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DR. CHASE'S

NEW

RECEIPT BOOK,

OR

Information for Everybody.

THE LIFE-LONG OBSERVATIONS OF THE AUTHOR, EMBRACING
THE CHOICEST, MOST VALUABLE AND

ENTIRELY NEW RECEIPTS

IN EVERY DEPARTMENT OF

Medicine, Mechanics and Household Economy.

IN FACT A BOOK FOR EVERYBODY, WITH REMARKS AND EXPLANATIONS WHICH ADAPT IT TO THE EVERY-DAY WANTS OF THE PEOPLE, ARRANGED IN DEPARTMENTS, AND COPIOUSLY INDEXED.

Toronto:

ROSE PUBLISHING COMPANY.

1889.

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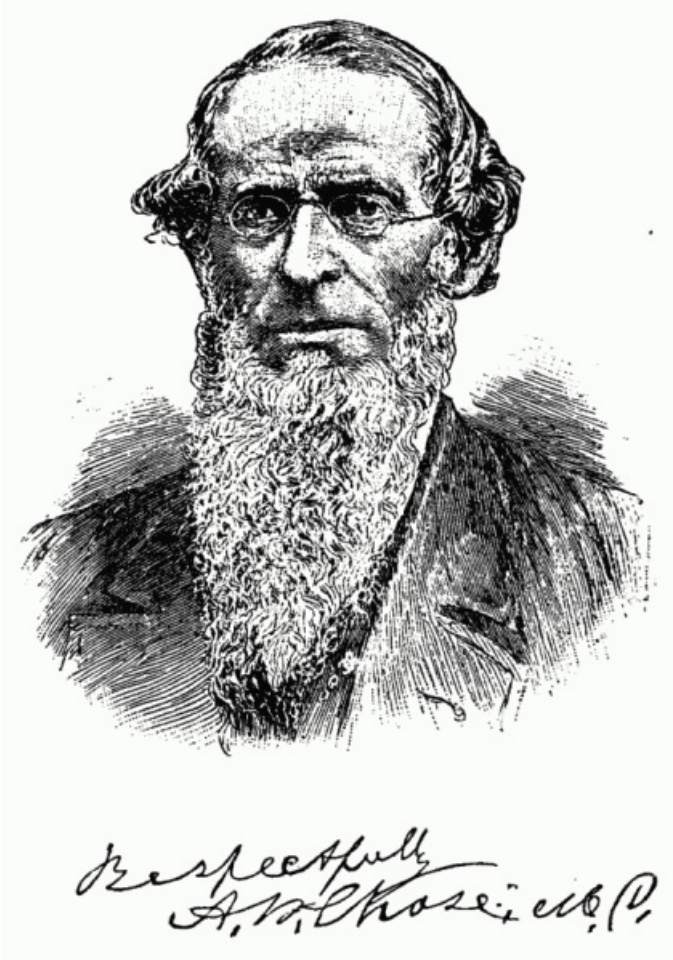

MEDICAL DEPARTMENT.

THE SICK-ROOM.—Its Location—A Good Nurse—Fresh Air—Light—Warmth—Cleanliness—Quiet—Food, Drink and Delicacies, and the Faithful Administration of Medicines, are of the utmost importance, and will each receive consideration. But, in accordance with the design of this work, the *essentials* only will be pointed out, the *minor details*, or little things, must be left to the judgment and "common sense" of the nurse or head of the household, to be met as best they can by the conveniences at hand or the means of obtaining them.

Location of the Sick-room.—In summer, if it be possible, let the sick room be on the north side of the house; in winter, upon the south—to avoid the mid-day heat of summer, and the cold blasts of winter. And also, if there is a room in the house having a fire-place, give it the preference, as it is considered the best means of aiding ventilation and providing artificial warmth when needed. And, if the windows do not admit of *lowering* the upper sash as well as to *raise* the lower ones, prepare them at once to allow this movement.

A Good Nurse.—We have so often heard the expression: "If Mr. Blank had not had the best of nursing, he would never have got well." Knowing that very much depends upon it, I say, get the best nurse that your means can obtain; then see and know for yourselves that they carry out your, or the physician's, directions faithfully; for a physician's prescriptions, nor your own desires or directions, are of any account unless they are faithfully followed. But, of course, much of the details must be left to the nurse, hence the necessity of getting one of sound judgment and considerable experience, if possible.

Fresh Air.—Although fresh air is essential in a sick room, yet a draft must not be allowed to strike upon the patient; hence the necessity, in small rooms especially, of having the means of raising and lowering the sash, either for ventilation or to reduce the temperature; ventilate and reduce the temperature always as needed, and, of course, with proper care. Keep the air pure by carrying out of the room any and all vessels *de chambre* as soon as used, no matter how small the discharge may be. Never bring a slop-bucket into the sick-room, as the pouring out, rinsing, etc., is not only very contaminating to the air, but annoying to the patient.

Light.—If a room for the sick has been chosen which will allow proper ventilation and fresh air, as needed, through the windows, the light can easily be governed by the curtains; and it is only necessary to say: Allow all the light that is agreeable to the patient; and, except in nervous or eye diseases, but little exclusion of light will be necessary, unless the room is on the south or western side of the house, which is not desirable, generally.

Warmth.—Under this head it will be necessary to include the temperature of the patient's surface as well as that of the room. The warmth or temperature of the room being about 60° to 65° Fah., if the limbs are cold, rub them with the dry naked hand, or wrap in hot, dry woollen cloths, or place hot bricks, or bottles or jugs, filled with hot water, or, what is better still, small bags of dry, hot sand, made for this purpose, whichever is most convenient or necessary to keep them comfortable. Comfort is to be sought, no matter how much labor and trouble it causes; for, unless a genial warmth can be maintained, health will seldom be regained. On the other hand, in fevers and inflammatory diseases, the surface must be cooled by means of sponging with cool or cold water with a little whiskey, or, what is better, whiskey with bay-rum in it —sponging sufficiently often to keep down extreme heat. Especially overcome all extremes of heat or cold.

Cleanliness.—It is claimed that "cleanliness is next to godliness." Whether this be a fact or not, it is absolutely necessary, if it is desired to restore the patient to health in the least possible time, that not only the sick-room be kept clean, but the bed, bed-clothing and wearing apparel be kept neat and clean; and the patient, also, must have such frequent washings or spongings as will keep the pores of the skin open, that the general exhalations, perspiration sensible or insensible, as when sick an odor, also, may not only pass readily through the pores, but to provide, in disease, for the escape not only of a larger amount than usual but that of a more offensive and injurious character, if left to be re-absorbed from the surface or clothing.

Quiet.—If the patient is very sick, absolute quiet is very essential. If a person is once admitted to the sick-room who is found to annoy the patient by long talking, or, in fact in any manner, they must not only be asked to retire, but never be admitted again. What is necessary to say, speak in a mild but perfectly distinct voice, and never allow whispering in a sick room for any purpose whatever. If there are any secrets to be kept from the patient, no hint of them, or whispering about them, should ever occur in his hearing; yet if it is believed the patient cannot live very long, I would most certainly inform them of this belief—'tis cruel and unjust to withhold it. Any continuous noise, although slight in itself, soon

becomes annoying to any nervous person, and there are but few sick persons, indeed, who do not soon become more or less nervous. Be firm, but kind, in all your relations with the sick. Give them to understand you know best, and what you know to be best to do you are going to do; and what you know they ought not to do, you are not going to allow them to do, but in all the kindness possible, and their acquiescence may soon be expected. Rustling silks, squeaking shoes and the rattling of dishes must not be allowed in a sick-room.

Food, Drink and Delicacies.—While the patient's condition will allow them to use plain and substantial food, and the usual drink, as tea and coffee, not too strong, it is best they should have them; but with the weak and debilitated the delicacies must take their place; and I desire to call especial attention to, and to give my sanction and advice, that if any special thing is craved, be it food or drink, I would most positively allow it, in moderation. We have all heard of the cravings, in olden times, of fever patients for cold water, and the cures brought about from its having been obtained stealthily against the commands of the physician; but there has recently come to my knowledge a case wherein the life of a typhoid fever patient was saved by drinking two quarts of hard cider, which he had craved and repeatedly called for, and when he got hold of the pitcher he would not let it go until it was empty. I do not call this, however, "in moderation," but the patient was stouter in his desperation than the nurse and the physician who had allowed it to be brought, so no one could have been blamed even if it had killed rather than cured the patient. Do not understand this, however, even in desperate cases, to be a pattern drink—a small glass, and often, as long as the craving continues, would be the safer plan with any drink. But both food and drink should be given regularly in reasonable quantities. And to aid the nurse or family in this, the following recipes, or receipts, may be resorted to with confidence and general satisfaction.

BEEF TEA, ESSENCES OF BEEF, ARTICLES OF DIET, DRINKS, ETC., FOR THE SICK.

Beef Tea.—Take lean beef, ½ lb.; cold water, ½ cup; a little salt, pepper, mace, or nutmeg. DIRECTIONS—Cut the beef into small bits—¼ or ½ inch squares—and see that no particle of fat adheres to it; put into a bottle with the water and cork, placing the bottle in a pan of cold water upon a stove, and as soon as it reaches the boiling-point move it back, but keep it near the boiling point for 2 hours; then strain, pressing out the juices, and season with a little salt and a sprinkle of pepper, mace, or nutmeg, as preferred by the patient.

Beef Tea—Improved Flavor, by Broiling.—Take a nice steak and remove all the fat. Have a gridiron, perfectly clean—all particles of burned steak may easily be removed from the bars by placing it in hot water a few minutes when first taken from the fire; then scrape, or what is better, use a stiff brush, kept for this purpose. Have a very nice fire of coals, and place the steak upon the gridiron and broil, as usual, till it is ready to turn; then take off, having at least a qt. bowl with 1 pt. of boiling-hot water in it, and keep it standing by the fire, or on the back part of the stove, to keep it hot. Place the steak, when the first side is nicely broiled, in this bowl of hot water, and press it with the knife and fork—a stiff spoon is the best—to extract the juices of the meat. Repeat this broiling and pressing several times, turning the steak each time, till all the juices and strength of the steak are extracted; and if, at the last, the steak is cut into squares of an inch or a little more, and each piece pressed in a lemon-squeezer, its virtue, or strength, will all be obtained. It looks much like wine of itself; but still, if a teaspoon or so of wine is added to what may be taken at any one time, it will not injure the most delicate stomach, but will be borne, even by a delicate stomach, better than bread-water, while it, of course, is much more nourishing; and, if properly seasoned, it will be relished by the patient—much more so from the broiling.

Beef and Other Meat Teas Without Heat.—Take 1/3 lb. of fresh beef, mutton, poultry or game (the lean part only), minced very fine; place it in 14 ozs. of soft cold water (2 or 3 tablespoons less than 1 pt.) to which has been added a pinch or about 18 grs. of table salt, and three or four drops of muriatic acid; stir all with a wooden spoon (on account of the acid, which rusts iron), and set it aside for 1 hour, stirring it occasionally; then strain it through gauze, or a sieve, and wash the residue left on the sieve by means of 5 additional ozs. of cold soft water, pressing it so that all the soluble matter will be removed from the residue; mix the two strainings and the Extract is ready for use. It should be drunk freely every two or three hours.

Chicken Water.—Take half of a young chicken, divest it of the skin, remove the feet, and break all the bones. Put into 2 qts. of water and boil for half an hour; strain through muslin, and season with a little salt and pepper, if desired. It quenches the thirst and is quite nourishing for use when the strong teas or essences cannot be borne by the stomach. Straining through muslin removes or absorbs any oil or fat upon the surface, which cannot be dipped off.

Barley Water.—Pearl barley, 1 oz.; wash in cold water, and pour off; then boil it a few minutes, and pour off again, which removes a certain rank taste; now pour on boiling water, 1 qt.; and boil, in an open dish, until half evaporated; strain and season to the taste of the patient. It is nourishing and pleasant, hot or cold, as desired.

Egg-nog for the Sick.—Beat the yolk of 1 egg with 1 tablespoonful of pulverized sugar to the consistency of cream; grate in a little nutmeg; add 1 large tablespoonful of brandy and 2 of Madeira wine. Beat the white of the egg to a stiff froth, and mix in with 1 cup of nice sweet milk.

Remarks.—This is palatable, and for weak and feeble patients will be found very invigorating and strengthening, the true "Madeira" being rich in its tonic and invigorating qualities.

Raw Egg and Milk for Convalescents.—A fresh egg; milk, 1 cup; a little port or other wine, and a little sugar. DIRECTIONS—Use only the yolk, beating thoroughly; then add the milk, and beat till foamy; then sugar and wine.

Remarks—Have this ready to be taken by convalescents when they feel the least fatigue on returning from exercise.

Milk Punch for the Sick.—Nice sweet milk, ½ pt.; white sugar, 2 tablespoonfuls; best brandy, 2 tablespoonfuls, ice. DIRECTIONS—Dissolve the sugar in the milk, and add the brandy, stirring well.

Remarks—This punch has maintained the life of very sick persons when nothing else could be taken for several days, or until the natural forces returned to the rescue. Make cold with ice, or keep it on ice.

How to Reduce the Temperature of Sick-rooms and to Keep them Cool.—In very warm weather it is often desirable, for the comfort of the patient, to have the room considerably cooler than the natural atmosphere. In such cases raise the lower sashes entirely upon the side of the room from which the breeze comes; then have a piece of muslin soaking wet, squeeze slightly, and tack it on so as to make all the air come in through the wet muslin, which will reduce the temperature of the room 5 or 6 degrees in a few minutes. This is done by the absorption of a part of the heat in the atmosphere by the passing of the water in the muslin from its liquid to a gaseous state (a principle well known in philosophy), and the air of the room becomes more moist also, which makes it more endurable.

Remarks.—It only needs trying to satisfy the most incredulous, and it will benefit the very feeble patient more than enough to pay everyone for the trouble taken. As the cloths become dry, replace them with others, or keep them well wet with a sponge.

Ventilation of Sick-rooms and Sleeping-rooms—Avoiding the Draft over the Patient.—Have a piece of board made just as long as the width of the window; then raise the lower sash, and place the board under it. The width of the board may be 3 or 4 inches only, as this will allow a current of air to pass up between the glass and sash, breaking the draft that otherwise enters directly into the room when the sash is raised. In this way air may be admitted even at the head or back side of a sick-bed, for the curtain may be lowered to break the current from passing directly upon the patient. This plan is equally important in small and ill-ventilated sleeping-rooms. This much fresh air, at least, should be admitted into every sleeping-room, excepting the extremely cold and windy days of winter.

SWELLINGS TO REDUCE—Liniment for.—Rum, spirits of camphor, and laudanum, each 1 oz.; mix, shake well and keep corked. DIRECTIONS—Heat the mixture hot (when using) and bathe the swelling thoroughly, at least 3 times daily, by pouring into the hand and thoroughly rubbing in. For a pin-scratch, or small pimple, a finger application will be sufficient.

RHEUMATISM, SPINAL AFFECTIONS, CANCERS, ETC.

Dr. White's Remedy, or Liniment for.—Strongest alcohol and spirits of turpentine, each 1 pt.; camphor gum and saltpetre, each 1 oz.; beef's brine, 2 qts. Dissolve the camphor gum and saltpetre in the alcohol; then add the turpentine. Scald and skim the beef's brine, and when cold, add it. To be shaken when used.

Remarks.—Dr. White used it extensively, and with success, in weak backs and all other spinal affections, rheumatism, etc., and also claimed to have cured several cancers with it.

Kerosene, ½ pt., and camphor gum, 1 oz., cured a friend of mine with whom I was acquainted for forty years; his fingers and hands were set nearly shut. Bathing his hands 3 or 4 times daily for 3 or 4 days made decided improvements, and finally cured them.

Cancer—A New Remedy which Carbonizes the Cancerous Tumor with but Little or No Pain, and Not Poisonous.—DIRECTIONS—Apply to the surface of the sore the chloride of chromium (a new salt of this rare metal), incorporated into stramonium ointment. This preparation, in a few hours, converts the tumor into perfect carbon, and it crumples away. Specimens of cancers thus carbonized were inspected by a number of physicians at a recent meeting held at the N. Y. Medical University, where a paper was read on this new method of treating cancer, which had the appearance of charcoal, and were easily pulverized between the fingers. The remedy causes little or no pain, and is not poisonous.

Cancer, Relief of Pain in.—Dr. Brandini, of Florence, Italy, has recently discovered that citric acid will assuage (relieve) the violent pain of cancer. He applies to the part pledgets of lint soaked in a solution of citric acid, 4 grs.; dissolved in soft water, 350 grs. (about ¾ oz.), with the result of affording instantaneous relief in the most aggravated cases.

Cancer, Chromic Acid Found Valuable in.—Prof. John King, in his American Dispensatory, more than a dozen years ago, spoke of chromic acid being found advantageous in cancers, malignant tumors, ulcers, etc.

SCIATIC RHEUMATISM—Successful Remedies.—*Internal and Alterative.* Fl. ex. of poke root, 1 oz.; fl. ex. of gelsemium, 1 dr.; mix. DOSE.—Take 20 drops, morning and evening, in a little water.

Fl. ex. of blue flag, 1 oz. DOSE.—Take 15 drops, at noon and bed time, in a little water.

Apply externally, along the back part of the thigh, as a liniment, tinct. of iodine and aqua ammonia, each 1 oz.; mix, and rub on thoroughly 3 times daily.

Apply the following preparation the whole length of nerve:

Menthol, 12 grs.; alcohol, to dissolve the menthol, 7 minims (drops); oil of cloves, 1 oz.; mix. [Menthol is one of the newer remedies, sometimes also called Japanese camphor. It is made from a species of *mint* growing in Asia, Japan, and I think in China also. It is in the form of crystals, and smells much like peppermint.]

This mixture is known to be of almost immediate benefit in neuralgic affections.

External Remedy, or Liniment for Sciatica, Lumbago, Stiff Joints, Contracted Cords, Rheumatism, etc.—Very Successful.—For External Use Only.—Fl. ex. of aconite root (never of the leaf, for these purposes), 12 ozs.; oil of hemlock, 3 ozs.; sulphate of zinc, 1 oz.; strongest alcohol, 1 qt.; soft or distilled water, 1 qt. DIRECTIONS—Take at least a 3 qt. bottle and put in the alcohol, oil of hemlock, and extract of aconite root together; dissolve the sulphate of zinc in a little water and add lastly the water also; shake, always, before pouring out into a smaller bottle for use, and always shake before pouring out upon the parts, or into the hand for application. I have given it in these large quantities, because it is to be applied freely, at least twice daily, in any case, in very painful cases three times a day, pouring upon the parts and rubbing in several times at each application. Do not get it into the eyes, *nor is it ever to be taken internally in any case*.

Rheumatism, Successful Alterative for—The Crutches Thrown Away by the Use of Half a Bottle.—Tincts. of sarsaparilla and quassia, of each 3 ozs.; iodide of potash, 1 oz.; quinine, 20 grs.; water, 1 pt. DIRECTIONS—Put all into a quart bottle, and shake when taken. DOSE—1 tablespoonful just before each meal.

The person communicating this recipe, "W. W.," of Independence, Ohio, says: "I was 3 months on crutches, before I took half of it I threw the crutches away." It is probable that this amount of the iodide of potash may be more than some persons can take, as there are those who cannot take it in large doses—this will be known by a stiffness of the nose, throat, etc., as though they had taken a bad cold. In such cases lessen the dose to a teaspoonful, and next time double the amount of tinctures, else use half the amount of the iodide.

Acute or Inflammatory Rheumatism—A New and Successful Remedy.—After a fair trial of the salicylate of soda, in acute rheumatism, *i.e.*, in a rheumatism with pain and often swelling of joints, etc., from having taken a cold, the

profession and doctors have come to a very favorable opinion of its use for rheumatism, as well as in tonsilitis and sick head-aches, which see.

Dr. Clouston, in the June number of the *Practitioner*, thinks the action of the salicylate of soda on acute rheumatism is most marked, as in 63 per cent.—63 in 100—the acute stage lasted only three days; the pain being relieved in a few hours, and the remainder of the disease having no serious symptoms; he thinks, however, its use should be commenced early in the disease, if benefit to any extent is to be experienced, and in doses not less than 10 grs. every hour, until the pain and severe symptoms are relieved, then less often, 2, 3, or 4 hours, and finally less amount. Dr. Clouston's recipe is as follows: Salicylic acid, 3 drs.; carbonate of soda, 1½ drs.; syrup of lemon, 1 oz.; cinnamon water to make 8 ozs.; mix. DOSE—A tablespoonful every two hours.—*Medical Digest.*

Remarks.—The *Medical Summary*, of New York, says: "The salicylate of potash has also been used with success: Salycilic acid, 2 drs.; bi-carbonate of potash, 3 drs.; water, 2 ozs.; mix. DOSE—A teaspoonful every 2 or 3 hours.

LINIMENT—Mrs. Chase's—For Ladies.—Best alcohol, 1 qt.; camphor gum, chloroform, laudanum, sulphuric ether, tinctures of myrrh and capsicum, and oil of red cedar, each 1 oz.; oil of peppermint, cloves, cajeput, and wormwood, each ¼ oz.; mix, and keep corked for use.

Dr. Chase's Golden Oil, or Strong Camphor Liniment.—Gum camphor, 2 ozs.; oil of origanum, hemlock, sassafras and tincture of cayenne, each 1 oz.; oil of cajeput, spirits of turpentine, chloroform, and sulphuric ether, each ½ oz.; best alcohol, 1 pt.; mix, and keep corked—as all liniments should be when not being used.

DOSE—The dose may be from 15 drops to a teaspoonful, according to the severity of the case, in sugar, or in a little sweetened water or milk: to be repeated in 15 to 30 minutes, also according to the severity of pain, griping of bowels, etc.

EXTERNALLY—For rheumatism, severe pains, etc., it should be poured upon the spot, or into the hand and applied, rubbing it well three or four times at each application; and, if the place allows it, hold the hand upon it till the heat and smarting subside. Do this night and morning, and, if a severe case, at noon also.

Liniments, Patent or Proprietary—Perry Davis' Pain Killer.—Some analysis recently made in the east, and published in the *Druggists' Circular* gives the following as the articles composing the medicines named: Spirits of camphor, 2 ozs.; tinct. of capsicum, 1 oz.; gum myrrh, ¼ oz.; gum guaiac, ½ oz.; alcohol, 3 ozs.

R.R.R. (Radway's Ready Relief).—Soap liniment, 1½ ozs.; tinct. of capsicum, ½ oz.; water of ammonia, ½ oz.; alcohol, ½ oz. This for 50c. a bottle.

Hamlin's Wizard Oil.—Spirits of camphor, ½ oz.; aqua ammonia, ¼ oz.; oil of sassafras, ¼ oz.; oil of cloves, 1 dr.; chloroform, 2 drs.; spirits of turpentine, 3 drs.; dilute alcohol, 3 drs.

Giles' Liniment of Iodide of Ammonia.—Iodine, 15 grs.; camphor gum, ¼ oz.; oils of lavender and rosemary, each 1 dr.; alcohol, ½ pt.; strong aqua ammonia, 1 oz.

Cure-All Liniment.—Gum camphor, gum myrrh, opium, pulverized cayenne, and oil of sassafras, each 1 oz.; oils of hemlock, red cedar, wormwood, spirits of turpentine, and hartshorn, each ½ oz.; best alcohol, 1 qt. DIRECTIONS—Cut the opium finely; mix, and shake daily for a week or 10 days; then strain or filter.

Remarks.—It will be found a valuable liniment for all purposes for which liniments are used.

Lightning Liniment.—Chloroform and ether, each 1 oz.; laudanum, 2 ozs.; spirits of turpentine, 4 ozs.; mix.

Remarks.—Mr. Johnson, of Grand Rapids, Mich., says: "Bathe legs, back, or any part of the body with it, and it will give immediate relief." Good for nervous affections, rheumatism, etc.

Goitre, Bronchocele, or Swelled Neck—Dr. Mason's Internal and External Remedy.—I. INTERNAL—Iodide of potash, 1 oz.; fl. ex. of sarsaparilla, 6 ozs.; fl. ex. of dandelion, 4 ozs.; dissolve the iodide in a tea-cup of soft water, then add to the extracts, in a bottle sufficiently large, 1 pint of simple syrup. DOSE—One teaspoonful half hour before each meal.

Remarks.—If in any case this causes a stuffing up of the nose, as is often said on taking cold, the dose must be lessened about one-half, or else as much more of the extracts and syrup must be added—with some people the iodide of potash causes this condition. Occasionally one cannot take it all; the extracts, then, must be taken without it, but the cure will not be as rapid. The patient is advised to drink only boiled water.

II. EXTERNAL—Take tinct. of iodine, 2 ozs.; soft water, ½ oz.; sulphite of soda, sufficient to remove the color of the iodine from the tincture before adding the water, which prevents the coloring of the skin or clothing. With a small brush, or swab, paint this tincture, once daily, upon the swelling, and so continue until cured.

Remarks.—The doctor says: "This remedy needs no recommendation, as it has been used by quite a number, and with good results. It was sent to my wife by a Mrs. P. M. Avery, of Pennsylvania; but the idea of discoloration," he says, "I got from the Boston *Medical and Surgical Journal*."

COLIC, OR OTHER INTERNAL PAIN—German Remedy or Liniment for.—Alcohol, 1 qt.; oil of sassafras and hartshorn, each 2 ozs.; spirits of camphor and laudanum, each 1 oz.; spirits of turpentine, ½ oz.; tinct. of kino, ¼ oz.; mix. DOSE—For colic, or any severe internal pain, from ½ to 1 teaspoonful may be taken for a dose; to be repeated in ½ to 1 hr., according to the severity of the case.

Colic—Cure by Quinine.—Dr. N. R. Derby, of Bergen Point, N.J., says, in the *Medical Recorder*, that by accident he discovered that a dose of 8 or 10 grs. of sulphate of quinine will speedily put an end to an attack of colic. He had had such attacks from childhood, but cured himself and several others in this way. This dose is for an adult. I should try it if I had occasion to do so.

CONSTIPATION, OR COSTIVENESS—Valuable Pills for.—Solid extracts of nux vomica and hyascyamus, and pulverized capsicum, each 25 grs.; podophyllin, and ext. of belladonna, each 10 grs.; mix thoroughly and make into 100 pills. DOSE—If very constipated when you commence taking them, take two each night for 1 or 2 nights, or until the bowels become easy; then 1 only at night till cured.

Constipation—Hot Water as a Cure.—A cup of hot water, a friend says, is a grand tonic and stomach cleanser, and a sure cure for constipation. It should be taken night and morning, just before retiring and after rising.

Constipation or Costiveness—Newer Remedies.—For a few years past the fl. ex. of cascara sagrada has been much extolled, and also found quite satisfactory in relieving the difficulty, and if properly combined with other remedies, has cured very many cases. I have been very successful with the following combination:

Fl. ex. cascara sagrada, 1 oz.; tincts. nux vomica and belladonna, each 2 drs.; with syrup of Tolu, or syrup of wild cherry, 2½ ozs.; mix. DOSE—A teaspoonful 3 times a day till the bowels become easy; then only at bed-time, till cured.

GRAVEL—Remedy.—A strong decoction, made with a handful of smart-weed in ½ pt. of water, taken with a gill of gin, is said to have discharged a tablespoonful of gravel at a time in 12 hours from the time it was taken. Keep on taking daily as long as any gravel is discharged.

HEMORRHAGE, OR BLEEDING FROM THE LUNGS, WOMB, RECTUM, ETC.

Witchhazel or Other Specifics, or Positive Remedies for.—Hemorrhage, or bleeding from the uterus (womb) after childbirth, from the lungs and from the rectum, in some cases of piles, are of such frequent occurrence that I deem it of great importance to give the latest and most successful prescriptions for hemorrhage in these cases.

Of late years the homeopathists claim that the valuable properties of the witchhazel is a discovery of theirs, and they make ado over it in the form of "Pond's Extract of Hamamelis." If this is used, give in doses of 10 to 15 drops, repeated every 3 or 4 hours.

Among eclectics, for many years past, the common witchhazel (hamamelis) has been considered a very valuable remedy for hemorrhages or bleeding from the internal organs. Prominent among these are Professors John M. Scudder and A. S. Howe, of the Eclectic Medical Institute of Cincinnati, who consider it a specific (positive cure) in all cases of debility of the nervous system—a weak and flabby condition that allows the blood to ooze through the membrane.

Prof. Howe has used this about 30 years, or long before homeopathy had become at all prominent in the United States.

Prof. John King thinks that in hemorrhages immediately following "delivery at full term," hamamelis is not equal to ergot, but in cases arising from debility, he agrees with the remarks above—that witchhazel is vastly superior.

A decoction or tea, made from the bark or from the dried leaves, will be as effectual as "Pond's Extract," which is kept by druggists.

The strength of a decoction will be 1 oz. of dried bark or leaves to 1 pt. of water. DOSE—A wine-glassful 3 or 4 times daily.

Uterine Hemorrhage—Specifics in.—C. J. Pitzer, M.D., of Detroit, Ill., asks for practical items from the experience of other physicians, and in giving his own, says: "Cinnamon and erigeron are specifics (positive cure) in uterine hemorrhage; I know it by actual experience. I don't tell you anything new, but recall your attention to the fact and confirm, as far as my evidence goes, what has been said of these articles by others. Let me say, while speaking of these invaluable remedies, that in uterine hemorrhage you can't have too much confidence in them. They are just what you want. Don't resort to ergot. Give oil of erigeron, 10 drops, every hour, and oftener, if needs be; and between each dose give 15 drops tinct. oil of cinnamon, made by adding oil of cinnamon, 1 fl. dr., to best alcohol, 95% 1 fl. oz. I use both remedies in every case, alternating. Don't know which does the most good; neither do I care much, so I save my patient. Just had a bad case last week, caused by retained membranes. The case had been managed by other physicians, and 4 or 5 days after the delivery the hemorrhage was very excessive and threatened the life of the patient in a short time. The doctor who sent for me had used ergot, opium, lead and tannin, and had resorted to the tampon. I suggested the above named remedies, and commenced the use of them at once. The hemorrhage ceased almost entirely in 4 hours, and we had no trouble in controlling it afterwards."

Hemorrhage from the Womb, with High Pulse and Fever.—Being called to a case where an abortion had been performed, in an early stage of pregnancy (not knowing for some time after of the cause), finding the wasting, or hemorrhage, considerable, I gave:

Fl. ex. of ergot, ½ oz.; gallic acid, 40 grs.; mixed. DOSE—½ teaspoonful every 2 hours, until pain and contraction of the womb was produced, then once in 4 or 5 hours only, until the wasting ceased.

For the High Pulse—I gave tinct. veratrum viride, 6 drops, with tinct. aconite 3 drops, every two hours, alternating with the first, giving the second 1 hour after the ergot mixture had been given, dropping each into a tumbler, so as to get this number of drops, of each, in a teaspoonful of water, when given. For instance 36 drops of the veratrum and 18 drops of aconite, with 6 teaspoonfuls of water, gave the right dose each time.

The urine in such cases may need some attention, and call for acetate, or nitrate, of potash (I like the acetate best, some others prefer the nitrate-nitre, or the sweet spirits of nitre), to correct any disturbance of these organs, for which purpose see "Diuretics" for directions.

Hemorrhage, Slight, of the Lungs, with Cough—Regular or Allopathic Treatment for.—Give fl. ex. of ergot, 15 drops in a little water, putting in a little essence of wintergreen to lessen its bitter taste. (The author would say, in such a case, a few drops of essence of cinnamon, which will cover the bitter taste as well as the wintergreen, is of itself good for the hemorrhage.) Give the above every six hours.

Between these doses also give gallic acid, 4 grs., in a little syrup of lemon. This alternation brings the doses only three hours apart. A few doses of each will generally allay any slight hemorrhage. If the cough is pretty persistent; *i.e.*, continuous and irritating, give laudanum, 15 drops, once in 4 or 5 hours, and 25 drops at bed-time, to allay the cough and help in procuring sleep. Give also laxatives, if needed, to prevent costiveness.

Hemorrhage, or Bleeding from Slight Cuts, etc.—Simple Remedy.—To stop the flow of blood bind the cut with cobwebs and brown sugar, pressed on like lint. Wheat flour and salt, in equal parts, bound on with a cloth, for man or beast; mix well, without wetting, the blood will wet them enough.

Hemorrhage from Wounds—Styptic Colloid, to Prevent and Cure.—The following will instantly coagulate blood, forming a consistent clot, under which wounds will readily heal: Collodion, 100 parts (grs.); carbolic acid, 10 parts; tannic and benzoic acids, of each 5 parts; mix the ingredients in the above order.

If the wound is so large that a slight application does not stop the hemorrhage or bleeding, wet lint with it and bind on if necessary, and leave on until the healing process is accomplished.

DIPHTHERIA.—Successful Remedies.—My first remedy, although simple and easily obtained, is from a paper presented to the French Academy of Medicine by Dr. Revillout, who asserts, from an experience of 18 years, that:

Lemon juice is one of the most efficacious medicines that can be applied in Diphtheria, and relates that when he was a dresser in the hospital, his own life was saved by this timely application.

He got a quantity of lemons and gargled his throat with the juice, swallowing a little at a time in order to act on the more deep-seated parts.

It is also recommended for any inflammatory or irritable condition of the throat in their commencement.

Lemon juice in Diphtheria is endorsed by American physicians, as the following will show. Let it be tried by all means:

Dr. J. R. Page, of Baltimore, in the New York *Medical Record*, invites the attention of the profession to a topical use of fresh lemon juice as a most efficient means for the removal of the membrane from the throat, tonsils, etc., in diphtheria. In his hands (he has heard several of his professional brethren say the same) it has proved by far the best agent he has yet tried for the purpose. He applied the juice of the lemon by means of a camel's hair probang (a piece of cloth on a stick will do as well) to the affected parts every 2 or 3 hours, and in eighteen cases on which he has used it the effect has been all he could wish. A little remarkable—one has 18 years successful experience, the other 18 cases; either is enough.

2. Diphtheria—Ice a Successful Remedy for.—The French have also been very successful in the use of ice as a remedy in diphtheria, which was introduced into this country by a Dr. Chapman, reported through the New York *Tribune*, by which means it was brought to the notice of the Oneida community in that State, where the disease was prevailing, and was successful in 60 cases. They aroused the mind of the patients, old enough to understand the necessity, to the greatest possible resistance to the advance of the disease. This determination of resistance is valuable against the advance of any disease. DIRECTIONS—The ice is broken into small pieces and given to the patient every ten minutes, night and day.

3. Diphtheria, Sulphur Treatment.—Our attention was first called to the use of sulphur, in this disease, by a report from Dr. Fields, in England. He found an advantage in its use in some bad cases within ten minutes of its commencement. His manner of using it with those old enough, was in the form of a gargle, a teaspoonful of the powder, or flour of sulphur, in a wine glass of water, gargling frequently. If the patient was unable to gargle, or too young, blow some of the dry sulphur through a quill upon the diseased parts of the throat, or burn some of the sulphur upon live coals near the patient, so that he will inhale the fumes. The patient should always be kept warm and the bowels open. In extreme cases, when Dr. Field was called, just in the nick of time, when the fungus was so near filling the throat, as not to allow the gargling, he first blew the sulphur through the quill into the throat, and after the fungus had shrunk to allow of it, then the frequent gargling. He never lost a patient from diphtheria under this treatment. He recommends after gargling a couple of times, to cleanse the throat, to swallow some of the sulphur water occasionally, so as to reach the fungus deeper in the throat, which also has a tendency to keep the bowels open, which is recommended a very important point to accomplish. This fungus is believed to be a living parasite of plant-like growth, and that sulphur is absolutely destructive to them, as has been proved by its use by applying upon the parasites of the grape vine. It has been proved that sulphur kills every fungus or parasite on man, beast, or plant. One Dr. Langautiers also found that 1 teaspoonful doses every hour, of a mixture of sulphur in 4 ozs. of water, taken every hour, is very beneficial in the treatment of croup.

4. Diphtheria, Specific for—Also, Scarlet Fever, and Preventive in Both.—The best physicians of New York city, Brooklyn, and Philadelphia, are equally in favor of the sulpho-carbolate of soda.

[The sulpho-carbolate of soda is composed of soda combined with sulphur and carbolic acid, either of which alone is good in diphtheria, scarlet fever, and any other inflammatory condition of the throat; and the combination is more decidedly beneficial than either would be alone; at least it seems so to me from my knowledge of their properties.]

Dr. May, of New York city, says the sulpho-carbolate of soda is a specific (positive cure) in diphtheria, also in scarlet fever, and claims that this article is a preventive to the development, even after exposure, as well as a cure for both these diseases. The writer of this report is very much impressed in favor of this article. He says:

"The use of sulpho-carbolate of soda in diphtheria has become a settled fact by the best physicians, as above named, to be the only certain specific (positive cure) for that dreaded disease which has taken off so many children in the United States during the past eight years. He also says it is certain to destroy the parasitic fungus in the throat and glands in two hours.

"Ten grs. dissolved in a tumbler half full of cold water, and take from ½ to 1 teaspoonful every hour, until the parasite is destroyed; then take 1 teaspoonful every 2 or 3 hours, according to the circumstances of the case. There is no use in physicians fighting against this remedy, for they will have to use it if they have success in the treatment of scarlet fever and diphtheria. It is a specific in both diseases, as they are both zymotic (acting like a ferment), spreading quickly through the system in their nature, and are produced by the parasite in the system. It will prevent both diseases if given before an attack, as well as a remedy. This remedy has been used for scarlet fever and diphtheria for over three years, and if given before gangrene (mortification) sets in, will work wonders in every case. It was discovered by an English physician, and has grown into favor as a specific ever since, particularly with children.

"The trichina parasite of pork, as soon as it enters the stomach, is absorbed by the blood, then into the muscles of the body. It is not so with the diphtheria parasite; it is generated in the stomach, and when it spreads up the œsophagus (comes from Greek words signifying to bear, to carry and to eat, being the passage way of the food and drink to the stomach, commonly called the gullet), it produces such a high state of inflammation that gangrene sets in, which dissolves the parasite, and carries it all through the blood, which is always fatal. Gangrene always dissolves the parasite, but before that takes place the use of the sulpho-carbolate of soda will save every case. I have written these lines by special request of very many citizens and friends who desire it made public for the benefit of all."

5. Diphtheria, Sore Throat, Swollen Tonsils, etc.—Homeopathic Remedy.—Bin-iodide of mercury, 10 grs.; sugar of milk, 100 grs.; triturate (rub) together 30 minutes in a wedgewood mortar. Then take 10 grs. of this triturated article and 100 grs. more of sugar of milk, and triturate again as before. Dose—Give 1 gr. of this second trituration every hour in ordinary cases; if a bad case, give the same amount every 15 to 30 minutes, until relieved; then every hour or two as needed. A few doses makes the cure.

Diphtheria—Latest Allopathic Treatment for.—In a recent conversation with Dr. Haney, of Toledo, Ohio, he claimed to cure every case of diphtheria, even in small children, by swabbing the throat with calomel; for quite a young child he gets 10 grs. into the throat, by a swab, and a child 5 to 8 years, 20 to 30 grs., so it will be swallowed. He says it stops the change in the blood, by which the fibrinous portions form the membrane in the throat. He follows 3 or 4 hours after with the liquid physic (see "Liquid Physic"), to help carry off the accumulation of the intestines; and then supports the strength with liquid food of a nourishing character. He is a successful physician, and claims not to have lost an average of one child a year for the eleven years' practice there; and I know he has a good share of practice among the children. I have also seen accounts in a recent medical journal, by some allopathic physicians, that they have been using calomel very similar to Dr. Haney, in this disease. Therefore I have not dared to pass it by without mention, as it may save many lives for future usefulness.

1. SORE THROAT—The Good Old Grandmother's Gargle for.—Steep 1 medium-sized red pepper in ½ pt. of water, strain, and add ¼ pt. of good vinegar, and a heaping teaspoonful, each, of salt and pulverized alum, and gargle with it as often as needed.

2. Sore Throat, New Gargle for.—In all recent inflammations, or colds, affecting the throat, a gargle made by putting a heaping teaspoonful of the bi-carbonate of soda (common baking soda) into a glass of water, and gargling with it frequently, will be found exceedingly valuable. A teaspoonful, or a little more, of it swallowed, will quickly relieve a tickling cough; also neutralize the acidity of the stomach often arising after meals, water-brash, etc. But if it should irritate, weaken one-half or more.

3. Sore Throat—Heat Strong Tea as a Gargle for Speedy Relief in.—It is well to know that sore throat can be speedily relieved by using strong, hot tea as a gargle. It is a convenient remedy, and rather a pleasant one.

Remarks.—Hot water has proved valuable in many diseases of late, as dyspepsia, consumption, etc., taken internally before meals, which see, for these diseases.

4. Sore Throat, Several Simple Remedies for.—The following are some of the most common, or simple, remedies for sore throat, easily obtained and often effectual:

I. Salt and water is used by many as a gargle; but a little alum and honey dissolved in sage tea is better.

II. Others, a few drops of camphor on loaf sugar, which very often affords immediate relief.

III. An application of cloths wrung out of hot water and applied to the neck, changed as often as it begins to cool, has great potency in removing inflammation in recent cases.

IV. Borax the size of a pea in the mouth relieves hoarseness quickly. (See also hoarseness, bronchitis, etc., for other remedies.)

SORE NOSE—Akin to Erysipelas—Certain Cure.—I had a case of sore nose, a very bad case, which nothing in the ordinary line of treatment would benefit at all, except for a very short time. The sufferer would cry out: "Cannot something be done to relieve this intolerable suffering," etc. DIRECTIONS—I prepared a little stick, 3 or 4 inches in length, and wound it with 3 or 4 thicknesses of cotton cloth, wrapped with thread, and dipped this into the full strength muriated tincture of iron, and held it firmly, for a ½ minute, or so, to each spot, and over the inflamed nose, and to the inner edges, where it was sorest. The first moment or two it smarted like fire, but I held it the more firmly and said never mind that, it won't be so bad next time. So night and morning, for 3 or 4 days, then once daily as much longer, made a perfect cure—now over six months, without the least return and no sign of soreness remaining. I should continue to apply for a month or more, if necessary, or until cured. I gave him also internally 5 drops of the same tincture 3 times daily in a little water. Of course he had an iron-colored nose, but a piece of lemon rubbed on a few times soon removed that ornamental shade and left him all right again, the same as it will remove recent iron rust spots from clothing.

CARBUNCLE—Treatment Which Saves Pain and Soreness—Also Applicable to Boils.—Having just passed through a three weeks' siege with a six hole carbuncle, I feel competent to tell others how I saved myself much pain, soreness and suffering, although it is bad enough when all has been done that can be done for relief.

What it might have proved without my mitigating treatment I do not know; it was the agony that compelled me to adopt some plan of relief, hence I took:

I. A mild liniment, Mrs. Chase's, given in this book (any mild liniment will do), 2 ozs.; chloroform, 1 oz.; laudanum, 1 oz.; mixed. Shaken, when used, and applied every hour or two, night and day. There were only short catches of sleep for about two weeks, after which an hour or two was occasionally obtained.

After applying the above mixture freely at each time, I then applied the following anodyne, emollient, or softening mixture:

II. Sweet oil, 7 drs.; laudanum, 1 dr.; mix. The application of the foregoing mixtures would relieve very much of the agonizing pain, even before I would be done applying the first; and the second kept the surface soft, as well as to help keep down the pain. (The same thing will be just as effectual for boils, I have not a doubt.) The situation was such that no poulticing could have been done, if desired, to hasten it; and even if it could, I have never known one under the poulticing process to subside in less than 5 or 6 weeks, while by the above process nearly all the pain and soreness subsided in 3 weeks.

At one time I thought it was going to repeat itself: but by the application of the permanganate of potash, 1 dr. to 1 oz. of water, applied by rolling up a strip of cotton cloth, and tieing a bit of cord around it in the centre, the size of the roll being just to fill the mouth of the vial, by which means I could wet one end of the roll of cloth without spilling it upon the clothing (permanganate colors the clothes), and apply to the swelling, it was driven back, or scattered, and by taking an active cathartic dose of crab-orchard salts (any active cathartic will do the same) it was carried out of the system.

BOILS.—Remedy Against Their Continuance.—Prof. Scudder, in his work on Specific Medication, speaking of lime, says: Its specific use is in cases of furunculus (boil), and other inflammations of the cellular tissue (the cell-like tissue immediately under the skin) terminating in suppuration. Why it has this specific influence I do not propose to say, but I have proven it in scores of cases. Taken in a case in which boils are continually developed, the use of lime water will effect a radical cure. [The proper strength for lime water to be used in these cases, in fact, in all cases, is: stone lime, 4 ozs.; distilled water, 1 gal., or in these proportions. Slack the lime with a little of the water, then pour the rest of the water over it and stir; cover the bowl and set aside for three hours; then bottle and keep the liquor upon the lime, well corked, and use only the clear liquid as wanted.] See "Milk Diet for Infants and adults." DOSE—It is given in doses of a wineglassful, 3 or 4 times a day. If too alkaline use additional water.

This lime water is very often properly used with the milk fed to infants which have to be raised upon the bottle; a teaspoon-full to a bottle of milk, or sufficient to prevent acidity of the stomach; and it is also valuable in Dyspepsia in adults when there are acid eructations of gas, or, as commonly called, belching or rifting of wind from the stomach, after eating. Dose—For adults in these dyspeptic cases, 3 or 4 tablespoonfuls to a bowl of milk; sufficient only is needed to keep down the acidity. See "Dyspepsia, Milk and Lime Water, Cure for." Lime water can often be borne by patients who cannot take the salts of soda, or potash. This also proves its value and adaptation to the human system.

1. Milk in Diarrhœa, Dysentery, Incipient Cholera, Typhoid Fever, etc.—Considerable has lately been said in medical journals concerning the value of milk as a remedial agent in certain diseases. An interesting article upon this subject lately appeared in the London *Milk Journal*, in which it is stated, on the authority of Dr. Benjamin Clark, that in the East Indies warm milk is used to a great extent as a specific for Diarrhœa.

I. *For Diarrhœa.*—A pint every 4 hours will check the most violent diarrhœa, stomach-ache, incipient cholera and dysentery. The milk should never be boiled, but only heated sufficient to be agreeably warm, not too hot to drink. [The author would say 140° Fah. is as hot as one can take it comfortably with a teaspoon.] Milk which has been boiled is unfit for use. He continues: It has never failed in curing in from 6 to 12 hours, and I have tried it, I should think, fifty times. I have also given it to a dying man who had been subject to dysentery 8 months, latterly accompanied by one continual diarrhœa, and it acted on him like a charm. In 2 days his diarrhœa was gone, in 3 weeks he became a hale, fat man, and nothing that may hereafter occur will ever shake his faith in hot milk.

II. *For Typhoid Fever.*—Another writer also communicates to the *Medical Times and Gazette* a statement of the value of milk in 26 cases of typhoid fever, in every one of which its great value was apparent, checking diarrhœa, nourishing and cooling the body.

III. *For Debilitating Diseases.*—People suffering from diseases require food quite as much as those in health, and much more so in certain diseases, where there is rapid waste of the system. Frequently all ordinary food, in some diseases, is rejected by the stomach, and even loathed by the patient; but nature, even in all disease, is beneficent, and has furnished a food that is beneficial—in some, directly curative. Such a food is milk. The writer, Dr. Alexander Yale, after giving particular observations upon the points above mentioned, viz.: Its action in checking diarrhœa, its nourishing properties and its action in cooling the body, says: "We believe that milk nourishes in fever, promotes sleep, wards off delirium, soothes the intestines, and in fine is the *sine qua non* (an indispensable—just the thing) in typhoid fever."

IV. *For Scarlet Fever.*—The writer goes on to say he has lately tested the value of milk in scarlet fever, and learns that it is now recommended by the medical faculty in all cases of this often very distressing disease of children. He says:

Give all the milk the patient will take, even during the period of greatest fever; it keeps up the strength of the patient, acts well upon the stomach, and is in every way a blessed thing in this sickness. Parents, remember it, and do not fear to give it if your dear ones are afflicted with this disease.

2. Milk an Antidote for Lead Poisoning.—The *Journal de Médecine* states, upon authority, that milk has been found to be an antidote and preventive to lead poisoning by those working in its manufacture. (Why not, then, for painters?)

A quart a day was furnished to each man, after which no colic nor other harm to health occurred.

The remedy is simple, easily obtained, and no doubt effectual. Used as a drink during the day would be the manner of taking it. See also its use in "Accidental poisoning."

1. SCARLET FEVER—Successful Treatment of.—Dr. Henry Pigeon writes to the London *Lancet* as follows:

"The marvellous success which has attended my treatment of scarlet fever by sulphur induces me to let my medical brethren know of my plan, so that they may be able to supply the same remedy without delay. All the cases in which I used it were very marked, and the epidermis (outer or scarfskin) on the arms, in each case, came away like the skin of a snake. The following was the exact treatment followed in each case:

"The patients were thoroughly anointed twice daily with sulphur ointment [the sulphur ointment used was made by the London Pharmacopœia as follows: sulphur, 4 ozs.; lard, ½ lb.; oil of bergamot, 20 minims (drops); mixed]; giving 5 to 10 grains of sulphur in a little jam, or jelly, 3 times a day, according to the age of the child and severity of the case. Sufficient sulphur was also burned, twice daily (on coals on a shovel), to fill the room with the fumes, and, of course,

was thoroughly inhaled by the patient.

"Under this mode of treatment each case improved immediately, and none was over 8 days in making a complete recovery; and I firmly believe in each it was prevented from spreading by the treatment adopted. Having had a large experience in scarlet fever last year and this, I feel some confidence in my own judgment, and I am of the opinion that the very mildest cases I ever saw do not do half as well as bad cases do by the sulphur treatment, and as far as I can judge sulphur is as near a specific (positive cure) for scarlet fever as possible."

2. Scarlet Fever, Sulphurous Acid Treatment of.—Dr. L. Waterman, of Indianapolis, Ind., in an epidemic there in 1876, gives his experience in the use of sulphurous acid. He says:

"I early adopted an anti-zymotic (anti-poisoning) principle, the administration of 10 to 30 drops, every 2, 3, or 4 hours, of sulphurous acid, diluted, in a little water. I treated eleven severe cases. The ten treated after its adoption recovered."

3. Scarlet Fever—Length of Time Dangerous to Others.—In this disease the parent and the school teacher are often concerned to know how long a time must elapse before it is safe to admit those who have had the disease to mingle with other children, or with the family, and go to school.

For a month, at least, the body of a scarlet fever patient is casting off scales, or particles, from the skin. The nose, throat, bowels and kidneys are also throwing off poisonous matter for this length of time, which will communicate the disease to others. The chief danger, however, is from the skin, as this is the main outlet for the blood poison to escape, and every scale or particle of dry dust from the skin carries the infection.

Therefore greasing the patient, by rubbing a bacon rind over them, which, by some, has been recommended as beneficial to the patient, will certainly do this good, i.e., it will keep these minute scales from rising into the air, and thus prevent the communication of the disease to others from this source. But a Dr. Chapin, in a communication to the *Brief*, of St. Louis, informs its readers that he has used the ham fat (as he calls the bacon rind) in every case for 20 years, and has lost but few patients since using it, and must have treated some hundreds, and gives the following as his plan; "As soon as I diagnose (*i.e.*, determine it to be) a case of scarlet fever, I have the patient put on Canton flannel, or better, if in winter, fine all wool underclothing; then cut a piece of rind from a pretty fat, fresh smoked ham, with a half inch of the fat upon it; then warm the hand, also the slice of ham, rub the hand on the fat, and then on the patient, till they are well covered, except the face. (The author cannot see why the fat may not be rubbed directly upon the surface—rather think it is the best plan, then rub it in with the hand.) Do this night and morning as long as the eruptions and fever continue; put them in bed, cover up warm and give as much cold water as they like. (I prefer the warm lemonade if agreeable to the child, as named above in No. 3.) The greasing is very satisfactory, allaying the burning and itching, which are so annoying." See also the sulphur ointment in No. 1 of scarlet fever; note for making it.

1. Typhoid Fever—Treatment in Its More Malignant Character.—The malignant character of this disease not being as prevalent in the North as in the South, I will first give the treatment used by Dr. J. J. Jones, of Conway Station, Ark., reported through the *Medical Brief*, of St. Louis, who has treated this disease in all its grades for over 25 years. When it takes on its malignant character of dysentery or pneumonia, which are inflammatory and dangerous if not properly met or treated in their commencement, he said that after testing various modes of treatment, he adopted the following:

I. First cleanse the alimentary canal with syrup of rhubarb and bi-carbonate of soda.

II. Follow this with spirits of turpentine, 30 drops; oil of sassafras, 60 drops; tinct. opium (laudanum) 25 drops; mix into well beaten whites of two eggs well sweetened with loaf sugar. Dose—Give an adult 1 tablespoonful of this emulsion every 3 hours.

III. If the pulse is full and firm, and over 100 per minute, give the following: Tincture of gelseminum, 1 oz.; fluid extract of aconite (of the root is best), ½ dr.; spirits of nitre, 2½ drs.; mix. Dose—Give 10 to 15 drops, for an adult, every 3 hours, until the pulse drops below 100. (The author would say, keep the pulse under 100, given this alternately with the emulsion—first one, then, one and a half hours after, the other; but these drops must not be continued to reduce the pulse much below 100 at the first. If it does this, lessen the dose, or make it 4 or 5 hours apart.)

IV. To control the temperature (heat of the surface), if it runs very high, which it frequently does, we resort to the wet sheet pack, as it is an important agent in the successful treatment of typhus and typhoid fevers. Use vinegar and spirits of camphor in place of water to wet the sheet, as it is much more sedative (calming, allaying irritation and pain), and less

dangerous than water. After the pulse and temperature is brought below 100, we give large doses of tinct. of iron (muriated tinct. of iron is meant, and 15 to 20 drops would be large enough, once in 3 or 4 hours), checking the diarrhœa, which is so common in typhoid fever. Alternate this (the iron tincture) with pure hard cider or lemonade. Diet: dried beef tea, and milk gruel seasoned with pepper; give egg-nog if there are pneumonic symptoms.

Remarks—It would be well to say here, see "Use of Milk in Diarrhœa, Dysentery, etc." I also say that my own plan has been to sponge the whole surface with bay rum and water (equal parts), sufficiently often to keep down the excessive heat; and if bay rum is too expensive, use whiskey and water —warm, if preferred by the patient; or vinegar and spirits of camphor will be good, if the heat is not too excessive. The bay rum, however, is more agreeable in flavor, especially for use about the face and hands. The patient can do this face sponging as often as the heat demands it, keeping a dish of the mixture and a small sponge near for the purpose. If the sponging, in place of the wet sheet, is resorted to, let it be done as often as the comfort of the patient demands it—doing it under the bed clothes, to avoid any exposure to cold air.

The lemonade recommended by Dr. Jones, or some of the drinks for fever patients in other parts of this work, would be very desirable; but what he calls "pure hard cider," unless reduced with cold water, would generally, I think, be a little too "hard;" however, it can soon be ascertained by trial. Whatever the patient craves in the line of drink or food, I believe in allowing moderately; and never to refuse even cold water right from the well or spring, as old allopathy used to do in the years "auld lang syne," by which, I have not a doubt, thousands of persons, burning up with fever, have lost their lives, where, if water had been allowed, they might just as well have been saved to their friends and usefulness.

2. Typhoid Fever, the Value of Coffee in.—Dr. Guillasse, of the French Navy, on typhoid fever, says: "Coffee has given us unhoped for satisfaction; after having dispensed it, we find, to our great surprise, that its action is as prompt as it is decisive. No sooner have our patients taken a few tablespoonfuls of it than their features become relaxed, and they come to their senses. The next day the improvement is such that we are tempted to look upon coffee as a specific (positive cure) for typhoid fever. Under its influence the stupor is dispelled, and the patient rouses from the state of somnolency in which he has been since the invasion of the disease. Soon all the functions take their natural course, and he enters upon convalescence." Dose—Dr. Guillasse gives to an adult 2 or 3 tablespoonfuls of strong, black coffee every two hours, alternated with 1 or 2 teaspoonfuls of claret or Burgundy wine. A little lemonade or citrate of magnesia should be taken daily, and after awhile quinine. From the fact that malaria and cerebral fever appear first, *i.e.*, a general prostration, with head or brain fever, accompanied with stupor, or great tendency to sleep, somnolency, from the Latin *somnus*, to sleep. The doctor regards typhoid fever as a nervous disease, and the coffee acting on the nerves is peculiarly indicated in the early stages before local complications arise.

DISINFECTANTS FOR ALL CONTAGIOUS DISEASES—FOR THE SICK-ROOM, BODY AND BED-CLOTHING, WATER-CLOSETS, SEWERS, ETC.

The following instructions were published in the *Hospital Gazette* by the National Board of Health, which was composed of some of the most prominent men in the medical profession:

"Disinfection is the destruction of the poisons of infectious and contagious diseases.

"Deodorizers, or substances which destroy smells, are not necessarily disinfectants, and disinfectants do not necessarily have an odor.

"Disinfection cannot compensate for want of cleanliness nor of ventilation.

1. Disinfectants to be Employed.—I. "Roll sulphur (brimstone) for fumigation.

II. *Copperas Solution.*—"Sulphate of iron (copperas) dissolved in water in the proportion of 1½ lbs. to 1 gal.; for soil, sewers, etc.

[The author, during the present summer (in the month of August, 1882), dissolved 3 lbs. of common copperas in a common wooden pail, holding about 2½ or 3 gals., by pouring on hot water, and with an old dipper threw it all about on the privy used by about 15 persons, which so completely deodorized and disinfected it that it required no more until late in the season.]

III. *Zinc Solution.*—"Sulphate of zinc and common salt, dissolved together in water in the proportions of 4 ozs. sulphate and 2 ozs. of salt to 1 gal.; for clothing, bed linen, etc.

"NOTE.—Carbolic acid is not included in the above list for the following reasons: It is very difficult to determine the quality of the commercial article, and the purchaser can never be certain of securing it of proper strength; it is expensive, when of good quality, and experience has shown that it must be employed in comparatively large quantities to be of any use; besides it is liable, by its strong odor, to give a false sense of security.

2. How to Use Disinfectants.—I. "*In the Sick Room.*—The most valuable agents are fresh air and cleanliness. The clothing, towels, bed linen, etc., should, on removal from the patient, and before they are taken from the room, be placed in a pail or tub of the zinc solution, boiling hot, if possible. All discharges should either be received in vessels containing the copperas solution, or, when this is impracticable, should be immediately covered with the solution. All vessels used about the patient should be cleansed or rinsed with the same. Unnecessary furniture—especially that which is stuffed,—carpets and hangings, should, when possible, be removed from the room at the outset; otherwise they should remain for subsequent fumigation, as next explained.

II. "*Fumigation.*—Fumigation with sulphur is the only practical method for disinfecting the house. For this reason the rooms to be disinfected must be vacated. Heavy clothing, blankets, bedding, and other articles which cannot be treated with the zinc solution, should be opened and exposed during fumigation, as next directed. Close the rooms tightly as possible, place the sulphur in iron pans supported upon bricks placed in wash-tubs containing a little water, set it on fire by hot coals, or with the aid of a spoonful of alcohol, and allow the room to remain closed 24 hours. For a room about 10 feet square at least 2 lbs. of sulphur should be used; for larger rooms, proportionally increased quantities.

III. "*Premises.*—Cellars, yards, stables, gutters, privies, cess-pools, water-closets, drains, sewers, etc., should be frequently and liberally treated with the copperas solution, No. 2. The copperas solution is easily prepared by hanging a basket containing about 60 lbs. of copperas in a barrel of water. [This would be 1½ lbs. to the gallon, or about that. It should all be dissolved.]

IV. "*Body and Bed-Clothing, etc.*—It is best to burn all articles which have been in contact with persons sick with contagious or infectious diseases. Articles too valuable to be destroyed should be treated as follows:

"(*a.*) Cotton, linen, flannels, blankets, etc., should be treated with the boiling hot zinc solution; introduce piece by piece; secure thorough wetting, and boil for at least half an hour.

"(*b.*) Heavy woollen clothing, silks, furs, stuffed bed-covers, beds, and other articles which cannot be treated with the zinc solution, should be hung in the room during the fumigation, their surfaces thoroughly exposed, and the pockets turned inside out. Afterwards they should be hung in the open air, beaten and shaken. Pillows, beds, stuffed mattrasses, upholstered furniture, etc., should be cut open, the contents spread out and thoroughly fumigated. Carpets are best fumigated on the floor, but should afterward be removed to the open air and thoroughly beaten.

V. "*Corpses.*—Corpses should be thoroughly washed with a zinc solution of double strength; should then be wrapped in a sheet wet with zinc solution, and buried at once. Metallic, metal-lined, or air-tight coffins should be used when possible, certainly when the body is to be transported for any considerable distance."

1. SMALL-POX—A Certain Cure.—Wm. Grandy, of Detroit, communicated the following item of Mr. Hines' to the Detroit *Tribune*, which he had seen in the Toronto *Weekly Globe*, with these remarks:

"Small-pox being so fatal and so much dreaded, an unfailing remedy like the following, so simple and so safe, once discovered, ought to be brought to the knowledge of the masses without hesitation or delay."

"I am willing," says Edward Hines, "to risk my reputation as a public man if the worst case of small-pox cannot be cured in three days simply by cream of tartar. This is the sure and never-failing remedy: Cream of tartar, 1 oz., dissolved in boiling water, 1 pt.; to be drank when cold, at short intervals. It can be taken at any time and is a preventive as well as a curative. It is known to have cured thousands of cases without fail. I have myself restored hundreds by this means. It never leaves a mark, never causes blindness, and always prevents tedious lingering."

Remarks.—Although this seems to be very strong language, yet I have never seen it disputed, nor have I seen by any reports of cases that it has been adopted in this country; but, as it is deemed very important to keep the bowels in a

solvent condition in this disease, no better and no safer medicine can be adopted for this purpose. Let it be used, by all means.

2. Small-Pox, Prevented by Vaccination.—Dr. Woolsey reported the case in the *Pacific Medical and Surgical Journal* as follows: "Small-pox occurred in a Chinese boarding house, at a jute factory, containing seven hundred and ten persons, under the same roof. Seven were sick, one of whom died, when all were vaccinated, and no other case occurred, thus exemplifying the protective power of vaccination, or of some very remarkable coincident."

Remarks.—Webster says "coincident" is having coincidence (*i.e., some circumstance*), agreeing, corresponding, *consistent*. I have italicised the word consistent merely to show how inconsistent it would be to suppose that any other circumstance could have given such protective power, except the vaccination. Then I think I have said enough when I say there cannot be a reasonable doubt but that vaccination is not only a protection, but that it is also safe; and therefore it ought to be adopted and insisted upon by boards of health, and also by parents and guardians.

1. Neuralgia, Headache, etc., English Remedy for.—The intimate mixture of equal parts of chloral hydrate and camphor will produce a clear fluid, which is of the greatest value as a local application in neuralgia. Dr. Lenox Brown states, in one of the English medical journals, he has employed it in his practice, and induced others to do so, and that in every case it has afforded great and, in some instances, instantaneous relief. Its success does not appear to be at all dependent on the nerve affected, it being equally efficacious in neuralgia of the larynx, and in relieving spasmodic cough of a nervous or hysterical character. It is only necessary to paint the mixture lightly over the painful part, and to allow it to dry. It never blisters, though it may occasion a tingling sensation of the skin. For headache it is also found an excellent application. DIRECTIONS—Rub the two together in a mortar, which liquifies them, then bottle and paint over the parts lightly, as above. For toothache, apply with lint, and rub upon the gums. I called upon one of the principal druggists of Ann Arbor, Mich., where I was then living, to see if they would mix, and also to see if they would make a clear fluid, as mentioned in the recipe; but I found he had mixed them several times for the last two years, and the result had been satisfactory. He had used the mixture personally, by wetting cotton in it and putting it into a decayed tooth, but the tooth was so extensively ulcerated at the roots, although it kept down the pain, yet it had to be extracted some two months after. But for common neuralgic pains the relief was generally instantaneous.

2. Neuralgia Pill, Tonic Alterative and Stimulant for.—Quinine, 1 dr.; morphine, 1½ grs.; strychnine, 1 gr.; arsenious acid, 1½ grs.; solid ex. of aconite, 10 grs.; mix very thoroughly and divide into 30 pills. DOSE.—Take 1 pill only, 2 hours after each meal; never more than three daily, and never more than 1 at a time.

Remarks.—This will be found a very valuable pill for neuralgia and all cases requiring tonic, alterative, anodyne or stimulative treatment, and especially so far as females of a weak and feeble habit, or condition generally. Valuable in ague, or chills and fever particularly. Some will say they contain some poisonous articles; so they do, and so do most medicines; but if they are made carefully and taken only as directed they will hurt none, but benefit many. (See also remarks after next recipe; see also tonic elixir, etc.)

3. Neuralgia—Warning of a Poor State of Health.—I cannot do better, in closing the subject of Neuralgia, than by giving the following sensible statement from the London (Eng.) *Lancet*, to show the importance of toning up the system of those afflicted with this terrible disease. (The Neuralgic Pills mentioned will do it nicely.)

> "The great prevalence of neuralgia—or what commonly goes by that name—should be regarded as a warning indicative of a low condition of health, which must necessarily render those who are affected with this painful malady especially susceptible to the invasion of other diseases of an aggressive kind. This is the season (autumn) at which it is particularly desirable to be strong and well furnished with the sort of strength that affords a natural protection against disease. There will presently be need of all the internal heat which the organism can command, and a good store of fat for use as fuel is not to be despised. It is no less essential that the vital forces should be vigorous, and the nerve power, especially, in full development. Neuralgia indicates a low or depressed state of vitality, and nothing so rapidly exhausts the system as pain that prevents sleep, and agonizes both body and mind. It is, therefore, of the first moment that attacks of this affection, incidental to and indicative of a poor and weak state, should be promptly placed under treatment, and, as rapidly as may be, controlled. It is worth while to note this fact, because, while the spirit of manliness incites the 'strong-minded' to patient endurance of suffering, it is not wise to suffer the distress caused by this malady, as many are now suffering it, without seeking relief, forgetful of the condition it bespeaks, and the constitutional danger of which it is a warning sign."

Remarks.—If the system is to be toned up, the first question is, how? Start out with a brisk cathartic; then follow with an alterative, as for rheumatism (which see), and also a good tonic bitters, or the Neuralgic Pills, as you choose; the pills are both tonic and alterative, and may cover both points with entire satisfaction, and especially so with females in a debilitated condition.

1. EARACHE—Cure for.—Take a large onion and cut it into slices: put a slice of onion, then a slice (the author would say a piece of leaf the size of the onion) of strong tobacco, then a slice of onion again, then tobacco, till the onion is all laid up, then wrap in a wet cloth and cover in hot embers till the onion is cooked; press out the juice with heavy pressure, and drop into the ear. It gives instant relief. Solution of morphine will have a good effect also.

Remarks.—I should drop in only 3 or 4 drops of the onion and tobacco juice at first, lest the influence of the tobacco might be too great, and repeat, if it was necessary. What is called a solution of sulphate of morphia, or *liquor morphia sulphatis*, kept by druggists, is of the strength of 1 grain of sulphate of morphia to 1 ounce of water only. Each teaspoonful of it would contain {1/8} grain and would be a full dose by mouth, which could be repeated, on an adult, in from 30 minutes to 2 hours, according to the severity of the pain for which it was given. To drop into the ear it might be, probably, twice as strong, without danger of injury. A few drops, say 4 or 5, of laudanum ought to have the same effect. The laudanum may be put with an equal amount of sweet oil, and the amount doubled, which would have a good effect in softening the wax of the ear. The onion cure is from Mr. Ford, of Iowa, who was referred to in the neuralgia (German cure, which see).

2. Ear, Ulcerations in—Very Certain Remedy.—Pulverized sanguinaria canadensis (blood root), 1 dr., in soft water, 1 pt.; steep and strain. DIRECTIONS—Pour into the ear, or, what is better, syringe out the ear 2 or 3 times daily with it—a little warm.

1. TOOTHACHE—Common Cures for.—The following are common things recommended for the cure of toothache, outside of the profession, and are good remedies:

I. Alum, in very fine powder, ¼ oz.; spirits of nitrous ether, 7 drs.; mix, and apply with lint if the nerve is exposed, and also around the tooth. This is claimed to never fail, unless it is of a rheumatic character.

II. Equal parts of powdered alum and salt, mixed; then wet a bit of cotton, to make the powder adhere, and apply to the hollow of the tooth.

III. Saltpetre, pulverized and applied by cotton, cures nervous toothache at once.

2. Toothache Drops, Dr. Chase's.—Best alcohol, 2 ozs.; chloroform, 1 oz.; sulphuric ether, 1½ ozs.; laudanum, oil of cloves, and oil of sassafras, of each, ½ oz.; oil of lavender, 1 dr.; gum camphor, 1 oz.; mix all, and keep well corked.

Remarks.—I have used this very successfully for a long time—have manufactured and sold it, and have put others into the same business. I put it up in 2 dr. bottles, retailing it at 25 cents, and have yet to find anything better. Apply to the exposed nerve by means of cotton, and put freely around the gums.

Polypus of the Nose has been cured by mixing the powdered blood root, 4 grs., with vaseline, 1 oz., and putting this upon cotton and pressing it up against the tumor. One month's application removed it. This was done by Dr. W. W. Carpenter, of Petaluma, Cal., and reported in the *Medical Brief*.

Burns and Scalds, Instantaneous Relief for.—The bi-carbonate of soda (the common cooking soda, found in almost every kitchen) has been found an exceedingly valuable remedy in the treatment of burns and scalds, giving almost, if not absolutely, instantaneous relief from pain, as well as a cure for the wound, by continuing its use. MODE OF APPLICATION—The injured part is to be moistened, then the dry soda, finely powdered, is to be sprinkled carefully upon it, to entirely cover the injury, and the whole wrapped with a wet cloth—linen is best. The relief is often instantaneous.

Remarks.—*Harper's Weekly* informs us that a Dr. Waters, of Salem, Mass., in speaking of the new remedy for burns and scalds, before the Massachusetts Dental Society, deliberately dipped a sponge into boiling water and squeezed it over his wrist, producing a severe scald around his arm some two inches wide, and continued the application, despite the suffering, for half a minute. Then he at once sprinkled on the bi-carbonate of soda, and applied the wet cloth, which almost instantly deadened the pain; and on the next day after this single application of the soda, the less injured parts were practically well, only a slight discoloration being perceptible, the severe portions being healed in a few days, by simply continuing the wet cloth bandage.

Ill Health—How Many People Bring it Upon Themselves.

I. By eating too fast and too much.

II. By not chewing the food enough to make it fine, slushing it down with too much fluid all through the meal.

III. By drinking spirits, or intoxicating drinks, too freely and too frequently.

IV. By keeping late hours at night, and sleeping it off in the forenoon.

V. By wearing too tight clothing, which prevents a free circulation of the blood.

VI. By wearing too thin shoes, and not protecting the feet from dampness and cold.

VII. By neglecting to take sufficient exercise to keep the feet and hands warm.

VIII. By neglecting to wash and rub the body with a coarse towel sufficiently to keep the pores of the skin open, for the escape of the effete, or worn-out, matter of the system.

IX. By changing the warm clothing of the day for light and inefficient, to attend evening parties.

X. By starving the stomach, as some do, to have enough to gratify the frivolous passion for dress.

XI. By being constantly in a fret and worry, lest this or that shall not go as desired, or, in other words, borrowing trouble.

XII. By eating and drinking at any or all hours of the day or night, instead of eating at regular hours and in only moderate quantities—nine-tenths of the people eat twice as much as is necessary to sustain life and health.

1. Lock-jaw or Tetanus Remedy and Preventive.—A medical authority says: "Let anyone who has an attack of lock-jaw take a small quantity of spirits of turpentine; warm it and pour it into the wound—no matter what the wound is, or what its nature is—and relief will follow in less than one minute. Nothing better can be applied to a severe cut or bruise than cold turpentine; it will give certain relief almost instantly."

2. Lock-jaw, or Tetanus, Quickly Relieved.—A Dr. Bigelow reports, in the *Practitioner*, a case of lock-jaw, or tetanus, caused by a rusty nail penetrating the foot, which was relieved in less than 20 minutes by introducing 1 dr. of the hydrate of chloral into the wound after it had been enlarged by incision.

Flesh Wounds and Fresh Cuts—To prevent Bleeding, Relieve Pain, Etc.—Everybody is liable to be cut or to receive other flesh wounds, away from surgical or veterinary aid; hence they ought to know how to proceed to save their own, or the life of a friend or beast, by exercise of common judgment.

I. If there is a flow of blood, close the wound with the hand and hold it firmly together so as to check the flow, and keep it thus until a bandage can be obtained or stitches can be taken, if necessary, and the final bandaging is applied. Bathing well with cold water, and keeping bandages wet with it, is the latest method of treatment. I have known, however, one-half whiskey to be used for this purpose, and believe it to be the best.

II. If the wound is painful, take a pan of burning coals and sprinkle upon them common brown sugar, and hold the wounded part in the smoke. In a minute or two the pain will be allayed, and the recovery proceed rapidly.

Remarks.—If the burning of wool will relieve pain and prevent lock-jaw from punctured wounds, why should not sugar do the same? Although I cannot understand the why nor the wherefore, yet I still believe that both the smoke of wool and sugar have cured many cases, otherwise these items would never have been reported.

1. NOSE BLEED AND HICCOUGHS—Novel, but Certain Remedy.—The *Scientific American* reports the following novel plan for checking bleeding at the nose: "The best remedy for bleeding at the nose, as given by Dr. Gleason, in one of his lectures, is in the vigorous motion of the jaws, as if in the act of mastication (chewing). In the case of a child, a wad of paper should be placed in its mouth, and the child should be instructed to chew it hard. It is the motion of the jaws that stops the flow of blood. This remedy is so very simple that many will feel inclined to laugh at it, but it has never been known to fail in a single instance, even in very severe cases."

Remarks.—About the time of writing upon the subject, I received a letter from a Mrs. Harlan, of Hutton, Coles Co., Ill., wherein she confirmed the above as to bleeding from the nose; and by the additional point of pressing the fingers into the ears, with the motion as if chewing, it also cures hiccough. And now I have an endorsement of my own as to its value in

hiccough, for I, at that time, had a little granddaughter living in the family who had been often troubled with hiccoughs, and only a day or two after the receipt of Mrs. Harlan's letter the child had an attack of them, and in two minutes, at most, from the time I directed her and showed her how to do it, according to Mrs. Harlan's plan of putting the fingers into the ears, and then "chew," the child was cured. She has had no further attack as yet a little over three years, while before they had held her an hour or two, sometimes longer, and it occurred quite frequently. It seems to have been an absolute cure.

2. Hiccough, French Remedy for Children—Instantaneous Relief.—According to the Lyons (France) *Gazette Médicale*, Dr. Grellety says:

"I have observed that hiccoughs in children are immediately stopped by giving them a lump of sugar saturated with table vinegar. The same remedy was tried on adults with similar instantaneous success."

The sugar plan is confirmed by the following from Henry Tucker, M.D., in the *South Medical Record*, under the heading of "A specific for Singulturs" (the physicians', or the Latin, name for hiccough):

"This very common affection, of infants and children especially, has a specific remedy, at least one which I have never known to fail. Moisten granulated sugar with cider vinegar; give to an infant from a few grains to a teaspoonful. The effect is almost instantaneous, and the dose seldom needs to be repeated. I have used it for all ages, from infants of a few months old to people on the down-hill side of life."

1. Ague, or Chills and Fever—Certain Cure for.—Quinine, 31 grs.; aromatic sulphuric acid and laudanum, each, 31 drops; water, 3 ozs. Dose—A teaspoonful 3 times a day, before meals.

Remarks.—This was given me by Mrs. Catharine Baldwin, of Toledo, O., formerly of Put-in-Bay, where she obtained it, and knew of its curing several of the *most obstinate* or long-standing chronic cases, which "nothing," as the saying goes, "would cure." I have used it with success, making only this difference with the receipt: Using 40 grs. of the quinine and 40 drops of the oil of vitriol and laudanum, in 4 ozs. of water (to make the quantity a little more); then, for an adult, directing a tablespoonful three hours, two hours and one hour before the chill should commence—which will break it. After that, 1 teaspoonful 3 times daily, just after meals, till all is taken, will cure most cases.

2. Ague Pills, Very Cheap and Very Effective, Without Quinine.—Chinoidine, 1 oz.; dovers powders, 3 drs.; piperine, 40 grs.; sub-carbonate of iron, 2½ drs.; stiff mucilage of gum arabic sufficient to work into pills, and mix very intimately and make into usual sized pills. [The author would say to make into 440 pills, to be sure to have 1 gr. of chinoidine in each pill.] Dose.—Take 2 pills every 2 hours until 6 or 8 are taken, in the absence of fever. After the first day 2 pills 3 times a day, just before meals, in the absence of chills or fever.

Remarks.—This recipe is decidedly a good one, either as an ague cure or as a general tonic. Chinoidine pills, however, in warm weather get soft and should, therefore, have plenty of powdered liquorice root among them to prevent their sticking together.

3. Ague Pills for Obstinate Cases.—Alcoholic ex. of nux vomica, 10 grs.; quinine, 30 grs.; pulverized capsicum, 20 grs. Directions—Mix very thoroughly and divide into 30 pills. First give an active cathartic to get a good action upon the bowels; then give two of the pills an hour before eating, 3 times daily, until cured, then one pill for a dose the same way until all are taken.

Remarks.—This was from an old physician in Tennessee to a Baptist minister who had had ague a long time, not being able to get it cured. This did the work. He gave it to my cousin, Dr. A. B. Moon, of Toledo, O., who says he failed only in a single case for the many years he had used it.

1. CINDERS OR DUST IN THE EYES—To Remove.—A correspondent writes to the *Scientific American* this remedy for cinders in the eye: "A small camel's hair brush dipped in water and passed over the ball of the eye on raising the lid. The operation requires no skill, takes but a moment, and instantly removes any cinder or particle of dust or dirt without inflaming the eye."

2. Another writer says: "Persons travelling much by railway are subject to continual annoyance from the flying cinders. On getting into the eyes they are not only painful for the moment, but are often the cause of long suffering that ends in a total loss of sight. A very simple and effective cure is within the reach of everyone, and would prevent much suffering

and expense were it more generally known. It is simply one or two grains of flax seed. It is said they may be placed in the eye without injury or pain to that delicate organ, and shortly they begin to swell and dissolve a glutinous substance that covers the ball of the eye, developing any foreign substance that may be in it. The irritation or cutting of the membrane is thus prevented, and the annoyance may soon be washed out. A dozen of these grains stowed away in the vest pocket may prove, in an emergency, worth their number in gold dollars."

1. Quick Emetics for Accidental Poisoning.—Another writer gives the following instructions for the management in accidents, poisoning, etc. He says: "Quickly mix a couple of ounces of powdered chalk or magnesia with a pint of milk and swallow the whole at one draught. Then run the finger down the throat and move it gently from side to side. This will induce vomiting; after which drink freely of warm milk and water and repeat the vomiting. Milk is an antidote for almost all poisons, narcotics excepted, especially if used promptly, and followed by vomiting. In narcotic poisoning, as by laudanum, opium or morphine, promptly give an emetic of mustard and water, followed by copious draughts of warm water and salt, until vomiting is induced. Keep the patient moving, and do not allow him to sleep. Send in haste for your family physician."

2. Poisoning by Poison Ivy—Remedy.—Bromine, 15 grs., rubbed in 1 oz. of olive oil, or glycerine, and apply 3 or 4 times daily; one application at bed-time has been found effectual; a poultice of clay-mud has also cured many cases.

3. Poisoning by Henbane, Tobacco, or Stramonium, and Bites of Snakes—Remedy.—The oil of sassafras has been found a remedy against the poison of these articles. Given in 15 drop doses, 30 minutes apart, for six doses, restored consciousness when the flowers of stramonium had been eaten by a boy 4 years old; after which a dose of castor oil was given to work it off by the bowels.

Remarks.—This is from a Dr. A. W. Lyle, of Castleton, Ind., in *Medical Brief*, in which he also gives Dr. Thompson's account of the value of oil of sassafras for henbane and tobacco poisoning, and also says: "It will destroy all insect life, and is an effectual antidote for the bite of venomous copperhead snakes." He recommends all physicians to try it, and, the author thinks, it is equally good for the people. He does not give the dose in these last cases: but if a boy of four years can take 15 drops, an adult may take at least 40. And in the snake-bites, I would rub it on the wounds also, and repeat as he directs.

SALVES, OINTMENTS, PLASTERS, POULTICES, ETC.

1. Ointment of St. John's Wort and Stramonium, for Tumors, Bruised and Blackened Spots, etc.—Tops and flowers, recently picked, of St. John's Wort (*hypericum perforatum*), fresh *stramonium* leaves, each ½ lb.; lard, 1 lb. Directions—Bruise the herbs and put into the lard and gently heat for an hour, then strain. Rub and heat into the swellings, caked breasts, hard tumors and ecchymosed spots (spots which have been bruised and the blood settled under the skin) thoroughly.

Remarks.—Prof. King also says the saturated (as strong as can be made) tincture of the St. John's Wort is nearly as valuable as that of arnica, for bruises, and may be substituted for it in many cases. (See also the recipe for coughs, colds, hoarseness, etc., for the further value of St. John's Wort.)

2. Ointment and Salve for General Purposes, Norton's.—I. For the ointment, lard, 1 lb.; rosin, 5 ozs.; beeswax and gum camphor, each 2 ozs.; oil of origanum and spirits of turpentine, each 1 oz. Directions—Melt the lard, rosin and beeswax together; break up the camphor gum as fine as you can, and when you remove the first from the fire, after all are melted, stir in the gum and continue to stir till the camphor gum is melted, and all is quite cool; then put in the origanum and turpentine, and keep stirring until it sets, or stiffens; box, or put in a fruit can, and cover to exclude air.

Remarks.—"It is good, very good, for all general purposes," says my sister, Mrs. Norton, from whom I obtained it.

II. *For the Salve.*—Use 5 lbs. of rosin; and in place of the lard use 6 ozs. of mutton tallow: all the other ingredients as for the ointment, and melt; but as soon as the gum camphor is melted, and after having removed it from the fire, put in the oil and turpentine, and stir well for a minute or two; then pour into cold water, and pull and work the same as shoemaker's wax; then roll into sticks, and wrap each stick by itself.

Remarks.—Valuable as a strengthening salve or plaster to apply over all weaknesses, rheumatic and other pains, anywhere on body or limbs.

3. Salve, or Balsam, for Wounds, Cracks, or Internal Pains.—Rosin, 2½ lbs.; spirits of turpentine, 1 qt.; balsam of fir, 4 ozs.; oil of hemlock, 2 ozs. DIRECTIONS—Melt the rosin and remove from the fire; then, when a little cool, stir in the fir, turpentine, and last, the oil of hemlock, continuing to stir until cool enough to remain permanently mixed.

Remarks.—I saw this salve on the hands of a Mr. E. B. Mason, a farmer of Ann Arbor, Mich., upon cracks and a wound of considerable extent. Noticing its white appearance and adhesiveness, I inquired about it; he told me he had used it for several years, and thought it had no equal for wounds, sores, cracks from husking, etc., and also as a "plaster" over any internal pains whatever. He spoke of it so highly that I was induced to obtain it for my Third Book. I know it must be valuable; but I think it will prove too soft for hot weather. Then to use only half of the spirits of turpentine, and possibly ½ lb. more rosin is all the modification needed to adapt it as a plaster to be applied to other parts of the body. It would be very valuable to wear over a sore breast, whether from strain or soreness of the lungs. See also the Centennial Recipes from "Poor Will's" Almanac, at the close of this department, for an ointment for these purposes.

4. Salve, Carbolic, for Burns, Sores, etc.—Lard, 10 ozs.; white wax, 5 ozs.; balsam of fir and carbolic acid, each 1 oz. DIRECTIONS—Melt the lard and wax together, then add the fir, and when it begins to thicken, by cooling, stir in the carbolic acid, and put up in tin boxes, or a suitable jar, covered tightly for use.

Remarks.—The balsam of fir is very soothing and healing, and makes the salve stick better to burns or other open sores, at the same time it hides the disagreeable odor of the carbolic acid. Many persons think there is no salve equal to those made with the carbolic acid. I think vaseline, 10 ozs., would be better than the lard as above given.

5. Weak Back, Valuable Plaster for.—Burgundy pitch and camphor gum, each 1 oz.; opium, 1 dr. DIRECTIONS—Melt the pitch, and having broken up the camphor, and made the opium gum into as fine bits as you can, stir them in and see that they are dissolved and evenly mixed. Spread the plaster very thinly on soft leather; wash the back with vinegar as hot as it can be borne; then rub the parts with dry flannel to make it red, and apply the plaster hot, and wear it as long as needed, renewing if necessary. Remember this, in applying a plaster to any place, if there is any hair where it is to be applied, always clip it off as close as possible, or shave it off, as thought best. A bandage will have to be worn with this, as it will work out and soil the clothing without it.

Remarks.—I obtained this recipe from Mr. Moross, of this city (Toledo), a grocer, who said he was cured by it, after he had tried all the doctors, been to Saratoga for a season, etc., without benefit. And he also assured me that he had given it to others who were very bad (the doctor claiming disease of the kidneys); one who had tried everything and was going home to die, by using this plaster became a well man. I have tried it personally, and find it valuable, and deem it worthy of great confidence. I would suggest, however, that the addition of 1 oz. of rosin to this salve would prevent its running, without injuring its value.

6. Itch, Valuable Ointment for.—Lard, ¼ lb.; sulphur, ½ oz.; white precipitate and benzoic acid, each ½ dr.; sulphuric acid and oil of bergamot, each ½ fl. dr.; saltpetre, 1 dr. DIRECTIONS—Have the saltpetre in powder; melt the lard, remove from the fire, and pour into an earthen dish; then put into an earthen dish, stirring till cold. Anoint well, night and morning, until cured, which it is sure to do as it kills the itch-mite, which burrows in the skin and causes the itch.

7. Salve or Ointment for Barber's Itch and Other Sores of a Chronic and Malignant Character.—A Mrs. H. J. Merrill, of Toledo, O., gives me the following, which she had used many years with great success, on all bad sores of long standing, and of an irritable character: Cleanse the sore well with warm castile soap suds, dry carefully with soft cloths and apply sparingly at first, as it will "bite" to show its power over the disease. Gunpowder, sulphur and alum, each, powdered, 2 tablespoonfuls; unsalted lard, or fresh made unsalted butter, ½ pt. DIRECTIONS—Put into an earthen dish, and stew on the back of the stove for 24 hours, strain and box for use.

ITCHING (Prurigo), TO CURE—Magical.—Dilute (the medicinal) hydrocyanic acid and sugar of lead, each 2 drs.; alcohol, 3 ozs.; distilled or soft water, 1 pt. DIRECTIONS—Dissolve the lead in the water, then add the acid and shake well, then the alcohol. Wet cloths and lay upon the itching parts, or apply with the finger, as the case will allow, frequently.

Remarks.—The acid is poisonous, hence keep it out of the way of children. It is claimed to be magical in its quick relief of itching of any part, but not upon open sores or where the skin is broken. It is perfectly safe to use when so extensively

diluted as this is.

CHAPPED HANDS, LIPS, CHAFES, ETC.—Cold Cream of Glycerine and Rose for.—A cream, or liquid, for the above purposes is made by using 1 oz. of white melted wax; 4 ozs. of glycerine, with oil of rose or other flavor to suit, 4 or 5 drops to flavor.

1. NERVOUSNESS AND SLEEPLESSNESS.—New and Successful Remedy.—Wm. A Hammond, M.D., states that he has recently used the bromide of calcium (lime, from the Latin *calx*, lime) in a number of cases in which the bromides were indicated, and is satisfied of its great efficacy. He says:

"The dose is from 15 to 30 grs. or more for an adult. It is especially useful in those cases in which speedy action is desirable, as owing to its instability the bromide is readily set free, and its peculiar action on the organism obtained more promptly than when either of the other bromides is administered. Chief among these effects is its hypnotic (sleep producing) influence, and hence the bromide of calcium is particularly beneficial in cases of delirium tremens, or in the insomnia (inability to sleep) resulting from intense mental labor or excitement.

"I gave a single dose of 30 grains of this to a gentleman who, owing to business anxieties, had not slept for several nights, and who was in a state of great excitement. He soon fell into a sound sleep, which lasted for 7 hours. The next night, as he was wakeful, I gave him a like dose of bromide of potassium, but it was without effect, and he remained awake the whole night. The subsequent night he was as indisposed to sleep as he had ever been, but a dose of 30 grains of bromide of calcium gave him 8 hours' sound sleep, and he awoke refreshed, with all unpleasant cerebral (head) symptoms—pain, vertigo, and confusion of ideas—entirely gone.

"In those exhausted conditions of the nervous system, attended with great irritability, such as are frequently met with in hysterical women, and which are indicated by headache, vertigo, insomnia and a mental condition of extreme excitement, bromide of calcium has proved in my hands of decided service. Combined with the syrup of the lacto-phosphate (milky phosphate) of lime, it scarcely leaves anything to be desired. An eligible formula is: Bromide of calcium (lime), 1 oz.; syrup of lacto-phosphate of lime, 4 ozs.; mix. DOSE—A teaspoonful 3 times a day in a little water."

2. Sleep as a Medicine.—A physician says: The cry for rest (sleep) has always been louder than the cry for food. Not that it is more important, but that it is often harder to obtain. The best rest comes from sound sleep. Of two men and women, otherwise equal, the one who sleeps the best will be the most moral, healthy and efficient. Sleep will do much to cure irritability of temper, peevishness and uneasiness. It will restore to vigor an overworked brain. It will build up and make strong a weary body. It will cure a headache. It will cure a broken spirit. It will cure sorrow. Indeed, we might make a long list of nervous and other maladies that sleep will cure. The cure of sleeplessness requires a clean, good bed, sufficient exercise to produce weariness, pleasant occupation, good air, and avoidance of stimulants and narcotics. For those who are overworked, haggard, nervous, who pass sleepless nights, we recommend the adoption of such habits as shall secure sleep, otherwise life will be short, and what there is of it sadly imperfect.

1. CROUP.—Instantaneous Relief—Internal Remedy.—It is claimed that alum and sugar will cure croup in one minute, by shaving or grating off 1 teaspoonful of the alum and mixing it with twice as much sugar, and giving it at once, the relief being almost instantaneous. Half these amounts may be repeated once or twice, ½ hour apart, if the relief is not permanent.

2. Croup, External Remedy.—Saturating (thoroughly wetting) flannel with spirits of turpentine, and placing upon the throat and chest, has the credit of being a sovereign remedy, *i.e.*, effectual in controlling the disease. If considerable distress is manifested when the child wakes up, and after the flannel has been applied a few minutes, 3 to 5 drops of turpentine may be given on a lump of sugar. Every family should keep turpentine in the house.

3. Croup, Emetic for.—If the foregoing fail in any case, an emetic may be given, of fl. ex. of ipecac. 5 or 6 drops, every 5 or 6 minutes, for a child of 4 years, giving warm water after 2 or 3 doses, have been given, continuing the fluid extract as at first, until vomiting takes place, which will occur generally by the time 5 or 6 doses have been taken; a little more, or a little less, for older or younger children.

1. HEADACHE, TO CURE.—Take a quart bottle and nearly fill it with water, then put in spirits of hartshorn and spirits of camphor, each 1 oz., and 1 tablespoonful of salt; shake well to dissolve the salt; then wet cloths with this and apply to the head, and renew as often as they become hot until relieved. If the stomach is sour, causing the headache,

taking a little bi-carbonate of soda (baking soda) in water, may help in its cure.

2. Sick Headache, Tea and Coffee often the Cause.—A distinguished doctor of New York, a man of wide experience, says of sick headache:

"Not a case of this disease has ever occurred within my knowledge, except with the drinkers of narcotic drinks (referring to tea and coffee), and not a case has failed of being cured on the entire renunciation of those drinks. Whatever may be said of the violations of physical law in other respects, tea and coffee may claim sick headache as their highly-favored representatives."

Dr. Alcott, in writing on this subject, says: "We are driven to the conclusion that no person can use the smallest quantity of tea or coffee, or, in fact, of any drink but pure water, without more or less deranging the action of the stomach and liver, and ultimately through these, the nerves and brain, of the whole system. Nay, we are driven to a position stronger still, which is, that no person can take these poisons at all, without, in a greater or less degree, abridging human happiness and human life."—*Christian Advocate.*

Remarks.—That the above is the general opinion of our best physicians, and other scientific men, there is not a doubt. For my own part I know that the giving up of tea and coffee, and substituting half milk and half water, for a few weeks at one time, did me much good. For great lovers of tea and coffee, among my patients, I have insisted that they take them of only half the usual strength, especially with those who have frequent headaches, and I claim it would be better for all; but I do believe that some warm drink, for general use, and taking tea or coffee of half the usual strength, as I now do, may be allowed, if not more than one cup is taken at a meal.

3. Headache, Heartburn, etc., Remedy.—A teaspoonful of bi-carbonate of soda (baking soda) in 3 or 4 tablespoonfuls of peppermint, or cinnamon water, with ½ teaspoonful of powdered ginger, or a little essence of Jamaica ginger added, and taken immediately after each meal, will generally remedy this in a few days. A dose of this, and repeated in an hour, will be good in headache arising from acidity of the stomach. If the regularly prepared water (cinnamon or peppermint) are not on hand, put ½ teaspoonful of either the essences in water, with the powdered ginger, or essence of ginger and the soda; or plain water will do, only not quite so pleasant.

CASTOR OIL.—Its Nauseous and Disgusting Taste Overcome.—I. A little glycerine (half the amount of the castor oil) mixed with castor oil, and 5 to 10 drops of any of the aromatic oils, as sassafras, winter green, etc., put into the dose, the natural taste of the oil will scarcely be perceived; or

II. Take the juice of a lemon or two, put a few drops of essence of cinnamon into it. Heat the oil and stir into the lemon juice, which forms an emulsion, and almost wholly covers the taste of the oil.

1. CONSUMPTION, TROUBLESOME COUGH IN—Syrup and Tincture as Used in Charity Hospital, New York.—I. Cough syrup: Bromide of potassium, chlorate of potassium, muriate of ammonia, each, 1¼ drs.; syrup of tolu, 4 oz.; mix. DOSE—One tablespoonful every 2 or 3 hours.

II. Cough Tincture: Paregoric, 1 oz.; tincture belladonna, 1 dr.; tincture of *hyoscyamus*, 2 drs.; compound spirits lavender, 1 dr.; mix. DOSE—Ten drops on a lump of loaf sugar every hour until cough is relieved.

Remarks.—For the hacking, or continuous, coughing of patients far gone with consumption, either of these will be found satisfactory. But as prevention is better than cure for those who are liable to have consumption, but have not got it fastened upon them yet, I will give the rules of the celebrated Dr. S. S. Fitch, of New York, for its prevention, as they are certainly valuable and ought to be heeded by every one. He claims an absolute preventive in all cases and all persons, but as his rules are so very strict, if they are lived up to, they will certainly do much to prevent the establishment of this disease. They are as follows:

2. Pulmonary Consumption—Absolute Prevention of—Dr. S. S. Fitch's Rules for.—He says: "There is no disease to which we are liable that is so preventable as consumption. It is absolutely preventable in all cases and all persons.

I. "From earliest childhood stand erect, walk erect, sit erect, never stoop, always let the weight of the shoulders fall behind you.

II. "Keep your chest fully expanded by taking constantly, all your life long, full breaths so as to fully expand your chest.

Do this at all times. Remember you can not have consumption until your chest shrinks in size, either wholly or partially; so if you keep your chest flexible and constantly expanded you will be safe from consumption.

III. "Never let a cold run on you. Break it at once by taking active physic and cough medicines, and putting your feet at bedtime in hot water; keep them in until you get in a perspiration, and then go to bed and keep up the perspiration with hot drinks (Thompson's old 'Composition Tea' is one of the best to use to start perspiration; hot lemonade is good, too); then take a portion of physic, and the next day your cold will be well. By pursuing this course for a length of time you get out of the habit of taking cold, and will rarely take one. Always continue your treatment until your cold is well.

IV. "Avoid all debauching courses that weaken and reduce your constitution, such as soaking with liquor and actual drunkenness and dissipation of all kinds and gluttony and late night exposures. In fact, lead an honest, orderly life, free from vice and every dissipation, your health will then be equal, regular and constant, and your life a long and happy one.

V. "Keep your bowels always free by habit, diet or purgatives."

Remarks.—If these rules are strictly enforced, by parents, with their children, when small, and by themselves, as soon as they can be made to understand their importance, very much will be done to improve the general health, as well as to prevent consumption. None are too old to take counsel from Rules IV. and V., and I might say also from Rule III.

2. Consumption—Climatic Changes are believed to have much to do in its Cure.—Dr. Talbot Jones, in a communication to the New York *Medical Journal*, says there are 3,000,000 of persons who die annually of consumption; and also says that the medical resources are baffled by this disease and confesses "that climate is the physician's only dependence for the cure of his consumptive patient." He makes the following statements in relation to the disease:

I. "No zone enjoys entire immunity from pulmonary consumption.

II. "The popular belief that phthisis (consumption) is common in cold climates is fallacious, and the idea, now so prevalent, that phthisis is rare in warm climates is as untrue as dangerous.

III. "The disease causes a large proportion of deaths on the sea-shore, the mortality diminishing with elevation up to a certain point.

IV. "Altitude is inimical (opposed) to the development of consumption, owing chiefly to the greater purity of the atmosphere in elevated situations, its freedom from organic matter, and its richness in ozone. [This agrees with my own opinion, that high and dry situations, especially rolling and consequently dry pine lands, are the best places to take up a residence in if one has to change at all.]

V. "Moisture arising from a clay soil, due to evaporation, is one of the most influential factors in its production.

VI. "Dampness of the atmosphere, from whatever cause, or in any altitude, predisposes to the development of the disease, and is hurtful to those already attacked.

VII. "Dryness is a quality of the atmosphere of decided value.

VIII. "The most unfavorable climate possible for a consumptive is one of uniform high temperature and a high dew point (warm and moist).

IX. "The effects, due to a change in the atmosphere, are by no means so pernicious as are generally supposed, and on this subject present views require modification."

3. Gallic Acid in Consumption.—Gallic acid, 1 dr.; pulverized Dover's powder, ½ dr.; pulverized cubebs and pulverized gum arabic, each, 1 dr., and pulverized liquorice root, ½ oz. Mix thoroughly. DOSE—Half a teaspoonful, dry, every 3 or 4 hours.

Remarks—Dr. Hull said of this: "Out of 200 cases treated during the past seven months, I found only two that this remedy would not relieve." Certainly a very marked proportion of cures. The corroboration I referred to above in the very bad case was reported also in the *Brief* by R. H. Holliday, M.D., of Guntley post-office, N.C. His patient was a man who had been confined to his bed for 170 days, and upon whom he had exhausted his book knowledge without benefit, the man raising two quarts of thick, purulent matter daily that smelled terribly, so that he says "the ferryman was waiting to carry him over, etc., when, upon the appeal of the wife if I could not do something more for him, I took up the *Brief*, and fell upon Dr. Hull's gallic acid treatment (above given) and saved my patient."

SINGERS AND PUBLIC SPEAKERS—Loss of Voice, Hoarseness, etc.—It has been found that borax has proved a most effective remedy in certain forms of colds. In sudden hoarseness or loss of voice from colds by public speakers or singers, relief for an hour or so, as by magic, may be often obtained by slowly dissolving and partially swallowing a lump of borax the size of a garden pea, or about three or four grains, held in the mouth for ten minutes before speaking or

singing. This produces a profuse secretion of saliva, or watering of the mouth or throat, probably restoring the voice or tone to the dried vocal cords, just as the wetting brings back the missing notes to a flute when it is too dry.

Remarks—There need be no fear in using 2, 3 or 4 pieces of the size above named, within the hour before speaking or singing is to commence. Keep it handy, to use, as needed, during the evening.

1. COUGH SYRUP—An Effectual Remedy for Coughs, Colds, Hoarseness, etc.—"E. J. R.," from an inquiry through the Detroit *Tribune*, sends for publication the following sure cure for cough, cold, hoarseness, etc., saying it has been tried repeatedly, and is a most invaluable remedy. It is always kept in our family. It cured a cough of three years standing to my knowledge. Syrup of squills, 2 ozs.; paregoric, 1 oz.; fl. ex. of liquorice, 1 oz.; fl. ex. of ipecac, ½ oz.; antimonial wine, ½ oz.; ess. of wintergreen or peppermint, 1 dr. DOSE—One teaspoonful every 2 or 3 hours, but not on an empty stomach.

2. Irritable, Dry or Hacking Coughs, Flaxseed Lemonade for.—Put 2 or 3 tablespoonfuls of flaxseed and the juice of two good-sized lemons and 2 or 3 tablespoonfuls of sugar into a dish which can be covered, and pour on boiling water 1 qt.; cover and let steep until the mucilage has been drawn out of the seed. DOSE.—A tablespoonful of it may be taken every hour or two to relieve the hacking, but sipping a little often is better than larger doses at longer intervals.

3. Bronchitis, Valuable Remedy for.—A simple, but oftentimes efficacious remedy for bronchitis in its early stages, is: Syrup of tolu, 1 oz.; syrup of squills, ½ oz.; wine of ipecac, 2 drs.; paregoric, 3 drs.; mucilage of gum arabic, 1½ ozs. DOSE—A teaspoonful 3 to 5 times daily, as needed.

4. Recent Colds, Simple but Sensible Remedy.—A medical writer says: "Hot lemonade is one of the best remedies in the world for a cold." DIRECTIONS.—Roll a good-sized lemon, squeeze out the juice, cut the rind in slices, put in 2 or three tablespoonfuls of sugar, and pour on 2/3 of a pt. of boiling water, stir well and cover up while the patient is getting into bed; then drink it all, cover up warm, and the result will be almost magical.

5. Colds of Young Children—Onion Syrup for—Very Valuable.—Slice up thinly a few mild onions and sprinkle sugar over them, set in the oven in a suitable dish to simmer until the juice may be all squeezed out, then thoroughly mix with the sugar, forming a very nice thick syrup, or sugar, according to the amount of each used. DOSE—A teaspoonful, or less, according to the age of the child, 4 or 5 times daily, as needed. It is perfectly safe and reliable for the smallest child; also valuable for adults.

Remarks.—This might claim to be a half-brother to General Washington's cure for colds.

1. WHOOPING COUGH—Remedy for.—A paper recently read before the New York Academy of Science, by Dr. H. A. Mott, holds that much of the mortality among children from whooping cough is attributable to the prevalent faulty belief that it will be much worse for the child if the disease is broken up. He says: The disease is now known to be caused by a fungoid growth (in plants, growing quickly like mushrooms, coming up in a night; but in animal bodies being slower in growth and being much of the character of proud flesh, but below he calls them spores, which indicates them to be more of the nature of an animal parasite), which begins under the tongue, and spreads backward to the throat and lungs, the spores requiring from 9 to 15 days to develop. When the fungus enters the bronchial tubes, most alarming complications arise. It is, then, best to kill the fungus in its earliest stage; there would then seldom be any trouble from bronchitis, cholera infantum, or cerebral (head) difficulties. Quinine, just after a coughing spell, and before retiring for the night, is the best remedy.

Remarks.—I have had no opportunity to try this remedy, yet I do not doubt its value, for some physicians claim that even chills and fever are developed by spores. Then as quinine does cure ague may it not be by killing the spores? most likely. Then by all means try the quinine immediately after it is known that a child, or anyone, has been exposed; and if it does not entirely abate it, I believe it will give it a mildness not otherwise attained. Probably as good a way, or the best way, to take the quinine for this purpose, is to dissolve it in one of the following ways:

I. *Quinine, to Dissolve, or Solution of Quinine*.—Put 20 grs. of sulphate of quinine into a 2 oz. vial, and add 1 dr. of aromatic sulphuric acid, then fill the vial with water. DOSE—For an adult, 20 drops once an hour, in a tablespoonful of water. The proper dose for a child will be 1 drop to each year of its age, in 1 teaspoonful only, of the water, or if it is a nursing child, in the mother's milk. And in all cases (if the spore theory is correct, which I have no reason to doubt) the longer the quinine solution is held in the mouth the more certain it will be to kill them.

II. Rub 20 grs. each of quinine and tartaric acid together, put into the same sized vial and fill with water, as in the first case. Dose and manner of using, the same.

1. CHOLERA—Infallible Cure for.—Gen. Jordan, of the *Mining Record*, makes the following statement in relation to the infallible cure of cholera by the use of chloroform only. It is somewhat strange that such facts as here stated should not become generally known quicker than they do; still I can not doubt their being facts, and as I know that a dozen drops of chloroform in a little water will at once correct a gaseous condition of a dyspeptic stomach (which see), why should it not correct a much more disturbed condition by using larger quantities? I would certainly "go for it," on the "double quick" if occasion called for it. He says:

"A ½ teaspoonful of chloroform in about eight times as much water is an infallible cure for cholera. A doctor who had lived in Mobile, Ala., and had great success in curing people during a cholera epidemic there, told me about it. When, in the Cuban revolution, I went to Cuba to help organize the insurgent army, I had a chance to try the remedy, for a cholera epidemic broke out among the troops. My first experiment was on a negro who was in the last stages. It cured him and hundreds after him. When we marched, the officers carried bottles of chloroform, and if a man fell out sick with cholera, the remedy was given and he was able to resume his place. I have seen men lying by the roadside in a state of collapse, almost dead. An officer would ride up, dismount and give the remedy, and before the column had passed the man would be in the ranks again."

2. Chronic Diarrhœa—A Well Tried Remedy.—Powdered opium and tannin, each 10 grs.; mix thoroughly and divide into twenty powders. Dose—Take one powder in a little syrup every 4 hours, till improved, then 1 or 2 powders daily, as occasion requires, until the cure is complete.

Remarks.—It is not best to check too suddenly, lest fever or other disturbance of the system arise. Watch carefully, with this, and it will generally be found effectual.

PAIN KILLER, Truly Magical, for All Purposes and Places of Pain.—Morphine, 10 grs.; chloral hydrate and camphor gum, each ½ oz.; chloroform, 1 oz.; nitrite of amyl, 2 drs.; oils of cloves and cinnamon, each, ¼ oz.; alcohol (best), to fill a 4 oz. bottle. Directions—Dissolve the morphine in a little of the alcohol; rub the chloral hydrate and the camphor gum together, which forms a liquid, and add the dissolved morphine and the others, the nitrite of amyl to be the last, as it is very evaporative; then add 3 or 4 drops of strong sulphuric acid, which keeps the morphine in solution. Dose—It may be taken on sugar in doses of 5 to 20 drops, and repeated in 30 minutes to an hour, according to the severity of any internal pain. For headache inhale from the bottle, from nostril to nostril, and apply also over the pain.

Remarks.—This will stop any kind of pain almost immediately, and does seem, at least, to be magical by its quick action upon the nerves, relieving pain at once. I have applied it upon the eyeball (not in the eye, but with the eye closed) holding the finger wet with it for a minute or two, which causes a counter, or external, irritation, and would soon cause a blister, which proves its value as well as its strength and adaptation to the relief of pain in all situations. I cannot speak of it too highly, for slight pains or neuralgia of the eye. I shall use it upon painful teeth, neuralgia, and, in fact, in all pains anywhere, internally and externally. It will be hard, very hard, to excel. The only objection against it is its cost (about 25 cents an ounce), when made in small quantities. It would still be valuable as a liniment if an equal amount of alcohol was added, which would make it cheaper, but to retain its magical power it must be kept full strength.

FELON—Warranted Cure for.—F. F. Lewis, of Whitewater, Wis., says: "Wind a cloth loosely about the finger, leaving the end free. Pour in common gunpowder till the afflicted part is entirely covered; then keep the whole constantly wet with strong spirits of camphor. Warranted to remove all pain in two hours. Have seen it tried many times, and never without absolute cure and without pain or injury to the hand."

SUN-STROKE AND APOPLEXY, How to Cure.—Sun-stroke and apoplexy, can be cured almost surely if taken in any kind of time. Dr. E. B. Babbitt says:

I. "Rub powerfully on the back of the head and neck, making horizontal and downward movements. This draws the blood away from the front of the brain and vitalizes the involuntary nerves.

II. "While rubbing call for cold water immediately, which apply to the face and to the hair on the top and the side of the head.

III. "Call for a bucket of water as hot as can be borne, and pour it by dipperfuls on the back of the head and neck for

several minutes. The effect will be wonderful, for vitalizing the *medulla oblongata* (that part of the spinal column within the head); it vitalizes the whole body, and the patient will generally start up into full conscious life in a very short time.

"Last summer I was called to see a man on Fourth avenue. I found him in a state of coma, and his wife greatly alarmed, supposing him to be dead. He had lain thus for about 3 hours. I had him brought out where he could get the air, jerked off his clothes, rubbed his back, head and neck powerfully, slapped his back, legs and feet briskly, and called for iced water, which I applied to his front and upper head. I then had a bucket of hot water brought, which I poured on his back, head and neck. Before doing this I had noticed some signs of life while applying the cold water in front, but after applying the hot water on the back of the head and neck a few minutes, he started up, vomited, and exclaimed "All right!" I occupied about 20 minutes in thus resuscitating him. He rose up, put on his clothes with a little help, and did not lose an hour more from his business. Persons of large and active brains and weak bodies are more liable to sun-stroke and should wear light-coloured, cool hats in summer, wet the hair occasionally, and if they feel a brain pressure coming on, should rub briskly on the back of the neck and put cold water on the top and front of the head. These remarks, if heeded, will prevent great danger and great suffering. I have never known this method to fail."

Remarks.—Heretofore it has been customary to use only cold water upon the head in sun-stroke or apoplexy, but it seems by the above treatment of Dr. Babbitt, with the hot water upon the back of the head and neck, that consciousness is restored much more quickly, as well as more certainly, for without it, on the old plan of the cold water only, many have never been restored at all; hence the hot water should be provided as quickly as possible, and applied freely with a dipper, while the cold water, by wet cloths, may be kept on the front and top of the head. Small things, when you get the right thing, are often "wonderful," as the doctor puts it above. The colder the water on the front and top of the head, the better, and the hotter it can be borne on the back of the head and neck, the better also. It would seem to me preferrable, to dip cloths into the hot water and apply as hot as they can be borne, re-wetting often, than to pour it. For those who have a tendency to head troubles let them dampen a flat piece of sponge and put it in the hat before going out into a very hot sun. It may be well to know that what is good for sun-stroke is also good for apoplexy.

When one is stricken down in the sun, he should be placed in the shade as quickly as possible, and cold water applied to his face, and the limbs kept warm by rubbing, etc., until he can be removed to the house, where the above plan can be carried out fully.

PIMPLES OR SKIN DISEASES,—Valuable Remedy for.—Glycerine (English or Price's), 100 grs; corrosive sublimate, 5 grs. DIRECTIONS—Rub the corrosive sublimate in a little of the glycerine; then mix all, and apply morning and evening.

Remarks.—M. Pierre Vigier, a French professor, finds, from experiments upon himself and upon his pupils, that substances incorporated with glycerine are not absorbed by the skin, therefore he advises this as a substitute for blue ointment, which stains the linen and is absorbed, while with a glycerine prepared as above, in spite of the causticity of the bichloroid (corrosive sublimate is the bichloroid of mercury), the skin is not irritated by this mixture, and after extensive applications to the skin, no mercury is found in the urine.

The fact that by this form of mixing the corrosive sublimate prevents its absorption into the system, it should be so prepared; as it thus cures these and other skin diseases, it becomes valuable for these purposes. It will also cure itch, as well as pimples, blotches, black-heads (worms in the skin of the face). See "Pimples, Tetter, etc.," where corrosive sublimate is always used.

1. PILLS, Compound Cathartic and Liver.—Comp. ext. of colocynth, ext. of jalap and calomel, each, 100 grs.; gamboge and ext. of hyoscyamus, each, 25 grs.; castile soap in powder (in fact, all in powder except the extract of hyoscyamus, which is gummy). Mix and make into 100 pills. DOSE—As an active cathartic, 2 or 3 pills, to act on the liver, 1 pill at bed-time each night until the action is sufficient.

Remarks.—I have prescribed them and found them to have the desired effect with those persons who prefer calomel to podophyllin. But if there are those who think they would like this pill best if it was not for the calomel, they can leave it out, or put in only 25 grs. of it, so as to have one-fourth of a grain only in each pill. Either way it will be found efficient and satisfactory. I prefer it with only ¼ gr. of calomel to each pill. The old plan of giving large doses of calomel, I feel thankful, is among the things of the past.

2. Liver Regulator, or Liver Complaint, Dyspepsia, etc., Liquid Remedy for.—Fluid exts. of dandelion, blue flag-

root, and rhubarb, each 1 oz.; fl. ext. leptandra (Culver's physic) and simple syrup, each, 2 ozs. Mix. DOSE—One-half teaspoonful every 6 hours.

3. Liquid Physic for Constipated and Weakly Women and Children.—Fl. ext. of butternut, 2 oz.; tinct. of aloes, 5 drs.; comp. tinct. of cardamon, 1 oz.; simple syrup, 4 oz. MIX. DOSE—According to age of children, from 1 to 3 teaspoonfuls in the morning is the best time to give to children, and repeat next morning, if no operation before. For weak, constipated women, the physician whom I first knew to use this preparation was in the habit of triturating calomel 10 grs., with 100 grs. of the sugar of milk, and dividing into 10 powders; then giving 1 powder at 10 in the evening, and at 2 in the morning, followed by 1 or 2 teaspoonfuls of this liquid physic, which carries off all otherwise ill effects of the calomel, arouses the action of the liver and overcomes the tendency to constipation. Those in favour of using calomel will undoubtedly be satisfied to use it in this manner; the trituration, of thoroughly rubbing the calomel, or any other medicine, with sugar or milk, divides it into more minute particles and then it takes less to have the desired effect. Of course, this liquid physic can be taken without the calomel by doubling the dose. See the remarks closing the subject of "Jaundice," for the author's experience and opinion of calomel in small doses. Since writing this I have given the twentieth of a grain calomel pill with entire satisfaction, arousing the action of the liver.

PURIFYING THE BLOOD—Safest Way by the Use of Onions.—Sherley Dare, in answering correspondents through the *Blade Household*, says to "A. E. W.," of Waterloo: "The safest and quickest prescription for clearing the blood is to eat a raw onion, finely minced, at breakfast; the whole of a common sized onion is enough, and a dose of charcoal or ground coffee, and brushing the teeth, will deodorize the breath. The onion can be taken with salt and vinegar as a salad. Consumptives find this of benefit."

Remarks.—I have much more faith in the onion as an alterative, than I have in the idea that the charcoal or powdered coffee, even with the brushing of the teeth, will remove the odor of onions from the breath; but what of that? let the "bref" smell of garlic; if onions will do what they are here credited with, they are certainly more valuable than is generally set down to their credit; but I remember of once being told by a gentleman that a moderate sized onion minced and eaten at each meal, with the salt and vinegar, as above mentioned, would cure dispepsia. I have no doubt of their utility, both as an alterative upon the blood and as a tonic to the stomach; not one is eaten where ten ought to be.

1. DIARRHŒA COMPOUND.—Compound spirits of lavender and tinct. of rhubarb, each, 1 oz.; laudanum, 3 drs.; oil of cinnamon, 10 drops; mix. DOSE—One teaspoonful every hour or two, for an adult, as needed, until relieved; then 2 or 3 times a day only, for a day or two.

2. For Infantile Diarrhœa.—That is, for children at the breast or less than 2 years old: Powdered rhubarb, 10 grs.; calomel, 1 gr.; morphine, ½ gr., and divide into 10 powders, 1 powder for a dose. No danger of salavating a child at the breast.

1. DYSENTERY—Successful Remedy for.—Laudanum and ipecac. DIRECTIONS, DOSE, ETC.—For an adult first give laudanum, 20 drops, to prepare the stomach so it shall retain the ipecac, which is to be given half an hour after, in 20 gr. doses, repeated every six hours until cured. The first dose may be vomited, or partially so, as this article is well understood to possess this property—of vomiting—but it is also known that the stomach can be trained to tolerate (bear) it. It also acts as a mild laxative, tonic, and stimulant to the coats of the stomach and intestines, producing slight sweating, moist and pliable skin and thereby reducing the fever, controlling also the tenesmus (pain and griping) of the rectum at the time of passage, almost if not wholly relieving this difficulty soon after its use is commenced.

NERVOUS HEADACHE—Such as People used to be bled for.—Iodide of potash, 2 drs.; tinct. of gelsemium, 2 drs.; pure water, 2 ozs.; mix. DOSE—1 tea-spoonful once in 2 to 4 hours until relieved.

Remarks.—This is a prescription of a physician of Grand Rapids, Mich., for a lady who called upon him to be bled for the difficulty, according to what she had been accustomed to. But he made this prescription for her and it relieved her. The next season she called upon myself for the same purpose, at the same time showing me the prescription, which I changed to bromide of potassium, in the same quantity for the iodide, which she took with the same success. I prefer the bromide as I think its action upon the nerves more satisfactory.

2. Nervous Headache, New Remedy for.—Salicylate of soda, 10 grs., every 3 hours for an adult, followed next day in 5 to 8 gr. doses. If of long standing, continue 1 or 2 doses daily for a few days longer. Taken by dissolving in water.

Remarks.—This was given in the *Scientific American* by a celebrated physician who gave a case of a boy of 16 years, who had had nervous headache several days each week from the time he was 6 years old, entirely cured by this remedy, and at the time of the report he had been free from the disease several months.

TONSILITIS—Salicylate of Soda for—Also as a Gargle in Ulcerated Cases.—Given in 10 gr. doses, every 2 to 4 hours, internally, and is also used as a gargle in ulcerated cases. Strength of gargle is not given; but I should say 5 to 10 grs. to the oz. of water, according to the degree of ulceration.

Remarks.—I certainly expect much from its use upon a fair trial, and say to all who need it, try it.

SCROFULA, White Swelling, etc.—Salve for.—Scrape sweet elder (inner bark), bitter-sweet (roots and twigs are used), and mullein leaves, each a good handful; boil these, (the roots and twigs being bruised) in a little water; then put in half as much golden seal root, and stew all in two tablespoonfuls of freshly churned and unsalted butter, not level spoonfuls but as you would take them up heaping from rather soft butter, and an equal quantity of mutton tallow. Stew till the water is all out, and the mass crisped or dry, but not burned; then strain and put back into the skillet, and add half as much beeswax as of tallow, and half as much pine pitch as of the beeswax. DIRECTIONS—For white swelling spread on a cloth and apply; for scrofulous sores put on cotton, and put into the sores or openings, if any, otherwise the same as for white swellings.

Remarks.—I should apply this salve while taking No. 1 internally, as I think it will hasten recovery. It will be found valuable for all purposes, as an ointment rather than a salve, if not made too stiff with the beeswax. As an ointment use but very little beeswax.

PLIABLE COLLODION—Or Artificial Skin—For Abrasions, Burns, Sores, etc.—A French journal gives us the following plan of making collodion pliable, for all purposes where water may come in contact with the spot, as upon the face, hands, lips, etc.: Collodion, 30 grammes; castor oil and soft turpentine (Venice turpentine or pine pitch), each 50 centigrammes, mix.

Remarks.—As a gramme is so nearly 15½ grains (being actually 15 and 334 of 1,000 parts of a grain we call it 15½ grains,) and as a centigramme is the 1-100th of a gramme, in the 50 centigrammes we get nearly 8 grains, hence we say: Collodion, 1 oz.; and castor oil and soft turpentine, each 8 grs. And thus we have the recipe Americanized, so that it can be filled understandingly by anyone or druggist. Apply with a brush. It will be found quite satisfactory to apply upon any injured parts, scratch, bruise, etc., as by putting on two or three times, as the first coat dries, it forms an artificial skin over the sore.

1. CHILBLAINS, FROST BITES, ETC.—Valuable Remedy for.—Spirits of turpentine and sulphuric acid, each ¼ oz.; olive oil, 1¼ oz.; mix, shake and apply frequently.

2. Spirits of Turpentine, 1 oz.; ammonia ½ oz., with as much camphor gum as this will dissolve, used as a liniment, will cure these hateful things.

3. **To Relieve** the intense itching: 2 or 3 bathings of the parts, warming in before the fire, or strong alum water gives relief.

4. An ointment made by rubbing as much tincture of cantharides into any simple "cerate," as it will take up (any druggist will prepare a small box of it for about 15 cents). Bathe the feet in warm water, wipe and rub this on at bed time. I cured a bad case of six years standing, in 2 or 3 applications, and afterwards cured several other cases.

WORMS—REMEDIES, VERMIFUGES.

There are seldom found but three varieties of worms in the human intestines.

I. The principal, or most common one, is the long, round worm, found in the small intestines.

II. The second variety is the small, round or pin-worm, so called because scarcely ever longer or larger than a pin. These are chiefly found in the rectum, and known to be there from an intolerable itching.

III. The last, or third variety, is the tape worm, called by physicians *tænia solium* (from *tænia*, tape, and *solus*, alone); for as a general thing, there is only one of them found to annoy the patient. The remedies for them I shall give in the order in which I have mentioned them.

1. THE ECLECTIC VERMIFUGE—The Latest and Least Distasteful.—Santonine, 30 grs.; white sugar, 50 grs. DIRECTIONS—Rub together evenly, and divide into 10 powders. DOSE—Give one powder an hour before supper and 1 at bed time; next day 1 powder before each meal and at bed time, and the following day the same, which uses up all the powders. Next morning take an active cathartic, to carry off the worms.

Remarks.—I recently took this remedy in just this way, realizing that I, at nearly 68 years of age, had them. For the cathartic I took 2 blue papers of seidlitz powders and 1 white paper, to be sure and get quick and thorough action. It did act quickly and brought them away. I have enjoyed better health since.

2. Pin Worms.—A solution made by soaking rasped quassia, ½ oz., in cold water, 1 pt., for 12 hours, then straining for the purpose of injection, is very effectual to remove pin worms. A solution of aloes, ½ oz., with carbonate of potash, 15 grs., in ½ pt. of decoction, or tea, of barley, dissolved by rubbing together, for an injection; or an injection of simple sweet oil, says Dr. Warren, of Boston, are very effectual in removing pin worms. Lime water (which see how to make) is also frequently used as an injection for the removal of pin worms.

3. Tape Worm—The Latest, Most Easily Taken, and Most Successful Remedy for.—There has been quite a stir made recently by two or three travelling physicians with the French chemist Tauret's "pellètierine," in removing tape worms. I have seen several that have been removed here within a few months. I had known that one physician was using it here with success before, but not being of the talkative kind, very little was said about it. With this introduction, I will say: Tauret's "pellètierine" is put up in bottles containing *one dose* only, and retails at about $3 per bottle. Its action is to numb the worm, causing more or less giddiness, according to the nervousness of the patient. This soon passes off by the patient laying down and keeping quiet. It is perfectly safe, and but slight preparation is necessary to take it. DOSE—One bottle being a full dose for a man, delicate females and youths of about fifteen years would take only two-thirds; children of 10 or 12, one half, and of 4 to 8 years, only one-third of a bottle. DIRECTIONS—The day before it is to be taken, take a laxative or gentle cathartic, or a copious injection; and for supper eat only a milk diet. In the morning take half a glass of water on an empty stomach; then, five minutes after, take the pellètierine, and immediately after, half a glass more of water, slightly sweetened. Three-fourths of an hour after take a dose of comp. tinct. of jalap; or infusion of senna (made by steeping ½ oz.), sweetened with syrup of orange peel. If in a few hours there are no stools, take a purgative injection or repeat the purgative medicine. The giddiness will come on in about 15 minutes after taking the pellètierine, and the worms ought to be expelled in 2 to 4 hours. I have seen one passed in 1½ hours from the taking of the remedy. It is important to remember, say the instructions sent out, that the purgative must act rapidly. Don't stay in bed any longer than the giddiness lasts; then move about to help the action of the medicines. I have taken these instructions from a pamphlet sent out by E. Fougera & Co., 30 North William street, New York, who supply the article if your druggist has not got it. The pellètierine is made from pomegranate bark, which has been the main dependence for removing tape worms; but as it had to be made in the form of an infusion and taken in large doses of ½ pt. or more, often causing sickness of the stomach, this new preparation is as great a boon as quinine was over having to take the Peruvian bark in powder, as formerly; and as the pellètierine has proved very successful, it will, undoubtedly be but a short time till our druggists will keep it, and it will enter into general use.

Professor Lahulbéne gives 19 successes in 19 trials. Dujardin-Beametz, member of the Academy of Medicine, France, succeeded 37 times in 39 trials. Dr. Ed. Mount, of Montreal, had 4 successes out of 4 trials; one of the cases had been troubled with tape worm for 26 years. Dr. H. Wilfert, of the Cincinnati Academy succeeded also in every case.

I will mention only one case more, the worm I spoke of being removed in one hour and a half, in the foregoing. The medicine was administered by a boy of less than 20 years, who had been with a doctor for a short time only, and learned what was used. The man was a butcher, and was well pleased to be rid of his tormentor.

1. DYSPEPTICS—Bad Cases Put Upon the Right Tack.—A writer in the *Medical Journal*, discoursing upon dyspepsia, says: "We have seen dyspeptics who suffered untold torments with almost every kind of food. Bread became a burning acid. Meat and milk were solid and liquid fires. We have seen these same sufferers trying to avoid food and drink, and even going to the enema (syringe) for sustenance. And we have seen the torments pass away, and their hunger relieved by living upon the white of eggs which have been boiled in bubbling water for thirty minutes. At the end of a

week we have given the hard yoke of the egg with the white, and upon this diet alone, without fluid of any kind, we have seen them begin to gain flesh and strength, and refreshing sleep. After weeks of this treatment they have been able, with great care, to begin upon other food; and all this," the writer adds, "without taking medicine." He says "that hard boiled eggs are not half so bad as half boiled ones, and ten times as easy to digest as raw eggs, even in egg-nog."

2. Dyspepsia, Liquid Food for.—Take fresh, lean beef, cut thin, 1 lb. Put it into a large-mouthed bottle or jar; add a little salt; place the bottle in a kettle of boiling water, and let it boil 1 hour, then strain through a woollen cloth. (It seems to the author that a stout piece of muslin is just as good.) There will be about 1 gill (4 ozs.) of clear, nutritious liquid. Begin by taking 1 teaspoonful, and increase the quantity as the stomach will bear. This has been retained on the stomach when nothing else could. It cured an old captain when nearly gone with dyspepsia.

Dyspeptics, Excellent Food for.—Take a piece of stale wheat bread and a little white sugar, and cover with boiling water, then cover with a plate for a short time, add cream or good milk. This dish rests easy on the stomach and is very pleasant.

Remarks.—This, of course, is not understood to be toasted, but in its simple state—to toast bread makes it much the nature of freshly baked, which is not good for the healthy, and especially bad for dyspeptics or the debilitated from any disease or cause whatever.

4. Dyspepsia and Weak Stomach, The Value of Milk and Lime-Water for.—Milk and Lime-water are now frequently prescribed by physicians in cases of dyspepsia and weakness of the stomach, and in some cases are said to prove very beneficial. Many persons who think good bread and milk a luxury, frequently hesitate to eat it, for the reason that the milk will not digest readily; sourness of the stomach will often follow. But experience proves that lime-water and milk are not only food and medicine at an early period of life, but also at a later, when, as in the case of infants, the functions of digestion and assimilation have been seriously impaired. A stomach taxed by gluttony, irritated by improper food, inflamed by alcohol, enfeebled by disease, or otherwise unfitted for its duties—as is shown by various symptoms attendant upon indigestion, dyspepsia, diarrhœa, dysentery and fever—will resume its work, and do it energetically, on an exclusive diet of bread, and milk and lime-water. A goblet of cow's milk may have 3 to 4 table-spoonfuls of lime-water added to it with good effect.

These ideas are fully endorsed by Dr. E. N. Chapman, who presented the following valuable notes on the use of milk and lime-water for invalids, to the Medical Society of the State of New York. He says: "I have used milk and lime-water for years as a diet with my patients with great success, particularly in cases involving nerve centres, that are acknowledged to be little under the command of the accepted modes of treatment, such, for instance, as marasmus (a wasting of flesh), anemia (debility from poor blood), paralysis, indigestion, neuralgia, cholera, dementia (insanity) and alcoholism. Also in cases where the nutritive functions are at fault, milk, with a pinch of salt being rendered very acceptable to the stomach by the lime, is the most digestible and nourishing food that can be given. It allays gastric (stomach) and intestinal irritability, offers a duly prepared chyle to the absorbents, supplies the blood with all the elements of nutrition, institutes healthy tissue changes, stimulates the secreting and excreting glands, and, in a word, provides nature with the material to sustain herself in her contest with disease. * * * Milk, acted on with lime-water, has a range of application almost as extensive as disease itself, whatever its character and whoever the patient."

Remarks.—I trust that enough has now been said to satisfy everybody of the value of milk in disease, and I will add that I know it to be equally valuable as a regular family diet.

5. Dyspepsia, or Indigestion, Very Valuable Treatment of.—I am now using a very valuable medicine, or combination, on a case where the indigestion was very bad, so much so, it might be considered real dyspepsia; but the treatment allayed the distress so promptly, and helped, or enabled the food to digest so effectually that I will give the recipe. First I used the following fluid preparation:

1. *Solution for Dyspepsia.*—Pepsin in crystals, 30 grs; glycerine, 1 oz.; concentrated lactic acid, ½ oz.; distilled, or soft water, 4 ozs.; mix. Dose—A tea-spoonful in 3 or 4 tea-spoonfuls of water immediately after each meal.

Remarks.—After a week or two, as the case may improve, less, and still less may be used, say ½ tea-spoonful only till finally cured. And in case there is a diarrhœal tendency, or any inflammatory condition of any part of the system, in which the lactic acid is not good, take the following powder, in place of the solution, as above:

6. Powder for Dyspepsia, Diarrhœa, etc.—Sub-carbonate of bismuth, 200 grs.; Scheffer's, or other good pepsin, 100 grs. Mix thoroughly and make into 20 powders. DOSE—Take 1 powder in a little molasses and water, half-and-half, immediately after each meal, the same as the solution; and after some time, or suitable improvement has been made, divide a powder for 2 doses, as long as needed.

7. Hot Water for Dyspepsia.—The following item is from the *Hartford Courant*, which I have since proven to be very valuable, by using the hot water an hour before each meal, instead of only at breakfast. The *Courant* says: "A gentleman who is in business in this city has cured himself of a chronic and ugly form of dyspepsia in a very simple way. He was given up to die, but he finally abandoned alike the doctors and the drugs, and resorted to a method of treatment which most doctors and most persons would laugh at as 'an old woman's remedy.' It was simply swallowing a tea-cupful of hot water before breakfast every morning. He took the water from the cook's tea-kettle, and so hot that he could only take it by the spoonful. For about three weeks this morning dose was repeated, the dyspepsia decreasing all the while. At the end of that time he could eat, he says, any breakfast or dinner that any well person could eat—had gained in weight, and has ever since been hearty and well. His weight is now between 30 and 40 pounds greater than it was during the dyspepsia sufferings, and for several years he has had no trouble with his stomach—unless it was some temporary inconvenience, due to a late supper or dining out, and in such a case a single trial of his ante-breakfast remedy was sure to set all things right. He obtained his idea from a German doctor and in turn recommended it to others—and in every case, according to this gentleman's account, a cure was effected."

Remarks.—After seeing the above item in the *Courant* I have had occasion to use the hot water personally, and to direct it for others, and I have found it satisfactory if taken faithfully before each meal, instead of only at breakfast. I also find that heating it in summer to about 140 degrees and in winter to 145 degrees F., is about the right degree of heat. I heat it over a small coal oil stove, in a pint tin cup about ¾ full, which I find about the right amount to be taken at one time. It can be heated in a tea-kettle and poured into a cup or bowl, but it is well to have a thermometer to know just what the heat is. A tea-spoonful of sugar makes it pleasant for me, but a bit of lemon juice might suit some better. It must be followed for several months in long standing cases, to prove of lasting benefit, eating only easily digested food and nothing that disagrees with the stomach. The sipping of the hot water has this advantage also, it allays the great thirst of dyspeptic patients, as well as the heat and distress in the stomach, better than any thing else I know of, contracting the lax and flabby condition of the muscular coating of the stomach, giving tone and strength to this organ, which immediately diffuses itself to the whole system. Take the hot water before each meal and at bed-time as long as you have any considerable thirst. Be careful, also, not to eat too much, and only at meal times, and a cure must be the result.

BRIGHT'S DISEASE OF THE KIDNEYS,—A Novel Cure for.—A correspondent of the New York *Evening Post* gives the following novel item to that journal. He says:

"About 20 years ago, a daughter of mine—then about 6 years old—was given up to die by the family physician, who said that she had Bright's Disease of the Kidneys, and that it was incurable, and never known to be cured either in Europe or America. The physician, on giving the case up, told my wife to give the child anything that she wanted, and to make her as comfortable as possible while she lived. The child constantly called for beans; so my wife cooked some as quickly as possible, not stopping to parboil them, as is usually done, but boiled beans, pork and potatoes together, in the first water, and when well cooked she gave them to the child to eat. The child then went to sleep and from that time began to improve. She is now the mother of two children. She is not troubled with the disease, unless she takes a severe cold, and when that happens she at once uses her old remedy, and it is always effectual."

Bright's Disease—Sixteen out of Nineteen Cases in a London Hospital Cured.—Notwithstanding the statement in the item above, that Bright's disease was never to be cured in Europe or America, still some years ago a London (Eng.) physician reported in the *London Lancet*, the cure of 16 out of 19 cases, in the Hospital, by the use of 15 gr. doses of powdered valerian, 3 or 4 times a day, with supporting diet. Now the fl. ex. would be used in ½ to 1 teaspoon doses, with the same effect; but I am not aware of its having been used by others. But if one has the difficulty it had better be tried, and may, with the beans, as above, cure more than without them.

QUINSY.—A New and Successful Remedy for.—A Dr. Gine, Professor of Clinical Surgery, at Madrid, Spain, reports through the *La Presse Med. Belge*, July 17, 1881, the bicarbonate of soda (the common baking soda, the best, however, is the English bicarbonate, kept by druggists) applied to the tonsils in fine powder in Quinsy, repeating frequently, is of inestimable efficacy, he having cured dozens of cases—in no case without benefit, and, usually a cure in 24 hours; and in no case when he had used it had he found it necessary to remove the tonsils.

DIRECTIONS FOR APPLICATION.—It may be applied by rolling a bit of paper of suitable length into cylindrical form, then putting the end into a fine powder of the soda, to get a suitable amount into the hollow, the size of an ordinary goose quill and blowing it upon the tonsils; or applying it by wetting the finger, then putting the finger into the powder, then upon the tonsils.

Remarks.—I have had no opportunity for trying it for this purpose, but I have proved its value as a gargle in "Sore Throat,"—which see. See also its value in "Burns, Scalds, etc." See also, "Inflammation of the Tonsils following Sick Headache," where the latter remedy—the salicylate of soda—is used as a satisfactory cure in both these diseases, as inflammation of the tonsils is only another name for quinsy.

1. EYE-WATERS.—Sulphate of zinc, and fine table salt, each 4 grs.; sugar of lead, 2 grs.; morphine, 5 grs.; loaf sugar, 10 grs.; distilled or rain water, 4 ozs.; mix and keep corked. DIRECTIONS—Drop 1 or 2 drops in the eye morning and evening, else apply with the finger between the lids which is the most common way. Best done when laying down. It can be done very well by holding the head back.

Remarks.—This will be found a very valuable eye-water in all cases of weakness, or slight inflammation of the eye. It may be applied three or four times a day, if needed so often. It is well to shake it two or three times a day at first, for a week or ten days, then allow to settle, and strain. If this causes too much smarting in bad cases, reduce some of it with more rain water, so it shall not smart more than five minutes at most.

2. Weak Eyes, Wash for.—Some writer on weak eyes says: "Bathe your eyes night and morning in a tolerably strong solution of common table salt and water. We have known some remarkable cures effected by this simple remedy. After bathing the eyes daily for about a week, intermit a day or two; then resume the daily bathing, and so on till your eyes get strong again."

3. Eyes, Acute Inflammation of—Valuable Remedy.—For an acute inflammation of the eyes I know of nothing better than to take the white of an egg, in a tin cup, and beat into it thoroughly about ½ a teaspoon of powdered alum; set on the stove to heat, and stir constantly till it curdles; then strain off the whey, breaking up the curd and putting it upon a cloth, and lay upon the eye; and as it becomes dry, take it off and fold the cloth around it to keep the curd together; re-wet it, by putting it into the whey, drain off the surplus whey, and re-apply. This may be done 2 or 3 times; then make more, if needed, and use the same way, until the inflammation subsides; after which any of the eye waters, reduced with water to be very mild, may be used to strengthen the eyes. I have used this in just this way, upon my own eye, with entire success. If the inflammation should continue long, take some salts or cream of tartar, or the sulphur mixture as in No. 2 for **"Catarrhal Ophthalmia."** I see this alum cure is recommended, in about the same way, for sprains. I have not used it upon them; yet, as a sprain produces an inflammation, I think it will prove valuable there also.

4. Stye upon the Eye—Lid Remedy.—Put a teaspoonful of black tea in a small bag; pour on it enough boiling water to moisten it; then put it on the eye pretty warm. Keep it on all night and in the morning the stye will most likely be gone; if not, a second application is certain to remove it.

Remarks.—The infusion of weak tea, made from black tea, has been for some time considered good as an eye-water, then why not the grounds good as a poultice? I believe it may be worthy of trial.

CORNS—Hard and Soft—Warts, Bunions, etc.—

1. *Corns.*—Probably but few subjects of more universal interest could be found than the very humble one of corns. A writer in the *Christian Weekly* says: "They are of two kinds—soft and hard—the result of pressure which stimulates the skin so that an increased flow of blood to the excited part is caused, and the cells of the cuticle (from the Latin *cutis*, skin) are more rapidly produced than is natural. Soft corns occur between the toes, because of the pressure of the joints of the smaller toes on the opposite skin, and the corn is constantly moist with perspiration. The first thing in the cure of corns is to remove the cause—wear soft, broad-toed shoes and boots, and thus remove the irritating pressure.

I. *Hard Corns*—Soak hard corns in warm water, shave down, touch them with a little ascetic acid occasionally, and put a thin plaster over the corn to prevent chaffing after the application of the acid.

II. *Soft Corns*.—In the case of soft corns great cleanliness must be observed, the suffering toes must be kept separate by a bit of cotton, and the dead skin, after touching lightly with the acid, must be removed as fast as the tenderness will allow. But no cure can be accomplished while an ill-fitting shoe is still doing its mischievous work. Too tight a shoe,

especially one too narrow-toed, is an ill-fitting shoe.

Remarks.—I wish to say, as confirming the idea above advanced, that if any one will not give up their "tight fits" they may rest assured that they will always have a crop of corn(s) on hand or rather on foot. So suit yourself as to keeping a full supply.

2. Corns, Simple Remedy for.—Having removed the friction and pressure causing corns, by the substitution of well-constructed shoes and boots, the thickened cuticle may be removed by applying equal parts of carbonate of soda and common brown bar soap. Rub these substances together with a spoon handle or a knife blade on the surface of a plate, forming a strong alkaline ointment. DIRECTIONS—Spread a little of this on a piece of buck-skin or wash-leather and apply it to the surface of the corns at bed-time, after soaking them for five or ten minutes in hot water, allowing it to remain until morning. When the soap plaster is removed in the morning the corn to which it has been applied will be found white and soft, and by scraping a little around its base with your finger-nail or a dull knife, it may be easily raised up and removed. Then apply the collodion or artificial skin, or a bit of court plaster till it heals. This is all that is needed, except to wear easy shoes and boots.

3. Warts, Simple Cure for.—Chromic acid, a drop or two to each wart at bed-time, I will warrant to cure in 3 days.

Remarks.—Be careful not to get it on the hands or clothing, nor leave it where children can get it. Carbolic acid, full strength, will do the same thing. The best way to apply any acids is to take the end of a match-stick and mash one end between the teeth, to make a broom-like end, to hold only a drop or two, and just touch the head of the wart, or corn with the acid 2 or 3 times. Remember this—if you get too much acid on, so it runs down into the flesh, soda will neutralize it. The chromic acid is considered the safest of the acids. (See Cancer, Chromic Acid in, etc.) Don't use enough to spread upon other parts.

SEASICKNESS—Cure for.—Dr. Landener, of Athens, Greece, claims to have discovered that 10 to 12 drops of chloroform cures seasickness. One dose cured 18 out of 20; the second dose cured the others.

Remarks.—It is simple, easily obtained and not unpleasant to take in a little water. And a lady who has had considerable experience in crossing parts of Lake Erie informs me that the smelling of chloroform a few times has relieved much of the nausea attending seasickness. So, also, my judgment is that the taking and inhaling a little of it from the bottle will do great good.

2. English Remedy.—The bromide of sodium, for long voyages, has been found very effectual in doses of 10 grs., 3 times a day, in treating 200 cases of ocean seasickness.—*Dr. Kendall, in British Medical Journal.*

Remarks.—The bromide of sodium was first used by the late Dr. Beard. The indiscriminate use of oranges, lemons, brandy and champagne, Dr. Kendall condemns, as making the case worse than without them.

RINGWORM REMEDIES.—The form that this eruption takes gives its name, as it is generally in a circle, itching considerably when the body is heated by exercise, or in hot weather, and also if rubbed or scratched. A saturated solution (all that will dissolve) of blue vitriol in water, touching the parts several times daily, will cure them.

SPRAINS—Capital Remedy for.—The white of an egg, into which a piece of alum about the size of a hickory nut has been stirred, stirring constantly until it forms a jelly or curd, is a capital remedy for sprains. It should be laid over the sprain upon a piece of lint, and be changed or re-wet in the whey as often as it becomes dry.

Remarks.—I think it best to lay on a cloth, rather than lint, for convenience of re-wetting, as in for Inflammation of the Eye; full directions there how to make and use it. It allays inflammation and soreness quickly.

CUTS, WOUNDS, FELONS AND OTHER INFLAMMATIONS—Hot Water Poultice for.—A paper called the *Home Health* says that a hot water poultice is the most healing application for cuts, bruises, wounds, sores, felons and other inflammations, that can be used. The poultice is made by dipping cotton in hot water and applying, changing often. A convenient way is, in case of felons or other painful abscess, to hold the hand for hours in water as hot as can be comfortably borne.

Remarks.—This is undoubtedly valuable. I have for some time past used hot applications to an inflamed eye, while most physicians apply cold. It is good for internal use, as seen by the use of the hot water cures for dyspepsia, consumption,

etc., in this book, which see; why not good for external applications? I believe it will be found so, if a wound or other sore manifests the least tendency to inflame and become tedious in healing.

1. CATARRH, NASAL—Common Sense Treatment for.—Notwithstanding Dr. Dio Lewis has sometimes appeared, at least, to run the "diet" question into the ground, as we often hear said, yet his remarks upon it in connection with nasal catarrh are perfectly sound. He says:

"For nasal catarrh, eat only a piece of beefsteak (broiled is best) half as large as your hand, one baked potato and one slice of bread for your breakfast; a piece of roast beef as large as your hand, with one boiled potato and one slice of bread for dinner; take nothing for supper, and go to bed at 8.30 o'clock. Sleep, if possible, half an hour before dinner. Drink nothing with your meals, nor within two hours after. Drink as much cold water on rising and going to bed as you can. Live 4 to 6 hours daily in the open air, riding or walking. Bathe frequently, and every night on going to bed rub the skin all over with a hair glove. [There are two kinds of hair gloves, the English and American, usually kept by druggists. The English are the best, being more durable.] In less than a week you will get along with one handkerchief daily. To cure even bad cases you have only to make your stomach digest well—only to make yourself healthier—and your nose will quickly find it out and adapt itself to the better manners of its companions."

2. CATARRH SNUFF.—Pulverized borax, 1 oz.; loaf-sugar, pulverized, ½ dr. Mix thoroughly, and take 6 to 10 pinches daily.

Remarks.—It may be used in connection with any other treatment, and will be found especially valuable in all recent cases, and has cured many chronic, or long-standing cases, without other aids. Still it is always best to use general treatment in connection with it. If the throat is at all sore at the same time you take a pinch of the snuff, it will be found valuable to take another pinch and drop it into the fauces, or back part of the throat. It helps the cure materially.

LIQUOR—The Use of it leaves a Permanent Injury.—An American physician, who has given attention to the study of alcoholism, said in the course of an address recently delivered before a learned society: "There are constantly crowding into our insane asylums persons, 50 to 80 years of age, who in early life were addicted to the use of alcoholic liquors, but who had reformed, and for 10, 20, or 30 years had never touched a drop. The injury which the liquor did to their bodies seemed to have all disappeared, being triumphed over by the full vigor of their manhood; but when their natural force began to decrease, then the concealed mischief showed itself in insanity, clearly demonstrating that the injury to their brain was of a permanent character."

Remarks.—Then is there not a double reason for not using it? The loss of time and money, and often the abuse of wife and children, or other friends, while using it, and the probability of the loss of one's reason in old age. It is greatly to be hoped that a word to the wise may be sufficient.

1. LIFE LENGTHENED—Sensible Rules for.—Dr. Hall, in his excellent *Journal of Health*, gives the following sensible and suggestive rules under the above heading:

I. Cultivate an equable temper; many have fallen dead in a fit of passion.

II. Eat regularly, not over thrice a day, and nothing between meals.

III. Go to bed at regular hours. Get up as soon as you wake of yourself, and do not sleep in the daytime—at least, not longer than ten minutes before dinner.

IV. Work in moderation, and not as though you were doing it by the job.

V. Stop working before you are very much tired—before you are "fagged out."

VI. Cultivate a generous and accommodating temper.

VII. Never cross a bridge before you come to it; this will save you half the troubles of life. (In other words, "don't borrow trouble.")

VIII. Never eat when you are not hungry, nor drink when you are not thirsty.

IX. Let your appetite always come uninvited.

X. Cool off in a place greatly warmer than the one in which you have been exercising. This simple rule would prevent incalculable sickness and save thousands of lives every year.

XI. Never resist a call of nature, for a single moment.

XII. Never allow yourself to be chilled through and through; it is this which destroys so many every year, in a few days' sickness, from pneumonia—called by some, lung fever—or inflammation of the lungs.

XIII. Whoever drinks no liquids at meals will add years of pleasurable existence to his life. Of cold or warm drinks, the cold ones are the most pernicious. Drinking at meals induces persons to eat more than they otherwise would, as any one can verify by experiment; and it is excess in eating which devastates the land with sickness, suffering and death.

XIV. After fifty years of age, if not a day laborer, and sedentary persons at forty, should eat but twice a day—in the morning, and about four in the afternoon; for every organ without adequate rest will "give out" prematurely.

XV. Begin early to live under the benign influence of Christian religion, for it, "has the promise of the life that now is and of that which is to come."

Remarks.—These rules need no extended commendation—they are certainly sensible.

2. How Long Have We to Live as Shown by the Life Assurance Tables.—The following is one of the authenticated tables, in use among insurance companies, showing the average length of life at the various ages. In the first column we have persons of average health, and in the second column, we are enabled to peep, as it were, behind the scenes, and gather from their table the number of years they will give us to live. This table is the result of careful calculation, and seldom proves misleading. Of course, sudden and premature deaths—from accidents, unusual severity of disease, etc.—as well as lives unusually extended, occasionally occur; but this is the average expectancy of life, of an ordinary man, who lives prudently and avoids all undue exposures, etc. In the earlier years of life, the female, from less exposure, has from 1 to 2 years more of life in expectation than the male; but as life advances, this over-average comes down gradually to nearly the same; but still there is a trifle, or small part of the year, always in favor of the woman. I will say, at the start, that the average life of all born into the world is, for males; about 39-90/100 years, and for females, 41-85/100 years. I shall only give the figures for every 10 years up to 20, and after 60, for, so far as business is concerned, before 20 and after 60, it will not be of much account, yet interesting as a matter of curiosity. The table is given in years and hundredths of a year, by Dr. William Farr.

Age. Those who reach.	More years to live.	Age. Those who reach.	More years to live.
0	39.90	45	22.76
1	46.65	50	19.54
10	47.05	55	16.45
20	39.48	60	13.53
25	36.12	70	8.45
30	32.76	80	4.93
35	29.40	90	2.84
40	26.06	100	1.68

Remarks.—With this table before us, taking the present age of any person in ordinary good health, we see at a glance how much longer they may be expected to live. By considering these things, we can tell whether or not it would be best to enter into new business enterprises, marriage relations, etc. And, with the table, on "The Pulse in Health," we can tell pretty nearly whether we are in an average condition of health or not, as these figures do not lie; if they do not hold good in any particular case, it is from a want of average health.

Supposing the ladies will desire to know their chances or probabilities of marriage, I will append a table showing what their prospects are, between thirteen and forty; as follows:

3. Chances of Women for Marriage.—The following statement is drawn from the register cases of 876 married women

in France. It is the first ever constructed to show ladies their chances of marriage at various ages. Of the above number there were married:

3 at 13	45 at 17	86 at 21	36 at 25	17 at 29	7 at 33	2 at 37
11 at 14	77 at 18	85 at 22	24 at 26	9 at 30	5 at 34	0 at 38
16 at 15	115 at 19	59 at 23	28 at 27	7 at 31	3 at 35	1 at 39
43 at 16	118 at 20	53 at 24	22 at 28	5 at 32	0 at 36	0 at 40

4. The Pulse in Health—Average Beats per Minute—From Physiologist Carpenter:

New-born infants,	From	140	down to	130
During 1st year,	"	130	" "	115
" 2nd year,	"	115	" "	100
" 3d year,	"	105	" "	95
From 7th to 14th year,	"	90	" "	80
" 14th to 21st year,	"	85	" "	75
" 21st to 60th year,	"	75	" "	70
In old age,	"	75	" "	60

In inflammatory or acute diseases the pulse may rise to 120 or even to 160, in the adult, and becoming so frequent in the child that it cannot be counted. Muscular exertion, mental excitement, digestion, alcoholic drink, and elevation above the sea level, accelerate the pulse, and as a rule it is more frequent in the morning than in the evening. It is slower in sleep, and from the effects of rest, diet, cold, or blood-letting. The pulse of a grown woman exceeds that of a man of the same age, as much as 10 to 14 beats a minute, and, according to some authorities, is less frequent in the tall than in the short person; the variations being about 4 beats for each 6 inches of height.

Remarks.—With this tabulation, any person of average ability (we are now talking of averages) can form a fair opinion of how much disturbance there may be in one's system, to cause any variation from the general average, and hence, tell how sick a person may be and the probability of returning health, under favorable circumstances; also the general average of the length of life and probability of marriages, etc. But it may not be amiss here, to state that while standing, a healthy man's pulse beats about 74 times in a minute; when sitting, only about 70; and when he lies down, only about 64. Thus the heart takes its rest at night; and as the heart passes in its beats about 6 ozs. of blood, it is saved the lifting of about 30,000 ozs. of blood in 8 hours' sleep. But now suppose he is a drinking man, and takes his wine or liquor day and night the heart must not only get no rest, but is increased by at least 15,000 beats in this 8 hours and he rises more tired than when he retired, and wholly unfit for the day's work, and so strikes out again for the "ruddy bumper," as some call it, to "settle his nerves," and thus in a few years he settles, also, into a drunkard's grave, mourned for only by those who ought to have been helped by him yet, for many years, if he would have cast away his "cups." O, why will men so far forget the object of their being?

1. THE TONGUE—What it Tells.—I am very sorry that I do not know who wrote the following soliloquy upon the tongue, as it is both sensible and sound in its teachings: hence, I say, let it be read with care and its teachings heeded. He says:

"A man can never be happy if his stomach is out of order; and dyspepsia and hysteria initiate the symptoms of innumerable disorders. But how, the reader may ask, can I tell the illness from which I think I am suffering to be real or imaginary? At any rate, I should answer, look to your stomach first, and, pray, just take a glance at your tongue. If ever I was so far left to myself as to meditate some rash act, I should, before going into the matter, have a look at my tongue. If it was not perfectly clean and moist I should not consider myself perfectly healthy, nor perfectly sane, and would postpone my proceedings in the hope that my worldly prospects would get brighter. What does a physician discover by looking at the tongue? Many things. The tongue sympathizes with every trifling ailment of body or mind, and more especially with the state of the stomach. That thin, whitish layer (fur) all over the surface indicates indigestion. A patchy tongue (*i.e.*, the fur in patches) shows that the stomach is very much out of order indeed. A yellow tongue points to

biliousness. A creamy, shivering, thick, indented tongue, tells of previous excesses; and I do not like my friends to wear such tongues, for I sincerely believe that real comfort can not be secured in this world by any one who does not keep his feet warm, his head cool, and his tongue clean."

LEMONS—Their Value in Sickness and in Health.—One of the journals, speaking of the use of lemons, says:—"For all people, either in sickness or in health, lemonade is a safe drink. It corrects biliousness. It is a specific (positive cure) against worms and skin complaints. Lemon juice is the best antiscorbutic remedy known. It not only cures the disease but prevents it. Sailors make a daily use of it for this purpose. A physician suggests rubbing of the gums daily with lemon juice, to keep them in health. The hands and the nails are also kept clean, white and soft by the daily use of lemon instead of soap. It also prevents chilblains. Lemon used in intermittent fever is mixed with strong, hot, black tea, or coffee without sugar. Neuralgia may be cured by rubbing the part affected with a lemon. It is valuable, also, to cure warts and destroy dandruff on the head by rubbing the roots of the hair with it. In fact, its uses are manifold, and the more we use them the better we shall find ourselves."

Remarks.—See also their value for freckles, and the use of hot lemonade to cure colds, and also lemon juice a cure for small-pox, etc.

ERYSIPELAS—New and Successful Remedy.—Dr. T. B. King, of this city (Toledo, O.), an old physician, of the "Old School,"—Allopathic—tells me he has cured erysipelas upon a woman's leg (by the way do women have "legs"—I believe not so understood, but "limbs"), after ulcerated and swollen so bad that other doctors said it must be amputated. But by simply dusting upon it, freely, the per sulphate of iron (Monsel's salt), cleaning off twice daily, with warm suds, and re-applying, without other treatment, effectually cured her.

Remarks.—This salt, or preparation of iron, is a great favourite with Dr. King. He applies it through a speculum (from the Latin *specere*, to look), to ulcers at the mouth of the womb, or upper part of the vagina, he says, with equal success. I have also used it, with success, in several of these ulcerations, so I have confidence in it, in erysipelas also. To avoid staining the clothing, in these cases, wear a suitable bandage to absorb any escaping fluid, as the iron in this leaves an iron-rust appearance upon the clothing.

1. DIABETES—Valuable Diet for, and Diet to be avoided.—Experience has shown that the only way to cure diabetes is to change from the ordinary to the following plan of diet:

I. *Food and Drinks which may be Used.*—The quickest way is to confine the patient to beef and bread made of gluten flour, which has all the starchy parts of the wheat removed from it in its manufacture; but mutton, tripe, tongue, ham, bacon, sausage, poultry, game, oysters, clams and eggs may be occasionally used for variety's sake (but liver never); so also salads, made with cabbage or lettuce; cucumbers, watercress, cauliflower, spinach and string beans in their season; so also peaches and strawberries with cream, but never with sugar; in fact, all tart fruit may be used, especially nice sour apples, peeled, quartered and cored, dipped in beaten eggs and rolled in fine or powdered crumbs of the gluten bread, then fried in very hot fat and drained while hot, make the best substitute there is for potatoes, which you will see below, must not be eaten. Milk in moderate quantities, cream, nice butter, buttermilk and all freshly made cheese and Neuchatel (Swiss) cheese may be eaten. Nuts in moderation may be allowed, and eggs freely, cooked to suit the patient. Coffee or cocoa, in moderation, with cream, but never with sugar. If tea must be used, let it be weak, and only taken in small quantities. Sour wines, as claret, Burgundy, Rhine, etc., for those who will use them, may be taken in moderation at dinner time. For variety's sake, instead of being absolutely confined to the bread made of the gluten flour, it may be made into rolls, pancakes, fritters, mush, and baked puddings, but never with sugar or molasses, nor may these ever be used, even in pudding sauces. Eat slowly, *i.e.*, masticate (chew) very finely, and what drinks are used let them be taken at the close of the meal—as little as possible between meals, of such as have been named above.

II. *Food and Drinks which should Never be Used.*—Potatoes, turnips, beets, carrots, parsnips, peas, beans (only string-beans above named), rice, celery, asparagus, or tomatoes; nor soups in which common flour has been put, as vermicelli, noodles, nor any of the vegetables above prohibited. No cake nor pastry of any kind, except it be made from the gluten flour; and nothing that contains sugar or starch in any form; and no spirits, malt beers, nor any of the sweet wines can ever be allowed. Take tepid or warm baths, according to the season, as often as necessary, followed with friction and exercise, as needed to bring a glow of warmth and heat to the surface. [I can not see why the Salt Water Washings, (which see) should not be used with the friction or rubbings, as there given; certainly diabetes is a chronic disease.] Also stick to the above directions as to diet, the year round, to avoid a relapse.

EMETIC—The Best in Use.—Lobelia and boneset (*eupatorium perfoliatum*, also called thoroughwort), each ½ oz.; infused or steeped in water, 1 pt. Dose—Give one tablespoonful every 10 minutes until thorough *emesis* (vomiting) has taken place.

Remarks.—This is the best emetic in use, from the fact that it injures none, and will not continue its action any longer than you give it. It is necessary, therefore, to continue to give it until the contents of the stomach are thoroughly evacuated. This was the great favourite of Prof. I. G. Jones, one of the early Eclectics, who claimed it the best emetic in use.

1. Tonic or Stimulant for Sexual Debility.—Tincture of iodine, 20 drops; simple syrup, 4 ozs. Dose—Take 1 teaspoonful 4 times daily, one being at bed-time.

Remarks.—Even in these small doses, Prof. Scudder says, it stimulates and increases the power of the sexual organs.

2. Tonic Tincture for Impotency, Spermatorrhoa, etc.—Dr. R. M. Griswold, of North Manchester, Ct., reports through *The Brief*, that he has made several quick cures of the above diseases with the following: Tincts. of nux vomica and cantharides, each 1 dr.; tinct. ferri-mur (muriated tinct. of iron), 3 drs.; fl. ex. ergot, 1 oz.; acidi phos. dil. (dilute phosphoric acid), 3 drs.; mix. [The author would say, double the amount, as it will be needed.] Dose—Thirty drops (½ teaspoonful) in a wine-glass of water, three times daily.

"Within the last six months," the doctor says, "I have treated several cases of the above diseases with uniform success, a radical cure being effected in each case. The two cases occurred in young men of about 20 years of age, resulting from masturbation; one case following gonorrhœa; the fourth case, a married man, was the result of excessive indulgence; and three other cases, where they search for the direct cause was unsuccessful, yet the same treatment was successful."

Remarks.—He required abstinence from all stimulants (liquors) and condiments (high-seasoned food), using light but nourishing food, especially milk, eggs, fish; sleeping on a hard bed, and in a cold, well-ventilated room; total avoidance of all sexual excitement, and all undue exertion of strength. By observing the foregoing, the success was satisfactory.

The only apology I have to offer for the introduction of this class of remedies, for the above diseases, is a positive knowledge that such conditions are found throughout the country—I mean the whole United States and Dominion of Canada, and, I have not a doubt, of all other countries—and also a knowledge that those who have need of such remedies have so great a delicacy in going to home physicians, they either put off treatment too long, or are so egregiously humbugged by advertising quacks that I felt compelled to come to their relief, as well as those troubled only with the common, or ordinary, diseases affecting the health of the people. Faithful attention in taking the medicines, and the avoidance of all the causes leading to these difficulties, with care also as to diet, etc., will ensure success, with but trifling expense as compared with the charges of those who can cure, at most, but few of the cases they succeed in obtaining through their advertisements.

BORAX—Its Value in Catarrh, Throat Difficulties, Inflamed Eyes, Dandruff, etc.—I. A solution of 1 dr. to soft water, ½ pt., snuffed up into the nostrils, is valuable in catarrhal difficulties; if recent, it will effect a cure. Use 3 times daily; though I must say I think it is easier taken in powder, as a snuff, and better too, taken 5 to 10 times daily. I combine sugar, ½ dr., with powdered borax, 1 oz.; and put in a few drops of white rose perfume, as a snuff; and if the throat is sore, drop a pinch of it into the throat at each time of snuffing. It soon benefits both difficulties.

II. The same strength makes a good wash for weak inflamed eyes.

III. Use as a gargle, in recent affections of the throat.

IV. It makes a valuable wash for the head if troubled with dandruff, leaving the hair soft and glossy.

V. In nervous headaches, wash the head with it two or three times as strong, then wash out with cool, clear water, rubbing well with the towel, and take a nap, and generally all headache will subside, and the patient be much refreshed.

VI. In erysipelas, a writer in the Philadelphia *Medical Times* says, from 8 years' experience, he has found a solution of borax in glycerine, 1 dr. to 1 oz., to be remarkably effective remedy, to be locally applied on linen. In connection with this borax solution upon the inflamed part, I would give 5 to 10 drops of muriated tincture of iron, every 4 or 5 hours, internally, when a cure may be expected in 2 or 3 to 6 days. If it irritates the stomach, or causes too much flow of urine,

lessen the dose, or lengthen the time between them. (See also erysipelas, where the treatment may be preferable.)

VII. As a champoo, once or twice a week, it will be valuable for everyone; but for students, clergymen and others who have considerable mental work, it will be found especially valuable, after the labors of the day, rubbing and drying the hair and head well, before retiring. The powdered borax is readily dissolved, and a small tea-spoonful to a tumbler of water makes all ready for general purposes. If there is any inflammation of the gums, rinse them with it 3 or 4 times daily.

VIII. For clothes washing, in Holland, Belgium and France the washer-women and washer-men (for in some of these countries the men do a good share of the washing) use a large handful of refined (powdered) borax; being a neutral salt (having no excess of acid or alkali) it does not injure the clothing at all, but softens the hardest water, or at least materially improves it for washing purposes. Many people use ammonia for most of the purposes here named, but the borax is generally preferable.

1. NIGHT SWEATS—Remedy for.—Dr. Charles D. Carpenter reports a case through the *Medical Brief*, of St. Louis, wherein he was attending a "medical" friend, suffering with rheumatism, which continued 7 weeks (I have heard of a case wherein the celebrated Abernethy, of England, was asked what should be taken for rheumatism, and the answer was, "Take six weeks,"—in other words, there was no cure, but it would get well in that time). In this case, after the acute stage had passed, recovery was retarded by terribly prostrating night sweats, and after trying half a dozen or more of the common remedies for them, at the suggestion of the "medical" friend, he gave 2 full doses of chloral hydrate. When the patient was fully under the influence of the chloral the sweating ceased and returned no more, the patient making a rapid recovery. He afterwards tested it in a number of obstinate cases of night sweats, and with uniform success. DOSE—A full dose may be put down as 15 grs. for a large man; 8 to 10 grs. for a large woman; repeating or given the second 2 hours after, dissolved in water, say a wine-glasful or ¼ of a common tumblerful. I should not give beyond the 2 doses. It has been given in much larger doses, but it is not best to run any risk, unless absolutely necessary in great and long-continued pain or nervousness arising from delirium tremens, etc.

Remarks.—If it is good for night sweats arising from rheumatism, it is good for them arising from consumption, or any other prostrating disease. Further, it is very probable that one of Dr. Carpenter's obstinate cases above mentioned was a consumptive; although he does not say what they were, it is enough to know it is good for this symptom. It matters not, then what the disease is in which they are present.

PILES (Hemorrhoids)—Bleeding or Only Tumors, Some Remarkable Remedies for.—Stephen Adams, M. D., of West Newfield, Me., in answer to a call in the *Medical Brief*, of St. Louis, Mo., for hemorrhoids (piles), says: "I use a remedy which I have used a long time, and which has cured every case where it has been used. Mix citrine ointment and rosinous ointment (both kept by druggists), about equal parts; put a few grs. on a piece of paper, rub on and about the anus (rectum) 3 or 4 times a week, at night. It will stop the hemorrhage (bleeding), and soon discus (drive away or scatter) the tumor. You need no knife or caustic. Should the bowels incline to constipation use, 2 or 3 times a week, 1/3 gr. solid ex. of belledonna, and some gentle laxative (as cream of tartar, sulphur, magnesia, etc., or the pile laxative below), or, if possible, a better plan is to keep the bowels regular by proper diet and exercise."

Remarks.—This would be considered a pretty good thing, without other testimony or corroboration; but in accordance with my general custom, although I have not had a bad case on which to try it, yet as others have, and are reported through the *Brief* above named, I will quote from one more of them. G. A. Graham, M. D., of White Hall, N. C., June 18, 1880, page 318 of that year, says: "Being a sufferer from hemorrhoids myself, I was especially interested in the many articles which appeared in the *Brief*, for the cure of this trouble without the knife. I concluded to try citrine and rosinous ointment, recommended by Dr. Stephen Adams; I only used it twice last November, and have not suffered once since. Four weeks since, an old man came to me for treatment, who had piles for forty years, in which time he tried any number of doctors and remedies, without any marked benefit. I did not care to treat his case with ointment alone, but, as he refused any more radical procedure (as the knife or ligature,) I gave him, as an experiment, a little of Adam's ointment; he reports a wonderful relief. The tumor, which was two inches in length, and nearly as hard as a bone, almost entirely disappeared, causing no pain, no hemorrhage (bleeding,) and leaving him like a new man. I write this hoping that others may be induced to try this remedy and report."

1. FEMALE COMPLAINTS—Female Debility, Tonic Pill and Infusion for.—In cases of female debility from uterine difficulties, often also connected with ague, or chills and fever; but whether chills and fever or not, the following pill

and infusion will be found valuable:

I. *Pill.*—Sulphate of quinine, 1 dr.; citrate of iron, 2 drs.; solid or alcoholic ex. of nux vomica, 16 grs. Mix thoroughly and make into 64 pills. Dose—Take 1 pill only half an hour before each meal and at bed-time.

II. *Tonic and Alterative, or Infusion.*—In connection with the above pill much additional benefit will be derived in these cases by the use of the compound infusion of gentian, made as follows:

Gentian root, ½ oz.; orange peel and coriander seed, each, 1 dr.; dilute alcohol (half alcohol and half water), 4 ozs.; cold water, 12 ozs., to which in these cases add nitro-muriatic acid, 1 dr. Directions—All the articles to be dry, and coarsely ground or bruised; then put on the diluted alcohol and let stand 3 or 4 hours, then put on the water and let stand 12 hours, and strain; then add the acid and shake well. "An excellent way," says Dr. Warren, "for using gentian." This plant comes from Germany, growing in the Alps, Appennines and Pyrenees mountains. It excites the appetite and invigorates the digestive powers, and is used in all cases of debility. It is much used in dyspepsia and during recovery from all exhaustive diseases. Dose—Take 1 tablespoonful half an hour after each meal.

Remarks.—If in any case there are ulcerations at the neck of the womb or vagina, let there be taken ½ teaspoonful doses, 3 times daily of the syrup of iodide of iron an hour or two after the infusion is taken, and in these cases of ulceration it is best to submit the case to a physician, and have him make such caustic applications as will kill the ulcers. The Monsel salt is a good thing to be applied to them. (See closing remarks above in Hemorrhage, etc.) The fact of ulceration may be known by a sensation of heat, and perhaps pain, at the point of ulceration, the discharge of matter, etc. This combination of treatment is well known to be exceedingly valuable. The nitrate of silver (lunar caustic in stick) is often used, and I have applied it—just touching the surface of the ulcer once in 4 or 5 days, has soon cured them, but more recently I have introduced the Monsel salts upon them, and also along the vagina as the speculum was withdrawn, with very satisfactory results, except that this salt contains iron, and consequently stains the clothing, hence, again, I have applied the sub-nitrate of bismuth, which does not stain, and I cannot see but what it does equally well if put on pretty freely twice a week, night and morning, using the injections as given in leucorrhea (which see).

2. Leucorrhea, Injection for.—Pulverized golden seal, 1 oz.; boracic acid, ½ oz.; pulverized alum, ½ oz.; sulphate of zinc, 20 grs. Directions—Mix thoroughly together and keep in a well-stopped bottle, or suitable covered box. At tea-time put one teaspoonful of the powder into a cup of hot tea—green tea is preferable. Stir 2 or 3 times during the evening, and at bed-time strain it and inject with a female syringe every night, if bad, or every second night in ordinary cases. First cleansing the parts by injecting 1 pt. to 1 qt. of water as hot as it can be borne. (See also "Injection, Valuable to Gonorrhea, or Leucorrhea." See also "Red Drops for Gonorrhea, Leucorrhea, etc.")

Remarks.—Dr. Mason says this has proved a splendid remedy in every case where he has used it. I have also used it with success. But as quinine and tannin have latterly been used considerably in these cases of leucorrhea, with almost entire success, I will give one containing them, which I have also tried with great satisfaction, as follows:

3. Leucorrhea, Valuable Injection for.—Fl. ex. of golden seal and chlorate of potash, pulverized, each 1 dr.; sulphate of zinc, 2 drs.; tannin and sulphate of quinine, each, ½ dr.; distilled, or pure soft water, 1 qt. Inject morning and night; first cleansing the parts by injecting, once or twice, water as hot as it can be borne. Directions—In mixing these ingredients, dissolve the sulphate of zinc in ½ pint of water, then put the quinine in a mortar, with a little aromatic sulphuric acid to dissolve it, then add to the zinc water. Put the tannin into another ½ pt. of the water, and stir until dissolved, then mix the two and add the other articles and the balance of the water, to make 1 qt.; shake when used, and use only enough to fill the vagina once, holding it in place 2 or 3 minutes by placing the fingers of one hand over the vulva, or external part, having first used the hot water, as directed in the last recipe above, keeping it in place also 2 or 3 minutes, each time, in the same manner as here directed, is of the utmost importance, as this plan distends and cleanses the whole vagina, while in the old way the injections flowed out alongside of the tube, cleansing but very little indeed. Use enough of the hot water to distend it twice at least, before using the tea, or other injection, and the cure will be quick and satisfactory.

Remarks.—With this, Dr. J. W. Burney, of Des Arc, Ark., says he has had more success than with any other; but with this he also gives 1 teaspoonful 3 times daily of the fl. ex. of buchu, internally, in a little flax-seed tea. The plan and remedies are excellent, as I have tested them.

4. Menses, To Restore.—Fl. ex. of ergot, and fl. ex. of gossypium (cotton root), each, ½ oz.; fl. ex. of black cohosh, 1

oz.; simple syrup, 2 ozs. MIX. DOSE—Take 1 teaspoonful 4 times daily, for a few days; then, if the menses are not restored stop its use till 4 or 5 days before the regular period for their return, and take it up again with the help of warm hip baths daily, and daily sitting over the steam of bitter herbs, etc., as the grandmothers knew so well how to do. In the meantime, doing anything needed to tone up the system by taking tonics; overcoming constipation by laxatives, and in a similar manner endeavoring to overcome any other irregularity, if any exist; and it is thus—or by such means—you will succeed in restoring the general health.

4. Milk, Suppression of, While Nursing—Treatment to Restore.—I. As this difficulty quite frequently occurs with nursing mothers, and is also sometimes slow in its first secretions, after child-birth, I will give an item from the *L'Union Medicale*, a French publication, which will prove valuable when needed. It says:

"When the milk secretion is slow in appearing, in a lying-in-woman (woman in confinement, or child-bearing), or when it ceases from mental or moral causes (not from inflammation of the breasts, or other actual disease), it may be made to return by cataplasms (poultices), or fomentation of castor leaves, applied to the breast, or by suction of the nipple, or by means of electricity. The mammary gland (the breast), is to be slightly compressed between two sponge electrodes (also known as the poles of a battery), and a feeble current passed through the gland for 10 or 15 minutes, twice a day; after the first few electrizations, the breasts become full, the large veins appear on the gland, and the milk secretion is set up."

Remarks.—I have only had an opportunity to test this in one case, which began to improve by the third day. The poultice should be warm, and if the castor bean leaf can be got (many people raise them as an ornamental plant in the garden), they, too, should be put on as hot as can well be borne. The poultice, or the leaves, used in connection with the electricity, make it more likely to succeed.

II. It is well, also, in suppression of the milk, which occurs most generally, if at all, when the child is only a few weeks old, to give acetate of potash, 1 oz., in water, 8 ozs.; adding a little tinct., ess. or fl. ex. of sassafras flavor. Give in doses of 1 to 2 tea-spoonsful, in a little more water, 3 times daily, to act on the kidneys, which are generally at fault, governing the dose by this action, not to make too free a flow of urine. As this also helps to relax the secretary functions of the breasts as well as the kidneys, weak coffee with plenty of milk and loaf sugar, and the old-fashioned chocolate, with milk and sugar plenty, drank alternately with the coffee, through the day, is also excellent, says an old doctor who has had large experience; and also rub upon the breast freely, Trask's ointment, or what he thinks better, the bitter-sweet ointment, given below, all that will be absorbed.

5. Milk, To Dry Up—Camphor and Soap Liniment for.—Take a pint bottle, and put into it alcohol, 12 ozs., gum camphor, 1 oz.; and when dissolved, fill the bottle with good soft soap; but if no soft soap can be obtained, put in castile soap (shaved finely), 2 ozs.; and fill the pint bottle with alcohol. Either has to be shaken when used; apply by wetting cloths and laying on, 3 or 4 times a day, after having rubbed the breast thoroughly each time. Before rubbing, however, apply a little of the Bittersweet Ointment, or a little mutton or lamb tallow, to enable the hand to glide over the breast easily. Careful rubbing is good alone—with the hand, or a soft, dry towel, properly gathered in the hand, so it shall not slip. The friction must always be gentle, but continued some time. If you want to avoid a broken breast, see "Sore Nipples, Breasts, etc., to Avoid."

D. P. Duncan, M.D., of Waynesboro, Ga., says that mint leaves, steeped and applied to the breast, will at once stop the secretion of milk, even of one breast alone, leaving the other with its usual flow of milk, if desired. The poultice should be applied hot, and changed when getting cold.

1. DISEASES OF CHILDREN—Prickly Heat, Dysentery, Diarrhœa, etc.—Remedies.—Mrs. Jay, of Fern Grove, Ill., reports through the *Blade*, that an experienced physician taught her the following, in caring for children broken out with prickly heat:

I. Keep them as cool as possible.

II. For a child of 2 years, give ½ tea-spoonful of cream tartar in the morning, for a few mornings.

III. Bathe them in tepid (a little warm) water, with a little soda in it, every night. It is also good to have a tubful of water (the chill off, of course), and let the child splatter in it for about fifteen minutes.

IV. When the heat breaks out in little pimples, which are all sore, grease them over with fresh (unsalted) grease of any kind; then dust over with pulverized starch, at least once a day, to keep them from smarting.

2. Dysentery, Diarrhœa, etc., of Children, Cordial for.—This lady continues: I. These little ones require much care during warm weather, with their dysenteries, diarrhœas, etc., from teething. I have found the blackberry balsam, as I call it, a most excellent remedy, but when the disease is of long standing, and there seems to be pain and soreness of the bowels, it is best to keep them very quiet, scarcely rocking them (so the doctor told me) and apply spirits of turpentine over the bowels. Take a cloth dampened with the turpentine, large enough to extend up over the stomach, as well as to cover the bowels, and leave it on long enough to cause redness, but not to blister. Then take it off, and when the redness goes away, apply again, until it seems to be out of pain, or easier, or:—

II. *Onion Poultices.*—Applied in the same way, are very good; but the turpentine, if at hand, acts quicker. Onion poultice is made by chopping, or slicing, 2 onions into a spider with a little water and cooking well, then spread on a cloth.

Remarks.—This cooking of the onion, accounts to the author, for their not acting as quickly as the turpentine; mash them and lay them on raw, and I think they will act as quickly and as effectually as the others. Her balsam is entirely different from any I have seen, but it will be found very valuable. It is as follows;

III. *Blackberry Balsam and Cordial for Children.*—Take of the small and growing roots of the blackberry, 4 ozs.; bark of the bayberry, 2 ozs.; cranes-bill root (known also as *geranium maculatum* by the profession, and alum root by the people), and cinnamon bark, each 1 oz.; gum myrrh and cloves, each ½ oz.; fennel seed, ¼ oz.; loaf sugar and brandy as given below. Directions.—The roots should all be cut short, then with the other articles all bruised and steeped in 2 qts. of water until half is evaporated (4 to 6 hours at least), making up with hot water if too much evaporation; but if steeped slowly, as it should be, or covered, it will be about right; then strain, and for the balsam add loaf sugar, 1 lb., and dissolve by heat.

For the Cordial.—Make the same way, but add sugar, ¼ lb., and best French brandy, ½ pt. Each are to be bottled and kept corked for use. Dose—For children, 1 to 2 tea-spoonfuls, according to age and severity of the disease; repeat every 1, 2 or 3 hours, as needed. For adults—for it is good for them too—1 table-spoonful for a dose, time as above.

Remarks.—I can see no reason for making two kinds, balsam and cordial. I should put the full 1 lb. of sugar and the brandy or good whiskey, as one can get handiest, ½ pt. to the strained mixture, and call it syrup, and be done with it; for the spirit will insure its better keeping and action. Prof. King, in speaking of the fruit of this berry family, in which the red raspberry, dewberry, etc., are all included, says: "The fruit, especially that of the blackberry, is of much service in dysentery, being pleasant to the taste, mitigating (easing) the accompanying *tenesmus* (griping and straining) and suffering of the patient, and ultimately effecting a cure. Blackberry syrup has cured cases of dysentery, even after physicians had despaired of a cure.

3. Summer Complaint, from Teething of Children.—Sub-carbonate of bismuth, 36 grs.; Dover's powder, 6 grs. Mix thoroughly, and divide into 12 powders. Dose—For a child from 1½ to 2 years, 1 powder in a little syrup, every 3 or 4 hours. When the looseness, or diarrhœa, has improved to justify it, give only 2 or 3 daily, when needed, to keep it under control so long as the irritation from the teething causes the continuance of the diarrhœa. If properly managed it will control it.

Remarks.—I think, in one case, a girl of 1½ years old, I continued its use occasionally for nearly a year. The child being weak and feeble—puny, as the doctors say,—but care and perseverance overcame both difficulties, and at this writing, she is nearly 8 years old and of very good health. Without these powders and the care, I believe she would years ago have been in her grave.

1. ASTHMA, Quick Relief and Other Remedies for.—Although a lobelia, or some other emetic, has for a long time been considered the only hope for relief, yet, more recently, the inhalation of chloroform has proved generally a much quicker relaxant, and consequently the more satisfactory remedy. It is not necessary to breathe it to entire unconsciousness, but simply to relieve by putting a bottle of it—an ounce is sufficient to buy at a time—first to one nostril, closing the other with the thumb of the opposite hand, and, the mouth being closed, draw in a long and deep breath to the fullest extent the lungs will allow; then alternate with the other nostril in the same way until you realize the needed relief or to the number of 2 or 3 times to each nostril. Then if not relieved, wait a few minutes and do the same again. It is better thus than to continue until unconscious. The chloroform is very satisfactorily inhaled from a glass tube inhaler. To be corked up when not in use.

2. Alterative Relaxing Anodyne, and Curative for Asthma.—Ethereal tinct. of lobelia and iodide of potash, each, 2

ozs.; tinct. assafœtida (fetta), and laudanum, each, 1 oz.; simple syrup, 4 ozs. Mix. Dose—From a tea to a tablespoonful every hour or two, to relieve a paroxysm, 3 or 4 doses. As a curative, after the paroxysm has subsided, take the same dose only 3 or 4 times a day.

Remarks.—In closing the subject of asthma, I would say in addition only, that according to the condition of the system, any existing difficulty, as costiveness, liver or kidney complaint, must be met and overcome on general principles, that is, to treat them as you would if they existed alone. Do all, as per instructions given under each head referred to in connection with the above items under this head, and very many cases of asthma will be cured, the general opinion to the contrary, notwithstanding. The condition of the surface, to keep it clean and the blood freely circulating therein, by the salt washings, dry rubbings, etc., (which see), must not, in any case, be neglected in any long standing disease. If neglected, it is at your own peril.

2. JAUNDICE, Cured by the Use of the Chionanthus and Acetate of Potash.—Dr. Henning, of Redkey, Ind., reports through *The Brief* also (February, 1879):—"Twenty years ago I used to give calomel and leptandrin with poor success. But now I give, in all cases, of the fl. ext. of chionanthus (fringe tree) from 10 to 20 drops (of course according to age and robustness of the patient) 4 times per day. This will correct the action of the liver in a short time. But in addition I prescribe the acetate of potassa (potash), 10 grs., 3 times per day, to act upon the kidneys (it is a very valuable diuretic) to pump out and eliminate (throw off) the bilious excrementitious (of the nature of excrement or fæces, but here more particularly worn out) matter from the blood. This I follow with the elixir of calisaya (Peruvian) bark with iron and strychnine (kept by druggists) as a tonic, increasing the nutrition and strength. This treatment," he says, "has been very successful in my hands, and I am satisfied it is the true theory of the disease in practice." He thinks it best to "follow up the treatment 3 to 5 weeks to make a permanent cure."

2. Jaundice, Allopathic Treatment of—Successful.—I give the following treatment because it contains calomel and may meet some cases where the chionanthus cannot be obtained, and also because it will lead me to follow it with remarks, showing how a very little calomel will sometimes arouse the action of the liver when, as the saying is, "everything else has failed." This is from Geo. B. Snyder, M.D., of Hays City, Kans. It will explain itself. It was reported in the July number of *The Brief*, 1879. He says:

"In looking over the April number of your valuable journal, I notice an article on the 'Treatment for Jaundice.' As I understand it, the mere presence of jaundice is not a disease, but merely a symptom. The yellow skin indicates the presence of hepatic (liver) trouble, the true character of which I am, in candour, bound to confess is not always easy to determine. The last patient under these circumstances, I was called upon to see, was on August 19, 1878. His symptoms were yellow skin, impaired digestion, excessive restlessness, with eclampsia, etc." [This "eclampsia," here, no doubt, refers to an appearance to the patient like flashes of light, a symptom of epilepsy.] "My prescription," he continues, "was Hydrarg chlor. mite (calomel), 4 grs.; podophyllin, 3 grs.; potass. chlor. (chlorate of potash, pulverized), 30 grs.; ex. of hyoscyami (hyoscyamus), 3 grs.; mix. Make into 10 powders. Dose—One powder every 2 hours. On the second day I found my patient so much improved that with a single prescription of bitter tonics with ex. of nux vomica, I dismissed him. His recovery to perfect health was absolute." [A good tonic pill for these cases will be: quinine 45 grs.; alcoholic ex. of nux vomica, 2 grs.; mix thoroughly and make into 30 pills. Dose—One pill only, 4 times a day for an adult. These pills should not be given to children. But for them 1 gr. powders of quinine might be given as the tonic, without the nux, in cold, strong coffee, which hides the bitter taste very much.]

Remarks.—Dr. Snyder says, above, "the yellow skin indicates the presence of hepatic, or liver, trouble," but the true character he "confesses is not always easy to determine." Well, I would ask, why try to determine at all, so long as the *chionanthus*, as given in the foregoing recipe, or even his own combination, will cure it? We know this much, that whenever the skin and eyes are yellow, there is a certain condition of the liver, and it is generally believed, at least, that this condition is always the same, hence they are always cured, as above indicated, by the same medicines. But there is a certain diseased condition of the liver, attended with considerable uneasiness, sometimes amounting to actual pain, but not having the jaundiced or yellow skin and eyes, when the author has not been able to touch the liver, so as to start the bile, with either the common liver pills, which contain podophyllin, leptandrin, etc., nor with the chionanthus; but very minute doses of calomel, even the 20th of a grain, taken at bed-time, followed with a teaspoonful of epsom salts in the morning, has aroused its action, and started the bile freely within the following 24 hours, and was entirely satisfactory and lasting, by repeating the same doses, at an interval of a week, for 2 or 3 times. These were desperate cases, else I should not have ventured upon what I have always considered a desperate remedy—calomel. But, as I have always believed in "giving the devil his due," I have thus set this down to the credit of calomel, notwithstanding I, and my

mother before me, as well as eclectics generally, have fought against the use of calomel all our lives. But I would not, even now, use it in large doses, especially when such very small ones have such a decided and beneficial effect. But I always try the ordinary treatment first, and only fall back upon these small doses of calomel when the first plan fails.

But if I fail to "touch" the liver, as the allopaths call it, *i.e.*, fail to arouse its action, by which its usual biliary secretions are produced, with the small doses, I should use them as large as 1 to 3 grs.; or, if need be, blue mass, a 3 gr. pill, followed with the salts, to accomplish the same end. I know several persons who claim, and no doubt believe, that nothing but a 3 grain pill of blue mass at night, and sometimes for a second night, will act on their liver when out of order. Working off next morning, of course, with salts or some other active cathartic. And I certainly prefer to try this plan rather than to lose the life of my patient, or have him go to a doctor who will use calomel or blue mass from choice; although, by their giving large doses of calomel, they often fail to cure. But I always give this class of patients a 1 to 2 gr. pill of quinine 3 or 4 times daily, alter the bilious passages have somewhat subsided; and if much sour crustations arise from the stomach while the bile is being poured out so freely, I give a little bi-carbonate (common baking) soda, in half teaspoonful doses, in a little water. Certainly, however, there can be no objection raised to Dr. Synider's doses of calomel, as there would be less than ½ a gr. to each powder, while allopaths, in the first time of cholera in the United States, gave it sometimes in ounce doses, and no doubt killed by such treatment more than the cholera itself. But now, as some of them have gone down to the 20th of a grain, or even ½ grain, doses, I will gracefully cease my warfare upon it, at least, when given in the above, homœopathic, doses. And I am now, more than ever before confirmed in the idea that it was by large doses, and other abuses of its use, that much of the harm it has done was brought about. Where it is used, let it be in small doses only, and its action watched with great care, and I trust the result will be as satisfactory to others, as it has been with myself.

1. SYPHILIS—Alterative for—Successful in Bad Cases.—Fl. ex. of stillingia, corydalis, poke root, yellow dock root and burdock root, each 2 ozs.; iodide of potash, ½ to ¾ oz.; simple syrup to make 1 pt. DIRECTIONS—Dissolve the iodide in a little of the mixture and mix all. DOSE—1 teaspoonful 4 times daily, one being at bed-time. Large and robust patients may put in the ¾ oz. iodide, weak and feeble ones only the ½ oz.

Remarks.—If there is any gonorrhœa discharge, every other time it is made, leave out the extract of poke root, and put in the same amount of the fl. ex. of buchu, in its place. In very bad cases of syphillis, when the pint has been all taken, get a pint bottle of Tilden's Elixir of Iodo Bromide of Calcum Compound (kept by druggists), and take it according to the directions upon the bottle, and so alternate for a year or longer, unless well satisfied that all the syphilitic poison is eradicated from the system sooner than this. The doctor of whom I obtained this, at Grand Rapids, Mich., told me that in this manner he had cured very bad cases—one where the whole body was covered with scabs and sores, except, fortunately for the patient, his face and hands did not show the eruptions. Upon the scales, or rather around them, he applied an ointment made as follows: Take a pint bottle and put into it nitric acid, 1 oz.; quick-silver, 1 oz., and let stand until the silver is cut; then melt lard, ½ lb., in an earthen bowl, and mix all together and stir with a wooden spatula until cold. This was swabbed on around the scabs, (if a little gets on the scab it does not matter; but he thinks it not best to tear off the scabs, but to put it freely around the edges), at first three times a week, then twice, and finally only once a week, till all is smooth as a child's flesh. This case paid him $100, and had previously paid out over $250 without benefit. I have also since cured a very bad case with it, and therefore know its value as an alterative. In the case first given the doctor told me that after the scabs or sores were cured about 6 months the man wanted to know if he might "marry with safety;" the answer was, "continue the alterative for a year longer, then there will be safety in marrying." He followed it up as directed, and then did marry, and never afterwards saw any ill effects from the disease. Although the plan of alternating the above alterative with the Tilden preparation is especially valuable for syphilis, yet the alterative above will be found very valuable in all the other diseases requiring one.

2. Gonorrhœa—Remedy.—It consists of an inflammation of the urethra of the male, and of the vagina of the female, which causes, generally, a discharge (which is contagious) of a muco-purulent character, having the appearance of mucous and pus. It is generally caused from impure cohabitation, but it does sometimes arise from the parts coming in contact with this gonorrhœal matter, even when partially dry, upon sheets where those having the disease have slept, or from privy-seats, and, in fact, husbands sometimes are affected by an inflammation of a similar character taken from the wife, who has an acrid leucorrhœal discharge, while both are perfectly honest and virtuous towards each other. These points are now well known by many physicians, but not well understood by the people, which leads me to introduce these recipes, as much to point out these facts as to enable people to cure themselves or their friends in like condition. Then, as the disease is well known, as above remarked, in the manner also described above, let everyone be very

careful how they pronounce another guilty of criminal or impure connection, at least, until they are positive as to the facts in any particular case. And let me caution everyone having this disease, or in treating others who have it, to be very careful not to allow any of the matter to come in contact with any open sore, nor with the eye or nostrils, for all mucous membranes will take on the disease by such contact. Keep the hands clean and burn all cloths used for the purpose of cleanliness to ensure safety.

Other Treatment Necessary.—In the commencement of the disease, while the inflammation is acute or active, give a full cathartic dose of some cooling purgative—for instance, the compound powder of jalap, with cream of tartar, or a full cathartic dose of any medicine one is in the habit of using as a cathartic.

Compound Powder of Jalap.—Best Alexandria senna, in powder, 1 oz.; powdered jalap, ½ oz.; powdered cloves, ½ dr., or powdered ginger, 1 dr.; mix. This forms an excellent cathartic in all cases requiring quick action. It is mild but efficient, stimulating the liver and biliary ducts to a healthy action, and helping materially to reduce all inflammatory diseases. It should not, however, be given in inflammation of the stomach or the bowels, if of a severe character. In pregnancy, painful menstruation, and other like conditions of females, it should be taken only in about half the usual doses; repeat half the dose if it does not operate in 4 hours in all cases. Dose—Take one teaspoonful of the powder in a tea-cup and half fill with boiling water, stir occasionally till cool, stir again and drink all. Sweeten if desired. In all fevers and in the above cases put into the cup 1 teaspoonful of cream of tartar, which aids in reducing fevers or inflammations, especially of the character above indicated.

The patient should also take freely of mucilaginous drinks, as gum-arabic water, ½ oz. to 1 oz. to the pint, poured on boiling hot, and the whole drank in the course of the day, or two at most; or, a tea of marsh mallows, 1 oz. to the pint of water daily; or, flaxseed tea made in the same way, as most convenient to obtain. As soon as the action of the cathartic is well over, and one of the mucilaginous drinks have helped to allay the severity of the inflammation, use injections also of an astringent, tonic or antiseptic character, according to the severity of the case, like the following:

Injection for Gonorrhœa.—The following is one of the more common, being principally astringent for cases where the inflammation and discharge is slight: Sulphate of zinc, 8 grs., to water, 4 ozs. Directions—To be injected 2 or 3 times a day at least; but it is well to inject after each urination, but if much purulent or thick matter, use one of the following, first having injected water to cleanse the parts thoroughly, and if this strength causes much smarting or pain, reduce half with water. A glass or rubber syringe is better than the metallic ones for all these purposes.

4. Injection for Gonorrhœa—The following combines tonic, astringent and antiseptic properties, applicable in the severe cases. It was given by Prof. King in his "Chronic Diseases," with the remark, "that he makes it known for the first time:" Sulphate of quinine, 20 grs.; elixir of vitriol (which is aromatic sulphuric acid), 1 dr.; mix, and shake to dissolve the quinine, then add camphor water, 1 oz. and distilled water, 3 ozs.; solution of iodide of iron, ½ dr. Inject as the first, and if it causes pain or uneasiness to any extent, reduce a little with water until the improvement enables it to be borne. I will give one more, which also combines the astringent, tonic and antiseptic properties necessary to ensure success, and equally valuable as an injection in leucorrhœa (which see). It is as follows:

5. Gonorrhœa Cured Without Injections.—If the following internal treatment will do what Dr. Given, of Louisville, Ky., claims for it, it is preferable, or, at least, is a less difficult plan to pursue. He states, through the *Brief*, in answer to an inquiry, "How to cure Gonorrhœa successfully without the use of Copaiba, Cubebs or Injections?" as follows:

"The following is my prescription, as published in the *American Practitioner* several years ago. It cures in from 2 to 10 days, if given within the first 24 or 36 hours after the disease has developed. I have never injected a single patient: Spirits of nitric ether, balsam copaiba and camph. tinct. opii (paragoric), of each 1 oz.; tinct. veratrum viride, 1 dr. Mix. Dose—A teaspoonful 3 or 4 times a day."

Remarks.—The author would say in flaxseed tea or some of the other mucilaginous drinks. The more freely the mucilages are taken the better for the patient. It is generally claimed however, that those suffering with gonorrhœa must be careful about their diet, excluding meats of all kinds, fats, tea, coffee, and absolutely avoid all alcoholic and malt liquors, and tobacco in all its forms, if they hope to get well at all speedily: and also to take a mild cathartic every 3 or 4 days, and that it is also valuable to take a hip-bath 2 or 3 times a day, while the inflammation is considerable, as hot as it can be borne; also to keep as quiet as possible, else support the scrotum with a suspensary bandage to prevent stagnation or accumulation of blood in the parts, to which there is often considerable tendency.

6. Gonorrhœa in its Commencement—Cure Without Injection.—After having written the above, I went to my dinner, and on my return found my *Medical Brief* had been delivered, and on looking it over, was struck at the simplicity of a recipe for gonorrhœa, given in answer to an inquiry for such a cure, by Dr. Hall, of Fairmount, Ga., as follows:

"Spirits nit. dulc. (sweet spirits of nitre), 1 oz.; balsam of copaiba and tinct. of mur. ferri (tinct. of muriate of iron), of each, 1 dr. MIX. DOSE—A teaspoonful in water, milk or wine (I would say in some of the mucilages before mentioned) given every few days, 4 to 6 hours apart. No injections needed in incipient (the beginning of) gonorrhœa."

Remarks.—He uses the same in ardor urinæ (scalding, or heat in passing urine) with like success; but in this last condition he gives the same dose, repeating in 3 hours, then at longer intervals. From my knowledge of the properties of the article, I recommend a trial at once, wherever and whenever needed, in either disease. But as some persons will not begin any treatment at once, as they ought to do, letting the disease become chronic, or by mismanagement or carelessness in taking medicine, or by persisting in the use of spirits, fat meats, etc., a gleet, or slight discharge, will continue from the uretha after the inflammatory condition has been subdued. Such a condition will require something of the character given for gleet, after the next item.

7. Gonorrhœa, the Latest and Most Simple Treatment for.—Some time after all the foregoing had been written upon this subject, the December number of my *Therapeutic Gazette*, of Detroit, Mich., came to hand, with a treatment for this disease, from Dr. Joseph McChesney, surgeon of the Atchison, Topeka & Santa Fe Railroad Co., at Deming, N.M., which appears so simple and easy of trial, and withal so effectual (he reporting a number of cures in from 6 to 10 days, and some of them of long standing) that I feel constrained to give it, believing it to be as effectual as it is simple. It is as follows: Dissolve corrosive sublimate, 1 gr. only, in water, 6 ozs., injecting a syringe of it every 4 hours.

Remarks.—He gave cases of acute, or just commenced, as well as those of long standing, in which it was equally effective. It needs no further comment nor recommendation of mine, only to say I trust too, with him, that in the corrosive sublimate treatment for gonorrhœa, I have at last met with the drug that gives such entire satisfaction to the infortunate, and one that will prove a financial boon to me, and hereby a boon to the infortunate many, who may never see Dr. McChesney nor myself.

8. Gleet, Effectual Treatment for.—Some of the first above mentioned injections for gonorrhœa, may be injected for gleet, or the following, as used by Dr. S. L. Blake, of San Francisco, Cal., who has found it so effectual that he deemed it his duty to place it before the readers of *The Brief*, in 1880, as follows: Sulphate of zinc, 12 grs.; tinct. iodine, 10 drops; distilled water (soft-water will do in all such cases), 8 ozs.; mix; inject 4 times a day. Also, fl. ex. uva ursi, 3 ozs.; fl. ex. pareira brava, 1 oz.; fl. ex. cascara sagrada and syrup of orange, each 2 ozs.; water sufficient to make 8 ozs.; mix. [The pareira brava is a native of the West India Islands and the Spanish Main, says King, in his American Dispensary, "It is a tonic, diuretic and aperient, used in chronic inflammations of the bladder, and various disorders of the urinary organs." The cascara sagrada is valuable in constipation, while the properties of the other articles in these prescriptions are well known to be valuable for what he recommends them.] DOSE—Take a tea-spoonful 3 times a day before meals.

Remarks.—This, he says, I consider an invaluable remedy in obstinate cases. Of course the principal readers of *The Brief* are physicians, which shows that Dr. Blake was well satisfied with it or he would not risk the criticism he would receive if it was not reliable.

EPILEPSY—Remedies Which Have Been Successful.—I. Chas. Van Wye, M.D., of Browning, Mo., reports through *The Brief* the case of a man of 37, who had been troubled from childhood with epilepsy, cured by the use of bromide of potassium, 30 grs., 3 times a day, dissolved in water, half a tumbler or so, until it produced its physiological effects, which are similar to that of iodide of potassium, *i. e.*, it may affect the head like a cold, and if the stomach or alimentary canal are irresistible, it may produce diarrhœa, and increase the urine too much, but it may produce *acne* (a pustular affection of the skin), and a person taking large doses very long may have a manifestation of weakening of the mind; then, if any of these occur, stop its use a few days, or a week; or if taking it 3 times daily about meal-time, stop the noon dose, and if this does not relieve that, or either of these conditions, drop to 15 or 20 gr. doses, twice daily, then if not relieved in a few days stop as above indicated. In the case given it was used at intervals, *i. e.*, stopping every fourth week for 15 months, and only one convulsion after beginning its use. But the doctor would not begin unless the man would agree to take it several months at least. He considered it a perfect cure.

Remarks.—Dr. King, in his Dispensatory, says: "It has been used successfully in enlarged spleen and liver, swelling of lymphatic glands (glands of the neck, armpits, front of elbow, back of knee, groins, etc., externally, and along the

lymphatic vessels internally), scrofula, epilepsy, nervous depression from masturbation, also nocturnal (night) emissions, irritability of the nervous centres, and in hypertrophy (enlargement) of the ventricles (of the heart). It has proved successful in pertusis (whooping-cough), and also in asthma, in doses of 20 to 30 grs., repeated 2 or 3 times a day," etc. So you see it has been used in as large doses as Dr. Wye prescribes it above; but it has not been used as long, generally, and that is the probable reason that it has not proved more beneficial heretofore. Even in doses of 10 to 15 grs. it has held fits in check, and in such doses may be continued for years safely; watch in all cases, however, for any of the above named bad symptoms and stop or lessen the dose as directed.

II. *Pill for Epileptic Fits in the Early Stages.*—Sulphate of zinc and cayenne pepper, each 60 grs.; rhubarb and ipecac, each 30 grs.; all pulverised and made into 60 pills, with solid ext. of hyoscyamus, enough only to form into pill mass. DOSE—Take 1 pill night and morning one week, then stop a week, and so on every other week.

Remarks.—Dr. Gunn, in his "New Family Physician," says of it: "An important remedy, and has cured many cases of epileptic fits, when taken in early stages."

SALT WASHINGS, DRY RUBBINGS, ETC.—

Important in all Chronic Diseases, Especially of an Inflammatory Character.—In all chronic diseases, and especially diseases of an inflammatory character, as catarrh, throat, bronchial or lung difficulties, inflammation of any or all these parts named, or inflammation of the stomach, liver, kidneys, bladder, urethra, vagina, white swelling, and any or all other swellings or inflammation, and in all conditions and at all times of life, it is of the utmost importance, not only to keep the whole surface clean, by bathing or washing, at least twice a week in summer, and once a week in winter; but in all chronic or long-standing diseases, it is very important to stimulate the skin by salt water washings every other morning (Sunday morning being set for a soap and water washing), followed by brisk rubbing of the whole surface, which equalizes the circulation, helps to break up congestions (an undue amount of blood in any organ or part), putting the whole machinery of the circulatory system (heart, arteries, veins and the smaller vessels near the surface known as capillaries), into complete working order, without which perfect health cannot be long maintained.

I. *Strength of Salt Water.*—Dissolve ½ a teacup of common barrel salt in 3 pints of water, in winter the water should be warm and the bath taken in a warm room; in summer, if the water stands in the room over night, it will do very well without warming; then with a sponge, or what is better, a piece of coarse woollen cloth, wash first the arms neck and body thoroughly, then the lower limbs and feet, by which time the upper parts will be dry without wiping, when, with another piece of coarse woollen cloth, flesh-brush or hair mitten, rub as hard and long as the friction can be borne, or till the whole surface glows or burns with the heat caused by the free circulation of the blood in the skin. The morning is the best time to do it, as the system is then free from excitement, and, unless you have been too warmly covered, also free from perspiration; therefore, less likely to "take cold." Do not neglect the feet, even, but rub all well and thoroughly each time. It is claimed by some physicians that these salt washings and dry rubbings alone will break up and cure many chronic diseases. I know, however, without a good circulation in the skin, health will sooner or later fail. My desire is to impress its importance upon every invalid, for without it not half the speed can be made in curing disease, even with the best of treatment.

II. *Dry Rubbings.*—All other mornings and evenings than those for the salt-water washings, the friction or dry rubbing will materially help to bring about the desired circulation of the blood in the skin, as it draws it away from any inflamed or otherwise diseased organ or part of the system. To be done as you undress for the night, and before dressing in the morning.

III. *Cold Feet.*—In all cases of habitual cold feet, the foregoing plan of washings and rubbings is also of the utmost importance, making the friction, or rubbings, of the lower limbs and feet the most thorough.

IV. The advantages of these washings and rubbings will soon be realized if the directions are faithfully carried out. If a common towel is thoroughly wet in salt water, of the strength above given, then hung up without wringing, and dried, it can be used with advantage on the back and shoulders. It does well, also, to rub the whole surface with the salt, which gives it a "bite," or roughness, taking hold of the surface quickly.

V. The flesh-brush, a long, crooked or bent one, with which you can reach the back, shoulders and every other part, is very convenient, but costs from $1 to $2, according to quality; and the English hair glove, or rather mitten, is also a great

help for men but too harsh for women, in their frictions. A mitten made of any coarse sacking will do well for them, or even for men, if they bear on hard in using it; but it matters not so much as to what you use to arouse the surface circulation as it does in this, that by some of these means it must be aroused and also maintained, *i. e.*, to have warm surface if you expect to break up chronic or long-standing inflammatory diseases of any of the internal organs; if you do not do this, or if you cannot do it, the disease will make steady progress against you, not much matter what else you do or take.

VI. *Sweating and Cold Feet in Cases of Debility.*—Very often, in cases of debility, the feet sweat considerably, so as to wet the bottoms of the stockings, and the feet consequently become so cold as to make one think they are standing upon a stone, as it were. In such cases, no matter whether it be with consumptives or from other diseases, or even if this condition of sweating of the feet is common to any one, the best and only natural course of treatment is to soak the feet in cold salt water—a couple of good handfuls of salt in water enough to nicely cover the feet—from 3 to 5 minutes, night and morning, and, if very bad, also at noon; then wipe dry and use the brush, hair mitten, or a mitten made with some very coarse sacking, until the surface is completely red by the rush of blood to them; then rub also with the hands, and pat or slap the feet with the hands, the one on top, the other upon the bottom, so that the blows meet, except that the foot and toes are between them; and thus work with them until they begin to get warm; then put on the stockings and you will soon feel such a glow of warmth and comfort that will more than repay for all the discomfort it has caused you. This must be continued until the difficulty—tendency to sweating of the feet—is overcome, no matter whether it takes a month or a year; and it must be extended to the whole surface of the body and limbs, as in the salt water washings before mentioned, once or twice a week, and with the dry rubbings each night and morning, all the time, as needed; and if it is done by every person all their lives, they will live years longer than they would without it. And here I will add, that those referred to before as not having a warm room in winter in which they can use the salt water washings, can do this soaking of the feet in salt water, as I have directed, in the family room, where even a young lady will probably not faint on seeing a gentleman's feet, especially if kept as clean as they ought to be; then the "Swiss movement" or the "Massage," and rubbing the body and limbs, can be done in the bed, as already pointed out. Of course, in all cases of debility, or of chronic diseases, a suitable tonic treatment should be adopted, that will build up the system and meet all other conditions that the case may require.

VII. *Salt Water Washings and Dry Rubbing, when Your Room is Cold, Substitute for.*—Some of my patients, whom I had desired to use the salt washings and dry rubbings, have reported that they could not, in cold weather, have warm rooms in which they could attend to it. To such I would say, then, get into bed, and as soon as the bed gets a little warmed up by your presence, lying upon the back, draw one foot up to the body, which elevates the knee, place the other foot upon that knee, which brings the leg near enough to allow you to pinch the skin, gently, with the thumb and fingers and with the fingers and "heel of the hand," from foot to knee, several times over, thoroughly; then the upper part of the limb in the same way; then change and do the other in the same manner, both evening and morning before rising. It is called the "Swedish movement," or "Massage," and if it is extended to the arms and body so much the better. You can have a common hair brush and use that over the limbs and feet freely too, to close with; or you can straighten down the limbs, and with the bottom and side of one foot against the inside of the other leg you can, with a little practice, make a thorough friction on the inside of the leg, or limb; then put the knee over the top and outside of the leg and do the same; then put the toes under the leg, and to the outside, do the same there. The quicker the foot is moved up and down upon its opposite one, the better will be the friction, and the warmer will the feet and limb become; for it can be done nicely upon the top and sides of the foot, as well as upon the leg. Of course, first one, then the other, is to have a "treat." And if it is done well and thoroughly, after the first few times, if your feet and limbs are habitually cold, you will, indeed, think and realize that it is a grand treat, too. One who has never tried it will be astonished at the warmth which five minutes rubbing thus, to each limb, will give.

If this plan fails to keep your feet warm all through the night, put on woollen stockings when you wake up and find them cold. Try it, all who have not warm rooms for the water washings and rubbings; and do this, too, every night and every morning, until warm feet is the rule, not the exception; and thank Dr. Chase as long as you live. I know you will, if you learn to do it thoroughly and well. The upper leg, or thigh, must be done with the hand, brush, small coarse towel, or a woollen cloth, well gathered into a tight ball or handful, that it may not slip round upon itself. The harder you rub the better, and the less time it will take to get up the necessary warmth.

DIURETICS, VALUABLE.—I. Buchu and uva ursi, leaves of each, 1 oz.; pareira brava root, 1 oz. Mix and divide into 3 powders or parcels, evenly. DIRECTIONS AND DOSE—Pour upon one of these parts a quart of boiling water, in a covered

tin pail or fruit jar. When cool enough to drink, take 1 to 3 moderate swallows every 2 or 3 hours, so as increase the flow of urine, which will use up the quart in about 2 days. If to be kept longer, 6 oz. of good gin will prevent its souring, if strained from the dregs. Used in catarrh of the bladder, irritation of the kidneys, urethra, etc.

II. Take Buchu leaves, 2 oz., and treat as in I.; when cool add 1 teaspoonful of bi-carbonate of soda, and 30 drops of fl. ex. of hyoscyamus, and drink all in 2 days. Use more than the above in cases where there is mucus of a stringy character passed in the urine. After a day or two, repeat the same until relieved. If much irritation of the urethra, get 1 oz. of sub-nitrate of bismuth and put into 8 oz. of soft water, and inject ½ oz. into the urethra 3 times daily, shaking before pouring out; else obtain "Humphrey's Marvel of Healing," and add 3 times as much water as of the "Marvel," and inject in its place. Either is excellent. Retain them 2 or three minutes, whichever is used. These are good for any case requiring diuretics.

HOT WATER CURE—Directions for using.—The following instructions as to the manner of using hot water as a means of restoring health to a generally debilitated or exhausted system, I take from the *Medical Brief*, thinking the explanation and directions here given will enable many of our readers to obtain additional helps over and above what are given under the head of Hot Water in Consumption, Dyspepsia, etc. I have been unable to find where Dr. Salisbury's institute is located, or anything further than given in this quotation, and the different items referred to in this book, as above indicated; but as I have been using it with satisfaction in several cases of dyspepsia I think it will be found generally useful. I will here say that I recommend the water to be heated to 140° F. in summer, and 145° to 150° in winter, in quantity about ½ to ¾ of a pint as a general thing, and taken about ½ to ¾ of an hour before meals. If one should be very thirsty at bed-time, then, also, but not unless necessary to allay thirst.

I. "*The Water Must be Hot, Not Cold Nor Lukewarm.*—This is to excite peristalsis (like peristaltic, a successive contraction and relaxing of the muscular coats) of the alimentary canal. Cold water depresses, as it uses animal heat to bring it up to the temperature of the economy (body), and there is also a loss of nerve force in the proceeding. Lukewarm water excites upward peristalsis, or vomiting, as is well-known. By hot water is meant a temperature of 110° to 150° Fahrenheit, such as is commonly liked in the use of tea and coffee. In cases of hemorrhage, the temperature should be at blood heat (98° F.). Ice-water is disallowed in all cases, sick or well.

II. "*Quantity of Hot Water at a Draught.*—Dr. Salisbury fist began with one-half pint of hot water, but he found that it was not enough to wash out, nor to bear another test founded on the physiological fact that the urine of a healthy babe sucking a healthy mother—the best standard of health—stands at a specific gravity varying from 1.015 to 1.020. The urine of the patient should be made to conform to this standard, and the daily use of the urinometer (an instrument for telling the specific gravity of the urine, but not generally necessary to have nor obtain except in hot-water cures) tells whether the patient drinks enough or too much hot water.

"For example, if the specific gravity of the urine stands at 1.030°, more hot water should be drank, unless there is loss by sweating. On the other hand, should the specific gravity of the urine fall to 1.010, less hot water should be drank. The quantity of hot water varies usually from ½ pt. to 1½ pts. at one time of drinking.

"The urine to be tested should be the *urina sanguinis*, or that passed just after rising from bed in the morning, before any meals or drinks are taken.

"The quantity of urine voided in 24 hours should measure from 48 to 64 ozs. (1½ to 2 qts.). The amount will, of course, vary somewhat with the temperature of the atmosphere, exercise, sweating, etc., but the hot water must be given so as to keep the specific gravity of the infant's standard, to wit: 1.015 to 1.020. The urinometer will detect, at once, whether the proper amount of hot water has been drank, no matter whether the patient is present or absent. Another test is that of odor. The urine should be devoid of the rank *urinous* smell, so well known, but indescribable. [The absence of this "rank smell" is a sufficient guide for home tests; take enough to get rid of this rank odor, is all sufficient.]

"The Salisbury Plans aim for this in all cases, and when the patients are true and faithful, the aim is realized. [If a patient will not be true to himself, or herself, you may as well give up trying at once.]

III. *Times of Taking Hot Water,*—One to two hours before each meal, and half an hour before retiring at night. [I have taken it myself, and so recommended to others, half or three-fourths of an hour, only, before each meal, and have never known vomiting, or even sickness of the stomach to arise.]

"At first, Dr. Salisbury tried the time of one-half hour before meals, but this was apt to be followed by vomiting. [I have

not so found it.] One hour to 2 hours allows the hot water time enough to get out of the stomach before the food enters, or sleep comes, and thus avoids vomiting. Four times a day gives an amount of hot water sufficient to bring the urine to the right specific gravity, quantity, color, odor, and freedom from deposit, on cooling. [There is probably something of importance in these points, but I have, as yet, at any rate, only recommended to take it 3 times daily, unless thirsty at bed-time.] If a patient leaves out one dose of hot water during the day, the omission will show in the increased specific gravity (weight, by the urinometer), in the color, etc. Should the patient be thirsty between meals, 8 ozs. (half pint) of hot water can be taken any time between 2 hours after a meal and 1 hour before the next meal. This is to avoid diluting the food in the stomach with water.

IV. "*Mode of Taking Hot Water.*—In drinking the hot water, it should be sipped, and not drank so fast as to distend the stomach and make it feel uncomfortable. From 15 to 20 minutes may be consumed in drinking the hot water. [About 5 minutes time is all the author took in drinking the hot water, and all he recommends; still, if 1 to 1½ pts. are to be taken, a longer time will be needed. But, for ordinary cases of home treatment, I think ½ to ¾ pt. is enough, and especially so if it is taken 4 times daily.]

V. "*The Length of Time to Continue the Use of Hot Water.*—Six months is generally required to wash out the liver and intestines thoroughly. As it promotes health the procedure can be practiced by well people throughout life, and the benefits of cleanliness be enjoyed. The drag and friction on human existence from the effects of fermentation, foulness and indigestible food, when removed by this process, gives life a wonderful elasticity and buoyancy.

VI. "*Additions to Hot Water.*—To make it palatable, in case it is desired, and to medicate it, aromatic spirits of ammonia, clover blossom tea, ginger, lemon juice, sage, salt and sulphate of magnesia (epsom salts), are sometimes added. When there is intense thirst, and dryness, a pinch of chloride of calcium (chloride of lime) or nitrate of potash (nitre) may be added, to allay the thirst and leave a moistened film over the parched and dry mucus membrane surfaces. When there is diarrhœa, cinnamon, ginger or pepper may be boiled in the water, and the quantity drank lessened. For constipation, a tea-spoonful of sulphate of magnesia, or ½ tea-spoonful of *taraxacum* (dandelion fl. ex.) may be used in the hot water.

VII. "*Amount of Liquid (Tea, Coffee or Water) to be Drank at a Meal*—Not more than 8 ozs." [½ pt. or 1 cup of tea or coffee.] "This is in order not to dilute the gastric juice, or wash it out prematurely, and thus interfere with the digestion process.

VIII. "*The Effects of Drinking Hot Water, as indicated, are:*—The improved feelings of the patient. The fæces (passages) become black with bile, washed down its normal (natural or healthy) channel. This blackness of fæces lasts for more than six months (I have not found this so, but it may be in some cases) or until the intolerable fetid odor of ordinary fæces is abated (this I have found true,) and the smell approximates the smell of healthy infants sucking healthy breasts, and this shows that the ordinary nuisance of fetid (bad smelling) fæces is due to a want of working out and cleansing the alimentary canal from its fermenting contents. The urine is clear as champagne, free from deposit, odor, or coloring, 1.015 to 1.020 specific gravity, like infants' urine. The sweat starts freely after drinking, giving a true bath from centre to surface. The skin becomes healthy in feeling and looks. The digestion is correspondingly improved, and with this improvement comes a better working of the machine." [Human system as a whole.] "All thirst and dry mucus membranes disappear in a few days, and a moist condition of the mucus membrane and the skin takes place. Ice water in hot weather is not craved for and those who have drank ice water freely are cured of the propensity. Inebriety has a strong foe in the use of hot water."

Remarks.—The author finds, by personal use of hot water, nearly all the foregoing statements of the *Brief* to be facts, and I especially hope the last statement shall so prove that "inebriety has a strong foe in the use of hot water," and I feel almost sorry I cannot attest to this from a personal knowledge, so anxious am I to do good to my fellow creatures, knowing, as I do, how much confidence the statement of a fact with which the author has positive knowledge helps one to have faith enough in any certain thing to give it a trial. Let none needing it for that purpose, or any other given here and in other parts of this book, for all purposes indicated here or there, fail to try it. The author, however, can give no greater assurance of his own confidence in the use of hot water than to say that I now arise to go and heat water to take myself, half an hour before my supper, for it does me good, stops all craving for cold drinks and allays all feverishness of stomach, bowels, etc., etc., of this hot day, the thermometer reaching 90° Fahrenheit in my office at 3 p.m.

MEASLES.—This is a contagious or "catching" eruption, and would be a disease of less severity were it not sometimes

followed by serious results. It is a disease peculiar to childhood, although persons well along in years sometimes have them. As children have them easier than adults it is advisable to take no special precaution to prevent them. They usually appear in from 7 to 14 days after exposure.

Symptoms.—The first symptoms of measles are shivering, succeeded by heat, thirst and languor; then follows running at the nose, sneezing, cough; the eyes water and become intolerant of light; the pulse quickens, and the face swells; there are successive heats and chills, and all the usual signs of catarrhal fever. Sometimes the symptoms are so mild as to be scarcely noticeable, and sometimes greatly aggravated; but in any case, at the end of the third day, or a little later, an eruption of dusky red color appears, first on the forehead and face, and then gradually all over the whole body. In the early stage of this eruption there is little to characterize it, but after a few hours it assumes the peculiar appearance, which once seen can never be mistaken. The little red spots become grouped, as it were, into crescent-shaped patches, which are slightly elevated above the surface, the surrounding skin retaining its natural color. On the third day of the eruption it begins to fade and disappear, being succeeded by a scurfy disorganization of the cuticle, which is accompanied by an intolerant itching. The febrile symptoms also abate, and very quickly leave the patient altogether, but often in a very weak state and with a troublesome cough. Between exposure to the infection and the breaking out of measles, there is usually an interval of 14 days, which is called the period of incubation; so that it is not uncommon, where there are several children in a family, for the cases to succeed each other at fortnightly intervals.

The disease is often rendered dangerous by complications with others; so that, not in itself of a fatal character, it frequently leads to fatal results. Where there are the seeds of consumption or scrofula in the constitution, they are likely to be called into activity during the debility which follows an attack of measles; dropsy often follows it, as do affections of the air passages, chest and bowels.

How to Distinguish Measles from Scarlet Fever.—Measles is a less dangerous disease than scarlet fever, although sometimes mistaken for it in the early stages. In measles the spots are not as deeply colored as in scarlet fever, and are differently shaped and rougher to the touch. In scarlet fever the spots usually appear on the second day after the first symptoms are observed, and in measles on the third or fourth day. The irritation of the nose, sneezing and discharge, that are prominent symptoms in measles, do not occur in scarlet fever.

Treatment.—Generally speaking, for simple measles, little medicine is required. Give the patient plenty of dilutent drinks, let him have a spare diet and a moderately warm and well ventilated room; keep the bowels gently open; if a roasted apple or a little manna in the drink will not do this give a dose of castor oil. Where there is much heat of the skin, sponging with tepid vinegar and water will completely relieve it, and also the itching. When the eruption has subsided, and the desquamation of the skin commenced, a tepid bath will materially assist this process, and get rid of the dead cuticle. On the third or fourth day after the disappearance of the eruption, give a small dose of powder of rhubarb, jalap, or scammony. Care should be taken to protect the patient against change of weather, and to restore the strength by a nourishing diet. Attention should be paid to the cough. Give drinks of flaxseed tea or slippery elm, made slightly acid.

If the attack is severe, attended with high fever, headache, restlessness, etc., the feet should be placed in a hot mustard bath for ten or fifteen minutes, after which place the patient in bed warmly covered, giving every hour until the fever subsides and sweating takes place, Fluid Extract of Aconite, 1 drop to a teaspoonful of water; and every 2 hours, or until the pulse is reduced in frequency, give 1 drop Fluid Extract of Veratrum Viride similarly diluted.

Cold water may be taken freely with benefit in this as well as in all other eruptive or miasmatic fevers. A very good drink can be prepared by making a bowlful of slippery elm infusion, and adding the juice of a lemon and a tablespoonful of cream of tartar, and using as a drink as the patient desires.

The bowels should be regulated by the Compound Podophyllin Pills, or the Compound powder of Jalap.

The diet should be light, and consist largely of ripe cooked fruits, gruels, broths, and other easily digestible articles.

Sore throat should be relieved by inhalation of hot vinegar, or by a Gargle of Carbolic Acid, 2 drops to 1 ounce of water. If the eyes should become irritated and inflamed, they may be relieved by a cool wash of slippery elm, alum curd, rose leaves, or moist tea-grounds taken from the pot.

To Bring them Out.—In cases where the eruption does not appear, warm whiskey-sling or the Compound Tincture of Virginia Snake Root may be given to bring it out.

2. Sometimes when warm drinks fail to bring them out, drinking largely of cold water, and keeping warmly covered in bed, will produce the desired effect.

3. The following will be found most efficient: Strong balm tea with a little saffron infused, or hot ears of corn, wrapped in a cloth saturated with diluted vinegar, placed about the body.

Striking in.—Sometimes the eruption of measles disappears suddenly—then there is cause for alarm, and energetic treatment required; the patient should be directly put into a warm bath, and have warm dilutent drinks; if the pulse sinks rapidly, and there is great prostration of strength, administer wine whey, and the following draughts: 10 drops of aromatic spirits of ammonia, or 5 grains of the sesquicarbonate in ½ an ounce of camphor mixture, with a drop of laudanum every four hours; should the prostration be very great, weak brandy and water may be given. The state of the chest, head, and bowels should be closely watched for some time after the patient is convalescent, as disorders of these organs are very likely to occur, in which case it is probable that there may be pneumonia, hydrocephalus, or diarrhœa.

2. Apply mustard poultices to the feet, ankles, wrists, and over the whole abdomen, letting the poultices remain a few minutes and until they produce considerable redness.

Severe cases of measles are liable to be accompanied with pneumonia, and where there are decided symptoms of this, the Hop Fomentation (see below) should be applied over the whole chest, with warm applications to the feet and legs. The frequent inhalation of the vapour of hot vinegar should be employed.

Chronic sore eyes, diarrhœa, a lingering cough, etc., are liable to follow severe cases of measles, and these should be treated according to the indications of each individual case.

Malignant Measles.—This is a variety which commences with the above symptoms in an aggravated form; the rash quickly assumes a livid hue, alternately reviving and disappearing, and is mixed up with dark red spots like flea-bites; in this form of the disease we have extreme debility and all the symptoms of putrid fever, like which it should be treated. No time should be lost in procuring medical aid.

Herbal or Eclectic Treatment for Measles.—A strong tea composed of saffron and snake root always proves beneficial. Decoctions of licorice, marshmallow roots and sarsaparilla are likewise beneficial. Sudden changes should be guarded against, and especially exposure to cold draughts, the room, however, should be kept moderately cool. No animal food should at first be taken, but the patient confined to low, spare diet, such as sage, gruel, etc. A good drink may be made of barley water, acidulated with lemon juice.

HOT FOMENTATIONS AND POULTICES.—

Hot fomentations are serviceable in treating many forms of disease, and in some they are indispensable. Hops, stramonium or jimson weed, tansy, hoarhound, catnip, lobelia, etc., either in the herb or in tincture, are among the most common agents employed. The herbs should be simmered in water, or vinegar and water, until their strength responds to the liquid, when they should be placed between thin muslin cloths, applied as hot as the patient can bear, and covered with a number of thicknesses of heated cloths. Material should be prepared for two applications, so that as one is removed the other may be applied. The same application may be used over and over, using the liquid in which it was steeped, or adding hot water to keep it moist. They should be changed every 5 to 8 minutes, using care not to expose the part to the cold air during the changes. When using tinctures instead of herbs, prepare a lotion by adding to a sufficient quantity of water, or vinegar and water, or whiskey and water, so much of the tincture as will give it the requisite strength, warm the lotion and place it where it will keep warm, and saturate and wring from it several thicknesses of flannel or muslin, applying hot to the part as in other cases. Vinegar or whiskey should form an ingredient, if practicable, in any fomentation, and hops form a good combination with other ingredients when not used alone.

Hop Fomentation.—In bilious colic, inflammation of the lungs, and other cases requiring energetic treatment, the best fomentation is made as follows: Take a quart of vinegar, put in a kettle, and add as much hops as the vinegar will take up; boil them together for 5 or 10 minutes, and stir in as much corn meal as will make the whole into a thick mush. The meal is added simply to give consistence to the mass so as to retain the heat and not wet the bedding. If corn meal is not at hand, shorts, or bran and flour mixed together, will do. Spread this thickly upon an ample piece of muslin cloth (if 2 or

3 inches thick all the better), and apply hot. If too hot to be applied next the skin, lay folds of cloth between. The essential point is to get the heat and the fullest effects of the hops and vinegar as soon as possible, and to hold their effect as long as possible.

Hot Mustard Foot Bath.—Prepare a bucket or tub, the same as for an ordinary foot bath, filling it a third to half full of water as hot as the patient can bear with comfort. Put in it about two tablespoonfuls of ground mustard (more or less, according to the degree of strength desired). Provide a reserve of hot water (boiling hot, or nearly so), and after keeping the feet in the bath for a short time, add hot water to keep up the temperature, keeping it as hot as the patient can bear for ten or fifteen minutes. The parts should then be gently dried and warmly wrapped.

Slippery Elm Poultice.—Take of slippery elm bark, in powder, half an ounce, and a sufficient amount of hot water to form a poultice of the proper consistence. This poultice is valuable in all cases of burns, scalds, swellings, inflammations, ulcers, painful tumor, abscesses, and wherever a general soothing emollient poultice is required.

Yeast Poultice.—Applicable to sores and indolent ulcers. Made by taking 5 ounces of yeast and a pound of flour (or in that proportion), and adding to water at blood heat, so as to form a tolerably stiff dough; set in a warm place (but not so as to scald) until it begins to ferment or to "rise," and apply like any poultice.

MUMPS.—This disease, which is a contagious epidemic, consists of inflammation of the salivary or parotid glands, which are situated on each side of the lower jaw.

SYMPTOMS.—It commences with slight febrile symptoms of a general character. Very soon there is a redness and swelling at the angle of the jaw, which gradually extends to the face and neck near to the glands. These sometimes become so large as to hang down a considerable distance, like two bags.

They may come on suddenly, or else be preceded by a few days of general indisposition, which now and then amounts to high fever. A feeling of stiffness about the jaws is soon followed by swelling, often very bulky, and more or less tense. The swelling is apt to extend either at the back of the lower jaw or underneath it. The swelling contains no fluid; dental pain is absent. Generally first one side of the jaw is attacked and then the other; it is rare for both sides to suffer simultaneously. Not uncommonly similar swellings burst out in other localities of the body, the genital organs being most liable to seizure.

TREATMENT.—But little medical treatment is required for this disease when at its height. The patient, from sheer inability to move the jaw, must live chiefly on slops; and it is well for him to be kept low, unless very delicate, in which case a little good broth or beef tea should be given. If there is much pain, the throat should have hot fomentations applied; and, in very severe cases, two or three leeches. Mumps is not a dangerous disorder, unless the inflammation should be turned inwards, in which case it will probably affect the brain or testicles; or, in the female, the breasts. Should the swellings suddenly disappear, and thereby aggravate the symptoms of fever, the following liniment must be applied: Camphorated spirits, 1 oz.; solution of sub-carbonate of ammonia, 2 drams; tincture of cantharides, ½ dram. Mix, and rub in until the swellings re-appear. Take also, internally, nitrate of potass, 1 dram; tartarised antimony 1½ grs. Mix, and divide into six powders, one of which is to be taken every four hours.

Camphor for Mumps.—Camphor is said to have been used successfully to reduce the after-swelling in mumps; in the case of males holding the pendant parts in a basin of spirits of camphor, and bathing the adjacent parts freely with it, continuing or renewing the application until relief is had. If it occasions smarting more than the patient can bear, the liquid may be diluted with water.

CHICKEN POX.—Chicken-pox is an eruptive disease which affects children and occasionally adults. It is attended only with slight constitutional disturbance, and is therefore neither a distressing nor dangerous affection. The eruption first appears on the body, afterwards on the neck, the scalp, and lastly on the face. It appears on the second or third day after the attack, and is succeeded by vesicles containing a transparent fluid. These begin to dry on the fifth, sixth or seventh day. This disease may be distinguished from variola and varioloid by the shortness of the period of invasion, the mildness of the symptoms and the absence of the deep, funnel-shaped depression of the vesicles, so noticeable in variola. The main distinctions between chicken-pox and small-pox are the absence or extreme mildness of the premonitory fever in the former disease, and the form and contents of the vesicles; those of the latter eruption being filled with dark matter, and having, invariably, a depression in the centre.

TREATMENT.—Ordinarily very little treatment is required. It is best to use daily an alkaline bath, and as a drink, the tea of pleurisy-root, catnip or other diaphoretics, to which is added from half to a spoonful of extract of smartweed, or the patient should be put upon spare diet; this, and a dose or two of some cooling aperient as rhubarb or magnesia is generally all that is necessary; but should the febrile symptoms run high, give a saline draught, as the following: Carbonate of potash, 1 scruple; citric or tartaric acid, 15 grains; essence of cinnamon, ½ a dram; syrup of orange peel, 1 dram; water, 10 ounces. Shake, and drink while sparkling a wineglassful as a refrigerant. To make it effervescing, add the acid after the draught is poured out. Give plenty of cooling drink, and, if the bowels are at all obstinate, emollient injections. Care must be taken that the skin is not irritated by scratching—as it is, painful and troublesome sores may be produced—and also that the patient does not take a chill. If these precautions are observed, little or no danger is to be apprehended from chicken pox.

YELLOW FEVER.—This disease is peculiar to hot climates and is a species of typhus, which takes its name from one of the symptoms, but which, however, is not an essential one. It is probably caused by a vitiated state of the atmosphere arising from decayed vegetable or animal substances, in hot, sultry weather. It is very contagious and an epidemic.

Symptoms.—Costiveness, dull pain in the right side, defect of appetite, flatulence, perverted tastes, heat in the stomach, giddiness or pain in the head; dull, watery, yellow eye; dim or imperfect vision, hoarseness, slight sore throat, and the worst features of typhus.

TREATMENT.—In this disease, good nursing is indispensable. Let the patient have perfect rest and quietness, in a well-ventilated room. In the early stages of the disease, the diet must be confined to preparations of sago, arrowroot, barley, etc.; but as the disease advances, give animal broths made of lean meat, thickened with bread-crumbs, oat-meal, or barley. The strictest attention must be given to cleanliness, and the linen changed frequently. If the stomach be very irritable and the vomiting violent, give the following preparation: Powdered rhubarb, 20 grains; powdered saleratus, 20 grains; powdered peppermint, 1 tea-spoonful; laudanum, 15 drops; brandy, 1 table spoonful; boiling water, 1 gill. Mix. Sweeten with loaf-sugar, and give a table-spoonful every hour till the symptoms change. The bowels must be kept open as in all fevers. For this purpose use the following: Ginger, 2 ounces; bayberry bark, 4 ounces; cayenne pepper, ½ ounce.

Dose, a tea-spoonful in a little milk, with half a tea-spoonful of powdered rhubarb every hour till it operates freely.

Captain Jonas P. Levy, who has had an extensive experience with yellow fever, states that he never knew a case of yellow fever terminate fatally under the following treatment:

Dissolve a table-spoonful of common salt in a wineglass of water; pour it into a tumbler, and add the juice of a whole lemon and 2 wineglasses of castor oil. An adult to take the whole at one dose. Then give a hot mustard foot-bath, with a handful of salt in the water. Wrap the patient in blankets until he perspires freely. Remove to the bed, and well wrap the patient's feet in the blanket. Afterward apply mustard plasters to the abdomen, legs, and soles of the feet. If the headache is very severe, they may be applied to the head and temples. After the fever has been broken, take 40 grains of quinine and 40 drops of elixir of vitriol to a quart of water. Give a wineglassful three times a day. Barley-water, lemonade and ice-water may be used in moderation.

CHOLERA MORBUS.—This is a disease prevalent in warm weather. From the great amount of bile secreted it is also called bilious cholera.

Causes.—Excessive heat, sudden atmospheric changes, indigestible food, unripe fruits. Dampness, wet feet and violent passions will also cause it.

Symptoms.—This disease begins with sickness and distress at the stomach, succeeded by violent gripings, with vomiting of thin, dirty, yellowish, whitish, or greenish fluid, with discharges from the bowels similar to that vomited. The nausea and distress continue between the vomiting and purging, and the pain at times is intense. The pulse is rapid, soon becoming small and feeble, the tongue dry, the urine high-colored, and there is much thirst, though no drink can be retained on the stomach.

TREATMENT.—Apply a large mustard poultice over the stomach and liver. Give large draughts of warm teas, by which means the stomach will be cleansed of all its solid contents. Every half-hour give table-spoonful doses of the compound powder of rhubarb and potassa, until the vomiting is checked. Warm injections must be given frequently, and hot bricks

applied to the feet, while the whole body should be swathed in warm flannels. To get up a warmth of the body and the stomach is, in fact, the most important thing in this disease. Hot brandy, in which is a dose of cayenne, is excellent to quiet the vomiting and griping. A few drops of laudanum in the injections may be given, if the pain is excessive; but generally it is not needed.

Either of the following have been found useful: Bicarbonate of soda, 12 grs.; common salt, 6 grs.; chlorate of potash, 6 grs. Mix and take in cold water. Or the following: Acetate of lead, 20 grs.; opium, 12 grs. Make into 12 pills and take one every half hour until looseness ceases.

Eclectic or Herbal Treatment for Cholera Morbus.—No time must be lost in treating the severe stages of this disease. Give the patient copious drinks of whey, warm barley-water, thin water gruel, or weak chicken broth. Bathe the feet and legs in warm saleratus water, and apply warm fomentations of hops and vinegar to the bowels. In addition to those, apply a poultice of well-stewed garden mint, or a poultice of mustard and strong vinegar will be found of much service. The vomiting and purging may be stopped by the following: Ground black pepper, 1 table-spoonful; table salt, 1 table-spoonful; warm water, ½ tumblerful; cider vinegar, ½ tumblerful. Dose, a table-spoonful every few minutes. Stir and mix each time until the whole is taken.

The evacuations, however, should not be stopped till the patient feels very weak. Nourishing diet should be taken by the patient. A wineglass of cold camomile tea once or twice a day would be very beneficial, as would ten drops of elixir of vitriol three or four times a day, or a tea made of black or Virginia snake-root. Flannel should be worn next to the skin, and the warm bath should be frequently resorted to.

CHOLERA INFANTUM, otherwise known as the summer complaint of children, has been by some regarded as belonging exclusively to America. It has been ascertained, however, that this disease prevailt in Europe, where it is called by a different name. It usually attacks children under four years of age, and generally between the months of June and October.

Symptoms.—There is at first diarrhœa and the stools are sometimes of a watery, colorless consistence; at others they have a greenish-yellow appearance; the pulse is quick, the head and abdomen are hot, while the limbs are cold. The child seems to suffer more or less pain, as indicated by its crying, and frequently screams as if suffering acutely. The disease often terminates unfavorably and sometimes within a few hours; again, it continues for several weeks, and the little sufferer becomes very much emaciated, his eyes sunken, countenance pale, and yet a recovery is possible.

Causes.—From the fact that it oftener occurs during the summer months than at any other time of the year, it may be inferred that the temperature greatly influences the prevalence of this disease. It more frequently attacks the poorer classes, or those living in unhealthy sections, although the children of the wealthy are likewise subject to it. Teething, change of diet at the time of weaning, and unhealthy, diluted milk, may be the exciting causes of this disease so common to children.

Cholera Infantum is more prevalent in our large cities, it being comparatively unknown in rural districts. Often these little sufferers are greatly improved by a trip into the country or to the sea-shore. Pure air and fresh sweet milk, as hygienic and dietetic adjuncts, are necessary for recovery.

TREATMENT.—The first treatment should be *preventive*. The little patient should be placed in a well ventilated room. Next, attend to the diet, and ascertain if the milk be pure and healthy. If the child nurses, then the mother should properly regard her diet. She should not eat unripe or stale fruits or vegetables, but her food should be nutritious and easily digested. She should not overwork, nor heat her blood, neither should she allow herself to become excited or irritable. She should occasionally give the child some milk alkali to obviate undue acidity of the stomach. Scalding the milk, or using a little lime-water in it, is sometimes beneficial. The following can be obtained at almost any drug store: Syrup of rhubarb, 2 ounces; lime-water, 4 drachms (about 4 tea-spoonfuls), and water of peppermint, 2 drachms. Give of this mixture, to a child one year old, 1 tea-spoonful every hour until it acts on the bowels as a laxative, which may be known by the changed appearance of the passages. Follow this with compound extract of smart-weed and cover the bowels with cloths wet with the same. This treatment I have employed with perfect success in my own family and also with the same uniformly happy results in the general practice of medicine.

Boils—To Relieve the Pain of and to Scatter.—The pain of boils, it is said, can be relieved very much by frequently applying castor oil on the parts.

Painting a boil with tincture of iodine, it is also claimed, scatters them; but I prefer to scatter them by frequently applying a strong liniment. I have recently scattered two from my own neck in this way. I used Dr. Chase's golden oil, or strong camphor liniment; I think I applied it at least fifteen different times in the day, rubbing over the boil hard and long at each application, which scattered it, and is doing so again, at this writing, so that I see they are in the system, and I have therefore made 1 qt. of the lime water (1 oz. stone lime to 1 qt.), and am going to use it, expecting I shall thus cleanse the blood and eradicate them—the boils from the system or blood. It did do it, as I have not had any more, or any indications of them, now over four months, after writing the above.

Boils, Alterative Syrup for.—Blue flag and black cohosh root, each 1 oz.; yellow dock root and the bark of the root of bitter-sweet, Peruvian bark, the bark of the root of sassafras and prickly ash berries, each ½ oz.; pyrophosphate of iron, 2½ drs.; whiskey, ½ pt.; glycerine, 6 ozs.; water, 12 ozs.—DIRECTIONS.—The barks, roots, and berries are to be coarsely ground, or bruised, then steeped in water in a covered dish, to leave, when strained, 1 pt.; then add the glycerine, whiskey and pyrophosphate of iron. DOSE.—A teaspoonful 4 times daily, at meals and at bed-time.

Remarks.—This is not only a valuable alterative in boils, but to follow the treatment of inflammations, after the acute stages have been overcome by cooling purgatives, such as salts, seidlitz powder or cream of tartar, attention to the skin, etc., especially so if there is a scrofulous tendency, or considerable debility, shown by the loss of strength, flesh, etc.

ACCIDENTS, POISONING, Etc.—Short Rules for Management.—Prof. Wilder, of New York, gives the following short rules to govern the action in such cases:

I. For dust in the eyes, avoid rubbing, and dash water into them; remove cinders, etc., with the rounded end of a lead-pencil.

II. Remove insects from the ear by tepid water; never put a hard instrument into the ear.

III. If any artery is cut, compress above the wound; if a vein is cut, compress below.

IV. If choked, get upon all fours and cough.

V. For light burns, clip the part in cold water; if the skin is destroyed, cover with varnish.

VI. Smother a fire with carpets, etc.; water will often spread burning oil, and increase the danger.

VII. Before passing through smoke take a full breath, and then stoop low; but if carbonic acid is suspected, then walk erect.

VIII. Suck poisoned wounds, unless your mouth is sore. Enlarge the wound, or better, cut out the part without delay. Hold the wounded part as long as can be borne to a hot coal or end of a cigar.

IX. In case of poisoning, excite vomiting by tickling the throat, or by warm water, or mustard and water, or salt and water, always warm, if possible.

X. For acid poisons give alkalies.

XI. For opium poisoning give strong coffee and keep moving.

XII. If you fall in water float on the back, with the nose and mouth projecting. (See falling into the river, etc.)

XIII. For apoplexy raise the head and body; for fainting lay the person flat.

Poison Ivy—Poisoning Cured by an Old Fox Hunter.—The following was sent to *Forest and Stream*, which explains itself. The writer says: "I have probably suffered more from poison ivy than any other man. Three times in one summer I have been blind from its effects. I have tried every remedy without success, until last summer. I was out shooting, and, with my usual luck, I got another dose that confined me to the house. I could not walk. An old fox hunter living in the neighborhood, hearing of my condition, came to see me, and brought me a remedy that acted like magic. In 3 days' time I was up and enjoying what I love better than anything else in this world, the best of all field sports—fall woodcock shooting. I give you the recipe: Take 1 pt. of the bark of black spotted alder and 1 qt. of water, and boil down to 1 pt. Wash the poisoned parts a dozen times a day, if convenient; it will not injure you."

Remarks.—Perhaps the better plan is to learn that the poison ivy has its leaves in clusters of three, while the non-poisonous has its leaves in clusters of five; knowing this, keep clear of the poisonous.

FALLING INTO DEEP WATER—What to do for Those Who Cannot Swim.—For those who may fall into deep water, and cannot swim, it is thought best that a little fuller instructions ought to be given:

I. When one falls into deep water let it always be remembered that he will rise to the surface at once; and now is the time to remember, also, that he must not raise the arms or hands above the water, except there be something to take hold of; if he does it will sink the head so low he cannot breathe. But:

II. Any motion of the hands may be made under the water, as you please, without endangering the life, for if the water is quiet, the head being thrown a little back, the face will float above the surface, unless heavy boots or clothing bear one down.

III. And a motion of the legs as if walking up stairs, while it can be borne, keeping the perpendicular as nearly as possible, will greatly aid in keeping one afloat until help arrives; and even good swimmers had better not exhaust themselves, if a boat is coming, only to keep afloat. (See also drowned persons, rules for resuscitation, etc.)

Healing Ointment or Black Salve for Inflammations, Wounds, Ulcers, Burns, Etc.—Olive oil, 1¼ lbs.; bees-wax and unsalted butter, each 2 ozs.; white pine pitch, called also white turpentine, 4 ozs.; red lead, ½ lb.; honey, 6 ozs.; powdered camphor gum, 4 ozs. DIRECTIONS.—Put the olive oil into a suitable kettle, place on a stove, and bring it to a boiling heat (remembering that it takes nearly three times the heat to boil oil that it does to boil water); then, the lead being in fine powder, stir it in, as you would make "mush," and continue the heat and stirring till it becomes a shining black or deep brown. Remove from the fire, the bees-wax being shaved finely, stir it in; then the other ingredients, the powdered camphor last. Spread on a cloth and apply.

Colds and Inflammation—Health Rules for Winter.

I. "Never lean with the back upon anything that is cold.

II. "Never begin a journey until the breakfast has been eaten.

III. "Never take warm drinks and then immediately go out in the cold air.

IV. "Keep the back, especially between the shoulders, well covered; also the chest well protected.

V. "In sleeping in a cold room, establish the habit of breathing through the nose, and never with the mouth open.

VI. "Never go to bed with cold or damp feet; always toast them by a fire 10 or 15 minutes before going to bed.

VII. "Never omit weekly bathing, for, unless the skin is in active condition, the cold will close the pores and favor congestion or other diseases.

VIII. "After exercise of any kind, never ride in an open carriage or near the window of a car for a moment; it is dangerous to health and even to life.

IX. "When hoarse, speak as little as possible until it is recovered from, else the voice may be permanently lost or difficulties of the throat be produced.

X. "Warm the back by a fire, and never continue keeping the back exposed to heat after it has become comfortably warm; to do otherwise is debilitating.

XI. "When going from a warm atmosphere into a colder one, keep the mouth closed so that the air may be warmed by its passage through the nose ere it reaches the lungs.

XII. "Never stand still in cold weather, especially after having taken a slight degree of exercise; and always avoid standing on ice or snow, or where the person is exposed to cold wind; in short, keep your feet warm, your head cool, and your mouth shut and you will seldom 'catch cold.'"—*Common Sense.*

XIII. To the foregoing rules from "Common Sense" allow the Old Doctor to make a "baker's dozen" of them, by saying that the most fruitful seed from which colds, and often consumption, arise is the pernicious habit of young people

loitering at the gate. Never do it.

BLEEDING—A Styptic which will Stop Bleeding of the Largest Vessels.—Brandy, or common whiskey, 2 ozs.; castile soap, 2 drs.; carbonate of potash, 1 dr. DIRECTIONS—Scrape the soap fine and dissolve it in the spirits; then add the potash; mix well and keep corked. Warm it and wet pledgets of lint in it and apply to the wound. It immediately congeals the blood and coagulates it some distance within the vessel. It may need repeating for deep wounds and when limbs are cut off.

Remarks.—I am sorry I cannot give the name of the writer, or the paper in which this was published, having had it in my scrap-book for some time; but I am satisfied that it is reliable.

Roasted Onions—As a Poultice to Boils, Inflammation of the Bowels, etc.—A poultice of roasted onions applied to boils, tumors, etc., hastens suppuration, and are often applied as "drafts" to the feet, and I have heard, from the old women, of their being applied in excessive fevers, by mashing or pounding onions and placing them under the arms and upon the bowels or other parts swollen by extensive inflammation (to be changed often), and they are very valuable indeed.

Onions, Their Value as Food.—Onions contain 25 to 30% (*i.e.*, 25 to 30 parts in 100) of solid substance, when dried; while potatoes, even, do not average 25%; but from some peculiarity of the onion its nourishing properties more than double those of the potato, and in some cases nearly treble it; hence its value as food may now be better understood, and without regard to its peculiar flavor, the onion should be much more eaten than it is. If health is desirable, eat onions.

APPETITE—To Increase or Restore.—Obtain valerian root, ¼ or ½ lb. Have it ground coarsely or well bruised. Make a tea of it by steeping a rounding tablespoonful of the powder in 1 pt. water. DOSE—One to 2 tablespoonfuls just before meals, and half to a wineglassful at bed-time.

Remarks.—This plant is known as the American Greek-valerian, abcess root, blue bells (from its blue flowers), sweat root, Jacob's ladder, etc. The Latin, or technical name is *polemonium reptans*. It grows in the northern states, and was a great favorite with the Indians, the tea being given freely in fevers, pleurisy, and to produce copious perspiration. It is claimed also to cleanse the blood, and to have cured many cases of consumption.

PECKHAM'S GENUINE BALSAM—For Coughs, Sore Throat, Sore Chest, Kidney Difficulties, Wounds, etc.—Rosin, 10 lbs.; spirits of turpentine, 1 gal.; or, rosin, 2½ ozs.; turpentine, 2 ozs., is the same proportion. DIRECTIONS—Melt the rosin in a suitable kettle, or pan, over a stove, in the day time, so that it shall not be necessary to have a lamp, or candle near; and when not too hot put in the turpentine gradually. It must not be made over an open fire, as the gas arising from it as the turpentine is put in, takes fire very readily, and would quickly fill a whole room with its blaze, and perhaps fire the house; hence I have given these necessary precautions. Bottle while moderately hot, else it will run too slowly. DOSE—For a grown person, take from 5 to 10 drops on sugar; children, 1 or 2, to 5 drops, night and morning.

Remarks.—I obtained this recipe of L. S. Robinson, of Jackson, Mich., who says he has made and sold thousands of dollars worth of it, claiming that it is the original Peckham's balsam, and that all additional articles put in and claimed to be an improvement, should not be used. With this balsam, Mr. Robinson claims he has made some remarkable cures in the diseases mentioned, both internal and external, and mentions the following cases.

I. A mare of his own, being in a strange pasture with some cows, was badly hooked one night. The wound was long, deep and jagged, upon the side; but he put some of this balsam into every part of the wound, then sewed it up, except a little opening at the lowest part of the wound, to allow the matter in healing to drain off. Then drove home, 30 miles, the same day, and the wound made a very rapid healing.

II. A remarkable case, that of a lady who had had several miscarriages, and feared another, there being an inflammation of the parts, and also of the neck of the bladder; but 5 to 8 drop doses, night and morning, of this balsam, cured both difficulties. The lady, upon a subsequent trip he was making over that route, showed him the babe, healthy and well, and herself the same, telling him, "There, doctor, that is your child, you saved it; nothing else was used."

III. A gentleman who had recently buried a wife from consumption, and who considered himself past help, with the same disease, when Mr. Robinson first made his acquaintance. But with this balsam internally, and Cook's electro-magnetic liniment externally, he was entirely cured, and is still alive, at this writing, hale and hearty, living with a second wife, some 30 years after the cure.

LIQUOR—A Cure for the Love of it.—At a festival at a reformatory institution recently, a gentleman said, of the cure of the use of intoxicating liquors: "I overcame the appetite by a recipe given to me by old Dr. Hatfield, one of those good old physicians who do not have a percentage from a neighboring druggist. The prescription is simply an orange every morning a half hour before breakfast. 'Take that,' said the doctor, 'and you will neither want liquor or medicine.' I have done so regularly, and find that liquor has become repulsive. The taste of the orange is in the saliva of my tongue, and it would be as well to mix water and oil, as rum, with my taste."

Remarks.—I will add to this, keep away from where it is sold, taking the orange as directed, and you will be safe. If you go into saloons, no matter how much you may try to avoid drinking while there, there will be pretended friends—real enemies—who will urge you to drink, and even attempt to pull you up to the bar, and try to force it into your mouth. I speak from knowledge. I once had two young men—I was then young myself—get a cup of brandy, and one of them behind me and the other in front, tried to force me to drink it; but I got a chance to get a foot against a bureau and pushed back enough to get room tor a kick, and that cup and brandy went, as the saying is, "higher'n a kite,"—it went to the ceiling,—and then I said, "Boys, if you don't let me alone, I will kick you, too, but drink I will not." But I should have had to fight, if the boss for whom we all worked, had not stepped forward at this juncture, and said "Boys, you ought to be ashamed of yourselves. You know Chase told us this morning that he did not drink, and, hence, went and borrowed a rifle, and has spent all day to get a deer for us to eat; now, let him alone." At this they gave it up. The occasion being when a saw mill, in which we worked, had been sold—this was in 1834 or '35—and the giving possession had to be done with whiskey and a high day. The difficulty is, people—men or boys—do not say *no* with sufficient vim. When enticed to evil, let the *no* have a ring as though you meant just what you said; then, unless the enticers are drunk, as they were in the above case, you will generally have no trouble, especially if you do not put in your presence at their haunts of vice. In the above case, it was a boarding-house for the mill, and I had nowhere else to go. I will only add, if a man does not want to drink, he need not; if he wants to drink, nothing can save him. He is bound to destruction. He is, like Ephraim, "joined to his idols,"—you may just as well—"let him alone."

TOBACCO CHEWERS' WEAK STOMACH—Antidote for—Which also Weans one from its use.—A writer to the "Household" of the *Blade*, in answer to an inquirer for such an antidote, says: "I herewith send you my prescription, which has never failed yet. Take the inner bark of the root of poplar or whitewood, and when your friend wants a chew of tobacco let him take a chew of this bark. If he will follow this for 3 weeks, I will guarantee he will not be troubled with a weak stomach or have any more desire for the filthy weed."

Remarks.—This being just the thing desired by many, let it have a fair trial, twice as long as the writer claims to be necessary, rather than fail. Not being a "chewer," I have not tested it.

Painful Menstruation and other Pains, Remedy for.—Dr. King, of Toledo, thinks very much of the following remedy, not only in painful menstruation, but also for pain in the stomach or bowels, colic, cholera-morbus, diarrhœa, etc. The author has used it in the latter cases with so much satisfaction that he has faith in its virtues in the first named: Oil of cloves, cinnamon, anise and peppermint, each 40 drops ({2/3} drs.); put these into 3 ozs. of alcohol, and add sulphuric ether and laudanum, each 1 oz. Dose—In bad cases, 1 tea-spoonful in cold, sweetened water; repeat in 10 to 20 minutes, if needed, and at longer intervals as long as needed. For children, in stomach and bowel difficulties, according to age and severity, from 10 drops to ½ tea-spoonful, as required to meet all cases.

Painful Menstruation and Nervous Debility of Females, Stimulating Tonic for.—Quinine, 60 grs.; morphine and arsenious acid, each 1 gr.; strychnine, 1 gr.; alcoholic ext. of aconite (or if this is not on hand, the same amount of the ex. of hyoscyamus may take its place), 3 grs. of the one used. Mix very thoroughly, and make into 30 pills. Dose—Take one pill only, every 6 hours, until relieved. Females, troubled with painful menstruation, should keep them on hand for use, as soon as the least pain is manifested; but do not take them any oftener than one once in six hours.

Remarks.—This pill I obtained from an old physician, whom I have known over 40 years, and I know him to be in every way reliable. Some will say: "They contain poisonous articles." So they do, and so do very many of our best medicines. It depends wholly upon the amounts taken as to their injurious effects; here we have 2 grs. of quinine, ½ gr. of ext. of aconite, 1/20 of a gr. of morphine and arsenious acid, and 1/30 of a gr. of strychnine, only, in each pill. If they are taken as directed, as to dose and time—1 pill, 6 hours apart—there is not the least danger in their use, as these articles are all, sometimes, given in doses twice as large as here given. It is, indeed, a happy combination of our most reliable remedies, for cases requiring the properties named—something to allay pain and strengthen the system. After the 30 pills have been taken, if not cured before, wait a week, before having any more made. By that time some of the chinoidine, or

cinchonidia pills, found among the Ague Remedies or the tonic pills for Debility following Leucorrhea, may be taken with good results.

Sore Nipples, Breasts, etc.—To Avoid and Cure.—Sore nipples are sometimes caused by wearing the dress or corsets too tight, but most generally by neglecting to wash them with cool water, and properly drying with a soft towel, after every nursing. When there is the least tendency to soreness of the nipples, dust on a little powdered magnesia or starch, kept generally as a baby powder, to prevent soreness in the groins or other folds of the skin. A very little mutton tallow, or, better still, lamb tallow, which is much softer, will prevent chafing when applied to any part liable to chafe. But if they become sore and irritable, make the following:

I. *Bittersweet Ointment.*—Bark of the root, with the outside scraped off a little, ¼ lb.; mutton tallow, or lamb tallow, ½ lb.; stewed carefully together; then strain while hot, and box or bottle for use. Apply a little, after washing and drying the nipples as above, at each nursing.

II. *Smartweed Ointment.*—In places where the bittersweet can not be obtained, take smartweed and tallow, the same amount, and make the same way, and use in the same manner as the Bittersweet Ointment.

[The bittersweet makes a most valuable ointment for all healing purposes, and I know of only one thing at all comparable with it for similar purposes, and that is an ointment made with Balm of Gilead buds, same amount, and made the same as the bittersweet. (See also Tinct. of Balm of Gilead Buds for Cuts, Bruises, Wounds, etc.) But the smartweed ointment is considered much the best to prevent breasts from inflaming and going on to suppuration.] So, if there is danger of this, use the smartweed, if obtainable, or the following:

Sore Breasts, to Prevent Breaking, etc.—As soon as there is inflammation and swelling of the breast, indicating any danger that suppuration will take place, send to the druggist and obtain fl. ex. (remember fl. stands for fluid and ex. for extract) of poke root, 4 ozs., and apply to the breasts by wetting cloths with the extract and keeping upon the breast. Also take internally of the same, in doses of 5 to 10 drops, in a little water, every three hours, until you see improvement has commenced; then every 4 or 5 hours, lessen the dose to 3 to 8 drops. (A large, fleshy and robust woman, will take the 10 drops; small and feeble ones, the 5 only.) Re-wet the cloths, at least as often as taken internally.

Remarks.—This is from Dr. Duncan (referred to in II., for Milk, To Dry Up), who says of it: "If administered early, it will in 12 hours begin to give relief, and in 36 hours all traces of inflammation will have subsided and disappeared." He has used it in a number of cases, and always with success, when begun as soon as inflammation set in, and before suppuration began. He thinks it, in such cases, specific (positive cure).

But if it is seen that the inflammation of the breast will go on, in any case, to suppuration, poultice with slippery elm, or bread and milk, as warm as can be borne, till they break without lancing if possible; but when it comes to lancing, this calls for a physician. So I will leave the further treatment of that condition to him, simply remarking that a weak tinct. of myrrh and aloes, or a weakened tinct. of the muriate of iron, makes good injections into the orifices; if they do not heal kindly, with some of the healing ointments, as Bittersweet, Balm of Gilead, etc., which are good to heal any sore on persons or domestic animals.

Bed-Wetting and Urinary Diseases of Children, Certain Remedies.—The following is from the *Eclectic Medical Journal*, of Cincinnati, O. The article was furnished by Dr. J. Berger, of El Passo, Kansas. He says:

I. "I have been using santonine in difficulties of the urinary organs for a year or more, and it has not failed to have the desired effect in a single case. I have used it in suppression of urine, incontinence of urine, and *dysuria* (see III., below), and also in fevers. When the urine is scant and deposits a 'brick dust' sediment, it is just *the* remedy. In my first case the suppression of the urine was complete, and resisted all treatment as per books, also the reputed *apis mel* (honey bee tea) was tried, and failed. But santonine thoroughly triturated (rubbed) with sugar, in ½ gr. doses every 3 hours, established the secretion in 8 hours, and cured the case in 24 hours. I have used it, in two other cases of suppression, with like results. [Then rub 4 grs. of sugar of milk, if done by a druggist—or, if done at home, in half a teaspoonful of white sugar—and divide into 8 powders—1 for the dose, as above.]

II. *Enuresis, or Inability to Retain the Urine—Bed-Wetting Proper.*—"The second case was a lad of 8 years. His mother called on me for medicine; said 'Ed.' had worms and would 'wet the bed three or four times during the night. I gave santonine triturated, in 2 gr. doses every four hours till six doses were taken. Followed with tonics of salicine and

carbonate of iron in 4 gr. doses, three times a day for four days. Saw his mother two months after; said 'Ed.' had not 'wet the bed' since taking that medicine.

III. *Dysuria, or Pain and Heat in Passing Urine.*—"The third case was a lady, aged 22 years, troubled with dysuria (pain and heat in passing urine). She was cured with santonine in 2 gr. doses every three hours. Continued twelve hours only, triturated as above."

Confirmatory of Dr. Berger's position above upon the use of santonine, Dr. Scudder, in his "Diseases of Children," page 35, makes the following remarks: "We think of santonine as a vermifuge only; yet it has some other desirable properties. One of them is its influence over the bladder in retention of urine. In some diseases there is sometimes a tendency to retention which ordinary remedies will not reach, and which at last proves fatal. Santonine thoroughly triturated with sugar, in doses from ½ to 1 gr. every two hours, affords very certain relief. It is also very effectual in relieving burning, scalding, etc., in passing urine and the tenesmus (pain in passing of urine), and other unpleasant sensations of the urinary passages," adding: "I think santonine is deserving a place among the 'Specific Medicines.'"

IV. *Incontinence of Urine (Bed-Wetting) Remedy for.*—Sulphate of quinine, 7 grs.; tincts. of belladonna and chloride of iron (muriated tinct. of iron), each ½ oz.; water, ¾ oz.; mix and shake when used. DOSE—Give 30 drops, 3 times daily, one being at bedtime.

Remarks.—The above dose is for a child 6 or 7 years; older or younger in proportion. By the time this amount is taken, generally at best, there will be no more "wetting the bed."

BEE AND WASP STINGS—Sure Cure for.—I. *Bees.*—Mr. R. L. Aylor, of Waterloo, Ky., in reporting his success in keeping his bees over the winter of 1881-2, sends a recipe to the *Bee Journal*, headed "Bees," claiming it as his own discovery. It is simple, easily obtained, and cheap; and if it proves as quick and successful a cure as he claims, he is the one to have the benefit of "discovery." He gave it in the following words: "Buy from any drug store a small phial of tincture of myrrh; as soon as you are stung apply a little to the puncture, when all pain and swelling ceases instantly. It is also excellent for bites of spiders and poisonous reptiles."

Remarks.—Certainly no one would ask it to cure quicker than "instantly." I trust it shall prove as successful as claimed. If it does, nothing else could be desired.

II. *Wasp Stings, Quick and Certain Cure.*—Cut an onion, scrape and apply the juicy part to the sting. It quickly relieves, and allays the irritation almost as quickly.

Remarks.—A correspondent of the *London Times* reports the case of his son, stung in the eyeball by a wasp, and when he reached the house, "looked like death," etc., which made a great commotion, and the sal volatile was gotten, but one of the maids used the onion juice, and the relief was so quick that he got up and went out again to help the men destroy the nest. I have no doubt the onion juice, or scraped onion, is as good for bee stings as for the other; but lose no time in applying it, if a wasp sting, for they are very poisonous.

III. *Handy Remedy for Bites and Stings of Poisonous Animals and Insects.*—A writer in *Holt's Journal of Health* says: "That for persons about to travel or to go into the country for the summer, an ounce phial of spirits of hartshorn should be considered one of the indispensables, as, in case of being bitten or stung by any poisonous animal or insect, the immediate and free application of this alkali, as a wash to the part bitten, gives instant, perfect and permanent relief, the bite of a mad dog (we believe) not excepted; so will strong asheswater.

Remarks.—I should as soon risk the immediate application of the spirits of hartshorn as any other caustic for a mad dog bite; but it would not do to put it into the eye—as the onion juice referred to.

SPRAINS, SWELLINGS, CROUP, ETC.—Remedy for.—Best cider vinegar, 1 pt.; spirits of turpentine, ½ pt.; beat well, 3 eggs, and mix all. DIRECTIONS—Apply to the neck in croup, and to sprains or swellings by saturating (thoroughly wetting) cloths and lay on, or bind on when necessary. "Cures," says Preacher Jones, "on the 'double quick.' It cured a woman's swollen arm in 9 days who had had to give up work and go to begging on account of the swelling."

TOBACCO.—Its Use Frequently Injuring Sight and Memory.—Dr. Mackenzie, in his "Opthalmology," a work on the anatomy and diseases of the eye, expresses his opinion that tobacco is the frequent cause of *amaurosis*, diminution, or complete loss of sight, and says: "One of the best proofs of this being the case, is the great improvement in vision

(sometimes complete restoration), which ensues on the use of that narcotic being abandoned." Tobacco is a powerful narcotic, and often affects the nerves disastrously. This position of Mackenzie, says a French writer, is confirmed by M. Michel, who classes the disease among the two forms of *cerebral*, or brain, *amaurosis* (loss or diminution of sight by the condition of the brain), which are but little known. One of these conditions is seen in heavy drinkers, and is symptomatic of delirium tremens; but the other, he thinks, is brought about by the use of tobacco; and he also believes there are but few persons who have habitually, for a long period, smoked more than 5 drachms, {5/8} of an ounce, daily, without their sight, and often their memory, being more or less enfeebled. Then let those who already realize either of these conditions, or think the prospect good for their occurrence, abandon the use of tobacco in any form, at once, and forever, and keep their young folks from its use, if possible. Fortunate for the author he could never tolerate its use at all; but one can scarcely see an old man, or even young men, and many boys, even passing along the street, without a cigar in their mouth, or gracefully (?) held in their fingers. If its use continues to increase for the next century as it has for the last decade (10 years passed of this century) we shall, I greatly fear, be the next thing to a nation of imbeciles; with much larger per cent. of idiots than at this writing. A fearful responsibility rests upon parents, and governments. Certainly no school-boy should be allowed to use tobacco in any form; but it is law, and vigilant watchfulness of officers appointed for this purpose, with the same care and watchfulness of parents also that will ever prevent it, and that not wholly; for it has a fascination which cannot be accounted for upon any other principle only that of exhilaration, which is, in fact, the reason why it should never be used. It over stimulates the nerves, and thereby destroys, or very much injures them, shortening life, if no more serious catastrophe, as blindness, loss of memory, paralysis, etc., does not set in before.

MIDWIFERY.

First Signs of Pregnancy.—The first circumstance to make a woman suspect that she is pregnant is generally the non-appearance of her usual monthly discharge.

Another Symptom.—The next symptom to attract attention is usually a feeling of sickness, often most distressing in the early morning, and sometimes accompanied with vomiting. This commences about the fourth or fifth week, and continues to the middle of pregnancy, when it generally ceases. Occasionally it lasts to the end of the pregnancy, while, on the other hand, in some women it is entirely absent throughout.

Shortly after pregnancy has commenced, a sensation of weight and fullness is felt in the breasts. A little later these organs enlarge, and the nipples become more prominent; the skin, too, just around the nipples becomes darker in color, an alteration most marked in women of fair skin and light complexion. Of course these changes are most noticeable in women who are pregnant for the first time; for when they have once occurred, the breasts never quite resume their original appearance, so that subsequent changes are less observable. The breasts *may* increase in size, and *may* even contain milk, without pregnancy; as, for example, in the case of certain diseases of the womb.

Probable Date of Confinement.—The usual method of reckoning the probable date of confinement is to learn on what day the last monthly flow ceased, then to count three months backwards (or nine months forwards) and add seven days. This is, in practice, the best plan that has been suggested, and will generally give a date within a very few days of actual confinement, frequently the very day. The following example will show how the calculation is made:—A woman, we will say, was last unwell on March 10; counting three months back from March 10 gives Dec. 10; add seven days and it will give December 17, which is the probable date of her confinement. If it is not the actual day, labor will in all probability take place within three or four days before or after it.

Action of the Bowels.—Great care must be exercised to ensure a daily action of the bowels. An excellent plan is to set apart a certain hour of the day for attending to this function, whether the desire for relief be urgent or not. Perhaps the most convenient time for most people is immediately after breakfast. By following this simple rule, a habit is established which will go far to obviate the necessity for aperient medicine. When such medicine is required, it should be of the simplest possible kind; for example, a compound rhubarb pill, or a little castor-oil. When constipation is associated with piles, the aperient chosen should be a tea-spoonful of sulphur in a little milk every morning, or a similar quantity of the compound liquorice powder made into a paste by mixing a little water with it; and the patient should be instructed to make her daily visit to the water-closet immediately before retiring to bed for the night. By these means the aching pain which, under such circumstances, is apt to follow every action of the bowels, may be considerably diminished. Injecting half a pint of cold water into the bowel, immediately before the bowels are moved, often proves highly serviceable.

Should the piles become inflamed or unusually painful, the patient must keep her bed for a day or two, and bathe the parts with warm water from time to time. Where these measures are required, however, the medical attendant should be consulted.

Sore breasts.—When the breasts become swollen and painful, they should be frequently fomented with flannels wrung out of hot water, and, in the meantime, should be supported, as in a sling, by a broad handkerchief passing under the arm of the affected side and over the opposite shoulder.

Sometimes the veins of the legs, thighs, and lower part of the body become swollen and uncomfortable. Under these circumstances, the patient should lie down as much as possible every day, and at once discontinue the use of tight garters.

In women who have borne many children, the abdominal walls are apt to become relaxed, and the pregnant womb, being insufficiently supported, is then in danger of falling forward, so as not only to produce deformity, but to prove a hindrance during labor. A flannel binder, or one of the abdominal belts sold for the purpose, should in these cases be constantly worn during the daytime.

Now and then the sickness, already alluded to as a common accompaniment of the early months of pregnancy, becomes so troublesome and incessant as to cause serious loss of strength. Under such circumstances consult a physician.

The Urine.—Towards the end of pregnancy it is not at all unusual for there to be some difficulty in passing urine, and for the desire to pass it to become very frequent. Should these symptoms, however, occur during the earlier months, and especially during the third and fourth, a medical man should be consulted; as they may be due to a displacement of the womb, which requires immediate attention.

Troublesome heartburn, diarrhœa, palpitation, persistent neuralgia, salivation, itching or swelling of the external parts, swelling of the face or ankles, all require prompt attention, and if severe, the personal care of the medical attendant.

PROCESS OF NATURAL LABOR.—Approach of Labor Pains.—Towards the latter part of the ninth month, certain changes take place which give warning that labor is not far off. One of the earliest of these is sinking of the abdominal swelling; the upper end of the womb, which at the beginning of the ninth month, reaches as high as the pit of the stomach, now falls a little below the point. Great relief to the breathing follows this alteration, as the pressure upon the organs within the chest is thereby greatly lessened. On the other hand, owing to this change in the position of the womb, certain new inconveniences arise from the pressure of its lower portion on the various important parts contained in the pelvis. Thus, walking becomes more difficult, the bladder requires relieving more frequently, and piles are apt to form.

A sign that makes it probable that labor is actually about to commence is the appearance of a slight discharge of mucus, streaked with a little blood. This is spoken of, in the lying-in-room, as the "show."

Labor Pains.—The so-called pains of labor are, in reality, contractions of the muscular wall of the womb. At the early part of labor they are slight, occur at long intervals, and are felt mostly in the lower part of the front of the abdomen; as labor advances, they become longer and more energetic, follow one another more quickly, though always with a certain regularity, and are generally felt chiefly in the back and loins. Each pain is comparatively feeble at its commencement, increases in intensity until it reaches its height, and then gradually passes off. This character, together with the regularity of their recurrence, serves to distinguish pains really due to uterine contraction from colicky and other pains, for which they are sometimes mistaken.

At the end of each pain the head of the child goes back a little, which prevents the strain from being so continuous as to be hurtful and exhausting. Nevertheless, almost every pain marks an advance upon the one preceding. This slight withdrawal of the head is frequently perceived by the patient herself, and unless explained to be natural and necessary, is apt to make her think she is not making any progress. There eventually comes a point, however, when the head is so far expelled that it no longer recedes between the pains. The intervals become shorter, and the pains more severe, until at last the head slips out altogether, and then the most painful part of the labor is over. The uterus usually now rests for a moment. Then the face of the child makes a little turn towards one of the patient's thighs, generally the right, in order that the shoulders may be brought into such a position that they may pass with the least difficulty. With another strong pain the shoulders are expelled. The rest of the body gives little trouble, for no part of it is as broad as those which have already passed.

The contractions of the womb now cease for a short time, varying from five to ten or twenty minutes, when a little pain is again felt, and the after birth and membranes are discharged, along with a small quantity of blood, with which a few clots are generally mixed.

Such is a brief account of the order of events in a perfectly natural labor.

Duties of a Nurse During Labor.—If the nurse is not already in the house, the appearance of the first discharge or "show" is a sufficient warning that she should be summoned. No time should be lost in obeying the call, for many women, especially if they have borne children previously, pass through all the stages of labor very quickly. On arriving at the house the nurse should make the necessary changes in her dress, and appear before the patient ready for duty. An opportunity will soon occur of forming a judgment as to whether the patient is really in labor, and, if so, how far it has advanced. If labor has actually commenced, the patient will, before long, cease speaking, suddenly grasp the nurse's arm, or the back of a chair, or whatever happens to be at hand, and exhibit other signs of suffering. The nurse will know, by the characters enumerated on a previous page, whether this is a genuine labor pain or not, and will observe how long it lasts and the degree of its severity. When it is over, she should inquire when the pains began, how often they return, whether the waters have been discharged, and other similar questions, in order that she may know what kind of message she is to send to the medical attendant, who ought at once to be informed that his patient is in labor.

Let me now suppose that the nurse has made sure that her patient is in labor, and that she has acquainted the medical attendant.

If the bowels have not been freely opened within the last six hours, it will be desirable to give a simple enema of soap and water. The emptying of the lower bowel will facilitate the labor, and will save both the patient and attendant the annoyance caused by the passing of fæces during a later stage. This having been attended to, the patient may be allowed to sit up in a chair or walk about the room, according to her inclination, provided it is clear that the labor has not yet reached its second stage. If it is night-time, however, it is better for her to remain in bed, in order that she may, if possible, get a few moments' sleep between the pains. During the early stage of labor it is of no use for patients to "hold their breath and bear down" during each pain, as they are often urged to do by untrained and inexperienced nurses. It must always be left to the medical attendant to decide when bearing-down efforts have become desirable and ought to be encouraged.

It is often a great relief to a patient for the nurse to support her back with her flat hand during a pain. In the meantime she should see that all things are in readiness for the actual confinement. The following are always wanted:—

Basins.
Binder.
Napkins.
Needles and Thread.
Nursery, or safety pins.
Olive-oil.
Pieces of old linen.
Receiver.
Roller-towel.
Scissors.
Sponges.
Thread, or strong worsted, for tying
cord.
Towels.
Vaseline, cold cream, or lard.
Water, hot and cold.
Water-proof sheeting.
Puff-box, and complete set of clothes for the baby.

In addition to the above it is advisable to have in the room some good brandy, a fan, a syringe, a foot-bath, and a nursing-apron.

The Binder usually consists of two pieces of stout twilled cotton, each two yards long and of good width, the edges of

which are stitched together so as to make the binder of double thickness. On an emergency, a small table-cloth or cotton sheet, suitably folded, answers the purpose very well.

The Receiver should be of flannel made of double thickness, and large enough to wrap the child thoroughly. The flimsy receivers sometimes used are only fit to protect a doll. A good thick flannel petticoat, or a cot-blanket, is as good as anything.

The Thread or Worsted for Tying the Cord must be made ready in the following way: Twelve equal lengths, measuring about a foot, are to be laid side by side and arranged evenly. Six of these lengths, are then to be knotted together at a distance of about two inches from each end, and the remaining six in the same way. Having been thus prepared, the threads must be laid on a dressing-table, and a pair of good scissors by the side of them, ready for handing to the medical attendant at the proper moment.

The Preparation of the Bed is a matter of considerable importance, and ought to be attended to during the early part of labor. Women are usually delivered lying on the left side, with the knees drawn up towards the abdomen. The right side of the bed, therefore, is the one which requires preparing, and that part of it near the foot is preferable because the upper part of the bed is thus kept clean and comfortable for the patient when the labor is over, and because of the help derived from being able to plant the feet firmly against the bed-post during the pains.

The mattress being uncovered, a large piece of rubber cloth is to be spread over it, and upon this a sheet folded several times. Next to this should come the clean under-sheet, on which the patient is to lie, and upon that another piece of water-proof sheeting, large enough to reach above the hips. Over this upper rubber, and ready to be removed with it after the labor is over, are to be then placed a folded blanket, and, lastly, a folded cotton sheet, both of which should reach well above the hips, so as to absorb the discharges.

Food for the Patient.—In the early part of labor when pains are slight and the intervals long, there is no reason for interfering either with the character or regularity of the patient's ordinary meals, provided there exist the desire for solid food. During the later stages, however, it is wise to confine her to fluids, such as beef-tea, gruel, milk, and tea, and to administer them in small quantities at a time, so as not to overload the stomach and excite sickness. Patients often ask for a little cold water, and many nurses, influenced by old traditions, fear to gratify the wish. A sip of pure water can never do harm, only it must be a "sip" and not a tumblerful, the patient being assured that small draughts, frequently repeated, assuage thirst far better than larger quantities. On no account must stimulants be given, except when expressly ordered by the medical attendant.

Vomiting is a troublesome symptom and distresses the patient, but its influence on the progress of the labor is in no way unfavorable. Should it, however, be excessive, it is well to give a little iced effervescing water from time to time.

Cramps during Labor.—Many patients suffer very severely from cramp during labor. Relief can frequently be obtained by stretching the limb straight out, and at the same time bending the ankle so as to put the muscles of the calf well on the stretch. Gentle rubbing of the affected part with the hand also affords great comfort.

In the case of patients who have not borne children previously, it is an excellent plan to diligently foment the perineum from the very outset of labor, so as to render the skin softer and more yielding, and lessen the risk of tearing.

DUTIES OF A NURSE DURING SECOND STAGE OF LABOR:—What to do in the absence of the Medical Attendant—Assisting at the Birth—Tying the Cord—The Third Stage—Application of the Binder, &c.—Convulsions—Fainting—Falling Forward of the Womb.—When the pains alter in character, compelling the patient to make efforts to bear down, and the face begins to get flushed and the skin to become moist with perspiration, the nurse may feel pretty well assured that the first stage is over; and if the medical attendant has not arrived, she should request him to be summoned without delay. In the meantime, the patient must be put to bed, and encouraged to bear down and assist the pains. The binder, napkins, and receiver must be spread near the fire in readiness.

If the medical attendant be still absent when the head is born, the nurse must spread the flannel receiver close up to the vaginal orifice, and receive the head of the child upon her right hand, still keeping up the gentle pressure upon the stretched perineum until the shoulders have passed out. Even then the body and legs must be left to follow of themselves, the nurse meanwhile holding up the parts which are already born. The upper bed-clothes should be now turned back sufficiently to allow the child to breathe, without causing any exposure of the patient herself. If the navel-string is found

coiled around the child's neck, it must be slipped over its head as quickly as possible, lest the life of the child should be sacrificed owing to a stoppage in the circulation of the blood through the cord. Very occasionally it happens that the child is born with the membranes unbroken; they will in such cases be found drawn tightly over the little face, and will cause death from suffocation, unless quickly torn open and the mouth freed. Amongst some people this occurrence is known as being born with a *veil* or *caul*.

The cry which a child usually utters as soon as it is born, helps to fill the lungs with air, and is on that account rather to be encouraged than checked. If the child does not cry, the nurse must examine the mouth to ascertain whether there is anything either over it or within it, preventing the breathing. Sometimes there is some frothy mucus in the mouth which can be cleared away with the finger. It is often useful, also, when breathing is delayed to turn the child on its face, and give it a few gentle slaps on the back with the flat hand.

The navel-string must not be tied until the breathing is established, unless it is quite evident that the child is still born. The first ligature must be tied an inch and a half from the naval, and the knot must be pulled tightly two or three times so as to squeeze out of the way the jelly-like material which surrounds the blood vessels of the cords; otherwise the vessels may not be closed by the ligature, and bleeding from the stump may occur to a fatal extent while the nurse is attending to the mother. The second ligature is placed an inch further from the child than the first one, and the cord is then divided with scissors mid-way between the two. All this must be done outside of the bed-clothes, lest some other part than the cord be cut in mistake.

The child, having been now separated, is to be wrapped in the receiver, with the face alone exposed, and placed out of harm's way on the other side of the bed. The patient must be warned to lie perfectly still, and to wait patiently for the one or two insignificant pains which accompany the expulsion of the after birth. These generally occur from five to twenty minutes after the birth of the child. Meanwhile the nurse must provide the medical attendant with a basin or other vessel, previously warmed before the fire, to receive the after birth, and one or two warm napkins.

When the placenta and membranes have come away, the hand should again be placed over the uterus, in order to make sure that it is firm and well contracted. If, instead of this being the case, it is felt to be large, soft, and uncontracted, firm pressure should be continued, so as to excite contraction and prevent flooding, which, in such circumstances, is greatly to be feared.

Should a gush of blood make its appearance in spite of the pressure, the hand must still be kept over the uterus and the pressure increased, cold wet cloths being in the meantime repeatedly applied with suddenness to the external genitals. Of course, if the medical attendant has left the house, he must be again summoned at once.

The uterus being firmly contracted, and the flow of blood having ceased, the thighs and surrounding parts are to be gently sponged with warm water and dried by means of a soft, warm napkin.

If there has been no flooding, the soiled chemise and night-dress may now be drawn down, and, along with the folded sheet, blanket, and upper rubber, removed from beneath the patient, who must not be permitted to make the slightest effort while this is being done. Then she may be slowly rolled over on to her back, to allow of the application of the binder. The binder, well aired, must be rolled up to half its length, and the roll passed underneath the lower part of the patient's back. Being caught on the other side, it is then unrolled, and having been smoothed out free from wrinkles, it is so applied as to encircle the hips tightly, and the overlapping end is then secured by means of three or four good safety-pins. All this is to be done with as little exposure of the patient as possible. The pillows having been duly replaced, the patient may now be carefully lifted into her usual position in bed; a fresh warm napkin being applied against the vulva, and the clean chemise drawn down into its place.

If, however, there has been any flooding, the patient must still remain undisturbed for some time after the discharge has ceased, the nurse from time to time examining the napkins to make sure that there is no return of the bleeding.

When the medical attendant is present, he will probably prefer to undertake many of these duties himself; at any rate he, being the responsible person, will give instructions according to the requirements of each individual case, which instructions it will be the nurse's simple duty to obey.

Convulsions, coming on during labor, are always alarming, and place the patient's life in great danger. Should they occur before the arrival of the medical attendant, no time should be lost in sending for him. In the meantime all that the nurse can do is to keep her patient lying flat down; to see that there is no tight clothing about her head and chest; to prevent

biting the tongue by pushing it, if possible, behind the teeth, and placing a cork or piece of India-rubber between them; to admit plenty of fresh air into the room; and, lastly, to restrain the meddlesome interference of bystanders. It is altogether worse than useless to attempt to force water or stimulants down the throat while the patient is struggling and unconscious; and although sprinkling the face with water, rubbing the hands, and applying smelling salts to the nose, can do no harm, it is more than doubtful whether they ever produce any benefit. When the fit is over, should the medical attendant not have arrived, the nurse may administer a soap-and-water enema with advantage.

Fainting during labor should always lead to a suspicion that there is some loss of blood going on, and the medical attendant ought to be immediately summoned, even if there is no blood to be seen externally, for internal bleeding may be going on, notwithstanding. The important point to remember about fainting is, that the patient is on no account to be raised up, however much she may desire it. The level posture, plenty of cool, fresh air, sprinkling a little water on the face, and firm, steady pressure with the hand over the uterus, comprise all that is desirable for a nurse to do in the way of treatment. If there is external hemorrhage, an endeavour must be made to control it in the manner described later on.

Management of a newly born child.—After making the mother comfortable, the next duty of the nurse is to attend to the washing of the child. This should be done, if possible, before the medical attendant leaves the house, in order that he may have an opportunity of examining the child thoroughly. For the washing, a foot-bath is required, or a basin at least a foot broad, one foot deep, and two feet long, so that the whole body, with the exception of the head, may be placed in the water for a minute or two. The nurse must also be provided with a piece of soft flannel, some olive-oil, a piece of good unirritating soap, and, for the dressing, in addition to the clothes, a needle and thread, some safety-pins, and a piece of linen rag six inches square, with a hole cut in its centre large enough to admit the navel-string. Sitting at a convenient distance from the fire, she then proceeds to unfold the flannel wrapper and anoint the child's skin with warm olive-oil wherever it is covered with the white greasy material usually present. This having been done, the child is to be put into water, the temperature of which should be about 90°, and the head supported on the left hand out of the water. After having rested there for about two minutes, it is to be taken on the lap and washed with soap and flannel, the eyes being carefully cleaned first, then the head, and afterwards the remainder of the body, great pains being taken to cleanse the little wrinkles at the various joints. After gently drying the skin with a soft warm towel, it must be well powdered, and especially those parts near the joints where chafing is most likely to occur; viz., under the knees and arm-pits, in the groins, and between the thighs. The piece of flannel used for the first washing should be burnt.

The skin having now been well washed, dried and powdered, the square of old linen is to be held near the fire for a minute and slipped over the remains of the navel-string, which is to be folded in it and turned upwards upon the child's abdomen, where it is to be retained by means of the flannel binder until its separation, which usually takes place about the fourth or fifth day.

Up to the time of this separation, the child must be washed from head to foot on the nurse's lap, night and morning. Afterwards, when there is no longer any fear of injuring the navel, the child should be placed in the water for two minutes during the morning washing, the evening washing being done on the nurse's lap as before. Whenever a napkin is removed, the parts protected by it must be well cleansed by sponging with a little soap and water, and then thoroughly powdered, so as to prevent the skin becoming sore. This rule holds good even if the napkin has only been soiled with urine, though it is of course still more necessary when there has been also an action of the bowels.

It is part of a nurse's duty to wash and dress the child during the time she stays in the house, and she should, for this purpose, be provided with a large soft flannel apron, which must be carefully dried each time it is used.

The child's clothing should be warm without being heavy, and should fit loosely so as to allow the organs free play, and the blood to flow unhindered. The body-binder should be of flannel, as it is impossible to prevent its being soiled with the urine, and flannel, when wetted, does not chill the skin so much as other materials. None but patent safety pins should be used about a baby, and even for them it is better to substitute two or three stitches wherever it is possible.

The medical attendant must always be informed, when he makes his first after-visit, whether the infant has passed urine and whether the bowels have acted; also as to any marks or other peculiarities that may have been noticed. The state of the eyes, too, should be narrowly watched, and any unhealthy appearance or the least sign of discharge at once reported.

It is most undesirable to give a newly-born child butter and sugar, or other similar compound. For the first twelve hours at least, and indeed for a much longer time, the child will take no harm if left unfed. The proper course, however, is to apply it to the breast a few hours after birth—that is, as soon as the mother has recovered a little from the fatigue of

labor. The breasts will probably not fill with milk for twenty-four or thirty-six hours, or even a little longer; but there is generally a little thick secretion of creamy fluid, called *colostrum*, much earlier than this, of which it is good for the mother to be relieved, and which acts as a gentle laxative upon the child. The early application of the child to the breast also helps to form the nipples, and renders the flow of milk easy from the first; it teaches the child how to suck, a lesson learnt less readily if it has previously been fed with a spoon; and lastly, it provides it, in the majority of cases, with all the food it requires during the first day or two, and obviates the necessity of artificial feeding.

The child should be put to the breast with clock-like regularity. Until the flow is fairly established, the interval should be four hours; afterwards, for the first month, an hour and a half or two hours in the daytime and four hours in the night. In the daytime the child may be awakened at the feeding-hour; in the night he should on no account be disturbed out of his sleep. Many infants will sleep continuously for six hours in the night, and suffer no harm from the long fast.

If it is important that a child should be fed as often as is here stated, it is no less important that he should not be fed oftener. Young infants very soon learn habits of regularity, and, besides, their stomachs need rest between their meals, just as in our own case, except that, of course, the intervals required are shorter. Many women put the child to the breast whenever it cries, forgetting that this is the only way in which it can express its sense of discomfort, from whatever cause arising, and that it is likely to be crying because it is in pain, or because its napkin wants changing, as from hunger.

It is important from the first to apply the child to each breast in turn.

When the secretion of milk is long delayed, and it becomes consequently necessary to feed the infant, the proper food is good cow's milk, boiled, so as to prevent its being a carrier of infection, then mixed with about an equal quantity of water, and sweetened. Bread and oatmeal gruel are not fit food for newly-born infants. They irritate the stomach and bowels and cause griping and flatulence. In short, during the first month of life no other food than the mother's milk or diluted cow's milk should be given, except under medical advice.

When the mother has not enough milk to satisfy the child, nursing may be combined with hand-feeding, which is generally preferable to hand-feeding alone. The additional food should consist of good milk, boiled, diluted with an equal quantity of water, and sweetened. After the first month the quantity of added water requires to be gradually lessened.

In case the mother cannot nurse her child, the next best way of feeding it is to obtain a good, healthy wet-nurse, whose child is not much older than the one she is to nurse. The medical attendant should always be consulted in regard to the health and suitability of a wet-nurse, before she is engaged.

It may be that a wet-nurse cannot be obtained, and then hand-feeding becomes necessary. For this purpose good milk (from one cow if possible), boiled, diluted, and sweetened, as already directed, is for the first few months all the food that is required. Arrowroot, cornstarch, and bread are all unsuitable at this tender age, and afford far less nourishment than milk.

Now and then a child is found with whom fresh milk does not agree, the curdy character of the stools showing that it is only partially digested. Should a change of dairy not suffice to set matters right, it will be desirable to try the concentrated Swiss milk, which, though greatly inferior to fresh milk, is the best of all artificial substances. Failing success with this, a malted preparation, known as Mellin's Food for Infants, may be tried, at any rate until the digestive powers become sufficiently improved to return to milk.

The custom of using feeding-bottles with India-rubber tubes has become exceedingly prevalent. These tubes are difficult to keep clean, and a mere drop or two of milk left adhering to the bottle or tube will often be sufficient to turn the next supply sour. Hence have arisen flatulence and indigestion, and much sickness and suffering. Another objection to the use of tubes is, that nurses are tempted to place children in the cot with the bottle of milk by their side and the tube in their mouth, a practice which is highly objectionable on several grounds. It does away with all regularity in feeding, and is very liable to cause the milk to be turned sour owing to the heat given off from the child's body. Feeding-bottles without tubes, and fitted with teats only, have the advantage of requiring to be held in the nurse's hand, and are on every account to be preferred. There should always be two, for alternate use, one being kept under water while the other is in actual use. Immediately after the child has had a meal, the bottle must be thoroughly washed in warm water.

It is an unnecessary and injurious practice to administer castor-oil to the newly-born. The first milk (or *colostrum*) from the mother's breast generally relaxes the bowels sufficiently, and if not, no aperient should be administered except under the advice of the medical attendant.

COOKERY DEPARTMENT.

SOUPS.—*Remarks and General Directions.*—The most nourishing soups are made of fresh meats: but whatever meat you use should be put in cold water, well covered, and kept at a low temperature and never allowed to boil, for at least one hour, after which a bubbling boil may be allowed. Remembering that the first hard boil hardens the surface and locks up the juices of the meat which, it is important to draw out in soup-making. For economy's sake, a knuckle-joint or a shin-bone is preferable; but there should be sufficient meat attached to give the required nourishment and flavor of the meat used. However, after the first hour slow stewing has passed, any cold meats or bits of fowl which have been left over, may be added, having been cut in small slices. It is well, also, with fresh meats to cut small, and bones to be well cracked, or sawed across to allow the marrow and juice to escape. Vegetables should be cut fine or sliced thin, or grated upon a coarse grater, as preferred. Salt helps to harden and lock up the juices, and hence should not be put into soups until the vegetables are added, about an hour before serving. But soup meats should be put over the fire as soon after breakfast as possible, so as to give 4 or 5 hours to its preparation.

In Cold Weather soup-plates should be well heated before serving the soup in them from the covered tureen; and in fact all plates in cold weather, from which meats or gravies are to be eaten, should be well warmed before bringing to the table. Soup properly "warmed up," *i. e.*, put on just before dinner-time, so as not to be too long upon the stove, is equal if not better than the fresh made; and this is especially so when beans enter into its make.

Bean Soup.—As I look upon bean soup as the *best* of old soups, I will give a receipt taken from "A Book of the Sea," which, having had it made several times, I can say can be depended upon. And when I say it was given by a sailor, the phraseology needs no further explanation. He says:

"The fact is, that bean soup at sea is such a stand-by that the sailor-man on shore sometimes gets quite mad when it's offered him, and still, bean soup is a mighty good thing, and all according to the way you make it. Now, you get a lot of swells on board, and make 'em soup, and call it *haricot* (in England, this name is still used for beans) and not beans, which is vulgar, and if you know how to turn it out, they will take three platefuls.

"First, you get a *pint and a half* of good sound beans—I don't think there is much difference in beans, whether they are *big* or *little*—and pick 'em over and stand them for an hour in a bowl of cold water. Take three pounds of meat or a shin-bone, and put the beef in 4 quarts of cold water, and let it boil. Fry an onion and put that in, with say 6 white cloves and a dozen peppers (the small cayenne peppers, the same that are used in making pepper sauce), and some parsley, with a tablespoon of salt. Let it boil for two hours, and you keep skimming. As fast as the water boils away, you keep adding a little hot water. When the concern is cooked, take a colendar and strain your soup through it, mashing up the beans and keeping out the meat and the bean skin. If you want to be superfine, you can hard boil an egg, and slice white and yellow through, and put them in the tureen; likewise some slices of lemon. Bits of toast don't go bad with it. If you happen to be cruising south, just you use, instead of the New England bean, the Georgia or South California cow-pea."

Remarks.—Dr. Chase never had any soup he liked better than this.

Soup, Tomato—Very Nice.—To canned tomatoes, 1 pt., or 4 large ripe raw ones, scalded, peeled and sliced, add boiling water 1 qt. and boil till thoroughly soft, then add cooking soda, 1 tea-spoonful, and stir well; when done foaming, immediately add sweet milk 1 pt., with salt and pepper to taste, and 1 tablespoonful of butter; and when it boils again have 8 or 10 common crackers rolled fine which add, and serve hot. Some think this equal, or better, even, than oyster soup. As the girls often say of a new bonnet: "It is just splendid." Try it, by all means.

Tomato Soup, with Milk.—Take nice ripe tomatoes, scald, remove the skins, and slice up 1 qt., and stew ½ hour in 1 pt. of water; then add a level teaspoonful of baking soda, stir till done foaming, and put in 1 qt. of hot sweet milk; and as soon as it boils again add salt and pepper to taste; with a bit of butter and a few broken crackers if you want it richer. A small slice or two of salt pork makes a nice substitute for the butter. And if you desire a meat flavor, put in some steak from the soup-jar. It should be made so that the milk addition is put in just as you are ready to serve it. This is often called economical or mock-oyster soup.

Potato Soup.—Thinly slice enough potatoes to make 1 pt., with 1 to 4 small onions (to obtain a little or more flavor, as you prefer) and boil in 1 qt. of water until perfectly tender; add 1 pt. of rich milk, and season with salt and pepper to taste. Serve hot. The potatoes and onions may be skimmed and rubbed smooth through a colander, if your like.

Milk Soup.—Same as the last without the onions, using 1 pt. of water to boil the potatoes in, then add 1 qt. of milk instead of 1 pt.; simply using half as much water and twice as much milk. Use with either crackers or not, as you choose.

Chicken Soup, Delicious.—Take 1 chicken, 4 qts. of water, 1 tablespoonful of rice, an onion, potato and turnip, 1 of each, ½ cup of tomatoes, 2 stalks of celery, pepper and salt. DIRECTIONS—Joint the chicken and boil very tender; pour through a colander and return the soup to the kettle, adding the rice, which has been soaking; chop the potato, onion and turnip and add ½ an hour after. Cut the celery in dice and add 20 minutes before serving; the tomato and seasoning last. If well done it will be very delicious; with milk or cream more so, if ½ pt. of either are put in just in time to get hot when ready to season.

2. Chicken, Cream Soup.—The best way to get the virtue out of an old, tough chicken is to properly dress and joint it, then boil it with 1 onion in 4 qts. of water till only 2 remain. Take it out and cut off the breast, chopping in fine with the yolks of 2 hard-boiled eggs, returning to the soup and simmering a few minutes more, then adding 1 cup of heated cream, or ½ pt. of rich milk, boiling hot, seasoning to taste and serving hot from a covered tureen.

3. Soup, Chicken Currie, as Made in India.—A pair of nicely dressed chickens, butter, currie powder, flour, salt and Cayenne pepper and some rice, to be nicely boiled by itself. DIRECTIONS—Boil the chickens carefully, keeping always covered with water, till perfectly tender, removing scum and oily fat as it rises; then bone them and have a skillet ready for frying the meat in enough hot butter, first dredging the meat with flour before laying in hot butter; brown nicely, keeping hot. Take 1 pt. of the chicken broth, which is to be kept hot, and stir in 1 table-spoonful of flour, 2 of butter, 1 tea-spoonful of salt, and a little Cayenne pepper and 2 table-spoonfuls of currie powder, and, when all is well mixed in, add this to the balance of the hot soup in the kettle and simmer a few minutes, then add the hot browned meat and serve hot, and with the hot boiled rice.

Soup, Celery, Rich and Creamy.—A shank of beef, 1 large bunch of celery or two small ones, and rich cream, 1 cup; a little flour. DIRECTIONS—Make a rich broth of the shank, always putting into cold water, skimming off all the fat as it rises; when ready take up the meat and thicken the broth with a spoon or two of flour, first rubbed in a little cold water; have the celery cut fine and boil it in the soup till tender; then add the cream, salt and pepper to taste, and serve at once.

Barley-Soup.—Take a 2 or 3 lb. shin of beef, well broken, pearl barley, ¼ lb.; 2 small onions, sliced; 2 small carrots, chopped; salt and pepper. DIRECTIONS—Put all into a soup kettle, cover nicely with cold water and heat up slowly for an hour, then continue 3 or 4 hours of more brisk boiling; and if you have celery, a stalk or two, cut and put in 15 or 20 minutes before serving, improves the flour very much. The old plan of simply putting in a little barley requires a fife and drum to call the very much scattered nourishing properties together.

Macaroni (Italian) Soup.—To 2 qts. of boiling beef-broth, or soup (made as for the carrot beef soup, above, without the vegetables), add 6 or 7 sticks of macaroni and allow it to cook ½ or ¾ of an hour; then, just when ready to serve, grate in ¼ lb. of nice cheese. (The macaroni should be broken up and soaked in water a couple of hours before cooking with the broth.)

Beef Soup.—A knuckle-joint or shin-bone, having sufficient meat attached for a family of 5 or 6 persons; six medium-sized potatoes, 3 or 4 small onions, ½ of a small head of cabbage, salt and pepper. DIRECTIONS—If a joint it should be cut through by the butcher; and if a shin, it should be sawed 1 or 2 times across to allow the escape of the marrow and juices. Put this into sufficient cold water and place upon the stove as early as practicable to allow it to be pretty thoroughly done an hour before dinner, at which time the cabbage, having been finely chopped, should be put in. The potatoes and onions, having been properly prepared, should now be chopped finely together added to the soup, with the salt and pepper to taste. Some persons are fond of adding a few bits of red pepper to their soups; but if much is put in children usually dislike it. If used, it should be put in with the vegetables.

Remarks.—A well-made soup is very healthful, and they ought to be made much oftener than they are in most families.

Scotch Broth (Soup).—Take 2 lbs. of the scraggy part of the neck of mutton. Cut the meat from the bone, removing all the fat; cut the meat into small pieces, and put into a soup pot with a large slice of a turnip, 2 small carrots, 1 onion, 1 stalk of celery, all sliced, and a cup of pearled barley, water, 3 pts. to 2 qts., and boil gently 2 hours. On the bones put 1 qt. water and boil gently the same length of time; then drain this into the soup. Cook 1 spoonful each of flour and butter together until perfectly smooth, then stir this into the soup with a spoonful of chopped parsley, season with salt and pepper and serve at once.

Mock-Turtle or Make-Believe Terrapin Soup, from Bob, the Sea Cook.—He says: "Of course, it's a sham, for there ain't nothing in this world that can take the shine out of a real terrapin (turtle); still, if you ain't got none of these nice creeturs, you can manage to make shift with a calf's head. You don't want the whole head of a calf, but boil it just the same, but don't sluice it with all the water in the reservoir, only enough to cover it, and in that water put a couple of onions and salt and pepper. When boiled tender, take, say, half the meat, then half the tongue and a table-spoonful of the brains. Cut it up, but not too fine. Put into a frying-pan a ¼ lb. of the best butter, and bring it up to a light brown, mixing in a very little sifted flour when it is off the fire, and a little cayenne pepper, and just a touch of sweet marjoram. If you put herbs into hot, boiling butter it makes a bitter taste. Then stir the sauce with a little of the water the calf's head was boiled in. Then put in your chopped-up calf's head. Place it on the fire again—not to cook but to get hot only—and last of all pour in 2 wine-glassfuls of Madeira, but if you have not that let it be sherry. Though it ain't terrapin, it's good all the same."

Split Pea Soup.—Make a broth of some water that corned beef or salt pork has been boiled in, and some beef bones. Do not let it be too salt; in that case use half water. Put 1 qt. of the split peas in enough of the water to cover them; when they have stewed soft, mash them through a colander, and then mix with them 2 qts. of the broth in which the bones have been boiling; add 1 onion, and 1 turnip, chopped up, and 1 carrot, grated. Just before serving put small pieces of toast in the soup.—*Peterson's Ladies' Magazine.*

Green Pea Soup, American.—Take lean, fresh beef, 2 lbs.; green, shelled peas, 2 qts.; water, 2 qts. DIRECTIONS—Boil the pods in the water ½ an hour, then skim them out and put in the meat and simmer slowly till half an hour before serving, adding boiling water to make up for evaporation; then add the shelled peas, and when tender, thicken with a little flour or corn starch, and season with chopped parsley, if you can get it; salt and pepper just before serving.

FISH.—Fish when fresh are hard when pressed by the finger—the gills red—the eyes full. If the flesh is flabby and the eyes sunken, the fish are stale. They should be thoroughly cleaned, washed, and sprinkled with salt.

Before broiling fish, rub the gridiron with a piece of fat, to prevent it sticking. Lay the skin side down first.

The earthy taste often found in fresh-water fish can be removed by soaking in salt and water.

Most kinds of salt fish should be soaked in cold water for 24 hours—the fleshy side turned down in the water.

Baked Fish.—Stuff it with plain dressing; put in a pan with a little water; salt, pepper, and butter. Baste while baking. A fish weighing four pounds will bake in an hour. Garnish with hard-boiled eggs and parsley, and serve with drawn butter or egg sauce.

To Boil Fish.—Sew them in a cloth, and put in cold water, with plenty of salt. Most fish will boil in 30 minutes.

Pickling Fish.—Spice the vinegar as for cucumber; put your fish in and let them boil slowly for a few minutes, until done, without breaking; then set them away for several weeks, and the bones will be entirely destroyed.

Stewed Oysters.—Put the juice into a saucepan and let it simmer, skimming it carefully; then rub the yolks of three hard boiled eggs and one large spoonful of flour well together and stir into the juice. Cut in small pieces, quarter of a pound of butter, half a teaspoonful of whole allspice, a little salt, a little cayenne, and the juice of a fresh lemon; let all simmer ten minutes, and just before dishing add the oysters. This is for two quarts of oysters.

Broiled Oysters.—Drain select oysters in a colander. Dip them one by one into melted butter to prevent sticking to the gridiron, and place them on a wire gridiron. Broil over a clear fire. When nicely browned on both sides, season with salt, pepper, and plenty of butter, and lay them on hot buttered toast, moistened with a little hot water. Serve very hot or they will not be nice. Oysters cooked in this way and served on broiled beefsteak are nice.

Fried Oysters.—Drain the oysters, and cover well with finest of cracker crumbs, seasoned with salt and pepper. Let them stand half an hour, then dip and roll again in the meal; fry brown in a good quantity of lard and butter.

Oyster Stew, Fried and Escaloped, According to Delmonico.—Oysters sufficient, and their liquor; rolled crackers, salt, pepper, and milk. DIRECTIONS—Put the liquor in a stew-pan (a teacupful for 3), and add half as much water, salt, a good bit of pepper, and a teaspoonful of rolled cracker to each person. Put on the stove and bring to a boil. Have your oysters in a bowl, and the moment the liquor boils pour in all your oysters, say 10 to each person, or six will do. Watch

carefully, and as it boils, take out your watch, or count 30, and take your oysters from the stove. Have a big dish ready with 1½ tablespoonfuls of milk for each person. Pour the stew upon this milk and serve immediately. Never boil oysters in milk if you wish them good.

Oysters, To Fry.—Oysters sufficient, nice light crackers, eggs, salt, pepper and cornmeal. DIRECTIONS—Roll the crackers, and mix a little salt and pepper into them; beat the eggs; then first dip the drained oysters into the cracker crumbs, then into the eggs, and then into the cornmeal, having sufficient butter pretty hot in a frying-pan, put them in as quickly as you can; then as soon as the first side is nicely browned, turn them carefully, and serve hot. If any of the cracker and egg is left, mix them together, fry, and serve with the oysters. Parsley is a nice relish with them.

Oysters, Escaloped.—Oysters, nice crackers, salt and pepper (and, if you desire, a little pulverized mace and cloves), butter, milk with the cream stirred in, else a beaten egg or two may supply the place of the cream. DIRECTIONS—Roll or pound the crackers finely; apply butter freely to the bottom of the pan in which they are to be baked; then cover it well with oysters and sprinkle them with salt and whatever seasoning you use; then a good layer of crackers, over which put pretty freely small pieces of butter, and wet slightly with the juice of the oysters, which has been mixed with the milk and cream, or egg. So fill the dish, the last layer being cracker, and double the thickness of the others, upon which put more butter and sufficient of the wetting mixture to well moisten. If the dish is deep it will require about 40 minutes to bake sufficiently; and if the dish is covered while baking remove it a few minutes before done to allow the top to be nicely browned.—*"S.E.N." in Country Gentleman.*

Chicken Oyster Pie.—Cut the chicken in suitable pieces for fricassee, and prepare it as for that dish. Line a deep dish with a rich crust, and put in a layer of chicken with its gravy, and a layer of raw oysters; sprinkle the latter with salt, pepper and bits of butter. Proceed thus till the dish is full, and cover with a crust of pastry. Bake from {1/3} to ¾ of an hour. Serve with gravy, made with equal parts of chicken gravy and the oyster juice, thickened with flour and seasoned with salt and pepper.

Oyster Flitters.—Drain the liquor from the oysters, and to 1 teacupful add the same quantity of milk, 3 eggs, pinch of salt, and flour enough for a thin batter. Chop the oysters and stir them in the batter, and fry in half butter and lard rather hot, and send quickly to table.

Oyster Omelet.—Twelve large oysters, 6 eggs, 1 cup of milk, 1 teaspoonful of butter, salt and pepper, and parsley, if agreeable; chop the oysters. Beat the whites and yolks of the eggs separately, as for cake. Heat 3 tablespoonfuls of butter, pour the milk, yolks of eggs, oysters and seasoning in a dish and mix, and add the whites of eggs, and 1 spoonful of melted butter, with as little stirring as possible, then cook to an appetizing brown, turning the omelet carefully.

Broiled Oysters.—Drain and wipe the oysters and dip them in melted butter; then broil them on an oiled griddle over a moderate fire. Season to taste.

MEATS.—Selection of Meats.—In selecting beef, choose that of a fine, smooth grain, of a bright red color and white fat.

The sixth, seventh and eighth ribs are the choicest cuts for a roast. Have the bones removed and the meat rolled, but have the butcher send the bones for soup.

The flesh of good veal is firm and dry, and the joints stiff.

The flesh of good mutton or lamb is a bright red with the fat firm and white.

If the meat of pork is young, the lean will break on being pinched; the fat will be white, soft and pulpy.

Curing, Smoking, Keeping, etc.—Curing Hams, Smoking, Etc., as Done in Pennsylvania.—Good for all Places and Kinds of Meat.—The following is the plan pursued in Pennsylvania, where it is well known that they have the very nicest hams:

After the hams are neatly trimmed, lay them upon slanting boards, to carry off the dripping brine, and rub well with pure fine salt, working it into every part; then let them lay 48 hours. Then brush off the salt with a dry cloth or brush-broom, and have ready a mixture of powdered saltpetre, 1 teaspoon; brown sugar, 1 dessertspoon, or a small tablespoon, of red pepper; use 1 teaspoonful of the mixture for each ham or shoulder, and rub well into the fleshy parts; then pack in a tub

or barrel, skin-side down always; put also a good sprinkling of nice, pure salt on the bottom, and between each layer, as packed. Let them stand thus 5 days; then cover with pickle made as follows:

To each pail of water required put 4 lbs. of pure, coarse salt, saltpetre, ¾ to 1½ ozs., and brown sugar, ¾ to 1½ lbs. The pickle should be made beforehand, so as to remove all skum arising, and to be cold when poured on. According to the size of the hams, let them lay 5, 6 or 7 weeks.

For Beef, 10 to 15 days only, according to size of pieces, in the same strength of pickle, and same treatment. Hang up a few days to dry nicely before smoking.

Hints in Cooking meats.—Boiled Meats.—For cooking they should always be put into boiling water, which sets or closes the pores and keeps in the juices; after which slow boiling until tender. And if corned boiled beef, to be eaten cold, is left to stand in its water over night, it will be sweeter and more juicy.

For Roasting Meats and Poultry, a hot oven, the door to stand a little open, covering the meat well with drippings or butter before putting into the oven, which keeps the surface moist and also helps to retain the juice of the meat.

Veal Oysters.—Mrs. W.—Cut veal in pieces about the size of an oyster (uncooked veal), cut pieces both ways across top (to make them tender), dip in egg, then in cracker crumbs and fry in butter.

Lamb With Tomato Sauce.—Mrs. S.—Take lamb steak, (pound to make tender), dip it in egg, then in cracker crumbs and fry it; cook tomatoes and strain them, season with salt and pepper; put spoonful on each piece of lamb after it is cooked.

Roast Beef.—The sirloin and rib pieces are best for roasting. Place roast in dripping pan with about 1 cup of boiling water poured over the roast as you place it in the oven, baste often with a little salt and water at first, then with the drippings in the pan as the meat cooks. Allow 15 or 20 minutes to a pound for cooking, sprinkle over with salt and pepper. For gravy: take out the meat, pour off some of the grease, and to that left in the pan add a little boiling water; set pan on top of stove, and add to this sufficient flour (mixed with a little cold water) to thicken it about like good cream; let come to a boil and pour in gravy dish.

Dry bread can be used with meats by breaking it up in a dish, covering it with cold water, when soft add an egg, salt and pepper (little chopped onion or parsley, if you like), mix with it some of the drippings from the meat; when the meat is partly done, place this in the pan next the meat; baste with the drippings from the meat once or more, and let it bake. Serve with the meat.

Leg of Mutton or Lamb.—Cook as roast beef.

Stewed Veal.—Put a good stewing piece in a kettle, pour over it enough boiling water to cook it; boil slowly several hours. When it becomes tender, add salt and pepper, and if a lean piece of meat, add some butter; cover closely while cooking. When perfectly tender take off cover from kettle, and pour the water out, put in little butter, and turn the veal often in the kettle to brown it on all sides. This is as good as chicken.

Veal Loaf.—Mrs. P.—3½ lbs. chopped veal, ½ lb. chopped pork, 2 eggs beaten thoroughly, about 8 crackers rolled and added, salt and pepper; make this in 2 rolls, roll in cracker crumbs and bake about 2 hours.

Beef Loaf.—Mrs. P.—3 lbs. chopped beef (let your butcher chop it), 1 egg, 2 table spoons salt, 1 teaspoon pepper, 8 table-spoons rolled crackers, {2/3} cup sweet milk; mix thoroughly, bake in small dripping pan in one loaf. When cold cut with a sharp knife.

Potted Beef.—Miss H.—Boil a beef shank until tender, in just water enough to cover it, remove bone and gristle, chop the meat fine and replace in kettle, with the liquor the meat was cooked in, which would be about 1 qt. Let it simmer gently, season with salt pepper to taste. When cool, cut in slices for tea or lunch, seasoned high and packed in a stone jar in a cool place it will keep a long time.

Beef a la Mode.—Mrs. H.—Take a round of beef, about 10 lbs., tie it up with a string, round, ½ tablespoon pepper, 1 of salt, 1 of cloves, 2 of sugar; rub this on the meat the night before using; ½ loaf of stale bread, ¼ lb. sausage, 1 onion chopped fine, two tablespoons sweet herbs, 1 of cloves, 1 of salt, ½ of pepper, 2 eggs, mince these ingredients together;

make holes in the meat, fill them with the dressing. Lay skewers in the bottom of pot, then lay beef on them, put in 1 qt. of water, stick 1 onion full of cloves, put in the kettle, cover tight and boil 4 hours, add 1 pt. of wine; turn over and boil one hour longer. Thicken the gravy and pour on the meat before sending to the table.

Ham Cakes.—Take the odds and ends of boiled ham, chop fine, add eggs and a little flour, mix and make in flat cakes and fry in a little butter until brown.

Boiled Beef Tongue.—If corned, soak overnight in cold water, in morning place in cold water in kettle, cover and boil slowly until tender, add pepper.

Beefsteak with Onions.—1 lb. chopped raw beef, 1 chopped onion, pepper and salt, little butter, make into little balls, flatten these; fry in spider with butter, turn and brown both sides.

Beefsteak Broiled.—Sirloin or porter house steak, cut at least ¾ inch thick, and hacked or pounded well on both sides; lay on buttered gridiron over a good fire of coals, turning often as it begins to drip. It should cook in about 10 or 12 minutes. When cooked sprinkle salt and pepper on both sides and place on hot platter; pour over this a little melted butter and *serve while hot*.

HOW TO CHOOSE POULTRY.—Young, plump, and well fed, but not too fat, poultry are the best. The skin should be fine grained, clear and white; the breast full, fleshed and broad; the legs smooth. The birds must be heavy in proportion to their size. As regards ducks and geese, their breasts must also be plump; the feet flexible and yellow. For boiling, white-legged poultry must be chosen, because, when dressed, their appearance is by far the more delicate. But darker-legged ones are juicy and of a better flavour when roasted. The greatest precaution ought to be taken to prevent poultry from getting at all tainted before it is cooked. It should be killed and dressed from eight to ten hours before cooking. Pigeons are far better for being cooked the day they are killed, as they lose their flavour by hanging. Care must be taken to cook poultry thoroughly, for nothing is more revolting to the palate than under-done poultry.

FOWLS.—Chicken Pie.—Cut up 2 tender chickens, cover with boiling water and cook until tender, covering closely; as water boils away add more, enough to make liquor for pie, and gravy to serve with it. Grease and trim the sides of a 4 qt. baking dish (or pan) with good rich baking powder biscuit dough nearly half an inch thick; put in a few pieces of chicken, season with salt, pepper, and butter some bits or squares of dough, then more chicken, etc. Season also the liquor in which chicken was boiled, put in enough to make quite moist, cover with crust same thickness as above, cutting a hole the size of a silver dollar, in centre of crust; through this more of the liquor can be added as the pie is baking, that it may have plenty of moisture. Bake 1 hour in a moderate oven. For gravy, add to the liquor left, 1 tablespoon butter rubbed with a little flour, seasoned with salt and pepper, stirring in little by little; let boil up once and serve. Meat pie, especially veal pie, is delicious made in this way.

Roast Turkey.—Singe by holding over burning paper on top of stove, wash the inside thoroughly with water in which 1 teaspoon soda has been dissolved, then rinse in clear water rubbing outside and in, and wipe dry; rub well inside and out with salt and pepper; make a dressing of dry bread crumbs, butter, pepper, salt, thyme, sweet marjoram, sage, or the grated yellow peel of a lemon, add, if you like, 1 egg. Pour a little warm water and milk over the bread crumbs, enough to soften; mix in the other ingredients. A few oysters chopped into the dressing improves it, also a little of the oyster liquor. Stuff the breast of turkey first and sew up; then fill body—not too full—and sew together. Hold the wings and legs close to body with cord tied round, rub salt and pepper under them, fasten over wings and legs thin slices of salt pork. Place in dripping pan a cup of hot water, and some skewers to prevent burning; put turkey on these, sprinkle over it a little more salt and pepper. Dip up the juices from pan over the turkey often, and if necessary, add more boiling water. When partly cooked sprinkle with flour; turn often to brown on all sides. Roast from 1 to 3 hours until easily pierced with a fork, and a nice brown. If browning too fast, put a greased paper over. Cut in pieces gizzard, liver, and heart, stew in basin until tender, chop fine, add this with water in which they were cooked. To the liquor left in dripping pan when turkey is taken up, stir in 1 spoonful flour wet up with cold water, let boil up and pour into gravy boat. Be sure to remove strings from turkey before serving. Chicken or duck may be roasted in this way. Cranberry sauce is a nice accompaniment for turkey, crab-apple jelly or tomato sauce for chicken, and currant or grape jelly for duck.

To Carve a Turkey.—Place your turkey on its back, then insert the fork astride the breast bone. Place the knife cross-wise 1 inch from the wing towards the fork, cut, then pry out and the wing will be unjointed. Place knife cross-wise on either side of the leg, cut down, place the point of your knife at the knee-joint, press out and the leg is unjointed at the hip. With the handle of your knife toward the neck, and the point toward the leg, slice four or more slices from the breast.

Carve the opposite side of the body in the same manner. Place your knife cross-wise in front and close to the breast bone, cut down, and the wish bone is unjointed. Then place the knife, with the handle toward the neck in the breast, press down toward the leg, and pry out, this will leave the clavicle unjointed. Turn the turkey over and with a slight cut separate the breast bones from the back, and lay them off on another plate. The fork is still remaining in the breast where it was first put. Enter the knife at the tail and cut forward, parallel with the back-bone, leaving the latter bone in its place, pry out and the bones are off.

SALADS.—Chicken Salad.—Mrs. H.—Boil 3 chickens until tender, salt and pepper to taste. When cold cut in small pieces (do not chop), and add twice as much celery as you have chicken. Pour over this and mix through it salad dressing, made from salad dressing recipe No. 1 or No. 2. This will be sufficient for 15 or 20 persons. If you choose you can use part of the celery only, using as much chopped white cabbage as celery.

Ham Salad.—Miss H.—1 pt. boiled ham chopped fine, same of chopped cabbage, 2 eggs boiled hard, 1 tablespoon mustard, season with salt, pepper, and extract of celery (or celery seed, or fresh celery cut up), mix with a little vinegar, garnish with celery and hard boiled eggs sliced.

Sweet Cream Dressing for Lettuce.—Mrs. P.—Take 2 or 3 teaspoons sugar, little salt, plenty of black pepper, mustard, mix, then add sweet cream and a little vinegar.

Delia's Salad Dressing, No. 1 (Excellent).—Rub smooth the yolk of 1 hard boiled egg, beat the yolk of 2 raw eggs and add to the other, drop in this a small bottle of olive oil, a drop at a time, beating constantly (to prevent its separating), 2 salt-spoons salt, mustard and Cayenne pepper to taste, vinegar, a few drops at a time, and a little lemon juice, little sugar; beat it thoroughly and put in a cold place to thicken. It should be about as thick as good rich cream. This dressing will keep for weeks in a cool place.

Salad Dressing, No. 2.—Mrs. F.—Put on the stove to cook {2/3} of a cup of thick cream, when nearly boiling add the yolks of 2 well beaten eggs, cook slowly and stir constantly, add a teaspoon of mustard, little salt, little sugar, and Cayenne pepper. Put in a little butter if the cream is not rich, lastly, add vinegar, little by little, enough to make a smooth, creamy mass. This is a good dressing for lettuce, cabbage or chicken salad.

Cabbage Salad Dressing.—Mrs. W.—2 eggs beaten together, butter size of half an egg, 2 tablespoons sugar, 1 coffee-cup vinegar, ½ teaspoon mustard, ½ teaspoon salt, little pepper; cook all together and pour over cabbage while hot. Cut the cabbage fine.

Tomato Salad.—Put nice fresh lettuce around a platter, slice red tomatoes on this, and pour over it one of the above salad dressings.

Potato Salad.—Mrs. H.—Chop 6 cold boiled potatoes, not too fine, half as much celery, ½ an onion chopped very fine, (a small quantity of meat if you like), mix with this some of the Durkee salad dressing or one of the salad dressings given in the foregoing recipes.

Shrimp Salad.—Pour cold water over the shrimps as you take them from the can, dry them with an old napkin, place crisp lettuce leaves upon a platter, break up in small pieces a little lettuce and mix with the shrimps, and place on the platter, pour over this some salad dressing, either salad dressing No. 1 or No. 2.

Lobster Salad.—Pick up the meat carefully, you can mix with it crisp lettuce leaves broken fine, and mix thoroughly with it a salad dressing, No. 1 or No. 2.

VEGETABLES.—Potato Puff.—2 cups cold mashed potatoes, stir into it 2 tablespoons melted butter, beat this to a cream and add 2 well beaten eggs, 1 cup of cream or milk, salt and pepper to taste, beat well, pour into deep dish and bake in hot oven until brown.

Cream Potatoes.—½ pt. milk, butter size of small egg, pepper and little salt, thicken with a table-spoon of flour (mixed smooth in cold water), let milk boil, put in the flour and seasoning, stir well and cook until thick like cream; pour over boiled potatoes, after placing them in a dish.

Cream Potatoes, No. 2.—Prepare the cream for the potatoes like the above, stir in this chopped, cold, boiled potatoes; cover them and stew until cooked through. You can add a little chopped parsley, or onions sliced fine, and stirred

through them just as you take them off the stove.

Saratoga Potatoes.—Mrs. H.—Select good large potatoes, wash and pare them, slice them on potato or cabbage cutter, let them remain a few moments in cold salt water, squeeze them out of this in your hand dry as possible, and put a handful at a time in a kettle of hot lard, stir with a fork, separating them quickly as possible; fry until of a light brown colour, take out with a skimmer in a colander. Serve in a dish with a napkin (to absorb the grease). They are good either cold or hot. Can be kept several days by keeping in a dry place (warming over, if not very warm). Warm them by placing in an oven a little time before using them, to make hot and brittle.

To Cook Parsnips.—Boil tender, mash fine, removing all strings, mix with them 2 eggs, salt and pepper, beat well together, and put a spoonful in a frying pan with hot butter in it; when one side of these is browned, turn over and brown the other.

Corn Imitation Oysters.—Grate 15 ears green corn, wash the cobs off in a teacup of milk, 3 eggs, 2 tablespoons flour, 1 teaspoon salt; bake on a griddle in spoonfuls, or fry like oysters.

Corn Pudding.—Scrape green corn from the cob, before cooking, add a *little* sweet cream, and little butter, salt and pepper; put in a pail, cover it, then put in a pail of hot water and cook three hours.

Baked Tomatoes.—Grease a pudding-dish with butter, sprinkle a few bread crumbs over it, then a layer of sliced tomatoes, sprinkle over them a little sugar, little salt and pepper, and bits of butter, then a thin layer of bread crumbs, then tomatoes, etc., then bread crumbs, until the dish is full; bake slowly 2 hours. (Use cracker crumbs if preferred).

Fried Apples.—Wash and wipe sour apples, quarter them if large, cut in two again, core but do not pare them, put in frying pan, little butter, and pour over them little hot water, sprinkle over them sugar and a little salt; cover up and cook until tender. Take off cover and cook until a little brown, scraping up from the bottom of pan.

Rice Croquettes.—Mrs. P.—Put 1 coffee cup of rice in the cooker, 1 cup milk, 2 cups water, sweeten quite sweet, little salt, cook until tender; then grate in the rind of 1 lemon, yolks of 2 eggs, make in oblong cakes, then roll in the yolk of eggs, then in cracker rolled very *fine*; then fry (like rice cakes) in hot lard until brown, put an old napkin placed on platter when you take them from the lard. These will keep two or three days. Warm them in the oven when you wish to use them.

Oat Meal, Fine Hominy, Cracked Wheat.—These are all cooked alike. To 1 cup of oatmeal, 4 cups of cold water, 1 teaspoon salt, put in oat meal cooker (or in a pail set in a pail of hot water) to prevent burning. Stir well when you put it on to cook, and do not stir again. Cook three hours.

German Toast.—Mrs. H.—Dip slices of bread (cut ½ an inch thick) in milk, in which put little sugar and salt, then dip in beaten egg, and fry in frying pan with butter, brown both sides. Good for breakfast or tea.

BREAD STUFFS.—Mollie's Bread.—Nearly 1 qt. tepid water, flour sifter (holding little more than 1 qt.) twice full, 1 spoon salt, 1 or ½ cake compressed yeast dissolved in ½ cup warm water, stir into batter, in centre of flour—leave over night. In the morning *mix thoroughly, add as little flour* as will answer, let rise, then mix *as before*, put in tins, let rise again and bake. Keeps moist a long time.

Mrs. H.'s Bread.—4 medium sized potatoes, pare and slice in cold water, boil until soft, leaving fully 1 pt. water when done; pour this water boiling hot on 2/3 pt. flour, mash potatoes fine and stir in; soak ½ "Twin Bro.'s" yeast cake in warm water, (*not* hot) and stir into the above, when it is cool; let stand until light in a warm place. This makes the yeast. At night stir this, with 1 qt. warm milk or water, and 1 spoonful salt, into the centre of 4 qts. flour, and mix with enough of the flour to make a thick sponge, cover lightly with a little more of the flour; set away until early morning, when it should be quite light. Now mix, cutting with a knife through and through; knead very thoroughly, using as little extra flour as possible; let rise in warm place, when light repeat directions for kneading thoroughly, make into loaves, put in tins, let rise again in a warm place and bake.

For Raised Biscuits.—When making bread into loaves save out nearly half as much dough as you use for 1 loaf; mix into this, shortening nearly the size of an egg, with a small spoon sugar, let rise, then mix again, make into biscuits, let rise once more and bake. For a change, sweeten 1 egg well beaten, with a little sugar, and brush over tops of biscuits with a cloth, just before putting into the oven; this, with the addition of more sugar to the biscuits, and a few spices to taste,

makes nice rusk.

Mrs. Wood's Yeast and Bread.—1 pt. sliced potatoes, 1 qt. water, when boiled take that water, potatoes well mashed, 1 teacup sugar, ½ cup salt, 1 cup flour, blended together with a little water; into this strain water into which a small handful of hops has been boiled, *not boiling* hot, when milk is warm add yeast 1 cup. This will keep for months. To make bread, take 2 cups flour, pour 1 pt. boiling water over it; add more cold water and more flour, ½ cup sugar, and small piece of butter, with small cup or less of the yeast above described. Put to sponge early in evening, before going to bed stir down, stir down again in the morning, let rise again, then mix *very thoroughly*, make into loaves and bake. Raised biscuits or rusk may be made of this dough, same as with Mrs. H.'s bread.

Mrs North's Parker House Rolls.—3 pts. flour, 1 pt. cold boiled milk, piece of butter size of an egg, tablespoon sugar, ½ cup yeast; sponge at night. Knead 20 minutes at 10 o'clock next morning; cut out at 2 o'clock and bake at tea time; roll out, and cut round, put a little piece butter on top, lay one half over the other.

Mrs. P.'s New Bedford Rolls.—1 pt. sweet milk scalded, when cool add 2/3 cup butter, 2 tablespoons sugar, little salt, 1 beaten egg, and 1 two cent cake compressed yeast (Fleichmann's comes in tin foil), dissolved in a little water; stir in flour to make a soft sponge. Start in morning, when light, knead well, make out into rolls, should be ready to bake about 4 o'clock, but if you wish them hot for tea, set the pan of rolls in a cold place till just time to rise and bake for tea.

Mrs. H.'s Baking Powder Biscuit.—2 heaping spoons butter, 2 scant cups sweet new milk, 3 teaspoons baking powder, 1 saltspoon salt. Rub baking powder into flour, and sift, next salt, then rub in butter quickly and lightly, lastly mix in the milk with as few strokes as possible. Dough should be *very* soft; roll out ½ inch thick, cut into biscuits and bake in a quick oven.

K.'s Lunch Biscuits.—Make a nice baking powder biscuit; roll out about ½ inch thick, sprinkle over this one cup fine sugar and the least dust of cinnamon, roll up tightly, and cut biscuit from the end, 1 inch thick, place on buttered tins, and bake quickly. Nice for lunch or coffee.

Nelly's Sally Lunns.—1 pt. flour, piece butter half size of an egg, 1 egg, 2 tablespoons sugar, 1 cup milk, 2 small teaspoons baking powder (or 1 teaspoon cream tartar, ½ teaspoon soda), 1 saltspoon or more salt. Bake in muffin rings 20 minutes, or in gem tins.

Mrs. G.'s Pop Overs.—1 qt. flour, 1 qt. milk, 2 eggs and a little salt. Stir quickly, putting in eggs last, and bake immediately in a hot oven.

Mrs. P.'s Pop Overs.—4 eggs, 1 pt. sweet milk, 1 tablespoon sugar, small piece of butter, little salt, 3 cups flour. Bake an hour with a slow fire. Bake in cups or muffin rings.

Mrs. N.'s Raised Muffins.—1 qt. milk scalded, then cooled to luke warm; two eggs well beaten, butter size of an egg, 2 tablespoons sugar. If yeast is new, 1½ coffee cup yeast (less if old, or in warm weather), mix at night if wanted for dinner or tea next day. Stir occasionally, don't get too thick. Bake in gem tins or pop over cups.

Elvira's Muffins.—1 egg, one spoon melted butter, 1 spoon sugar, 1 cup sweet milk, 2 cups flour, 2 teaspoons baking powder (heaping). Bake in muffin rings or gem tins.

Short Cake.—(Strawberry or other fruit), 1 cup sour cream, three cups flour, 1 teaspoon soda, and a pinch of salt.

Mrs. Harper's Breakfast Cake.—1 pt. sweet milk, 2 eggs, 1½ cups flour, and a little salt. Bake in cups or gem tins, quick oven.

Bread Griddle Cakes.—1 qt. sour milk (butter milk is better); break into this at night stale pieces of bread, 1 pt. or more, stir well. In morning rub this through colander, add 1 or two eggs, small piece of butter, 1 teaspoon soda, flour enough to prevent sticking to griddle. Rice or fine hominy is excellent in place of bread. If batter is left over add to this instead of making new from beginning, as it is better the second morning and will be good several days.

Flannel Cakes (griddle).—1 qt. milk, 3 tablespoons yeast, 1 tablespoon melted butter, 1 teaspoon salt, 2 eggs well beaten, flour to make a good batter. Set the other ingredients at night, adding the butter and eggs in the morning. Bake on a griddle.

Mrs. Waldron's Brown Bread (graham).—1 cup bread sponge, 2 spoons molasses, 1 teaspoon salt, warm water enough to make one loaf. Stir in about 1 handful white flour, and graham flour enough to stir stiff. Put in bread tins, let rise and bake.

Dina's Brown Bread (graham).—2½ cups dough, ¾ cup molasses, graham flour stirred in stiff; rise once, and bake.

Aunt Hannah's Graham Bread.—1½ cups sour milk, little salt, ½ cup molasses, 1 teaspoon soda; stir thick about like Johnny cake with graham flour, and a little white flour. Bake ½ or ¾ hours. Nice for dinner.

Cousin M.'s Graham Muffins.—2 cups graham flour, 1 cup white flour, 2 eggs, 1 cup sour cream, ¾ cup sugar, ½ cup butter, 1 teaspoon soda.

Mrs. G.'s Graham Gems.—1½ cups graham flour, ½ cup white flour, 1 cup sweet milk, 1 egg, salt, 1 teaspoon baking powder. Bake in gem tins; heat the tins before using.

Mrs. Waldron's Corn Bread.—1 pt. sour milk, 1 pt. corn meal, 1 pt. flour, ½ cup molasses, ½ cup shortening, 2 small teaspoons soda, salt. Steam 1 hour, and bake ½ hour.

Nelly's Johnny Cake.—1 pt. sour milk, 1 pt. Indian meal, 2 eggs, 1 tablespoon sugar (or more), 2 tablespoons melted butter, little salt, 1 teaspoon soda, beat thoroughly. Nice baked in gem tins, or in square tins.

Light Tea Cakes.—1 cup sugar, ½ cup each of butter and sweet milk, 2 eggs, 1 teaspoon baking powder, flavor to taste, add flour to make a soft batter, and bake in gem tins.

Tea Rusk.—1 pt. pancake batter stirred over night, ¾ cup butter, 1 cup sugar, tablespoon soda, spice to taste, mix light and soft as possible. Cut with biscuit cutter; eat warm.

Bread-Sticks.—Roll white bread dough (ready kneaded) very thin, cut in pieces 6 inches long by ¾ inch wide, put in tins so far apart that they will not touch in baking; bake until crisp. These are nice with any soups, or with coffee for breakfast.

CAKE.

Angel's Food.—Whites of 11 eggs, 1½ tumblers granulated sugar, sift before measuring, then sift again 4 times; 1 tumbler flour after sifting, then sift 4 times, 1 teaspoon cream tartar with flour, then sift flour and sugar together, 1 teaspoon vanilla; add sugar and flour to eggs carefully, stirring little as possible, having previously beaten eggs to a high froth on a large platter, put in a pan that has never been greased, and bake slowly 40 minutes; try with a straw and if too soft let remain a few minutes longer, then turn pan upside down over a napkin on a table, to cool, then frost.

Sea Foam Cake.—Whites of 10 eggs beaten to a stiff froth, 1½ cups sifted sugar, 1 cup sifted flour, 1 teaspoon cream tartar. After beating well, add 1 heaping teaspoon flour and flavor.

White Sponge Cake.—1 goblet sugar (heaping), 1 goblet sifted even full, whites of 10 eggs, 1 teacup cocoanut or almonds, 1 teaspoon cream tartar in the flour.

Frosting.—Mrs. H.'s.—To the white of 1 egg well beaten, add ½ cup powdered sugar, beat until light, and does not run; flavor to taste.

Boiled Frosting.—1 cup sugar to 1 egg; and a little water to sugar, boil to a thick syrup; when cold add white of egg well beaten, then beat together.

Chocolate Cake.—1 cup sugar, ½ cup sweet milk, ½ cup butter, 2 eggs, 1½ cups flour, 2 teaspoons baking powder. Bake same as jelly cake; and for layers between; whites of 3 eggs, 1 cup sugar, and chocolate to taste.

Minnie's Orange Cake.—2 cups sugar, 2 cups flour, ½ cup water, 2 teaspoons baking powder, yolks of 5 eggs, whites of three eggs, rind and juice of 1 orange; bake in layers. For frosting take whites of 2 eggs beaten stiff, rind and juice of 1 orange made stiff with powdered sugar.

Sponge Cake.—Beat well together yolks of 8 eggs and 1 pt. powdered sugar; having well beaten the whites of eggs, add in small quantities alternating with 1 pt. flour; flavor to taste. If sufficient care is taken in beating it is delicious. May be baked in layers for

Lemon Jelly Cake.—Juice of 1 lemon, 1 egg, {2/3} cup sugar; let this simmer on the stove, stirring constantly until it thickens. Put between layers of sponge cake.

Orange or Lemon Cake.—1 tumbler sweet milk, 1 tumbler sugar, 2 tumblers flour, 2 eggs, 4 tablespoons melted butter, 2 teaspoons baking powder; bake in layers. Frosting between, flavored with juice and little grated rind of lemon or orange.

Coffee Cake.—1 cup butter, 1 cup sugar, 1 cup molasses, 1 cup cold coffee, 4 cups flour with 2 teaspoons baking powder, ½ lb. raisins, ¼ lb. citron, 1 teaspoon each of nutmeg, cinnamon, and cloves.

Wedding Pound Cake.—Mrs. H.'s.—1 lb. flour, 1 lb. sugar, ¾ lb. butter, 3 lbs. raisins, 2 lbs. currants, 1 lb. citron, 7 eggs, 2 cups molasses, 2 teaspoons cloves, 2 nutmegs, 2 teaspoons cinnamon, 2 teaspoons soda, 2 cups sour cream. Bake in a slow oven a long time.

Mrs. W. P.'s Steamed Fruit Cake.—6 eggs, their weight in sugar, butter, and flour, each, 2 lbs. raisins, 1 lb. citron, 1 lb. English currants, 2 teaspoons baking powder. All kinds of spices to taste. Steam 6 hours and bake 1 hour, in a slow oven. This makes 2 large basin cakes.

Christmas Cakes. (Leb. Kuchen)—1 qt. melted lard, 2 qts. New Orleans molasses, 2 lbs. New Orleans sugar, 1 lb. almonds blanched and chopped, ½ lb. citron chopped, ½ pound orange peel preserved and chopped, ½ cup ground cinnamon, ¼ cup ground cloves, 2 nutmegs grated, 1 qt. buttermilk (or sour milk), 3 teaspoons soda, 1 tablespoon salt, 5½ even qts. flour. Warm lard and molasses, stir in sugar, then all the rest. Mix in the evening, put in a cold place over night, in the morning take a small piece at a time to roll, leaving the rest in a cool place, roll out like cookies, and cut with knife in oblong cakes; bake in dripping pans. Tied up in pillow case, and hung away in cool unused room, will keep six months.

Good Plain Cake.—2 eggs, butter size of an egg, 1 cup sugar, ½ cup sweet milk, ½ teaspoon soda, 1 teaspoon cream tartar, (or 1½ teaspoons baking powder,) 1 pt. flour.

Delia's Lemon Cake.—2 cups sugar, 3 eggs, ½ cup butter, 1 cup sweet milk, 1 teaspoon soda in milk, 3 cups flour, 2 teaspoons cream tartar in flour. Whites of eggs beaten separately and added last, flavor with lemon extract, add raisins cut in two; bake.

English Walnut Cake.—3 cups flour, whites of 5 eggs, ½ cup butter, ¾ cup sweet milk, 2 cups powdered sugar, 3 teaspoons baking powder, ¾ lb. English walnut meats broken up, ½ cup raisins seeded and pulled in pieces (not rolled in flour). Bake in square pie tins; make 2 layers with frosting between, then frost the top and when frosting is a little cold mark off in 2 inch squares, and on each square lay ½ English walnut meat.

Fig Layer Cake.—Miss T.'s—½ cup butter, 1 cup sugar, yolks of 2 eggs, {2/3} cup sweet milk, 2 cups flour (not very full), 2 teaspoons baking powder, vanilla and lemon. Bake in 3 tins and put frosting with chopped figs between each layer, and figs and frosting on top of cake. 1 lb. figs is sufficient for 2 cakes.

Kate R.'s Fig Paste for Layer Cake.—1 lb. raisins stoned and chopped, with 1 lb. figs chopped fine. Add hot water, a drop at a time until a smooth paste.

Mrs. W.'s Delicate Cake.—¾ cup butter, 2 cups powdered sugar, 3 cups flour, whites of 7 eggs, 1 teaspoon cream tartar, ½ teaspoon soda. Stir butter and sugar to a cream, then add 1 cup milk, little at a time, then the other ingredients.

Dark and Light Layer Cake.—1 cup butter, 2 cups sugar, 3¼ cups flour, ½ cup sweet milk, whites of 4 eggs, ½ teaspoon soda, 1 teaspoon cream tartar. Take ½ the mixture, add to it ½ cup molasses; cloves, cinnamon, and spice to taste; raisins, ½ cup flour, 3 tablespoons sweet milk. Bake each separately in layer cake tins, then alternate in layers with frosting between. If one wishes, leopard cake can be made of this, if before baking a spoonful of dark, then a spoonful of light is put in long cake tin until all is used.

Excellent Corn Starch Cake.—1½ cups sugar, ½ cup butter, ½ cup milk (sweet), ½ cup corn starch in the milk, not quite 1½ cups flour, 1 large teaspoon baking powder, whites of 8 eggs. Miss M.'s is like this, only it has 1 teaspoon cream tartar, ½ teaspoon soda, 1 teaspoon lemon extract.

Newport Cake.—Mrs. B.'s—1 egg, 1 qt. sifted flour, 2 teaspoons baking powder mixed with flour, {2/3} cup sugar; beat eggs and sugar together very light, ½ cup melted butter, 1 cup milk, stir all well together and bake in a quick oven. Without the sugar this makes a nice breakfast cake.

Minnehaha Cake.—Mrs. P.'s—1 coffee cup granulated sugar, ½ cup butter, rub to a cream, then whip whites of 3 eggs, stir in butter and sugar, 1 cup sweet milk, 2 cups flour, 3 teaspoons baking powder in the flour. Bake in layers, and put frosting with chopped raisins between.

Cold Water Cake.—6 eggs beaten separately, then together, 3 cups sugar stirred in the eggs, 2 cups flour stirred in, 1 cup water stirred in, 2 cups flour more with 3 spoons baking powder stirred in; then bake in 3 basins nicely greased. Cut cakes in two, and spread with custard, (make with ½ pt. milk, ½ cup sugar, 1 egg, 2 tablespoons corn starch. Let milk come to a boil, then stir in other ingredients) then frost.

Ginger Cake.—(without milk or eggs)—Mrs. W.'s—1 cup molasses, ½ cup butter, 1 cup boiling water, 2 cups flour, 1 teaspoon soda, 1 teaspoon ginger.

Cousin M.'s Ginger Cake.—½ cup molasses, ¾ cup sugar, ¾ cup sour milk, ½ cup butter, 1 small spoon ginger, ½ spoon cinnamon, pinch of cloves; 1 large teaspoon soda, 2 eggs; stir soft and bake slowly. Put molasses and butter in pan to warm, then add other ingredients.

Mrs. W.'s Puff Cake.—1 cup butter, 1 cup sweet milk, 3 eggs, 3 cups flour, 2 teaspoons baking powder, vanilla.

Spanish Bun Cake (Excellent).—Stir well together, 1 pt. sugar, ¾ cup butter, add the beaten yolks of 4 eggs, 1 cup sweet milk, 1 tablespoon cinnamon, ¾ spoon cloves, 1 heaping pt. flour, 1 cup chopped raisins mixed with a part of the flour, 2 teaspoons baking powder with the flour; add last, whites of 4 eggs well beaten. Bake in small dripping pan and frost with chocolate icing. For icing—1 cup sugar, just water enough to dissolve it, add chocolate to taste; boil until it drops stringy from the spoon, then take from stove, mix with beaten white of 1 egg, stirring rapidly. Do not frost until both cake and icing are nearly cold; set in a cool place to dry.

Mrs. P.'s Bread Cake.—1 coffee cup dough, 1 cup molasses, ½ cup brown sugar, ½ cup butter, 2 eggs, 1 teaspoon soda in 2 spoons hot water, a little flour, 1 teaspoon each of all kinds of spices. Let rise and bake.

Debby's Soft Cookies.—Very small ½ cup butter, 1½ cups sugar, 1 egg, {2/3} cup sweet milk, 3 teaspoons baking powder, very little nutmeg (or lemon extract); stir butter and sugar to a cream then add other ingredients, not too much flour, mix very soft, roll out (not too thin), cut in strips, roll in sugar and flour; braid so as to form a round, and bake: or cut round and put raisins in centre. These are very nice.

St. Denis Cookies.— 1 cup butter, 3 cups sugar, 3 eggs, 1 cup sweet milk, 7 cups flour, 7 teaspoons baking powder, little nutmeg.

Nelly's Ginger Snaps.—1 cup molasses, 1 cup brown sugar, 1 cup shortening (part butter, part lard). Boil in a basin 10 minutes; cool, then put in 1 teaspoon soda dissolved in about 2 tablespoons hot water, 1 teaspoon ginger; stir in enough flour to make stiff; roll thin and bake.

Nelly's Fried Cakes.—1 cup sugar, 1 cup sour milk, 2 spoons cream, 1 teaspoon soda, 2 eggs, a little salt; mix very soft but round, put a raisin in centre of each; fry light brown, then roll in sugar.

Mrs. H.'s Fried Cakes.—1 cup sugar (not quite full), 2 small eggs, ½ cup sweet milk, 1½ teaspoons baking powder, 2½ cups flour, 1 tablespoon melted butter.

Favorite Fried Cakes.—Put about 1 qt. flour in a dish, mix with it 2 teaspoons baking powder, 1 cup sugar, 2 small eggs, little salt, 1 cup sweet milk.

DESSERTS, CREAMS, ETC.

Coffee, Mrs. W.'s Excellent.—Allow 1 tablespoon coffee for each person, and one for coffee pot, ½ cup water to each tablespoon coffee; let boil 10 minutes, then set back until settled; then pour into another pot in which you have scalded milk, ½ cup milk for each spoon coffee. Serve with cream and sugar.

Cream for Coffee.—Heat 1 qt. new milk, work together 1 dessert spoon sweet butter with teaspoon flour, thin it with a little of the hot milk and beat for five minutes while boiling, then remove from fire and beat five minutes longer. Have ready yolks of 2 eggs well beaten and add to cream while hot, mixing well. This is almost better than cream.

Coffee Ice Cream.—3 pts. cream, 1 cup clear strong coffee, 2 cups sugar, 2 tablespoons arrowroot wet in cold milk; heat half the cream to boiling; stir in the sugar and when this is dissolved, the coffee, then the arrowroot; boil all together about 5 minutes, when cold beat up very lightly, whipping in the rest of the cream by degrees, then freeze.

Charlotte Russe.—To 1 pt. sweet cream whipped very light, add whites of 2 eggs well beaten, 1 cup sugar, flavor with vanilla; {1/3} box Cox gelatine dissolved in a gill of milk, strain into the cream. Have a mould lined with sponge cake (or lady fingers), pour in the cream and put away to cool.

Debby's Dessert.—Make lemon and orange jelly (see recipe), place bowl in centre of dish in which jelly is moulded, and when hardened, fill the cavity with whipped cream.

Miss H.'s Frozen Fruit.—2 doz. fine peaches pared and cut into small pieces, cover them with sugar and let stand 3 or 4 hours. Then beat them into 1 qt. sweetened cream or custard, and freeze. Canned peaches may be used, and other fruits are good.

Ice Cream.—1 qt. cream, sweeten very sweet and flavor with vanilla; whip up very light with whites of 1 or 2 eggs well beaten and freeze. This makes a large quantity and is quickly frozen.

Ice Cream No. 2.—Little more than 1 pt. cream whipped, 1 large cup sugar, white of 1 egg broken in, flavor with vanilla or lemon; 1 heaping tablespoon gelatine dissolved in a little water. When the cream is nearly whipped enough strain in the gelatine, then whip thoroughly; put in a small covered tin pail, pack in a larger pail with salt and ice. A short time before using, stir thoroughly from the sides where frozen, that this may be mixed with the rest; no shaking necessary.

Lemon Sponge.—Pour ½ pt. water on ¾ box Cox's gelatine, when dissolved add 1 pt. water, 2½ cups sugar, juice and grated rind of 2 lemons. Boil together, then strain; when quite cold stir in the whites of 2 well beaten eggs, and pour into a mould. This is very nice with custard round for dessert, or with red jelly in centre. In place of lemons use oranges, for orange sponge.

Lemon and Orange Jelly.—Pour a little more than 1 pt. boiling water on ½ box Nelson's gelatine; grate the rind of 1 lemon and 1 orange; use the juice of 2 oranges and 1 lemon, 2 cups sugar. Stir well, strain through a flannel bag and pour into mould.

Lemon Ice.—2 qts. water, 6 lemons; grate the peel and pour a little hot water on it, then strain in the water, add the juice and 2 lbs. sugar. Put in freezer, then stir in the whites of 8 eggs beaten to a stiff froth, and freeze.

Pine-apple Ice.—Chop the pineapple and lay in sugar over night: 2 qts. water and 2 lbs. sugar, adding whites of 8 eggs well beaten, after putting in the freezer.

Orange Float.—1 qt. water, juice and pulp of 2 lemons, coffee cup sugar; when boiling add 4 tablespoons corn starch mixed in cold water; stir while boiling 15 minutes. When cool pour this over 4 or 5 oranges sliced and sprinkled with sugar. Spread over this, beaten whites of three eggs, sweetened and flavored.

Russian Cream.—½ box Cox's gelatine, cover with cold water, leaving in a warm place until dissolved; 1 qt. milk, 4 eggs, 1 cup sugar. Beat the yolks of eggs and sugar together, stir in the gelatine, and pour into the boiling milk, let it cook a little longer than custard, flavor with vanilla. Let it cool a little, then stir in the whites of the eggs beaten to a high froth, and pour into a mould. To be eaten cold; set on ice in summer. Better the second day.

Spanish Cream.—2 qts. milk, 3 cups sugar, 6 eggs beaten separately, ½ box gelatine, juice of 2 lemons; put the gelatine

into 1 pt. cold milk, setting it where it will warm; boil the rest of milk and pour to it, then add yolks of eggs, 2 cups sugar, lemon juice; bake until a nice brown; beat whites of eggs with 1 cup sugar and a little lemon, put on top; set in oven to stiffen.

Snow Jelly.—½ box Cox's gelatine, 1 pt. boiling water, 2 cups sugar, juice of 2 lemons, whites of 3 eggs; pour boiling water over gelatine, add sugar and lemon juice; when nearly cold add whites well beaten. Put in mould and in a cool place.

Whipped Cream.—Beat fresh sweet cream to a stiff froth, (a Dover egg beater is best for this), add pulverized sugar and flavoring to taste. This is nice served in small glasses, with "sea foam cake."

Snow Pudding.—½ box Cox's gelatine in ½ part cold water, when dissolved add juice of two lemons, ½ lb. sugar, 1½ pt. boiling water; let stand until cold. Beat whites of 4 eggs to a froth with 1 tablespoon sugar, spread this over the jelly. For sauce scald 1 pt. milk, beat yolks of 4 eggs, sweeten and add grated rind of 2 lemons, and stir in the boiling milk.

Snow Pudding No. 2.—To 1 pt. rich new milk or cream just boiling, add 2 tablespoons corn starch mixed with a little cold milk, sweeten to taste, a little salt, vanilla, cook 10 minutes, stirring the while. Take off the stove and add at once whites of 2 eggs thoroughly beaten, then put in mould. To be eaten cold.

Omelette Souffle.—Beat the whites and yolks of eggs separately (the number you may require), to every white add 1 tablespoon pulverized sugar, same to each yolk; after beating each separately, thoroughly put together and stir; flavor with lemon; put in hot, buttered dish and bake 10 minutes.

Chocolate Custard.—1 qt. milk, 3 oz. chocolate, boiled until thoroughly mixed, then take off the fire and add 4 eggs thoroughly beaten; flavor to taste.

Custard for Dessert.—1 full qt. milk, 2 cups sugar, 4 eggs, put in cups; set the cups in water in a dripping pan, and bake until smooth (too much baking makes it watery).

Orange Float.—1 qt. water, 2 lemons, juice and pulp (squeezed), 1 coffee cup sugar; when boiling add to it 4 tablespoons corn starch mixed in cold water; let it boil, stirring it 15 minutes, when cool pour it over 4 or 5 sliced oranges, sprinkled with sugar. Over the top spread the beaten whites of 3 eggs sweetened and flavored.

Mollie's Peach Pudding.—Pour the liquid from a quart of peaches into a quart cup, fill the cup with hot water and make quite sweet; put this in a skillet and when it boils, put in it 7 even tablespoons corn starch (wet up with milk or water), cook about 15 minutes. Put some of the peaches in bottom of mould, then pour in some of the pudding, then more peaches, and in this way fill up mould. To be eaten with cream and powdered sugar. This is enough for 10 persons.

Peach or Apple Pudding.—Put a quart can of peaches or apples (juice and all), in a skillet; make a covering for it of 1 pt. of flour, 1 tablespoon baking powder, stirred through the flour, 1 tablespoon of butter worked into the flour; wet this with water or sweet milk enough to make it not quite as stiff as biscuit dough, and put over the peaches; cover this tight and cook about 20 minutes; turn out and serve with cream. Other fruits are equally good with these two puddings; plums are delicious in either.

Banana or Orange Pudding.—Mrs. B.'s—1 qt. milk, 1 coffee cup of sugar, 3 eggs, whites of 2 of them to be reserved for frosting; ½ box gelatine dissolved in hot water, to be added to the custard after it is taken from the fire. When quite cold put custard and banana in layers until the dish is full; then put the frosting on top with a few pieces of the fruit mixed with it.

Sponge Pudding.—1 qt. milk, ½ cup butter, ½ cup sugar, 1 cup flour, 12 eggs. Scald the milk (leaving out enough cold milk to wet the flour with), when near boiling add sugar; then stir in flour already wet with cold milk until thick as starch, take from the fire and add the butter; let it get nearly cool, meanwhile have someone else beating the eggs, yolks and whites separately until very light, then beat the yolks into the milk, and lastly the whites, mixing all very thoroughly; pour into a large pudding dish, set in a pan of hot water; bake about an hour. Sauce for above.—1 cup butter beaten to a cream, and 2 cups sugar and beat well, then beat in by the teaspoonful ½ cup wine; put in the pitcher in which you will serve it; set in kettle of boiling water for an hour, but do not stir it at all.

Queen's Pudding.—1 pt. cracker crumbs, 1 qt. milk, 1 cup sugar, yolks of 4 eggs, butter size of an egg, bake; then

spread over top a layer of jelly, and over this pour frosting made with whites of four eggs well beaten, 1 cup sugar, juice and grated rind of 1 lemon. To be eaten cold.

Dorchester Cracker Pudding.—2 qts. milk, 6 Boston crackers split and buttered, 8 eggs beaten very light, 2 cups sugar, nutmeg, cinnamon to taste, 1 teaspoon salt, 1 lb. raisins seeded and cut in two. Make a custard of the milk, eggs, and sugar with spices, heating almost to a boil, put the crackers and fruits in layers, wetting with the custard until the dish is full; let soak until soft, and bake a light brown; serve with hot sauce.

Hot Sauce for Puddings.—2 cups sugar, 2 eggs, juice and grated rind of 1 lemon, beat all together, and just before serving add 1 pt. boiling water, set on stove, stirring until just at boiling point (not boiling, as that makes lemon bitter), some add ½ cup butter and 1 tablespoon corn starch.

Hot Cream Sauce.—1 cup powdered sugar, small ½ cup butter, {2/3} cup sweet cream; beat butter and sugar together, add cream, stir in ½ cup boiling water, heat on stove a few minutes, stirring constantly; flavor to taste.

Rice Pudding.—Mrs. B.'s—Little less than ½ cup rice to 5 cups sweet milk; put on back part of stove to swell for 2 hours or more, add butter, sugar and raisins; put in a pudding dish, and bake about 1 hour, stirring often, until time to brown over top.

Rice for Dessert.—To 1 cup rice, 2 cups water, 2 cups milk, 1 teaspoon salt; boil fast for fifteen minutes, then turn into a colander to drain.

Sauce for Rice.—Yolks of 3 eggs beaten with sugar quite sweet, 1 cup sweet cream, juice and grated rind of 1 lemon.

Plum Charlotte.—Take a can of plums, pit them and put them in a pan on the stove (first pour a little water in the pan to prevent burning), cut the crust all off from a loaf of stale baker's bread, cut the bread lengthwise of the loaf in slices one-half inch thick, place a slice at a time in the pan of plums (when they are hot) and let remain until soaked through, dip up the liquor of plums over it; when thoroughly wet through, take slice up carefully and place on a platter, serve each slice in the same manner, piling them together on a platter, put this in the oven for a few moments to glaze over; with a knife make the surface of the loaf smooth. Then frost top and sides with cake frosting and set away to cool and harden. This is a delicious dessert; to be eaten cold with thick cream and sugar. Can be made the day before using. Can use raspberries, black-berries, or grapes, in the place of plums.

Quinces Washed (but not pared) and placed in pie tins with little water in and bake slowly, make an excellent dessert with cream and sugar.

Russet Apples are very good baked like quinces, but in a very slow oven, and baked a long time.

Excellent Fritters.—Mrs. H.—Stir into 1 pt. of boiling water 1 teaspoon salt, 1 pt. of flour; stir thoroughly. When this is nearly cold add 4 eggs beaten separately, the whites last. Drop in spoonfuls in hot lard and fry as fried cakes. Serve with maple syrup, or syrup made of white sugar and water boiled until thick.

Aunt Hannah's Steamed Fruit Pudding.—1 cup suet chopped fine, 1 cup raisins, 1 cup sour milk, 1 cup molasses, 1 teaspoon soda, little salt, flour, enough to make stiff batter, put in large buttered basin in steamer; steam 2 hours. Sauce—1 cup sugar, ½ cup butter, little flour beaten to a cream; pour on boiling water, cook a few minutes.

Bread Pudding.—1 pt. milk, 2 eggs (the white of one taken out for dressing), 2 slices of bread, 1 cup raisins, a little butter; bake in buttered pudding dish. For dressing—½ cup butter, {2/3} cup sugar, well whipped; white of 1 egg well whipped, beat all together well, add a little hot water just before using; flavor to taste.

Mrs. Waldron's Nice Pudding.—½ lb. sugar, ½ lb. butter, ½ lb. raisins chopped fine, ½ lb. flour, 5 eggs; steam 3 hours. Serve with sauce.

PIES.

Bertha's Pie Crust.—3 cups sifted flour, 1 cup lard well mixed together with the fingers, ½ cup water (or more), 1

teaspoon salt, cut this altogether with a knife, then roll out quickly and as little as possible. Can add small teaspoon baking powder if desired.

Cranberry Pie.—1 qt cranberries, 3 cups sugar, in about 1 qt. cold water, cover until nearly done, take cover off and stew until jellied. Next morning line a pie plate with crust, sprinkle with flour lightly, fill with cranberries, cut strips of pie crust about ½ inch wide, make lattice work over top of pie and bake.

Cream Pie.—Mrs. M.'s.—1 cup cream, 1 egg, sugar and flavoring to taste; bake in a slow oven.

Custard Pie.—Mrs. S.'s.—2 eggs, 1 pt. milk, 1 cup sugar; break eggs into dish containing sugar, beat fast and thoroughly until very light, add milk, a very little nutmeg or vanilla if liked; bake in a slow oven, not too long. When custard cuts like butter it is done.

Mrs. N.'s Lemon Pie.—1 cup water, 1 tablespoon corn starch, 1 cup sugar, 1 lemon, grated rind, juice, and inside chopped fine; bake with two crusts.

Pumpkin Pie.—Mrs. H.'s.—To ¾ pt. pumpkin nicely stewed down add one cup milk, 1 cup sugar, 1 egg, 1 small teaspoon ginger, a little butter. Pour this in pie plate lined with nice crust; to give a flaky appearance sprinkle over top a little sugar and cinnamon. Bake very slowly, do not let pie boil while in oven.

Apple Pie.—Grease pie plates and line them with paste, fill with sliced apples, sprinkling sugar through them, little nutmeg, or little cinnamon, butter size of walnut, cut in bits; use in all 1 cup of sugar; use tart spicy apples. Cover with apple crust and bake, not too fast.

CANNED FRUIT.

Canned Pears.—Select fine ripe pears (Bartlett's are best), handle carefully while paring, cut in halves, taking out core smoothly, drop each piece in cold water to prevent discoloring. In a porcelain kettle make a rich syrup of granulated sugar and water; when cooked divide the syrup, leaving in kettle enough for 2 or 3 cans. Put in pears enough for same, cook until transparent, then can quickly as possible. Peaches and plums canned same way, only these should not be dropped in water while preparing.

Quinces.—Pare, quarter and core, dropping in water to prevent discoloring while waiting (save parings and cores to make quince jelly). Steam quinces until tender, then cook them in a rich syrup made of granulated sugar and water, and can at once. Half or {2/3} sweet apples (to ½ or {1/3} quinces), are quite as good, if not better.

Cherries should be pitted and cooked in sugar to sweeten very sweet, no water.

Strawberries.—Sprinkle nearly 1 bowl granulated sugar to 1 bowl berries; let stand until juice is drawn out, pour into porcelain kettle, let cook a little, then put in berries and cook well, but not too long, take berries out with skimmer; let the juice cook until thick, then replace berries and cook together, and can at once.

Grapes.—Pulp the grapes, putting skins into one porcelain kettle, and pulps into another, until all are pulped; cover skins with water and boil until tender, then add pulps, which have been cooked and rubbed through a sieve to take out the seeds; add sugar until very sweet, cook down and can.

Currant Jelly.—Mrs. H.—Heat the currants thoroughly in a kettle, press the juice from them in jelly bag. To each bowl of juice allow 1 bowl of white sugar. Measure juice and sugar, keeping them separate, place the sugar in dishes in the oven, let it get hot. Stir occasionally. Boil the juice 20 minutes, add hot sugar, let come to a boil; dip jelly moulds in hot water and fill with the jelly; when cold paste paper over them. A little raspberry juice added to the currant juice improves the flavor.

Apple Jelly.—Cut up apples in quarters, take out the cores, do not pare them, put in kettle and cover with cold water, let cook until perfectly soft (stir very little). Strain this with the water they are cooked in through jelly bag; strain three times to make clear. To 1 bowl of juice add 1 bowl of sugar, boil until it jellies (try a little in a cup), skim well, put in cups or bowls and seal up. Use good, spicy, juicy, sour apples. Crab apples used in the same way.

CANDY.

Molasses Candy.—1 cup molasses (New Orleans is best), ½ cup white sugar, butter as large as a cherry, 1 spoon vinegar. Boil until it breaks crisp in water; just before taking from the fire add ¼ teaspoon soda.

Kisses.—Mrs. H. H.—Whites of 2 eggs beaten to a stiff froth, 1 cup powdered sugar, beat this together 15 minutes, drop in teaspoonfuls on brown paper, put on dripping pan turned bottom side up in the oven; bake until a crust forms on them.

Cream Candy.—Miss C. W.—1 bowl white sugar, 2 table-spoons vinegar, 1 teaspoon cream tartar, 1 tumbler water; put in vanilla just as it is done. Boil until it crisps in water. Pull it when it is cool, until white and porous, and cut into pieces.

Peanut Candy.—Mrs. H.—2 cups molasses, 1 cup sugar, 1 cup water, ½ cup vinegar (a small one), butter size of an egg. Boil until brittle, then stir in the peanuts (take the skins off first), and pour out on greased plate. Can use English walnut or hickory nut meats.

Cream for French Candies (Without Cooking).—Roll and sift 3 lbs. confectioners' XXX powdered sugar (get it at the confectioner's). Put the whites of 2 eggs in a tumbler, and mark with the thumb the amount; pour this in a dish and add the same measure of cold water, and a scant tablespoon of vanilla (or any flavoring you like). Stir these well together; then add sugar slowly, stirring all well together with a silver spoon. It sometimes takes more or less sugar; make it stiff enough to mold into shape with the fingers; roll this with the hands on the moulding board until smooth, and then with the hands shape into small balls for chocolate creams, or into squares and put English walnut meats on them, or roll grated cocoanut into it, or chop figs and mix with it, or open dates and fill them with some of the cream, or cover almond meats with it, then roll them in granulated sugar. For the chocolate creams make with the fingers little cone shaped balls, place on greased plate to harden (over night), or make them in the morning and leave them until afternoon. Melt some chocolate (confectioners' is the best), in a basin, set in another basin of boiling water; when melted and the creams are hard enough to handle, take one at a time on a fork and drop in the melted chocolate; roll it until well covered, then slip from the fork upon waxed paper, (or greased plates), and set away to harden.

Chocolate Caramels.—1½ cups sugar, 1 cup molasses, ½ cup sweet milk, ½ cake bakers' chocolate scraped fine, ¼ teaspoon soda dissolved in milk, 2 teaspoons pulverized gum arabic, piece of butter half size of an egg; boil without stirring until it breaks crisp in water, pour out quarter of an inch thick in greased tins; cut in squares with a knife when it gets a little cool. ½ of this recipe makes one square tin full.

Pop Corn Balls.—When making molasses candy, leave a little in the kettle, and pour in some corn nicely popped; stir quickly and make into balls by taking a spoonful at a time, forming with the hands.

Pop Corn Sugared.—1 cup sugar (white), hot water enough to cover it; let boil until it is crisp when dropped in water, then stir quickly into it (with kettle remaining on the stove), nicely popped corn; stir until each kernel is coated with sugar and separate.

SUGGESTIONS.

Breakfast.—For a 1st course, fresh fruits or melons in their season are best; in place of these, or for variety, oatmeal, fine hominy, rice, or mush served in saucers with cream (and sugar if desired) are excellent; and either of these fried a nice brown, to be eaten with syrup, make a nice after dish for breakfast, same as griddle cakes. 2nd course—coffee, chocolate, or cocoa, white, graham, or corn bread, rolls, muffins (white or graham), breakfast cakes, lunch biscuits, popovers, sally lunns, german (or other) toast; beef, lamb, veal, or tenderloin steak, lamb chops, boiled ham (with eggs), fresh fish fried, boiled mackerel, codfish picked up in cream, codfish balls, breakfast fast dish of fish, ham cakes, escaloped eggs, omelet, fried oysters; potatoes baked, fried, cream potatoes, (whole or chopped), potato puff, baked or fried apples.

Dinner.—1st course—soup, crackers, bread; 2nd course—fish boiled, baked, fried, or broiled; 3rd course—for meats

—roast lamb, leg of mutton, roast beef, veal, venison, spare rib, turkey or chicken, chicken fricassee, chicken pot pie, chicken (or other meat) pie, lamb cooked with tomatoes, escaloped oysters (with the roast turkey). Vegetables—potatoes baked, mashed, cream potatoes, potato puff, boiled or baked onions, cabbage (cooked or cold cut cabbage), with or without salad dressing, tomatoes (stewed, baked or raw), corn (in various ways), peas, beans, beets, cauliflower, squash baked or steamed, sweet potatoes, vegetable oysters, asparagus, parsnips, (sliced or in patties), cucumbers, lettuce, salads, pickles, jellies, stewed cranberries; bread—white and brown, rolls, raised biscuits, graham muffins, Johnnie cake, corn bread; for dessert—cheese, pies, puddings, fritters, baked quinces or apples served with sugar and cream, short cakes (berry or other fruit), custards, creams, ices, canned or fresh fruits, cakes, candies, nuts, raisins. If coffee, tea, or chocolate were served with the dinner proper, coffee may be served as a last course in after dinner coffee cups.

Supper or Lunch.—Fish turbot, breakfast dish of fish, small fresh fried, oysters escaloped, fried or raw, oyster omelet, cream oysters on toast, codfish cooked in cream, chicken fried, broiled, on toast, or chicken croquettes, beef rissolves, beef or veal loaf, potted beef, egg on toast, omelet, potato souffle (or puff), Saratoga potatoes, potato croquettes, chopped cream potatoes, sweet potatoes, sliced tomatoes, graham bread, white bread, raised biscuits, soda (or baking powder) biscuits, rolls, graham or other muffins, popovers, waffles, lunch biscuits, toast (of white or graham bread), milk toast, tea, coffee, or chocolate.

At a September breakfast a vase of nasturtiums brightened the whole table; nutmeg melon eaten with either salt or sugar, and beautiful clusters of grapes made the 1st course; and for the 2nd, we had chicken on toast, fried oysters, potato puff, rice croquettes, omelet, sliced tomatoes, rolls, graham muffins, white bread, coffee, and chocolate.

At Mrs. H.'s Dinner for 12—Flowers, dishes of jelly, pickles, and celery were prettily arranged on the table; knives, forks, and teaspoons sufficient for the different courses were laid at each plate, with napkin (in which was rolled a square piece of bread), butter (on tiny butter plate), and glass of ice water. Each plate was also served with raw oysters, and ½ lemon, before dinner was announced; square crackers were passed with this course. For the 2nd course—tomato soup and the squares of bread which were in the napkins at first. 3rd course—roast turkey, carved by host, and gravy, mashed potatoes, squash, parsnip patties, rice croquettes, jelly, pickles, and rolls, were passed by waitress; when this course was finished, the table was cleared and brushed, for the 4th course—ice cream with cherries frozen in, Minnehaha cake, and peach preserves. Table was cleared again, then coffee and the finger bowls were brought on.

At a Gentleman's Dinner Party—The table was laid as above, except that for decoration, there was a centrepiece of flowers and fruits, also a triangle of flowers at each corner of table, a hand painted card at each plate, with name of gentleman assigned to that place; also in place of bread in napkin, there were bread-sticks at each plate; 2nd course—baked whitefish with fish sauce; 3rd course—roast duck with olive or lemon sauce, vermicelli potatoes, roasted onions, rolls, and graham bread; 4th course—chocolate, quail on toast, macaroni cooked with cheese, corn pudding; 5th course—lobster salad and thin slices of bread and butter; 6th course—wafers and cheese; 7th course—steamed fruit pudding, ice cream, fig layer cake, fruits, nuts, raisins, candied fruits, coffee in after dinner coffee cups.

Mrs. B.'s Lunch for 10 Ladies—Was a very pretty affair, flowers in centre of table, dish of jelly at one side, crackers at the other, napkins, knives, forks, and teaspoons at each place, with pats of butter on tiny butter plates, and pretty glasses filled with ice water; also bouillon already served in cup and saucer on each plate, and beside the plate a tiny bouquet of flowers, with a card on which was daintily written the name of the guest assigned to the place; 2nd course—fish turbot, brown bread, muffins, olives, and Saratoga potatoes, each passed around; this course being removed, the 3rd consisted of lettuce and tomato salad, white bread cut thin and spread with butter; and the 4th and last course was of Bavarian cream, and lemon jelly cut in squares (each in a handsome glass dish), with baskets of angel food and fruit cake; then coffee was served and finger bowls set on.

At Another Lunch.—Table set as at Mrs. B.'s, except in place of small bouquets, each card was prettily decorated with etching including the name of guest. 1st course—fried oysters on platter garnished with celery leaves, and slices of lemon (the last to be served with oysters), crackers, celery, and olives; 2nd course—chicken on toast, vermicelli, potatoes, New Bedford rolls, small cucumber pickles, potted beef, crab apple jelly; 3rd course—shrimp or salmon salad served on white curled cabbage leaves, a little smaller than the tea or fruit plates on which they were placed, very thin slices of bread and butter were passed with this. Table was cleared and brushed, then moulds of peach pudding, and of pine-apple ice, with handsome dishes of English walnut, and coffee cake with some kind of preserves; after this coffee and chocolate, then a finger bowl with geranium leaves in it was placed for each couple.

At Mrs. L.'s Informal Tea.—The table was spread as at Mrs. B.'s lunch. In front of the host was a platter of raw oysters, garnished with slices of lemon; in a pretty glass dish there was cabbage salad with olives in, vinegar in glass pitchers, pickled crab apples, currant jelly, and a platter of crackers; for 2nd course—tender broiled chicken, the platter garnished with parsley, took the place of the oysters; cream potatoes, warm biscuits, tea and coffee finished this course. The table was cleared and brushed, then charlotte russe with lady fingers, served on tea plates, peach preserves in saucers, patticakes, and lemon jelly cake.

At Another Tea Drinking.—The table was spread much as before, in each napkin was a roll, butter and water already served, and on the table were brown bread, white bread, basket of cake (not served till last course), olives, pickled peaches, cold ham, chicken croquettes (or was it brook trout?) on a daintily garnished platter at one end of the table, at the other, potato croquettes (or else Saratoga potatoes), tea or coffee as preferred. Table was cleared and sweet breads took the place of chicken (or trout?), and tomato salad, that of potatoes; the brown bread was delicious with these. After table was cleared and brushed, we had strawberries (or pine-apple?) at one end, ice cream at the other, and with this the cake was served. We had plates for the ice cream, and saucers for the berries.

A Less Pretentious Tea.—To be served with only two courses, one could have tea (or coffee), graham (or white) bread, muffins (or sally lunns), oysters escaloped (or fried, or oyster patties), or chicken on toast (or fried chicken), rice croquettes (or corn oysters), potato puff (or an omelet), peach pickles, and olives (or cucumber pickles); table cleared and brushed, then preserves, canned or fresh fruit, and one or two kinds of cake.

An Every Day Tea or Supper.—May begin with hominy (oat meal, cracked wheat, or mush), eaten with cream, followed with baked potatoes (or potato puff); in place of these or with them, cold roast meats, potted beef, veal or beef loaf, or for variety, ham cakes, escaloped eggs, etc., graham bread, wheat muffins (or raised baking powder biscuits), canned fruit in winter (fresh ripe fruit in summer). Julia's lemon cake (cookies, or fried cake), tea, coffee, chocolate, or milk, as preferred. Simple codfish cooked in cream, baked potatoes, baking powder biscuits, honey, soft ginger cake, make a good supper.

RECIPES FOR THE DAIRY.

BUTTER.

BUTTER MAKING—A "New Departure," or New Discovery in Setting Milk, Claimed to be of Swedish Origin but really a Yankee Invention.—The Rev. Dr. Prime published in the New York *Observer* what he understood to be, and consequently gave as, a recent Swedish discovery. He said:

"A discovery has recently been made by M. Swartz, which promises to be most important to the dairy farmer. In the ordinary method of cream-setting, the milk is placed in very shallow pans, and stands for 24 hours or more while the cream is rising. The milk, during that time usually turns sour, and the cream becomes contaminated with free fatty-acids, with partially decomposed albuminous bodies, and with other products injurious to the flavor or keeping qualities of the butter. In Swartz's plan the milk, as soon as it reaches the dairy, is placed in deep metal pails standing in a vessel full of ice. Not only does the low temperature reduce the process of change to a minimum, but, quite unexpectedly, it also greatly facilitates the rising of the cream; so that in pails having sixteen inches depth of milk, the cream is nearly all obtained in twelve hours. The butter churned from the product is not only pure in flavor, but has remarkable keeping qualities. The plan is spreading rapidly."

To the above I give the following explanation by a gentleman signing himself Ivenans, which shows that if the discovery was not actually made by Mr. Starr, of Litchfield, Conn., it had been used by him three or four years, at least, before it was made public in Sweden. This writer and traveller says:

"I find the above in a newspaper of Paris, France, showing that the discovery is considered to be something new and wonderful. Some three or four years ago I wrote a notice, which was published in the New York *Observer*, of the splendid dairy of my friend, Mr. Starr, at Litchfield, Connecticut. In that notice I stated distinctly, with great particularity, Mr. Starr's method of *setting* his milk for cream; not in shallow pans, as the women of old were wont to do, but in narrow vessels about twenty inches deep, standing in ice cold water, or a very cold place. This is the identical process now boasted of as the new discovery in Sweden, and spreading rapidly. It is a Yankee invention, and how long it has been in use I do not know. But they are smart in Sweden, as I know from observation, and will make use of every good invention or valuable discovery in butter making or anything else."

Remarks.—There are those who claim that to heat the milk after straining it into pans, by setting upon the stove until the film upon the top of the milk begins to wrinkle will cause the cream to rise quicker and better than without the scalding, which experience will soon determine; but I am well satisfied that those who are situated so they can have cold spring water to run through their milk house, by which they can reduce the temperature of the milk quickly; or those who are near large streams of water or lakes, so that they can cheaply supply themselves with ice for the same purpose, will find the cooling process not only the best but a very necessary plan to pursue, if they wish to make the most out of their opportunities.

Butter—Gilt-Edged:—How to Make.—At an exhibition of the Chester County Agricultural Society, Pa., Isaac Acker received the first prize on butter making, managing as follows:

He feeds 10 qts. of corn meal and bran (mixed half and half, no doubt) to each cow per day, with hay, but does not think that corn fodder makes good butter. The temperature of the cream at churning was fifty-seven degrees, and it was churned from 12 to 20 minutes. Use 6 ozs. of salt and 3 ozs. of white sugar to 20 lbs. of butter.

Butter Churning, or "Getting on Time."—There are many people who complain that "butter will not come." To such I would say that "Aunt Ellen," of Oxford, Pa., has found a remedy, given through the *Blade*. She says:

"I have had a similar experience, and found the remedy by appealing to my sisters through the press. There came many replies, but I tried the advice of but one, and have never since had any difficulty about getting the butter on time. My adviser said never to let the milk stand longer than 24 hours, or 36 at most, before skimming. That plan I have followed letting the night's milk stand 36 hours, and the morning's milk 24 hours. Most butter makers claim that the quality of the butter is better than if the milk is allowed to stand a longer time. In cold weather, I think the temperature of the cream, when churned, will bear to be higher than in summer. Sixty-six degrees is about right."

Butter Coloring, From Ten Years' Experience.—Upon the subject of artificial coloring for butter, I will give you the experience of Mrs. "S. E. H.," of Circleville, O., also given in the *Blade*. Her remarks are as follows:

"In answer to an inquiry how to color butter, I would say that I have used *annatto* for ten years, and find that it gives entire satisfaction. I buy it by the ounce. Take a lump about the size of a hickory nut and dissolve it in a cup of water. This will do several churnings. When you have the cream in the churn, stir up and add one tablespoonful, which will color 5 lbs. I expect to catch a "blowing up" from some of the sisters, but we cannot make yellow butter in the winter without it. If you make good, sweet butter the *annatto* will not injure, but improves the taste, for if an article doesn't look good and appetizing, what is it good for? I am a farmer's wife, but I have good bread and butter the year around, and sell an average of 10 lbs. of butter a week, receiving the highest market price."

Remarks.—I can hardly understand why there should be any objection to the use of *annatto*. I know that my mother used it for coloring cheese when, from any cause, she thought the cheese would look better with it. Webster says it is "a species of red, or yellowish-red dyeing material, prepared from the seeds of a tree (Bixa orellana) belonging to the tropical regions of America. It is used for coloring cheese and butter." So whatever fault there is in its use must be charged to Webster. But I agree fully with the Circleville lady's opinion, that the *annatto* will not injure the butter nor those who use it, although for home consumption it need not be colored, but for what is to be sold, will sell better, *i. e.*, it will bring a higher price, and will give better satisfaction to the consumer, if it is properly colored; then, as it will not injure, why should it not be used, especially in winter? But I would recommend those who do color their butter, to use the *annatto*, preparing it themselves, as above, for you know not what the preparations may contain which are offered for sale, for this purpose, the *annatto* alone is all that is necessary; and in winter, I do think it is necessary.

But there may be some persons who will prefer the following plan of coloring with carrots, such can take their choice. I take the item from the *Germantown Telegraph*, in which it seems to have first been published, quite a number of years ago, by which means the *Telegraph* thinks the "Farmer's Wife" obtained it, reporting, or republishing, through the *Western Rural*, from which the *Telegraph* takes it up again, and endorses, and tells how it came by it, at the first. With this explanation, and the addition of my own endorsement, I will let the *Telegraph* tell its own story. Have no fears in trying either the annatto or the carrots, as your convenience of obtaining the one or the other may demand. It says under the head of coloring butter:

We notice in the *Western Rural* a brief communication from a "Farmer's Wife," describing her mode of coloring butter, which does not at all injure, but adds to the flavor of the butter. It is simply using the juice of the orange carrot, as follows: "For about 3 gals. of cream take 6 or more good sized carrots, wash them and grate them on a coarse grater; when grated pour on boiling water, which will extract the color. Put the cream into the churn; strain the carrot juice through coarse muslin into the cream, and churn. Should the cream be warm enough, the carrot juice must be cool before using. Aside from the coloring, the carrots give the butter a sweet taste, similar to grass butter."

This is the statement, and we wish to add our endorsement to its correctness in every respect. Some 15 years ago a neighbor asked us to buy her butter, and after trying it, and finding it unusually good, we engaged all she had to spare. Although it was in the midst of winter when we commenced to take it, we found it not only to be equal to grass butter, but to be similar to it in taste, and we decided that it was equally as delicious. Being unable to discover the secret of its excellence, we called upon our neighbor for information. She smiled and said it was the way she always made the butter in the winter, as did her mother and grandmother; and then went to describe the way it was done, which was exactly in accordance with that of the "Farmer's Wife" aforesaid—that is to say, grated orange carrot, boiling water, straining it out, pouring into the churn, etc. We published the recipe at the time, which was republished in a number of other papers, and it is quite probable that this was the source whence the "Farmer's Wife" derived her information.

Now this recipe is easy enough for anyone to adopt. It is as plain as to make a cup of tea, and is equal to any so-called "gilt-edged butter" that was ever made in the absence of pasturage. From this it will be seen that there is no excuse for making the poor butter in winter that we see so much of. The only expense is a few carrots at a churning, and a few minutes of labor, which are overcome a half score of times by the increased price of the butter sold.

Butter Making, Good in Winter.—There are a good many persons who think they can not make good butter in winter because the yellow color of summer is not imparted to that made in the winter, and hence that it is not of so good a quality. But, to such persons, the above will enable them to give their butter a proper color, and the following from an old butter maker, S. F. Adams, will, no doubt, be found very interesting, because practical, and certainly satisfactory. To

the inquiry of the editor of the *Farmer*, he makes the following full and very instructive answer:

"At your request, I herewith give you our method of making butter in winter. We keep 10 cows, part of them all natives, and part are Jerseys. The feed is nice, early-cut hay, given twice a day, regularly; I water them immediately after eating, when they usually drink. Feed cornmeal, wheat bran, 1 qt. each, scalded, adding 2 qts. of sweet skimmed milk, to each cow, twice a day. Bed freely with sawdust and leaves. Give them all the salt they wish. We always milk before feeding them, and always clean the stable before sitting down to milk. We strain the milk through a cloth, then heat it to a temperature of 130°, then set in small pans, in which it never stands over 36 hours, before skimming. The cream is kept in as cool a place as possible, without freezing. The room we keep the milk in has an even temperature by using a soap-stone stove. The milk is set on circular racks attached to upright posts, 6 inches by 6, and 8 feet long, slats nailed across 8 inches apart; a pivot in each post allows the racks to swing around convenient for skimming or removing the milk. The racks made thus will hold 64 pans. I skim twice a day, and churn twice a week; the cream stands 12 hours after skimming, to ripen, before we churn it. It is warmed by sweet, skimmed milk in the churn, temperature 62°. The butter is washed in 3 waters, then weighed, allowing ½ oz. of salt to a pound of butter. I use the best salt I can find in Boston. I use no tray, do not like them, but use a butter-box with tight cover, instead. I want my butter, after it has been salted, kept air-tight till lumped, then sent air-tight to market. The hand is not allowed to touch it at all. We use a butter-square, pound lumps, stamped, and sent twice a week to Boston. Farmers who make a business of selling milk, do it the year round. Why should not butter makers do the same? Some may say, "I can find no market for it," but if they will make a nice article, they can find a market. Why is it that seven-eighths of the butter that is sent to market sells for only about 30 cents, when, if made as it ought to be, it would bring about 40 cents, or more? Butter making, like other work, is a trade, and how many dairymen have yet to learn the trade? If a few men and a few women can make good butter and get a good price for it, why cannot a large number do it, other things being equal? I hear some one say, 'It is too hard work for the women; let the men do it.' A man can make as good butter as a woman if he tries, and he should do it when there is a large amount to be made."

Remarks.—If dairymen or farmers who wish to make good butter in winter will follow the instructions of this old butter maker, I have not the slightest doubt but what they will succeed; but I wish to call especial attention to the importance of sending to market twice a week, for it matters not what pains may be taken to keep the butter from becoming rancid, it never tastes so fresh and nice as when just made. I speak, as it were, from a double experience upon this point, *i. e.*, by dealing in it and in eating it. I say, therefore, both in summer and winter, what butter is to be sold, send it to the market as soon as made, if you wish to obtain the best prices.

Butter Not to be Gathered in the Churn, nor Washed in Water, but Brine.—At a meeting of the Ohio Dairyman's Association, Mr. Hawley, of Syracuse, N. Y., said: "Butter should not be gathered in a churn, nor should it be washed with water, but with brine. If the butter is gathered in the churn it is spoiled by breaking and tearing down the grain and making it salvy, whereas it should stand in the grain like particles of steel. Brine will dissolve or cut the skins of the pellicles, and they will then be washed out with the butter-milk, instead of being left to putrify and spoil the aroma of the butter.

Butter Not to be Worked Too Fast Nor Too Much.—The *Journal of Chemistry*, in relation to the working of butter, says: "Do not work butter too much nor too fast. Work slowly until all salt is thoroughly and evenly absorbed. Otherwise the butter will not be of uniform color. Working it too fast will destroy the grain, and the butter becomes salvy and lard-like in the texture. Let it stand or put it away in the tray for 24 hours. Then work it enough to remove all the buttermilk or surplus brine, so that the butter may become dry or like a piece of cheese. Mould into rolls and set them away for 24 hours, or until they become hard and firm. The cloth should now be put on, so as to cover one end, while the other is left open for the stamp. The cloth should be cut in pieces of exact size and dipped in brine, and the butter rolled when the cloth is dripping wet. Butter should never come in contact with the bare hand. When in bulk, it can be easily handled with a ladle and flat paddle."

To Make Butter Firm and Solid in Hot Weather.—An exchange gives information concerning a method in practice among the best English butter-makers for rendering butter firm and solid during hot weather: "Carbonate of soda, 1 teaspoonful, powdered alum, 1 teaspoonful, are mixed, and at the time of churning put into such a quantity of cream as will make about 20 lbs. of butter. The effect of this powder is to cause the butter to become firm, and solid and sweet flavored. Its action is upon the cream, and passes off with the buttermilk. The ingredients of the powder should not be mixed until the time when it is used."—*Harper's Weekly*.

Prize Butter, First and Second—How They Were Made.—Charles S. Sargent, of Brookline, who took the first prize at a recent fair at Greenfield, Conn., reported his plan as follows: "The accompanying sample of butter is made from a small herd of registered Jersey cows. The cows are fed 1 qt. Indian meal, 2 qts. shorts, ¼ bus. carrots, and about 10 lbs. English hay each per day. The milk, which is set in shallow pans, stands 24 hours before being skimmed, the temperature of the milk being as near 62° Fahrenheit as it is possible to keep it. In working this butter two rules are observed: 1. No water is ever allowed to touch it; 2. The hands of the operators are never allowed to touch it, wooden paddles being used to work it with. It is salted with the best quality of table salt, and is not colored. It sells at the present time at $1 per lb." The Farmington (Ct.) Creamery Company, which took the second premium, explains as follows: "This butter was made from the milk of four imported Guernsey cows, which were fed on hay, sweet corn stalks, and 2 or 3 qts. daily of bran. It was made at the Farmington Creamery, and set 24 hours in water in deep coolers. The cream stood 24 hours before churning. The butter was salted at the rate of ¾ oz. of salt to the pound."

Remarks.—You see the importance of not washing the butter with water, but with brine; and also that it must not be handled with the hands, but paddles or spatulas only.

Butter to Keep During Hot Weather.—Butter to be kept into hot weather ought to be packed in jars, pressed in firmly, and a pickle made by using common salt, 2 lbs.; saltpetre, ½ oz.; lump sugar, 2 ozs. to each qt. of hot water needed. Pour the hot water upon the salt, etc., and stir until dissolved, and let stand till cold; then pour over the butter, at least two inches in depth; it will keep it nicely. New ash or oak firkins will do, but are not so good as stone jars.

II. A new flower-pot, washed clean, and wrapped with 2 or 3 thicknesses of wet cloth, is said, by turning it over a dish of butter; to keep it as hard as if placed in an ice-box. The same with a dish of milk. The cloth must be kept wet.

Creamery, the Management and Advantage of in Butter-Making.—The management of a small creamery differs in no respect from that of a well-appointed private dairy. The only respect in which a creamery is different from a dairy is that it does the work of several dairies, and in doing this work it greatly reduces the cost of making the butter. If we follow up the season's work of a small creamery of, let us say, 200 cows, we shall find that one person, with the partial help of another, will be able to do all the work for this number of cows, which would probably be otherwise done in 20 separate dairies. The advantage is obvious. In place of 20 sets of pans, the use of 20 milk-rooms, 20 churns, and 20 pairs of hands in cleansing milk-pans and other utensils, there is but one, and the labor and time of 18 or 19 persons are saved. Besides, the product is all alike, of even quality, packed similarly, and marketed through one agent; so that all through the work there is saving of labor and economy of expense. This, of course, reduces the cost of making the butter to the least possible amount, and at the same time raises the income to the highest possible point. Instead of all the butter from these 20 small dairies being sold at a village grocery, and put up in the old-fashioned rolls, and being disposed of in trade, as was formerly the custom, at a very low price, the aggregate product is sent off at short intervals, and while fresh, in refrigerator cars, and, along with the product of other creameries, packed in a similar manner in the same kind of packages, and reaches the market in such a condition as to realize the highest price. This is an advantage which is equal in value to the saving of the cost, so that the patron of a creamery enjoys the double benefit of the lessened cost and the increased value. If dairymen lived before, it is not surprising that they can make money now, under these considerable advantages.—*N. Y. Times*.

Milking Shed—Care and Kind of Milk Pails, etc.—For summer dairying, an open shed in which the cows can be tied, and given a few mouthfuls of fresh green fodder after they are milked, and which should be cleanly scraped after each milking, is a very great advantage, which can also be utilized in winter for sheep or other stock. Then the milk can be drawn free from dust and dirt "flicked" by the switching of the cows' tails, as will happen with cows loose in a barn-yard. Moreover, the milk-pails should be of tin and not of wood. An old wooden milk-pail cannot be made clean by dint of any amount of scouring. Nor should the milk-pail be used for any other purpose; but, as soon as the milk is strained, the pail should be washed with cold water, scalded and turned bottom upward upon a bench or on a stand.

MECHANICAL.

1. BRASS, TO CLEAN.—Nitric acid, 1 part; sulphuric acid ½ part; (half as much) in a stone jar. DIRECTIONS.—"Have ready a pail of fresh water, and a box of sawdust. Dip into the acid (or swab on), then into the water (or swab on), and rub with the sawdust. A brilliant color is immediate—if things are greasy, first dip into a strong solution of potash or soda (or swab on), to cut the grease. It is used at the U. S. arsenals, and considered the best in the world.

2. How to Clean Brass, Copper, Tin, etc.—The following mixture will be found the best thing for cleaning brass, copper, tin, stair-rods, taps, and even windows, and it is quite worth the trouble of making. Whiting, pulverized rotten stone, and soft soap, each 1 lb.; vinegar, 1 cup, and as much water as makes it a thick paste; spirits of turpentine ½ pint. DIRECTIONS.—Let it boil fully 10 minutes, and when nearly cold, add the turpentine, and store in wide-mouthed pickle jars of glass or stoneware. When to be used, put a very little on a rag, and rub the article until it becomes bright. Polish with a soft leather dipped in powdered bath-brick. Unless bath-brick is used, it soon tarnishes.

3. Brass, the Dirtiest, to Clean Very Quickly.—Finely rubbed bichromate of potassa, mixed with twice its bulk of sulphuric acid, and an equal quantity of water, will clean the dirtiest brass very quickly.

4. Another.—Clean brass with a paste made of oxalic acid, 1 oz.; rotton stone, 6 oz.; and enough whale oil and spirits of turpentine, in equal quantities to mix.

5. Stained Brass, Silver, etc., to Clean.—Whiting wet with aqua ammonia will clean stains from brass or silver, and is excellent for polishing door knobs of brass, or silver, faucets, fenders, rods, etc.

Remarks.—All the foregoing are good, so take your choice of such as you can obtain the handiest.

1. Steam Pipes to Cover, to prevent loss of Heat.—Coal ashes 4 parts (qts. or bushels, no matter what the measure), sifted through a riddle 4 meshes to the inch; calcined plaster (of Paris), wheat flour, and fine dry clay, each 1 part (1 measure of each of these is used to 4 of ashes).

DIRECTIONS.—Mix ashes and fine clay together (with water), to the thickness of thin mortar, in a mortar-trough; mix with calcined plaster and flour together dry, and add to the ashes and clay mortar, as you want to use is; put it on the pipes in two coats, according to the size of the pipe. For a 6 inch pipe, 1st coat 1¼ inches thick, the 2nd coat about ½ inch. Afterwards finish with a hard finish, same as for a room. About 2½ hours will be required to set, on a hot pipe.

2. Steam Pipes, Protection, Efficient and Cheap.—A mechanic reports through the *Detroit Post and Tribune*, a little different from the above, you will see, using hair and leaving out the flour. He says: "One hundred lbs. of clay are mixed with water, and 100 lbs. of fine ashes added and well kneaded, then mix with one lb. of hair. This mixture is well incorporated and allowed to stand until needed to use. Just before using, 10 lbs. of ground plaster of Paris are mixed with it. The mixture, of course, soon sets, and cannot be kept over 12 hours after the plaster is added."

Remarks.—The clay should, no doubt, be dry, then made fine, else allowance made for the moisture in it; and this latter makes no distinction as to ashes, whether wood or coal. I think cleanly sifted coal ashes preferable. The plaster of Paris, it will be seen, too, is not calcined (dried in a hot kettle). If so done, it sets quicker, which is its only advantage, and it may be an advantage, sometimes, not to have it set too quick. The hair, I think, a decided advantage, but it should be thoroughly whipped. If good for pipes, it must be equally good for boilers.

"Zincing Iron" Without a Battery.—The following is an excellent and cheap method for preventing iron articles, exposed to the air, from rust. They are to be first cleaned by placing them in open wooden vessels, in water, containing ¾ to 1 per cent. ("¾ to 1 per cent.," means ¾ to 1 pt., or part, to 100 pts. or parts, in the "wooden vessel" of water), of common sulphuric acid, and allow them to remain in it until the surface appears clean (bright), or may be rendered so by scouring with a rag or wet sand. [This may be done in a revolving cylinder by machinery.] According to the amount of acid, they may require to remain in from 6 to 24 hours. [Then, if time is of any account, use more acid up to 5 or 6 per cent.] Fresh acid must be added according to the extent of use, and the amount of liquid; and when this is saturated with the sulphate of iron (the rust of iron from the articles being cleaned) it must be renewed. After removal from this bath ("wooden vessel") the articles are rinsed in fresh water and scoured until they acquire a clean metallic surface (become "bright," as above remarked); and then they are to be placed in water, in which a little slacked lime has been stirred, and kept there until the next afternoon. When thus freed from rust, they are to be coated with a thin film of zinc, while cold,

by means of chloride (more commonly called muriate) of zinc, which is made by filling three-fourths full a glazed earthen vessel with muriatic acid, then add zinc clippings (little pieces of zinc) until effervescence ceases.

[Effervescence is shown by the rising of bubbles; when these stop rising, it has dissolved all the zinc it will cut, is saturated, as chemists say, and is then called muriate of zinc, and is the same as tinners use upon their seams before applying solder.]

"This liquid (muriate of zinc) is now to be turned off from the undissolved zinc and preserved in glass vessels.

"For use, it is poured into a sheet zinc vessel, of suitable size and shape for the objects or articles to be zinced, and about 1-30th part of its weight of finely-powdered sal ammoniac is to be added. The articles are to be immersed in this ("cold," as above mentioned), and a scum of fine bubbles forming on their surface in from one to two minutes, indicates the completion of this part of the operation. The articles are next drained so the excess may flow back into the vessel. The iron articles are thus coated with a thin film of zinc, and are to be placed on clean sheet-iron plates, heated from beneath, until perfectly dry, and then dipped piece by piece, with tongs, or other means, into very hot, though not glowing molten zinc, for a short time, until they acquire the temperature of the melted zinc, into which they are being dipped. They are then removed and beaten, or tapped lightly, to cause any excess of zinc to fall off, while yet hot."

Nickel Plating, Without Battery.—"To a dilute solution of the chloride of zinc—5 to 10 per cent.—(5 to 10 lbs. to 100 lbs. of water)—enough sulphate of nickel is to be added to give the solution a decidedly green color, and it is then to be heated to boiling in a porcelain vessel. The heating makes the solution cloudy, but does not injure it. The articles to be nickel plated are to be carefully cleaned of rust or grease (see 1st receipt above for cleaning brass), and then suspended in the solution from 30 to 60 minutes, the bath being kept at a boiling temperature. When the articles are observed to be uniformly coated, they may be removed, washed in water, in which a little chalk is suspended, dried, and finally polished with chalk, or other suitable material."

Remarks.—This discovery is credited to a Prof. Slatba, and will be found valuable. Precipitated chalk is very fine, but rotten stone, as in some of the above receipts for polishing brass, may be found preferable. Zincing is done mostly on small cast-iron articles, while this nickel-plating is used on a finer class of goods.

Silver Plating, With a Battery.—1. Dissolve 1 oz. of pure silver (like old coin) in nitric acid, by pouring the acid upon the silver until all is dissolved—perhaps 4 ozs. of acid to cut one of silver—then dissolve salt in soft water until very strong; now pour off this salt water into the acid and silver until all the silver sinks to the bottom, scientists say, until all is "thrown down;" then fill the jar or bottle with soft water, shake up, and let settle; then pour off carefully, and fill again and again, for three times, shaking well each time, or until there is no acid or taste of acid left. This, if carefully done, without waste, gives you 1 oz. of silver in fine powder.

2. In a suitable jar or dish, dissolve cyanide of potassium, 6 ozs. in soft rain water, 2 qts., into which put the silver powder, which will be dissolved therein, and this constitutes the plating solution.

3. In this solution the articles to be plated are to be suspended upon a silver hook. And in this solution must also be suspended a plate (generally in sheet form) or piece of pure silver, with about as much surface as there is surface to the articles to be plated, as it is necessary to keep the strength of the solution up to the standard—the silver, therefore, that is deposited upon the articles being plated, dissolved off of the "plate, sheet, or piece of pure silver," as it is deposited upon the articles—the solution remaining full strength and ready for continued use. Of course the "battery" is connected with this "plating solution."

Remarks.—The battery used is the same as used by telegraphers, who will instruct one how to prepare and "connect" it. All articles to be plated must be freed from grease with a solution of potash or soda, as in the above processes. This is from a friend in Ann Arbor, whom I know to be reliable from over 25 years' acquaintance.

Steel—To Temper Very Hard.—Take water, 2 measures—no matter what size—wheat flour, ½ measure, and 1 of common salt.

DIRECTIONS.—Mix into a paste; heat the steel to be hardened enough to coat with the paste—by immersing it in the composition—after which heat it to a cherry-red and plunge it in cold, soft water. If properly done, the steel will come out with a beautiful white surface, and very hard.

Remarks.—It is said that this is the process by which Stubbs' files are tempered, which are recommended below, for drilling glass.

1. Steel and Iron Machinery—To Keep from Rusting.—Powdered camphor gum, ½ oz.; lard, 1 lb.; a little black lead.

DIRECTIONS.—Dissolve the gum in the lard by heat; remove the scum, stir in just black lead enough to give an iron shade. Rub this over cleaned steel or iron machinery of any kind, and leave on 24 hours; then rub with a soft linen cloth, and it is safe from rust for a long time.

Iron or Steel Varnish—To Prevent Rust.—Rosin, 120 parts (drs., ozs., or lbs.); gum sandarach, 180; gum lac (shellac), 60; spirits of turpentine, 120; and alcohol, 180 parts.

DIRECTIONS.—Pulverize the three first articles and melt together; and gradually (and carefully, to avoid taking fire), add the turpentine, continuing the heat until all are again dissolved (if they harden) in the turpentine; then add the alcohol, and filter through a fine cloth (muslin) or thick filtering paper, bottle and cork for use—*Manufacturer and Builder*.

Remarks.—The straining or filtering indicates its intention for fine articles; without it, it would do for outside railings or ornamentation; and if desired black, for iron balustrades, fence, etc., add a little fine lamp-black, which will adapt it to such work, and look very nicely. See also Black Paint—How to Make for Iron Work.

2. Steel—Rust Upon—To Remove.—Cover the steel for a couple of days with sweet oil; then with finely-powdered unslaked lime (known as "quick" lime), rub the steel until all the rust is removed; re-oil to prevent further rust.—*Indian Domestic Economy*.

3. Another plan is, to place the rusty article in a bowl of kerosene, else to wrap the steel in a cloth well wet with kerosene, and let it remain 24 hours, or more; then scour the rusty spots in brick dust.

Remarks.—If brick dust is used, bath or bristol brick would be best, but the powdered unslacked lime would be better than either, as it has an active power in itself of removing rust, and if time cannot be given, this powdered quick-lime, and the sweet oil or the kerosene, will remove it in a few minutes, by thorough rubbing; so will it with ammonia. Always apply oil, or some of the oily mixtures, at the last, to prevent the rust from deeper penetration.

4. Steel Dinner Knives—Rust to Remove.—Cover the steel with sweet oil, well rubbed in; let them remain 48 hours, and then using unslaked lime, finely powdered, rub the knife till all the rust has disappeared.

Remarks.—I should not like to go without my meals while this process is going on; hence I would let them lie over night only, and risk the job at that.

5. Steel Apparatus, and Fine Instruments—To Preserve Their Polish, by Preventing Rust.—Prof. Olmsford, of Yale College, says: "This is done effectually, by melting slowly together, lard, 6 or 8 oz., and rosin, 1 oz.; and stirring till cool. It can be wiped off nearly clean, if desired, as in a case of knife blades, or it can be thinned with coal oil or benzine. The surface should be bright and dry, when applied, as it does not prevent oxidation (rusting) already commenced."

Remarks.—If any spots of rust, remove first with the sweet oil and piece of quick-lime, as below. And remember there must be no salt in the lard.

Steel, or Iron Buckles, Jewelry, etc.—To Clean.—Take a piece of unslaked lime, free from grit or hard specks, and touch it to sweet oil, then rub them with it, and finish with chamois or buckskin. For ornamental jewelry, see next below.

1. Jewelry, Ornaments, Gold Chains, etc.—To Clean.—Wash in soap suds; rinse in diluted alcohol (half water, half alcohol), and lay in a box of dry sawdust to dry; then rubbing with the sawdust, is a nice way to clean such goods.

2. Gilded, Washed, or Plated Jewelry—To Clean.—Henry M. M. Morison, of Wis., says: "The work of cleansing gilt articles is a delicate task, but they may be cleaned by rubbing them very gently with a soft sponge or brush, dipped in a solution of borax, ½ oz., to water, 1 lb. (a pt. is a lb. the world around); then rinsing in pure water and drying with a soft linen rag."

3. Another.—To clean gilt jewelry, put cyanide of potassium, 1 oz. to boiling water, ½ pt., and when cold, add aqua

ammonia, ½ oz., and alcohol, 1 oz., brush gently the articles with this compound. Rinse and dry with a cloth, chamois, buckskin, or sawdust, as in No. 1 above.

Remarks.—Cyanide of potash is poison, so don't let children drink it nor get it into a sore spot when using it.

4. Silverware—to Keep its Original Lustre.—The proprietor of one of the oldest silverware houses in Philadelphia says: "Housekeepers ruin their silverware by washing it in soapsuds, which destroys the original lustre, and makes it look like pewter. When it needs polishing," he says, "take a piece of soft leather (chamois) and whiting, and rub hard."

Remarks.—When, of course, never use soap in cleaning it, but take the following:

5. Silverware, to Wash.—"Put aqua ammonia, 1 tea-spoonful to very hot water, 1 pt., and wash quickly with a small soft brush, kept for the purpose only, and dry with a clean linen towel; then rub very dry with chamois. Washed in this manner silverware becomes again brilliant, and requires no polishing with any of the powders, or whiting usually employed, and lasts much longer."

Remarks.—Nothing could be more sensible, still the following is also sensible:

6. Silverware, Knives and Forks, Tin, etc., to Brighten after cleaning.—Put the finishing touch to them by rubbing with old, dry newspaper. It is a fine polisher. Some of the receipts are quite domestic, but still they are equally mechanical.

Silvering Powder.—Chloride of silver, 1 dr.; potassa alum, 2 drs.; common salt and cream of tartar, each, 1 oz.

DIRECTIONS.—First dip the article to be silvered into a strong solution of salt in water, then rub with the powder; wash and dry with a soft cloth, and polish with any of the above plans.

Remarks.—Druggists in small places may say there is no "potassa alum," but there is, and also "ammonia alum."

Zinc, to Clean.—Take sulphuric acid, 1 oz.; water 2 ozs.

DIRECTIONS.—Wash quickly with the mixture, rinse immediately with water, wipe dry with a cloth, and polish with whiting; brightens it nearly equal to new.

Soldering German Silver.—To solder German silver, pour out some spirits of salt into an earthen dish, and put a piece of zinc in it. Then scrape the parts clean that are to be soldered, and paint over with the spirits of salt. Next put a piece of pewter solder on the joint and apply the blow-pipe to it. Melt five parts of German silver and four parts of zinc into thin cakes, then powder it for solder.—*Rural New Yorker*.

Remarks.—The phrase, "spirits of salt," is the old name for muriatic acid, as now called; and all the zinc should be put in that the acid will dissolve; then it is called "muriate of zinc," which is what is to be put on. Where he says, "Then scrape the parts clean that are to be soldered, and paint over with the spirits of salt." This "muriate of zinc" is the proper "flux," or solution for all soldering. See Soldering Cast Iron, next below, calling for the "muriatic acid." It should be kept corked and away from children, as it is poisonous—eats or destroys clothing, as well as flesh, hence apply with a swab.

2. Soldering Cast Iron.—A paper called the *Engineer* says that soldering cast iron is generally considered to be very difficult, but it is only a question of thoroughly making bright the surface to be soldered, and using good solder and clean swab, with muriatic acid.

Remarks.—The muriate of zinc is the article to use in this, as in all other solderings.

Glass Globes, to Clean.—If the globes are much stained by smoke, soak them in tolerably hot water with a little washing soda dissolved in it, then put a tea-spoonful of powdered carbonate of ammonia into a pan of lukewarm water, and with a tolerably hard brush wash the globes till the smoke stain disappears; rinse in clean, cold water, and let them drain till dry. They will be quite white and clear.

Remarks.—Aqua ammonia, which is more likely to be in the house, will do as well, but a tea-spoonful of either is not enough for a "pan of water," but only for a pint of water or one quart at most.

1. White Paint, to Clean.—Take a small quantity of fine whiting on a damp piece of flannel; rub gently over the soiled surface and the effect will almost equal the original purity.

Remarks.—See the next receipt for washing off, if needed.

2. Oil-painted Surfaces, to Clean.—Take a piece of soft flannel, put it in warm water, and squeeze it till it feels dry; next dip gently on to some very finely pulverized French chalk, and rub the painted surface with the flannel; the effect will be the removal of all dust, greasy matter, and dirt; the surface is next washed with a clean sponge and water, and dried with a piece of wash-leather. The method does not injure the paint like soap, and produces a very good result.

Remarks.—Wash-leather is split sheep-skin, prepared as chamois, and used for the same purposes, very properly, too, because much cheaper.

Tracing Paper, to Make.—To wet common drawing paper, or any other kind, with benzine, it becomes transparent immediately, and can be placed over a drawing, or picture, to be transferred, by tracing with a pencil, ink, or water-colors, which will not spread nor run upon its surface. This is condensed from the *Engineering and Mining Journal*, and may be relied upon. If the work is not completed before the paper loses its transparency by evaporation of the benzine, you can dampen that part again, to complete it. This is a new discovery, and valuable.

1. Glass, to Break as You Like.—File a little notch in the edge, at the point you wish to break from; then put a suitably shaped red-hot iron upon the notch, and draw, slowly, in the direction you wish. A crack will follow the iron, caused by the heat, if not drawn too fast.

2. Glass, to Drill.—To drill glass, use a file drill, and keep it wet with a mixture of camphene and spirits of turpentine. Heretofore turpentine has been used alone. The camphene helps to give the drill a better bite.—*Scientific American.*

Remarks.—It is claimed that a Stubb's triangular, or 3-square file, ground to a proper shape, makes the best drill for glass, and some have claimed that water only or turpentine, do equally well to keep the glass wet with. Again, turpentine with garlic juice in it, is claimed to be the best. The file must be ground so that the edge is sharp, and the width that the hole is to be. The file, perhaps, had best not be heated, as the temper can seldom be made equal to that of the maker, (if Stubbs tempers his files as given on page 721, why can not any good blacksmith do it?) but if heated, while hot shape it to suit, then retemper as Stubbs is said to do? A man in Jackson, Mich., claimed, in writing to the *Scientific American*, that he had drilled 4 holes through ¼ inch plate glass in 15 minutes, and that water was equally as good as turpentine to keep wet with.

1. Furniture, Black Walnut Stain.—Take 1 pt. of very thin glue, its adhesiveness being just perceptible between the thumb and fingers. Put into it 1 tea-spoonful of raw umber, stir it well, and put on warm with a sponge or brush. When dry, brush off and varnish, or,

2. Take 1 tea-spoonful of Venetian red and ½ tea-spoonful of lamp-black, mix into a paste and then dilute with 1 pt. of glue-water, as before.—*Journal of Chemistry*.

3. Ebony, or Black Stain Upon Pine, or Other Soft Woods.—Make a strong decoction of logwood by boiling, and apply boiling hot, 3 or 4 times according to the shade desired, allowing it to dry between applications; then apply a solution of acetate of iron. This is made by putting iron filings into good vinegar. These penetrate the wood deeply, and are very black, or less deep, according to the number of applications.

4. Polish, Fine, For Furniture.—Linseed oil, and old ale, each ½ pt.; the white of 1 egg, beaten; alcohol, and muriatic acid, each 1 oz., mix.

DIRECTIONS.—Dust the furniture, shake the polish, and apply with a wad of batting or cotton flannel, and finish with an old silk handkerchief.

Remarks.—This, and any of the others, will keep any length of time, if corked.

5. Polish to Brighten Old Furniture, Pianos, etc.—Dissolve orange shade, gum shellac, 4 oz. in 95 per cent. alcohol, 1 qt.; spirits of turpentine, 1 pt.; shake and also add sulphuric ether, and aqua ammonia, each 4 oz. Shake well when used, rubbing until a polish appears.—*Good Cheer*.

6. Polish, Simple.—Equal parts of spirits of turpentine, linseed oil, and good vinegar, mixed, and rubbed on with flannel, until polished, is excellent. Some persons prefer sweet-oil instead of the linseed.—*Moore's Rural New Yorker.*

Remarks.—For the sweet-oil, see the next receipt.

7. Polish, Excellent and Good.—To make a good polish for furniture, take alcohol, good vinegar and sweet-oil, equal parts of each, or a little more of the last. Shake the bottle well, daily, for three weeks, when it is fit for use, but the longer it stands, the better it is. The furniture be must be rubbed till the polish is dry. Apply every 2 or 3 months; and rub the furniture with a dry cloth every time it is dusted. For dining-room tables and sideboards, use the polish every week, as it makes them beautifully bright.

Remarks.—White-wine vinegar, when it can be got, is considered the best.

8. Polish For Pianos, etc.—Raw linseed oil (raw, which is unboiled oil, the kind intended in all, except the last one given), 1 qt.; spirits of turpentine, ½ pt.; alcohol, benzine, and aqua ammonia, each, 4 oz. Shake when applied, and rub well.

9. Polish, Cheap and Good.—Gum shellac and rosin, each 2 oz.; alcohol, 1 pt.; mix and let stand 24 hours, or until dissolved, shaking occasionally; then add spirits of turpentine, 3 pts.; boiled linseed oil, 2 qts.; red analine, 15 grs.; oil of citronella, ½ oz. Shake well when used. Apply with cotton flannel.

Remarks.—This is given in large quantities, as it has been made and sold extensively. The analine is only to color, and the citronella to flavor.

Furniture, Upholstered, Carpets, Furs, Flannels, Etc.—The Trade Secret for Ridding of Moths.—A trade secret among upholsterers for ridding furniture, etc., of moths, is the following: "A set of furniture that seemed to be alive with the larvæ, and from which hundreds of these pests had been picked and brushed, was set into a room by itself. Three gallons of benzine was purchased, at 30 cents a gallon, retail. Using a small watering pot, with a fine rose-sprinkler, the whole upholstery was saturated through and through with the benzine. Result: Every moth, larvæ and egg was killed. The benzine dried out in a few hours, and its entire odor disappeared in 3 or 4 days. Not the slightest harm happened to the varnish, or wool, or fabric, or hair-stuffing. That was months ago, and not a sign of a moth has since appeared. The carpets were also sprinkled all around the sides of the room, with equally good effect. For furs, flannels—indeed, all woolen articles containing moths,—benzine is most valuable. Put them in a box, sprinkle them with benzine, close the box tightly, and in a day or two the pests will be exterminated, and the benzine will all evaporate on opening. In using benzine great care should be taken that no fire is near by, as it is very inflammable.—*Tecumseh* (Mich.) *Herald.*

Remarks.—There is not a doubt of this fact, for I know that benzine is "death to bed-bugs," and so is gasoline, which may be equally good for moths, and being much cheaper, is worthy of trial. It will evaporate, too, as quickly as the benzine.

1. Paint—Cheap, as Used at Iowa College, Suitable for Fences, Cheap Buildings, Tenement Houses, Etc.—Crude petroleum, 3 parts—qts. or gals.—boiled linseed oil, 1 part, with "mineral paint," for body.

Remarks.—A report having got into some of the papers, that such a paint had been used on some of the college buildings, an inquiry about its value led Prof. S. A. Knapp to make the following explanation. He says:

"Five buildings and considerable fence upon the Iowa Agricultural College Farm, have been painted with this preparation. Upon some of them it has been one year, and thus far it has appeared to be fully equal to more expensive paints, in body, durability and in retention of color. It is especially adapted to cheap outbuildings, covered with rough boards. If 25 lbs. of white lead be added to each 100 lbs. of mineral paint, the mixture answers a very excellent purpose for tenement houses. [I see another writer claims that 1 lb. of lead to 4 lbs. of mineral paint, is sufficient.] Many experienced painters have examined the buildings covered with this paint, and affirmed it made a better covering than pure lead and oil. This is doubtless an extreme view. It may, however, fairly be considered as a reliable paint for protection of the fences and cheaper farm buildings.

2. Black Paint—How to Make for Iron Fences, Balustrades, Farm Implements, etc.—Coal tar, 2 qts.; benzine, or benzole, 1 qt., or a little more, to thin it, to lay on nicely with a brush. As the benzine is very evaporative, make no more than is to be used at the time.—*Industrial Monthly.*

Remarks.—This is claimed to be more durable than oil and lamp-black paints, even where that was varnished, having been in use three years when the report was made.

3. Paints for Floors.—A writer claims there "is but one paint suitable for floors, and this is French ochre. And, 1st, if the boards have shrunk, clean out the cracks, and, with a small brush, give them a heavy coat of boiled linseed oil, then putty them solid and smooth. 2d. Paint the whole floor with a mixture of much boiled oil and little ochre for the first coat; then after it is well dried, give two more coats of much ochre and little oil; and finally finish with a coat of first-rate copal varnish. It is extremely durable for floors, windows, or outside, such as verandas, porticoes and the like. A floor stain, he continues, is best mixed in oil, and finally varnished."

Remarks.—If "a floor stain is best mixed in oil and varnished," take the following:

4. Floor Stain.—"Boiled linseed oil, 1 gal.; 5 cts. worth, or 2 heaping table-spoonfuls of burnt umber; heat the oil hot in an iron kettle—soap will clean it easily—then stir in the finely powdered umber, and with an old paint brush apply it as hot as you can; then says a lady in the *Blade*, farewell scrubbing. A mop, wrung out of warm water will clean it nicely."

Remarks.—This amount was given for a floor 14 to 16 feet square; but it is about twice as much as needed if only one coat is to be given. The following receipt may be liked better, as it has spirits of turpentine in it, which causes it to penetrate the wood more deeply; and it has some "dryer" also, which makes it dry quicker than without it. It was given in the Detroit *Pest and Tribune*, coming from a painter, as follows:

5. Stain Black Walnut for a Pine Floor, Light Shade.—"For an ordinary sized room, boiled oil and spirits of turpentine, each 1 qt.; dryer, 1 gill (4 ozs.); burnt umber, ¼ lb. Mix thoroughly and thin, or your floor will be black as your shoes nearly. [Then put in sufficient of the umber to give the shade desired.] If the floor is not to be varnished, use turpentine, 1 pt. only, and boiled oil, 3 pts., to make it more glossy."

6. Paints, Flexible, for Canvas.—Yellow soap, thinly sliced, 2½ ozs.; boiling water, 1½ gals. Dissolve the soap by more heat, if necessary; and grind the whole solution, while hot, with 125 lbs. of good oil paint. Keep same proportions for any amount needed.

7. Paint, Old, to Remove.—Stone lime, 3 ozs.; pear lash, or saleratus, 1 oz.

Directions.—Slack the lime with water, and mix in the pearlash, or saleratus, using only water enough to make a paste. Spread this upon the paint to be removed, and let it remain over night, or until soft, when it can all be scraped off. —*Scientific American.*

Remarks.—Where pearlash or saleratus cannot be obtained, sal soda may take their place.

Fire-proof wash for Shingle Roofs.—Freshly slacked lime, salt and fine sand, or wood ashes, equal parts, made into a wash and put on freely as any ordinary whitewash is done, is said to render shingles fifty-fold more safe against taking fire from falling cinders, or otherwise, in case of a fire in the vicinity.—*Fireman's Journal.*

1. Cement, Crystal, or Liquid Glue for General Purposes.—"Hard water, 3 qts.; white glue, 3 lbs.; dry white lead, ½ lb.; aqua ammonia, 1 oz.; spirits of camphor, 2 ozs.; salt, 1 heaping table-spoonful; alcohol, 1 qt.; gum shellac, ½ lb.

Directions.—Put the shellac into the alcohol until dissolved. Dissolve the glue in the water by putting into a tin dish and setting into a pan of hot water to prevent burning the glue, till dissolved; then put the glue water and shellac, dissolved in the alcohol, together in a pan or kettle, to allow all to be brought to a boiling heat, stir in the powdered white lead; then the ammonia and spirits of camphor, and lastly the salt; stir and boil a few minutes, and bottle while hot.

Remarks.—This receipt was sent to me by Albert Stockwell, of Flint, Mich., who, in canvassing for my receipt books, always carried this cement with him, for sale, to help in his expenses. He spoke very highly of its great strength as a cement.

2. Cement for Iron Works.—It is sometimes advisable to fix two pieces of iron, as pipes for water or steam, firmly together as a permanency. A rust cement is frequently used, and the materials are sal ammoniac, sulphur and iron borings. If the cement is desired to act quickly, the proportions should be: Sal ammoniac, 1 part by weight; sulphur, 2 parts; iron borings, 200 parts. The sal ammoniac and sulphur should be pulverized, and the borings of iron tolerably fine and free from oil. The mixture should be made with water to a conveniently handled paste. The theory of its action is

simply union by oxidation.

3. Cement for Leather.—Sulphite of carbon, 10 parts; spirits of turpentine, 1 part; into which, in a suitable bottle, put finely cut shreds of pure gutta-percha, to make a thickly-flowing liquid. To remove grease from the belts or leather to be joined, put a cloth upon it, and apply a hot iron for a while; then apply the cement to both surfaces, put together, and apply pressure until dry.

4. Cement for Rubber, and to Fasten Rubber to Metal, Glass, and Other Smooth Surfaces.—"Powdered shellac is softened to ten times its weight of strong water of ammonia, whereby a transparent mass is obtained, which becomes fluid, after keeping some little time, without the use of hot water. In three or four weeks the mixture is perfectly liquid, and when applied, it will be found to soften the rubber. As soon as the ammonia evaporates the rubber hardens again—it is said, quite firmly—and thus becomes impervious both to gases and to liquids. For cementing sheet rubber or rubber material in any shape to metal, glass, or other smooth surfaces, the cement is highly recommended."

II. Cement for Rubber Goods, Fastening Rubber Soles, Leather Patches, Straps, etc.—Fill a bottle one-tenth full of native Indian rubber (gutta-percha) cut in minute shreds; pour in benzole till the bottle is three quarters full; shake every few days until the mixture is as thick as honey. This dries quickly. It is useful to mend rubber shoes or any other rubber goods, as a water and air tight cement for bottles—simply dipping the corks into it—and for a hundred other purposes. Three coats of this will unite leather straps, patches, and rubber soles with firmness. To make a patch invisible, shave the edge of the leather quite thin.

5. Cement, Similar to that upon Postage Stamps, Gummed Labels, etc., Good for Scrap Books, Labeling on Tin, Glass, etc.—Dextrine, 2 ozs.; acetic acid and alcohol, each, ½ oz.; water, 2½ ozs.

Directions.—Mix the dextrine, acetic acid, and water, stirring until thoroughly mixed; then add the alcohol. For attaching labels to tin, first rub the surface with a mixture of equal parts of muriatic acid and alcohol; then apply the label gummed with a very thin coating of the cement, and it will adhere almost as well as on glass. A thin coat only is need on "scraps" for scrap books.

Remarks.—Knowing the value of a paste, or cement, somewhat similar to this, where the adhesion depended upon the dextrine, I have every confidence in this for all the purposes named.

6. Cement for Small Leaks in Steam Boilers.—Experiments have shown the following to be effectual for stopping small leaks from the seams of boilers, pipes, etc. Mix equal parts of air-slaked lime and fine sand, and finely-powdered litharge equal to both the first. Keep the powder dry, in a bottle or a covered box. When wanted to apply, mix, as much as needed, to a paste, with boiled linseed oil, and apply quickly, as it soon hardens.

II. Cement, Steam-Tight and Water-Tight, for Joints.—Pure white and red leads, equal parts mixed with boiled linseed oil to the consistency required, has been extensively used for this purpose.

Steam Boilers, to Prevent Incrustation from Becoming Hard.—A bar of zinc having accidentally been left in a steam boiler, when under repairs, it was afterwards found to have disappeared, or dissolved, by which the incrustations, instead of becoming hard, were muddy and soft, and hence easily removed. This proves that the zinc, and iron of the boiler, forms a battery, the zinc being consumed, while the iron is protected, which is claimed to be a valuable discovery in engineering. The size of the bar of zinc would necessarily depend upon the size of the boiler, and how long the run was to be between cleanings.

Nails, to Drive Into Hard-Seasoned Timber.—The editor of the *New Genesee Farmer* gives the following account of witnessing an experiment of driving nails into hard-seasoned timber, fairly dried: "The first two nails, after passing through a pine board, entered about an inch only into the hard wood, then doubled down under the hammer; but on dipping the points of six or eight nails into lard, every one was driven home without the least difficulty."

Remarks.—Carpenters who are engaged in repairing old buildings sometimes carry a small lump of tallow for the purpose on one of their boots or shoes.

Calcimining.—Take four lbs. of Paris white, put it in a pail, cover it with cold water, and let it stand over night. Put into a kettle 4 oz. of glue, and cover it also with cold water. In the morning set the glue on the stove, and add enough warm water to make 1 qt.; stir it until dissolved. Add the glue to the Paris white, and pour in warm water till the pail is three-

quarters full. Then add bluing, a little at a time, stirring it well till the mixture is slightly bluish. Use a good brush, and go over one spot on the wall till it is thoroughly wet. If your brush dries quickly, add more warm water, as the mixture is too thick. The brush must be kept wet. This mixture costs thirty-eight cents.—*Scientific American.*

Sewing Machine Oil, to Make, and How to Use.—Take the best paraffine oil and the best sperm oil, equal parts. Mix.

To Use.—Clean off the old oil with benzine or kerosene, then apply. This I obtained from a sewing-machine agent, who said he had manufactured and sold much of this oil, having been in the business over 14 years. Machines should be cleaned and re-oiled as often as they become the least gummy.

MISCELLANEOUS RECIPES.

WASHING FLUID—Labor-Saving and Not Injurious.—Concentrated lye, 1 lb., muriate of ammonia, and salts of tartar, each 2 ozs.; rain water, 2 gals. DIRECTIONS—Dissolve the lye (here is a *lie*, indeed, as lye proper is a fluid, but this *concentrated* lye is a solid potash) in 1 gal. of the water and the salts of tartar, and muriate of ammonia in the other gal. of water, and put all into a 2 gallon stone jug, cork and shake, when it is ready for use. Put a suitable amount of water into your boiler for boiling your clothes; and when it is of a proper heat to put in the clothes, if they are very dirty, stir in 1 small teacup of the fluid, stirring well before putting in the clothes; if not very dirty, ½ cup will be plenty; add half as much more to each additional boiler, if more than one is to be used at the same time.

New Mode of Washing, Saving Time, Labor and Fuel.—"The ill effects of soda on linen have given rise to a new method of washing, which has been extensively adopted in Germany, and introduced into Belgium. The operation consists in dissolving 2 lbs. of soap in about 3 gals. of water as hot as the hand can bear, and adding to this 1 teaspoon of turpentine and 3 of liquid ammonia; the mixture must be then well stirred, and the linen steeped in it for 2 or 3 hours, taking care to cover up the vessel containing them as closely as possible. The clothes are afterward washed out and rinsed in the usual way. The soap and water may be reheated and used a second time, but in that case ½ teaspoonful of turpentine and 1 teaspoonful of ammonia must be added. The process is said to cause a great economy of time, labor and fuel. The linen scarcely suffers at all, as there is little necessity for rubbing, and its cleanliness and color are perfect. The ammonia and turpentine, although their detersive (cleansing) action is great, have no injurious effect upon the linen; and while the former evaporates immediately, the smell of the latter disappears entirely, during the drying of the clothes."—*Rural New Yorker.*

Washing Fluid, Requiring but Little Boiling or Rubbing.—"Camphor gum, ½ oz., dissolved in alcohol, ½ pt.; borax ½ lb.; sal soda, 1 lb.; dissolve the borax and sal soda in hot rain water, 1 gal., and stir in the others, and put into a 2 gallon jug, having 1 gal. of cold rain water in it, cork and shake, when it is ready for use. DIRECTIONS.—Put ½ cup of this to 1 pt. of soft soap, and apply to the dirty parts of the clothing, and soak in warm water ½ an hour, or while breakfast is passing; need not then boil over 5 minutes. Washing will be done in half the ordinary time. Does not rot clothing, but makes it white. Table-cloths stained with tea, coffee, or fruit, throw into boiling water a few minutes, when they will be free from stains (I have seen statements to pour hot water through such spots would free them from the stain), while soap or suds when the clothes are dry will set the stains permanently."—*Germantown (Pa.) Telegraph.*

Flannels, To Wash and Dry, Without Shrinking.—Flannels should be washed with as little rubbing as possible; or, better still, pounding without any rubbing at all, and drying rapidly, and pulling freely, both length-wise and across the goods, if you would avoid shrinkage.

Washing Muslins, Cambrics, and Calicoes.—Stir some of the starch, after it is prepared for use, into the water in which any of these goods are to be washed.

Or, soak them a while in water in which you have put 1 or 2 tablespoonfuls of salt to a pail of water.

For Black and White Calicoes.—A cup or two of weak lye to a pail of water is best for soaking in.

For Pink or Green.—One or 2 table-spoonfuls of good vinegar to the pail of water is best.

For Purple or Blue.—Use sal soda, or borax, in powder, 1 or 2 table-spoonfuls to a pail of water; but, now, if you use the washing fluid, above, soak them a little in that, and wash out, as usual, it saves all these troubles with the different colors.

Ribbons, to Wash.—Wash ribbons in cold suds—not very strong, and do not rinse.

Silk, Cashmere and Black Alpaca Dresses, to Cleanse.—Dissolve a table-spoonful of powdered borax in 1 qt. of warm water (soft water), and after dusting thoroughly brush such parts as need it, or the whole, if much worn, and iron on the wrong side.

Black Silk, Alpaca, Serge, and Lawn Dresses, to do Over.—The following on the care and manner of doing over black silk, cashmere, alpaca, serge and lawn dresses, which is taken from *Harper's Bazar*, is well worth a place here, and will be found worthy of consideration by every woman into whose hands this book shall come. It says:

"No lady should ever don her alpaca, cashmere or serge without giving it a thorough dusting with broom or brush. Dust permitted to settle in the folds of pleat or shirring will soon be impossible to remove entirely, and give the whole gown that untidy air so much to be deprecated in everything pertaining to a lady's person.

"But after constant use for months, or maybe a year, the most carefully kept black dress will begin to show the effects of use, in a certain rustiness of hue and general dinginess of aspect, if no place actually rubbed or worn. Now is the time to expend a little skill and ingenuity in its renovation, when the economist may be rewarded by coming out in an old dress made new, sure of eliciting the admiration of at least all those who are in the secret. For the undertaking provide yourself with ten cents' worth of soap bark, procurable at an herb or drug store, and boil it in 1 qt. of hot water. Let it steep a while, and then strain into a basin for use. If the job is to be a perfect and thorough one, take the body and sleeves apart and to pieces; rip off the trimming from skirt and over skirt. Brush off all loose dust first, and then, with a sponge dipped in the soap bark decoction, wipe over each piece thoroughly, folding up as you proceed. Have ready a ladies' skirt board, for pressing, and well heated irons. Smooth every piece on the wrong side, including even silk trimmings; and when you have once more put it together you will be amazed to see the results of the simple process. One advantage in taking the whole dress apart is that, by putting the trimming on in some style a little different from what it was at first, the attraction of novelty is added to make the effect more pleasing. If one has not time, however, to go through the whole process, a dress may be greatly improved by being wiped over with this mixture (or the borax water above), and pressed on the wrong side while damp—indeed, for a time, it will look quite as good as new. The process may be repeated from time to time, as shall be advisable. I have seen a cashmere, which had been worn two whole winters, taken apart and treated in this way, and the closest observer would have supposed the dress to have been put on for the first time, such was its soft, fresh look, and the vividness of its black. Grenadine may be submitted to the same sort of cleaning with fine results.

"When a black lawn has become limp, tumbled, and generally forlorn-looking, the best mode of treatment to subject it to is first a submersion in a pan of warm water, colored highly with indigo; then exposure to the air until just dampness enough is left to enable one to press it to advantage with a hot iron; and if this is carefully done, always on the wrong side, the lawn will come forth quite fresh, stiff, and renovated from its blue bath, and again do good service for another while.

"Every particle of dust should be removed from a black silk or poplin every time it is worn, for nothing cuts either out so soon as these often imperceptible little gritty motes with which the air of a city is filled where coal is in such universal use."

Washing or Cleansing Woolen Blankets.—It is quite as important to have the woolen blankets on our beds clean, as to have our sheets pure and white. For the emanations from our bodies are more quickly absorbed by them than by the muslin sheets; and as the women look upon the washing of a pair of blankets as a great undertaking, I will give them the easy way, recommended by the Boston *Journal of Chemistry*, which is about the same as practised by my wife, in her lifetime. It is as follows: Put 2 heaping table-spoonfuls of powdered borax and 1 pt. of soft soap (or its equivalent of dissolved bar soap), into a tub of cold soft water. Stir well to dissolve and mix; then put in the blankets, thoroughly wetting, and let them soak over night. Next day rub (the author says pound), and drain them out, and rinse thoroughly into two waters, and hang them to dry. Do not wring them by hand, but press out the water. They may be put through a wringer.

Borax is the Best Roach Exterminator Yet Discovered.—This troublesome insect has a peculiar aversion to borax, and will never return where it has once been scattered. And, as this salt (chemists know all these things as a "salt") is perfectly harmless to human beings, it is much to be preferred for this purpose to the poisonous substances commonly used.

"Borax is also valuable for laundry use, instead of soda. Add a handful of it, powdered, to about ten gallons of boiling water, and you need use only half the ordinary allowance of soap. For laces, cambrics, etc., use an extra quantity of the powder. It will not injure the texture of the cloth in the least.

"For cleansing the hair, nothing is better than a solution of borax water. Wash afterward with pure water, if it leaves the hair too stiff. Borax dissolved in water is also an excellent dentrifice, or tooth wash."

Borax as a Tooth Powder, or for Washing the Teeth.—I use borax in powder every morning, to cleanse my teeth. Borax in powder, ½ oz., with precipitated chalk, 3 ozs., with a few drops of oil of winter-green, which keeps my teeth

clean and white, by rubbing the brush first on soap, then into the powder. Soap is essential once a day in cleaning teeth. Borax is, indeed, one of the most valuable salts we have for washing and cleaning purposes; but as we have now had a pretty thorough course of instruction in the various methods of washing, we will take up the question of soaps, for domestic purposes. Our first one, however, claims also to make washing easy, which I very well know it will do. If you use any of the white bar soaps, your soft soap will be white—if any of the rosin-colored or yellow soaps, to make it white, such will be the color when done.

Soft Soap for Washing and House Cleaning.—There are many other ways of making soap, nearly all of which contain some of the improvements or newer articles which have been introduced within the last few years in soap making, such as sal soda, lime, borax, etc.; but few of them contain more than one or two of these. The next, although it has only one—the sal soda—yet you will at once see that Mrs. J. Lute, of Liberty, O., who sends it to the *Blade*, thinks very highly of it; and I give it to show the value of the sal soda mixed with soap which, in my own as well as in Mrs. Lute's opinion, will be a great help in washing clothes or house cleaning, as the case may be. She says:

"Take 4 lbs. of white bar soap, cut it fine, and dissolve by heating in 5 gals. of soft water, adding 2 lbs. of sal soda. When all is dissolved and well mixed, it is done. Yellow soap does very well, but I think the white is the best. This makes a very nice white soft soap. You will think it a fraud when you first take it off the fire, but when it gets cool you will change your mind, and after one trial of it you will have no other. I have used it for three years, and am not afraid to recommend it to your readers."

Pearline, Soapine, etc., to Make.—The *Scientific American*, which is one of our most reliable papers, informs us that these articles are made of powdered soap, and powdered sal soda, equal, or about equal parts of each. Thus you see for a few cents you can make what they ask much more for; and it shows, too, what is thought by scientific men of sal soda as an aid in washing.

Soap for Machine shop Men, Blacksmiths, Engineers, Printers, Scouring, etc.—Take 10 lbs. of hard, yellow soap; sal soda, 3 lbs.; borax and tallow, each 1 lb.; fresh slacked lime, as below; soft water, 3 gals. Directions—Put the water, soda and borax into the kettle, and when dissolved add the tallow and the soap, shaved fine; and when these are dissolved stir in as much freshly slacked, sifted lime as you can stir in well. The lime is to be sifted through a common kitchen sieve to avoid coarse lumps.

Medicated, or Sulphur and Tar Soaps, To Make.—So much is being said about sulphur soap, in skin diseases and for toilet purposes, it will be a satisfaction to many people, no doubt, to know that if you take a 1 lb. bar of any good, hard white soap, cut it fine and put it into a small jar and set that into a basin or pan of water and set on the stove till the soap is melted, then stir in, thoroughly, 1 oz. of the flour of sulphur and pour into a paper or wooden box to cool, after which you can cut it into squares and dry it, and your sulphur soap will be as good as any you buy. For the tar soap, do the same as above, except stir in ¼ oz. of creosote, which is the same in action as tar—contains the active principle of tar. No harm in combining them in one soap; the combination would work very mildly on any irritable skin.

Renovating Soap.—Marseilles (French) or Parker's best soap, such as used by the barbers (I have seen Babbitt's common soap used, but the above was the original recipe), ¼ lb.; alcohol, 1 oz.; beef's gall, 2 ozs.; saltpetre, borax, honey, sulphuric ether and spirits of turpentine, of each, ¼ oz.; camphor gum, 3 drs.; pipe clay, 1 dr.; common salt, 1 small tea-spoonful. Directions—Put the camphor into the alcohol, the powdered pipe clay into the beef's gall, pulverize the saltpetre and borax and put them and the salt into the honey. After 2 or 3 hours slice the soap into a porcelain kettle, with the gall mixture, and place over a slow fire, stirring till melted; take off and let stand until a little cool; then add all the other articles, stir well together and put into a glass fruit jar as soon as possible, as it soon hardens; then screw on the top, to prevent the evaporation of the strength, keeping in a dark closet, ready for use, as light decomposes or injures it.

Clothes Cleaning.—General Directions—To clean a pair of pants or coat (any color) that has been considerably soiled, open the jar, and with a stiff spoon loosen up some of the renovating soap and take out ½ an oz. (a rounding table-spoonful) and dissolve it in 1 qt. of boiling soft water in a porcelain kettle, so as to keep it hot. Now whip and brush the article to be cleaned thoroughly, to remove all the dust; then, with a scouring brush (a partly worn, consequently stiff, broom brush will do very well), saturate, or wet the soiled spots thoroughly with the hot solution from the kettle; and, as a general thing, it will be best to saturate the whole garment, else a part will look new (that which is renovated) and the rest will look old or dirty, except in cases of getting spots upon new clothing. After thoroughly wetting the garment with

the solution, dry as thoroughly, in the open air is best. This wetting of the garment is best done by drawing it on a press-board, if you have one, as described below, also by spreading on a table or counter to be handy. After being dried, press the garment well, using what is called a "sponge-cloth," of stout unbleached muslin or drilling. If this is to be followed for a business, buy 2 yds. and tear it in two, lengthwise, keeping one for light shades of clothing, the other for dark. When ready to begin to press the garment take a basin of soft water and put into it some aqua ammonia, at the rate of 1 table-spoonful to 1 qt. of water, and, with the ammonia water, keep your sponge-cloth wet while pressing.

For those following the business, a press-board, which can be got up by any good joiner, so that a pant's leg may be drawn upon it, and a smaller one suitable in size to enter a coat-sleeve, will be found more than sufficiently handy to pay their cost, as they will be found almost absolutely necessary in applying dye to black clothing where the color has been spotted or faded, as explained under that head further on. The press-board referred to has two parts, a base, or bottom piece, then the pressing-board proper is supported by two standards about 5 or 6 inches from the bottom piece, with one end running out free to allow the leg or sleeve to be drawn upon it 15 to 18 inches for convenience of pressing the single thickness of cloth, instead of double, if the leg or sleeve is simply spread out on a table or counter.

Paint, Pitch, Oil, and Grease, To Remove from Silk, Linen, etc.—Benzine (purified), also called benzole, 2 ozs.; oil of lemon, ¼ oz. Mix and keep corked.—DIRECTIONS—Apply with a cloth or sponge to any spots upon any of the above named kind of goods, rubbing with the fingers until removed. The colors will not be injured.—*Indian Domestic Economy.*

Remarks.—For sake of safety in using benzine, or benzole, as one kind is called, see note after Kid Glove Cleaning. The lemon is only for flavor, or to hide the odor of the benzine.

Fruit Stains, To Remove from Clothing, etc.—To remove fruit stains, hold them so you can pour boiling water through them; and if this fails in any case to remove the stain, then dip the table-cloth or other article into hot water, and place it over burning brimstone, as for bleaching flannels, below.

Bleaching Flannels.—Wet them and place upon a stick over the top of a barrel, in the bottom of which is an old pan with some burning coals, and sprinkle on the fire a little broken bits of brimstone and cover over with a piece of carpet to retain the smoke. Particularly applicable to children's flannels which have become yellowish, and which you do not like to wash for fear of shrinkage.

Silks, To Remove Spots, etc.—Fuller's earth, 1 oz.; saleratus, 1 even tea-spoonful, (if saleratus is not obtainable, get bi-carbonate of potash of a druggist, the same amount); lemon juice. DIRECTIONS—Dry the earth thoroughly, and mix in the saleratus evenly; then moisten with the lemon juice sufficiently to form it into a roll or stick; dry in the sun. Wet the spots with hot water and rub it with the prepared earth. Dry in the sun; then cleanse with clear water.

Ink Spots, To Remove From Clothing.—Wet the spots with milk—sour milk is best—if you have no milk, wet with water, and rub a piece of lemon on some salt, then upon the spot, a few times will always remove it. If you have no lemon, a little oxalic acid in water, rinsed out with clear water, will do it—except the cheap school inks made with chromates of potash, even oxalic acid will not dissolve them; but the better inks, which are set with iron, the above will dissolve out.

Ink—Printer's, To Remove From Clothing.—Saturate with turpentine, let alone for 2 or 3 hours; then rub well with the hands and dust out. Saturate means to wet thoroughly. It may be necessary to use some of the renovating soap, or erasive compound, or some of the soap for the machine-shop men to wash away the discoloration.

Tar Spots, to Remove.—Tar spots may be removed by putting butter upon them for a few hours; then cleanse with soap and water to remove the grease, using the renovating soap if needed.

Kid Gloves, To Clean.—Take purified benzine, in a bowl or suitable dish, sufficient to cover the gloves. Put the gloves into the benzine and saturate or soak to wet thoroughly; then having placed one upon a clean, smooth board, with a soft brush or soft sponge rub one way only, from the wrist towards the fingers, wherever there is any dirt, or all over is best, to make all look alike, clean—dipping them or the brush into the benzine as often as necessary to get out all the dirt; and if this can not be done with the first lot, throw it away and pour it fresh, and rinse and squeeze out in the benzine till perfectly clean. White gloves you will suppose, while cleaning, to be spoiled, as it gives them a dingy appearance. Tinted or light shades will not look so dingy; but, never mind, partially dry them in the sun. Now, having previously

prepared a stick, a foot or more in length, carefully tapered, and rounded at one end to resemble a finger, insert it into each finger, carefully pulling the glove on by the wrist until smooth, then rubbing dry with fine soft muslin. When all is dry, polish with French powder (white), using soft white flannel in polishing. Use care on the stick, and in all the processes, to keep the gloves smooth, for if wrinkled the surface would be broken. Keep them from shrinking by putting upon the hands occasionally when nearly dry; but if you are cleaning a smaller glove, for others, than will go upon your own hand, carefully pull them as needed to prevent shrinkage.

Benzine, Benzole, Rose Oil, Naptha, etc.—Explanation.—Naptha, which is a preparation made by the destructive distillation of wood, but now better known as "wood alcohol," was formerly used for this purpose; but as this is now worth 50 cents a quart, at least, and as the purified benzine, which is made from coal oil or petroleum, does this work just as nicely, and costs not more than 10 or 15 cents a quart, it is now almost wholly used for these purposes. This purified benzine is also known as "rose oil." Druggists understand all these names. Gasoline, even, will do the same work, but it has more of the odor, not being so thoroughly purified. Remember, it is the purified benzine that should be obtained; and, remember, too, all these articles are not only inflammable, but also explosive, if fire gets to them or the vapor arising from them. So do not use them near a fire, lamp, or gaslight, to insure safety.

Or if the gloves are not much soiled, set a saucer of sweet milk, and a piece of white soap upon the table. Fold a clean towel, 3 or 4 thickness, upon the table, or upon your lap, and spread the glove smoothly upon it. Take a piece of clean white flannel and dip it in the milk; then rub it upon the soap, then upon the glove, from wrist to fingers, continuing the process until the dirt is removed, when, if a white glove it will have a yellowish tint, dark shades of gloves will be darker still. Be careful to clean every part of the glove thoroughly, else there will be spots when done. Let dry, or nearly so, then put on your hands and work soft, and polish as in No. 1 above, and the result will be very satisfactory.

Or take a pan of white corn meal, sifted; put on the gloves and make believe washing hands in the meal, carefully, for 10 or 15 minutes, according to the extent of soiling. Fold in a clean towel, and put a weight upon them for a time. (See also white furs to clean, for the propriety of using corn meal in removing dirt.)

Finger Marks upon Doors—To Remove.—Dissolve sal-soda, 1 oz., in soft water, 1 pt., and go over the soiled doors or other painted woodwork with it, using a sponge or cloth, following with a wiping-cloth, slightly wrung out of hot, clean water.

Ink—Black, for School Purposes—A Quart for a Dime.—Extract of logwood, ½ oz.; bi-chromate of potash, 10 grs.; dissolve in a quart of hot rain water. When cold, put into a bottle and leave uncorked for one week, when it is ready for use. At first it is a steel-blue, but becomes quite black. I used this ink for a long time while in an office, and considered it equal to the best writing fluid. [This last remark is all in which I disagree with him. It does, however, make a good school ink.] Moderate freezing does not hurt it.

1. GLOSSY LINEN.—How it is Done.—To give starched linen the appearance so much desired put a small bit of paraffine (size of a small pea for each bosom, or its equivalent for cuffs) into the hot starch, and when it comes to ironing use a small iron having a rounded point that is very smooth, and rub with great pressure and for a considerable time. A great deal of "elbow grease" is absolutely necessary.

2. Scorched Linen in Ironing, To whiten.—If a linen shirt bosom, or other article, has been scorched in ironing, lay it in the bright sunshine, which will remove it entirely.

Flat Irons, To Clean from Rust or Starch.—Flat-irons often have starch stick to them, and occasionally a spot of rust from a drop of water shows upon them, and I have often seen directions for cleaning them with salt, but the following plan is the only sensible way of doing it that I have seen:—Have a piece of yellow beeswax in a coarse cloth; when the iron is almost hot enough to use, but not quite, rub it quickly with the beeswax cloth and then with a coarse cloth.

Oil-Cloth.—To Keep Bright.—Oil-cloths should never be scrubbed with suds, but carefully swept with a soft hair brush and washed with a cloth dipped into milk and water, half-and-half, but no soap, and dry and polish with an old soft cloth. In this way they will keep their original color for a long time.

Color of Plants and Flowers, to Retain in Drying for Herbariums.—Botanists who are grieved at the rapid loss of color in the plants and flowers of their herbariums will be pleased to learn, says a Vienna journal, that if plants or flowers be dipped in a warm mixture of 1 part of hydrochloric acid to 600 of alcohol before being placed between the

driers they will not only retain their natural colors, but will also dry with greater quickness.—*Harper's Weekly.*

Remarks.—This is in the proportion of 1 dr. of the acid to 9 ozs. and 3 drs. of alcohol, and must prove very satisfactory.
2. Another Way.—Another new way for preserving the color of autumn leaves is given as follows:—"Iron them fresh with a warm (not hot) iron, on which some spermaceti has been lightly rubbed. This method preserves perfectly their lovely tints, and gives a wavy gloss which no other one secures. The process is very rapid and very agreeable, and no lady who has ever tried the tedious and uncertain experiment of pressing will ever again resort to it after trying this new and better way."

Remarks.—The iron must be kept hot enough to keep the spermaceti soft, else it will not spread on the leaves.

Tomatoes, To Ripen in December.—A Massachusetts gardener sells ripe tomatoes in December, by sowing the seeds in July, then potting the plants in a 9-inch jar, and maturing in a green-house with artificial heat as soon as needed. An infusion of tomato leaves has been recently found to not only destroy plant lice, but from its peculiar odor prevent their return for a long time. See these destroyers.

Plant Jars, To Paint and Bronze for House Use.—Plant jars for out-door use ought, to look well, to be painted with bright colors, as red or blue—the foliage gives the contrast with its green; but for house use paint them over with plain, cheap varnish, then with a bit of pad, or piece of broad-cloth upon a thin, small bit of board, apply common bronze powder all over; or, to make them nicer, paint the bodies, some red and some blue, then bronze the rim, which gives them a gold-like appearance, contrasting prettily with the painted body. The bronze on a varnish will not stand the rains and exposure out of doors.

Cracked Hands, To Cure.—A laboring man who had been troubled with cracked hands, and tried many other remedies without success, was finally told to put common copal varnish into the cracks which, in 48 hours, entirely cured them. Others came, but the same remedy always cured. He had given it to others with the same success before making it public. He bought a ten cent bottle, kept it corked, and applied when needed with a bit of sliver from the fire wood. It is simple and efficient. Most all painters and paint dealers keep it.

CARROTS.—Their Value as Food for Man and Domestic Animals.—A writer, with whom the author agrees—except that he thinks parsnips preferable to carrots for horses—says: "The carrot is one of the most healthful and nutritious of our garden roots, and deserves to be much more extensively used for culinary purposes, and we urge our readers to give some of the early table sorts a trial. As an agricultural root, the carrot is not surpassed for feeding horses and milch cows, and every farmer should plant a few for this purpose. The carrot succeeds best on light, sandy loam, made rich by manuring the previous year. In freshly manured land, the roots often grow awkward and ill shaped. It is better to sow as early in the spring as the ground can be made ready, but if planting is necessarily delayed until late in the season, soak the seed 24 hours in tepid water, dry by mixing in sifted ashes or plaster, and sow on freshly prepared soil."

Remarks.—In drills would be best, the author thinks, as explained in the item referred to.

Pickled Carrots for Table Use.—A recent writer in the *Rural New Yorker* says, under this head:—"Wash and scrape, boil until tender, cut into quarters of convenient length, and cover with vinegar. It is the best way to prepare carrots for the table."

Remarks.—If the vinegar is properly spiced, this plan makes them very palatable.

Beans Should Always be Cooked in Soft Water.—A. C. Arnold, of Stamford, Conn., says:—"I notice those who tell how to cook beans omit to say that soft water must always be used in beans, otherwise some of them will remain hard—a fact that I learned in the army."

Remarks.—It is undoubtedly better to use soft water for cooking generally, when it can be done. The same man sends the next item also, through the *Blade*, and as it is a thing needed in every household that ever cooks apples, I will give it a place. His measurements are correct to make a suitable-sized corer.

Apple Corer to Make, Size to Cut the Tin, etc.—Cut the tin 3 by 4 inches and roll it up to be 4 inches long, and ¾ inch in diameter, at the smallest end, as it should be a very little larger at the other end, to withdraw easily.

Remarks.—If a small wire is put into the large end before rolling up, it will not hurt the hand to push it through the apple,

without which it would soon injure the hand.

1. Silverware, to Brighten with Little Labor.—When it is desirable to brighten silverware without a formal scouring, prepare some pieces of silver cloth, as follows:—Obtain hartshorn (carbonate of ammonia), 2 ozs., powdered or broken up finely, and boil it in 1 pint of soft water. Dip suitable pieces of muslin in the liquor and hang up to dry without wringing. When dry, fold closely and put away for use. Simply rubbing the silver with one of these pieces will surprise you by its improved appearance. Never put soap on silverware, if you wish to keep its original lustre.

2. Frosted Silverware, How to Clean.—Frosted ornamentation on silverware should never be cleaned with powder, but only with a soft brush and strong lye (from wood ashes, strained, or from concentrated lye or potash), accompanied by rinsings with soft water. After the frosted parts are properly dry, the smooth parts should be rubbed carefully with powder.—*Harper's Bazar.*

3. Polish for Silverware.—In place of using Paris white for a dry powder to polish the smooth parts of silverware, the following will be found better:—Put 4 ozs. of Paris white into soft water, 1 pint, and boil it; when cool, bottle it, and add 1 oz. of aqua ammonia. Rub with a cloth wet with this mixture, shaken, and polish with chamois.

Stains from Nitrate of Silver, to Remove.—Wet nitrate of silver stains with discolored tincture of iodine in as much water as tincture. Then rub the stained spot with a piece of cyanide of potassa. It fades out, or changes at once (or the hyposulphite of soda will do, and is not poison), then wash immediately with water. Always use soft water, if you can. This is from a photographer, and reliable.

Cabbage, to Destroy the Cut-worm of, and to Prevent Club-feet.—Sprinkle a table-spoonful of salt around each plant as set out, and mix slightly with the soil. Thus, you "kill two birds with one stone," besides it is a good fertilizer. I have seen more than half the plants set out in a garden patch, which were cut off the first night. This little trouble saves the loss, and makes them grow faster, too. [See also, cut worms to destroy.]

Crickets, to Drive Away or Destroy.—Put Scotch snuff into their holes. It is too much for them, and I think it would be more than roaches could stand the presence of. Put into crevices with a feather.

1. Chimneys, how to Build to Avoid Burning out.—When building chimneys, keep a mortar-board of mortar for the purpose of plastering them upon the inside as the work goes on, tempered up by adding one-fourth as much common salt as of mortar, which forms a glaze that soot can not stick to, and hence there is none to burn. "Prevention is better than cure."

2. Chimneys, to Build to avoid Smoking.—A builder of long experience says: "To build a chimney that shall not smoke, give a large space immediately above the throat, which will cause a draft. It may then be narrowed, if desirable." This is good logic.

3. Chimneys, Sky-lights, etc., to stop Leaks.—Take fine, white sand, 20 measures; litharge, 2; freshly slacked lime, 1; mix evenly together, dry; then wet to the consistence of soft putty with boiled linseed oil. It sets quickly, and forms a hard and durable cement.

1. Moths in Carpets, to Prevent.—Wet the floor around the edge of the room thoroughly with spirits of turpentine before laying the carpet, apply with a brush as you would paint; it kills the nits or eggs under the base, and also prevents further nesting. Salt sprinkled freely about the edge and over the whole carpet, while sweeping, is not only a preventive, but it also helps to remove dirt, and if damp, prevents dust from rising while sweeping.

2. Moths in Carpets, to Destroy, without taking up.—On parts of carpets where moths are suspected, lay a coarse towel, slightly wrung out of clear water, spreading out smoothly; then place a piece of firm wrapping paper upon the wet towel to keep in the steam, and iron it thoroughly with a hot iron. If thoroughly done, the heat and steam kills them. Repeat at any time if satisfied more have hatched and come out from under the base or other hiding places. It does not injure the carpet, nor fade the colors, and does not need hard pressure, as it is the heat and steam that kills them.—*The Household.*

3. Moths in Upholstered Furniture, certain remedy, also Good for Furs, Flannels, etc.—A writer in one of the Grand Rapids (Mich.) papers says, upon these subjects: "A sort of trade secret among upholsterers for ridding upholstered furniture of moths, is the following"; and gives the example: "A set of furniture that seemed to be alive with the larvæ

(the insect moth in its first stage of development), from the time it came new, and from which hundreds of these pests had been picked and brushed, was set in a room by itself. Three gallons of benzine were purchased at 30 cents a gallon, retail. Using a small watering pot with a fine sprinkler, the whole upholstery was saturated through and through with benzine. Result—Every moth, larvæ and egg were killed. The benzine dried out in a few hours, and its entire odor disappeared in 3 or 4 days. Not the slightest harm happened to the varnish, or wood, or fabrics, or hair stuffing. That was months ago, and not a sign of a moth has since appeared. The carpets were also well sprinkled all around the sides of the room, with equally good effect. For furs, flannels, indeed, all woollen articles containing moths, benzine is most valuable. Put them in a box; sprinkle with benzine, close the box tightly, and in a day or two the pests will be exterminated, and the benzine will evaporate on opening."

1. Feather Beds, old, to renovate without Steam.—Old feather beds may be renovated or cleaned very satisfactorily by putting them out during a heavy shower, turning, to give both sides a good soaking. [And the author can't see, if it does not rain, when and as hard or as long as it is desired for this purpose, why a woman can't get up a good "heavy shower" of her own by means of plenty of warm water and the ordinary house or garden sprinkler; she certainly could, and I think be better than the natural cold shower.] Dry thoroughly in the sun, beating with a stick to loosen up the feathers, as you do a carpet to get out the dust. The bed may lay upon the ground to receive the water, but should be placed upon slats or sticks across chairs, or something of this character, while drying.

Remarks.—On boards or poles, one end on the fence sloping towards the sun, is the better way. If there are stains on the tick they can be cleaned at the same time in the following manner:

2. Feather Bed Tick, to remove the Stains.—Pulverise some starch and stir it into sufficient soft soap to make quite a thick paste, enough to cover the spots caused by children's wetting it. When dry, brush off and wash with clean water by means of a wash-cloth or sponge. Dry again in the sun, and whip to lighten up the feathers.

Corn Crib, Rat Proof.—A correspondent of the *Practical Farmer* gives the following directions for making that most necessary of farm buildings—a rat proof corn crib. He says: "Build a good substantial house, 12 feet wide, 8 feet high, and as long as you want it. This will give you 2 cribs, 1 on either side. Put your building on stone pillars, 1 ft. or more above ground (mind, the pillars must not be wider than the sill, else the rats will stand on them). Side up with lath 2½×1 inches of hard wood—I used oak—putting them on up and down, being careful to have them just ½ inch apart. The gables and any part of the building that does not come in contact with the corn, can be sided up with common pine boards; for bottoms of cribs, laths lengthwise, ½ inch apart; balance of floor between cribs lay tight, of pine boards. My building has a string of ties between the sill and plate to nail to and cross ties to hold the building together. Every 8 ft. of these ties spike a good strong scantling, or plank, across them lengthwise of the building as far in from the plate as you want the width of top of crib, then set up studding from the floor, as many as will be sufficiently strong for crib: mortice the end in the floor, gain the top into the horizontal scantling about ¾ of an inch, then lath the inside of the crib with any kind of lath (I would keep up hard wood), just close enough to keep in the corn, commencing 10 inches from the floor, to leave room for the corn to come down into the trough, putting these laths on lengthwise. Then put a common sized door in the end, between the cribs. You can put a lock on the door and all is secure—I did not lock mine and gained something by it, as I found a stray mitten in the crib on a cold morning. To get the corn in the crib make doors above the plate the size you want them, the same as dormer windows, and hang the doors on and it will be completed. If any one wishes to have a granary, they can use one side of the building for that purpose and the other for a crib. The size of my cribs is 3 feet in the clear at the bottom, and 5 feet at the top, but I am well satisfied they might be much wider and still the corn would cure well. I have used this crib for about 10 years, and I can recommend it as an entire success. The secret of this crib is putting the lath on up and down; this gives no place for the rats to stand on to cut holes, and the building being 1 foot above the ground they cannot reach the bottom. We are infested with swarms of gray rats, and there is not a building on the farm from which we can keep them out except the corn crib. We keep corn over a year until the new crop is gathered in perfect safety."

Bushel Boxes, how to Make.—In gathering potatoes, apples, and other things, quite a saving in time and trouble can be brought about by making enough bushel boxes to fill the wagon-bed. If the inside of the wagon-box is 36 inches, the length of the boxes should be 17½ inches (which gives one inch play to get in and out). An ordinary wagon-box will hold 32 to 36 of them. With these boxes one has no use for baskets, and the trouble of shoveling out the load is saved. In handling apples and potatoes, they are much less bruised and marred than when no boxes are used. Where one has a supply of these boxes, a large number of them, after being filled with apples, etc., can be piled up and emptied at leisure. In this case the time of stormy days can be devoted to assorting the products. They are also quite convenient, being

square, for shipping on the cars. The ends are made of common pine boards, 12 inches wide, planed on both sides, sawed to the exact width of 12 inches, and then cut into lengths of 14 inches. In these, holes are cut for the hands, as cleats would take up too much space and they would not pack well. To make, take an inch bit, bore 2 holes and trim with knife. The sides and bottoms are made of lath, cut just 17½ inches in length. Six pieces are required for the bottom, and five for each side. One lath will make two lengths for sides or bottom. For 100 boxes, 800 laths, and 200 ft. of common lumber will be required. Two 4-penny nails in each end of the lath is sufficient to make a permanent box. Get them ready in the rainy days of summer for fall use, and you will never be sorry.

Dio Lewis' "Breakfast for Two Cents"—Good for Light Laborers.—Notwithstanding a large amount of sport was made over Dr. Lewis' publication upon the "Two-cent Breakfast," still for persons of a sedentary life and only light labor to perform, or perhaps, no labor at all, his plan is most excellent for those who desire to enjoy good health and long lives. Let this class of persons try it, and they will soon realize a feeling of enjoyment and hilarity of spirit never before experienced. He says, "My experience and observation has been that meat is a large item in the cost of living. By using less meat and more oatmeal, beans, peas, etc., the same amount of nourishment may be obtained. Get a good article of Scotch or Canada oatmeal, and to 1 qt. of boiling water slowly stir in 1 tea-cupful of oatmeal, to which add a little salt; let it cook slowly for half an hour, when it may be served with milk or cream and sugar. Three cents worth of oatmeal, 3 cents worth of milk, and 6 cents worth of sugar will make a good meal for a family of 6 persons. Some of the most healthy people I have ever seen had oatmeal morning and night, and had fresh meat with vegetables at noon. By this method of living we make the morning and evening meal so inexpensive that the cost of our food will be reduced at least one-half. Beans and peas are cheap and nutritious."

Hogs, Fall care of, for Early Slaughter.—Although considerable has been said in that department as to the care of hogs, as well as the treatment of hog cholera, etc., yet as I find an item upon this subject among my miscellaneous matter I have thought best to give it here hoping it may receive greater attention standing alone. It is best, when possible, to let swine have the range of a newly cleared field, where logs and brush have just been burned off, as they instinctively eat the coals that are left, which, it is well known, does them great good; but when this can not be done the next best thing is to place a mixture of salt, ashes (unleached), and charcoal (pulverized), and, the author thinks, sulphur, also, equal quantities, except the sulphur, perhaps only one-half as much as of either of the others, under shelter, but where they can have daily access to it; and also to begin to feed early with peas, pumpkins, potatoes, etc., the potatoes and pumpkins properly cooked and thickened with pea meal, if plenty, else with shorts, or a little cornmeal when no cheaper article is at hand to be worked off; so that by November 15th, or 20th, at farthest, they may be ready for slaughter. The charcoal is of vital importance to hogs, unless the stove coal, as mentioned in the other connection, proves to fill its place; and there is no danger of their eating too much ashes or salt. Running water ought always, if possible, to pass through their pasture; and when not possible fresh water should be pumped daily for their use, as well as for all the other stock, even to the chickens.

1. CODLING MOTH, Remedy.—Dr. Hull, a leading horticulturist, of Illinois, says that his lime remedy for the codling moth has proved completely effectual. The freshly slacked lime is thrown into the trees when the dew is on, or just after a rain, and after the fruit is set. A dipper or a large spoon may be used; but best of all, is a bellows made for the purpose (the author would say, with a long nose or nozzle to reach well up into the trees). The insects will not go where the lime is scattered; he says, "they go away."

Codling Moth Effectually Disposed of.—A writer who signs himself "H," of Fenton, Mich., sends a plan to the Detroit *Tribune*, which he says effectually disposes of the codling moth. He says, "I take a piece of old woolen cloth, 5 or 6 inches wide, and long enough to go around the apple tree and lap an inch or two, and place this around the tree midway between the lower branches and the ground, and fasten it there with a tack driven in just far enough to hold. The moth will go under this cloth and deposit her egg, which matures in 12 days. Every 10 days I go through the orchard, draw the tacks carefully, unwind the cloth and mash every worm and moth I find, sometimes as many as 40 under a single cloth. This followed up will utterly destroy them."

Borers in Peach and Apple Trees, Remedy for, and for Bark Lice on the Trees.—Mr. M. B. Batchman, of Ohio (residence not given), writing to the *Fruit Recorder*, of Palmyra, N. Y., gives the following valuable remedy to prevent the borers getting into the peach and apple trees. He says:—"Take a tight barrel and put in 4 or 5 gallons of soft soap with as much hot water to thin it, then stir in 1 pint of crude carbolic acid and let it stand over night, or longer, to combine. Then add 12 gallons of rain-water, and stir well; apply to the base of the tree with a short broom or old paint brush, taking pains to wet inside of all crevices. This will prevent both peach and apple borers. It should be applied the

latter part of June in this climate, when the moths and beetles usually appear. The odor is so pungent and lasting that no eggs will be deposited where it has been applied, and the effect will continue till after the insects have done flying. If the crude acid cannot be obtained, {1/3} of the pure will answer, but it is more expensive." [Crude carbolic acid is a black and dirty-looking fluid, and if not kept by small druggists they can obtain it in the cities; but, mind you, it is a strong acid, and it will destroy the skin or clothing if you get it on them by breaking the bottle or otherwise, so be careful. The crude is what is used in washes for lice about poultry, horses, etc.]

Remarks.—To the above, the editor of the *Recorder* added: "We believe the above remedy for borers would also exterminate grubs from strawberry, raspberry and blackberry roots—only that for strawberries dilute it with double the amount of water." To this I may add: I think 6 or 8 quarts of fine soot dissolved in a barrel of water and thoroughly sprinkled about the roots of these berry plants will kill the borers or grubs that trouble them, and probably 2 lbs. of potash in the same water would also destroy them, sprinkled on in the same way.

Forcing Plants.—For forcing plants that you wish to hurry forward for any reason, 6 or 8 qts. of fine soot dissolved in a hogshead of water and sprinkled upon them and about the roots freely, is said by the *American Gardener*, to do as well for plants as for bulbs, flowering plants, shrubs, etc.

Bark Lice, or Scale Bugs on Trees, Shrubs, Plants, etc.—Positive Remedies.—Prof. J. H. Comstock says that in fighting scale insects (scale bugs, bark lice) on trees and shrubs, that poisonous fumes nor powdered substances have done any good, and that "they cannot be destroyed otherwise than by actual contact. Lye and solutions of soap have been eminently successful. Common or whale oil soap, ¾ lb., to water, to 1 gal. (dissolve by heat); or lye (concentrated, in lb. cans), 1 lb. to 1 gal. of water, applied when the trees are dormant (not growing—fall or very early spring), has been found to work equally well. Apply with a stiff brush, which reaches the scale under the bark and sweeps off others, but cannot be used on the small branches, and on these Whitman's fountain pump syringe may be employed for spraying."

For Lice on Plants.—Prof. A. J. Cook, in the New York *Tribune*, says that one application of the following mixture is a complete cure for lice on plants: Soft soap, 1 qt., water, 1 gal., and kerosene, 1 pt. The soap and water are heated to the boiling point, the kerosene added and all well stirred. The mixture is thus made permanent. It is also used on trees, killing the lice and restoring the vigor of the trees.

Currant Worms, to Avoid.—A writer of experience in the *Fruit Recorder* says: "There is no necessity of breeding currant worms; which is done by leaving bushes untrimmed, the worms always attacking the new growth first." He continues: "My plan is this: In starting a currant patch I confine the bush not to exceed from 1 to 3 main stems, and give all the strength of the root to their support. As hinted above, sprouts will start from the roots each spring, but they must be rubbed off when small. All currant growers are aware that worms first make their appearance on a new growth and then spread over the bush. Consequently, no sprouts, no worms. This is just as plain as that 2 and 2 make 4. I have followed this plan for the past two years to my satisfaction, and have barely seen the effects of worms on 1 or 2 bushes where my plan was not fully carried out. But such currants I never saw grow, the common red Dutch being nearly twice as large as the cherry currant and a better bearer. I had a few bushes that actually broke down from their load of fruit."

Remarks.—The plan of making a kind of tree of the currant gives so much better chance of cultivating around them, I have often wondered it was not adopted generally; and if any one will adopt this plan, he will see how much easier it will be to adopt the use of soot, as the Scotch do, to eradicate the worm, and at the same time to fertilize; as given in the next item.

Currant Worms, to Destroy, and to Fertilize the Ground.—Instead of the powdered hellebore, as heretofore used, copperas water, at the rate of 1 lb. to water, 6 gals., not only destroys the worm, by pulling over the top of the bush to sprinkle it upon the under side of the leaves, but also fertilizes the soil. But possibly the Scotch method of dusting fine soot upon them after a shower, or when the dew is on, and also working small quantities of it into the soil around the bushes, is the best way after all, as it is claimed this latter plan in a year or two will eradicate them from the garden altogether.

Coal Ashes as a Fertilizer for the Soils; Also Valuable for Cherry and Other Fruit Trees, etc.—*For the Currants*.—Common coal ashes, well distributed about roots of currants, is one of their best promoters. This should be done by loosening the soil about their roots and placing the ashes near them, cover firmly with earth above, and the bushes will bear such clusters as will speak the beneficial effects of this application of material too commonly thrown aside as of no use.

Cherry and other fruit trees also greatly accept this renovator, and if carefully bedded about the roots with coal ashes in the fall the yield of the fruit the following year will surprise the cultivator. Especially is this effect produced in the black loam of Illinois. We have in our mind one fruit garden there where all the small fruit was treated in this way, and have never seen their yield excelled.—*National Farmer.*

Currants and Gooseberries, Setting Out for Trees or Bushes.—Both the currant and gooseberry do better to grow from cuttings than from roots. The wood of the last year's growth must be taken, cut it into pieces from 8 to 10 inches in length, and insert about half the length in the usual prepared garden soil, press the ground firmly with the foot, mulch, and there will be no danger of not growing. Set them where they are desired to remain permanently. If a small tree and not a bush is preferred, cut out all the eyes entering the ground. If a bush, let the eyes remain. We prefer the bush for two reasons: the first is, more fruit is obtained; the second, it is longer lived. In fact, the bush will live half a century, only requiring thinning out of the wood once in a while. As to the variety of currants, we prefer decidedly the old Dutch Red. It is not quite so large as some others, but it bears as abundantly and is less acid and of better quality. Of gooseberries we prefer the Downing. It is of good quality, an excellent bearer, and has never mildewed upon our premises. —*Germantown Telegraph.*

Grafting Currants—To Avoid the Borer and Mildew.—The *Rural New Yorker* says:—"Lovers of the currant and gooseberry have reason to feel jolly over the success which seems to attend grafting them upon the Missouri currant (*Ribes aureum*), which is not liable to the attacks of the borer. Besides they are exempt from mildew. And thus by a single, happy hit the two great drawbacks to currant and gooseberry cultivation have been overcome. The beauty of these little trees when loaded with their pretty berries, as displayed at the Centennial, is of itself enough to insure their general cultivation. It would be well for those who intend experimenting with grafting currants to bear in mind that there is a great difference in the variety of the Missouri currant, some making better stocks than others."

Gooseberries, to Prevent Mildew.—Edward Martin, of Freehold, N.J., says he prevents mildew on his gooseberries by raising the English variety, and applying soapsuds with a garden syringe, costing only $1.50, beginning its application as soon as the fruit begins to form, twice a week for 3 or 4 weeks, has never failed him, saving the suds on wash-days, for this purpose.

CABBAGE WORM—Successful Remedy.—A correspondent of the New York *Tribune* makes the following statement as to the destruction of this late pest of the garden, not in the least injuring the cabbage, as anyone can judge. He says: "I have used salt for the cabbage worm—at the rate of a large tea-cupful to a pail of water—for the last two years with perfect success. Two applications have been all that were needed. It killed the worms (or at least they died) without hurting the cabbage at all."

Remarks.—The cabbage worm being a soft-skinned thing, I think the salt will destroy them; if it does not in any case, try the copperas water, as given for destroying the currant worm above. The copperas will not injure the cabbage, and, I think, either might be used double the strength given, if needed.

Cabbage Worm, the Best Remedy, as Shown by the New York Experiment Station.—Common yellow hard soap, 1 oz.; kerosene, 1 pt.; water, 1½ gals.; well mixed and stirred and applied by means of a watering-pot, proved the best of anything tried at the above station in 1883. They state that "it kills all the worms it thoroughly wets, and does not injure the plant." They say "it must be kept thoroughly stirred while applying. Several applications may be needed."

Cabbage Plants, Best Manner of Setting Out.—In setting out cabbage plants it has been found best to pull off the largest leaves, leaving only the centre, as they are then more certain to live and to do better, from the fact that the large leaves often wither and die for want of a ready support from the transplanting.

ANTS, ROACHES, LITTLE SPIDERS, Etc.—To Destroy.—"Hot alum water," says a recent practical woman writer, "is the latest suggestion as an insecticide (insect killer). It will destroy red ants, black ants, roaches, spiders, chintz bugs and all other crawling pests which infest our houses."

The writer does not say how much alum to use. I should say ½ lb. to 1 pail of water, sprinkled about their haunts boiling hot, would do the work well.

Another writer, after being pestered with red ants a year or two, drove them away by placing raw sliced onions about the closets.

Another by putting tar, 1 pt., into water 2 qts., and placing in shallow dishes in the closets.

Another by wetting sponges in sweetened water and placing where they enter the house, if that can be found, else in the closets, and after an hour or two dipping into boiling water.

Another.—Destroys roaches by distributing the freshly dug roots of the black hellebore, bruised or strewed around the floor, or places where they frequent at nights, claiming it to be as infallible as it is poisonous, and they eat it with avidity. It grows in marshy places, and it is kept by druggists—these being dry however, would have to be soaked or steeped a little to allow it to be mashed. The water then might also be placed in shallow dishes, with bits of shingle laid on the edge to allow them to go up to it. See 8, 9 and 10, etc.

Ants, to drive from Lawns or other Grounds.—Carbolic Acid, crude, 1 part to the water 40 parts, (ounces, pounds, or pints); mix and sprinkle upon their mounds. Why not good then, about the houses where they infest? Standing the legs of safes for victuals in dishes of water will beat them all badly as to getting their dinner from that quarter.

Roaches.—Have been driven off, or killed, as I suppose by laying red wafers around for them to eat; the red being the result of the use of red lead, which is poisonous and destructive. Lozenges made with red lead would do the same thing; a mixture of red lead, say one oz., with corn meal, ½ pt. moistened with molasses to a consistence of batter, and spread on the bottom of plates turned up, or on thin pieces of boards, will also destroy them, as they eat it greedily.

Roaches.—I have seen it stated that a lb. of powdered borax scattered around their haunts would clear any house of roaches. I have scattered it upon them where they nested in drawers, etc., and have seen them scatter with the dust upon them, like leaves before an autumn wind—like the leaves, never to return. Yet I have heard others say it did no good; but with some of these plans, perseverance must conquer.

Roaches, Ants, Spiders, Chintz Bugs, etc., to Destroy.—The *Journal of Chemistry* publishes the following, as efficacious for all these pests. It says: "Hot alum water is a recent suggestion as an insecticide (insect killer). It will destroy red and black ants, roaches, spiders, chintz (striped or spotted) bugs, and all crawling pests which infest our houses. Dissolve alum, 2 lbs. in 3 or 4 qts. of boiling water; then apply it with a brush, while nearly boiling hot, to every joint and crevice in your closets, bedsteads, pantry shelves and the like. Brush the crevices in the floor of the skirting or mop boards, if you suspect that they harbor vermin. If, in whitewashing a ceiling, plenty of alum is added to the lime, it will also serve to keep insects at a distance, and also cause the white-wash to stick better; 2 lbs. to a pail is enough. Roaches will flee the paint which has been washed in cool alum water of this strength.

Roaches Utterly Destroyed.—A correspondent of the *Country Gentleman* says: "I give a recipe to your correspondent who wishes to know how to get rid of the insects he calls the cockroaches, although I think he misnames them. Let his wife finish making peach preserves late at night in a smooth, bright, brass kettle; then persuade her it is too late to clean the kettle till morning, but set it against the wall where the insects are thickest and retire to rest. In the morning he will find the sides of the kettle bright as a new dollar, but he will find every insect that was hungry in the bottom of the kettle, when, if he uses the recipe I did, he will treat them to a sufficient quantity of boiling water to render them perfectly harmless. As I thought molasses cheaper than peach preserve juice, I ever afterward baited the same trap with molasses, and I caught the last one of millions. I pity any one troubled with them. I have lived 30 years since making the discovery (accidental), and have never had to repeat it."

BED BUGS—To Destroy.—Take a quart bottle and fill it with equal parts of best alcohol and spirits of turpentine, and add camphor gum, 1 oz. Shake well when used, and with a small brush wet the crevices, foldings of the curtains, etc., if there is the least sign of the bugs having been about them. This is harmless, and safe, except by candle light. If any doubt of its success, touch a bug with the least bit of it you can put on him. Use it freely, as it is inexpensive, but positive in its destructive powers; and does not stain bed clothing. Still I must give some more, which are poisonous. Though the next is not poisonous, but more likely to inflame, or explode, than this; but, no matter what may be used, look over the bedstead in a week or two to meet the new ones, from nits not touched at first.

Naptha alone, or even gasoline, will destroy bed bugs utterly and quickly. Put on as No. 1, freely.

Bed Bug Poison.—Beat the whites of 4 fresh eggs well, and then put in 1 oz. of quicksilver; or in this proportion, for as much as needed, and apply with a brush, or feather, as most convenient—keep it out of the way of children, as it is very poisonous. Corrosive sublimate pulverized, ¼ oz., beat in, in the same way, will do the same thing. Or it can be used in

liquid form, as in the next recipe.

Bed Bugs, to Get Rid of.—Spirits of turpentine, ½ pt.; corrosive sublimate, ¼ oz. When dissolved apply with brush or feather to every crevice. Go over every 2 weeks till all nits are hatched out and killed—2 or 3 times will do it every time. It is poisonous. These poisonous things are more certain to prevent a return than the others.

Another and better plan is to use carbolic acid, 2 drs., to water, ½ pt., and apply as the others.

And finally, the grease cooked out of salt pork, or bacon, applied hot, by keeping over a dish of coals, is said to be everlasting in its effects of killing and keeping them away. The reporter of the plan had been 30 years without their return. I should only fear the everlasting squeak of the bedstead, if applied in the joints, just where the bugs most do congregate.

Bed Bugs, to Clear From Old Cracked Walls, etc.—Tear off the old paper and wash the walls with pretty strong boiling hot lye, made from wood ashes, or the concentrated lye, of which soap is made. Two ozs. of this would be enough for a pail of water. Put it freely to every crack, and about the base, at the floor joint, as well as next the plaster; then repaper and you are safe. If the wall is rough, and danger of nits, wash the whole wall with the hot lye.

Caterpillars on Fruit Trees, To Destroy.—If for no other reason than for the looks of an orchard every bunch of caterpillars should be destroyed as soon as seen; but if left alone they multiply and soon extend from tree to tree so quickly, to the destruction of the orchard, it should be done to eradicate them entirely from the grounds, as nothing is so unsightly as an orchard or tree infested with these pests. The most positively destructive way of ridding the trees of them is to have a sheet-iron dish made about 6 inches deep and 4 inches in diameter, with a tube-like piece, 5 or 6 inches long, standing at an angle of 45° (quarterly pitch) from the perpendicular, at the bottom, into which put the end of a slender pole, fitted to enter the tube 2 or 3 inches; the tube, say, 1 inch in diameter, having 2 or 3 small holes near its attachment to the main dish, to allow the circulation of air to prevent its heating and burning the pole; and near the bottom of the dish 3 or 4 holes of ½ or ¾ inch diameter are to be made to allow a draft of air to make the charcoal burn, which is to be put into the dish and set burning; then an extra person besides the one managing the pole with the chafing-dish upon it, drops in a few pieces of broken-up roll brimstone, which is to be elevated at once to the nest; the fumes of the brimstone and the heat soon causes a stampede that is effectual. If you don't believe it, please burn a match under your nose, and you can soon tell what the result would be, if long continued. To give the caterpillars a chance to drop out, pass the apparatus up through their nest. No living thing can stand the fumes of burning sulphur; but brimstone in small pieces is best for this, as it does not burn out so quickly as the fine sulphur. As soon as a nest is seen, go for it, and you will soon eradicate them. The plan of burning kerosene destroys the limbs too quickly. A day without wind is best, lest it drive the fumes away, rather than allow them to go directly upward through the nest.

Weeds, to Destroy, in Gravel Walks.—To destroy weeds in gravel walks, sprinkle them with carbolic acid, about the strength of 1 of acid to 40 of water. I have found it successful, but the process must be repeated at least once a year. —*London Journal.*

CISTERN—How to Build.—I see that a subscriber wishes to know the best way to build a cistern. I have had the care of building quite a number, and would say to him, build two instead of one so large; dig the holes, and put on two good coats of cement on the bank, and arch with good hard brick. One of my neighbors has one that I built for him 16 years ago in this way, and it has been in use ever since. I had one built for myself 6 years ago; the masons put brick all round; the brick settled, and it leaked. I had another built 2 years ago, which was 8 feet across in the clear after finished, and 9 feet deep. This was plastered on the bank and arched with brick, and has been full of water ever since, and has not leaked a drop that I know of. I could mention more made in this way, but this is enough. I would not have brick or stone in the sides of a cistern if they were put in for nothing; they are simply thrown away.—*Mentor, in Country Gentleman.*

Remarks.—If the Portland cement, which is the best water-lime, I think, in use, is obtained, or the best water-lime which can be got is used, there can be no doubt of the success in soil that does not cave; but in clay soil, they claim, nothing but tubs built of plank will keep out the surface water. This may be so, but it seems to me, even on clay, 2 coats of mortar made with the best Portland cement would keep the surface water out as well as it would keep in what comes in by the spout. It would save much expense if successful, which I fully believe it would be. Any plasterer would know the proper amount of clean sand to use with it.

Cisterns, How to Build Square or Round—The Difference in Capacity with the same Number of Brick.—But few

persons are aware that a square cistern holds considerably less than a round one, the walls containing the same number of brick. But it is a fact, nevertheless. For instance: about 2,800, or, at most, 3,000, brick will make a cistern 10 feet square and 10 feet deep, having an inside surface of 400 square feet, and will contain 1,000 square or cubic feet of water, equal to about 7,500 gallons, while the same number of brick will make a round cistern of about 12¾ feet in diameter and 10 feet deep, which will contain about 1,270 cubic feet, or 9,225 gallons, a gain of about 27 per cent. in capacity, with no more cost, either in brick, mortar, or laying the walls. Calculate about 7 brick to lay a 4-inch wall, for each square foot of wall desired, whether larger or smaller, deeper or less depth, it matters not. For the size above given, about 2 barrels of cement will be required, as the bottom ought to be about 2 inches thick. In laying the wall, great care should be taken to ram or pack the dirt down very firmly behind it, so as to resist the pressure of water. The roof should be arched 2 feet below the top of the ground.

ICE-HOUSE—To Build Good, but Cheap.—A year or two ago I had my attention called to an ice-house built by a farmer near me, which was simply a bin, made of rough boards, 16 feet square, roofed over, leaving a large opening in the front and sides. He said his ice kept perfectly until the next winter. He put a layer of sawdust, about a foot thick, on the ground, and then stacked the ice snugly in the centre, 18 or 20 inches from the walls, and then filled in with sawdust, and up over the top a foot or more thick. Last winter, before filling my ice-house, I determined to try this method. I accordingly tore out all the inside wall, and shoveled out the sawdust; then filled by stacking it snugly in the centre, 15 or 20 inches from the wall. This space I filled in with pine sawdust, and covered the whole over the top a foot thick or more. I left out the window and took down my door and left it all open, so that the sun could shine in every day. Now for results. At the present time I have an abundance of ice, and the cakes seem to come out as square and perfect as when they went in, seemingly nothing lacking except what is used out. I am satisfied how to build an ice-house.—*Cor. N. Y. Farmer's Club, in Rural New Yorker.*

SHINGLES.—To Make Fire-Proof and More Durable.—The *Scientific American* says: "Take a potash kettle or large tub, and put into it 1 barrel of wood ashes lye, 5 lbs. white vitriol, 5 lbs. alum, and as much salt as will dissolve in the mixture. Make the liquor quite warm, and put as many shingles into it as can be conveniently wet at once. Stir them up, and when well soaked (say 2 hours) take them out and put in more, renewing the liquor as necessary. Then lay the shingles in the usual manner. After they are laid, take the liquor out that is left, put lime enough into it to make whitewash, and if any coloring is desirable, add ochre, Spanish brown, etc., and apply to the roof with a brush or an old broom. This wash may be renewed from time to time. Salt and lye are excellent preservatives of wood. It is well known that leach tubs, troughs, and other articles used in the manufacture of potash, never rot. They become saturated with the alkali, turn yellowish inside, and remain impervious to the weather."

CLOTH.—Fire-Proof.—For clothing to be starched, put ¼ as much tungstate of soda as you use of starch; starching as usual, and ironing, which does not affect its fire-proof qualities. The tungstate of soda is often used as a mordant in dyeing, which, of course, makes them much less inflammable. There is so much life lost by dresses taking fire now-a-days it seems that advantage ought to be taken of this plan of fire-proofing them when starched.

For goods not needed to be starched, make a solution of ½ lb. of the tungstate to each gallon of water, wet thoroughly, and dry, twice, if to be absolutely sure against blazing. Soft water always. May be ironed.

Clothes, to Water-Proof.—Dissolve sugar of lead, 10 ozs. in a common wooden pail of water; do the same with the same amount of powdered alum in another pail of water, and then pour together, and then thoroughly wet the cloth therein, and dry, better without wringing. If weighted and allowed to soak awhile, all the better.

Drying Fruit at the Manufactories, and Home-Drying.—At a recent meeting of the Ohio State Horticultural Society, at Canton, Mr. James Edgerton read a paper upon the modern methods of drying or evaporating fruits. Mr. S. B. Mann, of Adrian, Mich., in response to requests from the members, gave an account of a fruit-drying establishment in his town, in which five large Alden machines were used. It had cost $10,000, and had paid for itself in five years. Its capacity was 400 bushels every 24 hours. It gave employment to 50 or 60 hands, chiefly girls, working in 2 sets, day and night, pearing and cutting the fruit. The benefit to the community from the establishment was great, and the neighboring farmers would be sorry to lose it from among them. Mr. Mann said, for the benefit of the ladies, that if they would slice fruit across, in thin slices, place it on trays in the sun, covered with thin muslin cloth, they could dry fruit which would closely resemble that prepared by the Alden process. Mosquito netting was not so good for covering as thin cloth. In the Alden process, the white color was obtained by driving the fumes of sulphur through the dryer. (See "Evaporated Fruit.")

These thin sliced apples ought to be dried on wooden trays, not on old tin, by any means. Wooden trays might be easily made about 2 feet long and 15 to 20 inches wide, by nailing pieces of lath, slit up to ¼ or {3/8} square, nailed on end cleats, with a lath of full width on the ends of the cleats running the whole length, to form sides, to prevent the apples from slipping off—the square bits of lath forming the bottom, nailed about ¼ inch apart, to allow air to pass up through; the side lath going down a little, say ¼ inch below the bottom ones, which would thus allow the free passage of air under and up through the bottom. The thin, or cheap muslin covering preventing the sun from turning the fruit dark colored, and the wood has no tendency, either, to darken the shade of the apples, or other fruit. When once made they last for years, with proper care.

Canning Fruit.—The Manchester *Mirror* gives the following tables for time to boil, and the amount of sugar to each quart jar:—

			Minutes.			Ounces.
Boil	cherries	moderately	5	For	cherries	6
"	raspberries	"	6	"	raspberries	4
"	blackberries	"	6	"	Lawton blackberries	6
"	plums	"	10	"	field blackberries	6
"	strawberries	"	8	"	strawberries	8
"	whortleberries	"	5	"	whortleberries	4
"	pie plant	sliced	10	"	quince	10
"	small sour pears	whole	30	"	small sour pears, whole	8
"	Bartlett pears	in halves	20	"	wild grapes	8
"	peaches		8	"	peaches	4
"	peaches	whole	15	"	Bartlett pears	6
"	pineapple, sliced	½in. thick	13	"	pineapples	6
"	Siberian crab apple,	whole	25	"	crab apples	5
"	sour apples,	quartered	10	"	plums	8
"	ripe currants,		6	"	pie plant	10
"	wild grapes,		10	"	sour apples, quartered	6
"	tomatoes,		20	"	ripe currants	5

RATS—To Destroy or Drive Away.—Arsenic, bread, butter, and sugar. DIRECTIONS—If arsenic is to be used, get ¼ or ½ oz., and label poison, and keep it away from children. To use it, first spread some slices of bread lightly with butter; then sprinkle on rather freely of the arsenic, and over this with a little sugar, and with a case-knife press the sugar and arsenic well into the butter, so they will not fall off. Now, cut the slices of bread into squares of half an inch or so, and drop into the rat-holes, out of the way of children, chickens, and other animals which you do not wish to kill.

Rats, To Get Rid of Without Poison, German Method.—A German paper gives the following plan of doing this: "Having first for some days placed pieces of cheese in a part of the premises, so as to induce the rats to come in great numbers to their accustomed feeding-place, a piece of cheese is fixed on a fish-hook about a foot above the floor. One rat leaps at this, and of course remains suspended. Hereat all the other rats take sudden flight, and at once quit the house in a body."

Rats and Mice, Simple Exterminator.—Another German newspaper gives the following simple method for exterminating rats and mice, which, it states, has been successfully tried by one Baron Von Backhofen and others for some time past: "A mixture of 2 parts of well-bruised common squills and 3 parts of finely chopped bacon is made into a stiff mass, with as much meal as may be required, and then baked into small cakes which are put around for the rats to eat."

Another Simple Remedy.—A writer in the *Scientific American* says: "We clean our premises of rats by making whitewash yellow with copperas and covering the stones in the cellar with it. In every crevice or hole in which a rat may tread we put crystals of the copperas and scatter the same in the corners of the floor. The result was a perfect

stampede of rats and mice. Since that time not a footfall of either has been heard about the house. Every spring a coat of the yellow wash is given the cellar as a purifier and rat exterminator, and no typhoid, dysentery or fever attacks the family. Many persons deliberately attract all the rats in the neighborhood by leaving fruits and vegetables uncovered in the cellar, and sometimes even the soap is left open for their regalement. Cover up everything eatable in the cellar and pantry, and you will soon starve them out. These precautions, joined to the services of a good cat, will prove as good an exterminator as the chemist can provide. We never allow rats to be poisoned in our dwelling, they are so liable to die between the walls and produce much annoyance."

Another very Simple Remedy—Not Poisonous.—Take equal quantities of rye meal, and unslacked, finely powdered lime, mix well, dry, but water in flat dishes may be set near. Put this on pieces of dry boards, in places which they infest. They will eat it readily, and soon become thirsty, and go for the water which slacks the lime, and the gas destroys them quickly.

Lice on Plants—Successful Destroyer.—A correspondent of the California *Horticulturist*, having exhausted all the known remedies for destroying plant lice and other minute forms of insect life which play upon plants, resorted to coal oil (kerosene) which proved a complete exterminator. He says: "I procured from a druggist an atomizer, and filling the bottle with kerosene, sprayed over a camelia to be experimented upon. It was a very dirty plant, branches and leaves covered not only with scale, but with black fungus; a very small quantity sufficed to vaporize and cover the entire plant. After the fluid had evaporated and the plant was dry, the scales were found dead, shriveled and partly detached, and with the slightest touch fell off; the black fungus, also, which everybody knows is so tenacious on the leaf, was dried up into a loose powder, which a shake sent to the ground."

Green Lice on Plants, to Destroy.—A writer says: "Steep tobacco in water, and when the liquid is lukewarm, sprinkle the plants thoroughly with it. Two or three applications will cause them to hasten their going, and generally prove sufficient to rid the plants entirely of them. If it does not, repeat until the plants are free. The natural dried leaf is best, in the proportion of one leaf to a quart of water; but any tobacco will do. The above will not injure the most delicate plant, and is better than smoke, so often recommended.

Bugs on Squash and Cucumber Vines, to Destroy with Saltpetre.—The following appeared in the *Southern Husbandman*: "To destroy bugs on squashes and cucumber vines, dissolve a table-spoonful of saltpetre in a pail of water, put a pint of this around each hill, shaping the earth so that it will not spread much, and the thing is done. The more saltpetre, if you can afford it—it is good for vegetable but death to animal life. The bugs burrow in the earth at night and fail to rise in the morning. It is also good to kill grub in peach trees—only use twice as much, say a quart to each tree. There was not a yellow or blistered leaf on 12 or 15 trees to which it was applied last season. No danger of killing any vegetable with it. A concentrated solution applied to beans makes them grow wonderfully."

Bugs on Cucumber and Melon Vines, etc., Simple Remedy.—"For the last five years," says a writer to the Chicago *Times*, "I have not lost a cucumber or melon vine or cabbage plant. Get a barrel with a few gallons of gas tar in it; pour water on the tar, always have it ready when needed; and when the bugs appear, give them a liberal drink of the tar-water from a garden sprinkler or otherwise, and if the rain washes it off and they return repeat the dose. It will also destroy the Colorado potato beetle, and frighten the old long potato bug worse than a thrashing with a brush. Five years ago this summer both kinds appeared on my late potatoes, and I watered with the tar-water. The next day all Colorados that had not been well protected from the sprinkling were dead, and the others, though their name was legion, were all gone, and I have never seen one of them on the farm since. I am aware that many will look upon this with indifference because it is so cheap and simple a remedy. Such should always feed both their own and their neighbors' bugs, as they frequently do."

Remarks.—The gentleman does not say how many gals. of tar to a bbl. of water. I should say 4 or 5 would be plenty. See oiled-cloth for hot beds; boxes for hills, etc., which protect from bugs.

FUNGUS—in Cellars, to destroy.—The use of sulphur to destroy fungoid growths in greenhouses and vineries is well known to horticulturists. The same remedy may be applied to destroy fungus and mould in cellars, in many of which it exists to such an extent as to damage produce stored there. Take some stick sulphur, generally called brimstone, but 'tis only sulphur in stick form, and place in a pan and set fire to it, on a pan or kettle of coals is best plan; close the doors, making the cellar as nearly air-tight as possible for a few hours, when the fungi will be destroyed and the mould dried up. Repeat this simple and inexpensive operation every 2 or 3 months, and the cellar will be free from all parasitical growth.

PASTE.—Cement or Mucilage for Labels, Postage and Revenue Stamps, etc.—Soak good glue, 5 oz., in water, 20 oz., for one day; after which add rock candy or loaf sugar, 9 oz., and gum arabic, 3 oz.; and when these are dissolved, it is ready to be spread on paper. It keeps well; does not get brittle nor wrinkled, and does not make the sheets stick when they are piled upon each other.—*Dingler's Polytechnic Journal.*

Mucilage, Simple and Good.—Put nice gum Arabic, ¼ lb. into a ½-pt. bottle, then fill it with soft water, and cork. Turn it bottom upwards and shake occasionally for a day or two, or until dissolved, and it is ready to use for putting paper together of any kind.

Mucilage for Fancy Work.—Gum tragacanth, 1 oz., corrosive sublimate, a thimbleful, and soft water, 1½ pints. Put into a bottle and let dissolve, corking tightly. Stir occasionally with a stick. As it is poisonous, it should be kept out of the reach of children. The mucilage will keep for months.—*Toledo Post.*

CEMENT, OR PASTE—New and Strong, That Sticks to Leather, Wood, Stone, Glass, Porcelain, Ivory, Parchment, Paper, Feathers, Wool, Cotton, Linen, and Even to Varnish.—A new cement which is well spoken of is made by melting in an iron vessel equal parts of common pitch and gutta-percha; it is not attacked by water, and adheres firmly to leather, wood, stone, glass, porcelain, ivory, paper, feathers, wool, cotton, linen, and even to varnish.—*Pansy, Stryker, Ohio, in Blade.*

1. Glue, Liquid, and Moth Glue.—Take any sized bottle, and half fill it with whiskey, and put in nice bits of glue to make it, when dissolved, which it will do in two or three days, as thick as molasses. It remains liquid, and is good for any purpose that glue is used for.

For the moth glue, dissolve any amount of glue in as little water as possible, by putting it in another dish of water to prevent burning, then add only one-fourth as much nice white sugar, by weight as you use of glue, and when melted pour upon a slightly greased slab, or tin. Used by wetting the glue in the mouth and touching the parts to be united and holding together a moment.

Glue, Water-Proof.—Best clear glue, ¼ lb., new milk, 1 pint. DIRECTIONS.—Soak the glue in the milk 8 to 10 hours; then boil, by setting the basin in a pan of water, with nails under the bottom of the basin, to prevent burning. Use as other glue. The casein of the milk aids in resisting dampness.

Glue, to Resist the Action of Water.—"A glue which will resist the action of water is made by boiling best glue, 1 lb. in skim milk, 2 quarts."

Glue, Very Strong for Veneering and Inlaying.—"Take the best light brown glue, free from clouds and streaks; dissolve in water to the consistence of well-made glue, and to each pint add half a gill (2 ozs.) of the best vinegar, and 1½ ozs. of isinglass."

Glues, Liquid.—"H.," of Mt. Clemens, Mich., in writing to one of the papers, says: "Liquid glue can be made by adding to the ordinary solution of glue, for each lb. of glue used, 1 fl. oz. of strong nitric acid."

"Or take 1 part (oz.) of dry glue, powdered, and parts (ozs.) of commercial acetic acid, which will dissolve the glue without heat."

Remarks.—See "Dr. Chase's Magic Mender," among the cements, which is made with isinglass dissolved in acetic acid, and is very strong. Glass or porcelain dishes only can be used with any acid, without dissolving the glues. See also mucilages, cements, etc., for fancy or other work, above.

Glue, Liquid, Simple, and Easily Made.—An excellent glue is made as follows: White glue, 2 ozs., good vinegar, 1 gill (4 ozs.) Put into a wide-mouthed bottle, and set the bottle in cold water, letting it come to a boil gradually, and boiling until the glue is dissolved; then add alcohol, 1 oz.; and after this keep corked for use.—*Toledo Post.* Good.

WIRE-WORMS.—Protection Against for Corn.—I give you my experience with the wire-worm. Being troubled with the little pests one year, I was advised to soak my seed corn in a solution of copperas and saltpetre, using ¼ lb. each to a bushel of ears of common eight-rowed corn. The result was that my seed all grew, and I lost none by the wire-worms, and I never saw corn have so dark and vigorous a color before. Since then I have always soaked my corn 12 hours after being shelled. I do not know as it would affect the cut-worm, but I have never been troubled with them since I used the

solution of copperas and saltpetre. Neither was I ever troubled with them when I plowed my corn ground in the fall, which I would invariably do on old sod. Some farmers exterminate them by hunting them out in the hill and killing them by hand, but this is slow and tedious, and is liable to be slighted by hired help. An ounce of prevention is worth a pound of cure is a proverb true in this case.—*J. B., in Country Gentleman.*

Wire-Worms, Protection Against, as done near London, Eng., where Soot is Plentiful.—An agricultural writer in the London *Land and Water*, under the head of "Soot *vs*. Wire-Worms," says: "I found the wire-worm so abundant in every part of the garden I was set to cultivate that I could scarcely grow a potato or a carrot without its being rendered useless by it; and, among the various things I was led to adopt as preventives, soot appeared to be the only effectual remedy. This I applied to potato crops in the following manner: The drills were got ready in their usual way and the sets laid in at the bottom of each drill. The soot was then put down upon them in quantity sufficient to cause the drills to assume quite a black appearance. This being done the drills were closed in the ordinary manner to the natural level, and the work was finished. Wherever soot was applied the crops turned out clean and good; scarcely a trace of the wire-worm's ravages was to be seen, while those from rows not dressed with soot were quite the reverse, the potatoes being pierced through in every direction and fit only for feeding pigs.

Cucumbers, Melons, Cabbage, Tomatoes, etc.—To prevent Bugs from destroying the Plant.—*For Cucumbers.*—Experience has shown that if a box or frame about 12 inches square, and 5 or 6 inches deep, having neither top nor bottom, is put over each hill of cucumbers when planted, and banked up around the bottom so that the striped bug cannot crawl under, they will never light down in the boxes, and hence, any plants thus protected are safe from their depredations. Boxes may be removed before the plants begin to run over them, and be saved for another year. Half-inch stuff is heavy enough for them, if well nailed. See also Oiled Cloth for Hot-Beds; Boxes for Hills; Safe Culture from Bugs, etc., which is only a little more expensive.

For Cabbage, Tomatoes, etc.—In place of boxes, other persons have recommended the peeling of ash, basswood, or other saplings of about 4 inches in diameter, that will peel, be cut off in lengths of about 4 or 5 inches, and the rings placed over cabbage, tomatoes, or other plants as a perfect protection, securing well at the bottom to prevent their crawling under. When the bark of any suitable tree cannot be got, pasteboard rings, I think, would answer all purposes, tied together to prevent them from opening out. The same as the barks would be.

For Melons, or other plants in hills, use the bark of larger trees. This, the writer claimed to be better than paper, which I had recommended in one of my former books, as the bark does not soften down by the rains. Boxes will do just as well, if any less trouble to obtain. Either must be pressed a little into the ground so the bugs cannot crawl under. See also insecticide, and other things to destroy insects, bugs, etc., upon plants.

Another plan, and claimed to be safe, is to sprinkle a little fine soot upon cucumber vines, squash, etc., which are liable to be attacked by any insects. If good against wire-worms (which see), why not good against these pests, too? It no doubt is.

Another writer says: "Last season I kept the striped bugs from my cucumber vines by saturating (making perfectly wet) ashes with kerosene and applying a handful to a hill." He does not say, but I think he means to the ground, as they burrow in the ground at night, and, as a writer says in some other place, "they don't come up, or out, in the morning." They are killed by it.

TURNIPS, BEETS, ETC.—To Keep Nicely in Cellars for Winter Use. Applicable to all Kinds of Roots and Large Fruits.—All kinds of roots keep better in the cellar by throwing fresh dirt over them; but turnips and beets especially keep much better for this, as they soon wilt and lose their freshness without it. Put in barrels, if it is too unhandy to thus cover them on the floor, by putting dirt in the bottom, and a layer every few inches, the roots not to come out to the sides by an inch at least, and then 5 or 6 inches of dirt on top. Large casks or boxes will do as well, and be less trouble. Some people do not put any earth in until the barrel is filled to within 6 inches of the top, then shake in dry sand, or dry road-dust, and cover with the same or fresh earth. Only such as are wanted for winter use are treated in this way, the others stand in root-pits, ventilated as seen under that head.

"A cellar," says a writer, "that is cool, dry, dark and well ventilated, is the best place for preserving potatoes in large quantities. When smaller quantities are to be preserved there is nothing like dry sand. The same may be said of fruits and roots of all sorts." See below.

This is fully confirmed by the next item, so far as lemons and oranges are concerned, from a California paper.

STAMMERING—to Cure.—A gentleman who had stammered from childhood to nearly manhood, gives the plan that cured him, as follows:—He says, go into a room where you will be quiet and alone, get some books that will interest but not excite you, and sit down and read 2 hours aloud to yourself, keeping your teeth together. Do the same thing every 2 or 3 days, or once a week if very tiresome, always taking care to read slowly and distinctly, moving the lips but not the teeth. Then, when conversing with others, try to speak as slowly and distinctly as possible, and making up your mind you will not stammer. Well, I tried this remedy, not having much faith in it, I must confess, but willing to do most anything to cure myself of such an annoying difficulty. I read for 2 hours aloud with my teeth together. The first result was to make my tongue and jaws ache, that is while I was reading, and the next to make me feel as if something had loosened my talking apparatus, for I could speak with less difficulty immediately. The change was so great that every one who knew me remarked it. I repeated the remedy every 5 or 6 days for a month, and then at longer intervals until cured.

PAPERING.—Making the Paste, etc.—As many people desire to do their own papering, a few hints will not be amiss:

I. Walls that have been white-washed may be papered by first wetting the walls well with alum water, 1 lb. to 2 gals. of water, and letting dry before papering.

II. Trim one edge off with the shears, and match the pattern as you cut off the lengths.

III. Make the paste the day before it is wanted to have it cold when applied to the paper. A gal. or 5 qts. will be needed for a room requiring 12 to 14 rolls. Mix a little over 1 pt. of flour into a thin dough, and thin down to avoid lumps; put then 1 gal. of water into a kettle, and when it boils, pour in the thin, hot batter and stir to avoid burning until it boils again; then pour into a tin pail or pan, and let stand till next day, and if lumpy, strain and press through a coarse muslin, and proceed with the papering. Rub out carefully with a towel all wind puffs, to avoid wrinkles when dry.

Toothache Drops, Japanese, Magical.—To quiet the pains in an aching tooth nothing can excel Japanese Drops. The formula (recipe) is: "Put together equal parts of creosote, chloroform, carbolic acid (liquid), oil of peppermint, oil of cloves, and oil of camphor (camphorated oil, kept by druggists). The result is a liquid that will give almost instant relief, if applied on a bit of cotton to the cavity of an aching tooth, and yet is no more fiery in the mouth than oil of cloves would be. The drops smell most strongly of creosote, while peppermint predominates in the taste. It is best to swallow as little as possible of the mixture."—*Country Gentleman.*

SCARE-CROWS—How to Make.—Take two small, cheap mirrors, fasten them back to back, attach a cord to and hang them to a pole. When the glass swings the sun's rays are reflected all over the field, even if it be a large one, and even the oldest and bravest crow will depart precipitately should one of its lightning flashes fall on him. [Good only when the sun shines.]

II. The second plan, although a terror to the crow is especially well suited to fields subject to the inroads of small birds, and even chickens. It involves the artificial hawk, made from a large potato and long goose or turkey feathers. The maker can exercise his imitative skill in sticking the feathers into the potato so that they resemble the spread tail and wings of a hawk. It is astonishing what a ferocious looking bird of prey can be constructed from the above simple material. It only remains to hang the object from a tall, bent pole, and the wind will do the rest. The bird will make swoops and dashes in the most threatening manner. Even the most inquisitive of venerable hens have been known to hurry rapidly from its dangerous vicinity, while to small birds it carries unmixed dismay.—*Scientific American.*

Another plan is to string a few kernels of corn on long horse-hairs, and place about the corn fields. The crows will swallow some of them and make such a noise of alarm as to drive the others away, while he will continue to scratch his throat to get rid of the corn, or rather the hair, which is said to rid the field of them for the season. It is easily tried.

Hawks and Owls, Best way to Catch.—Set a pole, 15 feet high, or thereabouts, in a place near where the chickens are kept, and fasten a steel trap on the top and set it, so that when they light on it, which they will do, it takes them "sure pop," every time.

STORING CELERY.—For Spring Use.—The *Germantown Telegraph* says: "We have tried most ways, but prefer this one, followed for many years. A trench is dug from 12 to 15 inches in depth and as long as may be suitable. Place the roots in this singly, side by side, at an angle—that is, leaning somewhat; three inches of soil are packed against them;

then another line of stalks, until the bed is as large as may be convenient for covering, when another, if required, can be made. The soil should be added until within 6 inches of the top of the stalks; then a layer of straw, then a layer of dry leaves; the whole to have a good board covering, to keep out water. Of course, rather high ground for the bed, or beds, should be selected, and a trench dug around the bed deeper than the bottom of the celery trenches, so made as to be sure to carry off all the water. If this plan is followed strictly, all others may be abandoned, as the celery will keep only till spring, but as long in spring as may be desired, if it is not all eaten beforehand."

FLY POISON.—Arsenate of potassa, 1 oz.; red lead, ¼ oz.; sugar, 5 ozs. Mix well together, bottle and cork for use, and label *Poison*.

FLY STICKUMFAST.—Not Poisonous.—Melt rosin, 6 ozs., in a tin cup, then put in lard, 1 rounding table-spoonful, as a woman takes it up for shortening, or about 2 ozs., which should make it like very thick molasses when cold. Spread upon rather stiff paper with a little flat piece of wood or a knife, and place upon the shelves, rooms, etc. If a knife is used to spread it, heat the knife over the fire when it will all wipe off with a piece of newspaper or cloth. It will hold all that light upon it, and the more that light the more will come, thinking something good has been found. It holds them fast. Place a paper over the cup to keep flies out when it is set away.

LEGITIMATE BUSINESS.—To be Stuck to if You Would Avoid Failure.—There are so many failures, I desire to say a word, if possible, to those who mean to do the right thing, to enable them to be successful, hence, with some modification by myself on some points, I give the following sensible article of some writer, I know not who, but I do well know if business men will be guided by it, *i. e.*, stick to their legitimate business, keeping all their capital in it, necessary to carry it on, there will not be one failure where there is now a score.

"Well-directed energy and enterprise are the life of American progress; but if there is one lesson taught more plainly than others by the great failures of late, it is that safety lies in a legitimate business. No manufacturer, trader, or banker, has any right to be so energetic and enterprising as to take from his legitimate business the capital which it requires to meet any emergency which may arise.

"Apologies are sometimes made for firms, or persons, who have failed, by referring to the important experiments they have aided, and the unnumbered fields of enterprise where they have freely scattered their money. We are told that individual losses, sustained by those failures, will be as nothing compared with the benefits conferred on the community by their liberality in contributing to every public work. There is little force in such reasoning. A man's relations to a creditor are vastly different from his relations to what is called the public. The demands of the one are definite, the claims of the other are just what the ambition and legitimate means of the man may make them.

"The histories of honorable, successful business men unite to exalt the importance of sticking to one legitimate business, and it is most instructive to see that, in the greater portion of the failures, the real cause of disaster was the branching out beyond his legitimate business, in the taking hold of this and that tempting offer, and, for the sake of some hoped-for gain, venturing where they did not know the ground, and could not know the pit-fall until in it."

INTEREST.—Simple and Easy Rules to Compute.—For finding the interest on any principal for any number of days. [The answer in each case being in cents, separate the two right-hand figures of answer to express in dollars and cents]:
4 per cent.—multiply—the principal in all cases—by the number of days, and divide by 90;
5 per cent.—multiply by number of days, and divide by 72;
6 per cent.—multiply by number of days, and divide by 60;
7 per cent.—multiply by number of days, and divide by 50;
8 per cent.—multiply by number of days, and divide by 45;
9 per cent.—multiply by number of days, and divide by 40;
10 per cent.—multiply by number of days, and divide by 36;
12 per cent.—multiply by number of days, and divide by 30;
15 per cent.—multiply by number of days, and divide by 24;
18 per cent.—multiply by number of days, and divide by 20;
20 per cent.—multiply by number of days, and divide by 18;
24 per cent.—multiply by number of days, and divide by 15;
without regard to fraction or remainder in any case; may add, however, the interest to the amount found for any fractional part of a dollar, if any such is found in the note or principal.

Cess Pools Disinfected Instantly.—Prof. Thos. Taylor reports that 1 tablespoonful of spirits of turpentine in 1 pail of water will disinfect an ordinary cess pool instantly, and that in the sick chamber it will prove a powerful auxiliary against germs and bad odors.

Remarks.—Then, I think, 2 or 3 spoonsful to the pail of water would be equally effective for a water-closet—privy.

Oil on the Water has Enabled Vessels to Outride Storms at Sea.—The schooner George Sherman was reported, May 30, 1884, by the Chicago papers, to have ridden out the gale on Lake Michigan that week by pouring on the water 12 gallons of linseed oil, which calmed the waves for a distance of half a mile from the ship. This is, no doubt, true, but wonderful all the same—one of the mysteries of nature—Nature's God.

INDELIBLE INK.—For Marking Clothing, to Write with a Pen.—*Ink*—into an ounce bottle, put nitrate of silver (lunar caustic), 1 dr.; gum Arabic, clean and white, 3 or 4 pieces the size of a common pea; then fill {2/3} full with soft water. This ought to be in a dark-colored, glass-stoppered bottle. Else it must be kept in a dark place when not in use. This is the ink proper; but to make it permanent, we have to first use a pounce, which also prevents the ink from spreading in the cloth, as follows:

Pounce.—Into a 4 oz. bottle put sub-carbonate of soda, 2 drs.; fill with water. Directions.—Wet the places to be written upon with the pounce, and iron smooth with a properly heated iron; then rub hard over the same spot with the end of a tooth brush handle, to polish, that the writing may be done nicely with the ink, using only a quill pen; then pass the hot iron over the writing to dry, and set the ink, else dry, in the sun. This, if properly done makes it perfectly indelible. —*Indian Domestic Economy*.

Indelible Ink, Quickly and Cheaply made.—A correspondent of the Detroit *Free Press Household*, gives us the following very simple home made way of making the ink and doing the work, and I will guarantee it will prove satisfactory. She says:

Rain water, 1 table-spoonful; vinegar, ½ tea-spoonful lunar caustic, druggists keep this in small sticks, a piece 3 inches long; put all in an ounce bottle, and shake occasionally till dissolved. Keep in a dark place.

Directions.—To each tea-spoonful of milk—needed to wet the places upon which the name is to be written—dissolve a piece of baking soda as large as a grain of corn; iron it smoothly, and write the name with a quill pen with the ink immediately.

Remarks.—Dry with the hot iron or in the sun, as in No. 1. In the same communication the lady said: Common soda, (the same as baking soda), in powder, with a damp cloth, and a brisk rubbing, is the best thing to clean tinware, rubbing it dry.

Home-Made Filter, Cheap and very satisfactory.—Take a large flower-pot, put a piece of sponge over the hole in the bottom, fill ¾ full of equal parts of clean sand and charcoal the size of a pea; over this lay a woollen cloth large enough to hang over the sides of the pot. Pour water into the cloth and it will come out pure after the dust from the coal has been rubbed off by a few fillings. When it works too slow take off the woollen cloth and wash it thoroughly and replace it again, is all that will be required for a long time.

BOOTS AND SHOES—Cement for Patching Without Sewing.—Pure gutta Percha, eschewed or cut fine, ¼ oz., sulphide of carbon, 1½ ozs. is about the right proportions. It should be the consistence of thick molasses. Keep corked when not in use, as the sulphide is very evaporative. Directions—Cut the patch the right shape, pare the edge thin, remove all dirt and grease from the place to be mended. Apply 2 or 3 coats of the cement to boot and patch, with a suitable spatula or flat stick, as a brush soon dries up; heat each and press on the patch with a warm burnishing iron, as shoe-makers understand.

Boots—To Make Water-Proof.—Farmers and others whose business calls them into wind, snow, etc., ought to have their boots made purposely for them, not of thick, heavy cow-hide, but kip or some soft and pliable leather; a kind the shoe-makers know as a "runner," is good, and the soles should be double the whole length, and of firm and well tanned leather, and before wearing the soles should be well filled with tallow, heated and dried in; then oil the uppers with castor oil, also heated in, at least, a tablespoonful of it to each boot; then, if out in muddy or damp weather, or snow, or if you are compelled to stand or work in water during the day, wash off the boots clean at night, warming them by the fire while wet, and rub in the castor oil, a tablespoonful at least to each boot, and there will be no shrinkage, nor hard boots

to get on in the morning. Do this twice to thrice a week all winter, as the show or mud demands.

The following is condensed from a report of one Delos Wood, address not given, to the *Indiana Farmer*, retaining all that is essential to understand it. He says, "I have stood in mud and water 2 or 3 inches deep, for 10 hours a day for a week, without feeling any dampness or having any difficulty in getting my boots on or off, by this heating every night." He had previously tried one of the water-proof receipts containing rosin, tallow, etc., but found this the best plan. I will, however, give one of this kind, that any one may suit himself as to plans. The compounds containing rosin, however, must have a tendency to harden the leather, but kerosene, as mentioned below, is now said to soften them as soft as when new, so suit yourselves as to which shall be used. The oil dressing and blacking for leather, carriage tops, etc., below, must from the nature of its ingredients, prove a good dressing for boots; but if I was making it expressly for boots, I'd leave out the Prussian blue. Neat's foot-oil, and castor oil are both very softening for all kinds of leather. Still, it is considered that rosin and Burgundy pitch both have a tendency to harden leather; but, as seen below, it has recently been discovered that kerosene will soften old boots equal to new.

Farmer Boy's Water-Proofing for Boots.—"Farmer Boy," of Buchanan, Mich., gave one of the papers the following water-proofing for boots, which will be found good. He says: "Melt together beef tallow, 4 ozs.; rosin and beeswax, each, 1 oz., and when nearly cooled add as much neat's foot oil as the above mixture measures (6 ozs. will be near enough). It is to be applied with a soft rag, both to the soles and uppers. The leather should be warmed meanwhile before the fire, and the application well rubbed in. It requires two applications to make the leather thoroughly water-proof."

Rubber Water-Proofing for Boots.—Neat's foot oil, 1 pt.; old rubber boots, 2 lb.; rosin, 1 oz. Directions—Melt slowly, and then pour off from or take out the cloth of the old boots, and apply warm. The boots will be water and snow-proof. —*"C. E. G." in Scientific American.*

Jettine, or Liquid Shoe Blacking—Water-Proof, and Does Not Soil Ladies' White Dresses.—Alcohol, 1 qt.; gum shellac, ½ lb.; camphor gum, size of a hen's egg; lamp black, 1 oz. Directions—Break up the shellac finely and put into a bottle with the alcohol, keeping in a warm place and shaking a dozen times daily till dissolved; then break up the gum camphor and put in, and when dissolved add the lamp black, when it is ready for use. Apply with a sponge fastened with wire to the cork. The camphor prevents the cracking of the varnish. It may be applied to anything requiring a black finish.

Boots and Shoes, Jet Polish for.—Nice clear glue, ¼ lb.; logwood chips, ½ lb.; powered indigo, isinglass and soft soap, each, 2 teaspoonfuls; best cider vinegar, 1 qt.; soft water, 1 pt. Directions—Put all together and boil 10 minutes, after it begins to boil. When cool, strain. Remove all dirt from the boots or shoes and apply with sponge or swab.

Boots, Hard, to Soften.—The latest discovery as to the uses of kerosene is that it softens boots or shoes which have become hard from water-soaking, making them as pliable as new; but they should then have a coat or two of one of the castor oil or Neat's foot oil dressings to prevent a like condition again. It you doubt it, try it on a piece of old leather, as I did first.

Oil Dressing and Blacking for All Kinds of Leather, Carriage Tops, etc.—For 1 gal., take Neat's foot oil or fish oil (Neat's foot is the best), 3 qts.; mutton tallow, 2 lbs.; castor oil, 1 pt.; ivory black, very fine, 1½ lbs.; Prussian Blue ¼ lb.; beeswax, ½ lb.; rosin, ¼ lb.; Burgundy pitch, 1 oz. Directions—Put all together in an iron kettle over the fire; boil and stir ½ an hour; then set off and let settle 15 minutes, and pour off, free of all sediment. When cold it is ready for use.

Valuable as a water-proof for boots and shoes, harness, carriage tops, etc. The dirt in all cases to be cleaned off or washed off and allowed to dry, as the case demands. For this recipe, and the one for "Excelsior Axle Grease," an old farmer friend of mine and myself joined, paid $1 for them to a man who lived near Ann Arbor and was selling them on the streets, and had been doing so for some time, the articles giving satisfaction. As the two seem to belong together, I will give the axle grease here. He called it

Allen's Excelsior Axle Grease.—Castor oil and linseed oil, each, 1 qt.; tallow and rosin, each, 2 lbs.; beeswax, 1 lb. Directions—Heat all well together, stirring to incorporate and stir till cool.

"If either of these are too hard," he said, "add a little Neat's foot oil; if too soft, a little more tallow." They will prove valuable.

Boot, Shoe and Harness Edge Blacking, Cheap.—Soft water, 1 pt.; alcohol, ½ pt.; tinct. muriate of iron and ex. of

logwood, each, 2 ozs.; best blue nutgalls, 1½ ozs. DIRECTIONS.—Pulverize the galls and put into a bottle, adding the others; let it stand a few days, shaking several times daily, until the extract of logwood is dissolved, when it is ready for use and will give great satisfaction.

It has been customary to use all alcohol, but a shoemaker, considering the use of all water in inks, concluded, and proved by test, that for summer, water is just as good: and for winter the above amount of alcohol is sufficient.

Rubber Boots, to Mend.—In a recent *Blade* a request was made for the publication of a recipe to mend rubber boots and shoes, to which they gave the following: "Cut 1 lb. of caoutchouc into thin, small slices; heat in a suitable vessel over a moderate coal fire, until the caoutchouc becomes fluid; then add ½ lb. of powdered rosin, and melt both materials at a moderate heat. When these are perfectly fluid, gradually add 3 or 4 lbs. spirits of turpentine in small portions, and stir well. By the addition of the last, the rapid thickening and hardening of the compound will be prevented, and a mixture obtained fully answering the purpose of glueing together rubber surfaces, etc.

A coal fire is called for merely to avoid the blaze of a wood fire, which is liable to set the turpentine on fire while pouring in. Avoid a blaze, and let there be only a moderate fire, makes it safe with wood. Over a stove will be most safe. One-fourth or {1/8} the amount can be made as well, keeping the same proportions; and, if I was making it, I should put all together in the vessel, as there would be less danger of burning the caoutchouc. Keep covered when not in use, to prevent its drying up. The rosin makes it very tenacious.

Tanning Skins with the Hair or Wool On.—Alum, 3 lbs.; rock salt (good hard salt will do), ¼ lb. DIRECTIONS.—Soak the skin in water for one day; then remove all meat fat, etc. Dissolve, by boiling, the alum and salt in sufficient water to cover the skin—this amount for a deer, dog, wolf, or sheep skin—pour into a tub, and when only lukewarm, put in the skin and let it soak for 4 days, working it with a pounder or square-ended stick of wood every day; then dry in the shade —a warm shed is a good place to dry in. Then heat up the tan liquor again, and re-soak as before, after which wash out well and beat it with a wooden mallet till quite soft; dry again in the shade, rubbing it well from time to time with the hands. If this is properly done, you will have a very soft and pliable skin, suitable for any purpose for which such skins are used.—*Indian Domestic Economy.*

The following, which is somewhat different, I take from the Toronto *Globe*, as it suggests the plan of coloring or dyeing, making them equal to those on sale in the stores. It was given under the following head:

To make Mats from Sheepskins.—"Take a fresh skin and wash the wool in strong soap-suds only slightly warm to the hand. Pick out all the dirt from the wool, and scrub it well on a wash-board. A tablespoonful of kerosene added to 3 gallons of warm soap-suds will greatly help the cleaning. Wash in another suds, or until the wool looks white and clean. Then put the skin into cold water, enough to cover it, and dissolve ½ lb. of salt and the same quantity of alum in 3 pts. of boiling water; pour the mixture over the skin, and rinse it up and down in the water. Let it soak in this water 12 hours, then hang it over a fence or line to drain. When well drained stretch it on a board to dry, or nail it on the wall of the wood-house, or barn, wool side towards the boards. When nearly dry, rub into the skin 1 oz. each of powdered alum and saltpetre (if the skin is large, double the quantity); rub this in for an hour or so. To do this readily, the skin must be taken down and spread on a flat surface. Fold the skin's sides together and hang the mat away; rub it in every day for 3 days, or till perfectly dry. Scrape off the skin with a stick or blunt knife till cleared of all impurities, then rub it with pumice-stone or rotten-stone. Trim it to a good shape, and you have an excellent mat. Dye it green, blue, or scarlet, and you have as elegant a mat as those bought in the stores. Lambskins may be prepared in the same way and made into caps and mittens. Dyed a handsome brown or black they are equal to the best imported skins. Still-born lambs, or those that die very young, furnish very soft skins, which, if properly prepared, would make as handsome sacques, muffs, and tippets as the far-famed Astrakhan. In dying these skins shallow vessels are used, which permit the skin to be placed in them wool-side down, so that the skin itself is not injured by the hot dye."

The coloring can be done with any of the recipes for coloring woollen goods, being careful that the skin itself is not allowed to touch the hot dye.

1. RECIPES FOR BAKING POWDER.—Tartaric acid, 1 oz.; cream of tartar, 10 ozs.; bicarbonate of soda, 5 ozs. Mix thoroughly. This is improved by the addition of 4 ozs. of flour.

2. Cream of tartar, 6 ozs.; bicarbonate of soda, 2½ ozs.; flour, 4½ ozs.

This receipt was procured from a chemist, and is a receipt for one of the best brands of baking powder sold by the trade.

DRINKS.

Bottling Cider, to Keep for Years.—A writer in the *New England Farmer* gives his plan of bottling cider that will keep for years. He says: Leach and filter the cider through pure sand, after it has worked and fermented, and before it has soured. Put no alcohol or other substances with it. Be sure that the vessels you put it in are perfectly clean and sweet. After it is leached or filtered, put it in barrels or casks filled, leaving no room for air; bung them tight, and keep it where it won't freeze till February or March, then put it into champagne bottles filled; drive the corks and wire them. It should be done in a cellar or room that is comfortable for work. The best cider is late made, or made when it is as cold as can be and not freeze.

Boiled Cider—How to do It, and Its Uses.—This is prepared by boiling sweet cider down in the proportion of 4 gals. to 1 (I have always bottled only 3 to 1). Skim it well during boiling, and at the last take especial care that it does not scorch. A brass kettle, well cleansed with salt and vinegar, and washed with clear water, is the best thing to boil it in. For tart pies for summer use it is excellent; and for mince pies it is superior to brandy or any distilled liquor, and in fruit cake it is preferable to brandy, and also nice to stew dried apples in for sauce. It is a very convenient article in a family. —*Country Gentleman.*

Wine—Wild Grape, to Make Wine.—Wild grape juice—half-and-half—with water. First having mashed the grapes and let it stand 2 or 3 days, then press out and strain, adding the water and white sugar, 16 lbs. to each 5 gallon keg, and let work 2 weeks, filling up full with more of the same, and bung tight. In February, when I obtained it, it was very nice indeed. Almost, if not quite, equal to port—better than half the port we buy.

Blackberry Wine—to Make Properly.—Take, of course, clean kegs or casks; let the berries be ripe; extract the juice with a small wine or cider press, or it can be done through coarse cotton cloths; then pass the juice through a strainer; let the juice stand for 2 or 3 days in the tub until the first fermentation is over, then skim off the top carefully, and add to every quart of juice 3 lbs. of the best yellow sugar, and water enough to make 1 gallon. Put all in a kettle, and let it come to a boil, and then skim again. When cool, put in a keg, fill up to the bung, place in the cellar and let it remain there with the bung off until after the second fermentation, which will be in 4 or 5 days. Meantime keep the cask full by pouring in wine that has been reserved for the purpose. After the second fermentation, put in the bung tight and let it remain in the cask several months, say to the following February or March, when it should be carefully drawn off and put in bottles, or, what is better, demijohns of from 1 to 5 gallons. It will keep for any length of time without the addition of a drop of whiskey or brandy, and will prove a very agreeable and whole-some drink.—*"Sophia B.," in Germantown Telegraph.*

Unfermented Wines—to Make.—The juice of grapes, blackberries, raspberries, etc., pressed out without mashing the seeds, adding water, 1 pint, and sugar, ½ lb. for each pint of the juice; then boil a few minutes, skimming if any sediment or scum rises, and bottling while hot, corking tightly, cutting off the corks, and dipping the tops into wax, and keeping in a dry, cool place, gives a wine that no one would object to, if iced when drank. They are nourishing, satisfying to the thirst, and not intoxicating, because there has been no fermentation. Made of grapes, this wine is in every way suitable for communion, but might be preferred as first mentioned in V., under Cider, Grape Juice, etc., to Keep, above, where no water nor sugar are used.

BEERS—Ginger, English.—Loaf sugar, 2¼ lbs.; cream of tartar, 1½ ozs.; ginger root, 1½ ozs.; 2 lemons; fresh brewer's yeast, 2 tablespoonfuls; water, 3 gals. DIRECTIONS—Bruise the ginger, and put into a large earthenware pan, with the sugar and cream of tartar; peel the lemons, squeeze out the juice, strain it, and add, with the peel, to the other ingredients; then pour over the water boiling hot. When it has stood until it is only just warm, add the yeast, stir the contents of the pan, cover with a cloth, and let it remain near the fire for 12 hours. Then skim off the yeast, and pour the liquor off into another vessel, taking care not to shake it, so as to leave the sediment; bottle it immediately, cork it tightly; in 3 or 4 days it will be fit for use.

Ginger Pop.—White sugar, ¾ lb.; cream of tartar and ginger root, bruised, each, ¾ oz.; juice and grated yellow of 1 lemon; water, 1 gal.; fresh yeast, 1 tablespoonful; essence of winter green or sassafras, as you prefer, or half as much of each, if a mixed flavor is liked. DIRECTIONS—Put all into a jar, except the yeast and essence; and pour out over the water, boiling hot; cover, and let stand until it is only lukewarm, and add the yeast and essence, and let stand in a cool place 24 hours, strain and bottle, securing the corks tightly. It will be ready in about 3 days. More or less flavor may be used to suit different tastes.

Cream Beer or Soda, any Flavor.—Sugar, 2¼ lbs.; citric acid, 2 ozs.; juice of 1 lemon; water, 3 pts. DIRECTIONS—Dissolve by heat, and boil 5 minutes; when cold, add the beaten whites of 3 eggs, beaten into a small cup of flour; and then stir in the ex. of lemon, or the ex. of any other flavor you desire; bottle and keep cool; put 2 tablespoonfuls, more or less as you prefer, into a tumbler of cold water, and stir in {1/3} to ½ teaspoonful of soda, and drink at your leisure, as the eggs and flavor holds a cream on top.

Summer Drink, Pleasant for Sick or Well Persons.—Mash a few currants, and pour on them a little water, strain, sweeten, and add sufficient cold water to suit the taste, though it is best to use the currants pretty freely, and sugar accordingly, as the acid of the currant makes this drink peculiarly grateful to the sick as well as those in health, satisfying the thirst of either. Currant jelly in cold water makes a good substitute for currants, and is next to that of tamarinds, which is undoubtedly the best to allay the thirst of fever patients of anything known. Lemons do very well. See next recipe.

Lemon Syrup, to Prepare, When Lemons are Cheap.—A very handy way of supplying summer drinks, or even for winter, when lemons are at a low figure, is to take any quantity, press the hand upon each, and roll it back and forth briskly, to break the cells, and make the juice press out more easily into the bowl, never into tin, as it gives a bad taste from the action of the acid upon the tin.

CARE OF CANARIES.

One of the most attractive and joyous embellishments of the home, one which, next to the presence of flowers, most gladdens, is found in that ever-welcome stranger—the canary. No home is now considered complete until this little visitor has taken up his abode in the window-garden of some quiet nook, and we propose to devote a few pages to the proper treatment of this, the most attractive of all domestic pets.

CAGES.

Of first importance to those who propose to keep canaries is the selection of proper cages. The cages in general use are altogether ill adapted to comfort, being open to the air at every point, and admitting a succession of draughts from morning till night. The brass open-barred cages, with sliding doors, now so much in vogue, should be avoided, as water lodging on the brass presents gangrene, and, when this is tasted, produces sometimes a sudden death. The best cage is made from mahogany and wire. It should be about thirteen inches long, eleven inches high, and eight inches deep, having the top, back, and one of the sides of wood and the other side and front of tinned wire-work, so as to admit the air and at the same time exclude a draft. The cage inside should be painted white. A long, square, but narrow perch should run from end to end, about the centre of the cage, and a second of a similar kind, directly behind the two tin pans inserted at the front of the cage, one on either side, to hold the seed. In the middle of the wire-work, at the front, let there be a hole sufficiently large to admit the bird's head while drinking. By having two perches only, the bird's feet will be kept clean and he will have plenty of room for exercise, without injuring his plumage.

In addition to the water supplied in the tin, it is always expedient to have a square earthenware bath, fitted in a mahogany frame, ready for use.

Breeding-cages for canaries are required of larger proportions. The top and sides should be made of wood, the front of strong tin wire. Three or four perches should run across the cage, and a little chamber, or rather one large chamber divided into two, should be made immediately under the top of the cage to hold the nest-boxes: in front of these should be circular holes, to give ingress and egress to the birds; and behind, in the side of the cage, doors, by which you can yourself get access to them. Beneath the nest boxes should be a small cage separated by wires from the larger one. This is for the young birds after they have left the nest. A distinct apartment of this kind is rendered necessary by a habit which the old birds have of plucking off the feathers of their young to line their nests for the next brood. The arrangements for food and drinking water should be the same as inner cage; but breeding birds will not require the bath. The wires of cages should not be painted; the paint is liable to be pecked off, and, being eaten by the birds, proves injurious to them. The best material for this purpose is tinned iron wire, which can always be kept clean and does not rust.

SELECTING AND BREEDING.

Birds are known to be old that have blackish rough scales on their feet, and strong, long claws. A fine, rich, clear, healthy, mealy hen, paired with a healthy, clear yellow cock, if both are bred from clear yellow stock, will produce handsome jonque birds. There are two classes of clear canaries, of a darker or lighter shade of color, designated by the synonymous terms, yellow and white, jonque and mealy, orange and white, and gold and silver.

To match birds of the same nest for breeding is considered unadvisable, as it will in every respect weaken them. To breed crested birds, if one has a fine crest match it to an opposite. Good birds may also be obtained by having one parent handsomely pied, and the other clear yellow or mealy. Cinnamon colored birds are to be obtained by matching a green male and clear yellow or mealy female, or the reverse. Some persons pair their birds the latter end of February; others a month later. As soon as the birds are paired, keep feeding them high, and add a little moist sugar to the bread and egg until the hen has commenced laying, as it will prevent her from becoming egg-bound.

GENERAL TREATMENT.

In winter canaries should not be allowed to remain in a cold room; in summer it is proper to allow them fresh air, which they enjoy, and in the light and heat of the sun they sing gaily and freely. Wholesome air and a lively situation will keep your birds in spirits and health; but beware of placing them in draughts, as many birds contract colds, asthma, and other diseases from that cause.

Cleanliness being a great preservative against most of their disorders, at the bottom of the cage a false bottom should be made so as to draw out, that it may the easier be cleaned and covered with sifted gravel or sand; some persons recommend sea-sand, the saline properties of which are considered good. Keep the birds' feet clean, and fresh water should be given them every day. The cages and birds must be kept free from vermin; examine the crevices and cracks of your cages, and if you find vermin, remove the bird and wash the cage with a mixture of tobacco and sulphur placed in boiling soap and water; should the bird have any parasites, syringe him daily with this mixture when cool, and while the bird is damp sprinkle over him Scotch snuff. In the course of a week he will be free from insects. If a piece of old mortar and plenty of gravel are kept at the bottom of the cage, it will aid in keeping the birds healthy.

Canaries should not be put up for breeding too early in the season. When the nests are made, the hens soon commence laying. A canary lays on the average, from two to five eggs, and the time of sitting is thirteen days. If three days afterwards any of the eggs remain as they were, remove them with a warm hand and place them gently in some water. If they are alive, you will then, by watching, see some evidences of the fact, and must tenderly replace them; if you do not, they may be destroyed.

When birds are sitting, it is not desirable that they should wash themselves all over, but it should be remembered that the canary loves a bath, and that she should be judiciously indulged in this way.

The materials for nest-building can be purchased of the dealers, but before using they should be freed from dust and dirt, and well washed in clean hot water to destroy any vermin that might be lurking therein.

Should the parent bird neglect to feed the young—a result which sometimes follows pairing at the wrong time of year, or from pairing birds before they are old enough—procure a piece of stale wheaten bread, the best; grate, and mix with some bruised and scalded rape-seed and a small portion from the yolk of a hard-boiled egg. Remove the nestlings to a warm corner and cover the cage up to exclude draughts. Feed with this preparation every quarter of an hour, using, by way of spoon, the finely pointed end of a short stick. Occasionally let a drop or two of water fall into their open beaks.

Young birds, unless neglected by the old birds, should not be removed until they are five weeks old, and their food should be very gradually changed. Afterwards keep them in a warm room, and within hearing of a good songster. During breeding you must not pry too closely into the proceedings of your bird. When it is found either desirable or necessary to feed the young birds by hand, they should be removed from the nest when they are about eight or nine days old.

In feeding your birds see that the canary-seed is large and glossy, and the rape or flax-seed large and new; and in mixing them together, use the two last in smaller proportions. Give a very little bruised hemp-seed occasionally. Great care should be taken with the food while breeding. Birds should have green food occasionally, but not too often; and for this purpose it should be gathered dry and given fresh. It is cruel to keep a poor little prisoner within sight of such a tempting luxury as green food, and yet neglect to gratify him now and then with a gathered leaf.

When you are in the habit of letting your birds loose, to fly about the room or in the aviary, and want to catch them, use a circular hoop-net of stout string, made deep and fastened on a wire hoop attached to a pole about six feet long—not less. By the skilful use of this net you may secure the bird without destroying the beauty of its plumage.

Canaries will soon acquire the habit of picking out their small feathers and thus disfiguring themselves. The only way of combatting this habit is by suspending a counter attraction for them to pick at—such as a piece of pack-thread saturated with sugar and water and hanging nearly as low as the perch.

MOULTING.

When a canary moults in July or August, according to the warmth or coldness of the season, all you need do is to keep him quiet and free from draughts. Feed him with a very small quantity of raw beef, scraped and moistened with water, once a week, and occasionally a little of the yolk of a hard-boiled egg, with now and then a piece of sponge cake, and ripe chickweed in full flower.

DISORDERS.

As birds are attacked with various diseases, we enumerate the following symptoms:—Placing their heads under their wings; lowering their wings; their feathers becoming bristled, uncompact, or loose; a cough, whine, or moan, as if they were in pain; panting in their breathing, etc. Great negligence is displayed in not, immediately they appear unwell, administering in their food or water such medicines as are essential to their cure. In all cases where milk is administered in warm weather, remove it before it becomes acid.

Asthma.—This disease arises from neglected colds, exposure to draughts, or from the birds being kept in very hot rooms. The symptom is a gasping as if for breath. Pure mild air and salutary food may in this case benefit, but it is seldom cured. Chickweed, groundsel, or watercress, will sometimes ease the bird; lettuce and endive leaves are also recommended. Castor oil with fresh milk and bread, sulphur in the seed, and a small quantity of camphor in the water, are given to birds suffering from this complaint.

Consumption, or Decline.—Atrophy is the form this disorder sometimes assumes in its early stages, produced from impure air or improper food. In addition to their ordinary food, give millet-seed, a little fresh milk and bread, watercress, or chickweed; place in the water a small piece of camphor, and in the seed a small quantity of sulphur occasionally.

Epilepsy.—This disease exhibits itself in sudden fits. The readiest method of treating is to syringe the bird well with water. Some persons have recourse to cutting the bird's toe-nail until it bleeds.

Ulcers.—If soft ulcers arise on the head or other parts, anoint them with sweet or olive oil. Tumors require opening and drawing.

Giddiness.—Some birds, that have been in cages open at the top, acquire the habit of twisting their heads and necks so far back as to overbalance themselves. When this is the case, remove them to covered cages, or place a dark covering over the top of the cage.

Baldness.—Should a canary become bald about the head or neck, and given to moping, there is no doubt that he has the "surfeit." This arises from being fed on bad seed or unripe green food, causing a humor of an acrid nature to exude from the skin. Wash the bird's head night and morning in salt and water, drying it with a soft clean cloth. Then rub in on the bald places a little lard or fresh butter. Repeat these operations for a week. This will cure the disorder, and in the spring the feathers will again begin to appear.

Huskiness.—When this disorder is detected the bird should be kept warm and free from draughts. Its food should consist of finely-scraped beef, mixed with hard-boiled yolk of egg, with a little cold water to dilute. Before giving this, put some boiled milk into the drinking glass; do this for two days and then give the prepared meat.

THE TOILET.

BARBERS' AND DOMESTIC.

1. HAIR DYE—Black—Eley's Best.—I. Pyrogalic acid, 1 dr.; distilled, pure rain-water, 6 oz.

II. Nitrate of silver, crystals, 2 drs.; strong aqua ammonia, 1 oz.; gum arabic, dissolved in a little water, 1 dr. Mix all.

DIRECTIONS.—First apply No. I., and let it dry; then No. II., and let dry. And if by carelessness there are any spots on the face, take them off with No. I. of the "Brown." Alcohol will take them off, but not as nicely as the sulphuret of the next dye.

2. Hair Dye—Brown, or a Lighter Shade.—I. Sulphuret of potash, 1 oz.; distilled or pure rain water, ½ pint.

II. Use the No. II. of the "Black,"—in other words, the dyes are the same.

DIRECTIONS.—Apply No. I., the sulphuret, and let it dry; then apply No. II. of the "Black" until you get a little darker shade than you desire; then re-apply the No. I., sulphuret, which leaves the desired shade, by making it a little lighter than it was.

1. LUSTRAL OIL—Hair Tonic, or Sea Foam—Eley's.—Alcohol, 1 pint; glycerine, 1 oz.; tincture cantharides, 2 drs.; aqua ammonia, 1 oz.; rain water, 5 ozs. Mix. DIRECTIONS—Pour upon the head, or into the hand and apply to the head, rubbing well until the foam subsides. Apply more or less, freely at first, as the condition of the scalp demands. It dissolves the dandruff; is good for a sore scalp, chapped hands, etc. For sore scalp, apply once daily; for chapped hands, night and morning. See remarks above, as to its reliability. I keep it in the office, and have used it many times.

2. Barber's Lustre, or Hair Tonic—Bowers'.—Alcohol, 1 quart; distilled or pure rain water, 1¼ pints; glycerine, 1 oz.; aqua ammonia, ¾ oz., or just enough, when shaken together, to make it look milky or a little white. This recipe is from Henry Bowers, with whom I have shaved about 2 years. It is not quite as strong as Eley's, but cleans the scalp nicely. He has used it on my head with satisfaction.

1. BOB HEATER'S SHAMPOO—Hair Tonic—Very Strong.—First put oil of sweet almonds, 4 ozs., into alcohol, 1 pint, and put in oil of bergamot, 2 drs., or 1 dr., with oil citronella, 1 dr., when it can be had; then add aqua ammonia, 4 ozs.; rye whiskey, 8 ozs.; gum camphor, ½ oz. Mix. Shake before applying, and rub in thoroughly.

1. HAIR OIL, OR DRESSING—Very Fine.—Castor oil and Cologne alcohol, each ½ pint; oil of lemon-grass, 1 dr.; oil of bergamot, ½ dr. Mix.

SHAMPOO OR WASH—To cleanse the Hair and Scalp.—Salts of tartar, powdered borax, aqua ammonia, each 1 oz.; rain water, 1 qt.; mix. DIRECTIONS—Rub well into the roots of the hair once a week. Good for a tettered spot on any part of the body. Applying freely (after using the hair dressing above, of glycerine and rose water.)

A wash of sage tea and borax, say 1 or 2 ozs., powdered to 1 qt. of the tea, is claimed to cleanse the scalp, make the hair grow nicely and keep it soft.

1. HAIR DRESSING WITH BAY RUM NICER THAN ALCOHOL.—"Dr. Cap," of New London, Conn., gives "Angeline," of the *Detroit Free Press Household*, the following:

"Bay rum, imported, 6 ozs.; castor oil, 2 ozs.; tinct. of cantharides, 1½ oz., perfume with anything you wish; will not only be good but harmless."

1. HAIR RESTORATIVE—Which has raised a Thick Head of Hair on a Bald Scalp.—Notwithstanding there are those who claim it cannot be done, there are those also who claim it can. The following is claimed by a physician to have done it upon his head. It will not do harm, and on some heads it will, no doubt, produce a head of hair "where the hair ought to grow," but does not, while in some cases it may not. It is owing to the condition of the hair follicles. If inflammation has destroyed them there is no hope; while if the work is only in progress it will; so it is no harm to try it. It is:

"Castor oil and alcohol, each 2 ozs.; tinct. cantharides and rain water, each 1 oz.; oil of bergamot, 1 dr.; mix, and use with a stiff brush."

2. Hair Wash or Restorative—Italian.—I will give one more wash or dressing, easily made, and very satisfactory. I have used it. It is:

Syrup of rosemary, 2 qts.; liquid potassa, ½ oz.; aqua ammonia, 1 oz.; oil of sweet almonds, 2½ ozs.; castor oil, 1 oz.; good whiskey, 1½ pts.

Remarks.—It looks a little milky at first, but soon clears up. Shake when used. This is good for dandruff and to clean the scalp.

Crimps in Damp Weather—To Keep in Place.—A very good bandoline is made by the use of gum Arabic or gum tragacanth (the Arabic is most used while the tragacanth is the best), say ½ oz. powdered, pouring on just enough boiling water to dissolve it; then adding alcohol enough to make it rather thin, (about 1 oz.). Let stand open all night, then bottle for use. Directions—Wet the bangs with this mixture at bed time, and twist or curl the bangs upon the forehead, as desired; then put over a bit of lace, or a gauze band (French *bandeau*), to keep it in position till dry, or rather, till morning; then remove the *bandeau*, and pull the crimps out with the fingers until they are soft and fluffy. It does not injure the hair, nor will the bandoline of quince seeds above. It will not come out, even in damp weather. If there is any gum on the hair, rub it off with the fingers, and if it looks dull, touch the fingers to a little of the glycerine and rose water dressing above, and pass them lightly over the hair to give it a shiny appearance.

Hair Curling Liquid.—Salt of tartar (which is carbonate of potassa), ¼ oz., aqua ammonia and cologne, each, 1 dr.; glycerine, ¼ oz.; alcohol, 1½ ozs.; distilled or pure soft water, 1 pt. If you wish it to have color, add ½ dr. of powdered cochineal. Shake daily for a week, and filter, or strain. Directions—To use it moisten the hair with it and adjust it loosely, as it dries it shows its tendency to curl; then run the fingers through it to lighten it up, as you desire.

COSMETICS FOR THE FACE.—For a very fine one (see face wash), Mrs. Chase's following treatment of pimpled face, etc.: Put flake white, ½ oz., in bay rum and water, each 2 ozs., and applied after shaking, to the face with a piece of soft flannel, and when dry, wiped or rubbed off where too much white shows, is excellent. But I have much faith in the old lady's only cosmetic, given next below:

An Old Lady's Only Cosmetic.—"The only cosmetic I have used," said an old lady, "is a flannel wash-cloth. For forty years I have bathed my face every night and morning with clear water as hot as I can bear it, using for the purpose a small square of flannel, renewed as often as it grows thick and felt-like. My mother taught me to do this, as her mother had done before her. No soap nor powder, nor glycerine even, has touched my face, and this is what my skin is at 60," she finished, touching with pardonable pride a cheek whose peachy bloom and fine soft texture gave effective emphasis to the recipe.—*Harper's Bazar*.

POMADE.—For the Hair, Lips, Chapped Hands, etc.—Oil of sweet almonds, 4 ozs.; spermaceti, 1 oz.; oil of lemon-grass, or oil of neroli (which is oil of orange flowers), ½ dr. Directions—Use sufficient heat to melt the spermaceti in the oil of almonds, and when cool stir in the perfuming oil, and put into a large mouthed bottle, to reach it with the finger. Of course, all flavored, or perfumed, or alcoholic mixtures, should be kept corked.

Pomade, Very Fine.—White wax, 1½ ozs.; pure glycerine, 2 fl. ozs.; castor oil, 12 fl. ozs.; oil of lemon (I would say lemon grass), 5 drops; oil of bergamot, 2 drops; oil of lavender, 1 drop; oil of cloves, 10 drops; annatto, 10 grs.; alcohol and water as below. Directions—Dissolve the wax in ¼ of the castor oil, with as little heat as possible, then titurate, or rub in the balance of the castor oil and glycerine, and stir till cool, and add the perfuming oils. Rub the annatto in 1 dr. (teaspoonful) of water until smoothly mixed, then add the same amount of alcohol to it, and stir it into the pomade. Do not use too much heat, and use the bandest (nicest) castor oil.—*American Journal of Pharmacy*.

Remarks.—This makes a very fine pomade. The annatto is only to give it color. The same amount of cochineal would give it a reddish shade, instead of a yellowish, with the annatto. Turmeric would give a yellowish shade, and carmine a carnation, all fine in themselves, to choose from. But it is just as good without either.

DEPILATORY—To Remove Superfluous Hair Boudets, or the Best French.—Crystallized sulphide of sodium, 3 drs.; quick (unslacked) lime, 10 drs.; starch, 11 drs. Directions—Reduce each separately, to a fine powder. Mix and keep in well stoppered bottles. When to be used, moisten to a paste, with a little water, spread on the part to be denuded

(from the Latin *de*, and *nudare*, to make naked), and leave on only 2 to 4 minutes. Lift it off with a dull knife, which fetches the hair with it.—*Druggists' Circular.*

Depilatory, Our Own Druggist's.—Powdered, unslacked lime, 8 drs.; carbonate of potash (which is salts of tartar), and sulphuret of potassium, each 1 dr. Mix and keep dry, as the first above. DIRECTIONS—Mix only to cover a small space at a time, leaving on only 5 to 10 minutes, then scrape off, which fetches the hair.

Remarks.—I have had this prepared and sent to various persons, on their application to me for such a preparation. I tell all, however, better let the hair grow, than to try to destroy the follicles, as this would require to keep on the mixture till it would make a sore, equal to a bad burn. If in any case this is done by accident, or to destroy the hair follicles, treat the sore the same as a burn.

Bay Rum, Barbers'.—Magnesia and powdered borax, each 30 grs.; oil of bay, ½ to 1 dr.; alcohol, 2 ozs.; dilute alcohol, 1 qt. DIRECTIONS—First, rub the magnesia, borax, and oil of bay in the 2 ozs. of strong alcohol, in a mortar; then put into a filter, and gradually pour on the dilute alcohol to percolate through the magnesia.—*Mt. Vernon (O.) Barber.*

Wash for Ladies' Hands.—This very appropriately comes in here, as it is really a toilet wash. Put powdered borax, 5 ozs., into a bottle with water, 1 pt. If this all dissolves, put in enough to always keep some borax, undissolved, at the bottom. When the garden work is done for the day, put enough into the water in which the hands are to be washed to make it soft or slippery as suds. "It is very cleansing," says Prof. Beal, of the Michigan Agricultural College, Lansing, "and by this use of it the hands will be kept in excellent condition, smooth and soft and white." Of course, a little of this in water to wash the head will cleanse the scalp as nicely as the hands.

Oatmeal Soap, to Keep the Hands Soft in Winter.—Take the white castile soap (the white is the mildest), ¼ lb., and melt it, with very gentle heat, in sweet almond oil, 1 oz.; then remove from the fire, and stir in oatmeal, 1½ ozs.

INTEREST.

EXPLANATIONS OF THE INTEREST TABLES.

EXAMPLE:

Desired to obtain the interest on $1,111.00, for 1 year, 4 months, and 27 days, at 6 per cent.

Turning to the tables you will see that the time is given in the left-hand column, the amounts on which you desire to find the interest are given at the heads of the various right-hand columns, the sum sought is found at the meeting of the lines to the right of the time, and down from the amount, as follows:

The	interest	on	$1,000,	1	year,	at 6	per	cent,	$60.00
"	"	"	100,	"	"	"	"	"	6.00
"	"	"	10,	"	"	"	"	"	60
"	"	"	1,	"	"	"	"	"	06
"	"	"	1,000,	4	months,	"	"	"	20.00
"	"	"	100,	"	"	"	"	"	2.00
"	"	"	10,	"	"	"	"	"	20
"	"	"	1,	"	"	"	"	"	02
"	"	"	1,000,	27	days	"	"	"	4.50
"	"	"	100,	"	"	"	"	"	45
"	"	"	10,	"	"	"	"	"	05
"	"	"	1,	"	"	"	"	"	00

Whole sum of interest sought									$93.88

In the same manner, proceed with any other amounts, or any other time, or rate per cent.; and if for more than one year, multiply the interest for 1 year by the number of years for which the interest is sought; if for twenty, thirty, sixty, or any other amount between ten and one hundred dollars, multiply the interest on ten dollars, by the number of tens in the amount, which gives you the whole sum of interest sought; the same rule holds good on hundreds, between one hundred and one thousand, and, also, on thousands.

To find interest at 5 per cent., take one-half of the 10 per cent. rate.

And, of course, the principle works the same on all of the tables, for the different rates of per cent.

INTEREST TABLE, SIX PER CENT.

TIME	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1000
1 DAY	0	0	0	0	0	0	0	0	0	0	2	17
2	0	0	0	0	0	0	0	0	0	0	3	33
3	0	0	0	0	0	0	0	0	0	1	5	50
4	0	0	0	0	0	0	0	1	1	1	7	67
5	0	0	0	0	0	0	1	1	1	1	8	83
6	0	0	0	0	0	1	1	1	1	1	10	1.00
7	0	0	0	0	0	1	1	1	1	1	12	1.17
8	0	0	0	0	1	1	1	1	1	1	13	1.33
9	0	0	0	1	1	1	1	1	1	2	15	1.50

10	0	0	1	1	1	1	1	1	2	2	17	1.67
11	0	0	1	1	1	1	1	1	2	2	18	1.83
12	0	0	1	1	1	1	1	2	2	2	20	2.00
13	0	0	1	1	1	1	2	2	2	2	22	2.17
14	0	0	1	1	1	1	2	2	2	2	23	2.33
15	0	1	1	1	1	2	2	2	2	3	25	2.50
16	0	1	1	1	1	2	2	2	2	3	27	2.67
17	0	1	1	1	1	2	2	2	3	3	28	2.83
18	0	1	1	1	2	2	2	2	3	3	30	3.00
19	0	1	1	1	2	2	2	3	3	3	32	3.17
20	0	1	1	1	2	2	2	3	3	3	33	3.33
21	0	1	1	1	2	2	2	3	3	4	35	3.50
22	0	1	1	1	2	2	3	3	3	4	37	3.67
23	0	1	1	2	2	2	3	3	3	4	38	3.83
24	0	1	1	2	2	2	3	3	4	4	40	4.00
25	0	1	1	2	2	3	3	3	4	4	42	4.17
26	0	1	1	2	2	3	3	3	4	4	43	4.33
27	0	1	1	2	2	3	3	4	4	5	45	4.50
28	0	1	1	2	2	3	3	4	4	5	47	4.67
29	0	1	1	2	2	3	3	4	4	5	48	4.83
1 MONTH	1	1	2	2	3	3	4	4	5	5	50	5.00
2	1	2	3	4	5	6	7	8	9	10	1.00	10.00
3	2	3	5	6	8	9	11	12	14	15	1.50	15.00
4	2	4	6	8	10	12	14	16	18	20	2.00	20.00
5	3	5	8	10	13	15	18	20	23	25	2.50	25.00
6	3	6	9	12	15	18	21	24	27	30	3.00	30.00
7	4	7	11	14	18	20	25	28	32	35	3.50	35.00
8	4	8	12	16	20	24	28	32	36	40	4.00	40.00
9	5	9	14	18	23	27	32	36	41	45	4.50	45.00
10	5	10	15	20	25	30	35	40	45	50	5.00	50.00
11	6	11	17	22	28	33	39	44	50	54	5.50	55.00
1 YEAR	6	12	18	24	30	36	42	48	54	60	6.00	60.00

INTEREST TABLE, SEVEN PER CENT.

TIME	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1000
1 DAY	0	0	0	0	0	0	0	0	0	0	2	19
2	0	0	0	0	0	0	0	0	0	0	4	39
3	0	0	0	0	0	0	0	0	1	1	6	58
4	0	0	0	0	0	0	1	1	1	1	8	78
5	0	0	0	0	0	1	1	1	1	1	10	97
6	0	0	0	0	1	1	1	1	1	1	12	1.17
7	0	0	0	1	1	1	1	1	1	1	14	1.36
8	0	0	0	1	1	1	1	1	1	2	16	1.56
9	0	0	1	1	1	1	1	1	2	2	18	1.75

10	0	0	1	1	1	1	1	2	2	2	19	1.94
11	0	0	1	1	1	1	1	2	2	2	21	2.14
12	0	0	1	1	1	1	2	2	2	2	23	2.33
13	0	1	1	1	1	2	2	2	2	3	25	2.58
14	0	1	1	1	1	2	2	2	2	3	27	2.72
15	0	1	1	1	1	2	2	2	3	3	29	2.92
16	0	1	1	1	2	2	2	2	3	3	31	3.11
17	0	1	1	1	2	2	2	3	3	3	33	3.31
18	0	1	1	1	2	2	2	3	3	4	35	3.50
19	0	1	1	1	2	2	3	3	3	4	37	3.69
20	0	1	1	2	2	2	3	3	4	4	39	3.89
21	0	1	1	2	2	2	3	3	4	4	41	4.08
22	0	1	1	2	2	3	3	3	4	4	43	4.28
23	0	1	1	2	2	3	3	4	4	4	45	4.47
24	0	1	1	2	2	3	3	4	4	5	47	4.67
25	0	1	1	2	2	3	3	4	4	5	49	4.86
26	1	1	2	2	3	3	4	4	5	5	51	5.06
27	1	1	2	2	3	3	4	4	5	5	53	5.25
28	1	1	2	2	3	3	4	4	5	5	54	5.44
29	1	1	2	2	3	3	4	5	5	6	56	5.64
1 MONTH	1	1	2	2	3	4	4	5	5	6	58	5.83
2	1	2	4	5	6	7	8	9	11	12	1.17	11.67
3	2	4	5	7	9	11	12	14	16	18	1.75	17.50
4	2	5	7	9	12	14	16	19	21	23	2.33	23.23
5	3	6	9	12	15	18	20	23	26	29	2.92	29.17
6	4	7	11	14	18	21	25	28	32	35	3.50	35.00
7	4	8	12	16	20	25	29	33	37	41	4.08	40.83
8	5	9	14	17	23	28	33	37	42	47	4.67	46.67
9	5	11	16	21	26	32	37	42	47	53	5.25	52.50
10	6	12	18	23	29	35	41	47	53	58	5.83	58.33
11	6	13	19	26	32	39	45	51	58	64	6.42	64.17
1 YEAR	7	14	21	28	35	42	49	56	63	70	7.00	70.00

INTEREST TABLE, EIGHT PER CENT.

TIME	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1000
1 DAY	0	0	0	0	0	0	0	0	0	0	2	22
2	0	0	0	0	0	0	0	0	0	0	4	44
3	0	0	0	0	0	0	0	1	1	1	7	67
4	0	0	0	0	0	1	1	1	1	1	9	89
5	0	0	0	0	1	1	1	1	1	1	11	1.11
6	0	0	0	1	1	1	1	1	1	1	13	1.33
7	0	0	0	1	1	1	1	1	1	2	16	1.56
8	0	0	1	1	1	1	1	1	2	2	18	1.78

9	0	0	1	1	1	1	1	2	2	2	20	2.00
10	0	0	1	1	1	1	2	2	2	2	22	2.22
11	0	0	1	1	1	1	2	2	2	2	24	2.44
12	0	1	1	1	1	2	2	2	2	3	27	2.67
13	0	1	1	1	1	2	2	2	3	3	29	2.89
14	0	1	1	1	2	2	2	2	3	3	31	3.11
15	0	1	1	1	2	2	2	3	3	3	33	3.33
16	0	1	1	1	2	2	2	3	3	4	36	3.56
17	0	1	1	2	2	2	3	3	3	4	38	3.78
18	0	1	1	2	2	2	3	3	4	4	40	4.00
19	0	1	1	2	2	3	3	3	4	4	42	4.22
20	0	1	1	2	2	3	3	4	4	4	44	4.44
21	0	1	1	2	2	3	3	4	4	5	47	4.67
22	0	1	1	2	2	3	3	4	4	5	49	4.89
23	1	1	2	2	3	3	4	4	5	5	51	5.11
24	1	1	2	2	3	3	4	4	5	5	53	5.33
25	1	1	2	2	3	3	4	4	5	6	56	5.56
26	1	1	2	2	3	3	4	5	5	6	58	5.78
27	1	1	2	2	3	4	4	5	5	6	60	6.00
28	1	1	2	2	3	4	4	5	6	6	62	6.22
29	1	1	2	3	3	4	5	5	6	6	64	6.44
1 MONTH	1	1	2	3	3	4	5	5	6	7	67	6.67
2	1	3	4	5	7	8	9	11	12	13	1.33	13.33
3	2	4	6	8	10	12	14	16	18	20	2.00	20.00
4	3	5	8	11	13	16	19	21	24	27	2.67	26.67
5	3	7	10	13	17	20	23	27	30	33	3.33	33.33
6	4	8	12	16	20	24	28	32	36	40	4.00	40.00
7	5	9	14	19	23	28	33	37	42	47	4.67	46.67
8	5	11	16	21	27	32	37	43	48	53	5.33	53.33
9	6	12	18	24	30	36	42	48	54	60	6.00	60.00
10	7	13	20	27	33	40	47	53	60	67	6.67	66.67
11	7	15	22	29	37	44	51	59	66	73	7.33	73.33
1 YEAR	8	16	24	32	40	48	56	64	72	80	8.00	80.00

INTEREST TABLE, NINE PER CENT.

TIME	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1000
1 DAY	0	0	0	0	0	0	0	0	0	0	3	25
2	0	0	0	0	0	0	0	0	0	1	5	50
3	0	0	0	0	0	0	1	1	1	1	8	75
4	0	0	0	0	1	1	1	1	1	1	10	1.00
5	0	0	0	1	1	1	1	1	1	1	13	1.25
6	0	0	0	1	1	1	1	1	1	2	15	1.50
7	0	0	1	1	1	1	1	1	2	2	18	1.75
8	0	0	1	1	1	1	1	2	2	2	20	2.00

9	0	0	1	1	1	1	2	2	2	2	23	2.25
10	0	1	1	1	1	2	2	2	2	3	25	2.50
11	0	1	1	1	1	2	2	2	2	3	28	2.75
12	0	1	1	1	2	2	2	2	3	3	30	3.00
13	0	1	1	1	2	2	2	3	3	3	33	3.25
14	0	1	1	1	2	2	2	3	3	4	35	3.50
15	0	1	1	2	2	2	3	3	3	4	38	3.75
16	0	1	1	2	2	2	3	3	4	4	40	4.00
17	0	1	1	2	2	3	3	3	4	4	43	4.25
18	0	1	1	2	2	3	3	4	4	5	45	4.50
19	0	1	1	2	2	3	3	4	4	5	48	4.75
20	1	1	2	2	3	3	4	4	5	5	50	5.00
21	1	1	2	2	3	3	4	4	5	5	53	5.25
22	1	1	2	2	3	3	4	4	5	6	55	5.50
23	1	1	2	2	3	3	4	5	5	6	58	5.75
24	1	1	2	2	3	4	4	5	5	6	60	6.00
25	1	1	2	3	3	4	4	5	6	6	63	6.25
26	1	1	2	3	3	4	5	5	6	7	65	6.50
27	1	1	2	3	3	4	5	5	6	7	68	6.75
28	1	1	2	3	4	4	5	6	6	7	70	7.00
29	1	1	2	3	4	4	5	6	7	7	73	7.25
1 MONTH	1	2	2	3	4	5	5	6	7	8	75	7.50
2	2	3	5	6	8	9	11	12	14	15	1.50	15.00
3	2	5	7	9	11	14	16	18	20	23	2.25	22.50
4	3	6	9	12	15	18	21	24	27	30	3.00	30.00
5	4	8	11	15	19	23	26	30	34	38	3.75	37.50
6	5	9	14	18	23	27	32	36	41	45	4.50	45.00
7	5	11	16	21	26	32	37	42	47	53	5.25	52.50
8	6	12	18	24	30	36	42	48	54	60	6.00	60.00
9	7	14	20	27	34	41	47	54	61	68	6.75	67.50
10	8	15	23	30	38	45	53	60	68	75	7.50	75.00
11	8	17	25	33	41	50	58	66	74	83	8.25	82.50
1 YEAR	9	18	27	36	45	54	63	72	78	90	9.00	90.00

INTEREST TABLE, TEN PER CENT.

TIME	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1000
1 DAY	0	0	0	0	0	0	0	0	0	0	3	28
2	0	0	0	0	0	0	0	0	1	1	6	56
3	0	0	0	0	0	1	1	1	1	1	8	83
4	0	0	0	0	1	1	1	1	1	1	11	1.11
5	0	0	0	1	1	1	1	1	1	1	14	1.39
6	0	0	0	1	1	1	1	1	2	2	17	1.67
7	0	0	1	1	1	1	1	2	2	2	19	1.94

8	0	0	1	1	1	1	2	2	2	2	22	2.22
9	0	1	1	1	1	2	2	2	2	3	25	2.50
10	0	1	1	1	1	2	2	2	3	3	28	2.78
11	0	1	1	1	2	2	2	2	3	3	31	3.06
12	0	1	1	1	2	2	2	3	3	3	33	3.33
13	0	1	1	1	2	2	3	3	3	4	36	3.61
14	0	1	1	2	2	2	3	3	4	4	39	3.89
15	0	1	1	2	2	3	3	3	4	4	42	4.17
16	0	1	1	2	2	3	3	4	4	4	44	4.44
17	0	1	1	2	2	3	3	4	4	5	47	4.72
18	1	1	2	2	3	3	4	4	5	5	50	5.00
19	1	1	2	2	3	3	4	4	5	5	53	5.28
20	1	1	2	2	3	3	4	4	5	6	56	5.56
21	1	1	2	2	3	4	4	5	5	6	58	5.83
22	1	1	2	2	3	4	4	5	6	6	61	6.11
23	1	1	2	3	3	4	4	5	6	6	64	6.39
24	1	1	2	3	3	4	5	5	6	7	67	6.67
25	1	1	2	3	3	4	5	6	6	7	69	6.94
26	1	1	2	3	4	4	5	6	7	7	72	7.22
27	1	2	2	3	4	5	5	6	7	8	75	7.50
28	1	2	2	3	4	5	5	6	7	8	78	7.78
29	1	2	2	3	4	5	6	6	7	8	81	8.06
1 MONTH	1	2	3	3	4	5	6	7	8	8	83	8.33
2	2	3	5	7	8	10	12	13	15	17	1.67	16.67
3	3	5	8	10	13	15	18	20	23	25	2.50	25.00
4	3	7	10	13	17	20	23	27	30	33	3.33	33.33
5	4	8	13	17	21	25	29	33	38	42	4.17	41.67
6	5	10	15	20	25	30	35	40	45	50	5.00	50.00
7	6	12	18	23	29	35	41	47	53	58	5.83	58.33
8	7	13	20	27	33	40	47	53	60	67	6.67	66.67
9	8	15	23	30	38	45	53	60	68	75	7.50	75.00
10	8	17	25	33	42	50	58	67	75	83	8.33	83.33
11	9	18	28	37	46	55	64	73	83	92	9.17	91.67
1 YEAR	10	20	30	40	50	60	70	80	90	1.00	10.00	100.00

HORSES.

RECEIPTS AND INSTRUCTIONS FOR THEIR CARE AND TREATMENT.

How Long a Horse Ought to Work.—It is now claimed by our best horsemen, that, with our many labor-saving machines, a horse ought not to be worked over 9 hours a day; at any rate he should have two hours at noon for eating, and to allow the digestion of his food, by which his strength will be greatly aided in his afternoon's work.

Raising and Breaking Colts.—A correspondent of the *Practical Farmer*, who says he has had considerable experience in handling colts, gives his views and practice upon the subject, also such examples of docility, after his manner of handling them, which are so consistent with what I consider the right thing to do in raising and breaking colts that I believe it will carry more force, or be more likely to be followed, than what I might be able to say, without corresponding examples, which I could not give. He says:

"I have adopted the rule of haltering my colts at 10 days old, and I lead it at its mother's side whenever I drive her. I have never found any trouble in teaching a colt to lead in this way, and long before it is weaned it will be perfectly halter-broken. I have just brought up from the pasture a colt that was 2 years old in April, to give it a little training. This colt was halter-broken and led at the side of its mother when sucking, and it is now as docile as any horse on the farm. A boy 16 years old, who is living with me, harnessed it a few days ago, and, after driving it round the yard for a short time, hitched it to a spring wagon and went off alone with it. I should not have allowed it had I known what he was about, but he came back with the colt as gentle as my old carriage horse. This has been about my experience with colts that have been taught to lead and handle when young. It is easy to accustom a colt to have the harness thrown on it, and chains wrapped around its legs, or to have something fall from its back, without its being frightened, and if these things are ever learned it must be when the animal is young. I believe that it is easy to so train a colt that if the hold-backs come loose on a hill, and let the buggy against it, instead of being frightened and running away, it will brace itself and stop the buggy. I remember twice being placed in a position of great danger, with a spirited mare that I had trained from a colt, and if I had not accustomed her to just such treatment as I recommend, I should undoubtedly have been severely injured or killed. The instances were these: I was approaching the Miami river, on a turnpike, and had just started down a long, winding hill, over a fourth of a mile long, when one of the bolts by which the shafts were attached to the buggy, dropped on to the mare's heels, and whenever I attempted to rein her in to stop her, the buggy would run against her. I went fully 300 yards down the hill before I could get her checked so that it was safe for me to jump out and catch the wheel and stop the buggy, but the mare made no attempt to kick or run. The other case was this: I had stopped at the top of a long hill with a load of wood, and when I stepped on to the doubletree to climb on to the load, the stick I took hold of to pull myself up by, pulled out, and I fell with my head between the mare's heels, and the stick came rattling down over the chains on top of me. If she had started at all the wagon would have run over me, for I was exactly in front of the wheel. Now, I do not say that every horse can be trained to do as mine did, but I do say that if it is ever done it must be while it is young, and that what the colt is taught young it never forgets. I have no faith in the theory that a colt should never be put to work until it is 4 years old. Of course, we must exercise judgment and not strain our young horses by pulling them hard, but I see no more reason why a colt should do nothing until it is full grown, than a boy, and every boy works from the time he is 12 or 14 years old. A well grown colt can be used for light work from the time it is 30 months old and made to pay its keeping, and if good judgment is exercised it will be all the better for it. One thing is indispensable in training a colt, and that is that you control your temper. The man who will get angry, and jerk and whip a colt, is not fit to have charge of it, and need not expect to render it docile and obedient.

Bitting the Colt and Training to Harness.—In the warm days of spring, when the colt is 1 year old, let the bitting process be commenced; and if the colt has been handled from its birth, as above suggested, it will usually submit to the bitting process as quietly as he will to any other training. After putting on the bitting fixtures, turn him loose in a safe yard, *i. e.*, with no obstructions, as wagons, sheep racks, etc., with which he might come in contact, allowing him an hour or so to become familiar with the harness, being careful to check him up but little the first time above what he carries his head naturally, but checking higher and higher each day until the proper carriage of the head is attained. I dislike an over-high carriage of the head in any horse. After a day or two, a cord 12 to 15 feet in length may be tied to the bits and the colt allowed, or trained, if need be, to exercise in a circle or around you, but never carrying it so far as to tire or worry him, gently patting and petting him from time to time to show that no harm is intended. This should be gone over again and again through the summer and winter following, and when it is 2 years old it may be harnessed and hitched beside its

mother, if she be gentle and kind, else beside an old, gentle horse, and driven quietly about, at first with only the harness on, then to a light carriage, with never more than two therein, and accustomed to driving, until it becomes second nature to do as its companion does, but never upon long and exhaustive journeys; but simply enough to harden its flesh and aid the muscular developments. And even from 3 until 4 years old a colt should be driven with exceeding care, never over-loaded, as this is the critical age of the colt, or its period of second dentition, and it can not, therefore, masticate hard food, as it can after its teething is completed. Indeed, all young horses should be used with care, and never put to steady, exhaustive work until they are 6 years old, after which, with this early care, they will become stouter and increase in power and speed until 10 to 12 years old, while if put to hardest work at 4 or 5, they will not improve beyond 8 or 9.

Weaning and Wintering Colts.—If the mare is allowed a few oats while in pasture, which is a very proper thing to allow, the colt will soon learn to eat with her, and as soon as this is observed, it should have a handful or two daily, where the mother cannot get in to eat them from it; by which means you increase its development and growth, and save the trouble of having to teach it to eat them at time of weaning. And as cool nights approach, it is best to take the mare to the stable over night, tying the colt near her; if a double stall, by her side; but not to allow suckling, which will take away half, at least, of the trouble of weaning without knowing it; and if the mare will eat roots, give such as beets, carrots, turnips, apples, pumpkins, etc., all properly cut into small pieces to prevent choking; and some persons think all breeding mares should be taught to eat roots to ensure a better condition of health. The colt will also soon learn to eat them, but should not be allowed so much as to produce looseness of the bowels; enough, only, to aid digestion. Some persons allow their colts to run with the dam till winter sets in; but it is not good for either the colt or the mother, especially if she is again breeding. The colt should be weaned, or shut off from the mother, about the end of the sixth month; but should be well cared for the first winter—in fact, all winters; should have either a warm stall, or at least a warm, dry place, with plenty of bedding, and a good brushing every day, being very careful, and kind, about his legs, to accustom it to grooming; give a quart of good, sound oats daily, with sweet, clean hay, add its little feed of roots, if you have them; but coarse cut food is not proper for a colt, as it packs too closely for the easy digestion of young animals. If the fall is particularly dry, when a colt is being weaned, a few bits of carrots, beets, or turnips, will more especially be called for as aids to digestion, on account of the shriveled condition of the grass. With these aids it will not miss the mother's milk nearly as much as it otherwise would; and if it has already been accustomed to them, so much less trouble will now be experienced. If 3 or 4 colts can be shut off together in an adjoining field from the dams, there will be still less trouble than with one alone.

Profit of Raising Colts.—A colt may be raised for about the same cost as a cow; but, at three years old, is generally worth as much as three or four cows. Not only must the right kind of mares be kept, and the right kind of colts be raised, but the mother must have the proper care, as indicated under the head of "Brood-mares, Proper Care of, etc." She must also have ample stable accommodations, when needed. And as the profit of raising good colts is so large, as before remarked, and the demand for them is becoming so great, let the farmer keep the mares, which are just as kind and good to work on the farm as the geldings, and let the latter go to the town-people who care not to engage in the breeding business.

Colts of Ordinary Training—To Cure of Halter-Pulling.—Colts which have not been broken young to lead by the side of the mother, as previously instructed, often annoy their trainer by pulling the halter. For such, place a spring-pole, a pretty stiff one, on the opposite side of the manger so he shall not see it; then pass the halter-strap, or what is better, a rope halter, that may pass through a hole in the partition or boards, put up for the purpose, passing to the pole, which shall give him at least 3 or 4 feet of play, and he will soon try his full strength upon it; but if properly done it will still hold him, and he will finally walk up to the manger—"the captain's office,"—and consider his passage paid for life on not a very large number of pulls either, if it is skilfully arranged. I have seen this done effectually, and satisfactorily, by taking the colt to the woods and trimming a sapling of such a size as to have the right spring to it, then cut off the top at a proper height, bending down and tying a long rope to the top and to the halter, then letting it up gently, when the contest would begin, but always with victory to the sapling, with only a few trials, although it is believed to be the best to have the sapling hidden from his sight, yet he hardly suspects the sapling of being his opponent.

Brood Mares, Proper Care of, Before and at the Time of Foaling.—The author is indebted to the "Veterinary" of the New York *Spirit* and a correspondent of the *Michigan Farmer* for the following sensible instructions as to the proper food and care of brood mares at this critical period of their lives; and especially will it be found necessary to have an eye to the mother's conduct towards the foal or colt, if it is her first, as she may be kind to it and she may not; still, watchful care is very important in all cases until the colt is up and doing well. The writers speak very much alike, as

though one had copied from the other, in parts at least, but which is the copyist I do not know; but as each is more full in some points than the other, I shall use all important points without giving both in full, as that would only be a repetition, my credit being given jointly, as above. The combination is sensible and worthy of consideration. It is as follows:

"The best feed for the brood mare is corn stalks or good timothy hay, with from 4 to 6 quarts of ground oats and wheat bran (equal parts) each day. The ground oats and wheat bran not only enable the dam to make all necessary preparations to supply the coming foal with nourishment at the time when most needed, but it keeps her healthy and strong, and enables her to furnish the growing fœtus (colt in uterus) with the best kind of material to make the best bone and muscle. The dam should also have moderate exercise, but it should be regular. If she be used in a team, she should not be driven faster than a walk, nor loaded too heavily, for in either case there is danger of injuring the dam and ruining the foal. She should be housed or sheltered nights and in all stormy weather. As foaling time approaches, she particularly needs the practised eye of the careful and experienced breeder. For she should be watched both day and night, as many a valuable colt has been lost that two minutes' labor at the particular time would have saved. As soon as the colt is dropped, the attendant should see that its head is free from the membrane or sac with which it is enveloped, as the colt will otherwise soon smother. The next thing is to sever the umbilical cord about 5 inches from the foal and tie the end next to the foal to the colt to prevent bleeding, etc. This, if possible, should be done before the dam rises, as many a colt has been ruptured at the navel by the dam rising before the string is severed. After the above has been promptly attended, leave the dam alone with the foal for half an hour and carefully watch her actions. Now, in case she seems disposed to injure, or in any way abuse the foal, it should be taken away from her and covered with a blanket until dry. At the end of a few hours, the attendant with whom the mare is most familiar should endeavor to assist the foal to suckle. If necessary the mare must be placed under more or less restraint. The twitch, strapping up one foot, or the side line must be resorted to, while the assistant renders the necessary assistance by holding the colt at the side and putting the nose to the teat of the mare. After the colt is able to draw its nourishment from the dam without the aid of its attendant, little need be done but furnish a shed, if the weather be inclement, and a liberal supply of good hay or stalks, and a peck of ground oats and bran per day until there is a full growth of green spring grass."

Remarks.—The author can see nothing to add to these instructions, except, should it ever occur that from storms, or from the mare's "coming in" out of the ordinary season, she should have a double stall or a barn floor, well bedded, entirely to herself at such time, together with the same watchful care to avoid accidents, that is above recommended, with which no danger generally need be apprehended.

Kicking and Runaway Horses—How to Cure of the Habit.—*The Kicking.*—If you have a horse which is accustomed to knocking out the dashboard with his heels, when things do not work to please him, proceed as follows: "Place around his neck a band like that used for riding with a martin-gale. Then take two light straps (made for the purpose) and buckle them to the bits, on each side, and pass them through the neck-band, and also inside the girth, and buckle them securely to each fetlock, of the hind feet, taking care, in the making, to have them of the proper length. When a horse is rigged in this manner, if he attempts to 'kick up behind,' each effort will jerk his head down in such a way as to astonish him, perhaps throw him over his head. He will make but a few attempts to kick when he finds his head thus tied to his heels, and two or three lessons will cure him altogether."

For the Runaway.—The method for the runaway is equally simple and effectual: "First of all, fasten some thick pads upon the horse's knees, then buckle a strap, about the size of a rein, upon each fetlock forward, and pass the strap through the hame rings or some part of the harness near the shoulder on each side, and lead the straps back to the driver's hand as he sits in the buggy. He has thus four reins in hand. Start the animal without fear; don't worry him with a strong pull upon the bit, but talk to him friendly. When he attempts to run, he must, of course, bend his forward legs. Now pull sharply one of the foot reins, and the effect will be to raise one of his forward feet to his shoulder. He is a three-legged horse now, and when he has gone on in that way a little distance drop the constrained foot and jerk up the other. He cannot run faster on three legs than you can ride, and when you have tired him on both sides pretty thoroughly, or if he refuses to take his trot kindly and obey your voice and a moderate pull on the bit, you can raise both his fore feet, drop him upon his knees, and let him make a few bounds in that position. The animal will soon find that he cannot run away; that he is completely in your power, and by soothing words you will also be able to convince him that you are his friend. He will soon obey your commands, and will be afraid to extend himself for a run. Within a week or two some horses that were quite valuable animals in respect to everything but their bad habits of kicking and running in harness, were cured by the methods described above."—*Boston Herald.*

Cribbing of Horses, What it is and How to Cure It.—The subject of cribbing is such a distressing thing to see a horse

continuously doing when hitched to anything upon which he can press his teeth; and which must be more distressing to the horse, to be compelled, either from necessity or habit, to do it; and, as it is a subject which I never heard anyone give a plausible reason as to why horses get into the habit of it, and as I never saw anything printed upon the subject which appeared to throw any light upon this mystery, until Dr. Tuttle, of Clinton, Mich., Feb. 28, 1880, sent a communication to the *Post and Tribune*, of Detroit, which seems to give such a rational explanation as to its cause, and also a rational treatment, or cure, for it, I have felt constrained to give his ideas, although I shall feel compelled to condense his letter considerably; yet, I will give that which will enable anyone to avoid the difficulty with colts, and to treat horses upon his rational plan, that have become diseased, as he claims, which has addicted them to this terribly distressing habit. I am aware that most people claim it to be wind sucking, and hence call them windsuckers, but it never seemed to me to be the fact; and Dr. Tuttle's idea that it is to get wind out of the stomach rather than to suck it in, as you will see below, I fully agree with, and believe his theory to be the correct one, hence I give it the more cheerfully. In answer to "What is Cribbing?" he says: "Belch of wind from the stomach. This is absolutely true in the first stage of every case." He admits the possibility "that horses which have followed the habit for years, may suck in and swallow wind, though I doubt it," he continues, "for by carefully watching 'an old stager' go through the motions of cribbing, you will observe that the shape of the neck, along the line of the gullet, indicates something coming up out of the stomach, but which is swallowed back again. As to its cause, he claims it to be indigestion—dyspepsia, which in man, by fermentation, or souring of the food, produces gas, and therefore belching of wind, as it is called—does the same with the colt, for he claims that it generally begins with the colt and the cribbing, at first, so far relieves the distress from the distention of the stomach, the habit is formed, and he ever afterwards follows it; unless the cause, indigestion, is cured. As to the cause of the indigestion, he thinks that it arises mostly with fall colts, which have been too early put upon dry feed, grain, etc., which it was not properly able to masticate, or chew sufficiently fine to make it digestible, "for remember," he says, "if you please, that a colt doesn't have a full colt mouth, (full set of milk teeth) until 2 years old; so don't feed them on dry, hard, old corn, to 'keep them thriving,' any more than you would feed a 3 months' old babe on corned beef and boiled cabbage and expect it to thrive." The last would be as sensible a thing to do as the first. Raising spring colts is his remedy, so as to avoid putting them so quickly upon other feed than grass-made milk, with grass to eat, if they want it, and warm weather in which to grow and develop. Then when winter comes, if grain seems necessary, give boiled oats, or oatmeal in limited quantities, just enough to keep the colt growing, and in condition. Early cut hay, a warm shed for stormy weather; feed regularly, water regularly before feeding, never after," etc. If after the foregoing care, signs of dyspepsia and cribbing appear, he claims there is something wrong in the diet, or handling, which must be corrected, and hot bran mashes must be given, and continued, to keep the bowels continuously free, never allowing the movements to be hard and difficult. And the further treatment to be the following, as for horses, in proportion to the age. To cure the disease when developed, "Bear in mind," he says, "you are treating dyspepsia, not cribbing, for the latter is only a symptom, a result of the former, and the treatment must be thorough and persistent" (continued). The following is his treatment for a horse of five years or older:

Tinct. of nux vomica, 20 drops, in a swallow of water, before each feed, continued for months, if need be. "The effect of a small dose is all you need." It may be given by putting into a small bottle with a long neck and with about a gill of water, and given by putting into the mouth, as a drench, or by putting into a small amount of water in a bucket and drank before giving his full drink before feeding.

Condition Powder.—A heaping dessert-spoonful (small-sized table-spoon) of the following tonic powder (condition powder), thoroughly mixed with the feed at every meal: Powdered gentian, powdered Peruvian bark (always get the best red, unground Peruvian bark, and have the druggist grind or powder it fine), of each, 1 lb., and powdered Jamaica ginger root, ½ lb., mixed thoroughly. [And the author would say, keep it in a closely covered tin box.]

Graduated Dose, According to Age.—He has graduated the dose to the age, as follows: For a horse 5 years or older, full dose, as above (20 drops); 4 years old, {7/8} (17 or 18 drops); 3 years old, ¾ (15 drops); 2 years old, ½ (10 drops); yearlings, {1/3} (6 or 7 drops); sucking colts, {1/8} to {1/6} (2 to 3 drops, according to the robustness of the colt). That in parenthesis is the author's, and will save every one the trouble of calculating at each time of giving the medicine. I will give Dr. Tuttle's closing paragraph in full. He says:

"In closing, I would say I am not a horse doctor, nor do I wish to be, but a regular physician of nine years' experience; that in the first years of my practice, by hard, irregular work and unwise handling, I made a cribber of one of the finest horses ever owned in Michigan or driven by any man. Since then I have tried to study carefully, and scientifically, his very intelligent efforts to obtain relief, and likewise the effects of treatment, hygienic and therapeutic (*i.e.*, care as to

proper food and medicine). And with my knowledge of disease and remedies in man I have, by analogy and experience, arrived at the above conclusions, which I give to the public, hoping to assist horse-loving men to a better understanding of a hitherto un-scientifically-treated disease, which is distressing to both horse and owner. And I am confident that if this advice is carefully followed it will be found to result in cures far beyond that ever produced by the choke-strap, to say nothing of the peace of mind which follows the humane treatment adopted for the relief of a distressing disease of the much abused, unappreciated, though intelligent horse."

Bots in Horses, A New Remedy Worth its weight in Gold.—The Department of Agriculture publishes the following experiments which a gentleman from Georgia tried and found effective in dispelling serious trouble in horses. He says: "About 30 years ago a friend lost, by bots, a very fine horse. He took from the stomach of the dead horse about a gill of bots and brought them to my office to experiment upon. He made preparations of every remedy he heard of, and put some of them into each. Most had no effect, a few affected them slightly, but sage tea, more than anything else; that killed them in fifteen hours.

He concluded that he would kill them by putting them into nitric acid, but it had no more effect on them than water; the third day they were as lively as when put in. A bunch of tansy was growing by my office. He took a handful of that, bruised it, added a little water, squeezed out the juice and put some bots into it. They were dead in one minute! Since then I have had it given to every horse. I have never known it to fail of giving entire relief. My friend had another horse affected with the bots, cured by this remedy.—*Grange Visitor.*

Tansy Tea for Bots.—There is undoubtedly more in the virtues of tansy for bots than appears upon the face of it; for the following item has been more recently going the rounds of the papers: "Tansy tea is said to be a sure remedy for bots in horses. Experiments tried upon bots show that while they resist the action of almost every other substance, they are quickly killed by tansy. It is an easy matter to test it, by those who keep horses, when some of the bots have been passed, by putting them into some of the extracted juice of the tansy leaves.

Colic in Horses—Its Cause and What is needed to Cure it.—As colic is caused by the indigestion of the food, a sour or gaseous stomach, as we say of persons, all that is needed to cure it is something to correct the acidity and to warm up the stomach, so that the digestion can proceed again; but as the indigestion and consequent acidity may have progressed so far it cannot be corrected, making it necessary to give an active cathartic to hasten the fermenting food out of the system, it is well at first to give a full table-spoonful of saleratus dissolved in warm water, ½ pt.; then, if you are where the pepper tea can be steeped at once, give it; but 'tis well to have something of an anodyne nature to help allay the pain, as well as to stimulate, which can be kept in the stable, always ready for use, like the following: Laudanum, sulphuric ether, chloroform, tinct. of cayenne pepper and ess. of peppermint, each, 1 oz.; tinct. of belladonna, ½ oz. MIX. DOSE—For a full sized horse, give 1 table-spoonful in warm water, ½ pt., and repeat in 3 minutes, if not before relieved; or, put the pepper to steeping at once on giving the first dose of this, and if not relieved in 30 minutes give the pepper tea, as in No. 1, above, instead of repeating this, would be preferable. But, if no peppers are at hand, repeat this as above without fear of injury. For I know that a dozen drops of chloroform in a spoonful of water has relieved gaseous dyspepsia of persons, while this mixture has several other things in it making it more reliable in colic of horses and would be good for persons in doses of ½ tea-spoonful, repeated once or twice only, if not relieved in the ½ hour.

In the meantime, if there is great distention of the bowels by gas, which is almost always the case in colic, do not overlook the importance of giving, or having given, the table-spoonful of saleratus dissolved in water, ½ pt., to stop the fermentation of the food, which causes this gaseous condition; and also to have got ready a physic containing ½ to ¾ oz. of aloes dissolved in ½ pt. of water, in which you have put another table-spoonful of saleratus to make it dissolve, so it shall be quicker in its operation to carry off this fermenting food.

If very great pain still exists, or does exist at any time, even as much as 2 ozs. of laudanum has been given, so also has 2 ozs. of ess. of peppermint, or 1 oz. of sulphuric ether, or ½ oz. of chloroform, or ½ oz. of hartshorn, in ½ pt. or 1 pt. of warm water, has and may be given; the laudanum to stop the pain, the others more to stop the fermentation, and consequent distention of the stomach and bowels by the gas. Sometimes this gas is aided to pass off by the rectum by giving warm water injections, turning the horse's head down hill and pumping in freely all the bowels will retain, even if it is a bucketful will do no harm, but by its wetting and softening influence aids the escape of gas and also the quicker action of the physic, if one has been given. If the gas is once started freely by the rectum consider your horse safe.

But, lastly, in no case allow the cruel custom of taking the horse out and running him, nor even trotting him, nor "rub his

belly with a chestnut rail," nor the wicked and cruel custom of laying him on his side and getting a big heavy man with coarse boots to walk back and forth upon him. Some of the mixtures to relieve pain and stop the accumulation of the gas, then physic, and injections, if needed, to start the gas off, must be the main dependence. And, I will only add, if you now allow your horses to die with colic it is not the author's fault, but will be chargeable to yourselves by neglecting to have a supply on hand of what is liable to be needed any day.

Corns, or Shoe Boil of Horses' Feet, Explanation of and Remedy.—Corns, also called shoe boils, are generally the result of bad shoeing, *i.e.*, allowing the heel of the shoe to rest too far in, upon the sole of the horse's foot. They should have their bearing upon the shell, or solid, outer part of the hoof; then there will be but few corns. But when they exist, the soft and diseased part of the shoe must be cut away, to allow the application of the following remedy: Sulphuric acid, 1 oz.; nitro-muriatic acid, ½ oz.; corrosive sublimate, 1 dr. DIRECTIONS—Add, little by little, of one acid to the other, in an earthen bowl, in the open air, to avoid breathing the fumes arising from them in mixing. Mash the corrosive sublimate finely and add it to the acids. Then, having pared and trimmed down to the sore, apply the remedy with a swab, or pledget of lint and bind on till the corrosion or destruction of the hoof is stopped; then apply a soft healing ointment.

CONDITION POWDERS.—Tonic and Purifying to the Blood.—Sulphur, 6 ozs.; gentian root, sassafras, bark of the root, elecampane root, ginger root, saltpetre and rosin, each 2 ozs.; digitalis leaves, buchu leaves, blood root, skunk cabbage root, cream of tartar, Epsom salts, black antimony, fenugreek seed, and rust, or carbonate of iron, each 1 oz. DIRECTIONS—Pulverize finely, mix thoroughly, and keep in air-tight boxes. DOSE.—Give a table-spoonful in feed as below.

Remarks.—In spring and fall use with all stock, as well as horses, 1 table-spoonful daily, in a bran mash, until you see a beneficial action, or for two weeks; but in case of a horse, cow, or ox being in bad health, at any time of the year, the same dose twice daily, in a bran-mash, may be given for a couple of weeks, or until the desired result—good health—is obtained. Some horses will not, however, eat bran-mashes, then stir it in wetted oats. This is especially valuable in all the chronic diseases, as mange, distemper, grease-heel, big-head, big-leg, poll evil, fistulas, yellow water, etc. It will show its beneficial effects very quickly.

Condition Powder, Relaxing, for Use in Scratches, Grease Heel, etc.—The following was published in the *Post and Tribune*, by H. W. Doney, of Jackson, Mich., in answer to an inquiry of "J. W.," of Paw Paw, for a condition powder to cleanse the blood in spring, adding, "I have got one horse that has had scratches most of the time for 3 years, and I have doctored him most of the time," Mr. Doney, in answering, says:

"You have a number of them already given, but there is one for the special purpose: Mandrake, aloes, Epsom salts, gentian, blood root, skunk cabbage, gum myrrh, golden seal, stillingia, each 2 ozs.; sulphur, licorice root, ginger root and coriander seeds, each 4 ozs.; nitre and lobelia, each 3 ozs.; camphor gum and copperas, each 1 oz. Powder and mix thoroughly. DOSE.—One-half ounce (about one table-spoonful) once a day, in feed or drench. To aid the operation and produce better results, give 1 pint of sassafras tea (daily). If fever is present, give 15 drops of aconite (tinct. or fl. ex.), once a day. If paralysis in any form exists, give 15 drops of belladonna (tinct. or fl. oz.) once a day; or if nerve power is lacking, give 15 drops nux vomica (tinct. or fl. ex.), once a day." [These last medicines are poisonous if used too much or too often.]

Physic, or Purge.—Mr. Doney continues:—"Give a good purge made of fluid extract of mandrake, blood root, liquorice, each 1 oz. DOSE.—1 dr. Adding to each dose 1 oz. of aloes and 2 ozs. of Epsom salts until the bowels respond freely, then lessen the dose."

Wash.—One oz. of white vitriol, oz. of alum, 1 of gum catechu, 1 qt. of oak bark solution, 1 oz. turpentine. Mix and use as a wash twice a day. Take the water in which you boil potatoes, 1 qt. Wash the limb with it before using the other. If it will not cleanse the limb thoroughly use oatmeal soap. Rub the limb until the sore looks a bright pink, and the surrounding portions of the leg white. Keep the stable well cleaned. Use a brush on the leg often.

Condition Powder for a Stallion.—White rosin and madder, each 4 ozs.; black antimony, gentian root, fenugreek seed, sulphur and ginger root, each 3 ozs.; anise seed, 2 ozs.; Spanish flies, 1 oz. All made very fine and intimately mixed. DOSE.—A table-spoonful, a little rounding, in the morning's feed, as he begins to drag towards the last of the season. This is from Robert Hudson, Winfield, Kansas. No one need fear to use it. And without the Spanish flies, it is a good alterative and tonic powder for any other horse.

Distemper in Colts—Treatment.—Distemper in a colt has about three weeks to run its course; all the medicine

required is a light dose of Epsom salts, say 4 to 6 ozs., and good nursing. Give warm bran mashes, linseed or oatmeal gruel; keep the animal warm, and rub the legs with cloths dipped in hot water; a table-spoonful of mustard in the water would be beneficial if the legs seem to be weak and numb, or cold.—*N. Y. Times*.

Epizootic, the Most Successful Treatment.—Wm. Horne, a veterinary, in the *Country Gentleman*, says: "In the treatment of the epizootic in horses, in 1872, no treatment in my own practice was so effectual, and none brought speedier or more permanent relief than a powerful stimulant applied to the throat outside, and tincture of lobelia, 1 oz., gelsemium, ½ oz. Mix and place on the roots of the tongue, 30 to 40 drops, three times a day. Plenty of pure air and general warmth and comfort, make good nursing; not too much pampering and medication.

Remarks.—The Sweeney Cure, which is a powerful liniment, and without the alcohol, will be as powerful a stimulant as any-one will need in these cases. It is not necessary to blister, however if it is likely to do that rub over with sweet oil to prevent the blistering. Or, if made without the cantharides, it will not blister. The lobelia helps the cough, and the gelsemium keeps down the fever by lessening the pulse. This is claimed to be a bad disease; then use the condition powder No. 1, in connection with the other treatment.

Galled Shoulders and Saddle Galls, To Prevent and Cure.—1. To prevent shoulder galls for horses easily galled, have a collar shield of firm, smooth-surfaced leather, upon which the collar will move or slip easily, and thus not abrade or chafe off the surface hair, skin, etc.; and have the saddle lined with hard, smooth-surfaced leather—rawhide is best—like the military saddle, but never have one lined with any woollen stuff.

Heaves or "Wind-broken,"—Necessary Caution in Feeding, and Cure for Many.—"Heaves and windbroken are one and the same disease, the first being used to designate its mildest form: and the latter when it reaches its severest stages. It is in reality a kind of asthma, caused by over-feeding on clover, hay, chaff, and other coarse, bulky, and dusty fodder. The disease is seldom known where horses are pastured all the year, and clover in some of its species does not enter into the hay crop. If the horse has not had the heaves so long as to be wholly beyond help, try feeding on corn stalks, cut moist hay, with carrots, beets, turnips, potatoes, and other well known nutritious roots. Keep the bowels open by laxative medicines, and for a tonic give arsenic in 3 gr. doses for 2 or 3 weeks. Give the animal no dry hay, except a little handful at night; and if you have good, well cured corn stalks, these will suffice, with plenty of roots and cut hay (wet), with grain 3 times a day."—*New York Sun.*

Remarks.—There are some veterinarians who claim that the air cells, or some of them, are ruptured; when this is actually the case, there is probably no cure; but before this has occurred, it has been claimed by M. Hew, a French veterinarian, I think, that 15 grs. of arsenic, daily, for 2 or 3 weeks, as McClure and Harzey, in their work on the horse, inform us, "with green food or straw, and in some cases bleeding, was perfectly successful," in ten reported cases. In one it returned after 3 months, which "speedily yielded to a repetition of the same treatment." The way to give it would be to sprinkle it in fine powder on a few thoroughly chopped roots, 5 grs., morning, noon, and night. There would be no danger in its use, stopping at the end of 2 or 3 weeks, or when the difficulty has been fairly overcome.

Liniments, Oils, Salves, etc., for Horses.—*California Liniment*.—"Opedeldoc, spirits of turpentine, oil of origanum and black oil, each, 2 ozs.; gum camphor and red pepper, each, ½ oz.; aqua ammonia, 1 oz.; best alcohol, 1 qt. Mix and keep well corked. Good in all acute pain, rheumatism, sprains, and swellings in man or beast."

Remarks.—This, with the Black Oil, White Oil, Gargling Oil, and the Green Salve following, and the Condition Powders for Stallions, were obtained from the diary of Robert Hudson, of Winfield, Kans., who had spent considerable time in California, where he obtained them from practical horsemen; and from my own knowledge of the nature of the articles used, I am free to say one will search a long time to find others equal to them.

New York Sun's Liniment.—The New York *Sun* says: "Of liniments there are as many different compounds as of condition powders; but a good one for horses and other animals may be made of 2 ozs. each of oils of spike, origanum and wormwood, spirits of ammonia and spirits of turpentine; then sweet oil, 4 ozs., and best alcohol, 1 qt. Mixed and kept in a bottle, corked when not in use."

Black Oil.—British oil, oil of spike (balsam of fir), tanners' oil, tamarack balsam and oil of vitriol, each, 1 oz.; spirits of turpentine, 2 ozs. Mix in the order named, putting in the oil of vitriol slowly, and when cool the spirits of turpentine. Better be in a quart bottle. Very healing, and to reduce inflammations, by rubbing in or laying on with wet cloths or soft paper on either man or other animal.

White Oil, English.—Spirits of turpentine and alcohol, ½ pt.; olive oil, 1 pt.; hartshorn, 4 ozs.; camphor gum, 4 ozs. Mix. Used especially in wounds and upon old sores.

Gargling Oil.—White wine vinegar (good cider vinegar will do), 1 pt.; spirits of turpentine and sweet oil, each, ½ pt.; oil of vitriol, 1 oz.; castile soap and saltpetre, each, 2 ozs. DIRECTIONS.—Shave the soap fine, pulverize the saltpetre and shake occasionally till dissolved, when it is ready to use upon swellings, wounds, frostbites, etc., on horses or cattle, and it has been used extensively on persons.

Green Salve.—Spirits of turpentine, 4 ozs.; beeswax, rosin, and honey, each, 2 ozs.; lard, 12 ozs.; finely pulverized verdigris, 1 oz. DIRECTIONS.—Heat all gently together, except the verdigris, then remove from the fire and stir that in as it begins to cool, and stir till cold. Put in tin boxes for use.

Mange in Horses, Remedy.—Wilkes' *Spirit of the Times* published the following as a safe and effectual remedy: "Whale (sperm) oil, 6 ozs.; oil of tar, 3 ozs.; lac-sulphur, 2 ozs.; mix thoroughly and apply with a hair brush, first washing the skin thoroughly. And at the end of the second or third day, the animal is to be again washed, and the remedy re-applied; as it is very probable that all the ova (eggs) of the mange (or itch) insect are not killed by the first application.

Poll-evil, Fistula, etc., Successful Remedies.—Poll-evil simply means a disease of the head, as the word "poll" comes from the Low Dutch polle, the head, and as the word evil, in connection with disease, signifies one causing suffering, we get poll-evil, a disease of the horse's head from which there is much suffering. As to *fistula*, it is a Latin word and signifies a hollow seed, or pipe; hence, where we have a hollow pipe, running down into a sore, it matters not whether upon the head or the withers (highest part of the shoulders), of a horse it is really a fistula or a fistulous sore; and, as what will destroy the pipe which runs down to the bone, in one case, will destroy it in the other, we couple them together.

When either has become a running sore, you will find the following recipe from the *Germantown Telegraph*, very satisfactory, as I have always observed the reliability of its recommendations. It says: "First, clean the sore with warm, soft water, and dry with soft, warm cloths; then drop on 8 or 10 drops of muriatic acid twice daily, till it looks like a fresh wound; after this, wash with suds of castile soap, and leave it to heal, which it will speedily do, if enough acid has been used.

Pawing in the Stable, to Cure Horses of the Habit.—Fasten a short piece of log chain—say five or six links—by means of a light strap to his leg, just above the knee—in the stable, of course—so the chain stays on the front of the leg, and see how quick the pawing horse will leave off the habit. In most cases a few days will be sufficient to effect a cure. —*New York Weekly.*

Ringbone, Spavins, etc.—Certain Remedies.—*Ringbone.*—Ringbone and spavins, poll-evil and fistulas are the most annoying diseases with which our domestic animals are afflicted; but careful observation of the recipes the author has gathered during ten years of close scrutiny of everything published in our most reliable farm journals, will, we have no doubt, enable our patrons to not only cure the lameness, but also to remove or cause the absorption of the bony enlargements in most ringbones and spavins, and to also cure the unsightly sores of poll-evil and fistulas. The first recipe I shall give for ringbone is from a correspondent ("J.H.M.", of Wyoming, O.) in *Farm and Fireside*, of Springfield, O., in answer to "S.F.W." in the same, desiring a cure for this disease, which, if followed, he says, will never fail: "Take cantharides (of course, powdered), 2 ozs.; mercurial ointment or spirits of turpentine, each 4 ozs.; tinct. of iodine, 5 ozs.; corrosive sublimate (powdered), 5 drs. Mix well with lard, 2 lbs. DIRECTIONS—Cut off the hair from the lump and grease with and rub in well the above preparation. In two days after grease with fresh lard, and in 4 days wash off with soap suds. Repeat every 4 days until the lump disappears. I have cured two cases of ten years' standing."

Spavin, to Cure the Lameness.—Iodine of mercury, 2 drs.; lard, 2 ozs. Rub well upon the enlargement; repeat in 2 weeks, or when the new hair has started out; and so continue till the lameness is cured.—*Dr. Home, in Michigan Farmer.*

Ringbone and Spavin Cure.—Powdered cantharides, powdered or finely shaved castile soap, rosin broken up finely, tinct. of iodine, and laudanum, each 2 ozs.; mercurial ointment 5 ozs.; pulverized white vitriol (sulphate of zinc), ½ oz.; oil of origanum, camphor gum, and Venice turpentine, each 1 oz.; pulverized corrosive sublimate, ½ oz.; lard, 2 lbs. DIRECTIONS—Melt the lard and stir in the mercurial ointment and rosin, stirring until these are also melted; then add the

powders, mixing well; then add the others, and stir till cold. For ringbone or spavin, clip off the hair, and rub in the ointment well with a wooden spatula, or the heel of the hand; after two days, oil the place with sweet oil (lard will do), and in two days more wash the place with soap and water, and rub in the ointment again, as at first, and so repeat till the bone enlargement is all gone.

Ringbones and Spavins, Ointment for.—A farrier living near Toledo uses the following ointment for these purposes, which will be found good, used the same as the other applications, cutting off the hair, greasing, washing off, re-applying, etc., with care. "Bin-iodide of mercury, iodine, corrosive sublimate, and cantharides, all powdered, and mixed into cosmoline 4 ozs."

Remarks.—None of these preparations should be applied in winter, unless the animal can remain in stable, and be secured so his mouth can not reach the place, and to avoid cold, snow, etc.

Spavins, Blood or Bag (Wind Galls), Thorough-pins, Splints, etc., Permanent Cure for.—Very strong vinegar, 1 pt., aqua fortis (nitric acid), spirits of turpentine and best alcohol, each 1 oz.; mix. DIRECTIONS.—Bathe freely, rubbing hard. Rub downward until you cause quite a heat in the leg. It will not cause any blister, whatever, and before you realize it, it will disappear. It has been over two years since I cured my mare, referred to below, and she is as good as ever to-day. Bathe three or four times a day, rubbing hard every time. It seems a very simple recipe, but I can warrant it a good one. —*B. F. Chamberlin, of Rich, Lapeer County, Mich., in Detroit Post and Tribune, Dec., 1880*; to which he added:

"It effects a permanent cure. I have tested it on my own horse, also on others. I have a mare which had two spavins, one on each hind leg; also two thoroughpins came with them. I tried several kinds of medicine with no effect, until I got this recipe. The spavins (wind galls) were as large as a pint bowl. I considered her almost worthless, she being a very small horse; but I not only cured her lameness, but caused the enlargement to disappear entirely in three weeks. You would not know to-day that she ever had a spavin.

Splints, Ointment for.—Bin-iodide of mercury, 1 dr., powdered cantharides, 2 drs., and lard, ½ oz.; mix evenly into an ointment. DIRECTIONS.—Shear off the hair from the enlargement, and rub in the ointment fifteen minutes. The third day after apply sweet oil, lard oil, or lard, to soften and aid in removing the scab. The horse, or colt, must not be allowed to get at the sore with his mouth. Continue until cured.

SWEENY.—Liniment, Oils, and other cures for.—Webster gives us no such word; but it is well understood by horsemen to refer to a shrinkage of the muscles over the shoulder-blade of the horse, with a tightening down of the skin to the shrunken condition of the muscles. If it was upon a person, physicians would say the muscles were *atrophied*, from lack of nourishment; then what will stimulate them to a healthy action, so that they shall receive their proper share of nutrition, will soon cure the difficulty; hence the propriety of using some of the following liniments, or oils, upon the affected shoulder. And first I will give one from a Kansas stagedriver, which he called:

Sweeny Cure.—Oil of origanum, 4 ozs., oil of spike, 2 ozs., oil of hemlock, tinct. of cantharides, spirits of turpentine, and camphor gum, each 1 oz.; mix and keep corked. DIRECTIONS.—Rub on well once daily, lifting the skin well at first. Two or three weeks will cure bad cases. It will blister. But if it gets too sore miss a few applications, or rub over with sweet oil (lard will do), after applying.

Sweeny, Simple and Certain Cure for.—A. W. Baird, of Gibson, Ill., writes to one of the papers in answer to an inquiry for a cure for this disease, saying: "The cure is short, easy, sure and simple. It is this: With the forefinger and thumb of the left hand pull up the skin on the shoulder, pretty well up on the shrunk place; then with the small blade of a penknife make an incision through one side of the skin that is pulled up. Then with both hands raise up the skin around the incision, and it will fill with air. Fill the shrunk place full; let your horse stand a few days, or run on pasture; he will soon be well; it is a certain cure."

"Oil for Sweeny.—Dig and wash clean angle worms to make 1 pt. and put them into a suitable bottle, adding salt, by weight, 1 oz.; spirits of turpentine and sassafras oil, each, 1 oz. Hang in the sun until the worms are dissolved, then strain and add oils of spike, hemlock and cedar and gum camphor, each, 2 ozs.; best alcohol, 1 pt. Shake and bathe the shoulder night and morning. If it blisters, or gives too much pain, rub on a little lard oil (or lard)."

Strains, Swelled Legs, etc.—Lotion and Liniment for.—*Lotion.*—Steep wormwood herb, 4 ozs., in sharp vinegar, 2 qts., and add salt, 2 lbs. Bathe the limb thoroughly with this, then use the following:

Liniment.—Oil of spike, 1 oz.; oils of hemlock, cedar, and camphor gum, turpentine and sweet oil, each, 2 ozs., in 1 qt of arnica. Shake before applying.

SCRATCHES, GREASE, HEEL, Etc.—To Avoid and to Cure.—To avoid, keep the horse in good health, and in the wet and muddy season—fall, winter and spring—keep the naturally long hair of the fetlocks, especially on the hind legs, which are much the more liable to this disease, cut rather closely, so that by proper grooming, these parts soon dry, and thus avoid this difficulty—I say this, for as a general thing, it begins with slight inflammation of the skin, when it is scratches, proper; but which, if allowed to proceed to deeper and more extensive inflammation, causing the cracking of the skin, and the escape of a greasy and purulent, or foul matter, to exude from the cracks, which also excoriates and extends the inflammation to all parts which it touches, when "grease" may be considered to have taken full possession; and if not now met with proper treatment, the exudation assumes a foul smell, and finally a fungus growth may arise in lumps—grape-like—to cover the whole of the diseased parts, leaving a red and angry appearance. Of course this is not common; for proper constitutional treatment, by condition powders, combining cathartics and diuretics, as well as tonics, with some of the following local applications, will prevent, or cure, this disease. (See Condition Powders, Nos. 1, 2 and 3, and also the one given in connection with Cribbing.)

Scratches, Canadian Remedy.—A Canadian correspondent of the *Scientific American* gives the following simple remedy for scratches in horses. He says:—"Having tried many lotions, etc., only to obtain temporary relief for my horse, I concluded to try a mixture of flower of sulphur and glycerine, which I mixed into a paste using sufficient glycerine to give it a glossy appearance, and the results I obtained in a short time were truly wonderful. I apply this paste at night and in the morning before going out I apply plain glycerine."

Scratches, Simple Remedy for.—A correspondent of the *Western Rural* sent this, as he calls it, "Simple Remedy for Scratches," which he also said has been thoroughly tested and proved highly successful: "Wash the sores thoroughly with warm, soft water, and castile soap: then rinse them off with clean water, after which rub them dry with a cloth. Now grate up some carrots and bind them on the sores. This should be repeated every day, for 4 or 5 days, when the scratches will be cured."

Surfeit in Horses, Cause and Cure.—Surfeit is a disease more particularly affecting the skin, in which at first there will be found hard lumps, and if not soon cured, will finally become sore and a sticky matter exude, forming scales or scabs, and the treatment become more difficult. It is believed to arise from the horse having been overworked or overdriven, by which the blood has become heated; then, by drinking cold water, or standing in the cold, they become chilled, which shows itself in the skin, more particularly because the kidneys fail to depurate the blood, *i. e.*, to take up and carry off the effete or worn out portions of the system, which are, therefore, thrown upon the skin in too great quantities to obtain free escape, and hence, diuretics, such as nitre, ½ oz., dissolved in a little water, and given in its drink night and morning, or an ounce daily of sweet spirits of nitre in the same way for a few days, will if taken in hand soon, generally correct the difficulty; but if the horse is not in general good health, a general constitutional treatment, with some of the condition powders, care in his feed and grooming, as well as to see he is not again over-heated, will be necessary. Cathartics, however, are not considered as essential in this disease as diuretics. I do not see that any writer upon this subject directs any application to the skin; but I should most positively recommend the daily, or twice daily, application of a good stimulating liniment to be well rubbed into the diseased parts of the skin, for I know it will expedite the cure as much as an itch ointment helps to more quickly cure the itch.

WARTS ON HORSES OR OTHER STOCK.—To Cure.—A farmer writing to one of the papers, says: "I had a mare some years ago that had a large wart on her side, where the harness rubbed and kept it sore. In the summer the flies made it worse. To prevent this I put on a good daub of tar, and in a few weeks the wart was killed and disappeared. I have frequently tried it since on cattle and horses, and seldom had occasion to make a second application. The remedy is simple and effectual.

Warts, Effectual Cure for, on Horses or Persons.—Take full strength acetic acid, and with a 3-cent camel's hair pencil (brush), just fairly wet the wart all over. A few applications will cure them on man or beast. Don't put on enough to run off the wart upon the skin, to make a sore.

Put 1 oz. of powdered sal-soda (washing soda) in a 2 oz. vial and fill with water, and wet the warts thoroughly with this, is also effectual, by a few applications, in all cases, as with the above. A little of this soda in water to soak the feet in, for those who have corns (which see), will soften up the dead part and make its removal easy.

WORMS.—Successful Remedies.—For the long worm which inhabits the small intestines of the horse, and sometimes find their way into the stomach, a Mr. Rhodes, a farmer, near Ann Arbor, Mich., gave me the following as a certain cure:—Burn black ash bark, and give the ashes in 1 table-spoonful doses, in his feed every morning for three mornings, then skip three till nine doses are given.

Heaves, a Claimed Cure.—Although this is out of its alphabetical place, as I have tried to arrange the horse recipes, yet as it was given by the same man who gave the ash plan, above, for worms, I will give it here, and although I can hardly expect it to cure the worst heaves, as he claims, it may prove better than I have dared to hope, as the article, blood root, is known to be valuable in coughs and throat difficulties of persons. He says: Get blood root, ½ lb., pulverized, and give 1 table-spoonful in the feed, the same as the ashes were to be given for the worms above (on the old plan of take three and skip three till nine are taken), will cure the worst heaves. He says, however, follow it up till cured.

Feeding Stock Horses, and Also Best Rations for Winter Feeding on the Farm.—Although considerable has already been said as to proper care in feeding work-horses, especially to avoid colics, etc.; yet stock horses, nor the plans of general feeding, and especially the winter care of horses, when but little is being done with them, have not been fully considered; and as such matters are known to be better understood by stockmen, I will quote from E. W. Stewart, in the *Rural New Yorker*, one of the most prominent men of that class in our country. See, also, an item taken from his prize essay on "Fattening Cattle," found under that head. Every word from such a man may be considered perfectly reliable and the best thing to "tie to" that can be found upon the subject upon which he is speaking. Upon the importance of the horse as the motive power on the farm, and also the importance of keeping him in full condition and strength in winter, he says:

"The horse is the principal motive power on the farm, and therefore needs the best attention. This class of stock is kept wholly for its muscle, and the working and culture of the farm must depend greatly upon the character and condition of the horses. The winter season is one of comparative leisure for horses, as farms are usually managed, and farmers appear to think horses require little attention when they are not in hard labor. They are quite in the habit of keeping them upon poor hay and straw at this season, reserving all grain for spring feeding. But this is very bad policy. Horses generally come to winter quarters in thin condition from their summer's labor, and require judicious feeding and good care to recover their full working capacity; and farmers should remember that it is much cheaper to put horses in condition when work is very light, and that all the extra flesh put on in winter represents so much extra labor available in spring. Besides, it should always be the aim of team-owners to keep their horses in good working condition, for it takes less food to keep up condition than to recover it when lost."

To avoid colics and aid in digestion, he says:—"Let us examine a few rations for work-horses in winter. Horses are often subject to colic from improper feeding. When fed upon cornmeal alone, its large percentage of starch renders it too heating, and besides, it is a very concentrated food, and being just moistened with saliva so as to be swallowed, it goes into the stomach in the compact form of dough, and the gastric juice cannot circulate through it so as properly to perform its office, and internal heat, fever and colic often occur from want of proper digestion. All such concentrated food should be mixed with cut hay, the hay being just moistened so that the meal will adhere to it. This mixes the concentrated with the bulky food, and the hay separates the particles of meal so as to render the mixture porous and the gastric juice now circulates freely through the mass and operates upon the whole contents of the stomach at once. The best way to use cornmeal as a single grain food is to mix it with moistened (cut) clover hay. If the clover is of good quality it contains a larger percentage of albuminoids (muscle-forming food) than cornmeal, and thus helps to balance the constituents."

[Possibly it may not be amiss to call attention here to the subject of scalding meal by pouring on boiling water, as mentioned under the head of "Meal and Hay for Fattening Stock." If scalding it for fattening purposes makes it more digestible, why not in general feeding? Still, as it is to be mixed with cut hay here it is not so absolutely necessary. —AUTHOR.]

On the Best Feed or Rations for Work-Horses he says: "But one of the best rations for work-horses is corn, oats, and flaxseed, ground together—the corn and oats in equal weight, and to 19 bushels of the mixture of corn and oats add one bushel of flaxseed, and grind fine altogether. The corn and oats make a well-balanced ration, and the flaxseed is rich in oil, muscle-forming and bone-building elements; but its oil is its greatest sanitary element. This small proportion of oil is just sufficient to keep the bowels in excellent condition, the coat sleek, and every part of the system in well-balanced activity. And then by feeding this ground mixture with twice its bulk of moistened cut hay you have as perfect a ration for

work-horses as can be compounded. All regular grist-mills now have an apparatus for mixing different grains together, so that the farmer has only to carry the oats, corn or flaxseed in proper quantity to the mill and they will all be mixed without hand labor. If the farmer has no straw-cutter he may use oats or wheat chaff to mix with the meal to render it porous."

[The author would hardly risk the mixture of so small a proportion of flaxseed with the other. I should prefer it to be ground alone and put in the proper amount with each feed; but possibly the machinery Mr. Stewart refers to may do it better than I could expect.]

For Wintering Horses doing but Little Work.—Amount and Kinds of Feed Necessary.—Upon this subject he closes by saying: "In wintering horses that are doing but little work, straw may be fed with the last ration and the horses will do well. From 8 to 10 lbs of this meal to each horse daily will bring them through finely, even on good straw. When oats are too expensive cornmeal and wheat bran mixed in equal weights, with 1 pt. of oatmeal to each horse, will give a good result. If hay is scarce, 2 lbs. of decorticated (hulled) cotton-seed meal, 4 lbs. of cornmeal, 4 lbs. of bran and cut straw will winter horses well. But there should always be a variety in the food. If the farmer has clover hay and straw, these should be mixed together—better if both be cut before mixing, but they may be mixed in the manger without cutting."

Amount of Food Necessary for a Horse at Work.—The English railway (or, as we call them here, street car) companies, feed their horses a mixed feed, about as follows, for 6 horses: Hay, 376 lbs., and straw, 84 lbs., both cut into chaff; oats, 336 lbs.; Indian corn, 252 lbs.; beans, 84 lbs.; bran, 14 lbs. All mixed evenly together and ground; then I should judge, mixed proportionally with the moistened cut hay and straw. This makes an average of 11 lbs. of the mixed hay and 16 lbs. of the mixed grain for each horse daily. A fair feed if not overworked, as many of them do in our cities.

A Pennsylvania farmer says: Two quarts of meal per day is not enough for a horse that is working; but an excellent mixture of grain is cracked corn, 1 bushel, and oats, 2 bushels. [The author would say better if ground together in equal proportions. See Mr. Stewart's Best Feed or Rations for Work Horses.] Of this, he goes on to say, a small horse that is driven or worked, should have two quarts at a feed, given three times a day, with 5 lbs. of hay (cut), night and morning. And a horse that is not working, but will be soon, would be the better for a daily feed of 2 qts. of grain (oats) given at noon.

For Old Horses.—For old horses the oats should most certainly be ground, and their coarse food also cut, damped and the ground oats mixed with it, as their teeth are not in condition to grind for themselves; and if they are left to do it, they do not get half the value of the grain. It is worthy of attention. Younger horses may do tolerably well grinding for themselves, but they will do much better if it is ground for them.

Apples Valuable for Horses.—Remarks have been made in connection with the subject of carrots, parsnips and other roots of valuable food for cattle, etc., in which apples are shown to possess largely the power of dissolving other coarse food for them, why not then good for horses? (See this pectine, or dissolving power, described in connection with carrots and other roots for cattle. Apples possess it in greater abundance than almost any other article known.) Of course it is only sour apples that have this power, and hence it is only them that should be fed. One writer says: I have occasionally fed sour apples to my horses, with excellent results. They are a certain cure for worms. I feed half to a whole pailful once a week. Another one says: I am in the habit of turning my horses into the orchard in the fall, where they can eat as many apples as they like. I find they derive much benefit from them, and gain flesh much more rapidly than others which did not receive an apple feed.

Parsnips Valuable as Food for Horses.—In the article above referred to, parsnips were spoken of as having been fed in France, by a horse-breeder there, for 20 years, with better success than when he used to feed carrots, from the larger amount of pectine or pectic acid which they contain. It is from the presence of this dissolving power in apples, as well as parsnips, carrots, beets, rutabagas, etc., which make them so valuable as food, when properly cut and mixed with other coarse food, as hay, cornstalks, straw, etc., all properly cut, both for horses and cattle.

Turnips Valuable as an Occasional Feed for Horses.—Turnips are healthful for horses, when sliced, or what is better, pulped finely and mixed with a little salt and corn meal. Of course rutabagas are richer than the flatter field turnip.

Bran, its Value for Reducing Inflammation, and as a Laxative.—Bran mashes are cooling and laxative, and valuable after inflammations, and for giving various medicines in, but should not be given in a dry state; for if fed to any considerable extent dry, it is liable to form into lumpy secretions, which become almost, if not wholly, impossible to

pass the bowels, and hence death has been known to occur from this cause.

Halter Pulling.—**Sensible Remedy.**—The *Country Gentleman*, in response to a request from a correspondent for a cure for horses which have contracted the habit of halter pulling, says: "Take a sufficiently long piece of ½ inch rope, put the centre of it under the tail like a crupper, cross the rope on the back and tie the two ends together in front of the breast snugly, so there is no slack, otherwise it would drop down on the tail. Put an ordinary halter on—a good one—and run the halter strap or rope through a ring in the manger or from the stall and tie fast in the rope on the front of the breast, and then slap his face and let him fly back. He will not choke nor need telling to stop pulling back. Let him wear it awhile, and twice or thrice daily scare him back as suddenly and forcibly as possible. After one or two trials you will see that he cannot be induced to pull back."

Lice upon Colts, Cattle and Other Animals.—**Easy and Safe Remedy.**—J. M. Johnson says in the *Iowa Homestead* that aloes, in fine powder, is a specific for the destruction of lice on all animals. It has no poisonous properties, its intense bitterness being what kills. It can be freely applied, and as it is to be used in a dry state, its application is as safe in cold as in warm weather, consequently it is free from all objections urged against other remedies. Use with fine pepper-box, dusting and rubbing it in all over, then curry out inside of a week; repeat if necessary.

CATTLE.

Milk-Fever, To Avoid.—"I am in the habit of giving water to cows, as soon as they drop their calves, and I have never known a case of milk-fever when the cow had all the water she wanted soon after calving, and the want was kept supplied at short intervals, giving a pailful at a time, fresh from the well. In all cases of milk-fever that I have known anything about, the cows went without water for a long time, and then were allowed to drink a large quantity, and the re-action was too great for the system.

"Cows which are fat," Mr. Putnam says, "should have no heating food for two weeks before calving. And, first, to milk the cow as soon as she calves, then to give her a bucket of water, fresh from the well, such as a thirsty man would relish. In half an hour after give her another, and so on until she is satisfied. Very few," he continues, "understand how necessary it is to supply the cow's system with water soon after calving, but it should be done gradually, as above directed." Mr. Putnam concludes as follows: "If the bag and teats are full before calving, the milk should be drawn out, and when great milkers are on pasture, it is a good plan to take them up two weeks before calving, and put them on dry food so as to check the flow of milk, for, when a cow is fed on dry hay only, before calving (the calf is ready for the milk as soon as it is ready), there is no danger of inflammation or fever."

MILK, TO INCREASE THE FLOW IN DAIRY COWS, AND THE BEST FEED TO INSURE IT.

Milk, to Increase.—The agricultural editor of the *Bee-Keepers' Journal* vouches for the following, handed him by one who had tried the plan to increase the flow of milk, and I have seen the same thing given in various other sources, and from the nature of the mixture I have every reason to believe it good. He says:

"If you desire to get a large yield of milk, give your cow, three times a day, water, slightly warm, slightly salted, in which bran has been stirred at the rate of 1 qt. to 2 gals. of water. You will find that your cow will gain 25 per cent. immediately under the effects of it, and she will become so attached to drink as to refuse clear water, unless very thirsty; but this mess she will drink almost at any time, and ask for more. The amount of this drink is an ordinary water pailful at each time—morning, noon and night. Your animal will then do her best at discounting the lacteal (*lac*, the Latin word for milk hence "lacteal," milky) fluid.

The Best Food for Increasing the Flow of Milk.—In the Eastern States, as before stated, milch cows are fed largely on corn meal, but I have the statement of a well-informed dairyman, that equal parts by measure, of corn meal, ground oats and wheat bran, well mixed, makes the best and most profitable feed for increasing the flow of milk, being much less heating than corn meal alone, and still very nourishing and satisfactory to the animal as well as to the dairyman by saving considerable expense, while at the same time he gets his increased flow of milk, and the cow is not too fat for comfort and health, as they often become on corn meal alone. There are those, also, who claim that milch cows will be greatly benefited by mixing their feed with warm or hot water, if this can be done without too much trouble, at each milking. It is well-known that to give a family cow a warm mess in the mornings increases the flow of milk perceptibly. Why should it not, then, do the same with any number of dairy cows? Cut the hay and pour hot water over it, and mix it so it is all wetted, then add the meal, or the mixed feed, referred to above, mixing thoroughly and feeding while warm. In a dairy of 20 cows the extra milk will more than half pay for the extra labor. (For the value of meal daily, to a cow giving milk, see next receipt.)

Meal, the Value of, for dairy Cows.—The editor of the *Farmer and Mirror* gives the following item, coming, he says, from one of the best dairymen in Vermont. He says:

"I have come to the conclusion, after seven years' experience in the feeding of meal every day to such of my cows as were giving milk, that in the future I would feed more meal instead of less. I believe that when the cows have been properly selected, and are of a breed that is reliable as to butter qualities, it amounts to a certainty that all we feed them above what is required to sustain their bodies, will be returned to us in butter with a large profit on the investment. At the same time care should be taken not to overfeed. Gilt-edged butter cannot be made from cows thin in flesh or poorly fed."

To "Dry-off" Cows and other Animals.—As we have given the plan above, for increasing the flow of milk, it may not be amiss to also give a good plan here for drying off, which is occasionally important, and as it is just as applicable to mares, when weaning the colt; and with slight modification, also valuable for caked-breasts, it is worthy of a place in

this connection. It is as follows: Tar and good vinegar, each ½ pt.; spirits of turpentine, 6 ozs.; beeswax and camphor gum, 2 ozs.; tallow, 4 ozs. DIRECTIONS—Boil all together for 15 minutes, except the turpentine and camphor gum, the latter of which should be broken up very fine or pulverized by the druggist, by dropping upon it a few drops of alcohol, then these added when removed from the fire, and stirred until cold.

The cow or the mare is to be milked dry night and morning, and the ointment rubbed into the udder and along the milk-veins for 3 or 4 days, or until the milk ceases to flow.

For Caked-Breasts make it without the tar and rub it in well as long as needed to remove the soreness, then cease unless you desire to dry up the milk as the camphor has a great tendency to do.

Remarks.—The camphor was not in the recipe as the author obtained it; but knowing its value upon the female breast, I have added it to the recipe, knowing it will prove so much the more reliable. The only objection to the tar upon the breast is, it stains the clothing, and is also more sticky.

Another writer says a cow may be dried off in a short time by not milching her quite out, leaving some in the udder each milking, and by feeding 4 qts. of dry corn meal in the course of the day, which, if she is to be fatted, will help to lay on fat, and gradually dry her off. This is no doubt the fact, if toward the close of her milking season. Still I can see no objection to the dry meal, even if the ointment is used.

Ointment for Swelled Bags, or Udders of Cows.—Sweet oil, 4 ozs.; pulverized camphor gum, 1 oz. Dissolve over a slow fire, and rub in well 2 or 3 times daily. The author thinks the ointment for drying off cows, above, fully equal, if not even better, than this camphorated-oil, although only swelling is to be remedied here, which generally arrives from colds.

Choked Cattle, Sure Remedy.—J. B. J. in *Country Gentleman* speaking of choked cattle, says: "The following recipe ought to be printed twice ever year, as it is a sure remedy: Take of fine-cut chewing tobacco enough to make a ball the size of a hen's egg, dampen it with molasses so it adheres closely; elevate the animal's head, pull out the tongue and crowd the ball as far down the throat as possible. In fifteen minutes it will cause sickness and vomiting, relaxing the muscles, so that the potato, or whatever may be choking it will be thrown up."

Hoven or Bloat in Stock.—Prevention and Cure.—O. J. L. of Modest Town (a very appropriate name for a place where the men are so modest they dare not give their name when reporting for an agricultural paper on the above disease), Va., made a report of the death of a cow and a calf to one of the farm papers, I think the *Farm and Fireside*, to which the veterinary surgeon A. T. Wilson, made the following sensible answer: "Your cow and calf both died from hoven or bloat, a very common result of injudiciously turning cattle into a rich clover patch. To prevent bloat, turn them in for an hour or so every day for a week until they get used to it. To cure bloat, when seen in time, use 2 ounces, each, of hyposulphite of soda, and tinct. of ginger, added to a quart of cold water. But in extreme cases, make a opening with a pocket knife, in lieu of a trochar, in the most prominent swelling or point on the left flank, and insert any small tube—a funnel. A quill, or pencil case might answer."

Scours and Diarrhœa in Cattle, Colts, etc., to cure.—For scours in cattle, change the food and water. Give first 1 qt. of lard oil, with laudanum, 2 ozs. After 3 to 4 hours, give powdered gum catechu, ginger, and gentian root, each, 2 ozs., in flaxseed tea, 1 pt., to any animal over 2 years old; half this, to those under 2 years, and over 9 months, and ¼ to {1/3} the amount to younger stock; repeating the dose twice daily, and withholding it as soon as the discharges diminish. Give nourishing food, and flaxseed tea to drink. In chronic (long standing) diarrhœa, give, morning and evening, 1 dr. of ammoniated sulphate of copper, dissolved in cold water, ½ pt.—*Western Rural*.

Diarrhœa of Cattle, Remedy.—Another writer says: "Three pecks of boiled potatoes, fed in the day, in 3 messes, warm, is an excellent remedy for diarrhœa in cattle."

Scours in Cattle, Remedy.—Mr. James Door, of Dorchester, Mass., recommends fine wheat flour as a cure for scours in cattle. He says: "Take 1 qt. of the finest flour, mix smoothly with water, making it just thick enough to run, and administer at one dose. A second dose may be necessary, but one is generally sufficient for a cure."

SALT—Its Importance for Milch Cows and Other Stock—Amount Daily Necessary.—*Its Importance*.—An American, travelling in Switzerland, writes that "Here the milch cows are salted early every morning, and if fed in the stable, as they usually are, the salt is given before feeding. And they claim that by salting in this way their appetite is

improved, they drink with more regularity, keep in better health, and give more milk, then when salted in the usual way, as practised by dairymen in America. The Swiss dairymen think it very injurious to salt milch cows only once or twice a week, as they would lick too much salt at one time, and drink too much water for the day; they consider that stock in order to do well must be fed with regularity every day alike, and never given too much of anything at one time."

Amount Necessary.—One of our own stockmen says: "Salt should be furnished to all animals regularly. A cow, an ox, or a horse, according to size, needs 2 to 4 ozs. daily. Salt increases the butter in milk, helps the digestion and nutritive processes, and gives a good appetite.

Salt, Amount Necessary for Different Kinds of Stock.—The French government, according to their custom of testing all such points scientifically, appointed a commission to examine into, and experiment if necessary, which reported upon the amount proper for different kinds of stock, in ordinary condition, as follows: "For a working ox or a milch cow, 2 ozs. daily; for fattening stall-fed oxes, 2½ to 4½ ozs., according to size and fatness; for fattening hogs, 1 to 2 ozs.; for store sheep, ½ to {2/3} of an oz.; fattening sheep, double the amount; for horses and mules, 1 oz."

And a private dairyman found, after many trials, that with 2 ozs. of salt daily, his cows gave the most milk. And the noted French farmer and chemist, Boussingault, to test it thoroughly, "Fed 6 steers for 13 months, in 2 lots, the food being the same for each lot; but to one lot he gave 1{1/8} ozs. of salt daily, to an animal, and to the other lot none. A remarkable difference was at once manifest. The first lot were all sleek, smooth-coated and in perfect condition. The other became rough, mangy, and ill-conditioned, and weighed at the end of the test 150 lbs. less than those that had been supplied with salt."

"Many other similar results," says the *Michigan Farmer*, which gave the above facts, "might be cited; but there ought to be sufficient to induce those who still doubt the value of salt for all kinds of farm stock, to test it for themselves." It closed as follows:

"Not only is salt an agreeable and needful article of food, but is in some diseases almost a specific remedy. For those parasitic diseases to which sheep are subject—such as the liver-rot (flukes in the liver), verminous bronchitis, (worms in the bronchial tubes), and worms in the stomach and intestines—salt is an unfailing remedy, as well as an effectual preventive. The irritating worms, which sometimes infest the rectum of horses are removed at once by an injection of a solution of 1 oz. of salt in 1 qt. of water. But it is as a constant addition to the food that it is most useful as a preservative of the health of our domestic animals."

Salt as a Vermifuge, its Value for Cattle, Horses, Sheep and Hogs.—The New York *World*, speaking of salt for stock, says: "If you want to keep your cattle, horses, sheep and hogs healthy, give them salt regularly. There is no better vermifuge than salt. Much of the so-called hog cholera is due to intestinal worms. Plenty of salt would prevent the accumulation of these worms. All animals desire salt, showing that it is a want of their nature, and undoubtedly for wise purposes."

Cows, Accidentally Over-Eating Meal, What to do.—When a cow has accidentally eaten her fill of meal, do not allow her to drink; and as soon as discovered, according to the size of the animal, give a drink of from 1 to 2 lbs. of Epsom salts, dissolved in warm water, and repeat the dose in 6 hours if it has not operated; in 6 hours more, if it has not yet worked a hole through, repeat half as much more, and so continue until a movement is obtained.

Feeding Calves in Winter.—A person signing himself "Experience," of Muir, Mich., in answer to the inquiry of "Breeder," in the Detroit *Tribune*, that some of its many readers would tell him the best feed for calves in winter, says: "If he will give his calves wheat bran for their morning meal, and turnips for their evening meal, with what good clover hay they want, and give them a warm, clean stable, never let them out doors in the cold; water them in their stalls once a day—in the evening—he will have no trouble to raise good calves, and keep them fat and growing. But under no circumstances should they be turned out of doors until spring, and if they are kept in the stalls on bran and turnips until feed is good, they are better for it. The bran should be fed dry with a small quantity of salt, twice a week."

Winter Feeding of Cows, Horses and all Other Stock—The Importance of Roots, or Oil Meal, etc., for.—It is a great change for cattle, horses, sheep, etc., from a pasture where there is plenty of grass, and also plenty of exercise, to the stable or even a barn-yard, where comparatively there is neither grass nor exercise; but the milch cows will show it the quickest by the shortness in quantity of milk given, unless some of the succulent roots or oil meal are given at once to make up for the change from grass to dry hay. Then, again, dry hay, oats, corn, or cornmeal, have a tendency to produce

costiveness, and hence the importance of some of the roots or oil meal to be given directly to avoid the probability of costiveness becoming thoroughly established. People eat oatmeal, or cornmeal mush, corn bread, apples, peaches, berries, etc., for this very purpose; why should it, then, not be as necessary for stock as for persons? It is, and should receive the same care and attention, if we would keep them in a continuous healthy condition, so that the cows shall give the largest flow of milk, and that other stock shall continue to thrive instead of the hair becoming rough and staring, and the animals losing flesh, as well as heart and appetite. Even poultry should have something of a succulent or juicy character to make up for the loss of green feed, insects, etc.

The Comparative Value of Roots for Winter Feeding as Generally Understood.—A writer in the *Rural Home* places the comparative value of roots in the following order: Carrots, parsnips, sugar-beets, mangel-wurzels, rutabagas, Swedish turnips, and lastly, English, or common field turnips, which are lighter, but do well for early feeding, before beginning on the richer roots, which also keep better. This writer did not mention potatoes, but another writer who had been experimenting upon the subject under the head of "Potatoes for Stock," says: "Potatoes for stock are worth 30 cents per bushel to feed to stock. They are not only nutritious, but excellent appetizers, and promoters of digestion. My experiments go to show that a peck of potatoes will produce as much milk as a bushel of carrots, beets or turnips."

Nutritive Value of 22 Different Kinds of Food for Farm Stock.

Food.	Flesh Producing.	Fat Producing.	Total.
Turnips,	1	5	7
Rutabagas,	1	7	9
Carrots,	1	7	10
Mangels,	2	8	12
Straw,	3	16	22
Potatoes,	2	17	22
Brewer's grains,	6½	18	25
Hay (early cut),	8	51	64
Millet (seed),	8	76	85
Buckwheat,	9	61	69
Malt,	9	76	81
Rye,	11	74	88
Oats,	12	63	70
Corn,	12	53	80
Wheat and barley,	12	66	32
Dried brewer's grains,	16	67	82
Beans (English field),	22	46	74
Peas,	22	61	79
Linseed,	23	112	82
Cotton seed cake,	24	46½	61
Linseed cake,	28	56	73
Bran and coarse millstuff,	31	54	76

Field Turnips, How to Feed to Cows Without Flavoring the Milk.—A writer in the *Maine Farmer*, says he raised 800 bushels, and fed all to his 16 to 20 cows—1 pk. twice a day—by trimming off the rootlets and feeding only the solid turnip, after milking, no bad flavor was imparted to the milk.

Soiling Cows.—It undoubtedly pays to judiciously soil cows, as there is no other way by which so much milk can be obtained from a small number of acres. When the land is in proper condition, a cow can be kept upon one-half acre for summer, and one acre for winter. Even better than this has been done. In starting, prepare the ground well—one-eighth of an acre of oats, thickly, for each cow, as early in the season as you can; two or three weeks after this, sow the same

amount of land to oats again for later cutting. Then prepare the ground, and sow ¼ of an acre in corn for each cow, which will probably leave a surplus towards the winter feeding.

SHEEP.

TWENTY-EIGHT YEARS IN SHEEP HUSBANDRY.—As the raising of sheep has become so common on almost every farm, we have thought we could not do better than to devote a few pages to this important subject. First, we will give a paper read before the Farmers' Institute, at Hudson, Mich., Jan. 10th, 1880, by Sidney Green, the well-known farmer of Pittsford, Hillsdale County, whose experience of 28 years will give valuable hints, to say the least, upon almost all the important points of sheep husbandry, so that new beginners may avoid the mishaps which Mr. Green and others have fallen into for the want of this very experience in their beginning. He says:

Introduction.--"Ladies and gentlemen, I want to say right here that what I have to say will be largely in the line of my experience, and the way that I have managed my own flock of sheep during the past twenty-eight years.

"A year ago last July, a friend of mine living in Missouri, wishing to engage in the business of sheep raising on a large scale, and knowing that I had been somewhat successful on a small scale in the same business, wrote to me asking advice, and, in fact, asked of me just what this Institute now asks. I complied with his request, and my whole essay was comprised of but one word, and that was "Care." If every man, woman and child, that owns a sheep, or even ever expects to, will take that one word and make it the key note of every move they make, guided by their best judgment and discretion, I will guarantee success in this important branch of farming.

Care—What it Will Do.—"Care will make carcass; care will make constitution; care will save fodder; care will ward off disease; care will make fat, and fat will make wool and grease, and wool and grease will make money, and that is what we are after. Yes, care will do one other thing, care will make blood.

"Were it not for the promise I have already made that I would relate my 28 years' experience with sheep, what I have already said, carried out, would accomplish a better purpose than anything I could add, and this paper would be complete. It is true that we are guided to some extent by the experience of others.

When and How He Began.—"In the fall of 1852, I bought in Oakland county, this State, 53 ewes of common stock for $1 per head, and one ewe, said to have been a pure cross between the Spanish and French Merino, for which I paid $25. I drove them to this county (Hillsdale) in the winter of 1853.

Shearing—Average Weight of Fleece.—"The first shearing the lot averaged a little less than 4 lbs. per head. I raised 24 lambs the first season; I had the good fortune to raise from my pure-blooded ewe an extra buck lamb, which was the foundation for great improvement of my flock for those days. For the first few years the flock showed a greater improvement per year, than they have since they have been brought to a greater degree of perfection. This, in fact, is my experience with crossing full bloods with natives. It requires greater skill to improve really good sheep, than it does to improve an inferior grade. The second shearing showed an improvement of nearly ¼ per head. In the course of 5 or 6 years the average of the flock, numbering from 80 to 100, was a trifle over 6 lbs. per head. With good luck in the selection of rams, in 10 years from the start, my flock averaged 7 lbs.

Drawbacks in Business.—"Sheep business, like any other business, has its drawbacks. The use of what I supposed to be a full-blooded Spanish ram from Webster's flock, of Vermont, set my flock backward on an average for 2 years ½ lb. per head. This is the only real set-back that I ever have experienced. I soon recovered that loss, and have made steady gain since. So I estimate my average this coming spring at 9 lbs. per head, with the prospect of a little more.

Increase of Wool per Head by using Blooded Rams.—"I have thus far shown simply the increase of wool per head during this time with the use of what we might call blooded rams, with the single exception of one blooded ewe. Here occurred an incident which was curious in its effects, and in after years proved to be adulteration of blood.

Danger of a Grade Buck upon a Blooded Ewe.—"My eyes have been wide open ever since to prevent the repetition of the mishap. The blooded ewe, which was pure gold in my eyes at the time, was, through carelessness, mated with a grade buck, and her second lamb was a nice grade; but the curious part of the affair was that that high and pure blooded ewe never afterwards raised a pure blooded lamb from mating with the purest blood I could find. Her breeding qualities were destroyed and her progeny was not reliable. I kept the ewe till she died—15 years of age.

Buck, Selection of, Suitable for the Flock.—"In selecting a buck that is suitable for the flock lies the secret of success. If a man has not the judgment for himself, he had better borrow it from some one that has, until he is acquainted with the

business sufficiently to prevent mistakes and set-backs. In choosing a ram for myself, I want a low, heavy body, straight on the back, clear to the roots of the tail, broad and level over the shoulders, deep and heavy in the brisket, thick neck, with heavy gullet; in short, constitution is the first strong point that will receive my attention. I want the wool of a medium length, smooth on the surface, the thicker the better. The staple rather stiff and stubbed, with plenty of oil distributed evenly from the roots to the end. I like heavy folds, but do not want them to run over the back, nor do I like to see them too heavy over the neck. Horns, if any, set well from the head, fore-top as long as the rest of the fleece, down even with the eyes, then stop. Smooth, clear pink face, and nose, short, thick velvety ears, wool full length, well down on the legs, and full heavy fleece on the belly. The foregoing is something of my ideal of a ram.

Time for Washing and Shearing and Putting Ewes and Lambs by Themselves.—"My flock is well washed and sheared from the 15th to the 20th of June. They are turned on the largest range that I can spare. The ewes and lambs by themselves, the bucks by themselves; the rest, counted as store sheep, by themselves, making three flocks. From that time till after harvest all the attention they get is salt once a week (twice or three times I believe better), and all carefully counted. About the 20th of August I wean the lambs, taking them as far from the mothers as I can, generally saving a piece of clover stubble for them, and giving them the best chance that I can. About the first of October I commence giving them about a gill (¼ pt.) of oats apiece daily. This is kept up until cold weather sets in, and then grain is increased about ½ more and kept up until grass grows the next spring. They have a good shelter if they choose to occupy it. During storms they are forced to their shelter. I feed clover hay twice a day, and water once a day, and feed them grain at night. With this treatment my lambs are kept thrifty all winter. I claim that the grain fed early in the fall is the secret of wintering successfully.

Time to Sort Out Breeding Ewes.—"About the first of October I sort my breeding ewes. In doing this important work, I have diverged from the well established rules of breeders and made one of my own. Here I would call the attention of the Institute to a statement made before the Institute one year ago, by our worthy president. He made this statement I think: 'That he raised all the lambs he could.' Now if he meant he tried to raise all that were born, then we do not differ, but if he meant that he tried to increase his flock as fast as he could, then his line of policy and mine lie in a different direction.

His Rule.—"My rule is, in sorting for the breeding band, that none should be less than 2½ years old, and none that are inferior as to size, constitution or thinness of wool. My year-old ewes are turned with the wethers; and the older ones that have been excluded from the breeders are marked for sale.

The Result.—"The result of this policy is a large and uniform flock, with strong constitutions and heavy shearers.

Average Weight.—"I have just weighed three of my breeders, which is the average weight of the flock of 30. The heaviest weighed 140 lbs., and the lightest 100 lbs., a pick of the average 116 lbs.

Land too Valuable to Keep Inferior Sheep.—"Our land is too valuable to keep inferior sheep, or to try to increase in numbers at the expense of size and quality.

Time to Divide in the Fall.—"My flock of 80 are divided from October, until they are brought into the yard in three lots, breeders, store sheep and lambs. Then the breeders and store sheep are turned together for the winter. I feed stocks twice a day. At noon they are fed light, with wheat, oats or pea straw. At night they are all fed about one gill of corn each. All have shelter and are compelled to use it during storms. Your essayist last year made one remark that was worth its weight in gold as to the care of sheep, that was, 'to be quiet among them.' I treat my sheep so they think I am in their way, instead of their being in mine when I am among them. I feed a very little sulphur mixed with salt during the winter. I think it a preventative for pulling their wool. The first of March I take the breeders and keep by themselves till nearly shearing time. In connection with their grain I prefer to feed a few roots or a little bran, but do not always find it convenient.

Time for Lambs to Appear.—"The lambs begin to make their appearance about the 20th of April. Great pains are taken at this time with this part of the flock. Let the weather be what it may, the ewes and the lambs are all driven to their shelter every night, and the little ones are carefully cared for. This precaution is used until the weather gets warm and settled.

Time for Trimming, Care of Fleeces, etc.—"My whole flock is carefully trimmed and examined about the first of April. The wool is washed and put in the fleeces at shearing time, so there is no waste. The theory that sheep will not do well for a long term of years on the same farm I take no stock in. For 28 years my stock has been kept on the same farm

and the one adjoining. You see I have reported a continual progress. This, I can assure you, has not been accomplished in a haphazard way. Nothing has been left undone for their thrift and comfort that is reasonably in my power to do."

Sheep, Value of on a Poor Farm.—"Some farmers of our acquaintance," says the *American Agriculturist*, "feel an antipathy to sheep for the reason that they 'bite close.' We consider this their chief recommendation. They can only bite close where the pasture is short, and the pasture is short only on a poor farm. A poor farm will necessarily be encumbered with briers, weeds, and brush in the fence corners. Under such circumstances we should say to a farmer who has $20 or upward in cash, or credit for it, let him borrow the amount if he has to pay 1 per cent. per month for the use of it, invest it in as many ewes, not older than 3 years, as you can get for that money. Put them in such a field as we have described, and give them, in addition to what they can pick up, a pint of wheat bran and oatmeal each daily, with free access to water and salt. They will first go for the briers and clean them out; every portion of that field will be trodden over and over again, and the weeds will have no chance. Fold them on that field during the winter, and carry them food sufficient to keep them thriving. Get the use of a good buck in season—Southdown would be preferable—and in the spring, if you have good luck, that means if you give them proper attention and feed regularly, you will raise more lambs than you have ewes. The money will be more than doubled, and the wool and manure will pay for their feed and interest. In the spring you may put that field in corn with the certainty of getting 50 per cent. increase of crop.

Sheep Better Than Neat Cattle.—A competent and experienced writer on this subject says: "One great advantage sheep have over other stock is, they never die of the contagious diseases which they contract. They get the scab, foot rot, or something else, and if unchecked it gets them in bad condition, and would ultimately, perhaps, kill them. But the very worst contagious diseases to which sheep are subject give the owner ample time to treat the affected animals, and the diseases are generally of a character which yield rapidly to treatment. But a man may have a lot of hogs and feed them on hundreds of bushels of corn, and about the time the bottoms of his cribs are neared and he is thinking of selling, some disease breaks out among them—no one knows what it is or what to do for it—one animal after another, following in rapid succession, is affected, and the greater portion die. I have known farmers well nigh ruined by the appearance of a contagious disease of this character. Sheep are, happily, exempt from such rapid and fearful mortality. Besides, when a sheep dies—and they do die, sometimes,—its pelt is sufficient to pay for its keeping from the last shearing to its death. It makes no difference when it dies, or what kills it, the sheep never dies in debt."

Sheep, More Made on Them Than Upon Horses.—The Iowa *State Register* says that an old and careful farmer of Indiana, after 33 years' experience, informs them that he has made most on sheep, for the money invested, and the least on horses.

Sheep, a Few Short Rules for the Care of.—The American Emigrant Company's circular says: I. Keep sheep dry under foot, with litter. This is even more important than roofing them. But never let them stand, or lie, in the mud or snow.

II. Drop or take out the lowest bars as the sheep enter or leave a yard, thus saving broken limbs.

III. Begin graining with the greatest care, and use the smallest quantity at first.

IV. If a ewe loses her lamb, milk her daily for a few days, and mix a little alum with her salt.

V. Give the lambs a little milk feed in time of weaning.

VI. Never frighten the sheep if it is possible to avoid it.

VII. Sow rye, for weak ones in cold weather, if you can.

VIII. Separate all weak, or thin, or sick, from those strong, in the fall, and give them especial care.

IX. If any sheep is hurt, catch it at once and wash the wound with something healing. If a limb is broken bind it with splinters tightly, loosening as the limb swells.

X. Keep a number of good bells on the sheep.

XI. If one is lame, examine the foot, clean out between the hoofs, pare the hoof if unsound, and apply tobacco with blue vitriol boiled in water.

XII. Shear at once any sheep commencing to shed its wool, unless the weather is too severe.

Sheep, Their Value for Fertilizing and Improving Worn-Out Soil.—A correspondent of the *American Farmer* writes on the subject of the capacity of sheep to improve soil, and to renovate and bring up worn-out land. He says: "From many years' experience and observation, I am fully convinced that plowing in green crops with lime—such as clover and others—is the most economical and speediest means that a farmer can use for bringing up worn soil. Yet it can be very profitably done by the use of sheep—in pasturing even. More than once and on more than one farm, I have seen dry, barren spots, such as gravel knolls and side-hills made fertile and productive in a single season, simply by salting a small flock on those barren spots twice a week during the summer; the sheep would be sure to resort there several times a day to lick up the salt, and thus leave their droppings, both liquid and solid, which are very rich fertilizers; then next season the most rank and luxuriant growths of grass and grain would be produced on those 'galled spots' of any other portion of the whole field; thus the best kind of manure was applied and spread just where most wanted without any hard labor. Weight for weight, sheep manure is more fertilizing than either horse or cow manure, and next in value to hen or hog droppings. Sheep are valuable fertilizers I am very sure."

Breeding Ewes, Care of for Profit.—Have good winter shelter, good clover hay, a few roots, a little grain daily, and water handy—water is more necessary in winter than in summer. Have no fears of their becoming too fat. If, occasionally, one gets too fat and drops her lamb out of season, she will be in season for the butcher, at a good price, after shearing. Sheep are cheap in the fall, when all are fat. Feed thus from the time they come into winter quarters, or earlier, if pasture is short, and until it is good in the spring; and your wool will be better and more of it, the ewes will be better supplied with milk, especially those raising twins; the lambs will be in a better condition for the butcher; so will any of the flock, which from age or general failure to raise a lamb or two, it will be the best to dispose of. If not cared for through the winter, but allowed to become poor, you can not sell till fall, when everybody else has them also for sale.

Pea and Oatmeal for Fattening Sheep.—As nothing was said above as to what kind of food should be used for fattening sheep, the author would suggest peas and oats, which may have been grown together, or, better still, to grind them together; then cut nice hay and properly wet it with sweetened water if you like, then mix in this mixed meal, and I will guarantee the fattening to be quickly and satisfactorily done.

Foot Rot in Sheep, Successful Remedy.—Sulphuric acid, 2 ozs., water, 1 oz.; and put into the mixture two old copper cents (I say old, because the old ones are purer copper than the new ones), and when the cents are dissolved it is ready for use. DIRECTIONS.—Remove all the rotten and decaying parts of the hoof with a knife or any convenient instrument—a knife like that the blacksmiths use in horseshoeing, have the end bent up or round a little, is best—the knife being sharp to cut off if need be any projecting bits of the decaying hoof, avoiding, if possible, any bleeding; then apply the mixture thoroughly to every part which was diseased. If thoroughly applied, once will generally be sufficient; but if there is any of the disease between the hoofs, besides cleaning out all that can be with the knife, a piece of soft cord or string must be wet with the mixture and drawn through to make thorough work of it and prevent its spreading again from this part.

Preventive of Foot-Rot in Sheep.—A Mr. Karkeek, who is claimed to be good authority, writes to one of the agricultural papers that when the prevalence of wet weather makes it probable that foot-rot may set in, "it is easily prevented by carting a quantity of earth and throwing it up in the form of a mound in the centre of the yard attached to the shed, and upon this mound strew small quantities of freshly slacked lime."

HOGS.

Hogs, Preparing Food for—Peas claimed Better than Corn.—The *Fostoria Review* informs us that a writer in one of their exchanges states:

"The present practice in any country, I believe, is to prepare food for hogs either by steeping, steaming, or boiling, under the belief that cooking in any shape is better than giving in the raw state. But I now assert, on the strongest possible grounds—by evidence indisputable, again and again proved by actual trials, in various temperatures, with a variety of the same animals, variously conducted—that for fast and cheap production of pork, raw peas are fifty per cent. better than cooked peas or Indian corn in any shape."

Hog Feeding, Experience of an Iowa Breeder and Packer.—A hog breeder and pork packer of Iowa gives his experience in the business to one of the agricultural papers as follows: He has demonstrated to his entire satisfaction that after his spring pigs had reached about 300 lbs. they ceased to grow with any profit. His pigs on the first of January weighed nearly as much as they did on the first of February, notwithstanding he had kept up the feeding. He is a great advocate of taking good care of hogs. He would never shut up his hogs more than five weeks before he wants to market them. His food early in the fall was pumpkins, steamed and mixed with middlings, the proportion being about one-half a bu. of middlings to 40 gals. of steamed pumpkins. His object was to develop the bone and muscle of the hog without adding fat. This he continued three months, and then put them in a close pen and fed them meal and middlings steamed. After shutting them up for five weeks they gained two pounds a day until they reached 300 lbs. and then ceased to grow to any extent.

Hogs.—Corn claimed to be the Best Food for, and Best when Cooked.—I am well aware that there are some people who yet think that it is not at all necessary to cook food for hogs or other stock. I do not propose to enter into the discussion of the subject. I will say that I think common sense tells us that it is better to cook food to fatten hogs; but I will give an item from the *American Rural Home*, which was given under the above heading, then let every one judge for himself as to whether it is best to grind and cook corn, or to let the hogs grind and cook it for themselves. The item is as follows:

"Corn is the best feed for hogs, and may be fed in the ear while soft, but when hard, should be ground fine and wet with hot water, or otherwise cooked, for it has been proved, by repeated experiments, that corn thus fed will make from one-third to one-half more pork than when fed unground and uncooked; and a bushel should make from ten to twelve pounds of meat when thus fed to good feeding stock."

Fattening Hogs, Roots Valuable for.—The *Dublin Farmers' Gazette* gives the following as to the value of roots for fattening pigs. "Pigs" is quite often used while speaking of these animals, when hogs would be the proper word. It says:

"Parsnips, carrots, Swedish turnips, and especially mangel-wurzel, will all fatten pigs. These roots ought not to be given in a raw state, but always cooked and mixed with beans, peas, Indian corn, oats or barley, all of which must be ground into meal. When pigs are fed on such cooked food as we have stated, the pork acquires a peculiarly rich flavor, and is much esteemed for family use."

Store Pigs, Value of Roots for.—The following item from the *American Agriculturist* will strengthen the above idea from the *Gazette*, and add another root to the list, as this item, no doubt, refers to the common field turnip, which is not enumerated in the other. I must add, however, what the *Agriculturist* does not mention, and that is, I think the turnips should be cooked. It says:

"Store pigs will thrive well on roots with a slop of bran, sour milk and water. A supply of roots on hand will greatly reduce the cost of feeding store pigs. Turnips that cannot well be fed to cows may be given to the pigs. Give your pigs a warm, dry bed."

Store Pigs and Breeding Sows, Corn and Oats Ground Together far Better than either alone.—A writer upon this subject says:

"A bushel of corn weighs nearly as much as a bushel of oats, but if ground together the mixture makes a better feed for growing pigs and breeding sows than either grain alone."

Apples Good for Hogs, and Hogs Running in the Orchard Destroy the Codling Moth.—Fallen apples may be gathered and fed profitably to hogs, horses, or cattle in moderation, but where one has enough hogs to consume all as they fall, it is probably the best thing to do to turn them into the orchard; as those that fall early, especially, contain the moth, whose sting, or eating into its heart, has caused it to fall thus early. The word codlin, as Shakespeare has it, means "almost an apple," hence we get the "codlin," or "codling moth,"—a moth that makes codlins, or early falling apples, which, if not picked up soon and carried out of the orchard, the moth will return to the tree for further depredation and its own increase. "The destruction of the early fallen apples also destroys the moths and saves the remainder left upon the trees."

Sows Eating their Pigs, to Prevent and Cure the Habit.—To prevent it, keep a trough of the following mixture where all the hogs can have access to it: Wood ashes, salt, sulphur and powdered charcoal, in about equal bulk, mixed, and see especially that sows partake of it about this period; then if they commence the eating of their young, give them in small pieces one pound of salt pork; ten or twelve hours later give them half as much more as long as they will eat it, and also see that they have frequent tastes of this preventative mixture.

To Cure the Habit.—A little salt daily and a handful of charcoal to each hog once a week, it is claimed will prevent cholera and other diseases; then, if the above mixture is kept where all hogs can eat of it at their pleasure, the author will guarantee it preferable to the salt and charcoal alone. Still, if cholera was prevailing in a neighbourhood, he would advise some of the preventatives found under that head, having antimony, saltpetre, etc., with the salt and charcoal.Keep on the safe side is a good motto to go by. And it is by thus satisfying the natural desire for what their systems need, that a ravenous taste is prevented, that of eating their pigs.

Scurvy Pigs, Simple Remedy.—Wash the scurvy hair and all parts troubled with the scurf thoroughly every day for a few times with buttermilk. A farmer who has tried this so many times as to be sure of his position, says: "It will entirely and speedily remove the scurf."

Lice on Hogs, Easy Remedy.—"Carbolic acid 1 oz. to water 10 ozs., makes a wash that destroys lice without injury to the hog." Then it would on other animals, as cattle, cats, dogs, fowls, etc.

Kidney-Worm in Hogs and "Fluke" in Sheep, Remedy for.—The *Rural Alabamian* asserts that kidney-worms in hogs, and the fluke worms that infest the livers of sheep are identically the same. A Parasitic insect—an insect drawing its whole support from another animal, as lice upon an animal, or worms in them—and the editor claims also "that lye made from hardwood ashes, if given daily, will work a cure; also rubbing turpentine upon the loins."

Corn and Pork, How to get the Most from, by the Way of Feeding.—The Chicago *Herald* informs its readers that "an Ohio pork grower has learned by experimenting that a bushel of corn fed on the cob will produce only nine pounds of pork, while an equal quantity, ground, and the meal fed raw, gives twelve pounds; but a bushel of corn boiled gives thirteen pounds, while if ground and the meal cooked, makes about 16½ pounds.

The Best Kind for Profitable Raising, etc.—No matter how much the doctors may say against eating pork it will always be eaten, and I am among the number who like my pork and beans, as well as ham and eggs, the ham part being nice and tender to begin with, and has been nicely cured, smoked, etc. I always expect to eat some as long as I live, and it being the same with many, very many others, I will try to give a few ideas that will benefit the others, to obtain the best breeds, how to prevent and cure their diseases, manner of feeding, etc., to the best possible profit. And I desire to be as short as possible, I cannot cover the point as to the difference in breeds, and as to thier value in the market, easier than to quote from the *Western Rural* upon these questions. It says:

Raising Hogs—Which the Most Profitable.—"Did our farmer readers ever take a slate and pencil in an evening and estimate the difference between a good and a poor breed of hogs? The increasing demand for ham and lard in all parts of the world shows that hogs that yield largely of these profitable parts are in demand. The consequence is there is a range in the market at this time at St. Louis, from $4.50 to $7.50, and at Chicago from $4 to $7, showing a difference of three per cent. in favor of the good hog. Nor is this all. While the improved breeds of hogs can be made as easily and with an equal amount of food to average at 15 months old 350 pounds, as the 'greaser' hog will 175 pounds, or a little better hog will 225 pounds. If a farmer has 50 head of the latter class to sell now, he will get, at $4 per cwt., $1,125. If he has 50 'greasers,' which are too numerous in this country yet, he will get $700. But if he has 50 of the best Poland-China, Suffolk, Berkshire, etc., which will have cost no more, and which will have rendered a large amount of satisfaction, he

will receive $2,450. These are figures that cannot be disputed, and are within the reach of every farmer who has 160 acres of land in cultivation. The number, weight or price is not over-estimated."

Remarks.—Remarks are almost out of the question, for figures don't lie, and there are too many whose experience has given them the $700, instead of the $1,125, or the $2,450. Don't do it again is all that is necessary to add. As to feeding etc., see that head.

Hog Cholera—Its Cause and Best Known Remedies—Cause.—A writer for the *Country Gentleman*, of Bronson, Michigan, speaking of the cause of cholera in hogs says: "I have never known an instance of cholera among hogs that had clean quarters and were fed regularly, kept warm and dry, although fed exclusively on corn, if they had also pure drink. The disease is not caused by any one thing alone, but by a combination of many unfavorable circumstances. To put a hog into a cold, wet, muddy place, exposed to hot days and chilling nights, compelled to pick its food out of the dirt and filth and drink from a filthy trough or hole, are enough to make the best of the swine race sick. All such abuses invite a sure penalty, and the wonder is that more do not get cholera, or something else, and die."

DICTIONARY OF MEDICAL TERMS

USED IN THIS WORK.

Ab-do-men. The belly, or the lower front part of the body.

Ab-lu-tion. Washing of the body externally; cleansing by water.

Ab-nor-mal. Unnatural; irregular; not according to rule.

Ab-or-tion. Childbirth before the proper time.

Ab-ra-sion. A superficial wound caused by bruising the skin.

Ab-sor-bent. Glands and vessels which absorb or suck up substances; medicines which absorb, or combine with acid matter in the stomach or bowels.

Ac-couch-eur. A man who attends mothers in childbirth.

Ac-e-tab-u-lum. The socket that receives the head of the thigh bone.

A-cho-li-a. Not sufficient of bile.

A-cid. Sour, sharp, pungent, bitter or biting to the taste.

Ac-tual Cau-te-ry. Used in surgery; burning or searing with a hot iron.

Ac-u-punc-ture. Pricking with needles; one of the operations of surgery.

Ac-ute. Diseases attended with violent symptoms; the reverse of chronic.

Ad-he-sive. Tenacious, sticky; apt or tending to adhere.

Ad-he-sive Plaster. Sticking plaster.

Ad-i-pose. Membrane of tissue; fat.

A-dult Age. Manhood or womanhood; a person who has attained full size and age.

Af-fec-tion. Disorder, disease, malady.

Al-bu-men. An element found in both animal and vegetable substances. The white of an egg.

Al-bu-mi-nose. A substance produced in the stomach during digestion.

Al-i-ment. Nourishment, nutrition; anything necessary for the support of life.

Al-i-ment-a-ry Ca-nal. The entire passage through the whole interstines from the mouth; the passge for the aliments.

Al-ka-li. A substance which, when united to acids, neutralizes them.

Al-ter-a-tive. A remedy which gradually restores healthy action.

Al-ve-o-lar. Relating to the sockets of the teeth.

Al-vine. Relating to the intestines.

Am-aur-o-sis. A loss or decay of sight, produced by various causes.

Am-en-or-rhe-a. An obstruction of the menstrual discharges; absence of the menses.

Am-ni-ot-ic Liquid. The fluid surrounding the fœtus of the womb.

Am-pu-ta-tion. The act of cutting off a limb or other part of the body.

A-na-sar-ca. A dropsy of the whole body; a general dropsy.

A-nas-to-mose. To communicate with each other; applied to arteries and veins.

A-nat-o-my. Study of the body.

An-em-i-a. Lack of blood; comparatively bloodless state.

An-es-the-sia. Numbness or paralysis of sensation.

An-eu-rism. A soft tumor, caused by the rupture of the coats of an artery.

An-i-mal-cules. Animals so minute as to be visible only with a microscope.

An-o-dyne. Any medicine which will allay pain and induce sleep.

Ant-a-cid. A substance which neutralizes acids; alkalies are antacids.

An-thel-min-tic. A medicine that destroys worms.

An-thrax. A dusky red or purplish kind of tumor, occurring in the neck.

An-ti-bil-ious. An opposing medicine counteractive of bilious complaints.

An-ti-dote. A preventive, or remedy for, poison of any disease.

An-ti-dys-en-ter-ic. A cure for dysentery.

An-ti-e-met-ic. A remedy to check vomiting.

An-ti-lith-ic. A medicine to prevent or remove urinary calculi or gravel.

An-ti-mor-bif-ic. Anything to prevent or remove disease.

An-ti-pe-ri-o-dic. That which cures periodic diseases, such as ague, intermittent fever, etc.

An-ti-scor-bu-tic. A remedy used for the scurvy; blood purifiers.

An-ti-sep-tic. Whatever resists or removes putrefaction or mortification.

An-ti-spas-mod-ic. Remedy for cramps, spasms, and convulsions.

A-nus. The external opening of the rectum, lower intestines.

A-or-ta. The great artery from the heart.

Ap-a-thy. Insensibility to pain.

A-pe-ri-ent. A mild purgative or laxative.

Ap-pe-tite. A desire for food or drink.

Ar-o-ma. The agreeable odor of plants and other perfumed substances.

Ar-o-mat-ic. Spicy and fragrant drugs.

Ar-te-ry. A vessel that conveys the blood from the heart to the organs.

Ar-thro-di-a. A joint movable in any direction.

Ar-tic-u-la-tion. The union of bones with each other, as at the joints.

Ar-tic-u-la-ted. Having joints.

As-car-i-des. Pinworms found in the lower portion of the bowels.

As-ci-tes. Dropsy of the abdomen.

As-phyx-ia. Apparent death, as from drowning.

As-sim-i-la-tion. The process by which food is changed into tissue.

As-then-ic. Debilitated.

As-trin-gent. A medicine which contracts or puckers up surfaces with which they come in contact; used in flooding, diarrhea, etc.

At-o-ny. Debility; defect of muscular power.

At-ro-phy. A loss of strength and wasting of flesh without any sensible cause.

At-ten-u-ants. Medicines for reducing the weight of the body.

Au-ri-cle. A cavity of the heart.

Aus-cul-ta-tion. The art of detecting disease by listening to the sounds of lungs, heart, etc.

Ax-il-la. The armpit; hence axillary, pertaining to the armpit.

Ax-il-la-ry Glands. Situated in the armpit, secreting a fluid of peculiar odor.

Bal-sam-ics. Medicines possessing healing properties.

Bile or **Gall**. A secretion from the liver which aids digestion.

Blis-ter. A thin watery bladder on the skin.

Bou-gie. A taper body introduced into a passage or sinus to keep it open or enlarge it.

Bright's Disease. A dangerous disease of the kidneys.

Bron-chi-tis. Inflammation of the bronchial tubes; the branches of the windpipe in the lungs.

Ca-chex-y. A bad state of the body. It may be caused by blood poisons.

Cal-cu-lus. Stone or gravel found in the kidneys and bladder.

Cal-lous. Hard or firm.

Ca-lor-ic. Heat.

Cap-il-la-ry. Fine, hair-like.

Cap-si-cum. Cayenne pepper.

Cap-sule. A dry, hollow vessel containing the seed or fruit.

Car-bon-ic Acid Gas. A gas of two parts of oxygen and one part of carbon.

Ca-ri-es. Ulceration of a bone.

Car-min-a-tives. Medicines which allay pain by expelling wind from the stomach and bowels; an aromatic medicine.

Ca-rot-id Artery. The great arteries of the neck that convey blood to the heart.

Car-ti-lage. A hard elastic substance of the body; gristle.

Ca-ta-me-ni-a. The monthly discharge of women.

Cat-a-plasm. A poultice.

Ca-tarrah. A discharge from the head or throat; a flow of mucus.

Ca-thar-tic. An active purgative.

Cath-e-ter. A curved instrument introduced into the bladder, for drawing off the urine.

Caus-tic. Burning; a corroding or destroying substance which burns or corrodes living tissues, as nitrate of silver, potash, etc.

Cau-ter-y. A burning or searing any part of the body.

Cell. A small elementary form found in vegetable and animal tissue.

Cer-e-bel-lum. The lower and back part of the brain.

Cer-e-bral. Pertaining to the brain.

Cer-e-brum. The upper and front part of the brain.

Cer-e-bro Spinal. Pertaining to the spinal cord and brain.

Ce-ru-men. The wax of the ear.

Cha-lyb-e-ate. Containing iron in solution, as found in mineral springs.

Chan-cre. A venereal or syphilitic sore.

Chol-a-gogues. Medicines that cause an increased flow of bile, such as calomel and podophyllin.

Chol-er-ic. Easily irritated; irritable.

Chor-dee. A painful drawing of the chords of the penis. It occurs in gonorrhea.

Chron-ic. To continue for a long time, and becoming a fixed condition of the system.

Chyle. A milky fluid, mixing with and forming the blood.

Chyme. The pulp formed by the food after it has been for some time in the stomach, mixed with the gastric secretions.

Cir-cu-la-tion. The motion of the blood, which is propelled by the heart through the body.

Clav-i-cle. Collar-bone.

Co-ag-u-la-tion. A change from a fluid to a solid condition, as in the coagulation of the blood.

Co-ag-u-lum. A clot of blood.

Co-a-lesce. To grow together; to unite.

Col-lapse. Sudden failure or prostration of the vital functions.

Col-liq-ua-tive. Excessive discharges from the body which weaken the system.

Co-lon. A portion of the large intestine.

Coma, Com-a-tose. Stupor; disposed to sleep.

Com-press. A bandage, made with several folds of linen.

Con-cus-sion. A violent shock.

Con-flu-ent. Running together.

Con-ges-tion. An accumulation of blood.

Con-junc-ti-va. The membrane that lines the eyelid and covers the eye.

Con-sti-pa-tion. Costiveness.

Con-ta-gious. Catching, or that which may be communicated by contact.

Con-tu-sion. A bruise.

Con-va-les-cence. An improvement in health after sickness.

Con-vul-sions. Involuntary and violent movements of the body.

Cor-dial. A medicine that stimulates and raises the spirits.

Cor-ne-a. The transparent membrane in the fore part of the eye.

Cor-rob-o-rants. Tonics or strengthening medicines.

Cor-ro-sive. Substances that consume or eat away.

Coun-ter-ir-ri-ta-tion. Driving disease from one part by irritating another part.

Cra-ni-um. The skull.

Cris-is. The turning point of a disease.

Cu-ta-ne-ous. Pertaining to the skin.

Cu-ti-cle. The outer skin.

Cyst. A bag or sac containing matter or other fluid.

De-bil-ity. Weakness.

De-coc-tions. Medicines that are prepared by boiling.

Deg-lu-ti-tion. The act of swallowing.

De-liq-ui-um. The act of fainting.

De-lir-i-um. Wildness, temporary loss of the mind.

De-mul-cents. A mucilaginous medicine, as flaxseed or gum Arabic.

Den-ti-tion. The act or process of cutting teeth.

Den-ti-frice. A preparation for cleaning the teeth.

De-ob-stru-ent. A mild laxative.

De-ple-tion. To diminish the quantity of blood by blood letting or other process.

De-p-u-ra-tion. Cleansing from impure matter.

De-ter-gent. Cleansing medicines as laxatives and purgatives.

Di-ag-no-sis. The act of determining diseases by symptoms.

Di-a-pho-retics. Medicines which aid or produce perspiration or sweating.

Di-a-phram. Midriff; the muscular division between the chest and the abdomen.

Di-ath-e-sis. Tendency of the body to any form of disease, as scrofulous diathesis.

Di-e-te-tic. Relating to diet.

Dil-a-ta-tion. Act of spreading in all directions.

Di-lu-ted. Reducing the strength of liquids with water.

Di-lut-ing. Weakening.

Dis-cu-tient. Medicines which scatter or drive away tumors.

Dis-in-fec-tants. Articles which purify infected places.

Dis-lo-ca-tion. A bone out of its socket.

Di-u-ret-ic. A medicine that increases the amount of urine.

Dor-sal. Having reference to the back.

Dras-tics. Active or strong purgatives.

Du-o-de-num. The first of the small intestines.

Dys-cra-sia. A bad habit, producing generally a diseased condition of the system.

Dys-pep-sia. Difficult of digestion.

Dys-pha-gi-a. Difficulty of swallowing.

Dysp-nœ-a. Obstructing the breath.

Dys-u-ri-a. Difficulty and pain in discharging urine.

Eb-ul-li-tion. The motion of a liquid by which it gives off bubbles of vapor.

Ef-fer-vesce. To foam as in soda-water.

Ef-flor-es-cence. Redness of the surface, as in measles, etc.

Ef-flu-vi-a. Exhalations from substances, as from flowers or decaying matter.

Ef-fu-sion. An escape of fluids from their natural position into the tissues or cavities of the body.

E-lec-tri-za-tion. Medical use of electricity.

E-lec-tu-ary. Medicines prepared with honey.

E-lim-i-na-tion. To escape from the body, as by the pores of the skin.

E-mac-i-ate. To waste away; to grow thin.

Em-bry-o. The early stage of the fœtus.

Em-e-sis. The act of vomiting.

Emet-ics. Medicines which produce vomiting.

Em-men-a-gogue. A medicine which will aid the menstrual discharge.

E-mol-li-ent. A softening medicine, flaxseed, etc.

E-mul-sion. A mucilage from the emollients.

E-nam-el. The outside covering of the teeth.

En-ceph-a-lon. The whole brain.

En-cys-ted. Enclosed in a cyst or sac.

En-dem-ic. A disease peculiar to certain localities.

E-ne-ma. An injection by the rectum.

En-er-va-tion. A reduction of strength.

En-te-ri-tis. Inflammation of the bowels.

E-phem-eral. Of short duration.

Ep-i-dem-ic. A disease that prevails in a certain district.

Ep-i-derm-is. The outer skin; the cuticle.

Ep-i-gas-tric. Pertaining to the upper part of the abdomen.

Ep-i-glot-tis. Trap-door cartilage at the root of the tongue, preventing food or drink from entering the wind-pipe.

Ep-i-lep-tic. Subject to epilepsy, convulsions, or the falling sickness.

E-piph-o-ra. A surplus secretion of tears, causing what is termed a watery eye.

Ep-i-spas-tic. Blistering.

Ep-is-tax-is. Nose bleed.

Er-e-thism. Morbid energetic action.

E-ro-sion. Eating away; corrosion.

Er-rhine. A medicine to promote the discharge of mucus from the nose.

E-ruc-ta-tion. Raising the wind from the stomach; belching.

E-rup-tion. Pimples or blotches on the skin.

Es-char. The dead part, which falls off from the surface.

Es-cha-rot-ic. An application which sears or destroys the flesh.

Eu-sta-chi-an Tube. A narrow channel leading from the side of the throat to the internal ear.

E-vac-u-ation. The discharge by stool or passing of urine from the bladder.

Ex-ac-er-ba-tion. Violent increase in a disease.

Ex-an-the-ma. An eruptive disease, as small-pox, scarlet fever, measles.

Ex-ci-sion. The act of cutting out or off.

Ex-cit-ant. A stimulant; a nerve remedy.

Ex-cor-i-ate. To wear off the skin in any way.

Ex-cres-cence. An unnatural growth of a part, as a wart or tumor.

Ex-cre-tion. That which is thrown off.

Ex-fo-liate. Scaling or peeling off.

Ex-ha-la-tion. Throwing off vapor, air, gas, etc.

Ex-os-to-sis. An unnatural growth from a bone; a bony tumor.

Ex-pec-to-rant. A medicine which produces or aids the discharge of mucus from the bronchial tubes or lungs.

Ex-pec-to-rate. To discharge mucus or saliva from the mouth.

Ex-pi-ra-tion. The act of expiring; breathing out the air from the lungs.

Ex-trav-a-sa-tion. A collection of blood into a cavity under the skin; a blood blister.

Fæ-cal. Relating to the fæces.

Fæ-ces. The natural discharges of the bowels.

Fa-ci-al. Having reference to the face.

Far-i-na-ceous. Containing starch, as farinaceous food, meal or flour from vegetables.

Fau-ces. The pharynx and back part of the mouth.

Feb-ri-fuge. A medicine to drive away fever, producing perspiration.

Fe-brile. Having reference to fever; feverish.

Fe-mur. The thigh bone.

Fet-id. Having a disagreeable odor.

Fi-brine. Animal matter found in blood.

Fi-brous. Composed of small threads or fibres of animal or vegetable matter.

Fil-ter. To strain through a paper made for that purpose.

Fil-tra-tion. Straining.

Fist-u-la. An ulcer.

Flac-cid. Flabby, soft, relaxed; as a flaccid muscle.

Flat-u-len-cy, Fla-tus. To inflate the stomach with gas.

Flood-ing. Uterine hemorrhage.

Flush. A flow of blood to the face.

Flux. An unusual discharge from the bowels, diarrhœa.

Fœ-tus. The child in the womb.

Fo-men-ta-tion. Bathing by means of flannels dipped in hot water or medicated liquid.

For-mi-ca-tion. An unpleasant sensation, like the creeping of ants.

For-mu-la. A medical prescription.

Fract-ure. A broken bone.

Fric-tion. Rubbing with the dry hand or coarse cloth.

Fu-mi-ga-tion. Smoking a room or anything to be cleansed.

Func-tion. The particular acting of an organ, as the function of the heart.

Fun-da-ment. The anus; the lower extremity of the rectum.

Fun-gus. A spongy flesh in wounds, as proud flesh, a soft cancer which bleeds when touched.

Gal-van-i-za-tion. Use of the galvanic current.

Gan-gli-on. A knot, or lump on tendons; an enlargement in the course of a nerve.

Gan-grene. Partial death of a part, often ending in entire mortification.

Gar-gle. A wash for the mouth and throat.

Gastric. Belonging to the stomach.

Gastric Juice. Secretion of the stomach.

Gas-tri-tis. Inflammation of the stomach.

Ges-ta-tion. The period of pregnancy.

Gland. A soft body, the function of which is to secrete some fluid.

Glot-tis. The opening into the windpipe at the root of the tongue.

Glu-te-us. A name applied to the muscles of the hip.

Gran-u-la-tion. The healing of a wound or ulcer with healthy matter.

Gru-mous. Thick, clotted, concreted; as in grumous blood.

Gut-tur-al. Relating ot the throat.

Hab-it. A peculiar state or temperament of the body; predisposed to do some particular thing.

Hec-tic. A remitting fever.

Hem-a-le-mes. Hemorrhage from the stomach.

Hem-a-tu-ra. Hemorrhage from the bladder.

Hem-a-to-sis. An excessive or morbid quantity of blood.

Hem-i-ple-gia. Paralysis of one side of the body.

He-mop-ty-sis. A spitting of blood.

Hem-or-rhage. A flow of blood, as from the lungs, nose. etc.

Hem-or-rhoids. The piles; bleeding piles.

He-pat-ic. Relating to the liver.

Her-ba-ceous. Pertaining to herbs.

Her-ed-it-y. Inherited from a parent.

Her-pes. Diseases of the skin, as tetter, ringworm, etc.

Her-ni-a. A rupture, and protrusion of some part of the bowels.

Hu-mors. The fluids of the body, excluding the blood.

Hy-dra-gogue. A medicine that produces a watery discharge from the bowels, used in dropsy.

Hy-drar-gy-rum. Metallic mercury, quicksilver, a physician's name for calomel.

Hy-dro-gen. One of the elementary principles, always existing in water, of which it composes the ninth part.

Hy-dro-pho-bia. The rabid qualities of a mad dog.

Hy-giene. The art of preserving health by diet.

Hyp-o-chon-dri-a-cal. Melancholy; low-spirited.

Hyp-not-ics. Medicines which produce sleep.

Hy-po-der-mic. To insert under the skin.

Hy-ster-ic-al. Subject to hysteria; nervous.

I-chor. A biting, watery, acrid discharge from ulcers.

Id-i-op-a-thy. An unhealthy condition not preceded by any other disease.

Id-i-o-syn-cra-sies. Peculiarity of constitution or temperament.

Il-e-us. Colic in the small intestines.

Il-i-ac Region. Region of the small intestines.

Im-be-cil-ity. Weakness of mind.

Im-mer-se. To plunge under water.

In-a-ni-tion. Emptiness; weakness; exhaustion.

In-cor-po-rate. To mix medicines.

In-cu-ba-tion. To hatch eggs; slow development of disease.

In-cis-or. A front tooth.

In-di-gest-i-ble. Not easily digested.

In-dis-po-si-tion. A poor state of health.

In-fec-ti-ous. Contagious.

In-flam-ma-tion. Attended with heat; a redness or swelling of any part.

In-fu-sion. Medicine prepared by steeping, not boiling.

In-ges-tion. Forcing into the stomach.

In-jec-tion. Any preparation sent into some part of the body by means of a syringe.

In-oc-u-la-tion. Communicating a disease to a health person by injecting contagious matter in the skin.

Is-chu-ra. Not able to pass the urine.

In-spi-ra-tion. Drawing air into the lungs.

In-spis-sa-tion. The act of thickening by boiling or evaporation.

In-teg-u-ment. A covering; the skin.

In-ter-cos-tal. Between the ribs.

In-ter-mit-tent. Ceasing at intervals; fevers which come on at regular intervals.

In-tes-tines. The bowels.

Jug-u-lar. Applied to the veins of the throat.

Lac-er-a-ted. Torn from.

Lach-ry-mal. Pertaining to the tears.

Lac-ta-tion. Act of nursing, or sucking.

Lan-ci-na-ting. Piercing, as with a sharp pointed instrument.

Lan-guor. Feebleness; lassitude of body.

Lar-ynx. The upper part of the windpipe.

Lax-a-tive A gentle cathartic; a medicine that loosens the bowels.

Le-sion. A flesh wound.

Leth-ar-gy. Excessive drowsiness.

Leu-cor-rhe-a. A whitish discharge from the womb.

Lig-a-ture. A thread for tying blood-vessels to prevent bleeding.

Li-ga-tion. The art of using a ligature.

Lin-i-ment. A fluid lotion or wash to be applied by friction.

Lith-on-trip-tic. A medicine to dissolve the stone or gravel in the bladder.

Li-thot-o-my. The operation of cutting to remove the stone in the bladder.

Liv-id. Black and blue spot on the surface.

Lo-chi-al. Pertaining to discharges from the womb after child-birth.

Lum-ba-go. Rheumatic pains in the loins and small of the back.

Lum-bar. Pertaining to the loins.

Lymph. A thin, colorless fluid in the lymphatic vessels.

Lym-phat-ic. Small vein-like vessels pervading the body; absorbents.

Mac-er-a-tion. Steeping or softening with water.

Mac-u-lar. Colored spots; blemishes.

Mal-Bad. Mal practice; not according to science.

Ma-la-ri-a. Bad air; air which tends to cause disease, supposed to arise from decayed vegetable matter.

Mal-for-ma-tion. Irregular formation or structure of parts.

Ma-lig-nant. Violent; dangerous; liable to produce death.

Mar-row. A soft substance in the bones.

Mas-ti-ca-tion. The act of chewing.

Mas-tur-ba-tion. Self-abuse. The most injurious, self-destroying of all habits.

Ma-te-ri-a Medica. The science of medicine.

Ma-trix. The womb.

Mat-u-ra-tion. The formation of puss or matter in any part of the body.

Me-dul-la Oblongata. A nervous mass in the lower part of the brain.

Men-ses, Menstruation. The monthly sickness of women.

Men-stru-um. A liquid used to dissolve solid substances.

Me-phit-ic. Suffocating; noxious; pestilential.

Met-a-car-pus. That portion of the hand between the wrist and fingers.

Me-tas-ta-sis. A change of disease from one location to another.

Met-a-tar-sus. The part of the foot between the ankle and the toes.

Mi-as-ma, Miasmata. Malaria; exhalations from swamps, lowlands and decaying matter.

Mor-bid. Unhealthy; diseased; corrupt.

Mor-bif-ic. Producing disease.

Mor-bus. A disease of the bowels; cholera morbus.

Mu-ci-lage. A glutinous, watery solution of gum.

Mu-cus. Animal mucilage secreted by the mucous membrane.

Mus-cles. A bundle of fibres; the organs of motion; they constitute the flesh.

Nar-cot-ics. Medicines that produce sleep, relieve pain, or stupefy.

Nau-se-a. Sickness at the stomach; may increase until vomiting takes place.

Na-vel. Centre of the abdomen.

Ne-gus. A liquid made of wine, water, sugar, nutmeg, and lemon juice.

Ne-phr-it-is. Inflammation of the kidneys.

Neph-ros. The kidney.

Ner-vine. A medicine that soothes a nervous excitement.

Neu-ral-gia. Pain in the nerves.

Neu-ras-the-nia. Nervous exhaustion.

Noc-tur-nal. Occurring in the night.

Nor-mal. Natural and healthy condition.

Nos-trum. A patent medicine.

Nu-tri-tious. A substance possessing nourishment.

Ob-tuse. Dull, not acute.

Œ-de-ma. A watery swelling.

Ol-fac-tory Nerves. The nerves of smell.

O-men-tum. The covering of the bowels.

Oph-thal-mi-a. Disease of the eye. Inflammation of the eyes.

O-pi-ates. Medicines which promote sleep.

Op-tic Nerve. The nerve which enters the back part of the eye.

Or-thop-nœ-a. Asthma; great difficulty of breathing, caused by diseases of the heart or diaphragm.

Os-si-fy. To change flesh or other soft matter into a hard, bony substance; from osteo, a bone or like a bone.

O-vum. An egg.

Ox-y-gen. A gas that forms one-fifth of the atmosphere.

Pal-ate. The partition separating the cavity of the mouth from that of the nose.

Pal-pi-ta-tion. A fluttering or unnatural action of the heart, in which it beats too rapidly and strongly.

Pan-a-ce-a. A remedy for all diseases; a universal medicine.

Pa-pil-la. A red point upon the tongue or elsewhere.

Par-a-cen-te-sis. Puncturing of the chest or abdomen for the purpose of drawing off water.

Pa-ral-y-sis. Palsy; losing control of any part of the system.

Par-a-lyt-ic. One affected with paralysis.

Par-a-ple-gi-a. Paralysis of the lower portion of the body.

Par-ox-ysm. A fit of disease at certain periods.

Pa-thol-o-gy. Doctrine of disease.

Par-tu-ri-tion. Childbirth.

Pec-tor-al. Relating to the chest.

Pel-vis. A bony cavity forming the lower part of the trunk of the body.

Pep-sin. A peculiar substance in the stomach which aids digestion.

Per-i-car-di-um. The sac containing the heart.

Per-i-car-ditis. Inflammation of the pericardium.

Per-spi-ra-tion. Sweat.

Per-i-ne-um. The part between the anus and organs of generation.

Per-i-os-te-um. The membrane covering the bones.

Per-i-to-ne-um. The membrane which lines the abdomen and covers the bowels.

Pe-te-chi-æ. Purple spots which appear upon the skin in low fevers.

Phag-e-den-ic. Corroding, eating; applied to ulcers.

Pha-lan-ges. The bones which form the fingers and toes.

Phleg-ma-tic. Dull; sluggish; heavy.

Phar-ynx. The upper part of the throat.

Phlo-gis-tic. Tendency to inflammation.

Phthys-ic-al. A condition of the system tending to pulmonary consumption.

Phlegm. A mucus from the bronchial tubes.

Ple-thor-ic. Of a full habit of body; corpulence.

Pleu-ra. A membrane that covers the lungs and folds upon the sides.

Pleu-ri-sy. Inflammation of the pleura.

Pneu-mo-nia. Inflammation of the lungs.

Pol-y-pus. A pear shaped tumor.

Pre-scrip-tion. A physician's formula for the preparation of medicines.

Probe. An instrument for examining the depth of a wound.

Prog-no-sis. Guessing the termination of a disease.

Pro-lap-sus Ani. Falling of the anus.

Pro-lap-sus Uteri. Falling of the uterus.

Pros-tra-tion. Loss of strength.

Pro-phy-lac-tic. A medicine to prevent disease.

Pty-a-lism. A copious flow of saliva; salivation.

Pu-ber-ty. Full growth; perfection.

Pu-er-pe-ral. Fever at or soon after childbirth.

Pul-mon-a-ry. Pertaining to, or affecting the lungs.

Pul-mon-i-tis. Inflammation of the lungs.

Pulse. The beating of the heart or blood-vessels, especially of the arteries.

Pulp. A soft mass.

Pun-gent. Piercing, biting, stimulating.

Pur-ga-tive. A gentle cathartic; a medicine acting on the bowels to loosen them.

Pur-u-lent. Consisting of pus or matter.

Pus. Unhealthy matter.

Pus-tules. Elevations of the skin containing pus.

Pu-tre-fac-tion. To decompose by fermentation.

Pu-tres-cent. Pertaining to the process of putrefaction.

Py-ro-sis. A peculiar disease of the stomach better known as water-brash.

Rec-tum. The lower portion of the large intestine.

Re-frig-er-ant. Medicines which lessen the heat of the body.

Reg-i-men. The regulation of diet and habit in order to restore health or to cure disease.

Res-o-lu-tion. To return to health; dispersion of an inflammation before pus has formed.

Re-solv-ents. Applied to inflammations.

Res-pi-ra-tion. The process of breathing.

Re-sus-ci-ta-tion. Reviving from apparent death, as drowning.

Ret-i-na. The internal nervous tissue of the eye.

Ru-be-fa-cients. Medicines that cause redness of the skin, as mustard, radish leaves, etc.

Ru-bif-ic. To make red.

Sac-cha-rine. Having the properties of sugar.

Sa-li-va. The spittle; the secretions of the mouth.

Sal-i-vation. Increase of the secretion of saliva.

San-a-tive. A curative medicine; to heal.

San-guine. Abounding in blood, or having the color of blood.

San-nies. A thin discharge from wounds or ulcers.

Scab. A formation over a sore.

Scarf-skin. The outer skin of the body.

Scir-rhous. Hard; knotty, generally of a cancerous nature.

Scorbutic. Partaking of the nature of scurvy.

Scro-tum. The bag containing the testicles.

Se-cre-tion. The separation of any substance from the blood for a particular purpose.

Sed-a-tive. The opposite of stimulation. A quieting medicine which allays irritation and soothes pain.

Sed-en-tary. Sedentary habit; accustomed to, or requiring much sitting; inactive.

Seid-litz. A village in Bohemia, from which Seidlitz powders derived its name.

Sem-i-nal. Pertaining to or contained in seed.

Se-rous. Thin, watery substance, like whey.

Serum. The watery, or milky portions of the blood.

Sin-a-pism. A mustard plaster.

Sin-ew. That which unites flesh to a bone.

Slough. Death from a part; the part that separates from a wound.

Slough-ing. The act of separating the dead flesh from a sore.

Sol-u-tion. Composed of a liquid and a solid substance.

Sol-vent. Having the power to dissolve solid substances.

Sor-des. The dark matter deposited upon the lips and teeth in low fevers.

Spasm. A sudden contraction of the muscles; cramps, convulsions.

Spe-cif-ic. An infallible remedy.

Spi-nal Col-umn. The back-bone.

Spi-nal Cord. The nervous marrow in the back bone.

Spleen. The milt; it is situated in the abdomen and attached to the stomach.

Squa-mous. Having scales.

Ster-num. The breast-bone.

Ster-tor. Noisy breathing; snoring.

Ster-to-rous. The act of snoring.

Stim-u-lants. Medicines that are calculated to excite a healthy action.

Sto-mach-ic. A cordial for the stomach, exciting its action.

Sto-mat-i-tis. Inflammation of the mouth.

Stool. A discharge from the bowels.

Stran-gu-ry. Difficult and painful passage of urine.

Strict-ure. Unnatural contraction of any passage of the body.

Stru-ma. Scrofula.

Stu-por. Insensibility; numbness.

Styp-tic. A medicine which stops bleeding.

Sub-cu-ta-ne-ous. Under the skin.

Su-dor. Sweat.

Su-dor-if-ics. Medicines that cause sweating.

Sup-pos-i-tor-ies. Medical substances introduced into the rectum to favor or restrain evacuations, or to ease the pain.

Sup-pu-ra-tion. The act of forming pus.

Sut-ure. The peculiar saw-like joint uniting the bones of the skull.

Symp-tom. A sign or token of disease.

Syn-co-pe. To swoon; fainting.

Syph-i-lis. A contagious disease from sexual intercourse with those who have venereal disease.

Syph-i-li-tic. Pertaining to the venereal disease or pox.

Syr-inge. An instrument for injecting liquids into the bowels, ear, throat, or other parts of the body.

Tan-nic Acid. An astringent made from oak bark.

Tem-per-a-ment. A peculiar habit of body.

Ten-don. A fibrous cord attached to the extremity of a muscle.

Te-nes-mus. Difficulty and pain at stool; a painful bearing down sensation in the lower bowels.

Te-pid. Warm, but not hot.

Ter-tian. Occurring every other day.

Tes-tes. The testicles.

Tes-ti-cles. Two glandular bodies situated in the scrotum, belonging to the male organs of generation.

Tet-a-nus. Locked jaw.

Tib-i-a. The large bone of the leg below the knee.

Tinct-ure. Medicine dissolved in alcohol.

Tho-rax. The chest.

Tor-mi-na. Severe griping pains.

Ton-ics. Remedies intended to strengthen the system.

Ton-sil. Glands situated on each side of the throat.

Tor-pid. Dull; stupid; lifeless.

Tra-che-a. The windpipe.

Tu-ber-cle. A pimple, swelling, or small tumor.

Tu-me-fac-tion. The act of forming a tumor.

Tu-mor. An enlargement of any part of the body; a swelling.

Ty-phoid. Resembling typhus; weak; low.

Ty-phus. A nervous fever, malignant, infectious, etc.

Ul-cer. A sore which discharges pus.

Um-bil-ic. Pertaining to the navel.

U-rea. A substance found in the urine.

U-re-ter. The duct leading from the kidneys to the bladder.

U-re-thra. Duct leading out from the bladder; the canal of the penis through which the urine passes from the body.

U-rine. Water from the bladder.

U-ter-us. The womb.

Vac-ci-nate. To inoculate with the cow-pox by inserting the vaccine in the skin.

Vac-cine. Matter of the cow-pox.

Va-gi-na. The passage from the womb to the vulva.

Vag-in-is-mus. Spasm of the vagina, caused by morbid irritability.

Val-e-tu-di-na-ri-an. A person of a weak, sickly constitution.

Va-ri-o-lous. Pertaining to small-pox.

Ve-ne-ry. Sexual indulgence.

Ve-nous. Relating to the veins.

Ven-ti-la-tion. A free admission or motion of air.

Ver-mi-fuge. A medicine intended to destroy worms.

Ver-ti-go. Dizziness; swimming of the head.

Ves-i-cle. A little bladder of water formed under the skin.

Vir-u-lent. Extremely injurious; malignant; poisonous.

Vi-rus. Contagious poison.

Vis-ce-ra. The internal organ of the body.

Vis-cid. Sticky; tenacious.

Vol-a-tile. Easily evaporated; substances that evaporate on exposure to the atmosphere.

Vul-ner-a-ry. Pertaining to wounds.

Vul-va. The external opening of the female genitals.

Whites. Fluor Albus.

Zy-mot-ic. Contagious diseases, such as may be inoculated.

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Transcriber's Note:

Numerous inconsistencies in spelling, punctuation and grammar have not been corrected, or have been corrected without comment, in order to preserve the quaint charm of the book.

The following changes have been made:

Title page—corrected typo 'ARRARGED IN DEPARTMENTS' to 'ARRANGED IN DEPARTMENTS'

1. page 26—corrected typo 'ox.' to 'oz.' in phrase 'Spirits of camphor, ½ ox.;'
2. page 40—added missing right bracket after word 'anti-poisoning'
3. page 59—corrected typo 'chlidren' to 'children'
4. page 72—corrected typo 'ox.' to 'oz.' in phrase 'simple syrup, 4 ox.'
5. page 96—corrected typo 'valuabie' to 'valuable' in phrase '...the nostrils, is valuabie in...'
6. page 97—corrected typo 'inflence' to 'influence' in phrase '...fully under the inflence of the chloral...'
7. page 101—corrected typo 'arcticles' to 'articles' in phrase '...add the other arcticles and the balance...'
8. page 101—corrected typo 'my' to 'may' in phrase '...other disease, it my be made to...'
9. page 101—next line, correted 'cataplams' to 'cataplasms'
10. page 102—corrected typo 'succed' to 'succeed' in phrase '...more likely to succed.'
11. page 103—corrected typo 'doctot' to 'doctor' in phrase '...(so the doctot told me)'
12. page 113—typo 'carlessness' corrected to 'carelessness' in phrase '...or by mismanagement or carlessness in taking...'
13. page 114—corrected typos 'Dispenrasy' to "Dispensary', 'crititism' to 'criticism'
14. page 115—corrected typo 'hypertropey' to 'hypertrophy'
15. page 116—correted typo 'roughnes' to 'roughness'
16. page 121—correted typo 'very' to 'vary' in phrase '...will, of course, very somewhat with the...'
17. page 121—corrected typo 'propably' to 'probably' in phrase '...There is propably something of importance...'
18. page 123—corrected typo 'feverishnes' to 'feverishness' in phrase '...allays all feverishnes of stomach...'
19. page 124—corrected typo 'measels' to 'measles' in phrase '...the breaking out of measels, there is usually...'
20. page 125—correted typo 'slipperly' to 'slippery' in phrase ',,,a cool wash of slipperly elm, alem curd,...'
21. page 125—corrected typo 'safron' to 'saffron'
22. page 128—corrected typo 'stimilar' to 'similar' in phrase 'Not uncommonly stimilar swellings...'
23. page 133—corrected typo 'discease' to 'disease' in phrase '...the prevalence of this discease.'
24. page 147—corrected typo 'Symton' to 'Symptom' in heading
25. page 152—corrected typo 'lett' to 'left' in phrase '...lying on the lett side, with the knees...'
26. page 163—corrected typo 'subsitute' to 'substitute' in phrase '...makes a nice subsitute for the butter.'
27. page 176—corrected typo 'colender' to 'colendar'
28. page 178—corrected typo 'Beford' to 'Bedford' in heading
29. page 183—corrected typo 'tarter' to 'tartar' in phrase '...2 teaspoons cream tarter in flour...'
30. page 199—corrected typo 'gentlemen' to 'gentleman' in phrase '...explanation by a gentlemen signing himself...'
31. page 208—corrected word 'soft' to 'soap' in phrase '...rotten stone, and soft soft, each 1 lb....'
32. page 211—corrected typo 'siver' to 'silver' in phrase '...or piece of pure siver,'
33. page 212—corrected typo 'processs' to 'process' in phrase '...this is the processs by which...'

34. page 213—corrected typo 'kerosone' to 'kerosene' in phrase '...cloth well wet with kerosone, and let it remain...'

35. page 218—corrected typo 'upholstereres' to 'upholsterers'

36 page 222—corrected typo 'firmy' to 'firmly' in phrase '...it is said, quite firmy, and thus...'

37. page 240—corrected typo 'made' to 'make' in phrase '...soft soap to made quite a thick...'

38. page 249—corrected typo 'read' to 'red' in phrase '...a mixture of read lead...'

39. page 284—corrected typo 'sympton' to 'symptom' in phrase 'The sympton is a gasping as if for breath...'

40. page 290—corrected typo 'power' to 'powder' in phrase '...each separately, to a fine power.'

41. page 293—corrected typo in table, last column, '3.00' to '4.00'

42. page 314—corrected typo 'vitirol' to 'vitriol' in phrase '...and oil of vitirol, each, 1 oz....'

43. page 323—corrected typo 'Pennsylvannia' to 'Pennsylvania'

44. page 327—corrected typo 'work' to 'word' in phrase '...the Latin work for milk...'

45. page 327—corrected spelling error 'perceptably' to 'perceptibly'

46. page 348—corrected typo 'symptons' to 'symptoms'

47. page 353—corrected typo 'penus' to 'penis'

48. page 358—added hyphenation to word 'hereditary'

49. page 361—corrected typo 'healty' to 'healthy'

[End of *Dr. Chase's New Receipt Book* by Alvin Wood Chase]