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# OVER THE POLAR ICE

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### Over the Polar Ice

#### CHAPTER I

#### THE GREAT PLAN

"Andy Lane! Have you lost your mind?"

"No, sir. I was never so serious in my life! I would like to start for the South Pole in December or January!"

Ronald Avery, president of the Apex Airplane and Motor Company, stared in utter amazement at the famous young flier standing before him. Andy Lane, his blue eyes twinkling in amusement at the protests of the older man, held his ground and presented his arguments in support of this astounding new scheme.

"Listen, Mr. Avery. When we flew the 'Apex' for fifteen days without a single stop, we travelled something like 36,000 miles in the air." The business man calculated hastily and nodded his head in agreement.

"Well," continued Andy, "the distance to the South Pole, according to the route I want to take, is almost exactly 13,000 miles. The round trip is far less than we have already flown in one hop. Both your engines and your planes have been so much improved in the last six months that we should be able to make a much longer distance without any trouble at all."

"No, Andy," declared the other decidedly, "I would do a lot for you, but not that! You are the most talked of boy of eighteen in the world today. The public worships you just as much now as it did when you smashed the world's endurance record to smithereens. If anything should happen to you, it would be a fearful blow to aviation."

"Nothing will happen to me," Andy persisted, "if all our preparations are carefully made. Of course," he added with a smile, "it will cost one heap of money!"

"I don't care how much it would cost," replied the airplane manufacturer. "The other flight you made brought us enough orders to make us a very wealthy company. Then, of course, Mr. Seymore, president of the Superior Oil Company, would want to furnish the fuel as he did before. Your flight helped the sale of his gasoline and oils all over the world. We could count on his money and co-operation every minute of the way."

Andy laughed. "Why, Mr. Avery, I think you are really selling yourself the idea!"

"Bosh!" protested the other. "I'm just telling you that it isn't the idea of spending a lot of money that is making me hesitate. I don't want to lose you, boy, that's all!"

"Suppose we work it this way," suggested Andy, feeling that he had at least planted the idea where it would grow very quickly. "I'll go home and work out my plan to the last detail. A week from today I'll come back and we'll have another talk. If Mr. Seymore could find time to be here, it might help a lot."

"Right!" answered his older friend instantly. "I know Seymore will be glad to be here."

Andy left the handsome offices of the Apex Company and walked out on the smooth green turf of the flying field. Standing at the border of the factory lawn, was a tiny, single-seated monoplane. Its wings gleamed with silver paint, its cockpit was upholstered in crimson leather. At the sound of his footsteps, a beautiful collie puppy poked his nose over the side of the fuselage and whined joyfully when he felt the hand of his master rumpling his silky ears.

"Whoops, Scotty, you air hound! We're going to the South Pole! Mr. Avery doesn't know it yet, but I do!" The pup didn't know what it was all about, but as long as his master was happy, he was too. He thumped his tail and wiggled all over with pleasure as Andy climbed into his seat.

Strapping himself in, and making sure that Scotty's safety belt was also tightly buckled, Andy pulled the starter switch. With a full-throated roar, the mighty Apex motor responded and the plane trundled forward. It moved faster with every second and when it had gained proper flying speed, Andy pulled the stick back. The silvery nose rose almost straight up to the sky, and with a breathtaking zoom, the most famous young flier in the world was on his way back to his classes at Newton College.

He was so excited and happy that he looped, Immelmanned, and spun just to relieve his excess spirits. His tiny ship seemed to dance a jig in the air. Six months of being worshipped as a hero had not turned the pilot's head a single bit. Six months of a popularity such as few boys in the world have ever known, during which time he could not go on the street without hearing

someone say, "There goes Andy Lane!" Then a procession would start behind him and before he had gone a half mile, a hundred people would be tagging after him. Usually he would hide in a building, or get into a taxicab and drive away to lose the crowd.

Somehow, he had managed to remain the same modest boy that he had been the morning when he had sat with Joe Lamson, the chief pilot, and Sam Allen, the mechanic, in the cockpit of the "Apex," and had taken off on a flight that was to last fifteen days and nights before coming down to the ground again. Fuel and water had been passed down to them from a tank plane, the "Superior," and after a series of the most exciting and hair-raising adventures that had ever befallen any aviators, they had broken all existing world's records for non-stop flights.

"Scotty, old timer," shouted Andy, above the thundering roar of his motor, "you're the greatest little flying dog in the world, I'll say! You enjoyed every minute of that long hop, didn't you? Well, you'll be a cold pup this next big flight, unless you grow a whole lot of brand new fur!" Scotty, his eyes watering a little from the blast of air blowing back from the whirling propeller, drew his head into the cockpit and seemed to grin at Andy as though he understood everything that had been said.

The lovely campus of Newton College was now in full sight from their altitude of two thousand feet. Andy never "showed off" before his admiring college mates, so he flew in a perfectly straight line until he was directly over the athletic field. Then he cut his engine, put the little scout plane into a tight spiral and whirled down to a perfect landing just in back of the goal posts. Then he taxied over to the side of the field and left his ship behind the grandstand.

One who had never heard of Andy could have told instantly that he was the most popular man in college. As the young flier walked down the maplelined paths toward his class room, almost every fellow he passed called out "Hello, Andy!" and gave him a cordial wave of the hand.

Andy thought how different it all had been, only six months ago! Then he had been a poor, friendless student, who could not take part in the regular college activities because he had to work at the village garage three afternoons a week to help pay his expenses through college. The other afternoons he had spent in his father's laboratory, helping his dad perfect the Lane carburetor, which had accomplished such wonderful things for the Apex engines and made possible the marvellous non-stop flight.

Six months ago the other students of the school hardly knew his name. He had not been asked to join a fraternity. They had simply overlooked him in everything. Then, when he had returned from his flight, famous throughout the whole world, they had all rushed to greet him.

Nothing had been too good for him then. Well, it had been a good thing he had waited. He had not pledged himself to any club, and had asked the fellows to forget he was a flier and to treat him as they did anyone else. This they had done as far as was possible. But Andy Lane was a great honor to their college, and they could not help showing they appreciated him.

He labored through his classes all that long day, never mentioning to a soul that he had made plans for the greatest and most hazardous flight of all. A flight that would take him to the coldest, most unfriendly, most dangerous place in the whole world!

#### CHAPTER II

#### ANDY SELLS HIS IDEA

There was a little celebration in the kitchen of the Lane home that evening. This was the usual thing when something important had been decided upon, or had been accomplished.

Although the Lanes had now, since the wonderful success of the carburetor which Andy's father had invented, moved to a finer house, their celebrations still took place in the white kitchen. Mrs. Lane would send the servants out for the evening and would herself prepare the coffee and hot chocolate while the others talked and ate great slabs of fudge cake.

Of course, Sonny Collins had to be there, or the party would not have been a success at all. Good little Sonny! Though he was the son of the man who owned the Collins Aeronautical Corporation, and was therefore a business rival of the Apex Company, Sonny was Andy's best friend. He was only thirteen, but he was a radio fan of the most ardent variety. It had been he, seated at his short wave transmitter, who had warned the crew of the "Apex" of the dangers which had beset them at every hand of their historic flight.

So tonight Sonny was there as usual, and entered into the conversation as though he had been of the same age as Andy.

Mr. Lane, the inventor, regarded his son with proud eyes as he sipped the hot coffee his wife had handed him.

"Well, Son," he said with a quiet smile, "you can't quite blame me if I admit hoping that Mr. Avery won't consent to your trip to the South Pole. The idea of flying around this country until your motors all wear out is one thing, but to go thousands of miles into the Antarctic is another thing entirely. If you have to come down there, you won't have a chance!

"Naturally, though," he continued seriously, "I'm very proud of you, and I wouldn't ask you not to go, nor try to dissuade you from your scheme. You've already shown that your ideas are pretty sound, but this one seems very risky to me."

"If you were two years younger, I'd take you over my knee with a shingle," grumbled his mother. "I suppose you'll catch your death of cold, or something!" The others all roared. Mrs. Lane always pretended to see the

worst side of everything. But her bark was much worse than her bite, for she was so proud of her famous son that she could hardly contain herself. Still, she had to sputter now and then.

"No, Mother," grinned Andy, helping himself to another huge slice of cake, "I'll let you pack my bags and you can put in all the earmuffs, and hot water bottles, and anything else you like into them."

"Andy," said Sonny, trying to hold Scotty and his cake in his lap at the same time, "I think I can help you a lot with my radio. You know Dad has let me buy a whole new set, both sending and receiving. There are amateur radio fans all over the World, you know, who send to each other every night. Why, there's a fellow in Australia whom I talk to three or four times a week! I have friends thousands of miles away that I've never seen.

"Well," he went on, "I can get all these fellows ready so they can relay messages to and from your South Pole ship all the time you are in the air. It ought not to take more than fifteen minutes for a message from your plane at the Pole to be relayed through the sets of three or four amateurs and be received by the Apex Company in Mineola."

"Great!" exclaimed Andy enthusiastically. "I had thought that when I got pretty far along on my trip, I'd lose touch with the world entirely. I'll put that into the completed plans that I'm going to give to Mr. Avery and Mr. Seymore."

"There's just one more thing to be taken care of," said Sonny, his eyes blinking with excitement behind his big glasses. "You must take me along as radio operator!"

"Why, Sonny," said Andy in astonishment, "your father would never let you go! You'll have to wait a few more years, I'm afraid."

"Gee, just tell me that you'll be willing to take me with you," urged the younger boy desperately, "and then I'll try to make him let me go along. You know I could help you, Andy, and I'll be fourteen in a couple of months!"

"Sure you could help," Andy said positively. "We'd have crashed a dozen times on our other flight if your hand hadn't been busy at the sending key a thousand miles away. I can't tell, of course, whether Mr. Avery will let me make this flight. If he does, I'll figure out how you can help me the most. That's really what you want to do, isn't it, old timer?"

"Yes, sure it is, but I hope helping you will mean being at the key of your ship."

"Well, I declare," muttered Mrs. Lane, "if that isn't the craziest thing yet! Andy's only a babe himself. We should not let him go at all! And now Sonny going, too! The very idea! Babes in the woods, both of you!" She sipped her coffee, looking at both boys with fond, proud eyes.

Mr. Lane smiled across the table at her. "I don't quite realize it yet, Mother," he said gently. "But our Andy seems to have made a name for himself already. It proves he can take pretty good care of himself wherever he is!"

The following week was a very anxious one for Andy. Every day he went to his classes at college. Every afternoon and evening, he went into his room and studied maps, atlases, geographies, and histories of other Arctic and Antarctic explorations. The books recounting the adventures of Peary, Amundsen, Scott, Shackleton, Byrd, and other noted explorers became dogeared and thumbed as Andy studied their pages, filling notebook after notebook with facts and figures which were important to know in the flight he wanted to make.

Every evening Sonny came over to show him hundreds of messages from radio fans all over the world. The youngster had apparently told all his particular comrades of the air what was being planned, for scores of them, from such countries as Brazil, Australia, New Zealand, Chile, and others far to the south, had promised to help in every possible way.

Right after he had finished his dinner, these early fall evenings, Andy would take Scotty and drive over to the field where he kept his own plane, the wonderful little scout plane given to him by Mr. Avery after the completion of his successful non-stop flight. Boy and dog would jump into the cockpit and for an hour they would frolic around in the clouds, twisting and turning, blowing the earth dust from their heads. Then, refreshed and sleepy, Andy would return to his den with his books and maps, while Scotty dozed on his own pillow at his master's feet.

At last the day for Mr. Avery to make his decision arrived. When Andy reached the factory, he found both the manufacturer and Mr. Seymore waiting for him. As soon as they had seated themselves Andy started to present his plan, but the president of the Apex Company cut him short.

"Andy, Mr. Seymore and I have been discussing this thing that you want to do. And we have made up our minds. We feel sure, after your last most successful flight, that you will succeed if anyone can, so we are going to back you to the last penny! Now, why do you want to leave in the middle of winter?"

Andy had to gulp down his emotion before he could answer. Finally he said rather huskily:

"Because the Antarctic summer comes during our winter. I'll leave here in cold weather and arrive there when it's warm as it ever gets." Andy repressed a desire to rush to the telephone and announce the wonderful news to his parents and to Sonny.

"Do you plan to make it a non-stop flight?" asked the president of the oil company.

"It would certainly be a lot easier if we could," answered the excited young pilot. "We'll need a big, heavy airplane to stand the storms which are almost continuous down there. If we start from as close as we can get to the South Pole to make the dash of seven or eight hundred miles, we'll need a huge runway to take off in, a tremendous ground staff, with machine shops, hangars, barracks for the men, radio and a thousand other things. Then we might have to wait for several weeks for good weather for our take-off.

"We proved in our last flight," he went on earnestly, "that it is a whole lot easier to keep a ship in the air than to take her off the ground when she is heavily loaded. If you could furnish enough refuelling planes, Mr. Seymore, so that we could have fuel and supplies passed down to us in the air at four or five places on the route, I'm almost sure the flight will be a success.

"It is about thirteen thousand miles from here to the South Pole along the route I plan to take. That makes a round trip, non-stop, of twenty-six thousand miles. In our last flight, as nearly as I can estimate it, we made 36,000 miles. That was nearly ten thousand miles longer, so our South Pole flight should really not be so difficult."

"But in your last flight you could have landed almost anywhere your engines happened to break down," interrupted Mr. Seymore. "On this trip, if anything should happen to your ship on the last thousand miles of your southward journey, where would you be?"

"Well, Amundsen and his expedition made a forced landing when they were flying in two big boats near the North Pole, and they managed to get back safely," responded Andy.

"Yes, and they had a fine time getting out of the ice, some six hundred miles from civilization, too! They didn't have enough to eat to keep a sparrow alive." Mr. Avery's face was grim.

Mr. Seymore broke into the discussion.

"Andy, your last flight accomplished as much for my oil company as it did for the Apex Company. The refuelling ship 'Superior' received almost as much credit as you did. Since your hop, we have opened up new branches in almost every civilized country in the world. In many of these countries our stations already have airplanes to advertise our high-test gasoline for aviation uses.

"All of these airplanes," he went on, "may be equipped as fuelling ships at very short notice. Moreover, wherever you plan to refuel in the air, I'll arrange to have a tank plane there. That is," he added with a smile, "anywhere north of the South Pole itself!"

"Well," the president of the Apex Company said, smiling, "that seems settled. Now, what kind of a ship do you need, Andy? And whom do you want for a crew?"

Then the exciting talk of details commenced.

#### CHAPTER III

#### BREWSTER ENTERS THE RACE

Sonny Collins was waiting Andy's return in a state of great excitement. As the pilot's familiar red and silver roadster skidded up to the door of his home, the smaller boy dashed down to meet him.

"Andy, I have some news for you!" he exclaimed breathlessly.

"Yes? Well, I've some for you, too!" Andy slapped him smartly on his back. "Listen to this: the flight is on! We start in December or January, just as I had hoped."

"Am I to go?" demanded Sonny.

"Part of the way, if you can arrange it," replied the other. "But tell me your news now."

"Do you remember old Brewster?"

"Would I ever forget him? You don't forget a man who hires other men to kill you if that proves necessary to spoil your flight!"

"Well, you know Dad discharged him from the Collins Company when he found out that Brewster was behind all the dirty work."

"Yes, I was sure glad of it!"

"Dad came home early this afternoon," explained Sonny, "and told me that Brewster had started a new company to build airplanes. In order to make a big hit with the public he was going to try to fly over the South Pole with one of his new ships."

"Good night! Why did he have to pick the very spot that I'm headed for?"

"That's about the only place that hasn't been flown over or across yet. That's why, I guess."

"Wow!" exclaimed Andy. "If he was mad at me when I broke the other record, won't he be wild when I beat him to the Pole?"

"I'll tell the world!" Sonny agreed. "You'd better look out for him. He'll be far more dangerous when he is fighting for his own company than when he thought he was doing it for Dad."

"Well, Mr. Avery is announcing our plans to the newspapers tonight. It will be in all the morning papers. Then I guess I'll have to look out for fireworks, for Brewster is a dirty fighter and won't hesitate at anything that will spoil my plans."

Mr. and Mrs. Lane received the announcement that the flight was really going to take place with mixed feelings. Both were very proud that their famous son was to take part in such a tremendous trip and realised that if he were successful, he would be even more of a public hero than he was already.

There was a big bookcase in the living room jammed full of medals, cups, and other gifts that had poured in from Andy's many admirers after he had rescued the shipwrecked aviators from the transatlantic airplane "Venture."

Mr. and Mrs. Lane both knew that if the young pilot returned safely from the South Pole, it would be such an astounding feat that it would make his other flight seem like child's play in comparison. Yet they realised with fear in their hearts that the North and South Poles were unfriendly places which took heavy toll of the daring explorers who challenged their icy surroundings. They feared greatly for this brave son of theirs.

However, they said nothing to discourage him. Mr. Lane patted him on the shoulder, and Mrs. Lane kissed him, all the time wiping her eyes and muttering about taking along plenty of cough medicines. In the great excitement of the moment, they forgot all about Herbert Brewster, the exchief engineer of the Collins Aeronautical Corporation, who had suddenly loomed up as a dangerous rival.

As they talked about the whole-hearted co-operation that Mr. Avery and Mr. Seymore had both promised Andy, Sonny could contain himself no longer.

"Andy," he begged, "please tell me now what you are going to let me do on this flight."

"If your father will let you, you will leave about six weeks ahead of our plane and go with a ground crew to the Bay of Whales," explained Andy.

"The Bay of Whales! Where in the world is that?" demanded Mrs. Lane.

"It is about eight hundred miles north of the Pole," said Andy, "and three thousand miles from Cape Horn. In fact, it's a whole lot nearer the southern tips of New Zealand and Australia than to South America. It's nothing but a

harbor in the ice cap which is supposed to cover the whole southern part of the world."

"Gee," gasped Sonny, his brown eyes wide with amazement, "is there a town there?"

"A town, bonehead?" roared Andy. "Your party will be a couple of thousand miles away from the nearest human being! You'll just be camped on the ice, in the middle of ice, and you won't see a thing *but* ice anywhere! If you have a little cold snap, you may see a temperature of sixty below zero. If it gets really chilly, it might go to eighty below zero! Do you still want to go?"

"Land's sakes!" interrupted Mrs. Lane, "that's no fit place for a grown person to go, to say nothing of a pair of children!"

"You bet I want to go," shouted the breathless Sonny. "What do I do after I get there?"

"On the same ship with you and the ground crew will be a refuelling airplane like the 'Superior,' equipped with skis. There will be plenty of fuel, food, spare parts for the tank plane and the South Pole plane, dog teams and sledges to come after us in case we should have to make a forced landing, and a fully equipped short-wave radio station.

"There's where you will fit in. I told Mr. Avery that I'd rather have you down there than anybody I knew. The fact that you know amateurs everywhere was the clinching argument for him. Mr. Avery is going to send another operator and two or three electricians to work with you, but you'll do most of the work yourself while we're actually in the air."

"That's wonderful," admitted Sonny, trying to conceal his disappointment. "But I suppose you couldn't find anything for me to do in the plane with you?"

"Listen, Old-timer," said Andy smiling, "you'll have trouble enough persuading your father to let you go that far, without trying to get anything more!"

"Maybe that's so," agreed Sonny, brightening a little, "and I'll bet my Sunday pants that no kid has ever been so near the South Pole as I will be!"

#### CHAPTER IV

#### ANDY RECEIVES A WARNING

The following morning the newspapers all over the country carried two bits of startling news spread across the tops of the front pages in big, black headlines. The first, of course, was that Andy Lane, the world famous young pilot, would start in mid-winter on another thrilling flight. The second sensation was that Herbert Brewster, president of the great new airplane company bearing his name, had also planned the same flight. A big Brewster biplane was starting even before Andy, in order to be the first to cross the bottom of the world.

"How did he happen to announce his flight at the same time as Mr. Avery, I wonder?" mused Andy, as his father read the headlines aloud at the breakfast table.

"It says here that when Mr. Avery gave out the news of your expedition to the papers, the reporters interviewed all the leading figures in aviation circles to find out what they thought of your plan. When they talked to Brewster, he informed them that his company had been planning such a trip ever since they had built their first plane."

"Is he going in his airplane?" asked Andy.

"It says that he and two of his men will fly."

"I wonder if the other two men are those fliers who tried to crash us on the endurance flight?" Andy looked anxious. His father made no reply. He, too, looked troubled and worried.

"I sure wish he had planned something else," the gray-haired man said at last. "I can't help feeling that he will cause you a lot of trouble before you get home again."

"He'll probably do his best to," admitted Andy seriously. "But after the experiences we have had with him, we'll be on our guard."

The telephone interrupted him, and he went to the receiver.

"Is that Andy Lane speaking?" said a harsh, unpleasant voice.

"Yes. Who is this?"

"I'm a friend. That's enough for you to know. I want to warn you against making that flight you announced in this morning's 'Times.' If you go down there, you'll never come back alive!" There was a click, and the line went dead.

Andy returned to the table with a very sober face.

"Well, that's their first shot out of the box," he said. "Someone who called himself my friend just delivered a warning to me, advising me not to make this flight."

"Why not go to the factory and see if Mr. Avery has heard anything?" suggested his father.

"Good idea," agreed the boy. "I'll cut my classes this morning and go right away. I want to look over some of the rough sketches of the ship, too."

As Andy and Scotty spiralled down to the smooth turf of Mineola field an hour later, a little crowd of men raced across the grass to meet them. They were so excited that one of them nearly ran straight into the whirling propeller. Andy idled his motor for a few minutes to cool it off, and rid the cylinders of gas and oil. Then he cut the switch and holding his pup under his arm, he clambered out of the cockpit.

He could hear the whirring of half a dozen motion picture cameras and the photographers made him stand for a moment beside his plane so they might take his picture again for at least the thousandth time since his famous flight.

Then the newspaper reporters had their turn, and they asked him hundreds of questions about his proposed expedition. In particular they wanted to know whether he expected to leave sooner than he had originally planned in view of Mr. Brewster's announcement.

To all these questions, he answered that further information concerning the flight must come from Mr. Avery. Since it was a flight backed by the Apex Company, and since he was just one member of the crew of the ship, it must be the president himself who must give out the information. At last they allowed him to go free, and he pushed himself through the evergathering crowd and entered Mr. Avery's office.

He found the usually jolly president looking very stern and grim. It was obvious that something was disturbing him a great deal.

"Andy," he said at once, "I'd give almost anything in the world if I could catch that crook, Brewster, redhanded in some of his dirty dealings and get

evidence on him to put him in jail!"

"What's the matter, has someone been telephoning you, too?"

"No. Why?"

"Someone called me up this morning and told me that if I started on this South Pole flight, I would never come back alive."

The President said nothing for a moment, but his expression became more serious. At last he explained his worry.

"Someone held up Mr. Wallingford, our chief designer, this morning as he was on his way to work. He was carrying, in his brief case, the first sketches for the new ship that will take you to the Pole."

"What on earth would anyone want of those plans?" asked Andy.

"Why, those plans will show, for one thing, about how fast your plane will be, how long it will be able to stay in the air, how many men you will have in your crew; in fact, almost everything anyone would wish to know. An experienced engineer can read in those plans more than an ordinary man could read in the columns of the papers when we give out the full and final information about the trip."

"I don't suppose there's much doubt that this is the first move Brewster is making to beat us," said Andy.

"Of course there isn't," said the other man. "He's the only man in the world to whom those plans would have enough interest so that he'd be willing to commit robbery to get them!"

"Well, let's get together with Mr. Wallingford and sketch out some new drawings," suggested the young pilot.

They called in the chief designer, and the three men gathered around the long mahogany table. Under Andy's amazed eyes, the engineer's rapid pencil sketched out an immense ship of the air that almost took his breath away.

It was, essentially, a great flying boat. The hull looked to be seaworthy enough to stand almost any kind of a sea. Along the sides the pencil indicated a row of square ports, or little windows, which would give the crew inside plenty of light and air. Just at the top of the hull was a single great wing, upon which were mounted three motors, all tractors, with their propellers in front.

The hull was enclosed all the way back to the rudders, and the young flier knew that many very necessary comforts could be crammed into that ample place.

Then the designer sketched a number of queer-looking slats which ran all the way underneath the hull and curved up with the bow in a graceful upswing.

"These are skis, or runners," explained Mr. Wallingford, noticing the puzzled expression on Mr. Avery's face. "Since this is a flying boat, she'll have no wheels. These runners will be made strong enough to protect the hull in case they have to make a forced landing on ice. Of course, if they land on an iceberg, or on hummocks, the skis won't protect the hull from being staved in. But in case the ice is just slightly uneven, I'm sure they'll let them down as easily as though they were sliding down a millpond."

"Great!" said Mr. Avery. "That ship will do the work if anything that flies will! Does she suit you, Andy?"

"You bet!" explained the boy, his blue eyes shining. "Where will we take off? From Long Island Sound?"

"Yes," answered the president. "Have you ever flown a seaplane or a flying boat?"

"No."

"Well, that's easily fixed. There's a naval flying station at Far Rockaway, almost inside the harbor of New York. The Navy Department will be delighted to have you take lessons in some of their ships. There's always a crew of Navy fliers there and they'll probably fight among themselves for the privilege of teaching you the tricks of Navy planes. I'll have the other pilot take lessons there, too. It shouldn't take more than ten or fifteen hours of practice before you'll be handling them as easily as you do land planes. When can you start your lessons?"

"This afternoon," replied Andy promptly.

"Good!" laughed Mr. Avery. "You certainly don't waste any time, do you? Well, I'll arrange it." He reached for the telephone. "Another thing. I'm going to ask them to give you a full course of navigation lessons. You'll need to learn all you can before you leave."

All that morning, throughout lunch, and for an hour in the afternoon, the two men and the boy talked over the thousand and one details of the flight. Difficulties seemed to roll flat under the direction of the rich and resourceful Mr. Avery. Now that he had decided to send Andy to the South Pole, the president of the company had thrown himself into the plan with an enthusiasm which astonished and pleased Andy.

Every suggestion that the boy made was listened to with great respect, judged carefully, and was usually adopted. The staggering cost of the arrangements did not seem to worry the older man at all. He told Andy that Mr. Seymore had given him permission to make all the plans for the cooperation of the Superior Oil Company without counting the expense at all. It was planned to start work upon the "Apex, Number Two," as the new ship was to be called, immediately. It was to be finished in six weeks, if possible.

"Are you hurrying the work," asked Andy anxiously, "because of Mr. Brewster's arrangements?"

"No, indeed," the other assured him. "Somehow I don't think a man like Brewster can ever make such a flight successfully. Any man who could play as dirty tricks as he does hasn't the brains and the nerve to actually beat you to the Pole. I doubt if he'll even start first. If he does, he'll probably crash and freeze to death on the Antarctic ice!"

"Maybe," said Andy, doubtfully. "I'm sure sorry, though, that he didn't make plans to go somewhere else. I've read that the Antarctic continent is 4,600,000 square miles in area. But I don't think even that space is large enough to hold his plane and ours without a whole lot of trouble starting in a hurry!"

#### CHAPTER V

#### FIRE!

Sonny Collins came over to Andy's house that evening with a face that was solemn and sorrowful.

"Andy," he said dismally, "the very worst thing in the world has happened!"

"What's wrong?" said the other, alarmed.

"Dad won't let me go!" replied the other boy, almost crying with disappointment. "He says I might as well go to the Pole itself with you, as to go to the Bay of Whales. He looked it up in the atlas tonight. He says that it's just part of a large glacier. No real land anywhere. He read that the whole bay is nothing but a little harbor in the ice, and that it is just a part of Ross Sea, which is filled all the time with floating icebergs. He says the ice might close in almost any time and freeze the whole party in for a couple of years. Is that so?"

"I guess it is, Sonny," smiled the older boy. "But, as a matter of fact, Ross Sea has been thoroughly explored a dozen times or more and it never does freeze up tight in the Antarctic summer. If the ground crew stayed too late in the fall, it might catch them for a cold, dark, six-months winter, but that isn't at all likely. The chances are that your party wouldn't be down there more than a month at the very longest."

"Well, Dad says I'm 'way too young to go. He is terribly interested in your flight and hopes you'll bring back the bacon, though it will do the Apex company a lot more good than it will him. If I could only convince him that I'd really be a lot of help, he might forget that I'm not quite fourteen and let me go. The trouble is, he still thinks I'm just an infant, and can't believe that I'd be worth anything to you!"

"I'll tell you what I'll do, old timer. I'll see if I can get Mr. Avery to call up your father and tell him that you would help us a heap if he'd let you go. I know your dad and Mr. Avery are business rivals, but I think it would do some good, anyway."

"Gee, that would be wonderful, Andy," said Sonny, "I've just got to go!"

The young radio fan left early and Andy returned to his study of the books of Antarctic explorers. If this flight were to fail, he told himself determinedly, it wouldn't be because he hadn't learned everything about the Pole that books could teach him.

As he tuned up the motor of his little plane the next morning to fly over to his classes at college, he was surprised by the sight of some grease marks on the polished aluminum cowl. He studied them, puzzled, for he had always been most careful to keep his beloved little ship absolutely spotless. He would just as soon have spilt grease on the living-room rug at home as to have allowed it to stay on his plane after he had been working on her.

He looked over the fuselage, wires, and struts more carefully than usual, then dismissed his suspicions as silly and donned his parachute pack.

"I'm just getting absent-minded in my old age, that's all," he assured himself, as he climbed into the cockpit and started the motor. Scotty was already in his special seat and Andy snapped on the buckle of the pup's safety belt just as carefully as he did his own. The collie looked straight forward into the windblast from the propeller, his ears laid well back, his tail thumping a happy tattoo on the floor.

The morning was ideal for flying. The autumn air, at two thousand feet, was crisp and cool. The blue sky was flecked with hundreds of tiny, fleecy little clouds, and Andy, in the sheer joy of flying, steered straight into them, enjoying the bump and the instant chill of the wet, gray interior before he flashed out into the sunlight again on the other side.

The horizon was like the edge of a bowl, seeming to mount with him as the bottom of the bowl became deeper with each hundred feet he climbed. Twenty or thirty towns and villages could be seen in the crazy-quilt of the earth far below. At three thousand feet, Andy could see a silvery blue line on the rim. That was the ocean, he knew, and his eyes went to the southward, towards the land of the unknown, where, if all went well, he would soon be flying.

Just at this moment, he felt Scotty nip at his leg. At the same instant, he became conscious of a strange warmth in the cockpit. He looked down under the cowl. For a moment his heart stood still! The heat was more noticeable now, and he saw to his horror, little tendrils of black, oily smoke creeping up from beneath the cowl and from under the floor boards.

Fire! The thing that every flier, however brave, fears! He nosed down to make a landing, three thousand feet below. He peered anxiously over the side of the cockpit for a safe landing place. Nothing but woods, directly beneath him, and the plowed fields of the countryside. But in the next second, he forgot what was beneath him, and concentrated on getting down safely to any kind of a landing place at all, good or bad!

He realised that nosing down had been the wrong thing to do. The downward speed of the plane had blown the flames straight up into the cockpit, and the heat was getting worse every second. He killed his motor and nosed up, at the same time tilting his joy stick far to one side. The ship heeled over in the air and slid down in a breathtaking side-slip. Ah, this was better! The roaring flames shot out of the side of the engine bed instead of back into the cockpit. He brought her out of the slip just in time to avoid a tail spin. Then he tried to nose her up and slip down again. This time, however, when he held her level, the flames shot back at him.

He heard Scotty whine, and at the same moment he knew it was too late to try to save the plane. The fire was being fed by the gasoline from the tanks and at any second it might reach the tank itself and blow the ship into a thousand pieces.

The altimeter on the instrument board showed that he had sideslipped less than a thousand feet. He quickly snapped his safety belt open, then reached down to release the pup, who was watching him with frightened eyes.

Lifting Scotty into his lap, then tucking him securely under his arm, Andy gave his beloved little airplane a last tender pat and then climbed onto his seat. Casting a glance at the earth beneath him, he saw that he was over a huge brown patch of plowed up farm. Then he stepped up to the edge of the cockpit and threw himself into space, still holding Scotty under his arm. He heard a scared yelp as the dog felt himself drop, then there was quiet.

Andy's strong fingers found the release ring of his parachute exactly where it should be, close against his chest. When he had counted ten, slowly, to give himself time to clear the falling plane, he gave the ring a hearty tug. For a long second, nothing happened. Then, to his great relief, he heard a ripple of fabric and a quick, sharp pull at his shoulders and legs as the huge silk parachute billowed out above him. The next moment, he and Scotty were floating gently toward the ground, swaying like a pendulum, but in perfect safety.

He heard the sound of wind shrieking through struts and wires. Looking up he saw the beautiful little airplane that he loved so much go hurtling past him in a tail spin. It was blazing like a falling rocket, leaving a stiff, straight ribbon of oily black smoke behind it. He turned away his eyes. He couldn't bear to see it crash!

As he was slowly wafted down towards the ground, he looked down again to the spot where he thought he would land. He saw several motor cars draw up to a stop at the edge of the farm. Their occupants jumped hurriedly out and ran over the soft, uneven dirt towards his descending parachute.

Just at that moment, he saw that as he was being driven by the wind diagonally above the ground, he would probably be dragged across a barbed wire fence, which was almost under him. That would never do! He and the dog would be torn to bits on the sharp prongs.

He measured the distance with an experienced eye, then reached up with his free hand and pulled hard at the shrouds which held him to the 'chute. Spilling the wind out of one side of the great, umbrella-like cloth, he slid directly down, but with greater force than he had expected. He felt a tremendous shock, then everything went black.

#### CHAPTER VI

#### ANDY PICKS HIS CREW

Andy felt something wet against his cheek. He tried to brush it away, but it kept on touching him, in spite of his efforts to push it off. He opened his eyes, and looked straight into Scotty's face. The pup was standing there beside his master, his friendly brown eyes very worried and anxious.

Then the first of the spectators arrived. Andy had been unconscious for only a moment, but in a few minutes a dozen anxious people were crowding around him, trying to do something to help this boy, who was by this time sitting up with a dazed face.

Someone soon recognised the world-famous young flier, and the anxiety of the little crowd increased. A woman suggested taking him to the nearest hospital, but Andy rose unsteadily to his feet and gingerly twisting his head, arms, legs, and body, announced that he was all right. Then he asked to be driven to his home. So in a very short time, Andy, pale and shaken, walked into his house, Scotty soberly following him.

His mother rushed to the door to meet him.

"Andy, you're hurt!"

"No, Mother, but I sure came near it! I had a spill, and it jolted me a bit. I'll be fine when I sit around for an hour."

Mrs. Lane fussed over her boy as though he had been brought back on a stretcher, but at last he persuaded her that no bones had been broken, and that a few minutes' rest would make him as fit as ever.

Then he told her of the loss of his wonderful little scout plane. Her face paled as she listened to his casual account of the narrow escape.

"Well, Son, I've always said that you'll get killed in one of these fool airplanes! Now won't you stop all this foolishness and keep your two feet on the solid ground where they were intended to be?"

"You know I could never do that," laughed her son. "Such an accident might just as well have happened on a street car!"

"Oh, of course, you would fall three thousand feet in a burning street car!" she replied angrily. "That's sensible, isn't it? Next thing I know, you'll be telling me you could have done it at home! By the way, Mr. Avery has

been telephoning you ever since you left the house. He wanted to know if you had gone off in your plane, and seemed very anxious to have you call up just as soon as you could."

"I'll do it now, Mother. I'm feeling fine again."

In a few minutes he was talking with Mr. Avery at the factory.

"Well, I'm certainly glad to hear your voice!" declared the other man's voice over the wire. "Where are you, Andy?"

"Here at home. I've had a little crash." In a few brief sentences, Andy told his friend what had happened. "Why did you want me to call you, Mr. Avery. Anything happened?"

"I'm sure there's been some dirty work," replied the other. "About forty-five minutes ago, someone called up and told me that what was going to happen to you would be a warning to us if we went ahead on the South Pole flight. Then the man hung up. I tried to trace the call, but it came from a public pay station in New York. I was frantic, particularly when I called your house and found that you had already taken off!"

"It never occurred to me that someone had been tampering with my plane," exclaimed the boy. "But now that you have told me this, I remember that I saw some oil spots that I couldn't believe I had left on the ship. I'll bet Brewster and his gang have been busy again at their little tricks!"

"Well, I'm about ready to call the whole flight off. Sailing across the South Pole a thousand times isn't worth losing you, Son!" Mr. Avery's voice was a little husky.

"Hey, don't talk like that, Mr. Avery! I'll be lots more careful, that's all! They're trying to scare us off, and I certainly won't give them the pleasure of doing it! I'd like to get even with them for burning up my ship! Beating them to the Pole would make me feel a lot better! Good bye, Mr. Avery, I'll be at the factory this afternoon."

As Andy hung up the receiver, there came a ring at the door. As the maid opened it, a half-dozen reporters walked in. They had heard of his fall, and had come out to his house in the fastest automobiles they could get hold of.

The young pilot was friendly to them, but insisted it had been caused by his own carelessness in not examining his plane more carefully before he took off. He had probably left some grease on the exhaust pipes. The accident was his own fault, and was, after all, a very trivial affair. If he hadn't tried to avoid the barbed wire, he would have come down without a jolt.

He admitted he was going to buy a new plane for himself. No, he told them, he wasn't rich, but his share of the profits of the Lane carburetor was large and he had received a good-sized check from the Apex Company when he had finished his big flight. So he had plenty of money, now, to buy and keep up his own plane.

That afternoon, at the Apex factory, he ordered a new scout plane, an exact copy of the one which had so nearly caused his death. Mr. Avery offered to give it to him without charge, saying that he was sure its loss had been caused by the plans for the South Pole flight. But Andy insisted that he would accept no more gifts, and they finally settled the matter by making the price extremely low, just what it would cost to build it.

"Andy, it would be a good idea to pick out your crew now, so that they could take flying lessons in seaplanes, too. By the way, how are your lessons progressing?"

"Wonderfully," replied the boy with enthusiasm. "The officers of the Naval Air Station are more than nice to me. The Navy flying boats feel like the big 'Apex' when they are in the air. They are heavy and cumbersome. The only trouble I have is taking off and landing. But I think I have the hang of it, now, and after a few more hours' practice, I'll be just as much at home in them as in the old 'Apex.' The navigation lessons are good fun, too. There's a young lieutenant who makes them seem as easy as pie."

"Good stuff. Now what about the crew?" said Mr. Avery.

"Well," answered Andy, "I'd certainly like to have Joe Lamson and Sam Allen if they want to go. Joe is a wonderful pilot and a great fellow. Sam can keep an engine running for days after it should have died of old age. How he does it, I don't know! Besides that, I taught him to pilot the plane on the other flight. He's a radio operator, too, and a dandy cook. He could make a peach of a hash out of old shoe leather," he grinned as an after-thought.

"I think they would both resign from the Apex company if they weren't chosen to go," said Mr. Avery. "I'll call them in and ask them." In a few minutes, they both rushed into the office.

Joe Lamson, chief test pilot for the company, had been in command of the first "Apex" on the record-breaking flight until he had been taken sick and forced to go to the hospital. Sam Allen, chief mechanic, had gone along as radio operator and mechanic, but when Andy and he had been left alone, he had helped with the controls and done an amazing amount of work that had kept the ship in the air hours after the engines had apparently been hopelessly worn out.

"How would you boys like to be part of the crew of the 'Apex No. 2' on the South Pole flight?" asked Mr. Avery, smiling.

The two men looked at each other with delighted faces.

"We'd have been heart-broken to have been left behind, Sir!" spoke up Joe Lamson. "We were beginning to feel that you had forgotten all about us!"

"We'd rather go on this flight than have your job as president of the company!" Sam's round jolly face shone with joy.

"Fine stuff!" said Andy. "With you and Joe to take turns with me at the wheel, and you, Sam, to baby the engines along, as you did on our last hop, I'd be willing to tackle a much harder stunt than this one. We need one more man who can relieve Sam at the radio, knows a little about engines, and who can be a good handy man all over the plane. Who knows of anyone like that?"

"I know just the man," answered Sam. "Dick Williams, my assistant at the motor test bench. He can play tunes on a motor, would rather fly than eat and on top of that he was radio operator on a transatlantic steamer for several years."

"He'd be fine on a long trip," agreed Joe Lamson. "I've used him on lots of test hops, and he's only about three steps behind Sam as a mechanic."

"That's settled then," approved Mr. Avery. "I'll have a talk with this Dick Williams a little later and break the great news to him. Now there's just one more thing. I'd like to have you all finish up on your seaplane training at the Naval Air Station just as soon as you can. Joe must take the navigation lessons, too.

"Then I want you to take the old 'Apex,' the ship that made the reputations for all of you, and fly her up into the wilds of Canada. Go as far north as necessary until you find snow and a whole lot of icy weather. Then you must take off the wheels and put on skids. I want you to fly around up there for two weeks, landing and taking off on the snow until you become used to flying under those conditions. I'm having new engines put in the old bus and I want you to fly, fly, fly, keeping over the snow country all the time. Is that satisfactory?"

Joe smiled delightedly. "I'll say it is! The idea of taking a long hop in the old 'Apex' suits me right down to the ground. Sam and I'll get our seaplane training over with in a hurry, won't we, eh?"

"Right you are!" replied the little mechanic, as he and Joe went back to tell their envious fellow workers of their good-luck. After their departure, Andy turned to the president and said seriously:

"There's one very important favor I'd like to ask of you, Sir."

"What's that, Andy?"

"Mr. Collins thinks David—Sonny, you know—is too young to go down to the Bay of Whales with the steamer that is to carry the ground crew. For my part, I'd feel a hundred percent safer if I knew the kid was at the sending key while I'm flying over those last few miles over the polar ice.

"You remember he saved our necks two or three times on our last hop, and I have a feeling that a good and loyal friend like that might do it again, if necessary. Well, what I want is this: will you call up Mr. Collins on the phone and tell him you'd like to have Sonny go with us?"

Mr. Avery thought hard for a minute. He had not been on very friendly terms with the president of the Collins Aeronautical Corporation for several years. They were bitter rivals in business and many harsh words had passed between them. At the same time, the Collins boy would be a great help and he surely owed it to Andy to favor such a simple request. So, somewhat reluctantly, he called the Collins factory, and asked to speak to its president.

"Andy Lane tells me that you don't like the idea of David's going along with the ground crew to the Bay of Whales," said Mr. Avery, after the first surprised greetings were over.

"Why should I?" replied the other man shortly. "My son is nothing but a baby!"

"He may be that in years, but he could help us more than a full grown man in this particular instance. I understand, of course, that you haven't any great wish to help out an 'Apex' plane or crew to make such a flight, but Andy was so anxious to have Sonny handle the radio end of the expedition that I thought I'd talk to you about it.

"We're sending down a crew of thirty men in a fine steamer, the 'Reliance,' built especially for polar explorations, and there will be a doctor along, and plenty of comforts. David would have an experience he would remember all his life, and he'd be helping his friend as well."

"I think you want to take him just because Andy likes the boy," replied Mr. Collins, but his tone was uncertain.

"Not at all," replied the other man. "He's capable of doing the work of a man along these lines, and we can fully trust him. It's a position where we must have someone in whom we can feel full confidence."

"Well, maybe, on second thought, I will change my decision. I'm really proud to think he is necessary to you. By the way, we haven't seen much of each other lately, have we, Avery?"

"No, we haven't."

"What do you say to getting acquainted with each other once more? Suppose you meet me at the 'Noon-day Club' tomorrow for lunch, and we'll talk over a lot of things!"

"Great!" said Mr. Avery, very much pleased, "I'll be there at one o'clock. Good bye, Collins."

The president looked at Andy as he put down the phone. "That telephone conversation was worth a great deal to me. Collins and I used to be great cronies. If we get together tomorrow we'll break the ice after years of misunderstanding. Incidentally, he says Sonny may go south with the 'Reliance.'"

"Wonderful!"

"All right, now, you run along. There's a plane out on the field I'm going to let you use till your own is ready. Good bye."

#### CHAPTER VII

#### THE NEW "APEX"

The next few weeks seemed to fly past on enchanted wings. Sonny was brushing up on his radio experiments, and the rest of the crew were busy with their seaplane lessons. They all had flown long enough to have acquired the "feel of the air" to a marked degree and the small difference between land and sea planes were learned without any trouble at all.

Andy and Joe worked hard on their navigation, until both could "shoot" the sun with a sextant like seasoned mariners. Then, after several trial flights, they climbed at last into the old "Apex" which had served them so faithfully a few months before, and set off for the north.

To them it was like the start of a two weeks' vacation. They had no records to break, no regular duties to perform. All they had to do was to find snow and fly over it. This was easy, and they felt that it was a lark of the very happiest kind.

They were not alone on their flight, however. The newspapers, now thoroughly aroused by the interest of the people in this flight to the South Pole, were eager for every scrap of news concerning the fliers. They had rented four airplanes, which followed the "Apex" northward until they reached a bleak little village in Manitoba, called Churchill.

Right on the edge of Hudson's Bay this little town nestled, and even now, in early autumn, it had been snowed in by a northeasterly gale that had whistled down from the North Pole itself. Finding a smooth place far outside of the town, Joe set the "Apex" down and they commenced the work of changing the running gear. The long skis were made with fittings identical with the wheels, so it was the work of but a couple of hours to put on the long, slim runners.

The newspaper men had also brought along skis for their planes and their pilots worked alongside the crew of the "Apex." Before they had finished, a number of dog sleds came into view, each carrying several passengers. The unexpected arrival of five airplanes at one time was a great event in this isolated country, and everyone came to gaze at them.

When all the planes were securely anchored into the ground to prevent the strong winds from carrying them away, the whole party of fliers and reporters accepted the invitation of the Canadians to return to the town on their sleds. It was a tiny little village, just a few low shacks huddled in the drifted snow in the lee of a small hill to protect them from the icy blasts from the Arctic.

It was quite a task to find a place for them all to stay, but the inhabitants doubled up in their houses and made room for the newcomers.

Every day for two weeks, the old "Apex" slid off the snow and cruised round through the crisp, cold air. Over Button Bay she flew, into the chilly sky over the vast, inland sea called Hudson's Bay. The cabin cockpit was well heated, but even then the sub-zero wind trickled through somehow and chilled them to the bone.

The four were kept busy thinking out changes and improvements to be put in the new "Apex" which would make the ship more comfortable and efficient in weather that would make their present climate seem like the warm tropics.

They were glad enough each day, after a cruise over the Bay, to turn back ashore and cross Cape Merry and Cape Eskimo and slide down to a landing.

Dick Williams, the new member of the crew, was a great success. He fitted into the close life in the small compartments without any trouble and always appeared to know what was needed at every moment. When the fliers were so cold it seemed that they could not stay up another minute, it was Dick who brought each a steaming cup of hot tea that warmed them up and made life bearable for another hour or two in the air.

The evenings were not so bad. The newspaper men were a jolly lot. They had been everywhere and seen everything. The whole group would plow through the snow to gather in one of the huts. Then they would swap stories until they were ready to turn in after their strenuous day.

At last their stay came to an end. They put the wheels back on the old ship and turned her nose southward. Over the cold, snowy, stretches of Manitoba they winged their way. Over warmer Ontario, with her endless green forests. Until at last they sighted a great body of water which their maps told them was Lake Ontario. Then they felt quite at home again, for they were soon flying over New York State.

They had had an excellent "shake-down" cruise. They had become used to long flights in cold weather, and had worked out a routine which they planned to use in the larger, newer "Apex No. 2." The two weeks of outdoor

life in the bracing cold had made them all fit as fiddles for the coming strains of the great polar flight, and they each regretted that they were not to start immediately.

Joe had accepted in the most friendly way the fact that Andy was to be captain of the new ship. He obeyed all commands cheerfully and seemed glad to be allowed to go with them in any capacity.

Andy was amazed when he went into the factory upon their arrival at Mineola. A long room had been built adjoining Mr. Avery's office.

Sitting at desks there were twelve men, all strangers to Andy, who had been added to the company's staff since he had left for the north.

The president, who was overjoyed at the husky, wind-burned appearance of his four fliers, introduced them all, one at a time, to the desk men. Each of the strangers was an expert in some line. One was planning the best possible route from New York to the South Pole. One would go in the "Reliance" and have complete charge of the ground crew. He would send up the last refuelling ship at the Bay of Whales and would be ready with a relief party in case the "Apex No. 2" came to disaster south of their base.

Another was planning the work of the Superior Oil and Gas Company, arranging to have their refuelling planes exactly on the spot at a dozen places en route. Still another had charge of all supplies; those to be taken on the new "Apex," and those for the Bay of Whales camp.

Andy's head whirled as he was introduced to all these men and learned that they were devoting all their time just to planning for his own success. The flight that had seemed so simple when he was working it out in his own mind now became staggering in its importance when all these men had to be called together to arrange the various details.

"Come out into the factory," said Mr. Avery. "I have a surprise for you." The little group of fliers, led by the president, went through a number of passages until they reached the main workshop of the factory. Here, standing alone in a great, well-lighted room, was the framework of the biggest airplane Andy had ever seen in his life. He gasped. It seemed really too big to fly!

"We have three shifts of carpenters, riggers and mechanics working twenty-four hours a day on this new plane," explained Mr. Avery proudly. "We're not going to let Brewster beat us if we can help it. The thing I'm most proud of is the fact that every man working on this ship has volunteered to do all the overtime work necessary without a cent's worth of extra pay."

Twenty or thirty workmen who had been swarming over the hull and wing structures stood aside while the fliers examined the magnificent flying boat. It was quickly taking shape under the skillful and fast-working hands of these picked men.

The hull was nearly finished, except for the planking of the sides and the finishing of the compartment interiors. As Andy walked up to it, he was more than ever amazed at its size. The bow stood many feet above his head and he had to climb up a long ladder to get inside. Followed by the others, he clambered up and stood, filled with amazement, within its immense interior.

In many respects, it followed the plan of the first "Apex," except that it was much larger and more comfortable. And, of course, it was a flying boat instead of an airplane. In the bow was the familiar open cockpit, in which Sam and Dick were to catch the hosepipes of the refuelling ships as they flew overhead, ready to pour their priceless loads of gasoline and oil down into the tanks of the lower plane. Andy noticed that there was a grooved steel shutter that rolled over the open cockpit when it was not in use. He knew this would lessen wind resistance and would also help keep the icy blasts of the Pole from blowing through the passageway which led back into the pilot's compartment, or control room.

Next aft from the bow came the control room, enclosed, as on the first "Apex," with glass. But these windows were of much heavier, non-shatterable glass and had storm windows securely fitted outside, like the two windows in a Pullman car. The same comfortable pilots' seats were already in place behind the two huge dual-control wheels. The instrument board, not yet completed, seemed to have room for many more instruments, dials, and gauges, than were on the first "Apex."

The roof of this room was higher than the rest of the hull and through the windows on all sides, the pilots' view to front, sides and rear was perfect. Even the roof contained a single large window. Behind the pilot's compartment was a little room filled with a desk and several drop-tables. There was a folding Pullman bunk on the side.

"This is the Captain's room," explained Mr. Avery, looking at Andy with a smile, "and these are map tables. It was better to have them in a separate room so Joe may be flying in darkness when you may be studying the charts under electric lights. I hope you have kept up with your navigation lessons, Andy."

"You bet I have, Mr. Avery," the boy reassured him, "I think I know enough navigation now to take a liner across the Atlantic and back again."

"I hope so," responded the older man. "It will be a pretty hard bit of navigating down there, with the magnetic pole 'way off on one side of the real pole. You'll think your compass has gone completely crazy. But we are installing one of the most powerful little direction-finding radio sets ever made, so you ought to be able to get your bearings by radio all the way to the Pole.

"We're also sending down there, on the 'Reliance,' a short wave set of a perfectly tremendous range, so your friend Sonny should be able to keep in touch with you every minute after you pass the Canal Zone on the way south. But look here, fellows, here's the radio room itself. How do you like this, Sam and Dick?"

It was a beauty, without doubt. On the side wall were upper and lower berths. On the front wall was a long panel board which would contain the most complete radio set ever installed in an airplane. Both men were jubilant at the appearance of this room.

"My stars, sir!" burst out Dick, "I wish this were all finished and we were hopping off tomorrow!"

They all laughed. But each flier had been thinking the same thing. The next room was Joe's. It was fitted up just as comfortably as Andy's. Then came the last compartment, a combination living and dining room. It had electric stoves, a drop-table, comfortable wicker chairs, electric lights set in convenient places for reading and Pullman berths for Sam and Dick. It looked more like the cabin of a beautiful little steam yacht than a flying boat.

"In this ship you won't have to use telephone receivers when you want to talk with anyone in the same room," said Mr. Avery. "Perhaps not at all, although the ship is completely outfitted with them if you should need them. You see, the walls are completely lined with insulating material which not only helps to keep out the cold, but also deadens all outside noises. We hope that it won't be much noisier than a closed motor car going at full speed."

The fliers looked at each other in amazement. The whole thing was unbelievably perfect. They climbed through a little trap door in the roof and stepped out on the one great wing. Here the mechanics were just mounting

three great 500 horse power motors on their beds and Sam's eyes glowed as he noticed the preparations made for his safety and comfort when he had to go out on the wing to nurse his engines.

There was a cat-walk leading from the hatch to each of the engines, with a rail along which his safety belt could slide. But at each motor there was, on the hand-rail, a long tube looking almost like the roller of a window shade. Mr. Avery stepped to this, pulled a handle, and down dropped a steel shutter in front of the motor that completely shut it off from the wind. Sheltered by this from sub-zero gales, Sam could make his repairs in comfort.

"Oh, boy!" he shouted, "now all I need is an open fire-place to feel right at home!"

The little party trooped back into the president's office. He again became serious as he said:

"Fellows, we've been rushing our plans ahead just as fast as we can. Of course someone, and we suspect it was Brewster, has made several efforts to stop us. A new shift going to work the night before last, found a time bomb near enough the new ship to have blown it to pieces.

"One of the machinists was approached on the street by two strangers and was offered a thousand dollars if he would put steel filings in each of the motors just before you took off, so they would tear themselves to pieces in a few hours. When our man refused, the thugs beat him up. He's in the hospital now. We've done everything in the world to try to trace these acts straight to Brewster, but he's been smart enough to keep under cover and we haven't a single thing that we can prove against him yet.

"He has announced that he will start away in the early part of November. I've decided to do this much to cramp his plans. I'm getting the 'Reliance' ready to sail next week. It will take her about eight weeks to get down to the Bay of Whales, longer if she has to fight her way through pack ice when she gets a few hundred miles from there.

"As soon as she arrives, all hands will get busy down there getting things ready for you to fly past. As soon as they are ready, they will let us know and you can start as soon after as you can get away. You'll be standing by waiting for the signal as soon as we hear she has arrived.

"I hope we'll be able to beat Brewster to the Pole, but I'm not going to let you start until the last detail is ready. Then you can shoot as fast as you please, the faster the better, whether he has beaten us or not.

"Now, in the meantime, I want you all to be more than careful. The test flight you have just taken has announced to the world who is to be in the crew. A mighty easy way to cause us trouble would be for one of the crew to fail to show up when we are just ready to start.

"Don't forget this. If Brewster is first across the Pole, his company's future will be assured. They will get enough orders for planes and engines to put them on Easy Street. To get this, Brewster would stoop to anything, so watch your steps carefully."

"How is Brewster going, do you know?" asked Andy, thoughtfully. "Is he going to try a non-stop flight, or does he plan to start somewhere from the ice?"

"I'm not certain, but I think he has already sent his plane down to the Antarctic in a steamer. Everything is a deep secret and has been kept completely out of the newspapers. He says he will announce everything at the proper time.

"We can't find out anything definite, but we think he is going to follow in another steamer sometime soon. I've heard the rumor that he is going to pitch a camp at McMurdo Sound. That's on the Ross Sea, too, but is some 500 miles away from the Bay of Whales, so I don't think he'll give you much trouble when you get down there."

"I wonder why he picked that spot?" asked Joe.

"Because, next to the Bay of Whales, that's the only other place on the Ross Sea about which much is known. Scott's last expedition started from there, you know, and his diary gives a very complete description of it."

"Well, so far as I'm concerned, I'd like to start tomorrow," said Andy, "but since we can't, I'm going home and say 'hello' to my folks and to Scotty. I sure missed that pup on this hop! The 'Apex' didn't seem the same without him aboard. But with Dick along it was so crowded I had to leave him at home. So long, gang!"

## CHAPTER VIII

#### ANOTHER CLOSE CALL

A week from the day of this first inspection of the "Apex No. 2," Andy went down to the docks in Brooklyn and saw Sonny set sail on the "Reliance" with the other men of the ground crew. The youngster looked so small and frail, with his pale face and his great brown eyes behind his horn-rimmed spectacles, that Andy, for one brief moment, regretted his share in letting him go. But the boy's enthusiasm and excitement soon dispelled Andy's vague regrets.

"Gee, Andy," Sonny shouted as soon as he saw his famous friend mount the gangplank, "this is the happiest day of my life! Just think, I'm going nearer to the South Pole than any boy has ever been before!" He turned happy, shining eyes toward his father, who, proud as punch of his son, was aboard to say good bye.

As soon as he saw Andy and Mr. Avery come aboard together, Mr. Collins rushed over to congratulate them and wish them every possible bit of good luck.

"Next to having a Collins airplane first across the Pole, I'd rather see yours, with Andy at the wheel, than any other. I'm with you in spirit all the way, and I'm glad David is going along to lend a hand, though I hate to see him leave! I've met and talked to the other members of the ground crew and I'm sure he'll be in safe hands."

The "Reliance" was a converted whaling vessel, carrying both sails and steam engines. Her entire hull had been made stronger with great oak crossbeams to withstand the ice floes that she would have to plow through. Her bows had been reinforced by several thicknesses of oak planks. Though she was small, she was strong and seaworthy and had already made several trips to polar seas with other exploring expeditions.

Her decks were piled high with cargo, her crew not having had time to stow the boxes, bags and barrels in their proper places. This they would do once they got to sea, but in the meantime everything seemed to be in a state of utmost confusion.

Several great packing cases on the foredeck caught Andy's eye. Examining them, he found that they contained the tank plane and enough spare parts to make another entire refuelling ship. In other huge boxes were spare engines and a complete set of parts for the "Apex," ready for use in case he was forced down somewhere within reach of the rescue party.

A terrific barking and yelping from the afterdeck caused him to pick his way through the mountains of cargo. Near the stern of the steamer were built a number of kennels, each holding a nervous, whining Eskimo dog.

"They all stay out here on deck the whole trip," spoke up a voice at Andy's elbow. He turned and saw a bronzed, weather-beaten man who apparently had charge of the dogs.

"These your dogs?" asked the pilot.

"Yep, and they are as good huskies as ever drew a sledge," announced the man with great pride. "They're a mite overheated now, but I reckon we'll keep 'em in shape until they get down in the cold weather again. I may have some trouble with them, though, when we get down towards the equator."

Andy remembered that Mr. Avery had told him he had bought several sledges and dog-teams in Canada, to use at the Bay of Whales base for carrying supplies, and for forming a rescue party in case it became necessary.

A wailing blast from the steamer's whistle announced that she was ready to shove off. The newspaper photographers took their last pictures, the motion picture men climbed to stringers on the wharf and began grinding their machines.

Andy gave a last hearty handshake to his little pal and went ashore with Mr. Avery and Mr. Collins. There the three stood in silence on the end of the wharf, while the snub-nosed little steamer, her signal flags flying gaily in the cold wind, steamed out into the East River and started the first leg of her twelve thousand mile journey to the ice-capped bottom of the world.

"Well, Andy, my boy," said Mr. Avery, throwing his arm around the pilot's shoulder, "I feel that things have really started, now!"

Mr. Collins had been standing with rather wet eyes fastened on a tiny figure standing at the stern of the "Reliance," but he turned now to the president of the Apex Company.

"Avery, I'm really sorry that I haven't been able to contribute something to this flight. I feel just as excited about it as if it was one of my own planes boxed up there on deck."

"You've done a lot towards its success by letting us have your son, who will have a large share in making this flight successful!" replied his friend.

"I'm delighted he could take part. Let's all go to lunch now." And the three moved off together.

Although the next few weeks were busy ones for Andy, the time seemed to drag by more and more slowly. In his mind's eye, he could see the sturdy little "Reliance" churning her way down the Atlantic coast, through the Panama Canal and along the unfriendly western coast of South America. Finally she would leave Cape Horn and would turn westward and southward towards the mighty ice barrier of the unknown continent of the Antarctic.

He knew from the radio reports she had sent that she was making good time and hoped that he would hear that she had kicked her way through the several hundred miles of ice that fringed the ice barrier and had landed at the Bay of Whales. For then he knew that in a few days he and his comrades would take off in that mighty, single-winged sea-bird and wing their way after the "Reliance."

His days were full to the brim. He still went to his classes at college, although it was a constant struggle to avoid his admirers and the millions of questions they wished to ask him.

Each afternoon he flew over to Mineola to inspect the new "Apex," which was now nearly finished. Andy was fascinated as he saw the last touches being put upon her. The many electric lights, the shining instruments on the cowl, the many lockers for the safe stowing away of their supplies, the electric heaters in every nook and corner—all these and many other comforts were being carefully installed in the ship.

Joe, Sam, and Dick could hardly attend to their everyday duties. The "Apex" drew them like a magnet. They went over her a dozen times a day, examining every gadget with delighted eyes.

Andy and Joe flew every afternoon from the factory to the Naval Air Station at Far Rockaway, where they took their lessons in navigation. All the latest navigating appliances were explained to them, particularly the sun compass, which would be their main guide in determining their position during the flight if their radio bearings failed them. Seaplane and flying boat lessons were no longer necessary. The fliers could now handle navy craft easily and as naturally as any type of land plane.

Each evening Andy spent at home with his parents. In order to pass the lagging time away more swiftly, he had once taken them to the city and to

the theatre. But someone in the audience had immediately recognised him and the show had to be stopped while the people clapped, cheered and stamped their feet. At last he had to rise from his seat and bow, but being very shy, he did not try the theatre again.

One afternoon, as Andy was visiting at the factory, one of the test pilots took up his borrowed scout plane to try and find a slight defect which Andy had reported. Andy spent the half hour while he waited with Mr. Avery. As they sat chatting at the president's desk the phone rang. As the older man answered it, Andy saw him start slightly in surprise.

"This is Herbert Brewster talking," had come over the wire.

"Yes, Mr. Brewster."

"I'm sorry to say that I've heard of Andy Lane's accident, and called up to express my regrets. I felt quite sure that he should have never attempted to beat me to the Pole. It is very sad!"

"What are you talking about, Brewster?" demanded Mr. Avery, shortly.

"Why, haven't you heard? One of my men just called me from Hempstead, saying that Lane's plane had crashed and that he had been seriously, perhaps fatally, injured."

"Andy Lane is sitting here at my desk at this moment, Brewster!"

"What?" came an incredulous voice.

"Right here at my desk! Your man must have made one of his usual clumsy mistakes. He'll land you and himself in jail some day! Good bye!"

The President slammed down the receiver and turned to face Andy. Just then the phone rang again. It was the telephone operator.

"Oh, Mr. Avery, Mr. Lane's plane is down and the test pilot has been hurt. An ambulance is taking him to the hospital. Someone just telephoned in from Hempstead!"

"Andy," said Mr. Avery, "that ship did not crash by accident! Brewster knew about it too quickly! I'm going to the hospital to see the pilot. You, Joe, and Sam get in a company car and get over to Hempstead as quickly as you can. Look over the wreck and see if you can find out what caused the crash. Be sure and look at the wires and struts to see if any of them have been cut!" He dashed out of the office, grabbing his hat as he went.

In ten minutes, the three other men were standing beside a charred, tangled mass of wires and half-burned struts. The engine was half-buried in

the ground. It was all so torn and burned that it was impossible to find the least evidence of what caused the crash.

"I saw it!" said a small boy who had been eagerly watching the fliers rush to the plane, "it was flying along just as easy as anything, when it suddenly dropped its forward end down, the wings twisted around a couple of times and blam! it hit the ground! A big cloud of dust went up and then all of a sudden the whole thing was on fire. When I got there the pilot was lying on the ground a little way off. Then an ambulance came and took him off to the hospital."

"That was about as clear an account as anyone could give," Andy told Mr. Avery later on. The pilot was seriously, but not critically, injured and would only have to stay several weeks in the hospital.

"We haven't a thing in the world to go on," said Joe, "but I'm sure that the plane had been tampered with. Our ships, in the hands of a good pilot, don't just suddenly fall to the ground like that. But we can't prove anything, so I guess we'll have to forget it and call it one more lesson learned. Until this polar flight is finished, we'll have to inspect each ship each time it goes in the air, just as though we were sure someone had been fooling with it."

"Yes, and not only that," added Mr. Avery solemnly, "from now on, Andy is going to have a guard over him day and night. If he doesn't, Brewster will get him as sure as the sun rises and sets!"

"Nothing doing, Mr. Avery!" protested Andy, "I'm not going to have a nurse tagging around me at every step I take."

"All right then, the flight is off," declared the older man positively. "I'm not going to have you on my mind every minute. We'll kill the flight deader than a haddock right here and now!"

"Well, who would be my guard?" asked the boy, weakening at the very possibility of anything interfering with the flight.

"I'll do it," volunteered Sam. "I've been a pretty good boxer in my day, and am fairly handy as a knuckle-tosser. If Andy can find a bed for me in his house, I'll take over the duty."

"Well, I wouldn't mind you being with me at all," said Andy cheering up, "but I'm not going to have any private detective following me around!"

So it was arranged that Sam should be relieved from all his routine factory jobs and stay with Andy, day and night, until the new "Apex" soared into the air for her historic trip to the South Pole.

## CHAPTER IX

### THE TRIAL TRIP

The morning following the second accident to Andy's airplane, he and Sam, who had already taken up his duties as the boy's bodyguard, came down to breakfast to find Mr. Lane reading the most important news of the day. As they started on their grapefruit, he read the headlines aloud to them.

At midnight, said the papers, Mr. Brewster and a small staff had set sail on a mail liner to the Canal Zone. Here he was to catch a fast steamer to Valparaiso, Chile, where he expected to arrive just in time to catch another mail packet heading still further down the west coast of South America. This last boat was scheduled to reach the Straits of Magellan on the southernmost end of South America just as Brewster's own ship, the "Success," would pass there on its way to the Antarctic Ocean. The "Success" had left New York many weeks ago and Andy's rival had saved just that much time by waiting and catching the fast steamer instead of going on his own smaller boat.

The daring explorer, went on the newspapers, had sent all but the last minute odds and ends of his equipment aboard the "Success." As soon as he had joined his own ship, they were to head down into the Ross Sea, pushing their way through the floating ice until they reached the spot they had picked for their base, on Cape Armitage, near the site used by Sir Robert Scott on the expedition which had cost him and his companions their lives.

"Gee whiz!" muttered Andy, "our own ship ought to be there near Cape Horn just about the time Brewster gets there. I wonder if our plans leaked out and he's made plans to meet the 'Reliance' to try some more of his dirty tricks?"

"I don't think so," Mr. Lane assured him. "From the radios received at the factory, I hardly think the 'Reliance' can be as far along on her course as the 'Success.' She'll be a week behind Brewster's boat, according to my figuring."

"Well," said Sam, downheartedly, but taking an immense bite of toast, "that will give Brewster and his gang at least a week's start before we even leave Mineola. Looks as though he might beat us to the South Pole."

Andy was busy figuring on the back of an envelope.

"Nope, it's not so bad as that. According to the mileages that I remember from the charts of the Antarctic Ocean, it's about 350 miles farther to Cape Armitage than to the Bay of Whales. It's hard going down there, because for the last three or four hundred miles they'll be pushing their way through very thick pack ice. Thousands of small floes and icebergs that have broken off the main ice barrier are drifting northward with the currents.

"Our ship is one of the finest in the world for that kind of work, and I shouldn't be surprised if the 'Reliance' will make up its lost time and arrive at the Bay of Whales just about the time Brewster and his gang get to their destination.

"We have one more thing in our favor," he added, "he will have to set up his plane and test it out far more carefully than our people with only the little refuelling plane to worry about. They will have to build a much longer runway than for our tank plane. We'll be right here, ready to take off the minute we get word and it will only take us five days to reach the Pole itself. Yes, sir, they'll have to step on the gas to beat us, even with the head start they have!"

"Well," muttered Sam, still not convinced, "I guess he took his parting shot at us yesterday afternoon when he thought he'd crashed your plane. But he may have left someone behind him to make us more trouble at the last minute."

Mrs. Lane, for once at least, since her son began to fly, really enjoyed herself. Andy and Sam took her while they went on a shopping excursion that lasted for several days. There was a store in New York which dealt mostly in sporting goods, camping apparatus, and supplies for such expeditions as Andy's. It was a regular museum of clothing and baggage suitable for every climate in the world.

In this store, Mrs. Lane had a wonderful time. She helped Andy make his selections, enjoying the tremendous variety and choice of clothes and kit for the coldest place in the world. The clerk who waited upon them was flattered by the patronage of the famous flier, and, as he had helped outfit other polar explorations, his advice was very helpful.

Andy, under his mother's watchful eye, selected four complete outfits of clothing, the materials being those advised by the expert on Mr. Avery's staff. Each outfit was made up of a coat which looked more like a huge shirt made of reindeer skin; great, bulky pants which had once been the winter overcoats of polar bears; slip-on overshoes made of sealskin and lined with fur which were pulled on outside the pants, and reached up to the knees.

Next came sealskin mittens lined with sheep's wool that pulled up to the elbows; three kinds of helmets, light weight for use in the tropics near the equator, medium weight, for the temperate zones, and a huge affair made of the same material as the mittens that could be pulled down over the face, head, and shoulders. This last was fitted with amber yellow goggles, to be used in the white glare of the icy continent of Antarctica.

When he tried on his complete suit of the polar costumes, his mother laughed until she cried.

"I'd like to give you to our neighbor's little girl!" she gasped. "You're just the sweetest, biggest Teddy Bear that ever was!"

Andy was glad to take the clothes off, for although they weighed little more than the ordinary coveralls he often wore when he flew, they were sweltering hot in the steam-heated room. He was drenched with perspiration when he was at last helped out of them.

"Whew!" he laughed, wiping his face, "if the cold gets in through those things, it'll sure have to be *some* cold!"

Mrs. Lane insisted upon selecting the winter flannels, the warm woolen stockings and many other odds and ends. It made her happy to think her boy would have all these warm things to keep from getting cold. The salesman took them to another floor, to show them some supplies that Mr. Avery had already picked out for the men. They were to be delivered at the factory in a few days.

Mrs. Lane's eyes were popping as the clerk showed her reindeer sleeping bags, a bundle of skis, snow shoes, three or four sets of extra shoes and moccasins, rifles, ammunition, two gasoline stoves, a tent and an immense pile of smaller items, all marked "Apex No. 2."

"Land's sakes!" she exclaimed, "where on earth are you going to put all those things? You'll have to use a shoe-horn to put them in your airplane. How are you going to fit in, too?"

"Mother, you just wait until you see that plane," her son replied. "Those things can all be packed away so that you'll never know we're carrying a load at all. Our ship will be as comfortable as our living room at home."

"Well," she said, "I must say I feel a lot happier about the whole thing now that I've seen all this. Surely, you can't be very uncomfortable with all those fur sleeping bags!" Sam, who had been trying on his own suit of furs, joined them, also wiping the perspiration from his red, round face.

"Andy," he said, "if we should have to come down on the ice, I'll just lie right down in my warm little reindeer bag until they come to rescue us! I'll be just as warm as though I was cuddled up on one of your twin beds on a June evening."

Time began to pass more quickly, now. A few days after the shopping trip, Andy and Sam flew over to the factory to find the mammoth "Apex No. 2" ready for her christening and her trial flight. These great events were set for the following week.

The fliers could scarcely move without a flock of reporters putting it into the headlines of the papers. They even took turns watching Andy's house, fearful lest he slip away and start the great flight secretly, without giving them advance notice. Public interest was gradually being worked up to a fever heat. Both the "Reliance" and Brewster's boat had been reported from Valparaiso. The "Reliance" was exactly six days behind the "Success."

Despite every effort made by Mr. Avery and the fliers to warn the public that this flight was not a race, the people considered it a contest and their interest was made a thousand times greater.

At last the day came for the launching. There was an enormous crowd shivering in the wintry air to watch the ceremony. The "Apex," after being hauled over the roads from Mineola, stood on her cradle at a special runway leading into Long Island Sound. One of the Cabinet Officers was present, on behalf of the Government. Also a number of State officials, even the Governor himself, as well as Mr. Seymore and other officials of the big oil and gas company.

Almost every well known figure in aviation was in the grandstand. In a place of honor on the Speaker's Stand, was a little party made up of Andy's father and mother, Mr. Collins, and other friends dear to Andy.

The four fliers were each sitting in their places in the huge hull of the flying boat, waiting for the signal to start the motors. Andy had refused to be present at the launching unless he could attend as just one of the crew and make no speeches.

Andy and Joe, fidgeting nervously as they sat in the twin pilot's seats, glanced through the windows at the crowds. Directly in front of them was the Speaker's Stand and Andy found himself more interested in the radio announcer than in any other part of the ceremony, for Sam, with his usual

humorous view of everything, had tuned in the "Apex's" own radio receiver to the station that was broadcasting an account of the launching. Through the loudspeaker, Andy could hear the words just as they fell from the lips of the man talking in front of the window.

At last, through the radio, they heard the voice of the final speaker. As he concluded his talk, Mrs. Lane, to the sound of much cheering, broke a bottle over the bow of the great plane. Andy felt a tingle go up his spine at the thought that the moment had come for the ship of his dreams to take the air. He felt almost as though the big flight itself were starting.

There was a slight lurch of the whole cabin as the cradle was started down the runway toward the water. Andy reached forward and pulled the three starting levers, one after another. With tremendous roars, each of the powerful motors exploded and settled down into a smooth, purring song.

Joe gripped the wheel before him, and pulled it well back against his chest. Andy looked out of the window to see if the plane was free of its cradle. Even as he did so, he noticed that almost every sound from the outside had been completely shut off. They could scarcely hear a sound from the mighty engines idling overhead. At last the plane gave a free easy lift and floated lightly on the surface of the Sound.

Andy nodded to Joe, who threw forward all three throttles. The purr of the engines mounted to a lusty roar, deafening to the people on the ground, but only faintly audible to the crew inside. The "Apex" forged ahead, plowing through the water like a tremendous motor boat.

Then, as the speed increased, it rested more and more lightly on the surface, until it just skimmed along like a surf-board, hardly touching the water as it passed over it. Suddenly the "pat-pat-pat" of the waves against the smooth mahogany hull died out entirely. The ship was free! The "Apex" was in the air at last!

A cheer came forward from the rear compartment as Andy and Joe exchanged happy glances.

"Boy," said Joe, in delight, "she steers like a scout plane! You take her, Andy! Try her! You'd never believe such a big ship would be so easy to handle!"

Andy grasped his wheel as Joe released the other. The boy trembled with happy excitement as the great ship responded to his slightest touch at the controls. Yes, it was as easy to handle as any ship he had ever flown!

He looked over the side, then at the altimeter on the instrument board. They had already reached a thousand feet, and were flying steadily over the Sound, straight toward Rye, on the opposite shore. He banked over slightly as he approached Rye Beach, flying over Port Chester and along the Connecticut side. He delighted in the smooth action and the perfect functioning of the whole plane.

Sam and Dick, who had been standing tensely in their part of the ship, listening for any sign of trouble in engines or other mechanism, at last came forward, sure that their duties on this flight at least, would be easy.

"Andy, old scout, what do you say we start right now for the South Pole?" shouted Sam, his moon face beaming with delight.

"I'd sure like to," laughed Andy, "if we could get the gas, I'd bet we'd make it, too."

"I'll tell the world!" came Dick's joyful reply.

The always watchful Sam took nothing for granted, so strapping his safety belt, with its two hanging buckles, about his waist, he climbed the ladder leading up to the wing, opened the hatch, and climbed out into the icy air.

Clipping his harness to the hand-rail, he walked gaily from one engine to another, touching them here and there with an oily rag, listening intently to every noise, and finally returned to the warm cabin, thoroughly satisfied with his pets.

Andy turned off one motor and handed the controls back to Joe. Then he began a tour of inspection of the entire ship. When he reached his own little room, there was Scotty, curled up on his bed, his safety belt strapped to the rail at the side! Sam saw the boy enter the room and followed him.

"So you forgot to take your mascot, did you?" he said. "Well, even if you did, I didn't! I had to smuggle him aboard the old 'Apex,' and he brought us luck, so I had to bring him as a mascot this time, too. Let's turn him loose and see how he likes the new plane."

Andy's heart warmed to the little dog. Scotty certainly had brought them luck on the last flight. He was glad that Sam had smuggled him in. The minute Scotty felt his belt untied, he bounced off the bed, immediately looking pouty because he could not stand straight on the rocking floor.

In Andy's small planes, he always had a special seat to which he was strapped. Here, he could walk all around and he liked that, but he felt

strange and lost for the first few minutes. At last, however, he plucked up his courage and went on an exploring trip of his own, smelling everything and poking his wet, cold nose into every corner. Finally he found that spot that had been his favorite on the old "Apex," the pilot's compartment, and he hopped up into Andy's empty seat and promptly went to sleep.

Andy inspected all parts of the ship and found everything working perfectly. Dick was already at work on his radio. He had tuned in his great ten-tube receiver and the roar from the loud speaker had nearly burst Andy's eardrums before the operator switched off with a satisfied smile.

"Too loud now," he commented, "but when we're a few thousand miles from nowhere, we'll be glad that every one of those ten tubes is working. The transmitter is a peach, too! Here it is, broad daylight, and I've only been fussing with it for ten minutes, but I've raised amateurs as far west as Des Moines, and as far south as Jacksonville, Florida.

"It's the best radio outfit I ever have handled, and I've worked some pretty good ones in my day. At night, I'll get five thousand miles, under perfect conditions, and I'll be able to send thirty-five hundred to four thousand. If that isn't a record for an airplane, I'll eat my new derby hat!"

Andy wandered back into the pilot's room. Joe had been testing his motors, cutting them out in rotation. He found that he could climb easily with but two motors working. With all three, the speed indicator showed 135 miles an hour. With two on, both of them throttled down to ordinary cruising speed, the "Apex" plowed through the air at an even hundred miles. One motor alone allowed the big plane to stay in the air at 85 miles an hour.

"Just about the speed of the old 'Apex,' " said Joe, "when she's throttled down as low as I can get her. When you need power, though, this baby has plenty in reserve! Boy, she's a real ship and I'm proud of her!"

"Good stuff!" replied Andy. "We'd better be getting back now. We've been out half an hour."

Joe opened up all three engines, banked around, and raced back to the runway like a shot out of a gun. Hardly a person had left the grandstand. The big crowd still sat there, watching the magnificent, graceful flying boat glide easily down to the surface, settle into the water with scarcely a ripple, then forge slowly ahead to the runway.

Andy, guarded as usual by the faithful Sam, slipped out of the side companionway, and before the crowd had time to realise it, had scurried under the hull to his roadster, which stood waiting them. Then they were

away like a flash, escaping the hordes of reporters and photographers who would have mobbed them.

## CHAPTER X

#### LAST MINUTE PREPARATIONS

On a bleak, snowy morning in December, came the long awaited radio message that the "Reliance" had arrived at the Bay of Whales. Andy was called to the phone at five o'clock in the morning to hear Mr. Avery's excited voice.

"Andy, better call your college classes off until further notice. I have a message from Sonny, just phoned to me from the factory. He says they've arrived at the ice barrier and are now unloading cargo. The refuelling plane has already been taken ashore and is being set up with all speed.

"It's snowing down there, and the temperature is fourteen below zero. They are cutting great houses and buildings out of the ice itself. Sonny says they intercepted messages from Brewster's steamer all the way down from Cape Horn and figure she reached her destination the day before yesterday. He sends me a message from the chief pilot of the refuelling ship urging us not to lose any time when they give us the signal to start in two or three days.

"So you'd better come over here this morning and help check the stores aboard the 'Apex.' We want all hands to know where everything is to be placed on the plane. Good bye."

Andy hung up the receiver and sat very still, letting the thrills of excitement chase up and down his spine. He could hardly realise that in a day or two he would be on his way. It seemed too good to be true!

He couldn't wait to go to college to tell the teachers good bye, that was certain. All he wanted now was to be at the scene of action.

He gave a loud shout that waked up everyone in the house. Breakfast was served as soon as possible and the two fliers made a merry meal with their high spirits and excitement. Mr. and Mrs. Lane, though they dreaded the moment of the take-off, soon caught and entered into the spirit of celebration.

As the two companions dashed out of the house at seven o'clock, a sleepy reporter saw them, snapped into attention and raced after them as they tried to slip around, unseen, into the garage.

- "Are you taking off today?" he shouted as he caught up with them.
- "Not today, but it won't be long now!" replied Andy, cheerfully.
- "Have you heard from the 'Reliance' yet?"

"Yes. Got a message a short while ago. She's there! We'll start as soon as she is ready for us."

Without more words, the reporter turned away and ran for his own car, to race back to his office and flash the exciting news to the waiting world.

As Andy and Sam drove over the slippery roads to the flying field where their two-seater plane was kept, the ether and the submarine cables were already buzzing and clicking with messages, stirring hundreds of men into action between Mineola and the southernmost tip of South America.

In a dozen cities on the scheduled route of the "Apex" down the Atlantic and Pacific coasts, sleepy men were dragged from their beds to speed in motor cars bearing the name "Superior Gasoline and Oil Company," to flying fields, where they tested, for the hundredth time, airplanes which were to refuel the "Apex" as she sped by. The South Pole plane was not to be delayed by anything that could be prevented by human forethought or human care.

Such had been the word flashed by Mr. Seymore, president of the great oil company, and his employees all along the line of flight were taking care that his orders should be obeyed to the very last letter.

The "Apex" factory was a beehive of industry. A huge truck, large as a moving van, was backed up to the door and a line of men was loading boxes into it. Mr. Avery was on the job, looking as excited and happy as a boy. He stood in one of the storerooms with a long list in his hands, checking off each precious article of the supplies for the "Apex." At the tailboard of the truck stood Dick, with another list, checking each item once more as it was loaded.

Work was halted for a moment as Andy and Sam entered.

"Hello, boys!" called the president jubilantly. "Well, come on, get busy! You two get into a car and drive over to the Sound. Joe is there, with the guard on the 'Apex.' Here are two copies of the list of supplies. When the truck gets there, Sam will check each box as it is unloaded.

"Andy and Joe will store them in the 'Apex,' marking against each item on this list the spot in the plane where it is packed away. Then, by keeping the list handy, you can tell, in a moment, where everything is as you need it. Beat it, now!" he smiled. "We're all busy men!"

With light hearts, the two jumped into a company car and skidded over the quiet roads to the shore of Long Island Sound, where the great ship stood on her greased runway. The "Apex" seemed almost to know that the time was drawing near, for as they looked at her, she, too, somehow seemed to be waiting impatiently for Andy's hand on her starting levers.

Joe greeted them with a happy shout. Even the sober-faced guards, who had stood watch over the ship since she had been brought to this waterside, smiled as the motor car slowed to an abrupt stop and the two fliers hopped out.

Scotty, who had rushed after Andy and Sam when they left the house, had scrambled out of the car before the wheels had stopped turning and was now running about, yelping and barking with the excitement which he had sensed in his master and his friends. He, too, knew that something very unusual was about to happen and whatever it was to be, he liked it!

"Whoops!" yelled Andy, forgetting his dignity and capering around like a small boy. "We'll get a message to go any time now! Whoops! You, Joe, if you go and get sick on this trip, we'll drop you plumb on an iceberg! Then we'll throw out a reindeer bag and pick you up on the way home!"

"Yep, you will!" grinned Joe. "You'll all come down with me and put ice packs on my head and tummy until I get well, that's what you'll do!"

Then he and Andy climbed the ladder leaning against the great plane and went over her again, every nook and corner. Their eyes glistened as they looked at her polished mahogany and bright, shining paintwork. She looked trim and fit and they longed to be off. The thought that she might prove to be the cause of their deaths in the bleak, unfriendly Antarctic never entered their heads. They had perfect confidence in her and her three silent motors on the thick, curved wing.

"Here comes the truck!" called Sam from the ground. The others piled out and saw the big van backing into position. Then they climbed into the warm cabin once more to supervise the careful packing of their supplies. Side lockers, or cupboards, had been built almost the entire length of the hull from the rear living compartment to the tail. Each of these lockers was numbered. In those closest to the bow, Andy and Joe packed away the food and clothing that they would use in the first few days of the flight. Light

summer clothing that they would use in the tropics and perishable food that would spoil in several days.

Then, as they worked farther back along the hull, they packed warmer clothes and canned goods, until, two thirds of the way back, came places for their polar clothes, their sleeping bags, extra blankets and box after box of food. Following that, at the extreme rear, would be stored supplies for the return journey northward.

"What's in all these bags?" demanded Joe, after he had stowed away a number of similar packages.

"Pemmican," replied Andy, looking up. "It's dried food, half meat, half fat. Not very tasty, they say, but it's a favorite food of all arctic explorers. Good for man or beast! Will stick to the ribs and is light in weight for its food value. Hope we don't have to use it, though. It's only in case of an emergency landing and there's enough here to last us more than a year."

"Here's about four packing cases full of candy," laughed Joe. "They must think we have our mouths full of sweet teeth!"

"Sweet chocolate, another fine food for emergencies," replied Andy, busily jotting down the location of each package as it disappeared into the numbered lockers. "And here's tea, dried milk, hardtack and all the other things that Peary, Nansen, Shackleton, Scott, and all the other fellows who walked for thousands of miles along the ice fields, found most necessary and valuable. The emergency food ration is one thing that hasn't changed much since arctic exploration began."

The quantity of supplies seemed endless. As they worked, they were filled with admiration for the thoughtful care spent on them by Mr. Avery. Things they had never even thought of appeared and were stowed away. Things that would be necessary in case of a forced landing on the ice and which might have been left behind had not all those resourceful brains been at work planning every slightest detail.

At last they were through. Every item had disappeared into its proper locker, and the "Apex" again looked trim and ready for flight. Andy tacked up the numbered list on the side of the after compartment, so that it might be instantly consulted when a sudden need arose.

The two fliers climbed down to the ground and, after warning the guards to allow no stranger to even approach the plane, they loaded Sam into the car and returned to the factory. As soon as they arrived, Mr. Avery told them

all to return to their homes and forget the flight, but to stay near a phone so they might be called instantly when the final message came from Sonny.

## CHAPTER XI

#### SAM DISAPPEARS

The afternoon, evening and night were the longest that the men had ever spent. Longer, even, than that night during the heartbreaking flight of the old "Apex" back from Newfoundland, when every minute might have been their last. Andy and Sam roamed restlessly around the house, trying to read, listening to brief snatches of radio music and denying themselves to the crowds of reporters who were besieging the house in hopes of scraps of information. They managed to sleep, but the dreams of both were filled with visions of blinding blizzards, and gales of hurricane force.

At ten o'clock the next morning, the telephone operator at the factory sent through a brief message. "Mr. Avery says the flight will start at one o'clock."

The Lane house instantly became a place of the wildest excitement. Though they had more than enough time, everyone dashed about, collecting toothbrushes, spare socks and those little things that are always left till the last minute. Mrs. Lane was almost distracted because she had mislaid a bottle of pills for colds. She dashed from one room to the other, getting in everybody's way, until finally she found them on the living-room mantelpiece.

Sam suddenly exclaimed, "Andy, I've got to go to the drug store and get some tooth paste. I'll be back right away." Before Andy could tell him that there was plenty in one of the lockers, the door slammed and he saw Sam disappear behind the garage to avoid the newspaper men who had gathered outside the front door.

When Sam had not returned in half an hour, Andy began to get impatient. Time was drawing near, now. They should be getting into their car to drive to the flying field, where a small plane would be waiting to take them to the runway on the Sound shore. He glanced at his watch more and more often. Where could Sam be? It was not at all like him to be careless! Even Scotty seemed nervous, pacing the floor restlessly, unable to find a place for a nap.

Suddenly the phone rang. Andy dashed to the instrument.

"Andy Lane?" asked a strange voice.

"I'm speaking for Sam Allen. He's gone to the 'Apex' with some friends in their car. He told me to let you know he'd meet you over there." The receiver clicked, and the voice, which Andy thought he had heard before, was stilled.

"Gee, that's sure funny!" mused Andy, now very suspicious and anxious. But there was nothing he could do except take the stranger at his word. He took Sam's suitcase with his own and calling Scotty, took them to his car. He kissed his mother and father lovingly, and raced away, unwilling to make the parting long drawn out. His last glimpse of them showed his father looking very old and pale. His mother was smiling bravely and wiping her eyes with a wet handkerchief.

Twenty-five minutes later an Apex factory pilot was landing him in a snow covered field that had been prepared close to the runway upon which stood the "Apex." A great crowd had gathered, the news of their impending departure having spread like wild-fire. It looked as though all the motion picture photographers in the world were there, cranking their cameras, and when they saw Andy they rushed over to him in a mass.

With his pup under his arm, Andy pushed through the throng, his eyes anxiously searching the milling crowd for Sam. Mr. Avery greeted him excitedly.

"Where's Sam?" he asked, all smiles.

"Isn't he here yet?" demanded Andy, now really scared.

"Here?" said Mr. Avery. "Why he's supposed to be with you!"

Andy quickly told him how Sam had gone out and had failed to come back. Then he told the words of the stranger who had telephoned that Sam was starting for the runway and would meet him there. Mr. Avery, hiding his anxiety, looked at his watch.

"You're supposed to start in just half an hour. We'll delay the flight one hour after that for Sam. If he's not here by then, I'll have to send someone else in his place."

Andy, still holding Scotty, climbed into the "Apex" to find Joe and Dick already there, talking excitedly, and stowing away their personal belongings. His news about Sam was like a bombshell. For a moment, neither of them said a word.

"Well, that's Brewster's parting present to us!" raged Joe. "Some of his men have captured Sam and are holding him until too late for him to go. Who can take his place?"

They thought in silence, rapidly running over in their minds the names of the mechanics of the company who could be trusted and who would make good companions for the flight.

"Andy," said Joe, with a discouraged expression on his sober face, "there are plenty of good mechanics at the plant. But, on a hop like this, where almost anything could happen, I'm pretty careful about who goes with me.

"If we should have to land on the ice, and spend six months through the long, Antarctic winter, we need someone who would be congenial and cheerful. I can't think of a single man who has all those qualities."

"Hanged if I can, either," muttered Dick.

"I'll tell you what I think," suggested Andy, suddenly. "If Sam doesn't come before we take-off, let's not take another man. There's too much complication in choosing another man on an hour's notice. We might pick the wrong bird, and everything would go wrong!"

As the others said nothing, he went on.

"It's surprising what you can do if you have to. Two of us flew the first 'Apex' after Joe had to go to the hospital. Off-hand, that would have seemed an impossible task. But it wasn't. This flight won't last as long as that one. What do you say?"

"O.K.," announced Joe without hesitating.

"I'm with you!" was Dick's brief comment.

Just then Mr. Avery, worried and troubled, climbed aboard, watch in hand.

"In forty minutes more, we'll have to select a man to take Sam's place," he said with evident reluctance. The three men then told him of their recent decision. For several moments he refused to let them start short-handed and even threatened to call the whole flight off. But at last they persuaded him that they would like it much better if no stranger were taken on board at the last minute and he gave his unwilling consent.

The reporters had somehow heard of the mystery and were swarming all about the plane trying to get some real information. The fliers bunched

together and, with Scotty growling fiercely, they drove them off, finally locking the companionway so that no one could get aboard.

"Now listen, boys," said Mr. Avery, nervously, after hours and hours seemed to have dragged by, "with this load you're carrying, you'll have to take off with only an hour's supply of gas. So the refuelling plane will meet you right here with a full load of gas and oil. She will fill you up full to the brim.

"The moment you are filled up, head down the coast. The next fuelling, you know, will take place at Key West, Florida. You have enough to make the Canal Zone if anything happens. Keep in close touch by radio with the factory. All broadcasting stations and thousands of amateurs will be listening for your signals during your flight.

"Soon after you pass Panama, you ought to be able to reach the 'Reliance' on the air. I think, with the chain of listeners Sonny has gotten together, you'll be in touch with us all the time. Be good and be careful! I hear the refuelling plane coming now, so you had better shove off! God bless you all!"

## CHAPTER XII

#### THE GREAT FLIGHT BEGINS

With a very heavy heart, Andy gave the signal for the ground crew to slide the "Apex" into the water. Gone was the wild happiness he had expected. He'd miss the brave, smiling Sam, so efficient, so ready to help. Since Sam had been detailed as his guard, they had grown to be great friends. He was very much worried for fear something more serious than mere capture might have occurred.

The disappointed three in the "Apex" paid not the slightest attention as the crowd outside, who, not knowing that anything unusual had happened, burst into great cheers when the nose of the big ship dipped slowly into the water. In a moment more she was floating. The crew waved their hands in a last farewell to the people ashore and Andy, with a grim face, cut in the motors.

A run of a mile over the choppy water was necessary before the heavily laden plane showed a streak of light between her keel and the water. She was off!

Andy, seated beside Joe at the wheels, lifted her in a slow, careful, climb, gradually swinging toward the south, until at last the altimeter showed two thousand feet. Then he straightened out and rocked the wings to let the crew of the refuelling ship know that they were ready for the fuel. Andy slowed his motors, still keeping all three running, however, in case of emergencies, and allowed the tank plane to catch up with him.

As it approached, he examined it carefully. It was a Jenny, with "Superior" painted in great, black letters on sides and wings.

"Look, Joe," cried Andy, "it's the same old 'Superior' that followed us all over the country on our last big hop. If it's the same crew, we won't have any trouble getting our load."

"Yeh," replied Joe. "It's the same plane, all right. Maybe it's a sign of luck! With Sam gone, we need all the luck we can get."

Dick, having been well instructed in his duties during the refuelling operation, ducked through the passageway leading forward. He slid back the steel shutter and Andy and Joe saw his head sticking out just aft of the bow.

Andy, watching the "Superior" through a rear-view mirror, held his course steady as the other plane forged ahead just over the "Apex."

Just as the "Superior's" nose drew ahead of Dick's cockpit, a rope was dropped. Then, when Dick grabbed it, a long thick hose was lowered from the upper plane. The mechanic inserted the nozzle in a great funnel-shaped tube leading from the gasoline tank, squeezed the pressure-valve, and the gasoline poured through. For five minutes the two ships flew almost as one, until at a wave of Dick's hand, Andy nosed down and away from the tank plane. The job was done!

The pilot cut off the center engine and turned the controls over to Joe. He had set a course slightly west of south, a course which would take them straight as an arrow to Key West, the scene of the next refuelling operation.

"There you are, old top," he said. "That's our course for about 1,100 miles. Too bad we can't just head exactly south and keep her there until we hit the Pole. We could, if it weren't for the fact that the fuelling planes couldn't take off from some of the mountainous places we'd have to fly over."

He went into his little room, took out a log book, entered the time of leaving, the weather conditions, the course set, and the fact that Sam was missing.

He glanced down out of his little window. Below them was the busy East River. Just beyond, the skyscrapers of New York were reaching up to the skies in all their strange grandeur. Here and there, in the cañon-like streets, he could see dense crowds of people standing, holding up all traffic, while they watched the "Apex" go thundering away on her course.

He could see white plumes standing straight up from factory whistles and from the smokestacks of steamers and tugs in the East River. Those were whistles, he knew, screaming their message of good-will to the ship and her crew.

High over the city, speeding on a course set to meet the "Apex" was another airplane, perhaps one coming to keep him company on the first few miles of the trip. Andy watched it idly, then his eyes narrowed as he scanned it more closely. It was coming closer than it should to preserve the rules of the air. He ran into the control room to warn Joe, but found that grim-jawed pilot, with his eyes glued upon the approaching plane, still keeping, however, to his southward course.

"Don't like the way that ship is pushing us," he said sourly. "But I'm not going to move off this course if I can help it. Better keep your eyes on her. Might be one more of Brewster's tricks!"

Closer and closer inched the strange plane, as both roared over the Battery and straight down New York Bay. Joe, tense and ready to dive away at any instant, still held his course. The other drew closer until her pilot could have thrown a stone straight through the windows of the huge ship beside him.

Suddenly the passenger in the rear seat of the strange ship threw off his helmet and goggles and looked over at the "Apex." It was Sam! His round face was all smiles. Before the three spellbound watchers had time to make a move, he tossed out a long rope ladder which dangled astern of his plane.

Then his pilot began to climb and edge over closer to the "Apex." Andy rushed forward to the cockpit and as the other ship drew ahead, grabbed the end of the ladder and held it taut. Sam, agile as a monkey, slid down in a jiffy. In a moment he was in the cockpit beside his friend and had seized him in a great bear hug!

He ducked out of the cold blast of the December afternoon, slid the shutter over the cockpit and preceded Andy into the pilots' room. Dick had come forward from the radio room, and the four had a grand reunion!

"Oh, sister! What a party I've had trying to get here!" exclaimed Sam.

"What on earth happened to you?" demanded Andy.

"Well, just before I got into the drug store at the corner near your house, two guys jumped on me, whacked me on the bean and the next I knew, I was being driven away in a closed car at sixty an hour! I peeked out of the curtains now and then and saw they were going down the Hudson River, apparently toward New York.

"Then we got into Yonkers and took the ferry over to Alpine, New Jersey. Over the roads we went on two wheels. They acted as though they were trying to make a non-stop trip to the South Pole themselves.

"Pretty soon they bind me as tight as an onion, stuff a couple of dirty handkerchiefs down my throat, stop the car at a roadhouse, and go in to lunch. When they came out, I wasn't there, that's all!"

Sam mopped his dusty face and went on.

"A car came by. I hailed it, told them who I was, and asked to be taken to the nearest air field. It was after twelve and there wasn't time to telephone

the factory. I just had time to move as fast as a plumber when the noon whistle blows!

"Pretty soon we heard a popping noise behind us and there was a motorcycle cop all ready for a nice little ride to the hoose-gow. But when I told him my story, he said to come with him.

"Say, fellows, with that cop leading us, blowing his siren like the screech of a sick cat, we went over those New Jersey roads like soup through a strainer! Finally we got to Teterboro Air Field and in no time at all a fine fellow said,

"'Come on, kid!' and we came on! He snapped a two-seater into life, hooked on a rope ladder, and here I am!"

# **CHAPTER XIII**

### BREWSTER TAKES OFF FOR THE POLE

As the early winter twilight set in, Andy, steering the plane on the exact course set when he left New York, suddenly felt very tired. He glanced at the luminous hands of his watch and shouted:

"Hey, Sam, when do we eat?"

"Coming, skipper, with a menu!" replied Sam, appearing at the door of the control room. "What'll you have?"

"Anything, as long as it's good, hot, and filling!"

"Fair enough! We got our provisions in this morning, we'll get some more in a few hours, so the world is ours! Watch me work!"

With Dick's able assistance, he turned out a meal on the electric stove that was worthy of a New York hotel. Steak, done to a turn, French fried potatoes, rolls fresh that morning from a bakery, and chocolate éclairs. Hot coffee topped off the meal.

"Hot dog!" exclaimed Andy. "Talk about the discomforts of polar flying! Here we are, according to radio and the papers, desperate and daring, flying to the unknown continent of Antarctica. Well, here we are, actually, in a comfortable, heated cabin, all gathered round the table for a meal that couldn't be better if we were at home in our own dining rooms. To put it mildly, this is the life!"

Having made up for the meal he had missed at noon, Andy went into his little office and studied the charts. If they were making their scheduled 100 miles an hour, they would be just about over Newport News, Virginia, the spot where the famous fight between the Monitor and the Merrimac took place during the Civil War.

All that afternoon they had been flying with the regularity of an express train. Every hour they had been precisely over the spot scheduled for that time. They had not deviated from their course an inch as they had hurtled along over the shore lines of New Jersey, Delaware and Maryland.

Most of the time they had been flying just outside the beach, but once in a while their route took them some miles inland where, of course, the flying boat could not have landed in case of an accident. But the crew knew those great engines and were trusting their lives to them. When they were going to fly thousands of miles over heaped-up hummocks of ice, what did a few miles of land matter? So to their course they held, no matter what was under them

Having spotted his position, Andy went into the control room to relieve Joe for dinner.

"Where are we, Joe?" he asked.

"See those lights behind us? Well, that's Norfolk, Virginia. Course unchanged. What ho, for dinner!"

Andy felt rested after his hot meal, and took over the controls with that same glad feeling he had experienced when he first handled the wheel on the test hop. Now he was beginning the first night in the air. A wonderful ship, a great bunch of fellows, perfect weather and another record-breaking trip ahead of him. What more could a boy of eighteen, almost nineteen, want? He smiled to himself as he looked ahead into the night.

After coming out of the brilliantly lighted room aft of the pilot's compartment, he could see nothing at first but pitch black windows, the softly glowing instrument board, containing the gauges, dials and the other instruments that permitted him to operate the plane in ease and perfect comfort without needing to see outside.

There was, of course, an altimeter, to tell him how high he was in the air. There were three revolution indicators, to show how many revolutions a minute each engine was turning up. There were spirit levels to show whether it was level or tilted sideways in the air. There was a spirit compass and an electric earth-inductor compass. Thermometers to show the temperature inside and outside the cabins. Oil and gas gauges. They were so numerous that they would have bewildered anyone who had not become used to them.

To Andy they were comforting in their very numbers, for very little could happen to the ship or to the air outside without his being able to read it in those dials so conveniently placed before him.

As his eyes became used to the darkness outside, he could see, by the alternate streaks of black and silvery gray beneath, that they were passing over low-lying, marshy land, crisscrossed by patches of water and meandering streams. A glance at the map on the shelf directly in front of the wheel showed it to be Dismal Swamp, that vast marsh that extends far over the Virginia border into North Carolina. There was no sign of the ocean now, for they were flying well inland.

His peace of mind was rudely shattered when Dick burst into the control cabin closely followed by Joe and Sam.

"Here's a red hot message from Mineola," cried Dick. "'Brewster and two fliers took off from their base this noon, heading for South Pole.' Isn't that sweet news?"

"I'll bet my last summer's straw hat," burst out Sam, "that Brewster knew early this morning we were going to start at noon. If his system of radio is as good as ours, he knew it just about the time we did."

"Gee," said Andy, thoughtfully. "It isn't safe to use all three motors and try to save a few hours on the way down there. They'll either have made their flight across the Pole and returned by the time we can get down there to the Bay of Whales, or they'll have crashed on the ice."

"Let's cut out the Key West fuelling," suggested Joe. "We've got a following wind and are making our hundred miles an hour with our motors cut about as low as they can be throttled. That means less wear and tear on the engines. We have more than enough gas to shoot straight for Colon. What do you say?"

"Fair enough," agreed Andy. "That's going to save us quite a bit of time and distance. Dick, radio Mr. Avery to keep the Key West tank plane on the ground. We'll let him know in a few hours what time we will be ready for the Colon ship."

As the radio man dashed to his instruments, Andy turned the controls over to Joe and went back to his stateroom to look at the charts. If he didn't have to swing westward from his southerly course to make Key West, he could shoot for the Panama Canal in a course almost due south. That would save time and distance.

So he measured his mileage, drew off his exact course, and returned to his seat at the wheel again.

"All right, Joe, you turn in now. I'll take her and put her on the new course."

So Joe went to his room, pulled down his berth, switched off his electric heater and lights, and tried to sleep. But the strangeness of his surroundings made sleeping hard at first. He knew he would soon fall easily into the set routine of his alternate periods of work and sleep throughout the nights. But now, for an hour, he lay on his soft berth, marvelling at his good fortune in being aboard such a wonderful ship on such an interesting flight as this.

Andy's watchful eyes, glancing from the darkness in front of the windows to the compass, then to the instrument board and back to the windows again, soon saw a shimmering, silvery streak on the horizon before him. On the new and more direct course, he had quickly reached the broad Atlantic again.

He was over the southern coast of Cape Hatteras, now, and the shore line stretched away to the southwest. Straight out to sea he headed, following his compass course. In a few moments he had left the last blinking lighthouse astern. The "Apex" seemed to be the only thing in the world, so great was the solitude out here and for a brief instant Andy felt very lonely.

He reached out toward the other pilot's seat, where Scotty had kept him company on the first "Apex" through that terrible North Atlantic night, and his heart leaped in gladness, for there the pup lay, curled up in Joe's empty seat, fast asleep near his master. For an hour, as the great ship roared southward over the black ocean, Andy's hand ruffled the warm fur beside him, grateful to the little dog for his silent company.

# **CHAPTER XIV**

#### BREWSTER'S S. O. S.

Andy realised suddenly that he was very uncomfortable as he sat there behind the wheel in the black control room. Perspiration was dripping down his neck, inside the fur coveralls he had put on when leaving the snow-covered runway that noon. The flying suit that had been so comfortable a few hours before, had now become unbearably hot. He glanced at the chart on the drop-table before him. He swiftly calculated that they were flying diagonally across the Gulf Stream, that warm current of water that sweeps from the Gulf of Mexico past American shores and across the Atlantic to keep Britain warm.

"Hey," he shouted lustily, "someone turn off this heater and give us a little air!"

Dick came in smiling. He had already shed his furs in favor of a light pair of khaki coveralls. He opened the side windows in the control room, so that the warm, moist air might gush through the compartment. The moment the windows were opened, however, the roar of the motors made talking impossible. Dick brought Andy a pair of ear phones and a chest mouthpiece and put on a set himself. They both plugged in the telephone line which ran through the entire ship.

"Boy, that's better!" breathed Andy in great contentment as he opened his furs and bared his chest to the welcome breeze. "I didn't know how tired I was of winter until I smelled that warm air!"

"Well, keep your fingers crossed," said Dick. "It won't be long now, the way we're travelling, before you'll be ordering the windows closed again and the heaters turned back on! We'll go through the tropics like a bolt of lightning and be in the cold again before we know it!"

In another hour, Joe and Sam were roused to stand their watches and rolled out of bed, astonished at the change in the weather. It was growing warmer all the time. Every window was now open except those directly in front of the wheels.

"Keep on this course, Joe," said Andy, as he rose to leave his post. "You should pass over the first of the Bahama Islands about 11:30 and arrive at

the northern coast of Cuba about 1:40 in the morning. If you're much earlier, cut down the motors a bit."

When he awoke from a sound sleep, the first light of day was flooding his little stateroom. He leaped out of bed and dashed for the control room. He plugged in his phone at the nearest jack.

"For the love of Mike, Joe, what's the matter with you? Here you've let me sleep through three watches!"

"Honest, Andy, it's been so beautiful all night, I didn't want to turn in," replied Joe. "The moon came up just before we went over the Bahama Islands. It was wonderful. We cut across Cuba right on time and those sugar and tobacco plantations were so pretty that I wouldn't have missed them for worlds. I got a glimpse of Jamaica way off to the east a little while ago. Sam's watch was over and Dick waked up, but Sam wouldn't go to bed. Sorry you missed the sights, but you needed the sleep. I'll get a shut-eye between here and the Panama Canal." As he turned through the door to his room, he asked Sam to wake him as soon as they sighted land.

Andy was enchanted with the view before him as he settled down to stand his long trick at the wheel. The sun was just rising and the sky and the sea were painted in the most beautiful colors he had ever seen. The horizon, on all sides, stood out in a clear, silvery blue line and there was scarcely a cloud to be seen. The warm smells of the tropics pervaded the cabin and Andy could hardly believe that at noon, only the day before, he had been shivering in the raw, December air over New York.

Dick came out of the radio room and sat beside him, enjoying the mild, balmy air.

"We should reach Colon in about an hour," said Andy, "have you heard from the refuelling plane there?"

"Yeh, the ship is ready, and the crew have been standing by for the past hour. They'll take off as soon as they hear our engines."

"Good! Now, let's have breakfast. As soon as it's ready, call the gang. We'll eat just before we get there."

Breakfast was a jolly affair. Everything had been going to perfection. The weather had been marvellous. What more could the fliers want? So they fell on the food with hearty appetites.

"Hustle up, Joe!" called Andy through the phones. "Let me get a bite before we refuel."

Joe pushed back his plate and returned to the control room. Just before pulling out his phone cord, and going in to breakfast, Andy said:

"See that land over there?"

Way off to the left Joe made out a tiny blue hump in the horizon, and nodded.

"That's Point Manzanillo," explained Andy. "Our navigation has been perfect. You'll sight the breakwater off Colon Harbor straight ahead soon. I'll be back in a few minutes."

Even before they had reached land, the refuelling ship appeared, flying out from Colon to meet them. She, like the Jenny in New York, carried the name "Superior" in great letters on wings and fuselage. Her crew had rehearsed the refuelling operation and her performance was as perfect as though they had done the same thing a thousand times before.

As the "Apex" flew together with the tank plane, the "Superior" a dozen feet above the lower ship's wing, her load of oil and gas was poured through the hose, then several baskets of fresh food, supplies, and the morning newspapers were let down.

The oil men did their work so well that the "Apex" was not forced off her course by so much as a foot. Straight down Limon Bay the planes flew, then over Gatun Dam, where the last empty basket was hoisted back to the "Superior," and the fuel ship zoomed up and away.

While the "Apex" flew southward above the Canal, the provisions were left as they had arrived in the cockpit. The four fliers were absorbed in the marvellous view of the wonderful engineering work beneath them. Andy, at the wheel, turned southeast when over the middle of Gatun Lake, to avoid losing mileage by zigzagging over the channel.

He crossed and recrossed the winding Canal and finally followed it again when he neared Culebra. Here, mammoth steam dredges still nibbled away at the sides of the slipping banks. From the decks of each digger, the crew waved up at the "Apex" while the whistles blew long notes of friendliness. Over the locks at the other end they roared, then cut straight across the old city of Panama and only too soon were out at sea again, this time over the broad Pacific.

As Joe took the wheel and Sam and Dick checked and stored the new provisions, Andy worked on the charts, plotting the next course to be steered. Returning to the control room, he plugged in his phones.

"Head her south, Joe. If it weren't for a little spur of South American mountains sticking out, and the necessity of ducking now and then for gas, we could fly on this same course nearly 3,900 miles, all the way down to the Straits of Magellan."

"Let's do it," suggested Joe, recklessly.

"I'll tell you what we might do," said Andy thoughtfully, "we're supposed to refuel at Callao, Peru, about 1,300 miles from here. If we have good weather today, let's just pass up that spot and shoot straight down for Valparaiso. It's about 2,600 miles. We ought to make it about ten o'clock tomorrow morning and have heaps of gas left over."

"I'm with you," agreed Joe. "With Brewster and his gang on their way to the Pole, let's not waste any time we don't have to."

"Good! Due south, then."

While waiting for his turn at the wheel, Andy read the Panama newspaper, which was printed in English. The vivid accounts of the flight, occupying almost the entire front page, reminded him of the interest of the American papers during the fifteen day non-stop flight. But in this case, there was the added excitement of a race, for the headlines carried a bulletin saying that Brewster had taken off in an immense Brewster biplane and was expected to have reached the Pole by the time the paper went to press.

Andy's heart sank as he read these dispatches, for he hardly doubted his enemy's ability to reach his goal, once he had taken off. Yet, he felt the "Apex's" trip would still be well worth while, even if Brewster had crossed the Pole first. At least, his rival hadn't flown all the way from New York!

"Listen, fellows," came Dick's excited voice through the phones, "here's a message from Sonny. It was picked up by an amateur in New Zealand, relayed to another in Ecuador, who repeated it to me. It was sent from the Bay of Whales only a half hour ago. That's some fast time, isn't it?

"Now listen: 'Hello, Andy. Understand you have started and ought to be somewhere off Central America now where it's hot. Boys, it's so cold down here that the men don't even have to shave. They wet their faces and stick them outside the hut. Then they knock the icicles off, and they are all shaved.

"'There's been a blizzard here for two days. If we didn't have directionfinding radio, I would tell you to land at Straits of Magellan and wait, for you might not be able to find the camp. Blizzards come here without five minutes' warning and blow at 90 to 120 miles an hour. This is summer. Winter weather must be cold and nasty.

"'Our hut is made of matched boards, three layers of insulation and then banked with snow. Very comfortable. Hangar's foundations dug in ice. In spite of weather, having lots of fun. Intercepted Brewster's radio announcing the take off. He should have returned by now if flight successful. If not, good bye, Brewster. Let me know how things are going if this message gets through relay of amateurs. Love to Scotty. Sonny."

"Gee, that sounds like old times, reading Sonny's messages through the telephone!" exclaimed Joe. "But that doesn't sound like the pleasantest kind of flying weather, does it? Here we are, suffering from the heat, and if all goes well, we'll be nosing into that kind of weather, blizzards and everything, in three days. Imagine that!"

"It's funny Brewster hasn't gotten back yet," said Andy. "As much as I hate that bird, I wouldn't wish him the bad luck of coming down on the ice a few miles from the Pole."

"Not without plenty of red flannels on," laughed Sam, who had even more reason to hate their rival than the others. "For my part, I wouldn't cry myself to sleep if he did freeze his dear little tootsies!"

Just after noon, Joe, who was again at the wheel, sighted a dark mass on the horizon directly ahead. He called Andy who checked on his charts. Yes, it was South America. Galera Point, in Ecuador. They all watched it as it loomed up higher and higher, shimmering in the almost unbearable heat waves. They had discarded even their light coveralls and attended to their duties in running shirts. Even in these light shirts they suffered from the heat that reflected upwards from the glassy ocean.

At last Andy gave the order to climb. Even at the expense of more gasoline, it was better to pull the heavy ship up to cooler altitudes. Not until they had reached seven thousand feet did the air become comfortable.

The mountains on the shore line approached. A narrow strip of extremely white sand, upon which were crashing line after line of white breakers, extending as far as the eye could reach. Behind the beach stood a magnificent line of mountains towering over the many miles of foothills and lesser ranges between the peaks and the shore.

"A bit west," directed Andy. "We'll skirt around this shoulder of Ecuador, then when we have passed Pointe Aguja, we'll head about south-

south-east, which will bring us back to shore fifteen or sixteen hundred miles south, near Valparaiso."

In a gradually turning semi-circle they flew, constantly within sight of those tremendous snow-capped mountains which lifted their jagged peaks over the narrowing strip of sun-drenched sand.

The tropic darkness fell with a startling suddenness, and at the same time the temperature within the cabins dropped with amazing speed. One moment they were sweltering at an altitude of several thousand feet. Within half an hour they were flying at their usual height of a thousand feet with most of the windows closed and the crew none too comfortable in their khaki coveralls.

After consulting his navigation books, Andy explained the sudden chill. "You all know how the Gulf Stream warms the Atlantic for thousands of miles? Well, just as we turned Pointe Aguja, we began to fly over the Peru current, which flows north along the coast here from the Antarctic Ocean. That's why it's cold now. Anyway, it will cool our blood. It's really only cold by contrast to the terrific heat we had a few hours ago. Now, say 'good bye' to land for many hours. Next port of call, Valparaiso."

The others cast a look behind them at the faintly twinkling lighthouses, then set about dinner and their routine duties of the night.

Just before Andy turned to at eight o'clock for his early night shift at the wheel, Sam came in with a radio message. The phones were no longer necessary, for with the windows closed, talking in ordinary tones again became possible.

"I sent a message to Sonny, through the same chain of amateurs, telling him of our progress and experiences to date. Here's his reply: 'Picked up weak S. O. S. two hours ago. Believe it to be from Brewster but signal faded away before anything else received. Weather still had with constant snow and cold. Don't come unless everything in perfect working order. Love to Scotty. Sonny.'

"We've given each of the three engines almost exactly the same amount of use. I've climbed up on the wings every two hours during the daytime, and every four hours at night. I've examined the motors constantly, every bolt and nut. They sound right now as though they were just finishing their tenth hour on the motor test bench at the factory. They're perfect, that's all, just perfect!"

"Tough on Brewster," said Dick, without too much grief in his voice, "but we're going to take the same chance as he did. It's each man for himself and tough luck for the loser!"

"Tell Sonny we'll keep going unless something happens between here and Cape Horn," ordered Andy, with a grim expression around the corners of his mouth.

### CHAPTER XV

### **ICE**

At ten fifteen in the morning, on the third day of the flight, Pointe Angeles was sighted, at the entrance of Valparaiso Harbor. Andy, a little tired after the strain of navigating the great plane through the night and early morning with only his compasses and sextant to guide him, felt intense relief that his plotting of the course had been correct. He had been forced to turn up the engines, for they had fought headwinds ever since leaving Ecuador. Still, he had made landfall within fifteen minutes of schedule.

As they swung ashore for a great sweep around the bay to meet the refuelling plane, the crew could see crimson spurts of fire from the guns of Fort Valdiva on the west and Fort Pudeto on the east. Chile was proudly welcoming the trail-blazing plane to her shores.

But their view of the great city, curving in a gentle semi-circle around the bay, was brief. They knew that the continent of South America was already more than half behind them and they were anxious to be on their way. So having received their fuel and supplies from the very efficient tank plane, they swung back over the breakwater, turned south, and were again eating the miles between them and their goal.

On this last lap of their coastwise journey, they were nearly always in sight of land. The grim, towering backbone of the Andes mountains, bare of vegetation and snow-capped, came nearly down to the sea itself. Where there was a wide strip of shore, it was as barren and uninviting as the mountains themselves. Vast stretches of desert and tundra land were swept by winds of constantly increasing chill. Not an inviting coast, thought Andy, as he eyed the endless lines of breakers sweeping in from the Pacific Ocean.

Early in the afternoon, the weather took a decided change for the worse. The temperature began to drop and Sam turned on most of the heaters in the cabins. Scotty, who had been basking in a tiny patch of sunlight on the cabin floor, hopped up on Andy's bed and burrowed beneath the pillow.

The long coast line became broken with hundreds of islands which stretched down the curving end of South America to the very tip. They were so rocky and mountainous that Andy began to feel very uncertain as to his next refuelling, which was to take place in the darkness over a tiny island near the Straits of Magellan.

Through the late afternoon and into the night the "Apex" roared her way southward. Early in the evening, low-hanging clouds settled down, bringing with them a half-gale of wind, accompanied by heavy, driving rain.

Dick took his place at the radio and established contact with a steamship belonging to the oil company, which had taken a seaplane, equipped as a tanker, to Desolation Island, at the western mouth of the Strait of Magellan. Here it lay at anchor, according to the radio operator, waiting for the fliers. Dick reported the progress of the "Apex" every half hour, and when the great flying boat, at midnight, fought its way through the storm to the island, a dozen great searchlights were sweeping the inky skies from the steamer's deck. One slim pencil of whiteness pointed straight at the seaplane tanker which was already in the air, circling under the clouds at five hundred feet up.

Andy, at the wheel, switched on a dozen lights on the wings, especially mounted for this very operation, while both Dick and Sam went to the open cockpit to receive the hose pipes and baskets. Joe stood by, ready to jump to any spot in the plane where he might be needed.

For nearly an hour, the two planes jockeyed around in the gale, trying to establish contact. Three times had the oil seaplane eased her way to the required position when a sudden gust of wind nearly crashed her on the "Apex," and she had to veer quickly away.

Twice she had actually dropped her hose and was delivering the fuel when she had to pull herself out of sudden danger. Only the special lever nozzles which closed automatically when no one held down the handle, prevented the precious fuel from flowing into the ocean. But at last the "Apex" tanks were full and all provisions were safely aboard. With a final wave of their hands, the oil men swept away, followed by the searchlights, to find their landing place.

With minds a lot easier, but with their bodies almost tired out, the crew of the "Apex" resumed their regular routine once more. Joe took the wheel, while Andy went for his charts. He measured and calculated with great care, for if his navigation proved to be faulty on this leg of the journey, they would find themselves out of gas on the unexplored continent of Antarctica. Of course he expected to check his bearings by radio, but radio sets had been known to fail and he wished to take no chances.

"Here, Andy," called Dick from where he sat at his set, "here's a message from Sonny. 'Terrific blizzard raging here. Weather man says likely to last for days. May be impossible to send up tank plane. Brewster lost somewhere on way to Pole. Men here have taken vote and suggest you wait at sheltered spot near Cape Horn for weather to clear. Tough luck. Sonny.' Well, that's a hot one!" concluded Dick with a long face.

"Get Sam out of bed and let's all go in and talk to Joe," snapped Andy.

"Out of bed?" came Sam's voice indignantly, "I'm not going to bed for a couple of days yet!"

In the forward compartment, while Joe's steady eyes never left the compass except to glance at the instrument board, Andy read the message again for the benefit of the two who hadn't heard it. Then he waited for their opinions. He felt he had no right to risk their lives by a hasty impulse of his own.

"Well, what about it?" he asked at last.

"It'll be bad luck to stop the engines," stated Sam, calmly.

"Sure! Let's go on," voted Joe.

"Why not?" said Dick seriously. Andy took a deep breath. What a crew this was!

"Tell Sonny, Dick," he decided, "that we're coming anyway! Head her over the southwest, Joe. We'll have a nice, long ride, on this hop!"

The night seemed short. A grayness in the sky chased the inky blackness away. The "Apex" was flying through the clouds, now, with never a patch of water to be seen. Except for the interior of the cockpit and the lighted cabins, the whole world was nothing but a churned-up mass of clouds and fog. When Andy took the early morning trick at the wheel, he did not even bother to glance out of the windows. He flew entirely by his instruments.

Sam had lost all desire for sleep. He prowled about the ship like an alley cat, inspecting everything again and again. At the end of each inspection, he donned his fur coveralls and swung out on the slippery wing, where his safety belt alone kept him from plunging into the sea.

A dozen times during his four-hour watch at the wheel Andy saw Sam's flashlight playing around the motors, pointing out each vital spot in its turn, while he assured himself that everything was as it should be. In between inspections, he relieved Dick at the radio so that the operator might stretch his cramped back.

The radio set had increased in importance now, for when Andy had informed the Bay of Whales base that there was to be no turning back,

Sonny had camped down at his key and was keeping in constant touch with the speeding plane. He sent radio bearings every hour to help keep the "Apex" exactly on its course during the perilous 3,000 mile journey.

Joe, calm and easy going as though he were taking turns at the wheel during a test hop over Mineola, stood his regular watch, and when off duty slept soundly and peacefully.

As the light of day crept through cracks in the clouds, Andy nosed down carefully, to fly close enough to the surface to see how rough the Antarctic Ocean might be. At 300 feet he broke through to find himself in hazy air, with the water gray-green and foam-flecked beneath him.

Then his attention was attracted by something glistening white at his left. An iceberg! And there was another and another! His shout brought Dick and Sam tumbling into the compartment and they, too, looked upon these great bergs, floating northward from the glaciers of the Antarctic barrier, with a great deal of awe in their eyes.

At eight o'clock when Joe came forward to take the wheel, the little group was still there, watching the bergs excitedly. It was their first glimpse of the real conditions at the bottom of the world. But Joe took them calmly.

"No use getting excited about them," he said yawning. "We'll get pretty tired of looking at them in the next two or three days."

### CHAPTER XVI

#### THE BAY OF WHALES

As the day wore on, the temperature and the weather varied in great extremes. They flew through belts of cold so bitter that it went right through into the tightly closed cabins. The air was dense with flying snow and the ship bucked and plunged through the blasts until it required the full strength of the pilot to hold her steady. Then, in a moment, they would reach clear weather. The outside thermometer would climb above freezing and the sun would shine warmly.

Sonny still told, over the radio, of his alarm for the "Apex," saying that they on the ground were almost completely snowed in. The blizzard was still raging, but they would send up the tank plane or crash it in the take-off.

Andy, steering through a cloudless sky for a moment, suddenly saw, beyond the scattered, drifting icebergs to the south, a solid white sheet on the water, that reached as far as he could see. As his course approached the strange surface, he could see that it was sheet ice, made irregular here and there by cracks through which the black water showed, and by peaks of icebergs in its midst.

He knew it was the northern limit of the ice pack, that vast body of floating ice which prevented ships from reaching the continent of Antarctica except at two known spots, Weddell Sea and Ross Sea. Only in Ross Sea, toward which they were heading, was the pack ice open in a great expanse during the summer months.

Sonny reported early in the afternoon that the blizzard had stopped, and that all hands were shovelling a great runway for the tanker to use as a take-off. He added that no word had been received from Brewster's party and that it was feared they had crashed and been frozen to death in the terrific cold.

Except for a general tightening of nerves and an increased watchfulness on the part of the four in the "Apex," the day wore on uneventfully. The weather changed constantly, but it grew a little colder with each hour that passed. Seldom could they see open water beneath them, now, and the uneven hummocks and pressure ridges of the ice pack did not look at all inviting as a landing place, should one be necessary.

The magnetic compass became almost worthless. The magnetic South Pole was directly in the direction they were heading, so the compass showed due south, while in reality they were flying on a true course many degrees to the west of south. But Andy and Joe checked Sonny's radio bearings against those taken with their sun compass and gained confidence as the three positions obtained checked each time they were taken.

The night lasted but a few hours. The sun seemed to just dip beneath the horizon before it rose again. Farther south, they knew the day would be twenty-four hours long.

Scotty was much upset by the shortness of the darkness. Though he was a flying dog, and accustomed to catching his naps at irregular hours, he had formed the habit of sleeping soundly all night long. Now, when darkness immediately turned into daylight again, his routine was sadly disturbed.

He finally adjusted matters by sleeping most of the day and night, huddled up beneath a pile of reindeer-skin sleeping bags in the corridor leading through the storage lockers. But he never felt quite happy about it, especially when he found that meals were being served at what he felt were the wrong times. Just after midday and just before dark were the proper times, he thought, to feed a growing dog. Now everything was all upset by these short nights. He wore a slightly grieved and reproachful expression as a result.

About five o'clock the following morning, the crew saw, for the first time, the ice barrier of Antarctica, rising from three to six hundred feet in the air. That sheer wall of ice to the south was a part of the ice cap covering most, if not all, of the continent. This had prevented all but a few hardy explorers from scaling its slippery heights. Behind the barrier they saw a ridge of snow-white mountains, reflecting the rays of the sun with dazzling brilliancy. Then, in a moment, the clouds had closed in and even the ice wall was not to be seen.

Andy had shaped his course to skirt what northern limits of the barrier were known to the map makers and kept sufficient altitude to prevent striking the icy wall if it should project farther north than he thought. But frequent glimpses between the clouds of those great mountain ranges made him hold his course at a respectful distance to the north of them as he circled westward and southward towards the Bay of Whales.

"Why in the world didn't we fly straight south from Desolation Island?" asked Sam, puzzling over the chart. "The distance from the island to the Pole itself isn't any longer than from the Straits of Magellan to the Bay of

Whales! Then, after we've flown all the way to the Bay of Whales, we are still about 800 miles from the Pole!"

"Because if we had flown straight south we'd have had to cover twelve or fifteen hundred miles of unexplored ice on the way to the Pole, where a landing would have been certain death from cold and starvation," explained Andy. "Three thousand miles nearly, to the Pole and back. No one knows how high the mountain ranges are between Cape Horn and the Pole. We might very easily have crashed into one during a storm. No, this way is much safer, for if there's an accident, there is at least a chance that a rescue party from the 'Reliance' can reach us."

The thermometer was dropping steadily now, for at last Andy believed that he had reached the full limits of his course to the southwest and headed directly south, straight through Ross Sea for the Bay of Whales and the South Pole. He and Joe took turns at the sun compass and, after comparing their positions, the captain snapped suddenly:

"Dick, tell the ground crew to warm up their plane. We'll arrive at the Bay of Whales in about two hours!"

Well ahead, in the distance, the floe ice loomed higher and higher. Beneath them were thousands upon thousands of huge ice cakes, some of them eight or ten miles wide, as well as hundreds of icebergs, which had broken off and were floating away to the north.

As they plunged ahead at a thousand foot altitude, Andy steered toward a spot in an ice barrier where it seemed to be very low. To right and to left of this one spot, the solid white wall seemed to be from 150 to 400 feet in height. This low place in the barrier must mark the site of the Bay of Whales, for it would be impossible for dog teams to scale the vertical walls of the higher parts in case a rescue party were to be sent to the south after the "Apex."

In a few minutes more the four men, all crowded together in the control room, peering anxiously ahead into the blinding whiteness, saw a little dark spot, where the black water met the solid ice.

"There's the 'Reliance'! Whoops, my dear!" yelled Sam, so excited he could hardly swallow.

Then another dark spot and another appeared as the "Apex" continued her hundred-mile pace. Soon the entire camp became visible, with dozens of tiny black figures running about. The ground crew had poured out of the huts to see the long-awaited flying boat. Sharply outlined against the glittering ice, they saw the bright red wings of an airplane at the end of a long smooth stretch of snow. Even as they watched, it got under way and dashed along the runway. They held their breaths as the plane came near the end of the ice.

"She'll never make it! She'll go into the water!" shouted the excited Andy.

At that very instant, just as black water appeared beneath the bright red wings, the speeding plane got clear by the narrowest possible margin. It had looked like almost sure disaster for the fuelling ship and a forced landing, through lack of gas, for the "Apex."

As the oil plane slowly climbed under her terrific load, Andy swung his ship in a wide circle over the camp on the ice. They had done well, down there. The "Reliance" was anchored against an enormous ice floe, which extended for miles, right to the foot of the barrier. A hundred yards from the steamer was a long, unpainted hut, with smoke issuing from several chimneys.

So deeply was the hut buried in drifted snow that little could be seen but the roof and several windows where the drifts had been shovelled away to allow the sunlight to enter. Twenty feet away was a tall radio mast, with wires leading down to the hut. Even as they watched, they saw Sonny's little figure standing at the door waving excitedly to them. Andy's heart warmed to his faithful little friend and he rocked the "Apex" to let the boy know he had been seen.

A few feet beyond the radio masts were a series of open kennels where the Eskimo dogs could be seen running frantically back and forth in the snow, barking up at the strange bird flying over their heads.

At first, the crew of the "Apex" could see nothing of the hangar, but at last, by tracing the many broad ruts made by the tank plane's skis, they found it, completely covered with snow, except for the yawning black door, standing open amid the drifts.

"Boy, that's no winter resort down there, I'll tell the world!" exclaimed Sam, as the other three studied the scene below them in amazed silence. "If it looks like this in midsummer what'll it be like when it snows all the time and the temperature drops to 70 and 80 below zero!"

"Well," commented Joe, "all I know is that I don't want to be here to see what it is like!"

"Ditto!" agreed Andy heartily.

The refuelling was as simple as it had been in warmer climates. Certainly, thought Andy gratefully, Mr. Avery had selected a wonderful corps of pilots to make up his tank plane crews. How they must have rehearsed their part in the ticklish business to go through it with such smooth efficiency!

Sam and Dick, after fifteen minutes out in the open cockpit attending to the hose and ropes while the two planes circled around over the camp, crawled back into the control room blue and shivering with the cold. Dick, who had slipped off his fur mittens for a moment, to adjust the nozzle of the hose, showed two fingers white with frostbite. They went hastily to the warmth of their compartments, where they shivered and shook for an hour before they finally felt comfortable once more.

Then Andy, with a grave face and a feeling of great responsibility, waved his hand in response to the good byes of their friends on the ground, and set the "Apex" on the last and most dangerous course of all. Before them was nothing but the icy wastes of the Antarctic, the unblazed airway to the South Pole, the bottom of the world!

### CHAPTER XVII

### THE BLIZZARD

As the "Apex" soared high over the vertical cliffs of the ice barrier, Sam came forward with a pencilled note, written in Sonny's scrawling, boyish hand. He had found it in the top of the provision basket.

### "DEAR ANDY:

"You have no idea what a kick I got when you radioed that you would be here in two hours. Just think how close we are to each other—yet how far we might as well be apart for all the chance I'll have to actually talk with you!

"I sort of wish you hadn't come. The barometer is dropping. The professor says we're going to have another blizzard. I never knew how bad a snow storm could be until I got here and saw one of these blizzards! Andy, they're simply awful! You just wouldn't believe how hard the wind blows and how cold it gets.

"Brewster is lost. There's no doubt that he's down on the ice somewhere. Last night I got a radio from his camp asking if you would fly down there and go to the Pole over the route they took. Don't know what good it would do if you did. One thing is sure—you couldn't land there if you did find them. The most you could do would be to radio back and let them send out dog teams.

"No one here would blame you if you paid no attention to them. Brewster has tried to kill you lots of times. Why should you risk your lives trying to hunt for him?

"Gee, Andy, I hope you are very careful and get back safely. But I'm worried. If you make the hop all right, land here and call it off. For goodness' sake, don't try to fly back to New York. Love to Scotty.

## "Sonny."

The other three, crowded together in the control room, listened to the reading of the note in silence. At last Andy said slowly:

"Well, I don't know how you birds feel about it, but I sure hate to leave those fellows down there in the snow if there's anything we can do toward rescuing them. Still, it isn't right to turn away from our course without finding out what all of you think about it."

"I don't care much one way or the other," volunteered Joe. "They deserve to die and we're probably too late to do anything about it, anyway. But if the rest of you would feel better about it if we hunted for them, it's all right with me."

"Those are about my sentiments," agreed Dick.

"I'm all for flying over his course," stated Sam. "If we find him and manage to pick him up, I'm going to take great pleasure in busting him on the beak, if it's my last living act! But let's not pass him by!"

"Head due west, Joe," directed Andy. "Dick, radio to the camp that we're going to the Pole along Brewster's route."

Due west, then, they flew, following the tremendous ice cliffs of the barrier, bucking strong, gusty headwinds, which became stronger as they progressed. The temperature began to drop and the air became filled with great white snowflakes which lodged on the windows in ever-increasing numbers. Andy switched on the electric windshield wipers and sat with Joe behind the dual controls, ready to add his weight to the wheel if going became too hard.

They steered by compass straight into the howling blizzard, unable to see anything before them but the driving snow. The plane leaped and plunged, every strut and wire shrieking in protest as the terrific wind tore through.

Scotty, who had been napping peacefully on his pillow near the radio set, was suddenly rolled over and over across the floor as the "Apex" was thrown on her beam ends by a great blast. Before he could recover himself, the plane was tilted up in the opposite direction. Thereupon the pup, like a great fur ball, was slid across the floor into the opposite corner. He had seen other rough weather in his flying adventures, but this was entirely too much. As he huddled in the corner, he turned up his black nose and wailed long and lustily, until Sam picked him up, put on his little safety belt and, after tossing him in Andy's bunk, snapped the hook on the bed rail. Then the pup burrowed deep beneath the pillows and trembled until he dozed off.

"Oh, Sam!" called Andy, "better issue out the parachute packs."

From their convenient place on a shelf near the control room door, Sam brought the four bulky bundles and the entire crew buckled them on, to be ready for sudden disaster.

All that afternoon they plunged ahead on their compass course, both Andy and Joe straining every nerve and muscle at the controls to keep the huge flying boat from being whirled over and over like a torn scrap of paper. Time and time again she threatened to capsize or to nose headlong down to the ice below, but the two grim-faced pilots, working together perfectly, managed to bring her back to an even keel.

They had no idea how fast they were travelling over the ice, for they could see nothing and at times the speed of the wind pushing against them seemed actually greater than the forward speed of the ship. They cut in all three mighty engines and ran them with wide open throttle. Sam and Dick, standing by for emergencies in the radio room, were chilled to the bone, but the pilots were warmed by their own exertions. They both perspired freely as they tugged and pulled at the huge wheels and kicked at the rudder pedals beneath their fur-lined boots.

Only constant radio bearings from the ever-faithful Sonny told them where they were. They found that they were making discouragingly slow progress against the raging blizzard. A scant fifty or sixty miles an hour were the best they would make against a wind which, in the unbelievable force of its blasts, sometimes seemed to actually blow them backwards.

It was duty for all hands, every minute. Twice through that fearful afternoon, Sam borrowed Dick's safety belt and mounted to the wings, where only the double strength of the two belts prevented him from being swept instantly from the slippery cat-walks. But despite a wind which all but took the breath from his body, he made minute inspections of each laboring engine before returning, half-frozen, to the warm cabin.

"Man!" he muttered after the second trip into that awful cold, "you just wouldn't believe that an airplane could live through such a wind! If she lives through this, I'll say the 'Apex' can defy any weather that exists anywhere in the world! Well, now let's have something hot to eat."

So, during half an hour when every moment might have been their last, the four men enjoyed a hot meal which brought strength into their tired muscles. Sam and Dick ate in comparative comfort in the radio room but Andy and Joe each took one hand from the jerking wheel now and then to snatch at a bite from the tray which stood on the drop-table beneath the controls.

Somehow they existed through that afternoon, although at times, the odds were heavy against them. The hands of the clock crept around the dial with discouraging slowness. As time went on the light grayness of midday changed into a darker half-light, but utter darkness was spared them. They were now in the region of the twenty-four hour day.

At last Sonny's bearings told them they must be nearly over Brewster's base camp. But for all they could see, they might as well have been a thousand miles away. There was nothing but that blinding, whirling snowstorm to be seen through the windows.

"Well, it's a cinch we can't stay around here waiting for the weather to clear," observed Andy. "We'll have to turn south and fly toward the Pole. Perhaps we'll fly out of this blizzard on the way down and find them somewhere near the Pole itself. If we don't, we'll fly this same course on the way back and search their whole route."

"For the love of Mike!" yelled Sam in a voice of amazement. "What's that?"

Through the snow-blanket that seemed to be drawn before each window, came a dull red glow, which grew brighter with each passing second. Even as they gazed at it in astonishment, they could feel the heat of it radiated through the windows in front of them. It looked as though the whole sky was on fire.

"Quick! Hard left!" gasped Andy and the stout ship heeled far over on its left wing as both pilots threw their full weight on the wheels. For an instant, the horrified crew found themselves looking straight down into a boiling pit of fire through eyes which watered as a cloud of sulphurous gas seeped into the cabins. A blast of hot air beat up against the upended keel of the "Apex" at the same time that a terrific gust from the blizzard caught the under side of the right wing.

For a few awful seconds the "Apex" flew upside down. Sam and Dick were thrown against the wall beneath them and rolled all the way up to the ceiling. Andy and Joe, sagging head-down in their belts, pushed at their wheels in deathly silence. In a heartbreaking dive the great plane swept down toward the invisible ice. Then, as she straightened out into a screaming dive, the two pilots, acting as one, gradually pulled the wheels back, little by little, lest the "Apex" fall apart under the strain. Even through the insulated walls, the scream of the wind through the wires and struts drowned out every other sound.

It seemed to Andy as though that dive lasted for hours. Every instant that passed he expected the ship to meet her end in a headlong crash against the ice. She was responding now. Her nose was coming up, little by little. Hours seemed to pass between each heartbeat. His eyes flickered to the altimeter, but the pointer was quivering so that he could not tell how much precious altitude they had lost. At last the scream of the wires dropped to a lesser note, then died out entirely. The wheel no longer pulled against his tired arms. Her nose came up. She was flying level again. Back he pulled again. They must regain the altitude they had lost. There was no telling what they might strike while they were skimming low over the surface. Five hundred, seven hundred, a thousand feet, showed on the now-steady altimeter. Andy heaved a great sigh of relief and pushed back his helmet with hands that shook.

For a few minutes, no one spoke. All were too busy congratulating themselves that they were alive. At last Andy said, huskily:

"Joe, swing over that chart. Let's see what that fire was we passed over." He studied the map in the dim light of the instrument lamp. "Look, Joe, here it is! That was Mt. Erebus, an active volcano. Boy, we sure came close to getting fried, that time! Head due south now."

"Golly," exclaimed Joe. "Let's not do that any more. I'm getting old and don't like to fly ships like this upside down. Next time I come down here, I'm going to bring a stunt plane! This is some ship! I'd have sworn that she'd fall to pieces under a strain like that."

"Well," observed Sam, ruefully, fingering a bump as big as an egg on his head, "that next time I go up in this crock, I'm going to pad the roof. When I slid up that wall, I patted my conk against the ceiling with a bump that made me see more red fire than that mountain back there ever saw in its life. Next time you're going to loop, barrel roll or Immelmann, please tell me so I can put on my thick helmet and open my parachute!"

"We're on the right course, at last," said Andy, grinning at the moans from the mechanic. "That volcano was within a few miles from Brewster's camp. If we head on this southerly course now, giving her plenty of right rudder to allow for the wind drift, we'll fly straight over his course. If the blizzard would only let up, we'd have a pretty good chance of seeing him, if he isn't completely covered by the snowfall."

In another hour the incredible force of the wind began to grow less. Suddenly the "Apex" burst out of the driving, snow-laden clouds into brilliant sunlight. Sunlight so dazzling when it was caught and reflected

back by the snow and ice on every side that the fliers were almost blinded by its intensity. In an instant four pairs of amber goggles were produced, then they were able to look about them.

"See that!" exclaimed Dick in an awed voice. "It's ten o'clock at night and the sun is still shining!" Low on the clear-cut horizon the sun looked like a great ball of brown fire. Below them everything was covered by a thick mantle of snow, seamed with wide, bottomless crevices which looked black and ominous as the flying boat hurtled over them. Here and there tiny patches of smooth, level snow upon which it might be possible to land flashed under them, but such spots were only too few and far between. Most of the surface was heaped into jagged hummocks as though it had been turned up by a giant's plow.

"We must climb, from now on," said Andy, after studying his charts. "That mountain range over there to the right slants straight across our course. We'll have to fly over it about 350 miles this side of the Pole. There's a place called Beardmore Glacier, where it's only some 9,000 feet high. We'll cross there."

"Nine thousand feet!" murmured Sam, buckling his safety belt. "Sister, those engines need their mother's loving care!" He went out on the wing. Andy glanced at the thermometer. Thirty below zero! What would they have done without Sam? Now, after more than twelve thousand miles, the engines were still turning over without a single wrong note. Sam had changed the spark plugs each day, as one motor after another had been silenced in turn.

He had made careful adjustments each time an engine was cut out, and the results of his painstaking attention were to be heard each time the throttles were opened. Every motor could turn up its 2,000 revolutions with the greatest ease, and the crew were confident of their ability to pull them over the mountains.

Up, up, the "Apex" climbed. And as the sturdy plane headed up into the cold, blue air, the red lines in the thermometer dropped. As they approached the mountain range, they had gained ten thousand feet, and looked down upon a scene of marvellous, but terrible grandeur. Slightly to the left the Commonwealth Range appeared to be slightly below their level.

On their right, Mt. Markham towered like a huge pile of heaped-up ice. Its summit was a full five thousand feet above the high-flying plane. The wind, cut up by the mountains, was gusty and bumpy, but after their fight with the blizzard it seemed almost calm.

They slipped through the mountains by following the glacier until, at last, they were over King Edward VII Plateau. The wind blew steadily now, and with a biting cold that went through even the insulated cabins. The thermometer recording outside temperatures showed 45 degrees below zero, and was dropping steadily as the "Apex" forged ahead. The sun touched the horizon beyond the Plateau, then rose again.

"Look, fellows," said Andy, "it's midnight, and the sun is rising again." The four fliers, all thought of sleep forgotten, gazed at the midnight sun with interest. Suddenly Andy's eyes, tired and bloodshot behind their brown glasses, narrowed as he looked along the path of light on the ice. He stared carefully for a moment, then shouted,

"There's Brewster!" At the same minute he put the plane in a twisting glide that sent her down in a slow circle to the right.

### CHAPTER XVIII

### **TREACHERY**

Only a few hundred feet from the path of the "Apex" was the wreck of a huge biplane, nearly covered with drifted snow. Standing beside it, as if they had just crawled out of the shelter of its cabin, were three men, waving wildly at the approaching flying boat.

Andy's experienced eyes searched the ice of the Plateau for a suitable landing place. At last, three or four miles to the east, there was a stretch of smooth snow and ice, perhaps half a mile long. At one end, however, there was a yawning crack. On each side the ice had piled itself into jagged hummocks.

It was a desperately dangerous place to land. If Andy overshot his mark, the plane would fall over the crevice and all would be plunged into its depths. Fortunately, however, the smooth surface headed nearly into the wind. He swooped low over it and flew across its entire length, while he and the other fliers examined it foot by foot for possible obstructions. Then Andy banked over to return to the wrecked ship.

"Are you all with me?" he asked gravely of the others. "Of course, we can't tell what's under that snow, but it looks like an even chance."

The other fliers agreed to attempt the landing. Andy wrote on a slip of paper. "Landing three miles in direction we are flying. Start to meet us." Sam, rather reluctantly, it must be admitted, wrapped the note around an old spark plug. As they turned again over Brewster and his two companions, Sam climbed to the wing and tossed it overboard. It fell within a hundred yards of the three men, and the watchers in the "Apex" could see them start to wade through the deep snow to recover it.

Andy, judging his distance more carefully than he had ever done in his whole flying experience, cut his motors and shot for the smooth stretch of snow. Inch by inch he pushed the wheel forward as he drew near the landing place. Then he pulled her nose up and let her settle, very gently, in the snow. For two hundred yards she plowed along, sending huge clouds of soft, powdery snow up on either side of the bow. At last she stopped. It had been a perfect landing!

"Well," said Andy, though he could have wept with disappointment at this delay, "Here we are! The question is, will we ever get off again? Sam, did you radio the camp that we were coming down?"

"Yes," replied the operator, looking doubtfully at the huge drifts outside the window. "I told them our position, too."

"Let's go to meet those fellows," suggested Joe. "Maybe one of them was hurt. It looks like pretty tough going through that snow, and it may take them several hours to get here."

"Good idea," agreed Andy, going back to the storage room for sets of skis, outdoor moccasins, and mittens. "If we can help them any, we better do it, for that wind is blowing the snow in clouds and we don't want it to drift over us and lock the plane in."

"Right!" said Sam. "Why don't any of these birds crash their ships down in the tropics where we can go after them in bathing suits? Remember, Andy, the last time we hunted for a lost plane? Off Newfoundland, and plenty cold!"

"I'll say so!" replied Andy.

"You'd better cut in all three engines, and leave them idling as slowly as they'll tick over. It will be better to spend those few gallons of gas than to have the oil chill to the thickness of wax. Then we'd have a merry time starting the motors again."

Dressed warmly in their complete outfits of furs, they let themselves down the polished mahogany side of the hull. For a moment, as they opened the door, they had drawn back in dismay, for the blast of frigid air that swept through to the innermost corners of the cabins nearly froze the breath in their lungs.

They snuggled their faces closer into their fur helmets, however, and climbed down into the snow, where each assisted the other in putting on their skis.

The careless good humor of the whole party helped them to forget the bitter cold that reached, with icy fingers, through every opening of their furs.

"Sam," laughed Andy, "you'll have to reduce before our next trip, that's all! You cook good food, but you eat too much of it. You're fatter than Scotty, and I'm sure you'll sink for miles through this snow!"

"He'll be the first one to go into the pot, if we have to stay here and starve," added Joe.

"Listen, you birds," panted Sam, almost winded by the exertion of getting his skis straightened out under him, "I'm the baby you'll carry back to the ship if you want to go home! Who else could get those engines so they would call, 'Sam, Sam,' whenever they felt the need of a little oil or something?"

"Come on," called Andy, who had already begun to slide along on his skis in the direction of the wrecked crew. "It's too cold to argue! Let's get this rescue business over with and get back into the warm cabin again."

After the first few steps, all found it easier to struggle along in silence. The cold hurt their lungs when they spoke and the wind flung tiny particles of snow into their faces like the lashes of a million little whips. So they pulled their goggles over their eyes, shrunk into their furs as deeply as they could and plodded along. The last sound they heard was the agonized wailing of Scotty, who had been left aboard the "Apex" for his own protection.

It seemed to Andy as though they were making no progress at all. He looked behind him at frequent intervals to measure their distance by the width of snow between themselves and their flying boat. For an hour it seemed just as close as it had been when they had been marching but ten minutes. Every step was a torture. They leaned far forward into the bitter wind, pushing one ski before the other, shoving hard on their ski poles to help them along. They lost all track of the time, feeling that the heartbreaking walk was lasting forever.

But at last, three dark figures appeared over a hummock of ice. In another few minutes the two polar parties had met face to face. For the life of him, Andy could not be cordial to the man who had tried so many times to injure him. Even though these seven men were thousands of miles from civilization and hundreds of miles from the nearest human besides themselves, he could not conceal his dislike for Brewster.

"Any of you hurt?" he asked curtly, glad that none of them had offered to shake hands.

"No," replied Brewster, his full red lips showing just the least bit of a smile. "Very decent of you to stop for us."

"I'll say it was!" agreed Joe heartily. "It's a pretty good return for some of the accidents that happened to us in New York and other places!"

Brewster made no reply. He and his two companions drew close together, as if for mutual protection.

"Well, we didn't land here to pass the time of day with you!" snapped Andy. "We'll have plenty of time to talk those things over when we get the 'Apex' in the air again."

The shipwrecked three started towards the flying boat, followed by Andy and his crew.

"Golly, but he's got a mean disposition!" panted Sam, as he trudged heavily through the snow. "If he ever bit himself, I'll bet he'd get hydrophobia! I wish now that we'd stayed in our nice warm cabin and let them ankle through the snow to us. I don't like to be a reception committee in this climate, anyway!"

"Save your breath, Sam," grunted Dick. "You'll need it. This skiing beats gymnasium exercise all hollow!"

Half way back to the "Apex" Sam had to call a halt to catch his breath. The three rescued men kept on, while the four from the "Apex" crouched for a moment behind a hummock of ice, listening to the shriek of the wind over their heads.

A mile further on they caught up with Brewster and his men, who were resting behind a mighty pinnacle of heaped-up ice.

"What caused your wreck, Mr. Brewster?" asked Andy, while the whole party took off their skis to warm their chilled feet.

"This idiot here," the other replied testily, pointing to a slim, hard-faced man at his side, "lost his senses in the first blizzard we struck. Just after we climbed over the mountains, he dived straight down into the snow. Luckily, the cabins weren't badly smashed. We lighted our primus stoves and were quite comfortable. We rigged up our emergency radio transmitter, using a hand-cranked generator and sent out an S. O. S., but before we could give our position, the gale blew away the kite antenna. We could have lasted a month, I imagine, but we were mighty glad to hear your engines."

"Well, you were lucky, that's all I have to say," commented Sam, whose ordinarily good-natured disposition had not even yet warmed up to the man who had caused him so many troubles.

"Right!" agreed Brewster, eyeing him unpleasantly. "Let's push on."

He and his companions had completely recovered their strength. Moreover, they were more skillful in the use of their skis than the crew of the "Apex," so they led the way, the other four trailing behind despite their best efforts to keep up with them.

At last the shipwrecked fliers reached the great flying boat, which still stood there, securely anchored to the ice, her motors ticking over slowly, awaiting only a touch of the throttle to unleash their 1,500 horse power.

"Well, those birds have plenty of brass, I'll hand them that much!" sputtered Sam. "Look at them, climbing into the ship ahead of us. They might at least have waited for us to invite them inside!"

The four hastened their pace, spurred on by some vague sense of danger. They arrived at the bottom of the ladder just in time to see it pulled up out of their reach. Brewster's leering face showed from the doorway.

"I hope you gentlemen aren't too tired to go back to our plane," he smiled tauntingly. "Light the gasoline stove and you'll be quite comfortable for three or four weeks, at least! Ta, Ta!"

Andy leaped for the doorway, but his clutching fingers slipped on the polished mahogany hull far below the sill and he fell in a heap. Sam started back along the hull, planning to climb aboard the tail structure and crawl along the hull to the cabin windows. Even as he reached it, he turned back, for he knew that it was a forlorn hope. The first blast from these three great propellers would blow him off the smooth surface.

Just as Brewster began to shut the door, the four on the snow heard him cry out in a voice choked with fear and rage. They saw the door swing open again and caught a glimpse of their enemy, poised there in the doorway, trying to recover his balance and at the same time thrust something away from him. Then he teetered, clawed wildly at the slippery hull and fell headlong down into the snow, while Scotty, snarling with rage, held on grimly, his puppy teeth buried deep in the falling man's furs.

Right then, events moved swiftly. Dick, who was nearest to the struggling man and dog, leaped to help the collie in his unequal battle to save their lives. Sam and Joe each seized Andy and gave him a tremendous boost, enabling him to grasp the lofty doorsill. In spite of his heavy clothing, the boy shinned up, as agile as a cat. Then he dropped the end of the ladder to the snow and dashed forward to the control room.

One of the rescued men had already seated himself behind the wheel and was even now reaching for the throttles to give the engines the gas and slide the "Apex" away from the fight on the snow, even though it meant leaving his leader behind to perish with the others. His companion was casting the ice anchors loose as Andy jumped upon him. With all the power of his sturdy young body the boy swept his heavier opponent off his feet and threw

him across the lap of the other. The pilot struggled furiously to shove his companion away from him, so that he might open up the motors and pull back the wheel. But while they were still tangled, Andy leaped again, throwing himself straight across the two to delay things until reinforcements could arrive. Both struggling men punched short-arm blows at his head, but he buried his face against the chest of the topmost and held on grimly while the blows rained over his head and shoulders.

Then he heard footsteps clattering along the passageway. Joe's strong hands seized his loose fur collar and snapped him off the scrambling pair beneath him. Then Sam reached for the first pirate and jerked him to his feet, at the same moment punching him on the chin with a blow that took all the fight out of the desperate man. Joe reached for the pilot, dragged him from his seat and backed him against the wall.

"Now, you rats!" he grated, "make one more move and we'll dump you out beside your thieving boss. Then you'll have plenty of time to think it over while you wait for some other poor saps to come and rescue you!"

The two were thoroughly and completely subdued. They stood there, cowering, their frightened eyes glancing from one to another of their opponents, trying to read their grim faces and learn whether they were to be abandoned to certain death in the bitter cold.

Andy looked out of the window. Down in the snow, Dick had just succeeded in breaking Scotty's desperate grip on Brewster's leg. The older man had scrambled to his feet and aimed a wild swing at the radio man, who had promptly knocked him back into the snow. Then Brewster was through. He arose very slowly, keeping a watchful eye on the pup, who was trying to pull out of Dick's grasp and get back at his man.

"Dick," called Andy from the doorway, "we're going to take a vote on these burglars. What shall we do with them?"

"Leave 'em here!" replied the other promptly. "That's what they were going to do to us. What's fair for one is fair for the other!" Brewster looked very unhappy.

Returning to the control room, he put his question to Sam and Joe. Both voted whole-heartedly to throw the two captives overboard, where they might spend the rest of their lives fighting and stealing from themselves. Andy's whole crew was, at this moment, filled with deadly hatred against the three for whom they had risked their own lives and who would have left them behind to perish on the ice. They were in no mood for being lenient.

"Drop 'em off!" voted Joe.

"Ditto!" nodded Sam.

Andy thought hard and fast. At last he turned to his comrades.

"Will you leave it to me?" he asked. "I've thought of a scheme which is even better than that!"

"Fair enough!" growled Joe, glumly. "I'm for leaving them, but you're captain and what you say goes with me." Sam nodded again.

"All right," said Andy gratefully. "The first thing to do is for all of us to get the ship back to the far end of the runway. We'll have none too much room to take off with these three passengers. I sure don't want to drop into that crevice at the end. If these pirates work good and hard, we won't leave them here, but one peep out of them will be the finish!"

For three long, unbelievably cold hours, all seven men pushed, shoved and pulled the great ship through the deep snow. She was resting upon an underlayer of ice, otherwise the work never could have been accomplished. But at last the job was done. The "Apex" stood at the extreme end of the smooth strip of snow, with a long path carefully levelled out before her. Joe and Andy had examined her skids and found them to be in perfect condition.

"All right," panted Andy, straightening his weary back with relief, "all aboard, Brewster and his men last. Dick, you climb aboard first and get several short lengths of rope from the lockers."

As Brewster and his two companions mounted the ladder after the others, they were met by Dick and Andy, who tied their hands and feet securely.

"Now, you precious pets," said Sam, who had been watching the proceedings with unconcealed joy, "you'll have a nice long, airyplane ride, and if you're good, you'll eat some lovely, nourishing pemmican, with water for dessert, at each meal. If you're real good, you can have another helping of pemmican. And you'll have a pretty little room with one bed in it, so you can spend your spare time arguing as to who will sleep on the springs, who'll have the mattress, and who'll have the bare floor. Now won't you have a good time, dearies?"

All three were herded into Joe's cabin, while the pilot took his own things into Andy's room, which he would share while the passengers remained aboard. The door was securely padlocked on the outside and the crew of the "Apex" looked at each other with undisguised relief. It had been a narrow escape!

Then, with one accord, they looked around for Scotty. They scoured the ship, but he was not to be found. At last they heard a long wail from outside the door. There he was, at the bottom of the ladder, looking up longingly and howling his grief at having been forgotten. In the excitement of the fight with their prisoners, they had completely forgotten the little pup who had saved their lives. Andy was down after him in a jiffy, while Sam dashed to the lockers to cut off a big steak. So Scotty, his griefs forgotten in the unusual banquet, settled down at his meal, glancing up again between bites and seeming to smile at the crew to show them that he had forgiven them all.

## CHAPTER XIX

### BREWSTER WALKS THE PLANK

"Wait a minute," Sam called out suddenly, "I've forgotten something very important."

While the others watched him, he produced a cake of soap. Then he went up through the hatchway, crawled over the wing until he came to a spot just above the window of the room in which their prisoners were locked. Leaning far over the edge of the wing, he rubbed the soap over the window until it was thoroughly covered. The prisoners might as well have tried to look out of a ground glass window as to see through that outer coating of soap.

"Come on, let's go," grinned Andy, as he thought of the discomfited Brewster. He returned to the control room and in a jiffy all four men were at their posts. The three motors roared into full-throated song and the "Apex," slowly at first, then with ever-gathering speed, plowed through the deep snow.

Andy's heart almost stopped beating as he saw, at the end of the runway, the wide black crack that marked the point where the "Apex" must be in the air or be wrecked. She was too heavy, that much he knew. With many hundreds of gallons of gas, a full load of supplies and three extra passengers, she was never meant to rise from such a runway. She wallowed clumsily and Andy was tempted to cut the motors and throw out part of his cargo. But it was too late, now. She had too great a headway and would slide into the crevice before she stopped.

He pushed against the throttle, trying to open her up still more. Joe sat beside him, quiet and apparently unconcerned, his eyes narrowed to little slits as he watched the great crack approach at railroad speed.

Andy held the wheel forward, keeping the flying boat on the ice until she had gained every mile of speed that she could before they reached the edge. She was hurtling across the snow, now, at a tremendous speed, but her crew could still feel the bumps on her skis that told them she had not yet taken the air. Andy saw the black, bottomless crevice disappear beneath her blunt bows. The great wall on the other side loomed up in front of him.

He pulled back with a mighty wrench at the wheel. The opposite wall flashed beneath them. She had taken the air just in time. For a moment she sagged, as though she would rip out her hull on the jagged ice beneath, but Andy, with a quick intake of breath, levelled her out and they were safe. The faithful engines had been true to their trust and had dragged them out of an almost impossible situation.

Andy was weak and shaky from the strain and shook the wheel for Joe to take control. Then the boy sat back quietly in his seat for several seconds before he felt himself again.

"Well," came Sam's cheerful voice from behind them. "That was an interesting few minutes, wasn't it, now?"

"Uh, huh," grunted Joe without enthusiasm.

"I'm feeling sorta peckish," replied Sam, "and am beginning to think about some nice, hot dinner. What'll you have?"

"My word," laughed Andy, the strain broken at last, "here we are, on the last few hundred miles of our hop and Sam wants to cook, and eat, a nice warm meal! Can you beat that? No wonder he gains weight on a long trip. Sam, you'll have to reduce before we make another big flight or we won't be able to take you. Well, cook your meal, then we'll eat it! But first, have Dick radio to the camp and tell them that we're on our way again. Don't let him say a word about our having rescued Brewster's gang. We'll give them the details later."

At ten o'clock the following morning, Andy took the last of a long series of observations with his sun compass, then said, in an excited voice:

"Joe, take an observation of our position to check with mine. I'll take the wheel. Dick, radio to Sonny, quick, and tell him to get a cross-bearing."

Even as he snapped out these commands, he yelled, jubilantly:

"Hey, gang, look here! Look! Look! We're at the South Pole! There's the pile of stones that Amundsen left when he discovered it! Whoops!"

Dick, who had lagged behind at the radio, came in with a yell. "Sonny says we're there, according to his radio direction finder!"

Now, just beneath them, they saw another evidence of the Pole's discovery by the brave Norwegian explorer, the torn remains of a tent. Nearby was a single ski, stuck on end in the eternal ice, with the fluttering ribbons of a flag standing straight out in the wind.

"Well, fellows," announced Andy, "a second ago, we were flying south. Now, without changing our course, we're flying north. That's a funny one, isn't it? Whichever direction we look when we're over the South Pole, we're looking to the north."

"Fly back over the Pole again, Andy," begged Sam, "in the excitement, I forgot to drop our flags."

So Andy turned back, while Sam opened the door and dropped half a dozen American flags together with a book, securely wrapped in oilskins, containing an account of the flight and the names of the crew. No mention was made of the three unhappy men in Joe's room who were unable, because of the soaped window, to even look down upon the spot which they had hoped to fly over.

"Well, that's that!" remarked Andy. "There isn't much here we want to stick around and look at. To me, it looks just like all the rest of the ice and snow on the plateau this side of the mountains. Let's head back for home, sweet home!" Leaving Joe at the controls, he marked out a course on the charts that would take them straight back to the Bay of Whales. "All right, fellows," he added, "now let's get back to our regular watches. In an emergency, we can all turn to, but the weather is with us, we have a long jump ahead of us, and we may as well get all the rest and sleep we can. Sam, how do the prisoners like their pemmican and water?"

"They didn't mind it much the first two meals," he grinned, "but this morning, Brewster seems to have lost his taste for it entirely. He looked sort of low in his mind when I showed him the juicy steak we were going to have and said he didn't want his pemmican at all. For a few minutes he talked very mean, but when I offered to pop him on the nose, he calmed down a lot."

Luck smiled on the faithful ship and its daring crew of adventurers. They now had a strong wind behind them and the "Apex," with but two engines cut in, thundered north at nearly 125 miles an hour. Just after dinner that evening, Andy again spotted the Bay of Whales camp, far out on the end of the ice, where the water again showed between the ice floes. How much quicker it had been in this straight line from the Pole, mused Andy. If it hadn't been for Brewster, they would have been well on their way toward Cape Horn by this time.

As before, everyone in the camp rushed out of doors to see the successful ship fly overhead. The tank plane was already in the air and carried out its own part of the refuelling program without a hitch. But as it

slid down towards the ice, its tanks empty, the "Apex" startled those on the ground by circling back over the camp, instead of hurrying on her way.

Andy, Sam and Dick stood outside Joe's room, with a pile of parachute packs beside them. They opened the door and told Brewster to come out, alone. He was then seized in strong, capable hands while a parachute was securely buckled around him.

"Now, Mr. Brewster," said Andy, politely, "you have flown over the Pole, which is just what you came down here for. More than that, you've broken a world's record. You and your pals are the first men who have ever been to the Pole and not seen it. That's an experience that few people will ever have, and you should thank us for it. Your friends—if you have any—will be glad to see you, for they all think you're still lost in the ice.

"Now, we're all a little fed up with your company, so we're going to let you out here and have a free ride back to Valparaiso in the 'Reliance.' Of course your friends in the 'Success' may get pretty cold waiting for you, for it will be two or three days yet before they know where you are. But that isn't our worry.

"While you are getting down to the ice, I'd advise you to be thinking up a good, iron-clad alibi. There are several newspaper correspondents down there with our party and they'll want to know all about your trip. In a few minutes we are going to radio them a full account of it and they may ask you some embarrassing questions.

"Here's your release ring. Put your finger in it and pull it when you've counted ten. Good bye, you low-life!"

Then, ignoring the frightened protest of the other, he opened the door and shoved him out. Andy might have been mistaken, but he was quite sure that he had seen Sam's huge boot help Brewster out into space!

In quick succession, the other two, thoroughly cowed and begging to be allowed to stay aboard the "Apex," were pushed out, to join their leader in a long, cold, but gentle descent into the arms of the amazed ground crew, who soon lost all their cordiality when Sonny came running out with a long radio message telling of the attempt at piracy. The newspaper correspondents noted down the details with great interest.

The northward trip in the "Reliance" would be, it was to be feared, very unpleasant for Brewster and his two companions.

## CHAPTER XX

#### HOME AGAIN

After the dangers and the excitements of the southward flight, the return flight seemed commonplace and uneventful. They met storms all the way up the coast of South America of such fury that, had they not fought and conquered the blizzards of the Antarctic, would have seemed terrible indeed. But after the perils of the South Pole they took these lesser gales quite as a matter of course. Nothing that the temperate zones had to offer daunted them after what they had already passed through.

The crew of the "Apex," now thoroughly at home in their giant flying boat, went through their duties methodically, easily and with the least amount of effort. Watch on, watch off, sleep and eat—these were the regular order of the days. The position of "Captain" seemed almost a joke. These four worked together so well, that any one of them might almost have been captain and filled the job to perfection.

The refuelling ships met them with unfailing regularity and delivered their loads with the least possible amount of confusion. It seemed almost too easy.

Up into the tropics they flew, saving their motors with the aid of following winds. They were grateful for the hot latitudes and did not complain when they found themselves flying comfortably in their running shirts. Scotty spent most of his time in the open cockpit at the bow, basking in the warm winds and growing fat and lazy.

One of the motors broke its crankshaft over the Panama Canal, but the four fliers worried not at all. The other two engines were working perfectly. Their hull was strong and seaworthy. If they were forced down to the surface, it would matter very little. The main objective of their flight had been gained, so what did it matter if they had to float on the Caribbean Sea or the North Atlantic for a few hours—or even days—until they were towed ashore?

The radio set was jammed with messages of congratulation from all over the world. Each time that Dick tuned in his instrument, he heard a hundred stations at once calling the "Apex." At first the crew enjoyed reading the messages, but at last they became bored with them. There were too many and they all said just about the same thing. So they shut off the set entirely, except to make frequent reports of their position to Mr. Avery at the Apex factory.

The second motor broke its camshaft off Cape Hatteras. It was too involved a repair for Sam to make in the air, so they staggered along on the one remaining engine. They were now but a few hours out of New York, were passing over coastwise steamers with increasing frequency, so they were not worried about an emergency landing.

Two hours from their starting place, just as the fliers were climbing back into their heavy flying clothes to protect them against the constantly increasing chill of the northern winter, Dick came back with a radio message, the first he had bothered to pick up since they had passed Cuba.

"Land at Battery, New York. Imperative." It was signed by Mr. Avery.

"Gee," said Andy, "that's short and snappy, isn't it? Guess we'll have to obey orders when he sends them that way!"

As they passed Sandy Hook and limped through the bright winter skies with their one faithful old engine, Andy gasped with dismay.

"Look, fellows!" he cried, pointing over the low strip of land to New York Harbor. "Every ship in the world is in that Bay!" And it certainly looked so! Both the upper and lower bays were literally jammed with water craft of every size and description. Every whistle in the flag-bedecked fleet was blowing as the "Apex" flew up the Ambrose Channel.

From the bows of half a dozen trim, gray Coast Guard destroyers that were keeping a lane clear for the flying boat's landing, came the stabbing crimson flames of their saluting guns. The dull concussions reached the bewildered ears of the fliers as they looked down, astounded by this totally unexpected reception.

"Golly, let's go back to the Pole!" exclaimed Andy, as a moment of sheer panic swept over him. He was tempted to fly straight on, up the East River to their starting place on Long Island Sound but realized that he couldn't do it. He was powerless and had to land to face the music.

So he cut the gun and came down in a gentle half-spiral, to make a perfect landing in the wide lane straight in front of the Battery Wall which had been cleared by the Coast Guard.

The moment the roar of the motor died to a whisper, the tired explorers heard the bedlam of whistles and cheers that was shattering the air. They sat in their cockpits, too confused to move. Then a naval cutter swung sharply in towards them, a sailor lassoed the mooring post at the "Apex's" bow and they found themselves being towed, willy-nilly, to the sea wall surrounding Battery Park.

The next fifteen minutes were so jumbled up that none of the four knew quite what was happening. They were pulled this way and that, a lot of men with high hats and papers in their hands talked to them, although they could not hear a word that was said.

Then they suddenly found themselves seated on the open tops of two great touring cars, which were leading a huge procession, bands, soldiers, and everything, up Broadway. Andy and Joe were in the first car, Sam and Dick in the second. Ahead of them, almost invisible in the great snowstorm of torn paper that was being thrown out of the windows of the mighty skyscrapers, Andy could see a troop of cavalry and a squadron of mounted police.

At last, almost dazed with the noise and the unexpectedness of it all, Andy looked down into the car. There, seated in the tonneau and looking up happily at him, were his father and mother, Mr. Avery and the Mayor of New York. He hadn't seen them until this very minute. He grinned at them, rather embarrassed, and shouted "Hello" to them above the thundering roar of the massed crowds.

"Had enough flying, Andy?" yelled Mr. Avery.

"Not much!" responded the boy, happily. "We're going to fly around the world, before long!"

"Good!" replied the other. "The 'Apex' is yours, whenever you want to start!"

Andy and Joe smiled at each other. For even as they sat there, at the head of the great procession, enjoying the wild greetings that New York gives so whole-heartedly to her returning heroes, they seemed to see past Broadway, over the Harbor and the Atlantic. They saw strange countries speeding past under the broad wing of the sturdy "Apex." Enough flying? Not much!

# TRANSCRIBER NOTES

Mis-spelled words and printer errors have been corrected. Where multiple spellings occur, majority use has been employed.

Punctuation has been maintained except where obvious printer errors occur.

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