THE FLYING FOOL

by JAMES ALBERT ALLEN

When an ace puts his crate through the reckless, daredevil stunts that Lucky Bugs Mack did, and always comes out O.K., he's got to have something more than luck on his side. This one did!

THROUGH THE THICK, FOG-LADEN AIR, the drone of the plane came steadily nearer. At the edge of the field, a little group of anxious men looked up through the mist. The roar of the engine was plain enough, but there was not the least trace of the machine itself.

It was going around in circles as it approached the ground, the engine idling except now and then when the pilot gave it the throttle a little to keep the motor from fouling.

"That's Bugs all right," said one of the men, Bob King by name, the chief mechanic at the airport. "You can tell by the way he handles his motor."

"And you can tell because nobody but a damn fool like Bugs would attempt to locate the field when it's as thick as this," snorted Phil Thornton, pilot on the route south of the airport.

"Maybe he's found a hole," suggested another of the group, older than the rest and none other than William A. Benning—better known as Bill Benning—the president of the Benning Pacific Airways.

"Hole, the devil!" retorted Thornton. "He's found no more hole than there is right there," he said, pointing into the obscuring mists. "He just plays in luck, that's all. He'll crack up one of these days right."

A moment later, the plane—a monoplane—broke into view across the field. It was very low and headed straight toward a row of trees that grew just beyond the end of the runway, now hidden in the fog. The men held their breath as the pilot gave the motor the gun. The plane banked sharply to one side and disappeared in the fog again.

It circled back toward the field while the men listened intently for the crash they expected. Abruptly the roar of the engine stopped as the pilot cut the gun. The next instant the monoplane broke out of the fog at the end of the field and came easily to rest on the runway.

At the end of its run, the plane was turned about and taxied up to the hangars. The pilot let the motor idle a few moments to cool before he switched it off and climbed unconcernedly from the cockpit.

He was a small man, probably twenty-six or so in age, business-like, with a certain air of confidence which most people branded as conceit. That was pilot Casey Mack, more familiarly known as Bugs because he was supposed to take apparently insane chances when it came to flying.

"How the devil did you get here?" Bill Benning was the first to speak as the group gathered around the pilot.

"Why—all right," replied the flyer, with a look of wonder at the president. "Why?" he asked. "What's wrong?"

"Oh, don't be so damned innocent," Phil Thornton laughed unpleasantly.

"You mean the fog?" inquired Casey. "It's not so bad. Only about five hundred feet thick and the visibility isn't as bad as it looks. It's steady all the way down, though; not a break anywhere."

Benning nodded. "That's what our weatherman said," he replied. "We've all been having heart failure since we heard you started."

Casey grinned. "Well, I made it, didn't I?"

Phil Thornton snorted with disgust. Casey's eyes went to him with a gleam of amusement—and something else.

"What's the matter, Phil? Got a cold or something?" he asked.

Phil shot him a quick glance of defiance. "There's nothing wrong with me," he smiled between his teeth, accenting the last word with unmistakable emphasis.

WHILE the mail was being taken from Casey's plane, the group of men made their way to the pilot's

quarters just off the hangars. Inside, they found seats in chairs or on the bunks around the small stove, while Casey threw off his heavy flying garments and washed the spattering of oil from his wind-burned face.

There was a certain uneasiness among the men. They all knew that the president of the Benning Pacific Airways was not there for a friendly visit.

Bill Benning did not keep them waiting long. "Fellows," he came to the point quickly, "I think you all know without being told why I am here. Our service on this Oakland-Portland division has been rotten. Of course you all know, too, that the Hunter Aircraft outfit are after this route.

"If we don't get through better, they've got a good chance of copping our contract. They're raising a hell of a holler; and when old Jim Hunter gets to hollering he can make more noise than a pack of coyotes.

"Now the idea is this: we've got to get the mail through on this run in spite of hell and the weatherman! If winter flying conditions and three hundred miles of mountains are going to put a crimp in the air transport business, we'd better kick the whole works in the tail and go to packing the mail on mules."

Benning's eyes swept the group of silent men. "But to put it straight from the shoulder," he resumed, "I think the weathermen are a bunch of calamity howlers and they've got the rest of you bluffed. All except Casey. He goes through, and that's what convinces me that it can be done. Now what are you going to do about it?"

Phil Thornton's eyes went to Mack with no effort to conceal his resentment. "We don't all have as much luck as Bugs, you know," he spoke with sneering emphasis.

Casey glared at him. He did not like that cognomen Bugs. He had acquired the name through his exploits in flying, but it was unjust. The apparently reckless chances he took he did not consider as chances at all. Casey was a good flyer and it was not to his discredit that he knew it.

He had absolute confidence in himself and an aircraft was as much a part of him when he flew it as the wings of a bird are a part of the bird itself. In other words, Casey Mack was the acme of perfection in a pilot; he felt his plane. He did not fly it; he flew with it.

But the flying fraternity misjudged him. It dubbed him Bugs because it misunderstood him and it construed his ability as luck.

"Well," Benning answered Thornton, "I notice Casey doesn't crack up any more planes than the rest of you, and he gets the mail through, luck or no luck."

"That's all right to say when Bugs has the northern hop," Phil argued. "You can make that almost any kind of weather. But nobody but a damned fool would hop south on a day like this. It's raising all hell around Shasta and you can't get around it or above it."

Bill turned to Casey. "How about it, Mack; think you can go through?"

Casey paused. "That's Phil's run," he answered after a moment. "I'm not jumping out on his hop. That's up to him."

Benning chewed savagely on the black cigar in his mouth as he glared impatiently at the other.

"What's the matter, Bugs?" Thornton inquired irritatingly. "I thought you could fly in anything, anywhere."

A SLOW, unamused smile came over Casey's face. "Well, Phil," he spoke distinctly, each word edged like a knife. "If that's the way you feel about it, I'll make you a proposition. From now on, you take my hop north and I'll take yours south."

The sneer on Phil's face left suddenly. He stared at his rival in complete silence.

"And if you don't want to do that," Casey went on after a moment, "I'll take your hop south, anyway!"

"That's the talk," boomed the president. "From now on that's going to be your hop, Casey. When will you be ready to take off?"

"Right now," said Casey.

"Good!" grinned Benning. "I'll have the mail loaded on the plane and wire ahead you're coming."

He went out with the others, leaving Casey and Phil alone. Phil rose, glaring sullenly at his rival, while the latter slipped into his heavy flying garments again.

"You just think you're playing hell, don't you?" he sneered. "Oh, I know what your idea is. You're trying to make an impression on the old man. But you're feathering your nest with pretty poor stuff, Bugs. You may impress the layman with your deeds of bravery, but to real flyers, you're just a damned fool;"

Casey took a step forward, his fists clenched. Thornton waited for him, but the other stopped. He stood an instant, then relaxed.

"No," he said with a steely smile. "I'm not starting anything this time, Phil. I've got a job ahead of me. And anyway, the time's going to come when we'll find out who's the best flyer. We'll settle this little argument then. So long, Phil!"

He went out, leaving his rival still standing there.

Bob King had the plane he was to take out all ready

when he went to the hangars. The mail was loaded and with a quick examination of the ship, Casey climbed into the cockpit. "Off!" he yelled to Bob, standing by the propeller.

The mechanic swung the steel blade a half dozen revolutions. He brought it up to the right position. "Contact!" he cried to Casey.

"Contact!" replied Casey switching on the ignition.

Bob poised himself and swung the motor over compression. It fired, went over a turn, kicked back; then Casey picked it up with the throttle and it went off with a roar. It was seldom Casey failed to catch his engine the first crack, a thing few pilots could do.

Casey let the motor warm up. As the temperature rose, he pushed open the throttle more and more. The motor took hold and he pulled back on the joystick to keep the tail down. He watched the tachometer come up as he gave her the gun.

Sixteen—seventeen—eighteen hundred and above; the engine revved up perfectly. He listened to the mighty pulse of it; then he shook his head slightly as he cut the gun and switched off the motor.

"Don't like this baby," he announced, climbing from the cockpit. "That engine doesn't feel right. I'll take my own ship. I know it'll work."

Bob King, hands on his hips, looked at him in mingled surprise and resentment.

"Say! What's the big idea?" he growled. "I serviced this ship. What's the matter with it?"

"I don't like the feel of that motor, that's all. Get my ship gassed up and the mail in her," Casey directed.

BOB KING took off his cap and flung it to the ground. "Well, I'll be damned!" he said heatedly. "Telling me, a mechanic, that that engine isn't in shape! Why the hell don't you run the whole bloody business yourself?"

"Listen, baby!" Casey shot back. "When I fly in this kind of weather, I pick my own ship, and don't forget it!"

In a few moments, the service men had his ship gassed up and loaded, and he was off through the fog. He set the plane on its course, steering blindly by the use of the turn indicator and keeping the grade indicator on a steady climb. Five minutes after leaving the field, he broke out of the fog into bright sunshine. Ahead of him, towering into the sky, was a great bank of white clouds marking the first range of mountains.

Casey climbed the ship till his altimeter read eight thousand feet. Still the clouds towered above him, but he knew the highest peak on the range was not over seven thousand feet. It gave him a thousand foot leeway. Keeping dead on his course, he plunged into the obscuring cloud.

Again he navigated entirely by instrument. Keeping the motor revved up to around seventeen hundred revolutions a minute, the plane maintained an air-speed of better than a hundred miles per hour. At this speed, Casey knew it would only require a very few minutes to cross the range.

On the other side he expected to break out of the clouds over the valley below and get some idea of the most likely place to strike the expanse of rough country beyond. The allotted time passed and the cloud remained as thick as ever. A few minutes more Casey held to his course without sighting a break anywhere.

"Too high," he decided, throttling the motor down and putting the plane into a steep glide. From the weather report, he knew he was entering the storm area. The plane was not flying smoothly as it had been. Rapidly the air grew rougher. The plane tossed and lurched, compelling him to watch the bank indicator constantly to keep the ship righted.

By dropping down, Casey hoped to get below the clouds over the valley and there make the passage beyond. As he lost elevation, he began to encounter snow and sleet flurries. Soon he had dropped to four thousand feet and the clouds began to break. He knew the valley was around three thousand and he began circling to come down more slowly. Snow was falling continually now and as he came nearer the ground, cross currents and pockets made the going precarious.

Presently, he saw a break in the clouds and made for it. It was closing rapidly, but he could see the dark outline of the ground beneath and he dove into the opening. As he hurtled through it, the air cleared for a moment and the ground seemed to rush upward to meet him.

He gave the engine the gun, pulling back on the stick as he did so. The plane shot forward into the clear, flattening off a scant hundred feet above the ground.

CASEY felt better now as he headed across the valley just under the low hanging clouds. He ran into snow, rain and sleet by flurries and often all three together. They were not heavy enough to bother the plane, but with the strong wind that was blowing, it was nasty work piloting so near the ground.

Approaching the end of the valley, Casey searched

for an open pass through the mountains. Clouds hung heavily to them and he swung east along the line in the hope of finding an opening. A few miles that way, he knew, was Mount Shasta, hidden by the storm, towering to a height of fourteen thousand feet.

Its presence there precluded any attempt to climb above the storm, for Casey knew the absolute ceiling of his plane was not over ten thousand feet. Besides, if he went up high enough to be safe, he knew the storm would be so terrific that, flying blindly as he would have to do, the ship might not stand the strain. No; if he got through at all he would have to go under it.

Through the line of mountains to his right, the mouth of a narrow canyon came into view out of which a river belched into the valley. At once, Casey saw that it was clear of fog at least for a way. He swung the plane toward it instinctively.

As he approached, a sudden feeling of apprehension stole over him. The canyon was very narrow and the clouds pressed close down upon it. At best it would be a precarious passage. It might take him through—and it might not. Behind him was the valley; he knew he could land safely there and—

"Never!" The word broke from his lips and was torn away by the wind. His left hand gripped the joystick as his right pushed open the throttle. The plane jumped ahead and plunged into the mouth of the canyon.

All uncertainty was gone from him in a flash. The machine was again a part of him; he felt no more concern than if he had been on the ground, walking through the storm.

Mile after mile spun behind him as he hurtled through the narrow passage. The air-speed indicator showed close to a hundred and twenty miles, but he knew his actual speed was nearer eighty because of the strong head-wind.

It ripped through the canyon in cross currents and waves and tossed the plane around like a cork on rough water. Casey looked through the chaotic forces with apparent coolness and unconcern. But his nerves were tuned to every movement and sound and feel of the plane as though they reached beyond him and to the machine itself.

As he probed farther and farther back into the mountains, gaining elevation with the ever dwindling stream below, conditions become worse and worse. Snow squalls came now with blinding intensity, cutting down his visibility until often he was steering by the merest outline of the canyon. At last he realized he was getting up near the head. At the same time he saw that at the higher elevation, the snow had turned into sleet, the airman's worst enemy. Quickly it began to pile up on the wings and fuselage and cling to the propeller.

CASEY gave the motor full throttle as he zoomed out of the dwindling canyon in a steep climb. In an instant he was enveloped in a swirling, seething chaos of white. The plane lurched and twisted like a wounded bird; he piloted by feel alone now, for even the instruments would not respond to the crazy antics of the machine.

Up and up he continued in wide circles, his ears listening to the even pulse of the motor, his eyes watching the tachometer needle as it held steady above the nineteen hundred mark. The tide of the battle hung on the engine.

If the deluge of sleet which collected continually on the plane should short-circuit one or more spark plugs and the cylinders cut out, it would only be a matter of minutes before the ship would be forced down by the sheer weight of ice which collected on it. His one chance now was to climb above the storm center before the rapidly collecting weight cut his ceiling to such an extent that he could not climb above it.

Slowly, very, very slowly, the altimeter registered the plane's ascent. At almost six thousand feet the white deluge continued with only a slight let up. The engine was droning like a stricken bee that flies until the end. Buffeted by the intensity of the storm, many fold worse than at the lower levels, Casey fought to keep the nose up almost to the point of stalling.

Though the engine was running wide open, the airspeed had dropped so far now that the plane was almost unmanageable in the seething forces. Another five minutes and Casey knew that he would be forced down.

But that five minutes never came. As the plane reached its absolute ceiling, the clouds commenced to break. The heavy fall of sleet stopped suddenly. Casey straightened out on his course and the plane shot forward as it levelled off.

For ten minutes he plunged through the fog, the engine still wide open, steering entirely by the turn indicator. At the end of the time, the air had smoothed down greatly; then suddenly he dived out of the mist and into bright sunshine.

An hour and a half later, Casey came down through the dispersing fog over the north-east arm of San Francisco bay and a few minutes later landed easily at

the Oakland airport. He taxied his plane to the hangars where a group of anxious men awaited him.

After he had idled the engine a moment to cool it off, he climbed unconcernedly from the cockpit. But as he did so, he paused just long enough to pat the joystick in a gesture of almost affectionate appreciation.

"You were sure lucky," the radio man told Casey a little later. "Shorty Hite—one of the reserve pilots, you know—got all hepped up after you gulled out and volunteered to take the mail north. I just got the report chat he went down in the mountains and cracked up his ship completely. He got it pretty bad, too. I guess he knows now that everybody doesn't have the old horseshoe flying along with them."

Casey withheld his resentment. "What happened?" he asked.

"Engine went on the bum," replied the other. "It wasn't his fault."

Casey smiled tensely. "No—I don't suppose so," he spoke, more to himself than to the other. "And it may be luck that I made it. But I turned down that ship because I knew it wouldn't go through!"

With almost unceasing fog and storm over the entire route, the winter dragged by slowly. Yet to the air mail pilots, it hardly could be said that it dragged. Each day came all too quickly and with each day came new adventures.

Though they passed over the same routes every day, never was it the same. For conditions change when you hurtle through the air at two miles a minute, and there was always that unknown quantity to make things interesting.

LUCK or no luck, Casey Mack's record over his division was enviable. Throughout the winter, he made his schedule consistently and almost to the minute. His forced landings could be numbered on the fingers of one hand. And when spring rolled around he was still using the same plane without a crack-up.

Enviable record that it was, it had not helped appreciably his reputation as a flyer. The cognomen, Bugs, still clung with him. Even the newspapers had taken it up and had singled him out as a daredevil, playing up his every move far beyond the facts and forever stressing the luck that guided his destiny.

Casey writhed bitterly under it all. It was not of his doing, but he got the credit for playing for publicity. While, as Phil Thornton had said, among real flyers he was being called a damned fool.

After that one encounter at the airport, Casey and Thornton met seldom. When they did come together, neither had time to press the differences between them. Soon after Casey had taken over his division, Phil had been transferred to Los Angeles as a test pilot for Bill Benning's aircraft plant there. Bob King, too, was called south as special mechanic for a new series of high speed planes Benning was putting out.

These moves were incident to the West Coast Aeronautical Exposition which was to be held in the south in the middle of August. As the summer progressed, preparations were made throughout the aircraft and air transport industry for the event. There was going to be competition of all sorts and for every type of plane.

Casey heard a lot about the Exposition. As the opening day approached, he passed many of the planes and pilots on their way to the competition as he made his daily hop north and back.

Though he was interested in the event, Casey's time was taken up entirely with his route. With the perfect flying conditions of summer, he was breaking in a line of new and larger planes to take care of the increased volume of mail.

The Exposition was well under way when Casey received a long distance call from Benning. He had just landed at the northern terminus of his route and found the call waiting for him.

"For the Lord's sake get down here just as fast as you can!" Bill stormed over the phone. "I'm in a devil of a pickle and you've got to be down here by three o'clock!"

"Holy cats!" exclaimed Casey. "What do you think I am? It's after eight o'clock now. I can't drop the mail and get down there by that time."

"Damn the mail!" roared Benning. "Give it to one of the reserve pilots. You've got to get down here by three o'clock, get me?"

"But I don't know that I can do it even with an empty plane. What's the idea anyway?"

"I say you've got to do it! And the idea is that Thornton, the damned outlaw, has double-crossed me! He was set to pilot my new Z-7 racer. This morning, when he thought I couldn't get anybody, he jumped out on me.

"He's going to pilot for that low-life Hunter outfit. They bought him off because they know dam' well I've got the fastest line and there is no other man down here who can handle this Z-7 Special."

"Then what do you want me for?" asked Casey. "I

don't know that ship any better than probably a dozen men down there."

BILL BENNING went figuratively into the air at that. "I don't give a dam'!" he managed to get out when he had come down again. "I've got to have somebody and you're the only man I'll take a chance on without experience. With your luck and my ship, we'll turn the trick against that Hunter outfit."

Casey tensed at that. "My luck!" he breathed fiercely.

"What?" asked Benning, not catching the low spoken words. "Make it snappy," he went on when the other did not answer at once. "Remember that race starts right after three. So get going!"

"I'll see what I can do," Casey told him, hanging up as Bill roared something back at him.

"My luck!" Casey repeated again as he leaned against the wall by the telephone. "That's all he's thinking of. He's gambling on what he calls my luck. And if I win, what will I get out of it? Everybody will say it was my luck that did it!

"And to take a speed ship into a race without trying it out first—! Yes, they'll call me Bugs, all right! But they do anyway and— Dammit all! I will! Phil Thornton thinks he's putting something over. And if I can beat him, it'll sure make him crawl! And that dirty Hunter outfit needs to be smacked down."

Casey was out in a jiffy. He told one of the reserve pilots to get in touch with Benning for orders to take the mail; then he rushed to the hangar. He had no intentions of taking the big biplane with which he had come up and which was being used now on the run. It was too slow.

He knew the little monoplane which he had used all winter rested in the hangar as a reserve plane, all gassed up and ready. In less than ten minutes, he was ready for the take-off. As he taxied the ship to the end of the runway, his hand tightened on the stick with a feeling of complete confidence.

On that trip south, Casey forced the plane to the limit. It had been close to nine o'clock when he took off. That gave him just six hours to make better than eight hundred miles. He kept the motor revved up around nineteen hundred which gave him an airspeed of from a hundred and twenty-five to a hundred and fifty miles an hour, depending on his elevation.

When he had crossed the mountains, he dived down into the long, flat stretch of the Three Valleys, just clipping the tops of trees and farmhouses to gain every advantage of the denser atmosphere near the ground. The air-speed needle held against the hundred and fifty mark almost constantly now.

It was ten minutes of three by the chronometer on his instrument board when Casey sighted the field where the exhibitions were being held. He zoomed up to a higher elevation and circled the field to make sure it was clear for a landing. As he looked down on the hangars he could make out Benning, wildly waving his arms in a signal to come down.

There were several other planes circling the field and Casey fell into their course, spiralling down until he levelled off for his landing. Benning in his excitement almost ran into the propellor as Casey taxied his ship to the hangars.

"I knew you'd make it!" Benning shouted, clapping him on the back and wringing his hand as he climbed from the cockpit. "It's five minutes of three and the race comes off as soon as the one that's on now is over."

"Where's the ship?" were the first words Casey spoke.

BENNING took him to it and Casey made a hurried examination of the machine. Casey had never flown a real racing ship; nor had he ever flown in actual competition before. Casey sized up Benning's Z-7 racer with appraising eyes.

Though the Z-7s were Benning's new standardized line of sport ships, this particular one was a special. It was powered with a special twenty-four cylinder X motor developing eight hundred horsepower. The stand-dard Z-7s were three place machines, built to carry not over a three hundred and fifty horsepower standard radial.

Of course under the excessive power and the extra weight of motor, the plane was not balanced properly and at best would be a tricky thing to handle. But Casey had made up his mind to fly that ship; and when Casey had made up his mind, nothing stopped him.

When the plane was wheeled out of the hangar, it was lined up alongside of the Hunter Aircraft Company's entry. Phil Thornton was there and Bob King, who had also gone over to the Hunter people with Phil, was giving the engine a final examination.

"Well, if it isn't the Lucky Bug of the Benning line!" Phil sneered insultingly, as the two saw Casey. "What are you? Flying expert for Bill now?"

Casey smiled tensely. "Whatever I am, you're going to know I'm in the race," he answered. "Here's your chance to show me up, Phil."

"And I will, too!" snapped the other. "Luck doesn't count in this business, Bugs. You've got to be a pilot to

fly a speed ship. And you'll learn several things about that baby before you get through!" He laughed evilly.

Casey climbed into the cockpit and had the engine started. As he let it warm up, he was approached by one of the student mechanics who was just learning the business. The youth stepped up to the cockpit where he could shout in Casey's ear.

"For God's sake don't take this ship up!" he warned. There's something wrong with it. It's got a bug!"

"A bug?" said Casey, surprised.

"Yes!" the other yelled in his ear. "Phil Thornton has been testing it. I heard him tell Bob about it before they jumped out on us. I don't know what it is, but it's a bug of some kind!"

Casey listened with no apparent emotion. He knew what a bug meant; it was the popular name given to unaccountable faults slipping into aircraft construction. They developed unexpectedly in flight and when they did, almost anything might happen.

Casey saw now the meaning of that evil laugh of Phil Thornton's. Phil had tested this plane and knew about the bug. He was deliberately letting him—Casey—take the plane up when it was nothing short of a flying coffin.

CASEY was white with rage at the diabolical scheme of the two traitors. His first impulse was to jump from the cockpit and, with the automatic which was still strapped on his hip from the mail route, confront Thornton and the mechanic and shoot them down as they deserved. But there was a better way, he decided. He would beat Phil Thornton at his own game!

"Thanks for the tip," Casey told the other. "But I'm taking this ship up anyway. I'm going to beat that snake Thornton if it's the last thing I do! Do me a favor and keep the thing under your hat."

The student agreed reluctantly and Casey's hand knotted on the stick as he revved up the great motor. It roared out its mighty challenge. Casey's spirit cried out with it; his very heart seemed to pulse with that giant of power a few feet ahead.

A few minutes and the blocks were taken from the wheels and Casey taxied out on the field along with Phil Thornton and the one other entry. The three pilots had received their instructions. The race was to be in direct competition for twenty-five miles around a five mile triangular course. The three entries would be paced around the course once and with an even break the race would be under way.

Casey was first to take off. Though he had never flown this type of ship before, his take-off was perfect. The fact that the plane had to reach a speed of close to a hundred miles an hour before it could rise, did not cause him to attempt rising too soon.

When the wheels left the ground he pulled gently back on the stick and the plane mounted easily into the air. While the other two and the pilot ship got under way, Casey circled the field putting the Z-7 Special through a short test of his own to get the feel of the ship and try and find the bug. This last he did not accomplish.

In a very few moments, all four ships were in the air and maneuvered into position beside the pilot ship. As they swung into the straight stretch for the start, the planes were like three unruly horses lining up for the gun.

Casey stuck with the pilot ship, while Phil Thornton and the other entry fought with each other for the break. When the signal was given to start, Phil was ahead several lengths while Casey broke from the pilot ship in the last position.

For the first lap. Phil built up a good lead on the third entrant and the Z-7 Special still lagged behind both. Casey was throttling up slowly. He studied the air-speed indicator and the tachometer carefully to learn the relationship of engine revolutions to the speed of the ship. At a hundred and ninety miles an hour, he began overtaking the plane ahead of him.

He tested the stability and general maneuverability of the ship; it responded perfectly to the controls. He throttled up at more than two hundred miles per hour, and on the first of the third lap he swung into second place, creeping slowly up on Thornton, who still maintained a good lead.

AROUND two sides of the course on the third lap, Casey let his ship continue as it was. The tachometer registered slightly over eighteen hundred revolutions per minute and the air-speed two hundred and five miles. Flying about a hundred feet from the ground, the Z-7 still performed perfectly.

Casey began to wonder if the bug in the ship wasn't, after all, only another trick of Phil's to scare him out. His spirit rose in a leap. The motor which beat deafeningly in his ears was not running near up to capacity. It was rated up to between nineteen fifty and two thousand revolutions. That gave him close to two hundred revolutions in reserve, and even now he still continued to overtake Phil slowly.

As they swung on to the fourth lap, Casey pushed open the throttle. The big motor took hold and at the same instant, the plane pitched suddenly to the right. Casey shifted the stick quickly to the left—but the plane did not respond!

Over it went still farther, nosing down as it did so. Casey tried to counteract the imminent plunge with the elevators, but like the ailerons, they seemed to have no effect on the ship.

At upwards of two hundred miles per hour things can happen quickly. Had it been a matter of thought in the next fraction of a second, the race would have been over for Casey Mack. But flying was not a matter of thought with Casey.

With inconceivable speed as the ship went into the spin, Casey cut the gun and swung the stick hard to the right and slightly forward. The ship responded to that move and went over on its back. Casey kicked the rudder bar around to check the swing of the tail and with the stick, stopped the roll.

On its back the plane held stable. As it plunged toward the ground, he gave her the gun again, pushing forward on the stick as the engine took hold. Upside down and under full gun, the ship now responded to the controls. With utter coolness, Casey saw the blur of the ground approach within hardly more than inches of his nose. The next fraction of a second it was dropping beneath him again as the plane zoomed up!

At a safe altitude, Casey throttled down and brought the ship right side up. At the lower speed, it handled perfectly again in that position. He throttled up again to two hundred and five miles where he knew the ship would function; then he looked about him.

THE WHOLE THING had happened so quickly that he had scarcely moved out of the course and had lost practically nothing. He continued as he was for the remainder of the fourth lap and into the last. He was content now with the slow gain on his rival, though at that rate it was certain he could not win the race. But Casey did not stay behind because he was afraid. He had found the bug, and with it he had made another discovery.

Half way around on the last lap, Phil Thornton led Benning's Z-7 by a scant three lengths. Phil was coaxing his motor now as a jockey coaxes his horse. He succeeded in getting a little more speed and Casey's steady approach was lessened.

Phil came out of the bank as quickly as possible and straightened out on the home stretch, trying to swing the ship into the other's course. But Casey did not come out of the bank. Instead his plane went clear over and on its back. In that position, it suddenly seemed to jump forward. The great motor, turning now under full gun, roared its mighty challenge as it swept up to the other plane and *past!*

Casey's head was ringing from the rush of blood to his head caused by the prolonged inverted position and the terrific speed of that roll. Up in front and so that he had to throw his head back to see it, the finish line seemed to approach very, very slowly. The weight of his body was straining against the straps that held him in. He was rapidly growing dizzy.

He glanced at the air-speed indicator; it was hard against the pin at two hundred and twenty-five miles per hour. A few seconds later, through the red mist that was forming before his eyes, he saw that he had crossed the finish line.

Weakly he cut the gun. His head was swimming, but enough sense of equilibrium was left him to bring the ship right side up and keep it there. He circled the field, a giddy feeling creeping over him rapidly.

He fought for consciousness. Another moment and he brought the ship down on the field at its terrific landing speed. He clung to the last spark of consciousness till the plane came down to a safe speed; then everything seemed to slip away from him.

A crowd of white-faced men took him from the cockpit and got him into the quarters at the hangars. Not the least of these was Bill Benning.

When Casey returned to consciousness a short time later, he heard Bill talking:

"Sure it was a fair win!" he was saying loudly. "Bugs or no bugs, he finished first and I guess Casey Mack gets the five thousand first money. And that skunk, Thornton, is going to have his license revoked permanently, along with his cohort, Bob King, who's going on the blacklist.

"I got it straight those two knew that ship had a bug; but they overlooked the fact that there are bugs—and BUGS. But from now on Casey Mack is not going to be called Bugs if I can help it. Because he's the best flyer in the business.