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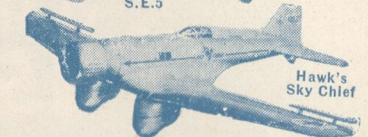
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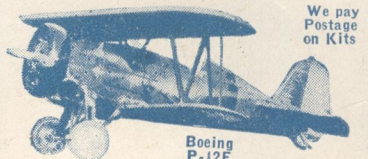
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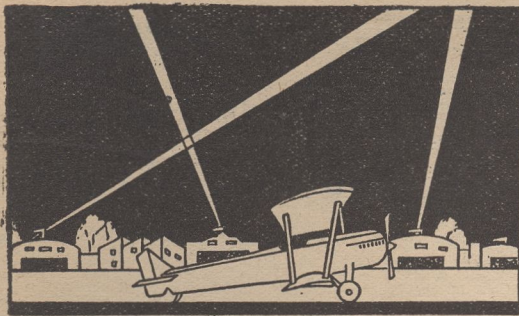
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FLYING ACES

A.A.WYN, *Editor*

VOLUME XX

APRIL, 1935

NUMBER 1

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Satan's Shroud

PHILIP STRANGE PLAYS A NEW GAME WITH DEATH!

★ ★ ★

CHAPTER I

MURDER MAGIC

IT was the theater hour in Paris, and the *Variétés* was filling with a war-time crowd. Few noticed the gray-haired A.E.F. colonel as he strode through the throng in the lobby. Those few saw only another stiff-necked Brass Hat strutting by, a golden pince-nez perched astride his haughtily tilted nose. No one could have seen, under those pompous features, the lean and whimsical face of Philip Strange, the phantom ace of G-2.

Beneath his clever make-up Strange hid a mounting excitement, but not in anticipation of what the *Variétés* offered. Nor was it the hint of a queer problem, though that would have been enough to stimulate his jaded mind after days of inaction. It was the last of Jordan's messages which had quickened his pulses.

For within two hours he would be reunited with Tom and "Noisy" Jay! Perhaps on some dangerous mission—but reunited!

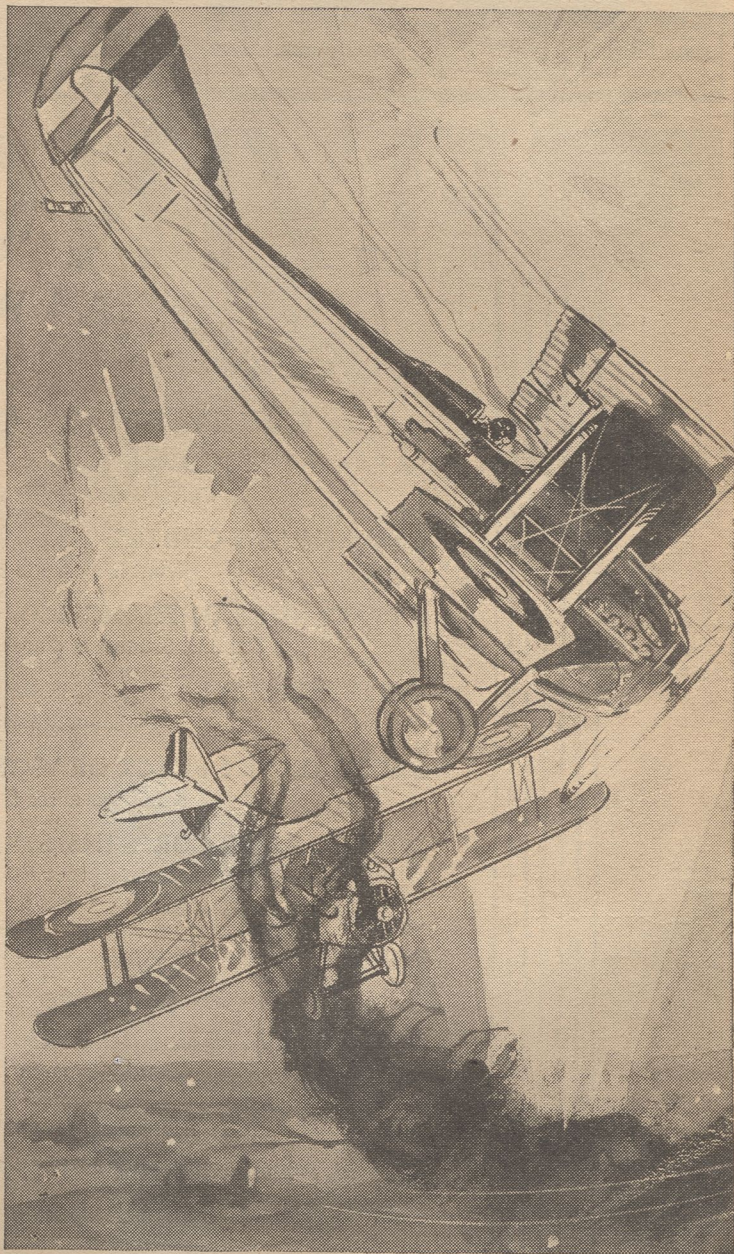
Strange was literally coming back from the dead. Like the others at G-2, his young, wise-cracking twin aides had accepted the story of his grim death in Germany. A German spy's burned body had been mistakenly buried as that of the hated "Brain-Devil." The green eyes back of the nose-glasses were bitter as Strange remembered. Too many of his comrades in G-2 had been murdered in that last venomous drive against him. There had been but one thing to do. Captain Philip Strange had remained officially dead.

Only Jordan and two others had known that he still lived—until now. Like a ghost, he had flitted through two missions, one glorious interlude, and then again, dragging days and gnawing loneliness. But now the Jay Birds knew! He would see them again, feel the grip of their hands, hear their cheerful banter.

A momentary qualm seized him as he followed an usher toward the stairs to the upper boxes. He was not following Jordan's directions to the letter. He had received the wireless at his secret base. It was unusually long; but he recalled it without effort:

"Orchestra ticket tonight's performance, *Théâtre des Variétés*, awaiting you Hotel Crillon, in name of Major John Faris, Air Service. Wear major's uniform, pilot's wings, Croix de Guerre with two palms. Be in seat before nine o'clock. Have told Jay twins about you. They will contact you there for emergency duty. Further orders through them."

The message had come in Strange's own stencil code, the only cipher which could not be broken without the use of a special block-out pattern. There was no question in his mind about the message. Jordan and he were the only ones who possessed the stencil patterns, and wild horses could not have dragged the key out of the



Illustrated by Eugene M. Frandzen

stocky G-2 chief; he was positive of that.

But months of espionage, with German agents forever on his trail, had made Strange wary. He had decided to inspect the place of rendezvous before assuming the rôle Jordan had indicated. He had the major's insignia, the wings, and the Croix de Guerre in one of his pockets. It would be easy to slip out and make the change, then go to the seat on the lower floor.

THE box was the first in the balcony level tier. The usher handed Strange a program and his ticket stub, then departed. As Strange stepped between the half-parted curtains, he heard a low voice speaking.

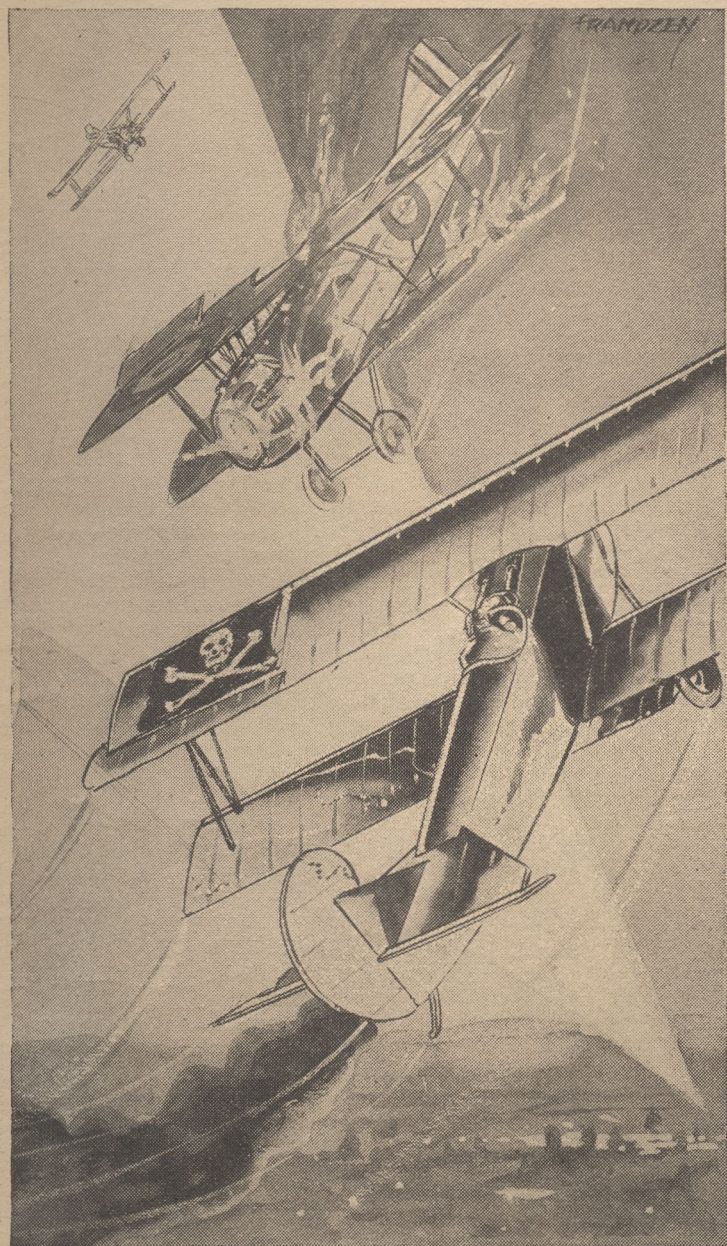
"I tell you, Willemby, it's ruining the whole R.F.C. If this Black Flag mob isn't stopped—"

The words ended abruptly. Two men in British uniform stared back at Strange from the first two chairs of the box. One was a florid-faced lieutenant-colonel, the

GRIPPING "PHILIP STRANGE" MYSTERY NOVEL

By Donald E. Keyhoe

Author of "Raid of the Red Reaper," "Claws of the Hawk," etc.



The Boche in front darted up in a climbing turn, but Philip Strange's Vickers poured a withering blast into the death's-head Fokker's tail.

other a lanky, sun-bronzed major. After that brief stare, they turned their backs and were silent.

Strange took one of the empty chairs, adjusted his pince-nez and gazed importantly about the theater. The house was almost filled, for it was nearly time for the curtain. He looked at the boxes on the opposite side, then let his eyes wander over the orchestra section.

The seat Jordan had designated was in the fourth row, eighth from the right center aisle. The ninth and tenth seats were also empty. Strange's green eyes gleamed. Those must be intended for the Jays. Perhaps in a few moments he would see them come in.

A sharp, ferretlike countenance caught his glance. He recognized Jacques Rosseau, a French Intelligence agent from the Deuxième Bureau. Rosseau was wearing American uniform, and he was directly behind the first vacant seat. Strange hid a start as he recognized

Not one of the many G-2 agents of every nation who were planted in that crowded Paris theater knew Philip Strange as he peered down from a curtained box. Not one suspected that he held a ticket for one of those three strangely empty seats on the aisle. But Philip Strange shuddered, for he alone knew that Death lurked behind the scenes—Death was ready to ring up the curtain on a gruesome show—and Death's invisible aids were already in those three vacant seats.

three more Sûreté agents, two in the sixth row, one farther down and near the vacant seats. Two of the men had pretty French girls with them. Strange suddenly remembered having seen one of the girls at the private office of Commandant André, in the Deuxième Bureau.

With growing amazement he saw still other Allied agents—Dix Harrison of G-2, one of Jordan's best men; Carstairs, ace of British Intelligence, in a French uniform; Luttre, the plump little Belgian, dressed as an English captain.

Swiftly, Strange's eyes traversed the adjacent seats. In less than a minute he had identified a score of Allied agents, known to him through missions with the various Intelligence forces. Seven or eight of them were women who worked with agents of their own headquarters. Apparently, they had been sent here tonight so that attention would not be attracted by a solid block of men. A few of the men were in civilian clothes, but most were in uniforms other than their rightful ones. There were still others whose faces were unknown to Strange, but who he shrewdly suspected were also Intelligence men.

The emergency Jordan had mentioned suddenly assumed a greater importance in Strange's mind. The matter must be grave, to cause such a concentration of star agents. He watched them keenly, though his face showed only a bored expression. They did not seem to be aware that agents of other than their own armies were near them, though that might be good acting. Most of them appeared to be—Strange stiffened. They were all watching the three empty seats!

He could see the sidelong glances of those to right and left of the vacant seats. He saw Rosseau's eyes dart toward the aisles each time a newcomer paused near that row. There was ill-concealed eagerness in that ferretlike face. Strange frowned. Something was wrong here. Jordan certainly would not have broadcast the truth about him, and if he had, it would not explain that assemblage of Allied spies.

The house lights dimmed and the curtain went up. Strange turned his attention briefly to the stage, his mind puzzling over the gathering of agents. The show was a variety bill, with acrobats and jugglers for the opener. The two Englishmen in front of Strange watched for a moment; then one turned to the other with an impatient gesture.

"A lot of silly rot, that. Too bad we have to wait through it to see Celeste."

"She's worth waiting for," said the other. He drummed his fingers on the rail of the box, glanced

over his shoulder at Strange. Then he spoke to his companion in a lowered tone, using a foreign tongue. With no intent to eavesdrop, Strange found himself listening. There were few foreign languages he did not know. In the unhappy days of his public appearances as a youthful "Mental Marvel," he had learned a dozen major tongues, beside the mathematical and telepathic accomplishments which had startled audiences in several parts of the world. Since then, he had added a score of other languages.

He quickly recognized the Englishmen's words as Hindustani, confirming his first impression that they were British regulars with service in the colonies.

"This Black Flag squadron you mentioned," said the major, "I don't see why it hasn't been stamped out by now."

"No man likes to go against certain death," muttered the other.

"But they can't be invincible—"

"It isn't that, though they're the fiercest *Staffel* on the Front, in my opinion. But their secret is simple. Any man who downs one of their group dies soon after, and usually a terrible death. If they don't get him in the air, they track him on the ground, murder him—or carry him off and torture him."

"But, good Heavens, there must be some way—"

The rest was lost as the orchestra blared out to emphasize a tense moment in the act. In a few minutes, the second act came on, a dancing sketch. It was followed by a featured act, announced as "Norwood, the Yankee Magician."

Just before the house lights dimmed, Strange took a quick glance below. The three seats were still vacant. Rosseau was restlessly watching the aisles.

THE curtain went up on the usual scene of magic paraphernalia. The magician, clad in correct evening attire, came forward and began his act with several sleight-of-hand tricks. Strange felt a faint stirring of interest as he saw that it was the same Norwood who had once been billed with him at the Palace, in New York. His eyes narrowed, a second later, as he remembered another who had played on that bill—a man he now had good reason to hate.

As Norwood finished his deft manipulation of a deck of cards, he motioned to his assistant, who had remained in the background. The other man came forward, a slender young man wearing a distinctive livery not unlike that of a bell-boy. As Strange saw the youngster's face, he almost dropped his glasses.

It was one of the Jay twins!

In a daze, Strange watched the next few moments of the act. This development was totally unexpected. The Jays had both been in vaudeville, doing a twin skit, he knew. But that had been before the war. What could be their connection, G-2's connection, with Norwood's performance? Was it a plant, so that the Jay Bird could watch the audience? But no, there were a dozen ways less conspicuous. Even now, he could see Rosseau and another French agent lean forward to stare at the Jay Bird. Obviously, they knew him, and were wondering.

It was Tom Jay, Strange saw after a minute. Noisy's manner was always a trifle more brisk, though only their intimates could tell the two apart. Tom had arranged a screen painted to resemble the Front, a few yards from which was a small section of barbed wire on crossed sticks. As he stepped back, Norwood waved his hand, and electric light bulbs flashed on top of each miniature pole. The magician stepped across to where a Lewis machine gun stood with its muzzle pointed into the air. He aimed the gun, pressed the trigger.

There was a series of muffled reports, such as a machine gun might have made at a little distance. Smoke curled from the muzzle. The lights on the sticks had gone out, and now inside each bulb appeared a live canary. The audience applauded. The magician bowed, nodded to Tom Jay, who spoke to some one off-stage.

The house lights came up brightly, and the footlights dimmed correspondingly. Norwood lifted the walking-stick which he had used as a wand, pointed toward two tall black cabinets at opposite sides of the stage.

"With your permission, ladies and gentlemen, I shall now place my assistant in the right-hand cabinet, fasten it securely—and cause him to vanish."

A feeling of uneasiness went over Strange. There was a taut note in Norwood's voice. He could feel a tension in the air, a presentiment of something ominous . . .

Tom opened the doors of the cabinets, while Norwood rapped inside them with his stick. Both cabinets were raised from the stage by small, rubber-tired wheels. As Tom finished turning them for the inspection of the audience, he stooped and connected an electric plug. Lights flashed on at the base of each cabinet. Norwood turned, smiled at the crowd. His tall figure was one of easy poise, but as he spoke, Strange again caught that hint of increasing tension in his voice.

"As you see, these are ordinary cabinets. I have had these lights turned on so that you can see beneath as well as all around the cabinets. And now—" he picked up a pair of handcuffs, secured Tom Jay's hands behind his back—"now, my young friend, I consign you to oblivion."

Tom Jay smiled, but a cold perspiration broke out on Strange's brow. He got to his feet, started toward the door of the box, one hand thrust under his blouse where an armpit pistol snuggled. Then abruptly he faced back. If he was right, there would not be time. . .

Norwood closed the first cabinet door on Tom, dropped the bar in place. Picking up a pistol from a prop table near by, he walked to the other cabinet and closed the door. A snare-drum rattled from the orchestra pit; then Norwood fired into the air. There was a blinding flash, and a report louder than that of an ordinary blank cartridge. The magician ran to the first cabinet, threw the door open. The cabinet was empty. Before he could reach the second one, its door flew open and there—apparently—stood the vanished Jay Bird.



STRANGE watched, eyes slitted, while the audience thundered applause. The trick did not concern him. It was a common one, usually done by means of twins. But there was something else. . .

He went rigid as there came a sudden yell from off-stage. Tom Jay's voice! It was muffled, but he knew it at once. Almost instantly there came sounds of a commotion in the left wing. A *gendarme* plunged out onto the stage, shoving aside two stage-hands who sought to hold him back. Gun lifted, he dashed toward the second cabinet.

"Raise your hands, pig of an *espion*!"

The second Jay Bird had leaped back toward the cabinet at sight of the *gendarme*.

Swiftly, he ducked back of it, seized the Lewis machine gun. The gun roared, and the *gendarme* fell, almost cut in two.

Until that moment, the crowd seemed to think it part of the act. As the *gendarme's* bleeding form sagged to the stage, a woman screamed shrilly. In an instant, the audience was in an uproar.

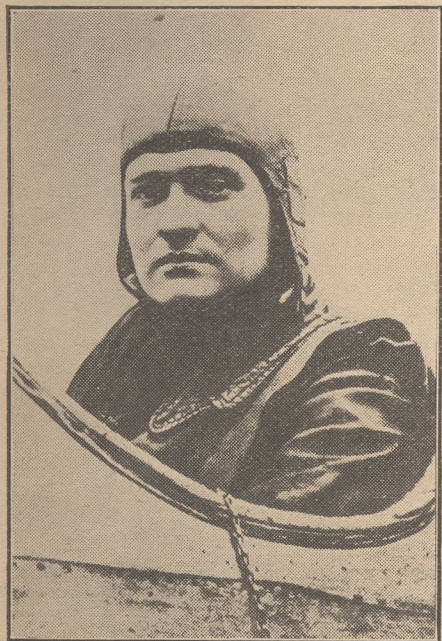
Frozen with horror, Strange saw the glaring Jay Bird whirl the spurting weapon. A fleeing stage-hand dropped; then the Lewis hurled its deadly blast over the footlights and into the terrified crowd. Straight into the group of Allied agents tore the slugs from the clattering gun.

Luttre, the little Belgian, pitched over the woman beside him. Strange saw Rosseau claw at his side, slump behind a seat. Carstairs had jumped to his feet, trying to save the girl who was with him. Suddenly his slight body shook as under the blows of an invisible hand. Still trying to shield his companion, he twisted about and collapsed.

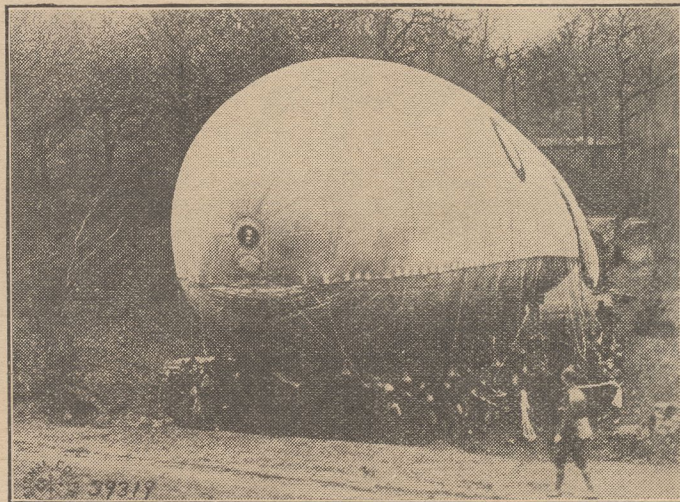
In that flash of a second, as the gun began to spout, Strange stood utterly stunned. Noisy Jay had gone mad!

(Continued on page 44)

Snapshots of the War

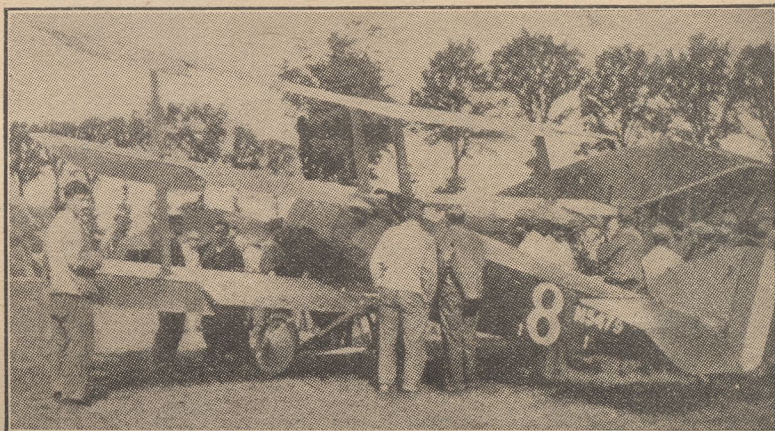
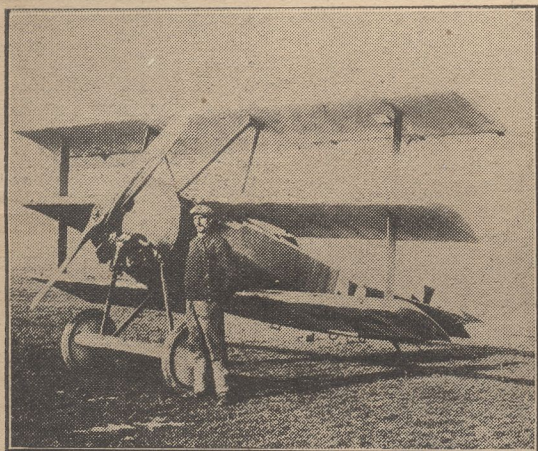


Left: One of the finest photos of Baron Manfred von Richthofen, Germany's greatest ace, who was credited with eighty victories. He is shown in the cockpit of his Fokker fighter, prior to going on patrol.

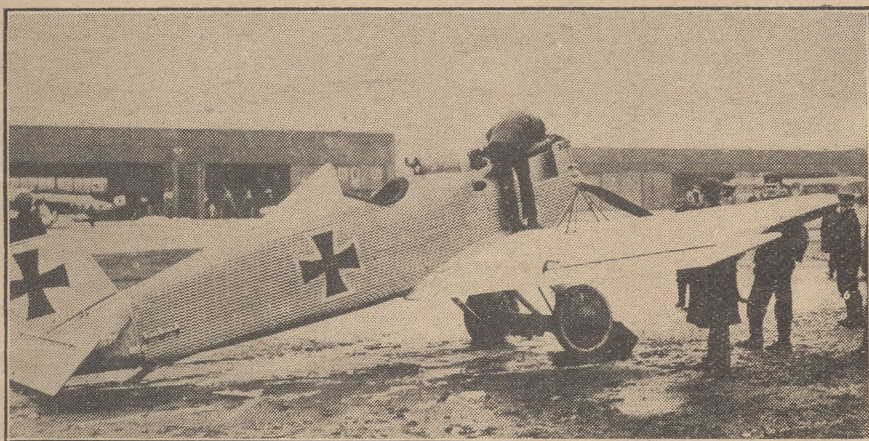


Right: An unusual picture of an American kite balloon being drawn out of its bed in the woods behind Verdun. This picture was taken on November 11th, 1918, when the big kite was going aloft for the last time during the war.

Photo from Signal Corps, U. S. A.



Here's an interesting contrast in triplanes. On the left is von Richthofen's pet triplane of the Fokker variety, showing the typical Fokker cantilever wing, Vee strut and German rotary motor. Standing before it is the civilian engine expert who cared for it. In comparison, we have, above, the British Sopwith triplane made famous by Ray Collishaw. Notice the broad interplane struts and ailerons on all six planes. The ship was powered with a Clerget rotary.



Above: The famous Junkers all-metal monoplane fighter D-1, displaying many trim lines of modern ships. The raised instrument board and the high headrest are interesting. It was powered with a 160-h.p. Mercedes. Few actually got to the Front, however.



Right: A war-time photograph of Herman Goering, who scored 21 victories for the Germans. Today he is Herr Hitler's right-hand man and Prussian Minister of War.



Official Photograph, U. S. Army Air Corps

Here's a take-off for you! This vivid photograph shows Corporal Cain at the very start of a parachute leap from a plane over Chanute Field, Ill. Somehow, the wing of that ship looks pretty safe to us!

BLUE sky with scattered clouds floating lazily across it. A mile straight down, Kelly Field, the eagle's nest of the Army birds of prey. A big observation plane wallowing through the air with a deep-throated roar. The high-pitched whine of three wasp-like pursuit planes maneuvering in tight formation.

Thus was the stage set for one of the most thrilling dramas in American aviation.

Like falcons harassing a dove, the S.E.5 fighters would swoop upon the back of their theoretical enemy, the D.H. observation plane, and then zoom straight up into the sky, swing over and dive for another attack. When the pilot of the lumbering D.H. kicked her around for a shot at the fighters, they would adroitly dart out of range of his guns.

The fledgling military pilots were keenly enjoying this game of war. It was great stuff. Cadet Charles Lindbergh grinned enthusiastically as the leader of the V formation headed down for another attack. The wind screamed shrilly on the strut wires, and the whole plane throbbed like a thing alive. Faster, faster the little group fell upon its prey. The D.H. loomed up in Lindbergh's sights. If this had been a real enemy, he would have him going down in flames before you could say Jack Robinson.

Closer, closer, it came, filled his sights; now it was all he could see. He was within a few feet of it. He yanked the stick back hard and his nose flipped up like the end of a cracked whip. Straight up he shot.

But let Lindbergh himself take up the story here as he told it to the Chief of the Air Corps:

"I passed above the D.H. and a moment later felt a slight jolt, followed by a crash. My head was thrown forward against the cowl and my plane seemed to turn around and hang nearly motionless for a moment. I closed the throttle and saw an S.E.5 scout plane, with the pilot in the cockpit a few feet away. He was apparently unhurt and getting ready to jump.

"Our planes were locked together with the fuselages nearly parallel. My right wing was damaged and had folded back slightly, covering the right-hand corner of my cockpit. Then the planes started milling around and the wires began whistling. The right wing was vibrating and striking my head at the bottom of each oscillation.

"I removed the rubber band on my safety belt, unbuckled it, climbed out past the trailing edge of the damaged wing and with my feet on the right side of the cockpit, which was then in a nearly horizontal po-

Chuting

WHAT IT MEANS
TO BE
A CATERPILLAR!

By

Lieut. H. Latané Lewis II

Author of "Outguessing Death," "Light-house Keepers of the Sky," etc.

★ ★ ★

sition, I jumped backward as far from the machine as possible.

"I had no difficulty in locating the release ring and experienced no sensation of

falling. The wreckage was falling nearly straight down, and for some time I fell in line with its path. Fearing the wreckage might fall on me, I did not pull the ripcord until I had dropped several hundred feet and into the clouds. During this time, I had made a turn and a half and was falling flat, face downward.

"The parachute worked perfectly, and almost as soon as I pulled the ripcord, the risers jerked on my shoulders, the leg straps tightened and the chute fully opened. I saw the other pilot above me, for I was now below the clouds, and the wrecked planes passed me about 100 yards to one side. They were spinning to the right and leaving a trail of fragments along the path. I



Official Photograph, U. S. Navy

This is what is known as letting yourself down easy! The jumper here is equipped with both chest and back parachutes—and he's using both of them in a nice, soft glide earthward. Wonder how long he'd stay up there if he had two more!

the Chutes

Picture a plane soaring serenely in the blue sky, while all about it, fleecy white clouds float lazily by. Then crash! Something goes wrong with the ship. It dips precariously, and starts a startling dive for the ground. There is only one thing the pilot can do—take to his parachute, and leap into space. No, he didn't ask to be enrolled in the Caterpillar Club, but when the time for initiation arrived—he jumped at the chance! Here are some stories of the Caterpillar Club and some of the exciting parachute jumps of its members.

★ ★ ★

watched them, still locked, until they crashed in the mesquite woods about 2,000 feet below and burst into flames a few seconds later. During the descent, I lost my goggles, vest pocket camera, which was in my hip pocket, and the ripcord and ring of the parachute."

Had it not been for the parachute which Lindbergh was wearing, he would have met a horrible death beneath that flaming pile of wreckage. But thanks to this bit of silk, which all Army and Navy pilots are required to wear, his life was preserved for further service to his country, and he was initiated into that exclusive group of flyers known as the Caterpillar Club.

FOG, the airman's Nemesis, has forced a great many pilots to leave their planes and stake everything on their silk life preservers.

Ordway Webster, an air mail pilot, had to bail out when he became hopelessly entrapped in a soupy fog while carrying the mail over Hell Stretch. He had taken off from Cleveland, Ohio, with a heavy load of mail, and had pointed the nose of the big plane eastward toward Hadley, New Jersey.

As he reached the low, bleak foothills of the Nittany

Lieutenant J. R. Tate being pulled off a Navy plane by his parachute. Looks as if he didn't mean to make that leap quite so soon.

Mountains, he saw that ahead the weather was fogging up. The ceiling was closing down and visibility was getting bad. In the distance, a blanket of gray fuzz was clinging to the mountain peaks. Webster roared along just below the dark, scudding clouds.

Then, with the suddenness of a tunnel in the path of an express train, the fog was upon him, blotting out everything outside the ship. Webster was an old hand at barging around in dirty weather and he began to fly by instrument. Wavering needles on luminous dials were interpreted by him into movements of his ship and he instantly, instinctively, made the proper corrections. A little pressure on one of the rudder pedals, a slight touch to the stick by his delicate fingers, and a dangerous tail-spin would be avoided.

Missing those mountain peaks while speeding along at two miles a minute was a little more difficult. They reared their sinister forms on every side like some labyrinth of old. It was as bad as trying to drive an automobile through traffic at high speed, blindfolded. But Webster managed to hurdle the towering, rocky heights without ever seeing them.

He glanced at his watch. Hadley ought to be down there below him somewhere. He was still flying blind, without once having caught a glimpse of a landmark. He began to feel for the ground, coming down in cautious dives. Each time he did so, trees shot past not fifty feet from his wings.

Going back up into the enshrouding murk to a safe altitude, he flew for some minutes longer. Then he came down again, trying to find the ground. Suddenly, he realized that he was no longer in fog. The air was clear. He strained his eyes for a sight of a light or other object on the ground. Instead of the flat fields of New Jersey greeting them, he saw the angry waves of the wind-lashed Atlantic.

Webster thought that it was Long Island Sound and continued on his course, climbing back into the mist. After fifteen minutes, he dived through the clouds and took another look. An icy hand gripped his heart. For there below him were still those mountains of wave and foam, reaching menacingly at the frail plane.

This could not be the Sound, he knew now. But what he did not know was how many miles out to sea he had flown. He looked at his gas meter. The thin, white needle was hovering dangerously near the empty mark.

Banking the ship around until he was flying northwest, he headed back, climbing into the clouds once more. After about half an hour, he calculated that he

(Continued on page 77)



Official Photograph, U. S. Navy



Introducing the author of this and many other FLYING ACES articles which you have read and enjoyed. Here is Lieutenant H. Latané Lewis II, wearing a seat-pack model parachute, the type used in the Army and Navy. Note his right hand grasping the ripcord ring.

Attack on San Francisco

THRILLING STORY BEHIND THIS MONTH'S COVER

By C. B. Mayshark

★ ★ ★

FROM across the Pacific a harmless-looking tramp steamer is churning its way to a point within five hundred miles of San Francisco. There is nothing about her appearance to arouse the slightest suspicions on the part of anyone. She is just like a thousand other tramp steamers—black and smoky and clumsy-looking.

As the ship nears the California coast line, it heads into the wind and drops anchor. Activity on deck is apparent as huge hatches are removed and the swinging arm of a derrick is brought into play. Terse orders are barked out, and obeyed with smart promptness. Military procedure appears to be the keynote of all operations—a thing unusual in a tramp steamer's crew.

An observer, if he had the good fortune to watch the activity unseen, would by this time begin to doubt the steamer's appearance. As a matter of fact, he could not help suspecting a warlike objective. Tramp steamers do not stop five hundred miles off San Francisco for the fun of it.

In San Francisco Bay, a batch of United States destroyers and cruisers are weighing anchor, preparatory to steaming out of the harbor and joining the rest of the fleet for operations off Catalina Island. The smooth lines of the fighting craft are set off in sharp relief against the blue hills of the Tamalpais range. Unlike other mechanical devices, they add immeasurably to the natural beauty of the surroundings, and as they slowly get under way, they remind one of a giant cat carefully threading its way through leaves and branches, only to bound into action with a roar as its prey is hopelessly pinned beneath it.

One by one, Uncle Sam's ships steam up the bay, through the Golden Gate and out into the broad Pacific. As they pass the hundreds of workers busily employed on the construction of the new Golden Gate Bridge, a spontaneous cheer floats across the still air from riveters and engineers alike. With a sense of proud security, the bridge workers drop their tools to gaze intently on each vessel as it passes beneath them. There is something awe-inspiring about the United States Navy, and it makes the men on the steel towers reflect upon the possibility of foreign invasion. Each Navy ship seems like such a mountain of strength and durability that an offensive move against our coastline by anyone would most assuredly lose. However, torpedoes that find their mark are seldom ineffective.

By this time, the tramp steamer has completed its work. Two Kawasaki two-seater torpedo planes are well on their way to San Francisco, and as they flash up over the horizon, their pilots see that they must hurry. Almost half of the destroyers and cruisers are already clear of the Golden Gate channel. The rest must remain inside.

As the two airplanes draw near, a cry of fear rings out. The bridge workers realize that this is not a friendly air visit. The torpedoes hung between the wheels of each plane give cause for grave doubt, and all operations on the Golden Gate span stop as the men scramble to places of safety.

But what is this roaring out from the mainland? Two Navy planes to the rescue! The approach of the two

foreign torpedo ships has been observed from a land station and, taking no chances, the C.O. has sent a couple of Vought landplanes into the air.

The pilots of the Navy planes, of course, figure the move a useless one. Nobody would torpedo United States cruisers or destroyers out of a clear blue sky, when there is no apparent motive, they think. Doubtless, the Navy pilots are unaware of a recent diplomatic breach between the United States and a certain Eastern power. They are unaware of the fact that a certain power considers itself Uncle Sam's equal and is out to prove it. Most of all, they don't know that a whole fleet is at that very moment charging across the Pacific, intent upon taking swift advantage of the preliminary work to be done by the torpedo planes.

The object being pursued by the invading power is simply this. As the fleet, or part of it, is departing from San Francisco Bay, one or more ships are to be torpedoed and sunk directly in the Golden Gate Channel, thereby making it impossible for the remainder of the craft to accomplish their scheduled departure. In this way, the attacking warships would be left more or less free to proceed with the bombardment of San Francisco and the near-by coast-line cities, thereby paving the way for the actual landing of troops. Of course, failure to bottle up the fleet in the bay would mean failure at the very start of the enterprise.

In the particular instance, some of the Navy fighting craft have already made their safe departure through the Golden Gate, but there are still numbers of ships which theoretically could be locked inside. Besides the ships that are in the clear, the rest of the fleet is still somewhere off the coast of southern California. These combined forces might possibly fight off the attacking navy, but that is doubtful.

The only course left open, then, is defense by air. Naturally, the attacking forces are well equipped with aircraft carriers and launching apparatus on all battleships. Quite possibly the combined strength of the Pacific Coast Army and Navy Air Forces might turn the tables completely and force the invaders into confused retreat. The whole affair would be a huge air battle, with both sides sending hundreds of planes into the air. If the invaders should win, California would be doomed. If Uncle Sam's ships came out victorious, the outcome even then would be problematical.

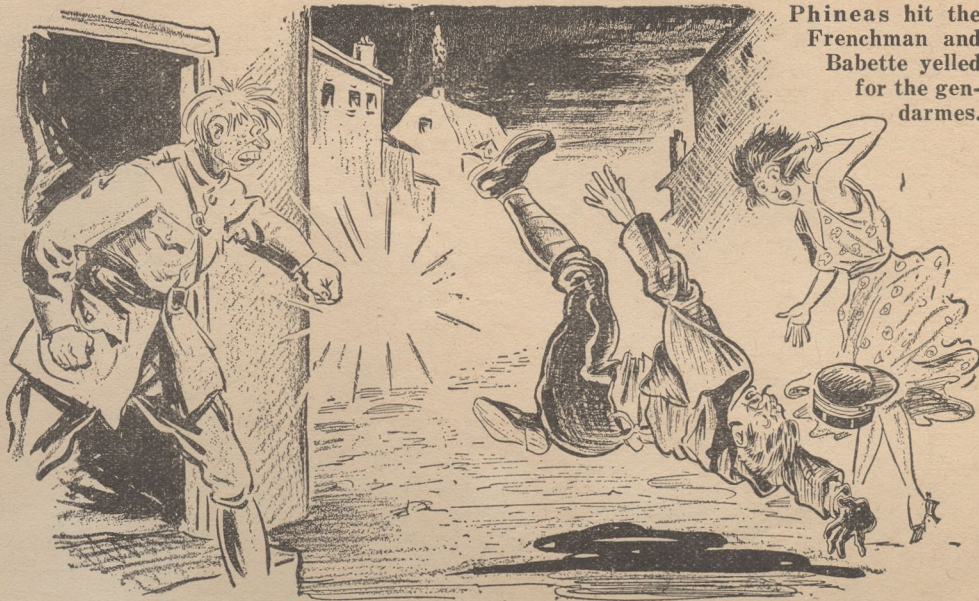
But to get back to the two torpedo planes bearing down on the Golden Gate. Will they accomplish their purpose and block off San Francisco Bay? Or will the Corsairs send them charging into the water?

No one can say what would be the outcome of such a venture, but this much we do know. Judging from the recent better understanding which has been accomplished between most of the nations of the world, and from the bitter lessons which we all learned in the last great war, we have good reason to assume the belief that no nation would care to or have reason to attempt a wholesale invasion such as the one fictitiously described here. We earnestly hope this to be the case, and we pin our hopes on the strength of the United States Army and Navy Air Forces.

WINNERS OF MISSING WORDS CONTEST NO. 10

First Prize—S. STEPHEN WEBER, Union City, N. J. Second Prize—MARION FERGUSON, Hollywood, Cal. And Three Prizes—I. E. NILES, Milwaukee, Wis.; WM. LYNCH, Cleveland, O., and KENNETH BECKMAN, Northampton, Mass.

Trouble had been coming to Phineas in bunches, like bananas. At last, the Ninth Pursuit thought they had got him down. But don't let that fool you. A Pinkham at bay is worse than an army of leopards with brass knuckles.



Phineas hit the Frenchman and Babette yelled for the gendarmes.

Geese Monkeys

SAUCE FOR THE GOOSE—AND GRAVY FOR PHINEAS

By Joe Archibald

Author of "Horse Flyers," "Crepe Hangars," etc.



IN the merry month of May, 1918, Phineas Pinkham strolled to Bar-le-Duc one day. It was the tra-la-la season, and the thoughts of the flyer from Boone-town, Iowa, had turned to love, as he was a young man, if not fancy. Under his arm, Phineas carried a box of bonbons. He whistled a lilting tune as he walked with sprightly step to the bailiwick of Babette, the oo-la-la of his dreams. But as the sprightly step carried him around a corner, Phineas' fuselage collided with that of a very spiffy Frog officer who was wrapped up in the scenery of the French Flying Corps.

"Pardonnay moi," Phineas hastily tossed out. "I—er—huh? Uh—" The glib Pinkham tongue became dry, and curled up like a truffle as he spotted the *femme* who was fastened to the right wing of the pompous war bird. It was none other than Babette, the fair.

"So this is it, huh?" spluttered Phineas. "Two-timin' me, huh? You like little boy blues, do ya? Why, if it ain't Major L'Eclair, the Rose of Picardy. Well, I'm waitin'—"

"Peenkham," blustered the French love-dream buster, "step to ze side so we should mus' pass, *n'est-ce pas?* I am ze superior."

"Nuts to voose!" exclaimed the Yank, flaring like a sulphur match. "Awright, Babette, here's my arm an'—"

"Non! Non!" objected the heroine of

the drama. "I geeve to you ze foot, so. For ze complete week I have not see you. *Mais non*, you t'eenk I crave ze standeeng up all ze time, *oui?*"

"I was under arrest," explained Phineas patiently. "The old termater wouldn't let me leave the drome. I kin explain as—"

"Bah," countered Babette forcefully. "*C'est* what you call ze feathers from ze horse. *Beaucoup* juice from ze prunes. François, late ees eet an'—"

"Awright," said Phineas, "*allez* with the bum. You're no Peggy Joyce, an' I passed her up once, haw-w-w-w! An' I want them medals back, too, also that diamon' I give ya. I ain't spendin' three bucks and a quarter on no gold digger."

"Lieutenant," exclaimed Major L'Eclair, "you have insult ze *fleur de la belle France*. *Sacré—*"

"I wish she was a dandelion," snorted Phineas. "I would break her off at the neck."

Major L'Eclair shoved Phineas. The Yankee trickster poked the Frog flyer right on the prop boss, and Babette shrieked for *gendarmes*. M.P.'s came running, and one told Phineas he was under arrest. A trio of Yankee doughs oozed out of a gloomy *estaminet* and asked the M.P.'s what was the idea of helping the Frog. Before the M.P.'s could reply, the doughs waded in.

Phineas shoved the Frog C.O. on his way out of the *mêlée*, and *M'sieur* L'Eclair skidded back to a seat in a garbage can. Then the box of bonbons, which Phineas had been toting to the fair damsel's residence, bounced off his rival's head. Phineas headed for another part of town. Whistles were still blowing, M.P.'s were still yelping, when he barged into a secluded *buvette* and sat down in a corner to steep himself in woe. His heart was heavy as a bride's first biscuit as he reviewed the events of the past several days.

Trouble had been coming to Phineas in



Phineas gazed at the goose—and got an idea. Proving that there's danger, even in the farmyard.



bunches like bananas. As he took off his cap, a pair of imbibers near by stared at the bared Pinkham thatch and mumbled to each other. Patches of Phineas' red hair had turned to green, due to the treachery of some Limeys. Three of them had visited the drome and had succeeded in getting possession of the Pinkham flying helmet for a few moments. Bump Gillis had been a party to the skulduggery, and had even taken the dye from his hutmate's own trunk of tricks.

"I'll git the beef-eatin' bums," our hero growled as he sipped his grog. "Maybe even now they wish they never fooled with me."

And there was Major L'Eclair, flying C.O. of the Frog squadron which had been moved in close to Sivry. Nice new Spads they had, and the supremacy of Major Rufus Garrity's Ninth Pursuit Squadron was being reduced to a minimum. And now the Frog had snagged Babette.

"Oh, but I'll git hunk," he reassured himself bitterly. "I'll git the Frogs, too, and then the Krauts over by Metz. I am a Pinkham at bay, and that is not healthy for even an army of leopards with brass knuckles." Phineas paused in his soliloquy long enough to order another glass of brain spinner and gulp it down.

"Babette," he muttered. "Hm, Babette! I wash jusht a playshing, huh? A moth flutterin' 'round the can'le. Awright, you'll be shorry. Jusht wait—y'all be shorry."

Over in the Café of the Pink Vache, in Bar-le-Duc, Babette was already feeling sorry. Her craving for bonbons knew no bounds, and she had resurrected them from the scene of battle. At the moment, her face was as white as the blind spot of a codfish. It would have looked more appropriate at the rail of an ocean liner in a heavy sea. Babette's eyes were a little out of focus as they ogled the big gap in the top layer of the box of bonbons.

"Maybe Babette she die *ici, oui*," she mumbled to L'Eclair. "Zen she feel bettair. *Mon Dieu*—I like for to be burie' in ze churchyard. Babette, she feel like eet ees ze merry-go-round' she have swallow' inside. Awk! Air, *vite, vite!* Somebody get ze air—"

It was midnight when Phineas evacuated the Frog grog shop and weaved his way out of town. The Spad pusher from Boonetown remembered nothing more until Bump Gillis poured a pail of cold water over him at dawn. Phineas sputtered and turned over on his stomach, began to use the crawl stroke.

"I'll make it," he muttered. "Only three miles to shore. A Pinkham—uh—er—where am I?"

"Git up, ya fathead," barked his hutmate. "You been crocked to the gills."

"Huh? Oh, yeah," the errant son grinned. "So I found my way home, huh?"

"You did," growled Bump. "A sentry followed you in here. Ya took his gun away an' wouldn't give it back. An' you left a mule tied up out in the hangars. It kicked hell out of Sergeant Casey. That's all I've heard so far. Where did ya get it?"

"See my lawyer," retorted Phineas. "Outside of that, how's every little thing? I—er—" His bloodshot optics spotted something on a table—a box which once had held bonbons. Speechlessly, he pointed. Then he burst out with a loud guffaw. "Yuh ate 'em, huh? Haw-w-w! They was just chock full of soap. I had two boxes of them things an'—didn't ya git sick, Bump?"

Lieutenant Gillis inflated his chest and bestowed upon his hutmate a very engaging grin. "Oh, I just switched them boxes, Carbuncle. You took the one with the soap to Babette an'—oh, well, I been wantin' to git square with ya. Now be a sport an' don't git sore. Now don't make a pass at me as—"

"Bump Gillis!" exclaimed the jokesmith, rising exuberantly. "Put it there! Shake! Oh, boys—so they will fool with a Pinkham, huh?"

Bump swallowed and then stuttered, "I—I—d—don't git it. I—er—huh, maybe you're still boiled. Ain't yuh sore?"

"For-r-r I'm the Queen of the Ma-a-a-ay—tra-la," trilled Phineas. He began to make his toilet, light of heart. An orderly came in and saluted.

"Major Garrity just can't wait to see you, sir!"

"Tell 'im I'll be there after I've fixed my hair," grinned Lieutenant Pinkham. "It's simply a fright!"

"He's awful sore at ya," Bump warned him.

"So the Frogs called up, huh?" Phineas tossed out. "Did ya hear about the bum? He was with—"

"It's about the Limeys," Bump interrupted. "You been insultin' the Italians, too, by any chance?"

"Haw-w-w-w-w," erupted Phineas. "If it is what I think it is, I will go to Blah with a smile for everybody. Oh, boys! Adoo, Bump!"

"GOOD morning, Mr. Pinkham," trebled Major Garrity as Phineas barged in. "Did I disturb you?"

"Oh, that's all right," Phineas assured him. "The street cars outside my hotel room were very noisy this a.m. and woke me up anyway. What can I do for you, if anything?"

Major Rufus did a Doctor Jekyll and Mister Hyde act. His face began to twitch, and his lips curled back from his teeth as he half rose from his chair. Homicide was written all over the C.O.'s countenance.

"D'you know what you've done?"

Garrity yelled. "You've knocked hell out of the Limey Camel outfit. Five of them are wrapped up in bandages like the things they take out of tombs in Egypt. Poison ivy, Pinkham, and it was cut down from some place and strewn all around the swimming hole where the Limeys go. You know they go in without clothes, and you know damn well where they hang their clothes. You put that poison ivy all over that limb. You—"

"Prove it!" snapped Phineas. "Haw-w-w-w-w! Look at my hair. You laughed when you saw that, didn't ya? I warned them bums. They was lucky. I was goin' to get some electric eels an' put 'em in the pool, too, but I found out they wouldn't keep in the mails. What is sauce for the goose, et cetera! Is that all for today, sir?"

Major Garrity pulled out tufts of his hair from a scalp that could not spare them, and pounded his feet on the floor like a young hopeful protesting against a spinach diet.

"You mussed up the Camel outfit," he yowled, "an' we're short four ships ourselves. All we can depend on now to help knock off that Heinie concentration center is the Frogs. Mr. Pinkham, if I say 'Please,' will you promise me you won't dynamite them, too?"

"Sir," Phineas snapped, drawing himself up, "when I am hard-pressed, I have no mercy. I have got to git hunk with that Frog, Eclair, as he has sullied the Pinkham honor. It's no use tryin' to break me down as—"

"You're busted right now," the Old Man roared, and picked up a chair. "I'll show you!"

However, Phineas had leaped out of the Orderly Room and slammed the door behind him. A panel split as the chair crashed against it.

"Tsk, tsch!" chortled the exuberant Yank. "Is that a temper, oh, boys! Well—"

An engine roared outside. Tires shrieked as brakes were jammed on. A British officer, very much agitated, pushed open the door of the Frog farmhouse and glared at the occupants. His eyes bore down heavily on Phineas.

"Pinkham, eh, what?" he gritted. "Two more R.F.C. men broke out with a rash this morning. Whole outfit's jolly well messed up. By gad, I'll have you broken, Pinkham! I'll—"

"You're just too late, as I am resigning," the Boone-town jokester chuckled. "The major is at home, but

(Continued on page 71)

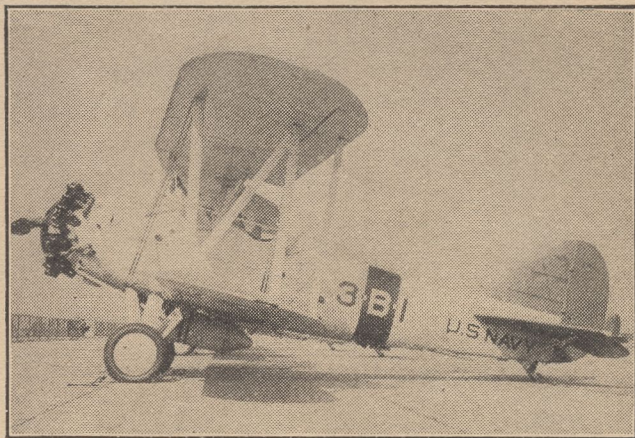


Phineas worked into the wee small hours.

Sky Fighters of Today

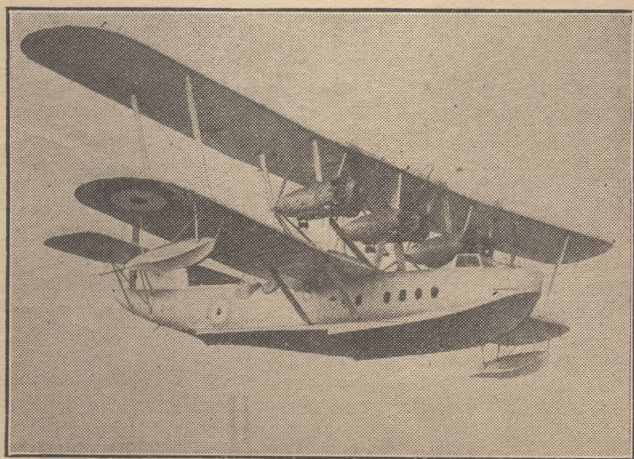
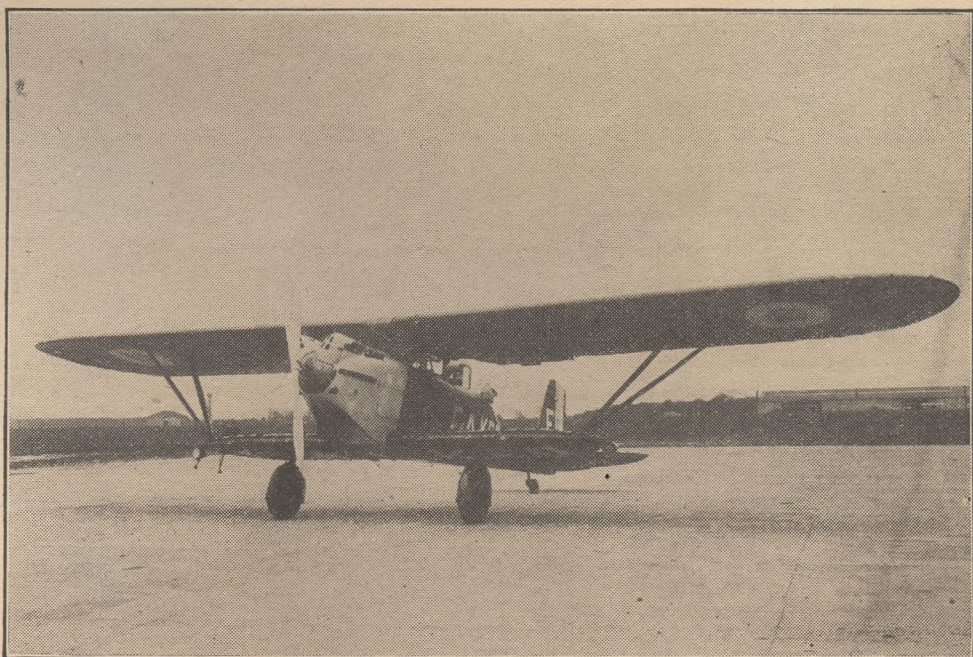


The modern Spad, now listed in the Jockey interceptor class. This high-speed single-seater is made by the Bleriot Company of France and is now regular equipment in the French Air Service. With a 500 C. V. Hisso, it carries two Vickers guns and does well over 200 m.p.h. The type number is S-91-C.8.

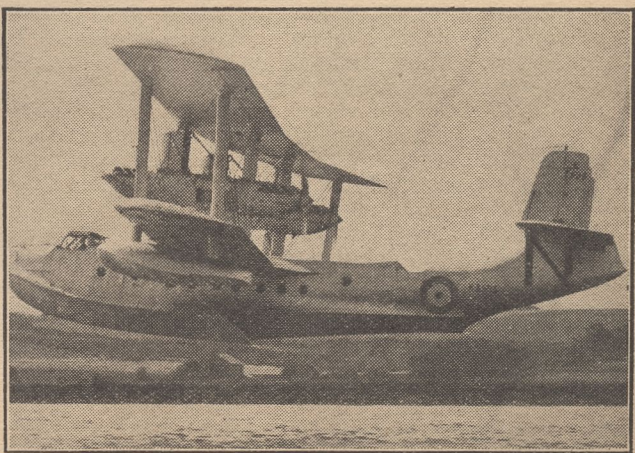


The new Martin diving bomber BM1, now fitted with the 620-h.p. Cyclone engine which gives it a top speed of well over 160 m.p.h. This is an adaptation of the former 125 ship and carries a 1,000-lb. torpedo or, as is shown here, an extra belly tank for long-distance Navy patrols.

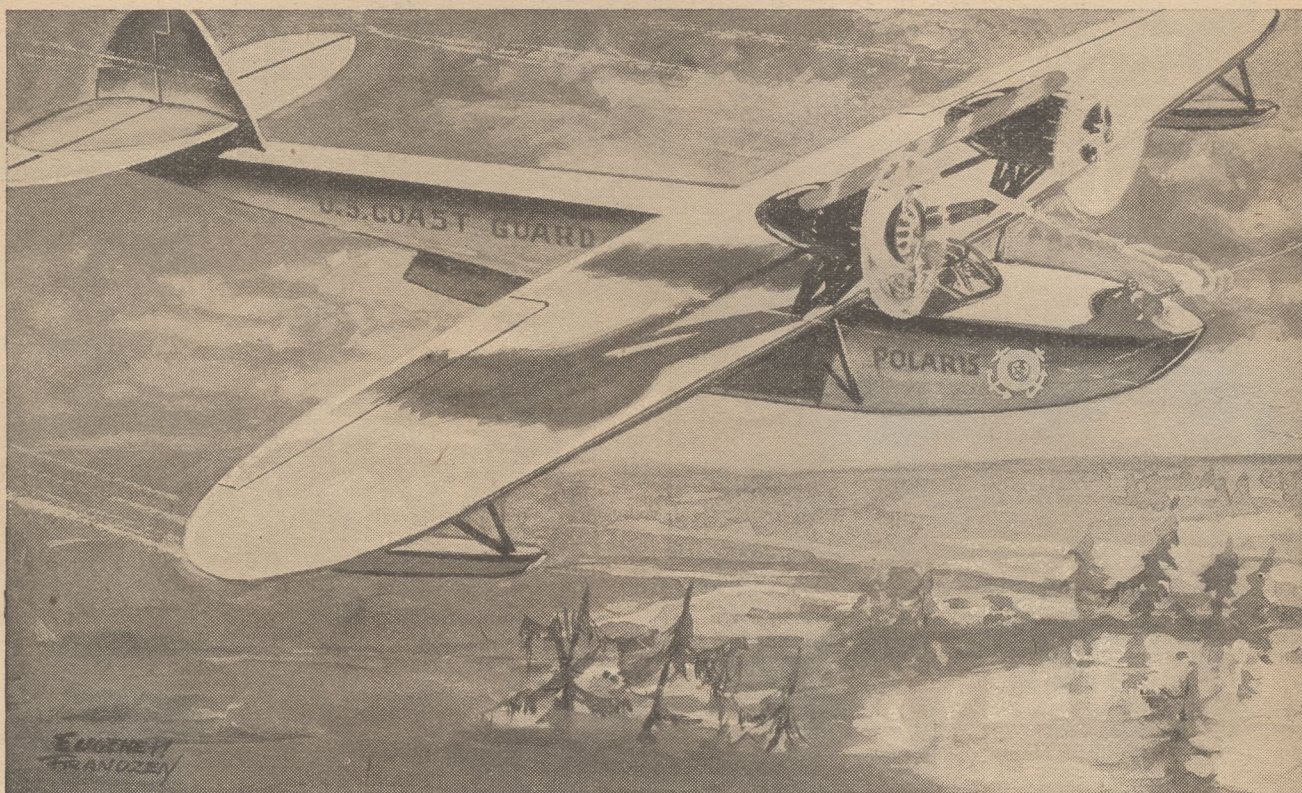
One of the most unusual and yet efficient fighting observation ships in the world! This Breguet 27A2 is equipped with a special 500-h.p. Hispano-Suiza engine and does 198 miles per hour carrying two men and a full line of observation equipment, including wireless, camera, four guns and special night landing equipment. It is a sesquiplane with much metal in the structure. The interesting feature of the ship is the design of the tail, which gives the gunner an unusual arc of fire on enemy ships attacking from the rear.



The new British Short "Rangoon" flying boat, designed especially for work in the Persian Gulf. It has three Bristol "Jupiter" engines and a top speed, fully loaded, of 123 miles per hour. It has an unusually long range, being able to stay in the air for more than seven hours. It carries two pilots and two gunners.



The latest addition to the R.A.F. flying boat squadrons—and already in use in the colonies. This is the Short "Singapore" Mark 111 ship completed last year. It is powered with four special Rolls-Royce motors suitably geared for tandem settings. It can fly on two engines, and carries two pilots and two gunners.



The ponderous Douglas and the low-winged Lockheed leaped at each other like angry birds of prey.

BROOD OF THE

A mysterious wind had strewn death upon the Everglades, had stippled the surface of its dark and dismal swamps with the dead bodies of strange beasts and reptiles. And of the giant planes that battled fiercely in the skies, one was fated to sink into that dark abode of loneliness—to leave no trace. For Satan was abroad, and his home was in the Everglades.

Illustrated by Eugene M. Frandzen

THIS is off our beat, but I guess you'll have to hop over to Okeechobee and have a look-see."

Commander Dennison of Base Eighteen, U.S. Coast Guard, handed Lieutenant John Caldwell a radio message which had just come out of the air. The flying officer's eyes hardened as he read it. It had nothing in common with the business of guarding America's shore line against either foreign invasion or smugglers. He scanned the message through and then re-read it.

"Seminole village of Olahasee wiped out. Mysterious death attacks men, birds and animals. Investigate and report.

Harper,
C.C., U.S.C.G."

Caldwell's gaze dwelt on the signature. Admiral Harper, commander in chief of the Coast Guard, had issued the order. Something more than the death of a few Indians was behind that command. During the past few weeks, an air of mystery had hung over the Coast Guard. It had been called upon to investigate a number of strange things. A sense of menace seemed to brood over the service, something dark and intangible.

"I've got the Polariss all gassed up. Guess I'd better hop now, sir," Caldwell said.

"Yes, and get back as soon as you can. The Old Man wants action, or he wouldn't have put that order through."

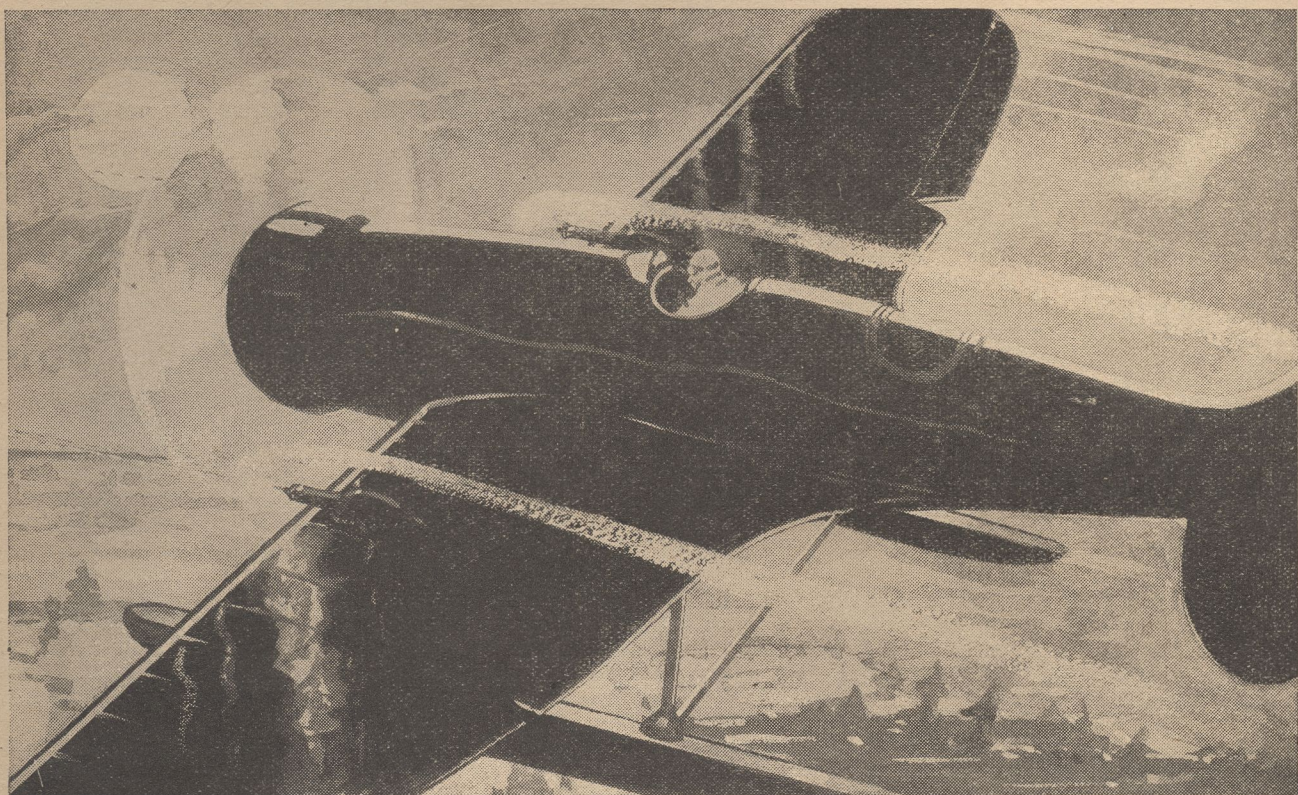
Caldwell nodded. He knew the ways of the service. Washington was stirred up about something, but the men along the coastline were not taken into the capital's confidence. They were put to tasks whose meaning they did not understand.

"And keep in touch," Dennison cautioned, as Caldwell started for the door.

"Yes, sir."

The twin-motored Douglas cruiser, Polariss, was loaded and ready for flight when Caldwell reached the landing basin. A call brought the crew from the hangars. The big ship cast off and scudded across water, to nose into the air. Then the heavy tail came around and it headed north and west for the interior.

Beyond the Everglades lay Okeechobee. Somewhere in that wide expanse of water was an islet upon which was the Seminole village of Olahasee. Caldwell studied his maps and laid the course. Then he instructed Ensign Barlow, his relief pilot, to take over the con-



BLACK DRAGON

COMPLETE AIR NOVELETTE OF TODAY

By James Perley Hughes

Author of "Eagles of Asia," "War of the Pacific," etc.

✱ ✱ ✱

trols. Something mysterious lay ahead.

Roaring through the turquoise sky, the Polaris flicked the miles from beneath her strong pontoons. Soon the borders of the lake were sighted, and Caldwell consulted his maps again.

His brow furrowed as he studied the situation. So many strange things had happened in the past few weeks. The Coast Guard had arrested a score of Orientals trying to steal into the country from Cuba and Hayti. They were not the usual run of Chinese coolies. These were little men — brown, rather than yellow. Islanders, Caldwell was sure, although they claimed to be from China. More than that, they were not coolies, but men of education. He had trapped one into answering a question put in French. Another had revealed his understanding of German.

Their actions had showed familiarity with airplanes, guns, and other warlike paraphernalia. Although they posed as farmers, truck gardeners, and laundrymen, Caldwell knew they had had military training by their arrogant strides and the way in which they held their shoulders.

"But that has nothing to do with this chore," he mumbled, hunting on the map for the Indian village. "It's getting so the Guard has to run errands for the Bureau of Indian Affairs."

HE found the spot on the map where the village was located. A small island, almost in the center of Okeechobee, had been selected as the summer home of a handful of Indians. Caldwell took over the controls and started a dive that would bring the Polaris down beside the ravaged village.

As they neared the surface of the lake, he saw a swarm of dugout canoes drawn up along the shore. Half the Seminoles in that part of Florida had gathered at the scene of their tribesmen's death.

A geyser of spray marked the pontoons' contact with the water. Then the Polaris taxied to where the canoes were beached. John Caldwell opened a side door and looked out. He saw a ring of gaudily dressed Indians staring at the forms of their fellows stretched out upon the ground. They were jabbering among themselves, paying little attention to the airplane.

Caldwell slid down to one of the pontoons and then, as Barlow snubbed into the waiting canoes, he stepped from one small craft to another until he reached the shore. As he strode up the beach to where the Indians were standing, one of them turned and hurried to meet him.

"Me Tonomana, Okeechobee chief," he announced.

Caldwell saluted, as though greeting a superior officer.

"White Father in Washington wants to know all," he answered. "Wants to know all so he can help."

The Seminole nodded. He was dressed in a colorful array of native cloth, stressing stripes of red, yellow, green, and blue. No war bonnet or feathers such as mark the Western Indian were affected by the chief, although his head was covered with something that looked like a flat, cheesecake turban.

"Death wind come. All die," Tonomana declared. "Man die, dog die, bird die, 'gator die."

His leathery brown hand pointed to the slain Indians, the carcasses of their dogs. Around the palm-thatched, wall-less sheds in which the Seminoles had lived, were the crumpled bodies of chickens and a wild bird or two. Along the lake, the half-submerged remains of several alligators lay motionless. Snakes, toads, even insect life, had vanished in the presence of the mysterious, lethal force that Tonomana called a "death wind."

"What was it like?" Caldwell asked.

"No can tell. All dead that it touch," the Seminole answered. "One live little while. Tell me wind come from lake—everything die."

"Did he smell anything strange?"

"No."

"Did you?"

"No, nothing but dead. We burn body. Bad luck to bury. You stay funeral?"

"I'm sorry, I have to return, but White Father in Washington keep death wind away. Come no more," Caldwell promised.

He turned to go back to the Polaris, then hurriedly retraced his steps. A sudden thought had come into his mind. Perhaps Tonomana could help him out.

"Have you see any strangers around here—white, black, or anybody?" he asked.

Tonomana thought for a moment. He paused to light a cigarette. Then he nodded slowly.

"Little brown man, row funny boat. All rubber."

"Little brown man? Slant eyes—talk funny?" Caldwell pressed.

The Seminole nodded soberly. "Funny man. Say White Father in Washington no good."

"What did he want?" Caldwell was eager.

"Don't know. Tell him go to hell. He row 'way," the Indian replied. "No like. Him name Tanaka. Funny name, funny man."

In spite of Caldwell's questions, Tonomana would reveal no more. He was too interested in the impressive funeral his tribe would hold. Seven men, three women, and ten children had been wiped out by a death wind that blew off the calm waters of Lake Okeechobee. To the Seminole, it was a divine visitation. To Caldwell, it was an act Satanic, but of human origin.

"If you see Tanaka again, telephone or telegraph the Coast Guard," the lieutenant urged.

"All right. Will if can. No got time now. Got to make funeral ready."

After making a cursory examination of the dead, Caldwell extracted a promise from Tonomana that no body would be burned or buried until a Coast Guard surgeon had a chance to examine it. Then he leaped upon the pontoon of the Polaris and scrambled back into his cabin.

"Shoot all the sauce you have, and crowd her for home," he told Ensign Barlow.

The Polaris took to the air, and was soon sweeping toward the base port. John Caldwell looked down, his eyes drained of all save horror. Weakly they gazed at the scene below.

The wind which had strewn death with lavish hand upon the tiny isle of Olahasée had visited the waters of the lake with the same Satanic prodigality. The surface was stippled with dead bodies.

"Look, skipper, everything is dead," Tompkins, the radio operator, said in awed tones.

Caldwell nodded. His thoughts were not on the life-

less things over which they were flying. He was visioning what would have happened had the devil of destruction swept over more populous districts. Those things he saw below were only the carcasses of alligators, lizards, geese and ducks. If that had been a city, they would be the dead bodies of men, women—and children!

LITTLE men, brown and slant of eye, gathered around a table in a house on the outskirts of the Haytian village of Gonaives. They spoke in stilted sentences, following the ritual of an Oriental society of which they were members. Each wore a flowing robe upon which was embroidered a dragon in black. Their order, Sons of the Black Dragon, was an organization that had written its name upon the pages of Oriental history. Now its agents had crossed the seas.

"Your attention, Brothers of the Brood," a white-headed man at the head of the table began. "We are about to take a step that will commit not only honorable society, but our native land as well."

His lips parted in a cruel smile, baring yellowed, misshapen teeth. His small eyes glittered and a strange light showed in his small, buttonlike eyes. Half a madman, Yogo Kinomoto was a power in the sinister organization.

"We will wipe these white faces from the earth," the old man went on. "Their women and their children will be destroyed as we despoil an insect nest. Their cities will be shambles of rotting corpses. Life will disappear, for the power is ours."

The others around the table nodded their heads. Their taut faces grimaced into mirthless smiles, while their small glittering eyes narrowed to mere slits. Then the leader turned to a young man whose robe only partially concealed an aviator's uniform.

"Did you deliver the gas to our cache in the lake?" Kinomoto asked.

"All but one tank, honored one."

"All but one!" The aged leader leaped to his feet, his thin face ashen. "What do you mean? Tanaka San, if you have played the traitor, I will open your veins and—"

He paused. A short, narrow-bladed knife in his right hand told the young man what his fate would be.

Tanaka did not wince. "One of the containers was not secured properly," he explained, "and I struck a down-current. The tank broke loose and fell."

"What happened?" Kinomoto asked in a whisper.

"It broke, and the gas swept over the lake. A village of Indians was in its path and—"

"That is enough," Kinomoto broke in.

"If we had another pilot here, I would give you the Chinese punishment of *li chi* and cut you into a thousand pieces while you still lived. As it is, you will get an honorable death—when your work is done."

Tanaka bowed stiffly. "I am grateful to Kinomoto San," he said.

The other men at the table were not inclined to dismiss the young man's accident without further discussion. The rupture of one tank of deadly gas might destroy their carefully laid plans.

"What is it, Honorable Shima?" the old leader asked one, as he arose.

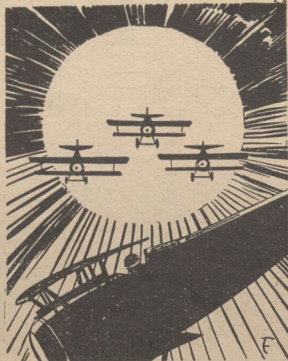
"Kinomoto San, we must work quickly. Tanaka has opened the door for the enemy, and the enemy will look in. We plan to release this death wind upon the great cities to the north. We would have destroyed ten million people without warning, but the warning has been given. Yet you promise this man an honorable death."

"He must earn it," the aged leader said.

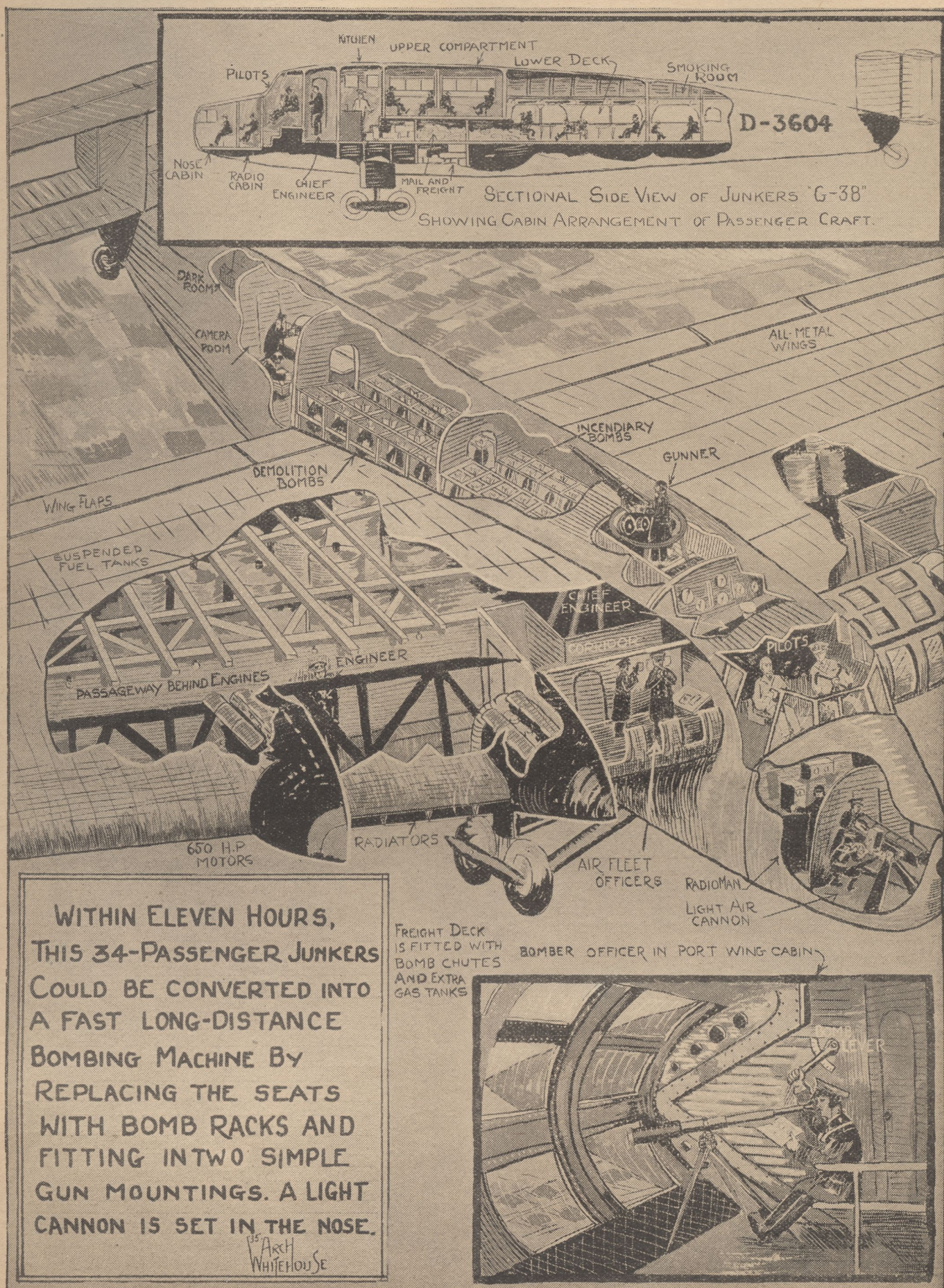
"He cannot earn it," Shima protested. "Unless our plan goes through, he should be given the Thousand Deaths."

The men about the table nodded. It was their will that their unfortunate companion should meet the most

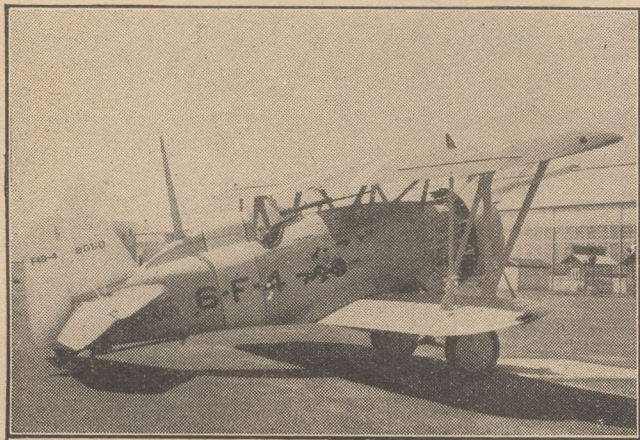
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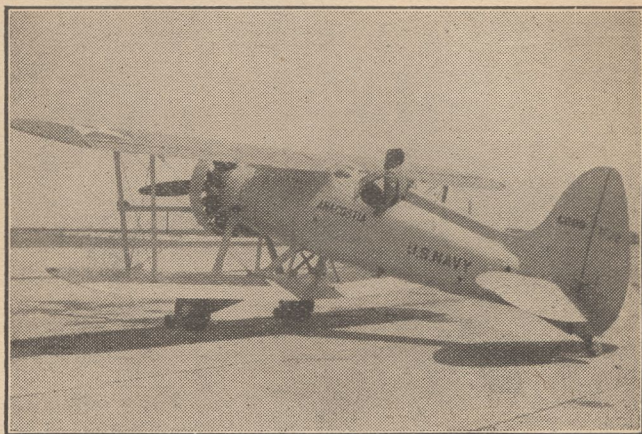
From Transport to Bomber



Need we name this plane? Of course, it's the famous Boeing F4B-4 Fighter. Note all insignia, especially the chevron on the upper wing.



One of the best-known Navy Fighters, the B/J XFJ-2. This ship has an unusual design—gull wings in upper wing, lower wing mounted on struts—and plenty of speed.



What U. S. Air

INTERESTING FACT ARTICLE ON AIRPLANE MARKINGS

By Fred Bamberger

★ ★ ★

MANY aviation enthusiasts and model builders have seen aircraft used by the United States Navy and also the Marine Corps. A lot of them have built models of these naval airplanes. But do they know what the markings on these airplanes are for, or what they mean?

Probably all of the model builders have made a model of the Navy Boeing Fighter known as the Boeing F4B-4. However, there are very few of them who could explain what the numbers and letters "F4B-4" mean. Many of them would be interested, also, to know the correct squadron insignia which is placed sometimes on the wings, and on the side of the fuselage.

All planes used by either the United States Navy, the Marine Corps or the Army have one symbol on them. This marking is a star in a circle, and it is a positive way to identify a plane in the service of the U.S. The star is five-pointed and has a circle inside of it. The outside of the star is painted blue; the star itself is white, and the circle inside of it is red. Thus it contains the colors of the flag of the United States—red, white and blue.

Four of these stars-in-circles are painted as follows on every plane in the service. Two are painted on the top of the wing near the ends, and two are painted on the bottom of the lower wing, also near the wing tips. All U.S. Marine airplanes are painted like the Navy ships, and the symbols on them mean the same.

If one stands alongside a Navy airplane, the following features stand out. Alongside of the fuselage, and usually right underneath the stabilizer, in heavy letters are the words, "U.S. Navy" or "U.S. Marines." Usually there is some number on the fuselage or, perhaps, squadron insignia. These are usually placed outside under the cockpit.

All Naval or Marine aircraft do not have to have insignia painted on the side. Many of them just have the standard marking "U.S. Navy" and the name of the Air Station from which they are attached. Thus, instead of a number of insignia, the plane may have N.A.S. (Naval Air Station) Lakehurst or N.A.S. San Diego. It usually has one of these two types of markings, unless it is an experimental type of airplane. If

the airplane is stationed aboard a battleship or an aircraft carrier, it usually will have the name painted on the side of the fuselage, near the words "U.S. Navy." Thus it will have two markings, "U.S.S. *Lexington*" and "U.S. Navy."

The rudder of a Navy or Marine plane may be painted in three different ways. It may be painted a solid color with just the identification numbers on it. It may also be painted with the vertical stripes of red, white and blue with the numbers painted over the stripes. Thirdly, it may be painted with a horizontal set of stripes which set the rudder and fin off in different colors. This type of rudder is used on airplanes used aboard ships.

Now for those numbers. In the U.S. Navy classification, there are ten types of tactical uses. They are listed below.

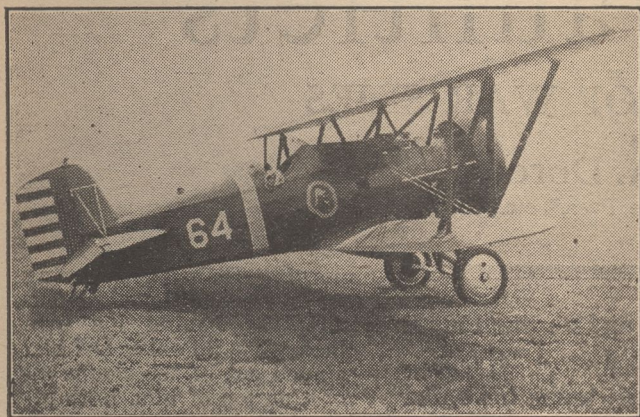
Bombing	B
Ambulance	H
General Utility	J
Observation	O
Scouting	S
Fighting	F
Training	N
Patrol	P
Transport	R
Torpedo	T

These letters are used in this manner. If there is a plane being used for fighting purposes, it comes under the classification "F"; for bombing, it would be "B," and so on. If an airplane is used for more than one type—being a trainer and an observation plane at the same time—it will be known as the type in which it was accepted into the service. Thus, if a Curtiss Fledgling, used mainly as a training plane, is also used as an observation ship, it is still classed as a training plane and retains the letter "N."

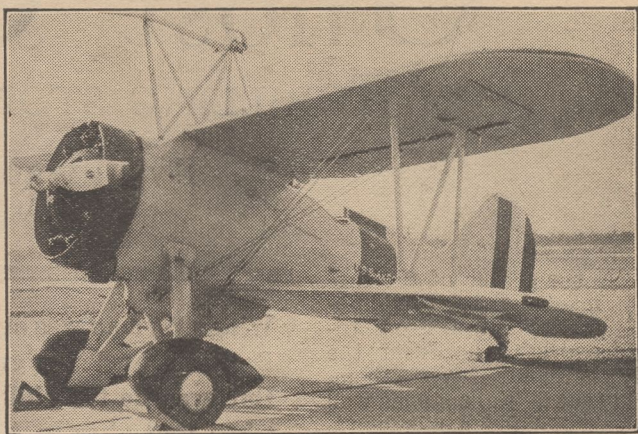
The present practice is to designate airplanes by a group of letters and numbers. This consists of a letter indicating its class (tactical use); a number indicating the model, and a letter indicating the manufacturer. This is followed by a dash, and then a number showing the modification of the model.

In the designation of the first model, the first num-

Another of the Boeing clan. Here we show you the Boeing P-12D, a single-seater fighter used by the U.S. Army Air Corps. Those are neat-looking stripes on the tail!



One of the Curtiss F9C-2's carried on the ill-fated *Akron*. Since these ships were not being used at the disaster, they were safe, and are now used on the *Macon*.



Corps Insignia Mean

ber is omitted. Thus, the Curtiss Company's first observation plane for the Navy is known as the OC-1 and not O1C-1. When a major alteration,

not of a character to change the model, was made in the OC-1, the modified model would be known as the OC-2. A second modification of the first model would be designated OC-3 and so on. The second type of observation plane built by this company would be known as the O2C-1. Similarly, the first modification of the O2C-1 would be the O2C-2, and succeeding modifications would be the O2C-3, etc.

The designation of airplanes of an experimental design is prefixed by the letter "X." Airplanes so designated retain the prefix while in test service, in order to indicate that they were the first of that experimental design series. XF2B-1 would indicate that the airplane is the first of a new series of experimental fighters manufactured by the Boeing Airplane Company, although this design is the second type fighter design to be accepted by the Navy.

If a third type of fighter is built, it would be known as the XF3B-1, etc. When this new experimental airplane design is accepted for service use and put into production, the prefix of the designation is dropped. Thus, the XF2B-1 would become the F2B-1, although the very first one made would have the "X" on it, to show that it was the first of that series.

All the manufacturers of airplanes for the U. S. Navy and Marine Corps are given a letter to be used in the designation of airplanes they build for the service. The letters are as follows.

- A—Atlantic Aircraft Corp.
- Fokker Aircraft Corp.
- General Aviation Mfg. Corp.
- B—Boeing Airplane Company.
- C—Curtiss Airplane and Motor Co.
- Curtiss-Wright Corp.
- D—Douglas Aircraft Co.
- E—Bellanca Aircraft Corp.
- F—Grumman Aircraft Eng. Corp.
- G—Great Lakes Aircraft Corp.
- H—Hall Aluminum Aircraft Corp.
- J—B/J (Berliner Joyce) Aircraft Corp.

How many of you know exactly what the trick markings, numbers and insignia on Uncle Sam's airplanes and airships mean? What does the F4B-4 stand for on that Navy Boeing you see soaring overhead? Does XFJ-2 on that new Berliner-Joyce Fighter mean anything to you? If not, here's some interesting and worthwhile information on the real meaning back of those mysterious numerals and letters on Uncle Sam's airplanes.

- K—Keystone Aircraft Corp.
- L—Loening Aero. Grover Loening, Inc.
- M—Glen L. Martin Co.
- N—Naval Aircraft Factory.
- O—(This letter is used by Lockheed sometimes.)

- P—Pittsford Aircraft, Inc.
- Q—Fairchild Aviation Corp.
- American Airplane and Engine Corp.
- R—Ford Motor Co.
- S—Sikorsky Aviation Corp.
- T—New Standard Aircraft Corp. (Also used by Northrop now.)
- U—Chance Vought Corp.
- W—Wright Aero. Corp. (Now also being used by Waco Airplanes.)
- X—Experimental Designation.
- Y—Consolidated Aircraft Corp.

With the aid of these two above charts, one telling the name of the manufacturer, and the other telling what the airplane is used for, it is easy to determine what the numbers on the rudder mean. If you see the letters F4B-4, you know that it is a Fighter, the 4th model built by the Boeing Airplane Company, and that it has had four modifications over the original F4B-1.

Perhaps you might see the letters XFJ-2. You will immediately know that this is an experimental fighter design, made by the B/J (Berliner Joyce) Corp., and it has had two modifications. Similarly, if there were any other designations, such as O2C-1 or T4M-1, you could tell what they were used for, the company that built them, the model number, and its modifications.

The standard coloring of Naval airplanes is to have the fuselage painted Navy gray or silver, the wings the same color on the insides (in case of a biplane); the top of the upper wing and the bottom of the lower wing are painted chrome yellow. The star-in-circle insignia is painted over the wing tips. The stabilizer is silver or gray. The rudder, if not striped, may be of any color, depending on the squadron to which the ship belongs.

In case of a monoplane, the wings are painted chrome yellow all over. If the airplane has a cowling over the engine, this cowling may be painted with the top half of one color, and the bottom half of another color or it may be one full color all around. These

(Continued on page 80)

Ghost Gauntlets

THRILLING STORY OF WAR SKIES

By Edwards A. Dorcet

Author of "At Suicide Pass," etc.

IN the center of the tarmac of the 66th Bombing Squadron, two yardsticks protruded from the oily earth. Between them, held taut by light stones well balanced, hung a silk handkerchief. The gentlest touch would knock it to the ground.

Overhead, Captain "Wings" Wyman gunned a new, untried Spad that was scheduled to be put into service as a scouting crate. Banking it sharply, he was able to see the handkerchief in the dim light of dusk. Simultaneously, he threw the stick forward and gave the crate the gun.

Down shot the speedy Spad, banking at a dangerous angle. Crying wind brushed and burned the broad face of Wings Wyman. As the crate hurled earthward, the iron-nerved pilot drew all eyes. One slight slip and he'd crack up in a hospital. Down, down!

Dropping all caution now, he banked his wings perpendicular with the earth. His right foot moved quickly, and the right wing snapped up as the motor strained under the gun. The fins moved slightly down, and then the Spad righted itself and began a chandelling climb.

But where once the handkerchief had been, now only the two yardsticks remained, for the silk rag slapped viciously in the slipstream at the end of the lower right wing.

Nine men applauded that daring maneuver from the soggy tarmac, while the short, chisel-featured Monty Price scuffed the ground and growled, "Now he'll admit the crate is good enough for some green loogie to get shot up in by a Kraut. But after all—" he shrugged—"I suppose it is just his method of being the best damned pilot in France!"

Captain Wings Wyman landed the Spad with a graceful swoop, and dug it to an idling halt before the group of owl-eyed peelots. Then he dropped to the ground and quickly plucked the handkerchief from the wing, where a Victrola needle had clipped it from between the sticks.

He was a big man, and powerful. He had a deeply tanned face, and large blue eyes that sparkled like good wine, while his sandy, curly hair tangled carelessly above his forehead.

"Well, eagles," he bellowed in his big voice, "we are playing Easter greetings with the Boche tonight. We're going to plant some eggs and see if the Jerries can tell where we put them. The peelots that put the eggs in the most conspicuous places get the grand *prix*!"

Usually a crazy sally like this would reward Wings Wyman with a grin from Price, but now it brought only scowls. Wyman lifted an eyebrow, and said, good-naturedly, "Don't tell me somebody put salt in your rum, Price." His eyes snapped with laughter.

Price shrugged in disgust. "No, nobody did. But there is a G.H.Q. buzzard in the C.O.'s quarters to sprinkle a little on your fins," he replied tartly. "And I've got a letter here from the brother of that Kraut you shot down this a.m. Between the two of them, you ought to get salted flatter than a mackerel."

Wyman's brain raced back over the incident of the

Wings Wyman was strong, and he was tough.
Daily he hurled a grim challenge to death.
But even he felt chill fingers touch his spine
when that ghostly Albatross flew out of the
dusk and made a perfect landing on the drome
of the 66th Bombing Squadron. For the
pilot of that German ship had been dead
for many days!

Illustrated by Eugene M. Frandzen

morning. He had been trying out a reconditioned Nieuport, far behind his own lines, when a Fokker D-7 had winged out of the clouds almost on top of him. Both pilots had been surprised at the unexpected meeting, and the German had unleashed his Spandaus with startling suddenness. But the blaze of lead had gone wild, and the Kraut had yanked back his stick to careen the Fokker into a cloud envelope.

Wyman had said at the time, "He acts more like a scout with important news than a battlebird." Regard-

less of what the German was, Wyman's Vickers had chirped a short, savage blast. The soaring Fokker had toppled over in mid-air like a shot pheasant, and had spiraled earthward. No blaze followed the crash, so Wyman had landed to secure a keepsake, and see if he could help the German pilot. But the pilot had been dead, and what a keepsake Wings had secured!

The pilot had worn gauntlets, not the ordinary type of gloves used by pilots, but gauntlets made of mail, covered by leather, and lined with fur. The mail looked to be centuries old. Touching it had given Wings a strange thrill. . . .

"So we got a letter from the Jerry's brother, did we?" Wyman echoed, his voice sobering. "That's good. I'd like to learn more about those gauntlets he was wearing."

Now a grim smile pushed its way to Price's stony features, but it was mirthless and hard. "You will, don't worry." He handed Wyman the letter, but Wings pushed it back.

"What's it say? I can't read it with my eyes smarting like hot grease."

"It is from one of the famous von Leefeldts, in person," said Price. "It was a von Leefeldt you shot down. And it was *Hauptmann* Otto von Leefeldt himself who wrote the letter. He's the last of the brood now, and he wants you to return the gauntlets his brother had on at the time he was shot down. He says they have been in the family for hundreds of years."

"That's all right with me," Wings agreed. "I'd like to have kept those gauntlets, but if they mean that much to the von Leefeldts, they are welcome to them."

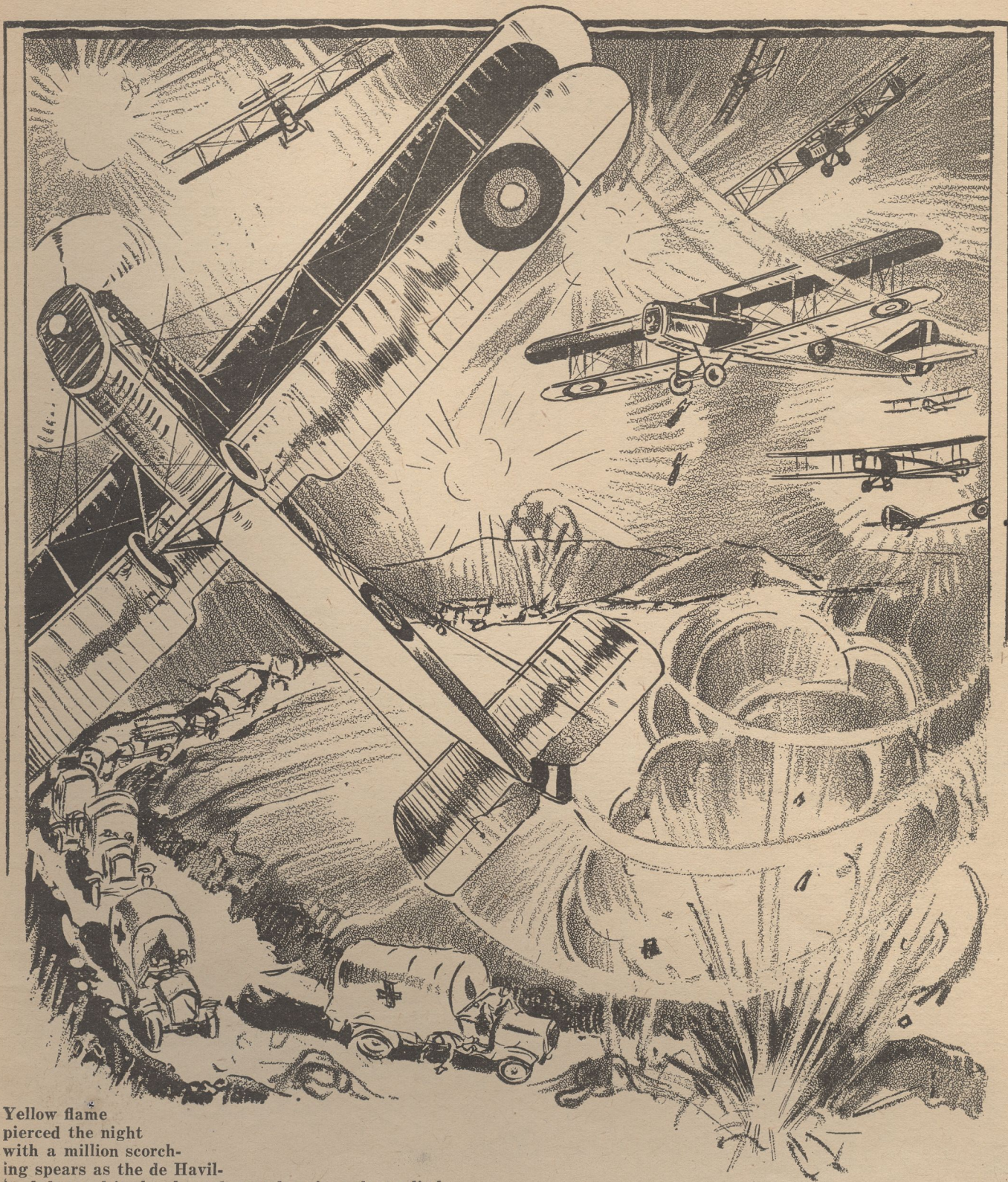
Price continued, his voice hard. "Here's the rub, Wings," he said. "After he tells you what he wants, he insults you by telling you that if you don't drop them on his *Jagdstaffel* before six o'clock this evening, he won't be responsible for what happens." He glanced at his watch. "And it's almost seven-thirty now. I wonder what'll happen."

Wyman's face hardened perceptibly. "In that case," he snapped, "he doesn't get the gloves—and I'll be responsible for what happens."

Lieutenant Monty Price chewed off a snarling oath as his worried dark eyes searched the gathering dusk.

"Take it easy, Wings," he advised sagely, "because being responsible for what happens might not suit you, either." He drew a deep breath, then added, "You haven't heard the rest of the letter."

"I suppose it's going to scare me stiff, eh?" grunted



Yellow flame
pierced the night
with a million scorch-
ing spears as the de Havil-
land dropped its bombs and roared up in a sharp climb.

Wyman, now thoroughly aroused.

"It did me," Price admitted, "because I'm not used to seeing dead men fly crates, and have shadows take off with a D.H."

Wings Wyman stepped forward, rounded his shoulders and glared into the eyes of Price. "Have you gone nuts?" he demanded. "Dead men flying crates? Shadows winging off with D.H's? Price, what are you talking about? You are as crazy as—"

He broke off, and listened, his head cocked skyward. Out of the night came the sullen, reverberating roar of a Mercedes. Nearer and nearer it gunned, swooping lower and lower.

Across the tarmac, a pencil of light stroked the sky from behind the tall trees. It picked out the swiftly

diving crate, a late Albatross model.

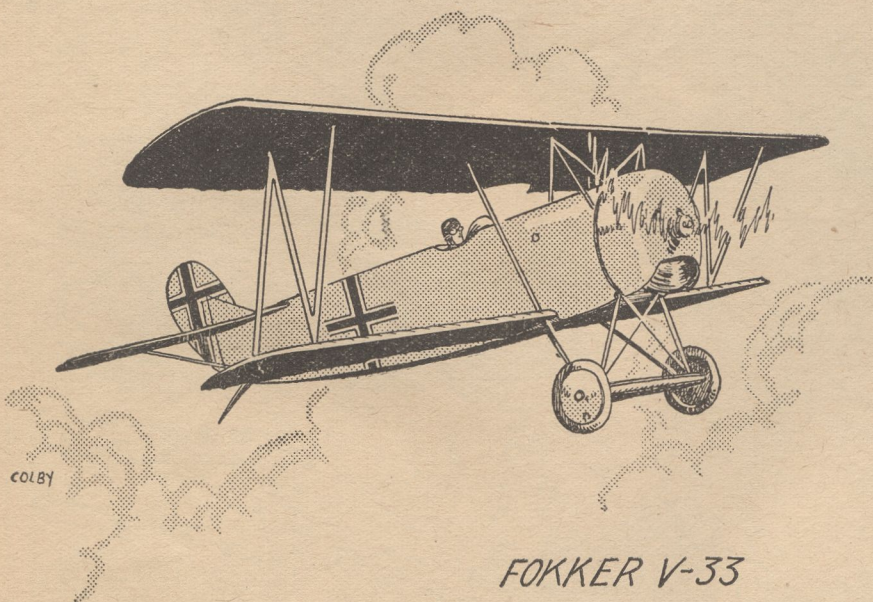
Suddenly the Mercedes conked. Only the hissing swish of silent wings now rustled the night air as the Albatross settled rapidly, banked, and nosed level with the oily tarmac. The finger of light swung lower and lower with the crate, until the tall trees blacked it out. Then the night was pitch-dark once more.

The Albatross made a perfect landing in the darkness off the far side of the tarmac. Wyman recognized this perfect landing by the almost feathery touch of the wheels on the sod. The plane taxied across the apron of the hangars at a terrific speed.

Wyman swung. There was no use letting that Kraut crate bash into the hangars. "Fall on one of those wings,

(Continued on page 62)

War Planes Album



COLBY
FOKKER V-33

FOKKER V-33

THE series of Fokker ships using "V" in their type numbers have an interesting history. As far as can be discovered, the first "V" Fokker was the first ship in the world to use the cantilever wing principle, and while it took the Germans by storm at first, it was not accepted because they could not see a plane with two wings that used no interplane struts. Therefore, while the theory of the

cantilever was accepted in the German schools of science, the gentlemen who purchased planes for the German air service refused to believe it.

Fokker was not dismayed, however. He continued to work at the idea and, in 1916, he startled them all again with the first triplane which had cantilever wings and again no interplane struts. He flew it in all maneuvers and proved that

the wings would not pull off. But the Germans were not buying it. And then, when he equipped the Fokker triplane with interplane struts, they ordered them by the dozens.

However, the "V" series was not dropped completely. There are many of them, although in the flurry of scattering out of Germany after the war, they have been badly mixed up, and some "V" ships are also listed in some reports as those of the "D" class.

In the records, we find about six or seven ships listed in the "V" series. The last on the list is the V-33 shown here. This machine has the cantilever wing structure in biplane form, and is powered with the German rotary. A close inspection will disclose the fact that the V-33 looks suspiciously like the D-8 monoplane with an extra wing. It will be remembered that the D-8 had a hard time passing the German inspectors, and it is quite possible that Fokker decided to strengthen it up with another wing. This ship was the last Fokker of the war and had a top speed of 123 m.p.h.

It was a single-seater and carried two Spandau guns mounted high on the cowl, but beyond all this, it was not unlike most of the long string of experimental Fokkers of the era.

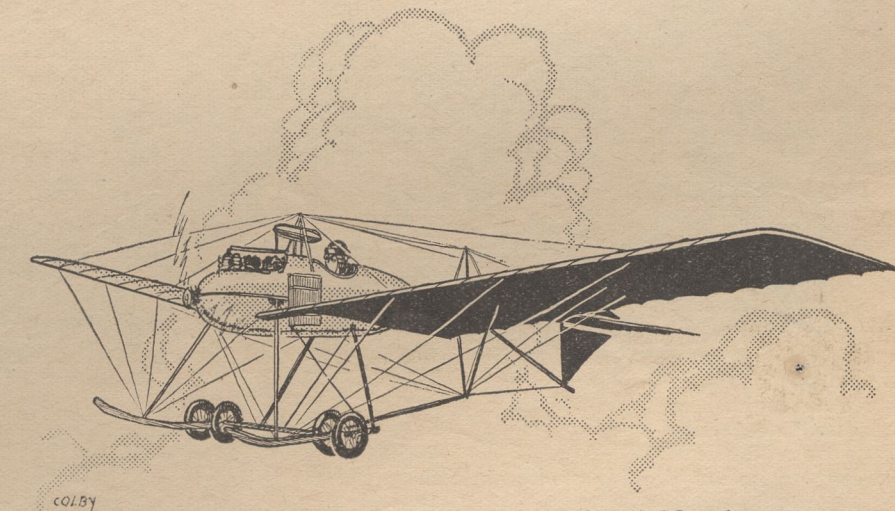
FOKKER M-1

THIS ship is supposed to be Fokker's first war plane, and many writers have exhibited it as such. Nothing could be farther from the truth, however. In his book, "Flying Dutchman," Fokker states with no uncertainty that the original Fokker fighter was a single-seater, powered with an 80 Gnome engine and provided with a synchronized machine gun. This was evidently the original E-1 flown by Immelmann.

All ships before this were carry-overs from Fokker's manufacturing days. Some of them actually saw war service, but only after they were stripped of their sport-plane equipment and given military equipment. Further proof of this may be found in Fokker's book in which he shows an illustration of this same M-1 ship which was crashed in 1912 by the Baroness Leitner.

This ship was the typical bamboo and wire contraption of the early days, with wings built for stability rather than speed. They carried no ailerons but relied on the extreme dihedral for stability.

From general inspection, the ship seems to have been built around a framework that involved a weird undercarriage and a monocoque body.



COLBY
FOKKER M-1

Box-structure formation was obtained by the use of long struts and skids on which were hung two sets of landing wheels. The 120-h.p. Mercedes of those days was planted forward in the body, and above it, swung in the wing-support pylon, hung the gasoline tank—or perhaps it was for oil. The radiator was slung along the port side, and a great wooden prop gave the tractor thrust.

The tail was German, whatever else may have been in Fokker's idea

when he designed this ship. It was the typical Taube tail, beginning well behind the main section of the body and ending with a flare that gave the impression that the bottom of a large rowboat had been pilfered from somewhere to do the trick.

The body carried two people and had a wheel control. The rudder was a strange affair, divided above and below the elevator like two triangles. No accurate speed records of this ship are available.

Fokkers old—and Fokkers older! Fokkers flown by Immelmann in the beginning of the World War — Fokkers flown by von Richthofen toward the end! Four of these famous ships of the Fokker line we offer you this month—the V-33, the M-1, the M-4 (all rare ones), and the famous Fokker triplane, probably the best ever flown.

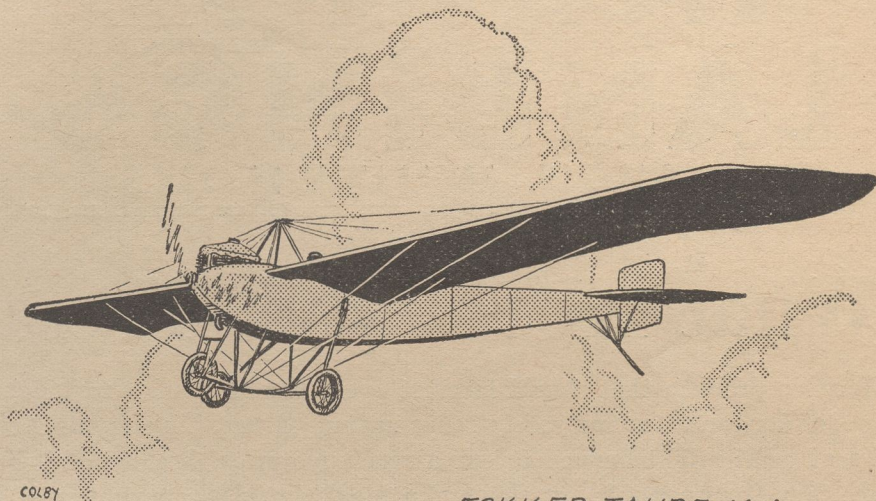
FOKKER M-4

THIS Fokker machine displays the first real move of the noted Dutch designer to turn to the rectangular style of fuselage for high-speed production. Already he had been urged by German Army officials to go into Germany and manufacture ships for the new army. Fokker was none too keen about changing his nationality, however, and for a time held out. For this reason, it is hard to figure whether this ship was even built in Germany.

The M-4 shows the first traces of the line that was to become the famous Eindecker of the early war days. The wings were less given up to the god of dihedral, and there were warping tips carried into the Taube-like tips of the trailing edges. Gone, too, is the Taube tail, for Fokker has here gone to the monoplane tail assembly with a square rudder hung between the elevator flaps.

The Bleriot touch is seen in the guys that support the wing and the cabane pylon over the front seat. The usual wheel control was used, and an improved 120 Mercedes gave the M-4 its power. No accurate details of the speed are available, but we have been given to understand that it did about 70 m.p.h.

An interesting feature of this ship



FOKKER-TAUBE M-4

was the three-wheeled undercarriage then coming into popularity all over the world. This arrangement consisted of three Vee-shaped sections made of light tubing which ran from the lower longerons, in the case of the first two sets, down to a main member that carried the front wheel. It was on this member that the main axle was carried, and steadied by two legs that ran up to the upper longerons and finished up in a swinging absorber case. This allowed the

wheels to roll up forward toward the body when the full weight of the ship was lowered onto the two main wheels.

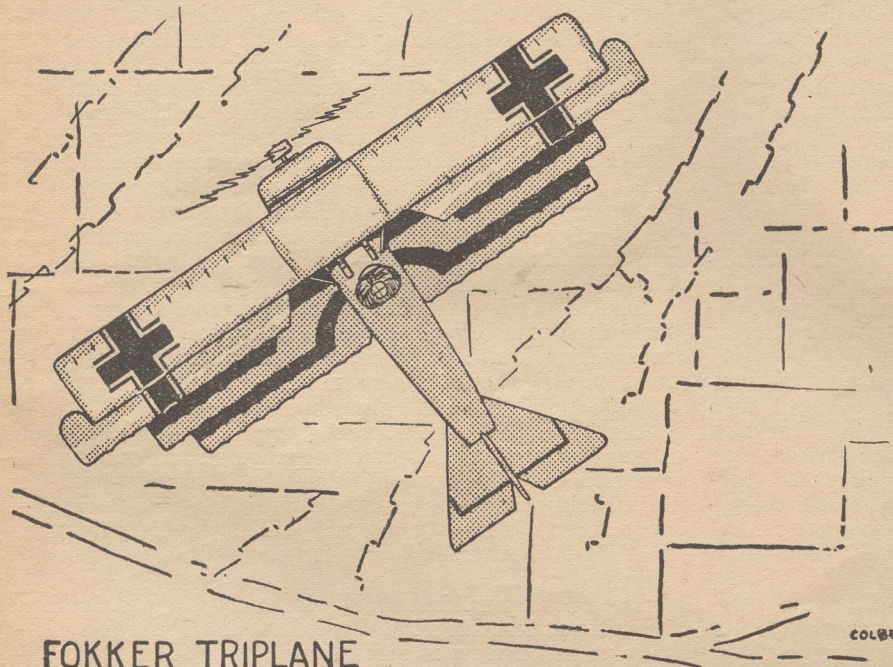
The openings to allow this movement, however, were far too large to assure good streamline and they provided considerable wind resistance. To take care of all this massive structure, Fokker had to build a suitable tailskid mounting to lift the tail high enough for proper landings.

Fokkers which were using the old 90 Gnome engine. Greater power was unavailable, so he sacrificed speed for climb and maneuverability and brought out the Fokker triplane.

The Fokker triplane was a smart ship. It had good visibility, good climb and plenty of ease of movement on the stick. Apparently these ships were easier to land than the Sops, for they stayed out there long after the English ship. The Sopwith was wicked on landing speed and too easily cracked up in landing to be of much use in France. However, those who have flown both declare the Sopwith to be a better-handled ship in the air.

As we stated above, the Fokker triplane was fitted with a 90 Gnome rotary, and later an Obertubersal rotary of 110 horsepower. The wings were a distinct Fokker product, thick and heavy, but having no dihedral or sweep-back. The top wing was cut away at the center for visibility, and the three planes were supported by a single strut, just as the Sopwith.

There was much metal-work to the job, of course, including the inverted-V center-section struts and the fuselage longerons. The ship had an unusually long prop, and seems to have larger landing wheels to make up for this length, so that the tips would not foul when taking off. The machine was fitted with two Spandau guns, and, of course, was a single-seater.



FOKKER TRIPLANE

THE FOKKER TRIPLANE

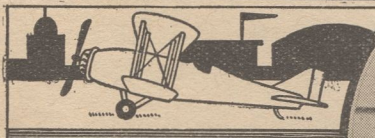
NOW we give one of the most interesting ships of the war, and probably one of the most advertised—the Fokker triplane.

The ship was designed in 1916 by Anthony Fokker. It had a fairly long life for a war machine, and we are told that von Richthofen, Voss and many other German aces used it at one time or another.

It is generally admitted that the Fokker triplane was a good copy of the British Sopwith triplane which came out a few weeks before. Fokker declares that he designed the triplane to give the Germans a fast-climbing ship for certain defensive work. It seems that the French had perfected their 110 Le Rhone engine, and their Nieuports were outstepping and outclimbing the earlier

HAPPY LANDINGS

BY ARCH WHITEHOUSE



What About the Aircraft Factories?

Here's a problem that should interest every one of you! Great Britain has recently gone into the subject of danger zones and safety zones in time of war. This month Arch Whitehouse discusses the possibility of what might happen to our aircraft factories, because of their location, in time of war. How safe are they from possible invasion and attack? In this department, FLYING ACES gives Mr. Whitehouse free rein to express his own personal views of various phases of aviation.

* * *

PERSONALLY, I do not care for the idea of war, yet I am probably one of the most interested persons when some one starts talking about it. A morbid interest, perhaps, but until I get too old for anything but a warm armchair and a pair of carpet slippers, I shall continue to worry about wars and what I can do either to stop them or make them as easy on the public as possible.

All this business about spies gets me stirred up, too. We hear every day of spies being picked up somewhere. Germany nails one every other week. Italy frowns on French tourists. A Jap is picked up in Florida with a camera, and diplomatic relations are strained again. A British armament expert is caught selling important arsenal secrets, and a couple of Americans go on trial in France for snooping somewhere. A Panama Zone editor explains lucidly how the canal can be blown up in a few hours, and some one else discloses that 300 Japanese barbers have barber shops along the Canal from one end to the other.

What it's all leading to, I don't know, but an item garnered from a British air magazine started me thinking the other day, and I wonder now why the matter has never been brought up before. Perhaps it is because we are not as air-minded as we believe, or at least as air-defense-minded as we should be.

Britain, it seems, has just decided that all this war-talk on the European continent may break out into reality some day, and Britain, being one of the few nations that truly realizes the value of an air arm, has decided that something should be done about her aircraft factories in case some one in Europe starts throwing Jack Johnsons and Krupp coal boxes again.

With this point in view, they suddenly discovered that important aircraft factories like Hawker, Fairey, Blackburn, Short Brothers, Boulton & Paul and several others are placed in conspicuous places, or at points where it would be easy for raiding squadrons from the continent to find them with very little trouble. Consequently, the British Air Ministry has chopped the map of England up into danger zones and not-too-dangerous zones. There are several comparatively safe zones, too. It was not disclosed, of course, whether the focal point of these zones is set in Moscow, Berlin or Paris.

Now here's an important point to consider in this country.

Take the Boeing plant at Seattle, for instance. We buy a lot of pretty swell bombers and pursuit ships at Boeing. Seattle is in a tough spot if some Asiatic power

ever suddenly made a raid on the West Coast. Seattle is too close to Vancouver to be safe, not from a possible Canadian raid, but from an enemy that might take Vancouver Island. The Berliner-Joyce firm is situated at Dundalk, Md., a place I can't find on my map, but I'll bet it is situated beautifully in the vee of a nice railroad and not too far from the Atlantic coast. A push-over for an incoming raid crowd!

Bellanca has its factory at New Castle, Delaware, smack on a bright point of Delaware Bay, near a railroad and a main highway. Lovely for the night-flying lads to pick out! The Consolidated Aircraft Corporation, makers of the new P-30, is at Buffalo, as is the Curtiss plant. These are both fairly safe as long as some one doesn't get gay around the Great Lakes to make it look as though Canada were getting nasty.

Then there's the Douglas Aircraft Company, makers of fine bombers, observation ships and special Navy jobs. They have conveniently placed their plant at Santa Monica, Calif. All the Asiatics have to do is to sneak over with a raiding force some nice dark night, and there it is, right on Ocean Park Boulevard. Pretty for the boys on the toggles!

The General Aviation Manufacturing Corporation, makers of the big G.A. flying boats, are down at this mysterious Dundalk place, too. If the enemy should miss the B/J outfit, they might get the G.A. place. What's a few initials between enemies?

The Great Lakes Aircraft Corporation might come under the head of reasonably secure factories, as they are situated in Cleveland, along St. Clair Avenue. In announcing all these points, I am giving out no military secrets, for they are all published yearly in "All the World's Aircraft," a volume that is available all over the world.

The Grumman Aircraft Engineering Corporation has its plant at Farmingdale, Long Island, and from a military point of view is fairly safe, in spite of its proximity to the Atlantic coast. Farmingdale is hidden away neatly and would be fairly hard to pick out, unless you knew where it was. Of course, some one might forget to daub out those bright names that glisten off the roofs of many of our big aircraft plants, and there we go again.

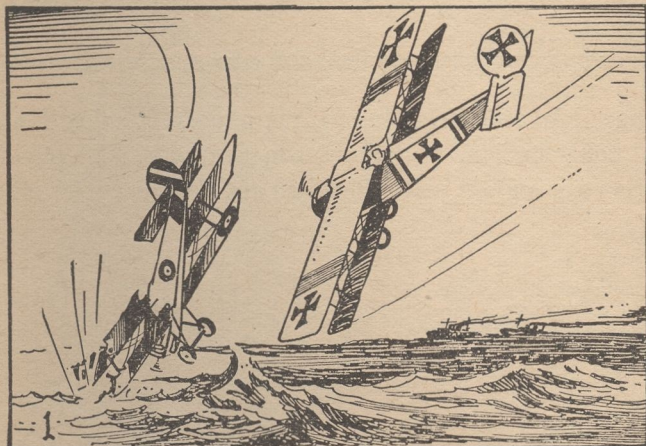
A FEW ARE SECURE

THE Hall-Aluminum Aircraft Company, manufacturers of the big Hall bombing and patrol flying boats, is listed in the comparatively safe zone, as their

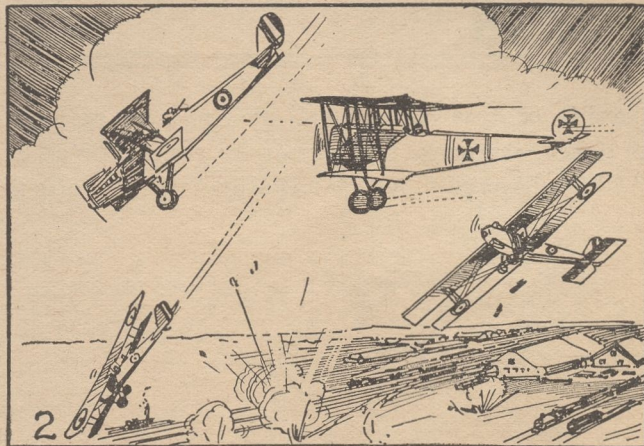
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Lives of the Aces in Pictures

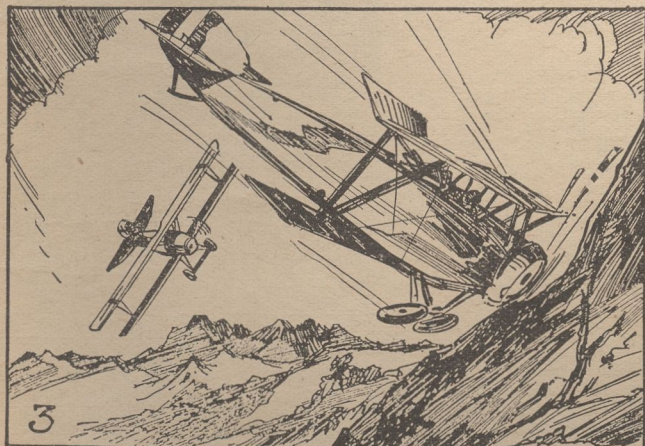
XXXIV—Lieut. Rudolph von Eschwege, German Eagle



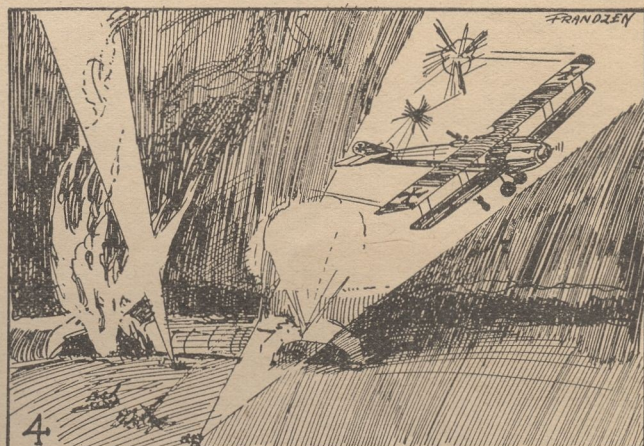
1—Lieutenant von Eschwege, known as the Eagle of the Aegean, was the German ace who fought on the lesser known Balkan front at Drama, Greece. Early in his fighting career, he met an airman from the English airdrome on the island of Thasos. They engaged in a furious fight, and von Eschwege forced his opponent down over the sea.



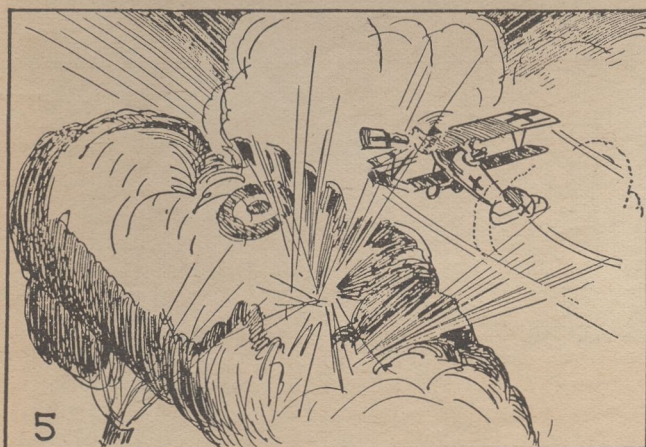
2—Eschwege, flying along on one patrol spied several B.E. machines bombing a railroad station. He quickly attacked them. One avoided him, but the second B.E. shot at the Eagle's motor and also wounded him in the arm. His plane fell in a steep dive, but he succeeded in straightening it—and came back at the B.E.



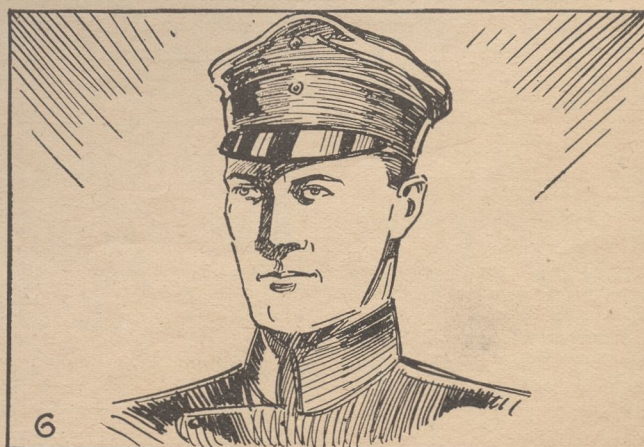
3—Von Eschwege once met an English two-seater from a near-by drome, and attacked it. The fight carried them over the Macedonian mountains. After skilful maneuvering, the Eagle put in a burst which disabled the two-seater, sending it smashing against the sheer cliffs of this rough, desolate terrain.



4—On another occasion, the Eagle flew out with a companion on a bomb-dropping expedition to an enemy drome. They dropped four eggs on a hangar, and a lucky shot crippled a searchlight on the ground. They sprayed bullets on the Tommies who ran to put out the fire in the blazing hangar, and did all the damage possible.



5—Von Eschwege had been intrigued by watching an Allied balloon at Orlyak. He got "balloon fever" and, despite warnings, determined to go after it. He fired at the balloon, which was filled with explosive to trap any plane which flew within a hundred-yard radius. His plane was caught, and went down in a dive. The Eagle was killed.



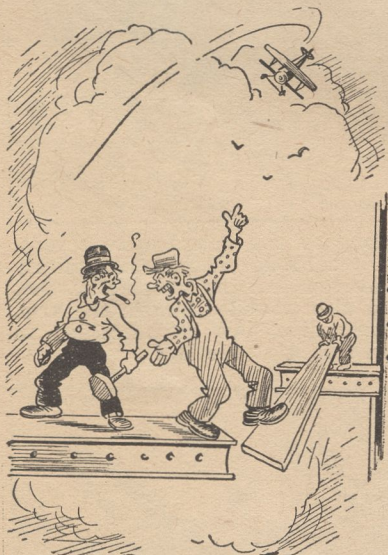
6—Rudolph von Eschwege began his war career in a mounted Jaeger regiment in 1914. He had been in the trenches six months before he trained for aviation. He was killed on Nov. 21, 1917. The English gave him a military funeral, and the Bulgarians commemorated his fame by a monument erected in Drama.



WISECRACK-UPS



Taxi in on this runway and pick up a plane load of laughs! In this department, we present a collection of jokes, cartoons, and humorous verse. For all original contributions which we can use here, FLYING ACES will pay \$1. No contributions will be returned unless a stamped, self-addressed envelope is enclosed.



"I wonder how he'd feel up there without it?"

FAST AND FURIOUS

The D.H.4 pilot was carrying an important official across the lines for a look at the trenches. They had gone only a few miles into German air when the pilot sighted a flight of Fokkers. Not wanting to endanger the life of his passenger, he turned tail and dived for the lines.

The engine, always unreliable, chose this time to stop, and the Fokkers gained on him. The official now saw the enemy planes and missed the comforting beat of the motor.

When the Fokkers were close enough to shoot, lead began to stream past him. He grabbed up the speaking tube and yelled:

"Can't you go faster?"

"Sure," replied the pilot, "but I daren't leave the plane."

A LOAD OFF OUR MIND

Phineas: If my left arm weighs a pound and a half, how much does a big fat pig weigh?

Major Garrity: Well, how much?

Phineas: Weigh yourself and find out! Haw-w-w-w!

TIME'S UP!

Instructor: How many times have I told you to bank more when she skids?

Student: I dunno. I thought you were keeping score.

A GRITTY PROBLEM

Going: Does it take much courage to navigate a free balloon?

Coming: Oh, no—just a little sand.

A CLOSE CALL

On: MacPherson always cuts off the motor when he's aloft and wants to come down.

Looker: Yes, he's of Scotch descent.

KEEP IT DARK!

First darky: Yas suh, boy, Ah seen dat dere airoplane rise right out of the water an den lan' on de groun'.

Second darky: Yo amphibian!

Dumb Dora is on the right track, but she still thinks ground school is a sort of agricultural college.

STUFF AND NONSENSE

Old-timer: If your youngster builds little air-planes, he must have the right stuff in him.

Proud parent: Yes, he's a model boy.



"That's what ya get for cheatin'!"

ZOOM COMEBACK, EH?

Angry instructor (in the air): I don't believe there's much difference between you and a fool.

Student (answering over the inter-phone): There isn't—just a couple of feet of fuselage cowl.

THE TIP-OFF

New passenger (after air liner had banked a dozen times): Why does this ship make so many tips?

Air hostess: Oh, it's just making an example of itself to the passengers.

ACE IN A HOLE

C.O.: Which of you men shot down that black Rumpler?

One of the Aces: I did.

C.O.: Will you designate the exact location where you shot it?

Ace: Yes—right over the spot where the wreckage was found.

No prophet has yet announced what will come after the airplane, but our guess is that it will be a sky cop.

TAKE IT BACK!

Flyer: What do you mean by saying Jones is bull-headed?

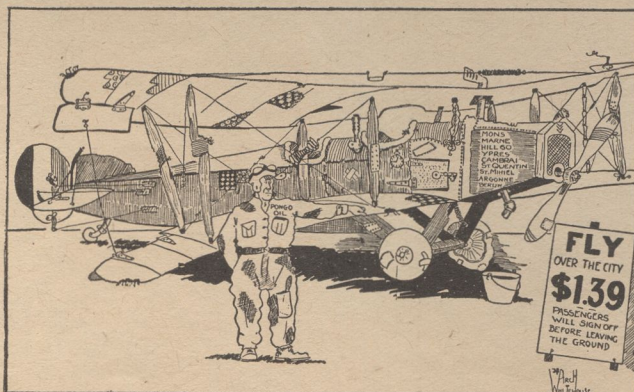
Same: Why, that man's so obstinate he won't even retract his landing gear.

THE UPSTARTS!

He: Say, we're having a great time keeping up with the Joneses.

She: You are?

He: Yes, they're always after a new altitude record.



FAMOUS BARNSTORMERS

This is Pilot Adolph Squizzle, the noted aviator, who flew overseas—that is to say, he sat in a kite balloon that was towed by a tug-boat from Governor's Island to Hoboken, after the Armistice. Adolph has fixed up this former war plane, which had a splendid record prior to its first seventeen crashes. He expects to do a nice little business next summer. He probably will—for the undertakers.

FLYING ACES PICTORIAL FLYING COURSE

ACE MCCOY YOUR INSTRUCTOR

LESSON NO. -16-



ACE —
HOW CAN YOU TELL
WHEN A SHIP IS
CLIMBING OR LOSING
ALTITUDE WITHOUT
USE OF INSTRUMENTS
WHEN GROUND IS
HIDDEN BY FOG?



THE ANSWER

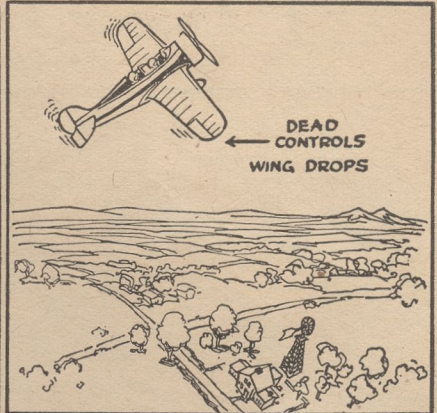
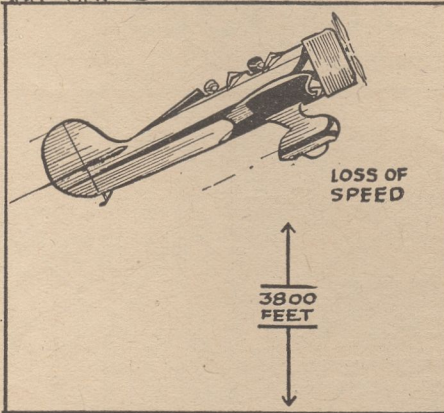
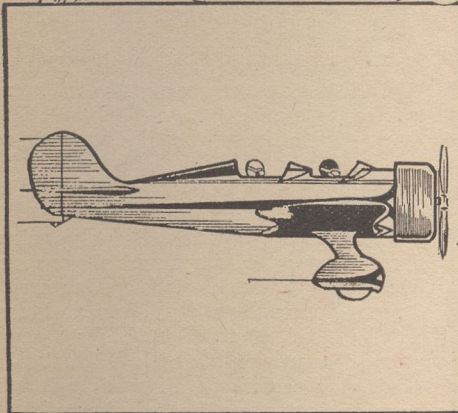
WIND STRIKES
SIDE OF FACE
IF SLIPPING

SOUND OF
ENGINE

CONTROLS BECOME
LAX IF APPROACHING
STALLING POSITION

THE FEEL OF
YOUR WEIGHT HERE
"YOU FLY FROM
THE SEAT OF
YOUR PANTS"

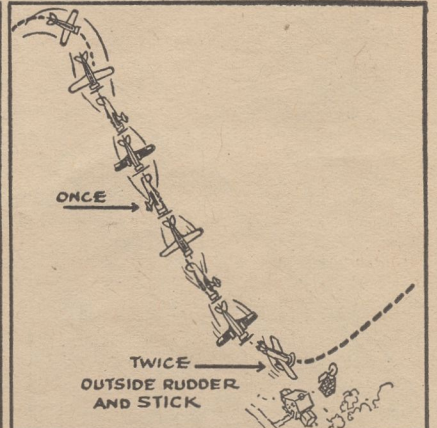
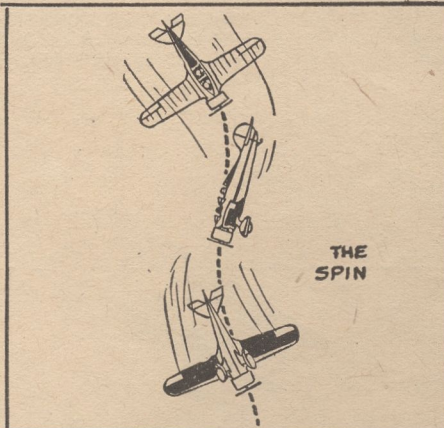
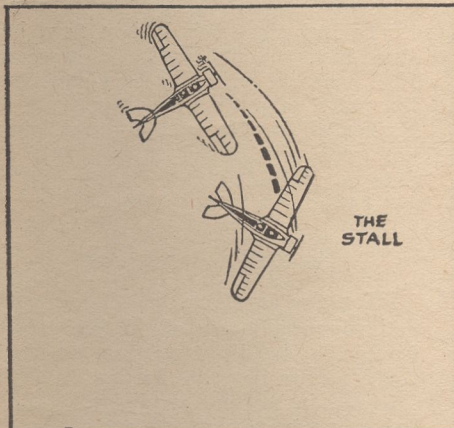
FLY "HANDS OFF"
MODERN SHIPS
RIGHT THEMSELVES



Stalls and spins! There is something every pilot should know all about before he ever tries any stunts, and that is how to kick 'er out of a spin when she stalls off with a wing down.

Always practice this headed into the wind. Pick out a landmark, like the house below you, and be sure you kick 'er out of the spin when you get headed in the same direction as when you went into it.

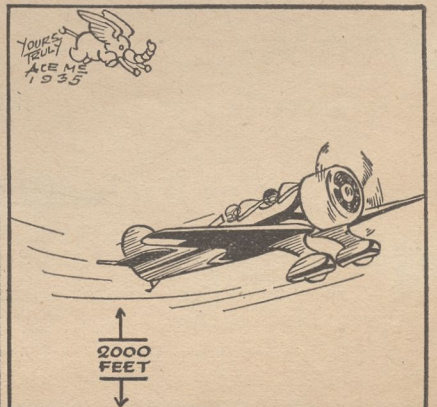
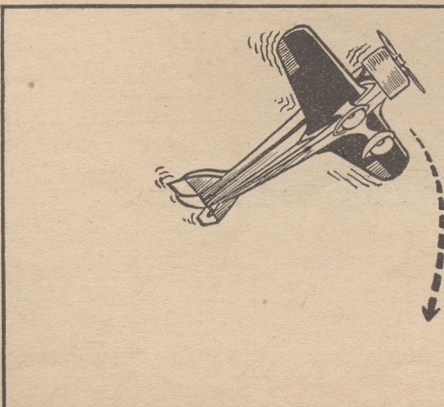
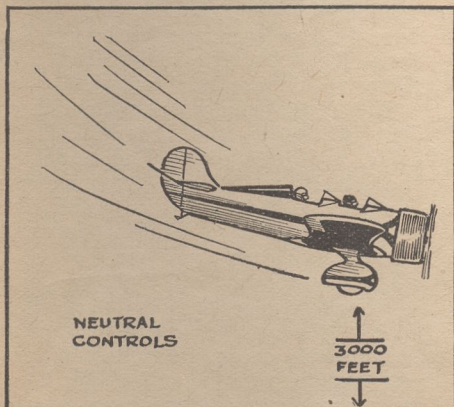
Make sure you're up over 3800 feet; then cut down your power and hold her nose well above the horizon with one wing slightly down, until your controls become lax and dead.



As she stalls, she will fall off and spin toward the down wing side. So kick rudder on the down wing side and haul the stick back as far as it will come. Hold it there and let 'er spin.

Let 'er spin around twice. Try to keep her nose on your landmark below until that windmill seems to make two complete revolutions around the house. Don't spin 'er too tight—you have plenty of altitude.

Now as you look out over the nose of your ship, the windmill is in the same position as when you went into your spin, so kick opposite rudder and neutralize your controls (lateral).



Then bring your stick back to level flight position slow an' easy so's you don't pop a wing off of 'er. Then feed 'er the power as she regains flyin' position. Then, if you're still up over 3000 feet

Cut down your power again, haul 'er back again and let 'er stall off on the other wing. Repeating the maneuver, but spinning 'er in the other direction, controls reversed, of course.

Always have plenty of altitude before attemptin' this, and be well out of it at 2000 feet. If she tries to go into a "flat spin," pour the coal to 'er pronto, an' give 'er opposite stick an' rudder!

Here and There in the Air

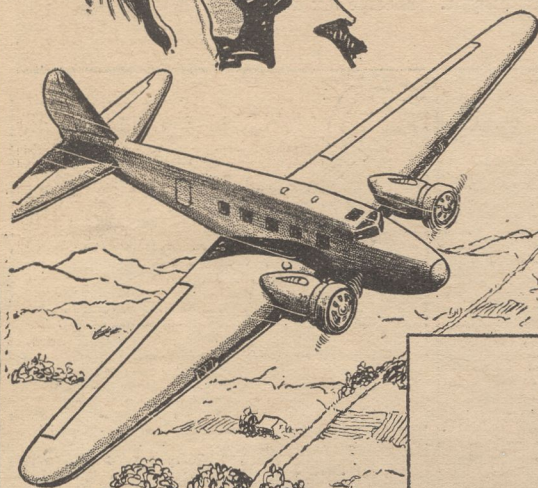
In this department, FLYING ACES presents some of the odds and ends of aviation—interesting facts about flyers and their foibles, news picked out of the sky here and there. We hope you like it.

PILOTOPICS

By ROY HUMPHRIES



CORA STERLING
THE FIRST AERIAL
POLICE WOMAN.



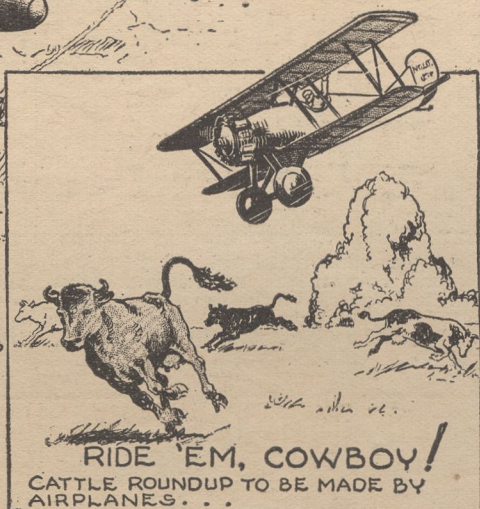
THE MASON-DIXON LINE, LOOKED UPON AS AN IMAGINARY LINE SEPARATING SOUTHERN STATES FROM NORTHERN STATES, CAN ACTUALLY BE SEEN BY AIR PASSENGERS



ROY HUMPHRIES



AIRPLANE CROSSING
SIGNS SIMILAR TO
RAILROAD SIGNS.



RIDE 'EM, COWBOY!
CATTLE ROUNDUP TO BE MADE BY
AIRPLANES.

Stories Back of the Above Pictures

- 1—Miss Sterling of Seattle, Wash., first aerial policewoman, patrols the skies for air regulation offenders in the Puget Sound area. Badge and all!
- 2—This unusual sign appears as a warning to motorists at the Grand Central Airport, Glendale, Calif.
- 3—The Mason-Dixon Line is not imaginary. Passengers flying from Washington to Pittsburgh can clearly see the clearings, twenty yards wide, made by the early surveyors through the wooded sections of Penn.
- 4—"Git along, little dogie!" Old "Paint" seems destined for the shelf, as cowboy pilots employ planes in their roundups in the north woods near Hibbing, Minn.

NEWS OF COL. BISHOP

THE call of the clouds has once more gripped Canada's ranking war-time flying ace, Lieut.-Col. W. A. Bishop, V.C. After an absence of 12 years from active flying, he has decided to climb back into the cockpit. He is now taking instruction at the Montreal Light Airplane club field preparatory to regaining a pilot's license.

Col. Bishop, however, is only going into flying again for personal reasons. He wants to be able to commute between Montreal and his summer home in Muskoka, Ont. Col. Bishop soon showed he was only a little bit rusty on the flying technique. He went up first with an instructor, but within an hour was flying "solo."

Colonel Bishop achieved an enviable record during the war, accounting for 72 German airplanes. With orders to return to England in his pocket, on his last day in France he brought down five ships.

The last time Col. Bishop flew, before his present comeback, was in 1922, when he went on a barn-storming tour of Canada, accompanied by Col. Barker, of Toronto, another noted flying ace, who was killed in a crash in Ottawa, in 1931.

AMERICA'S CRASH ACE

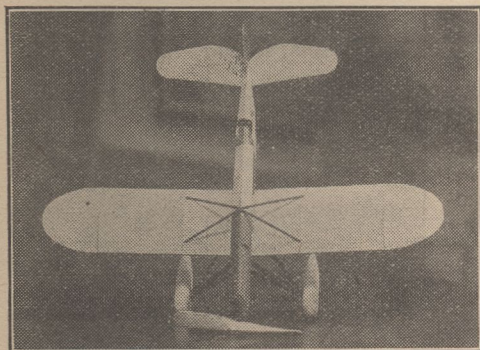
IT'S a far cry from hell-diving with the immortal aces of the LaFayette Escadrille, to demonstrating a dance routine for a bevy of chorines. Such is the leap in fortunes made by Le Roy Prinz, since he hurtled to earth at Chateau Thierry in his twenty-sixth, last, and almost fatal airplane crash.

The casual observer, noting the Paramount dance director's smooth hair, pink-and-white complexion, agile dance movements and soft, well-modulated speech, couldn't possibly believe he had ever wandered very far from the theatrical realm. But that showman exterior is deceptive.

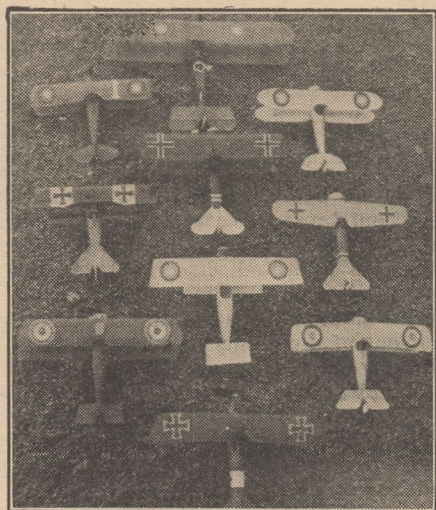
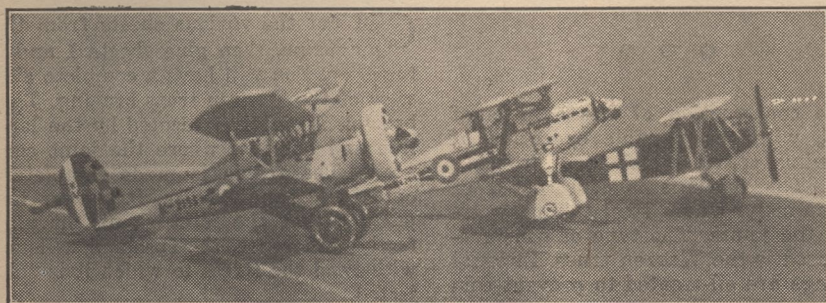
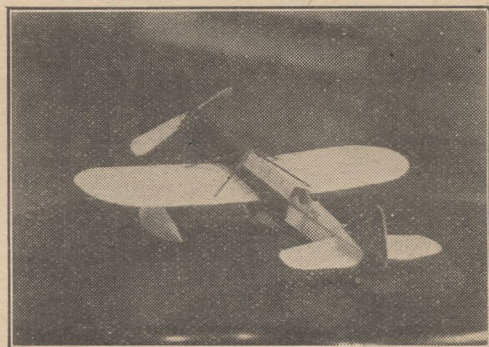
This is the man who, in the French Foreign Legion, the LaFayette Escadrille, and the famous Eddie Rickenbacker's Hat-in-the-Ring Squadron, was known as Lieutenant Prinz, and also as the "Smiling balloon buster," "America's Crash Ace," etc.

His five and one-half fighting years in France were rewarded with a silver plate in the skull, a cracked jaw that is noticeable when he smiles, a two-year hospital record, seven decorations, and a great array of war pals—among them, Major Lufbery, greatest French ace; Frank Luke, balloon buster; Rickenbacker, Gen. "Billy" Mitchell, Merian Cooper, and Quentin Roosevelt.

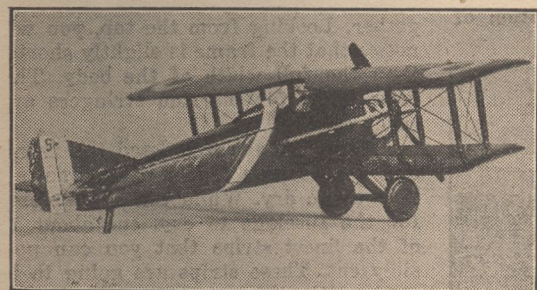
With the Model Builders



Last month you all saw the excellent plans for a Flying Aces Sportster printed in this magazine. Well, here's the result of using those plans in a constructed model. We show you two clear views of the F.A. Sportster, built by Hy Loschin, Brooklyn, N. Y., who designed the model. Let us know how your Sportsters are coming along.

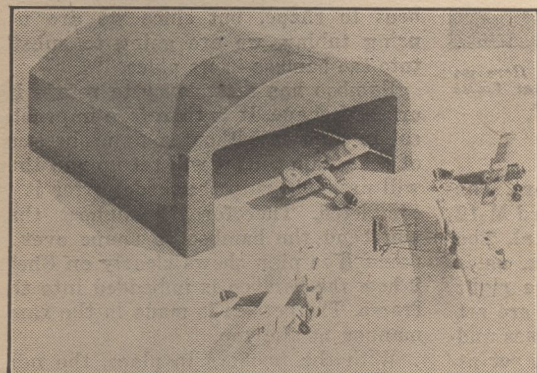


Above: From far-off England came this triumphant trio of models. The Bristol Bulldog, Hawker Super Fury and Fokker D-7 complete to radial engines, machine guns, etc. Built by J. H. Elwell, of East Yorkshire, England.

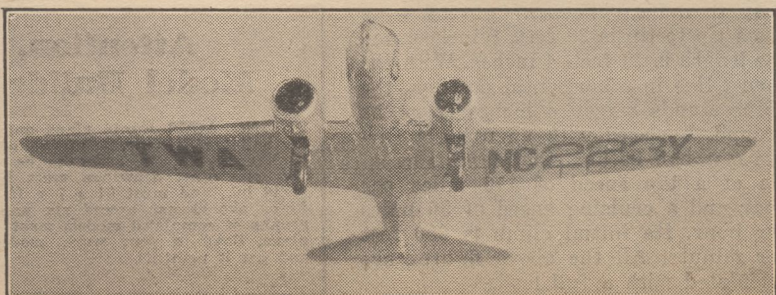
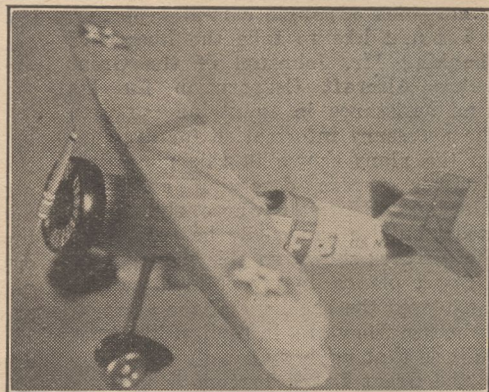


Left: Here's something interesting! A Spad 7 model, an exact duplicate of the French ace Guynemer's war plane, which was built by Arnold Smith, of Pittsburgh, Pa., and displayed all last summer at the Jarrett Museum of World War History at Atlantic City.

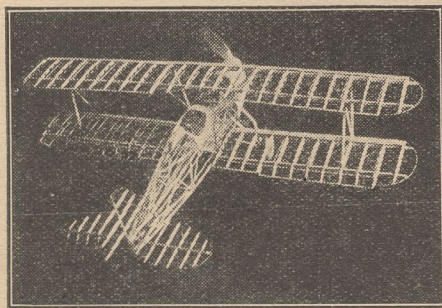
Peter Bowers, of Los Altos, Calif., sent us this imposing array of World War models. Reading from the top down, you'll find the D.H.4, Spad 13, Nieuport 28, Fokker D-1, Fokker Tripe, Fokker D-8, "Bullet," Sopwith Camel, Nieuport 17 and Albatross D-3. Well, he's covered a good many of them!



Here's variety for you! On the left is a hangar model, with a group of war planes in front of it. One Voisin and three Sopwiths—know the models? These were built by Harry Kraus, of New York City. Below this you'll find Gerard F. Ansel, of Minneapolis, Minn., proudly displaying a group of his war and modern models. We don't blame him for looking pleased! Here at the right is a 19½-inch Curtiss Goshawk, with movable controls. Peter Malaczuk, Jr., of Chicago, who made it, says it's a wonderful flyer, and it looks it. Below is another model made by Arnold Smith. This time it's a Douglas DC 1, and it looks as if it were going places. It won a prize in a national TWA model contest in which there were 2,500 entries, so it must be good!



Build the Great Lakes Trainer



This interesting snapshot of the framework of the Great Lakes Trainer model built according to plans given here will give you a clear idea of what your model should look like before covering.

HERE'S something new in the way of model building. The replica model of the Great Lakes Trainer described in this issue is an exact reproduction of the large ship, incorporating all its detailed structure work. Movable controls and metal fittings for attaching the parts are its most outstanding features. The controls are operated through a system of rods and are operated directly from the cockpit in the same manner as on the large ship. All the metal fittings are cut out of aluminum and bent to form directly upon the part to which it is to be attached.

Due to the fact that the model was built to scale, it was found necessary to increase the power. This was accomplished by using a three-to-one geared-up motor. With this ratio, the propeller will, under the same conditions as if it were attached directly to the rubber, travel three times as fast, thus giving the necessary propulsion power. The type of gear described can be purchased at most model supply companies, as can the propeller, which is a nine-inch Japanese carved propeller.

I would like to take the liberty of thanking Mr. Johnston of the Great Lakes Aircraft Corporation for his kind assistance in supplying me with the necessary information for drawing up the plans shown in this magazine. Another person deserving credit is Abraham Bergman whose skill as a model builder can easily be seen from the pictures shown on this page.

Sport planes, in my opinion, can be considered the backbone of the aviation industry. They are, in reality, like cars, built so that anybody can fly them.

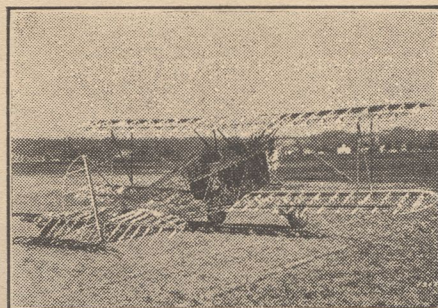
The Great Lakes Trainer is a plane of this design, made to sell almost as cheaply as some of our cars, and as easy to drive. The span of the wing from tip to tip is 26 feet, 8 inches, and the length is 20 feet, 4 inches. With the thrust line in a horizontal position, the plane stands 8 feet, 4 inches from the ground. Powered with an upright Cirrus motor of 95 h.p., the plane is capable of a top speed of 110 miles per hour and a cruising speed of 90 miles per hour. Its initial climb is 600 feet per minute. All the above figures are calculated with a full load.

You thorough-going model builders who want to make exact replicas of large ships can go right to it this month! Here are plans and directions for building the Great Lakes Trainer, an exact reproduction of the real ship, complete with detailed structure work, movable controls and metal fittings. Follow the directions, and you'll have an amazing duplicate of this famous sport plane of today.

By Avrum Zier

The construction of the ship is of metal, with the possible exception of the wing spars, which are probably wood. The fuselage is constructed of chrome molybdenum steel tubing, welded at the joints. The type of construction used is the Warren truss. Internal bracings are oil-treated to prevent corrosion.

Top and bottom wings are constructed of aluminum with the exception of

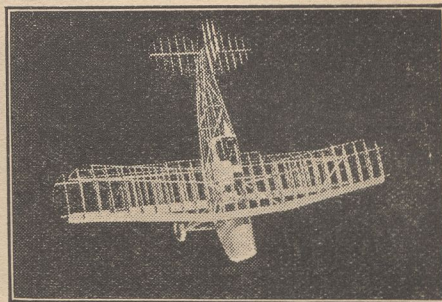


Compare this picture with those above. Here we show you a picture of the actual Great Lakes Trainer ship, in skeleton shape. See any difference?

the spars, as I have stated before. The airfoil section used is the standard M-12 and is stamped out of sheet metal. The top wing is built in three parts, as is clearly shown on the plan. The right and left panels of the top wing are set at a sweep-back angle of 9 degrees and 13 minutes. The bottom wing is set at a positive stagger of 25 inches. Both wings subtend a dihedral angle of 3 degrees.

Attention, Model Builders!

FLYING ACES wants plans and directions for building flying scale models of the latest modern planes. In order to be printed in this magazine, drawings must be done in India ink, and must fit a 7 x 10-inch page. Plans should not exceed six pages. Photographs of completed models must accompany plans. Send in your work, model builders, and get it printed!



Over on its nose! Here's another view of the Great Lakes Trainer model in its framework stage.

FUSELAGE

CUT out the various sheets from the magazine, then glue sheets 1 and 3 together. You will have a complete side view of the Warren truss bracing. This bracing is clearly indicated by the long line and dot just where the joint connects. The frame is made completely out of 1/8" square balsa. It is very important that the joint should fit perfectly; otherwise, the fuselage will not withstand the stress to which it is subjected.

The top cross bracings may be obtained by pasting Sheets 2 and 4 together. Looking from the top, you will notice that the frame is slightly shorter than the full width of the body. This is to allow for the side stringers and covering.

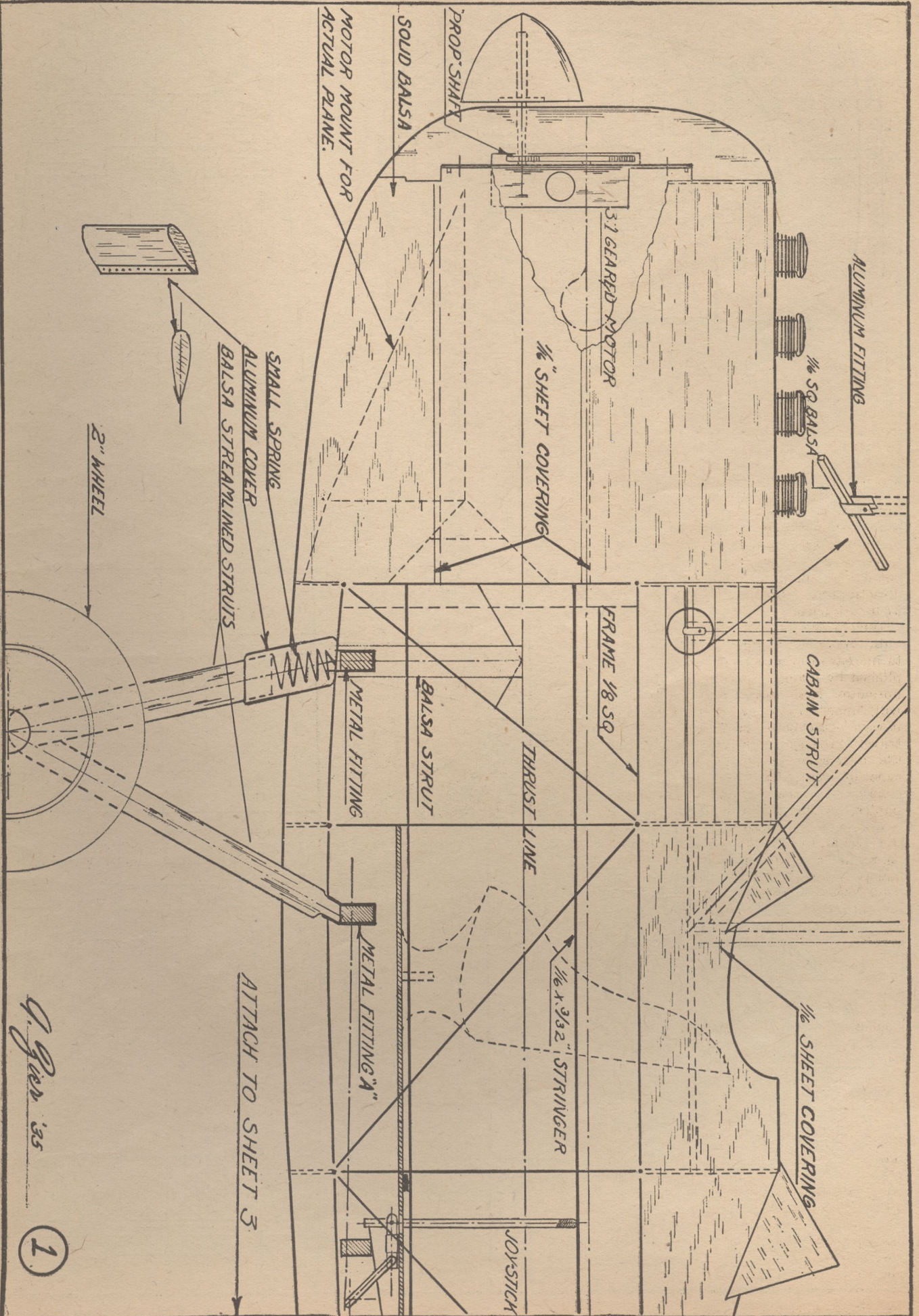
After you have completed the frame and are positive that it is in line, set it away to dry. While you are waiting for the fuselage to dry, cut about 12 of the finest strips that you can possibly cut. These strips are going to be used as the formers. As you probably know, the large ship has the tubing bent to shape, but since we are not using tubing, we are going to substitute the bamboo in its place.

Bamboo has a tendency to retain its original shape. It is therefore impractical to bend it without a flame because of the strain that it will set up and that will probably ruin the model after it is completed. Therefore, I suggest that you bend the bamboo to shape over a flame. The plan shows clearly on Sheet 2 how the bamboo is imbedded into the frame. The bottom is made in the same manner as the top.

With the formers in place, the next step is to place on your stringers. The stringers on the top are bamboo and merely glued on top of the bamboo formers. The side stringers are balsa, as shown on the plan. One stringer, however, is also balsa on the top; that is, the one on which the cabane struts attach (Sheet 1). It is important to note how the top rear stringers run.

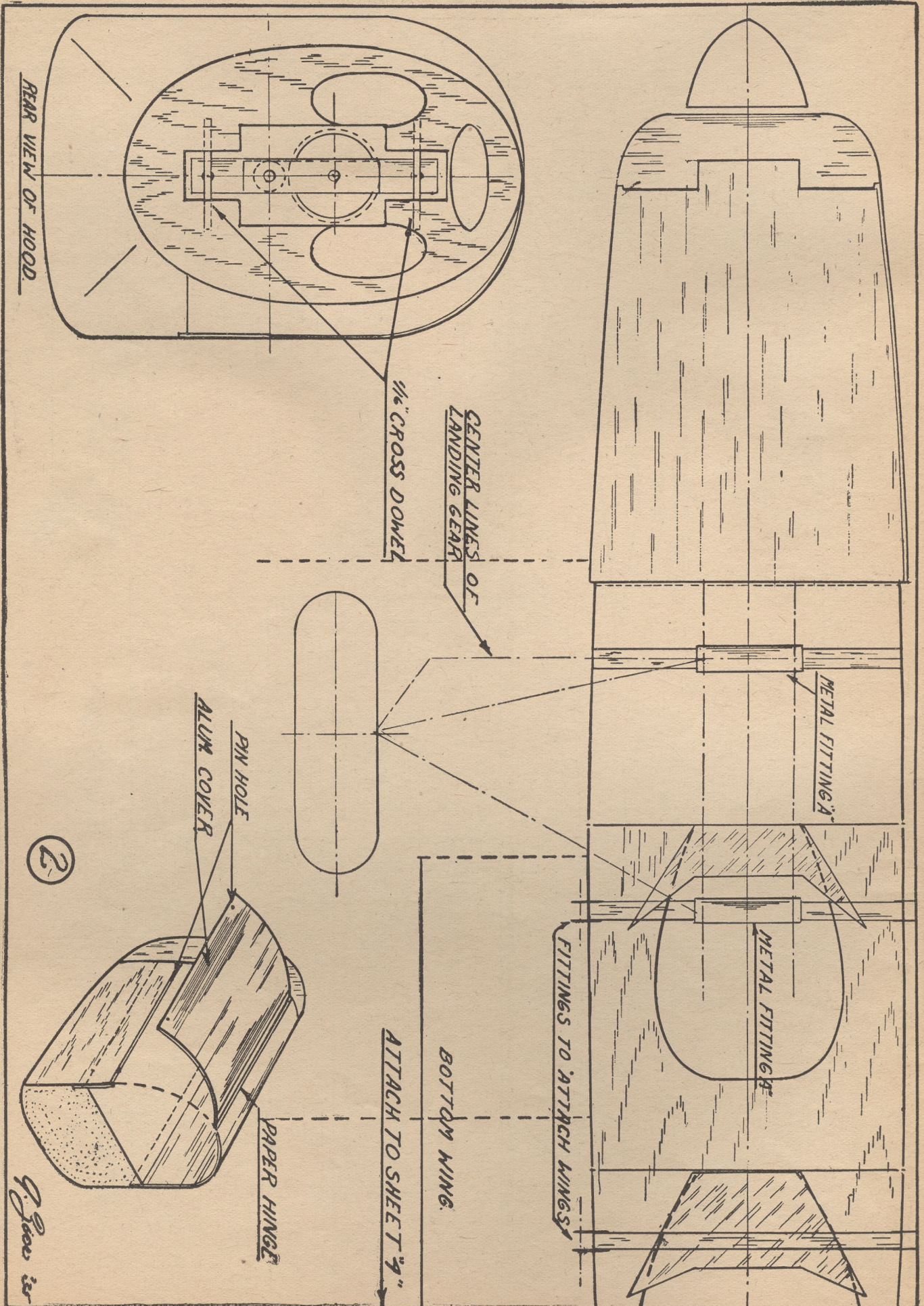
Bend the rear hook to shape and insert it into the rear post. The rear post is constructed of heavier balsa so that it will withstand the strain on it. The cockpit is covered with sheet balsa of about 1/64" stock. The windshield is

(Continued on page 79)

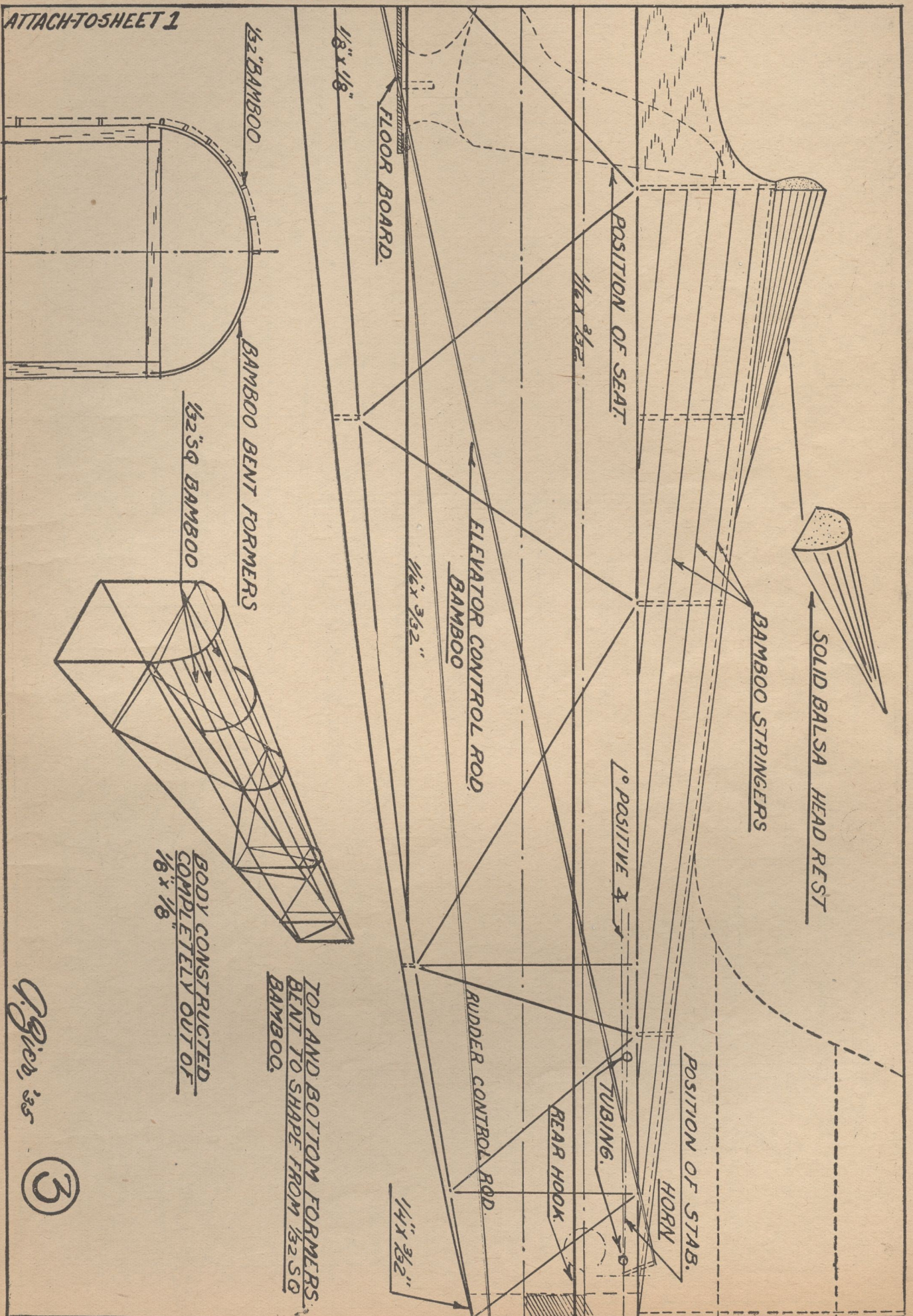


A. Guer 135

1

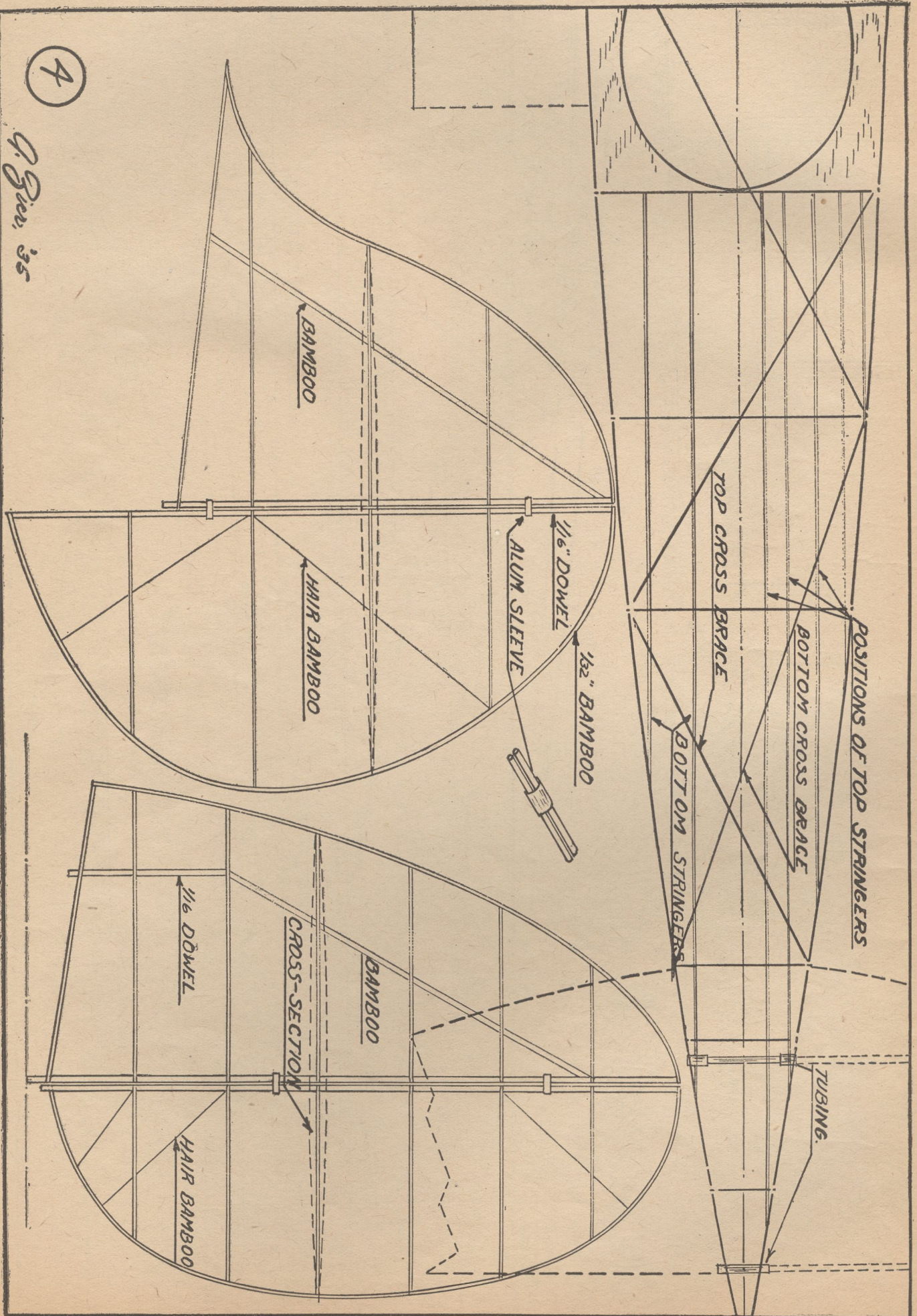


ATTACH-TO-SHEET 1

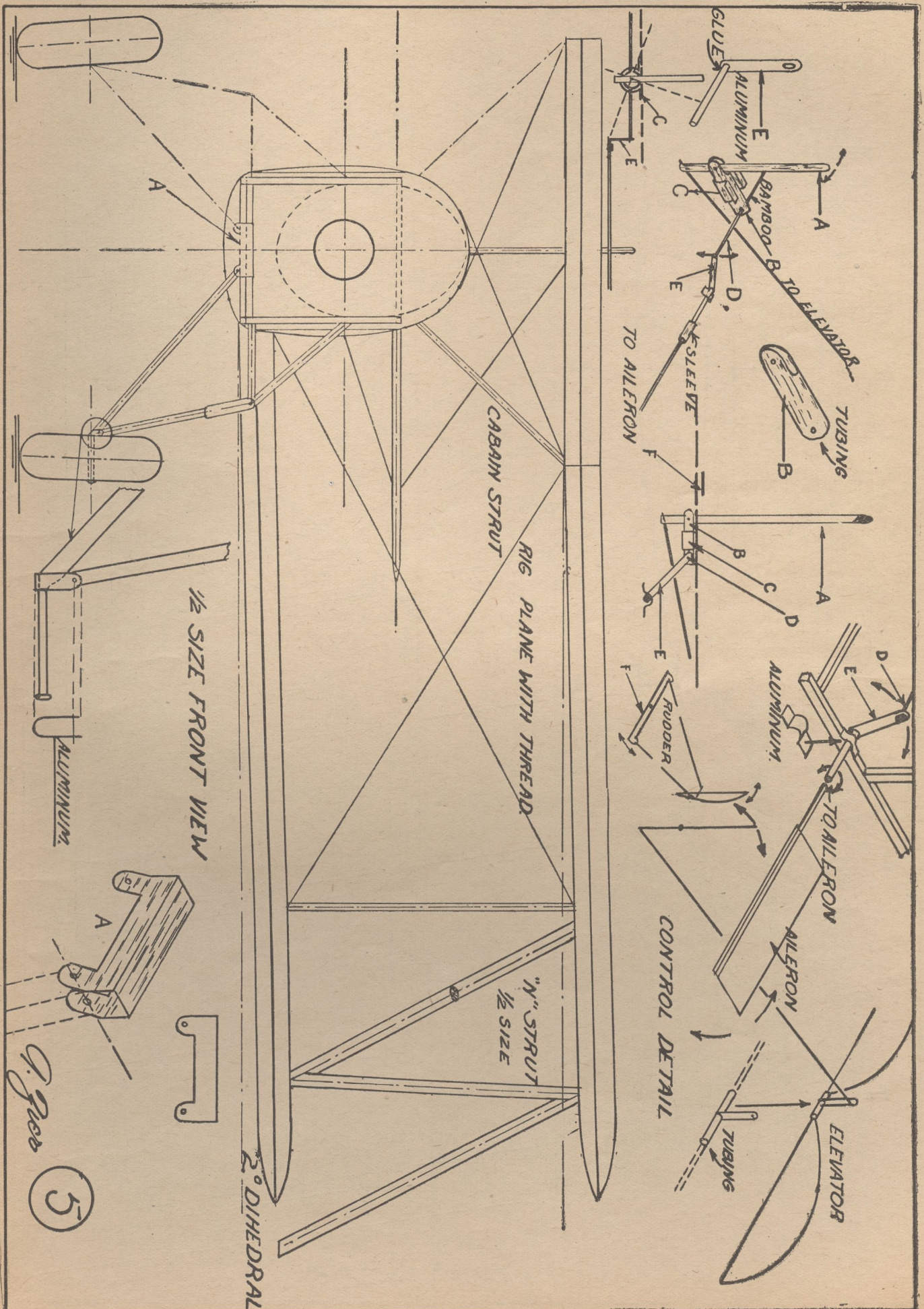


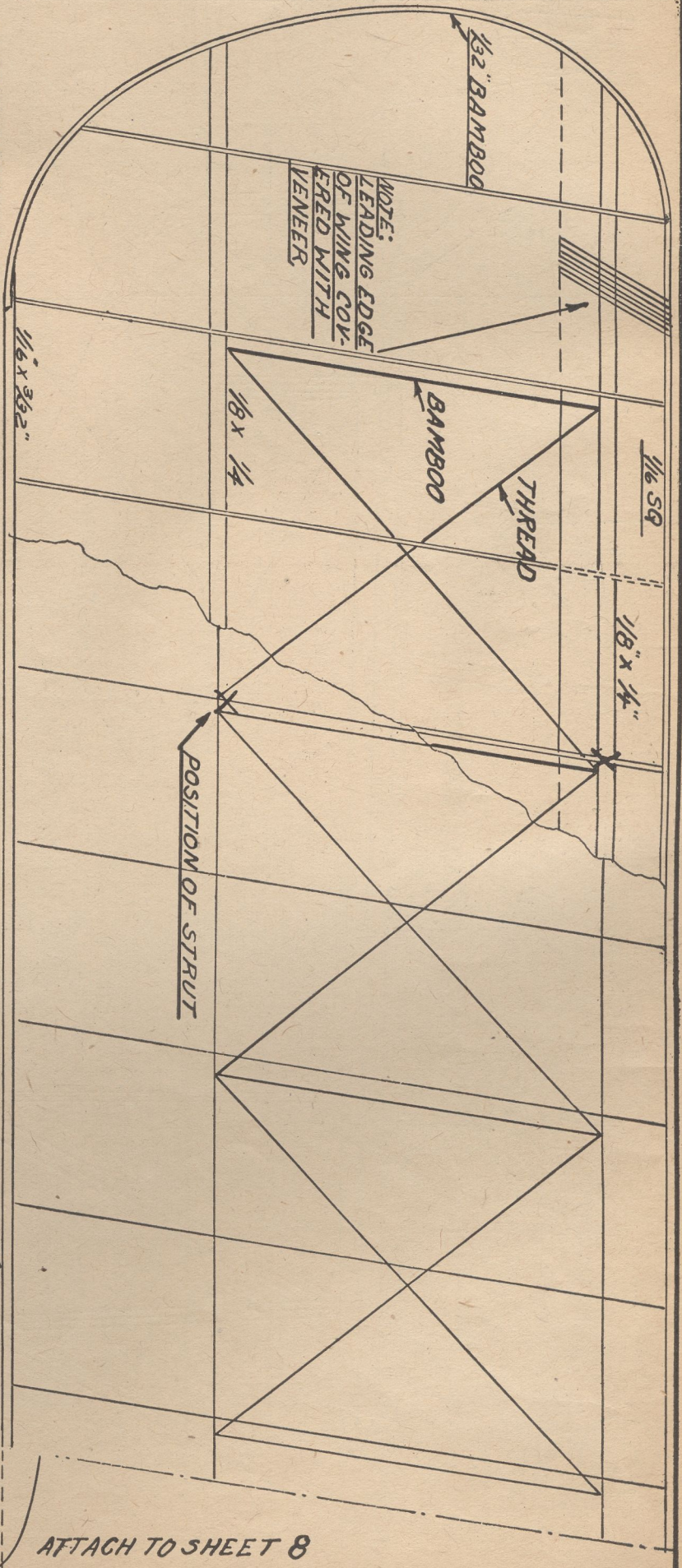
A. G. Gies, Jr.

③



4
A. Guin, '35



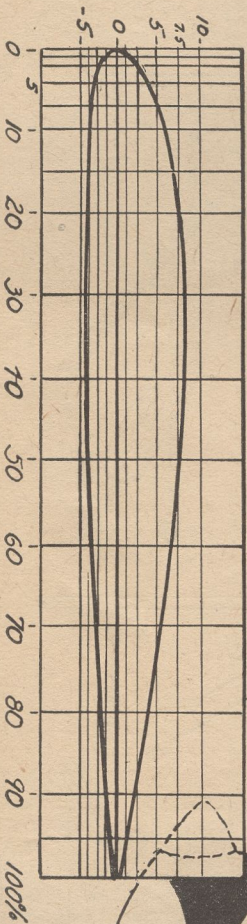
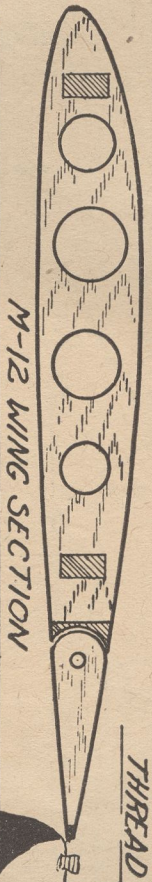


ATTACH TO SHEET 8

SWEEP BACK 90/3'
DIHEDRAL 2°

SPARS 1/4" x 1/8"

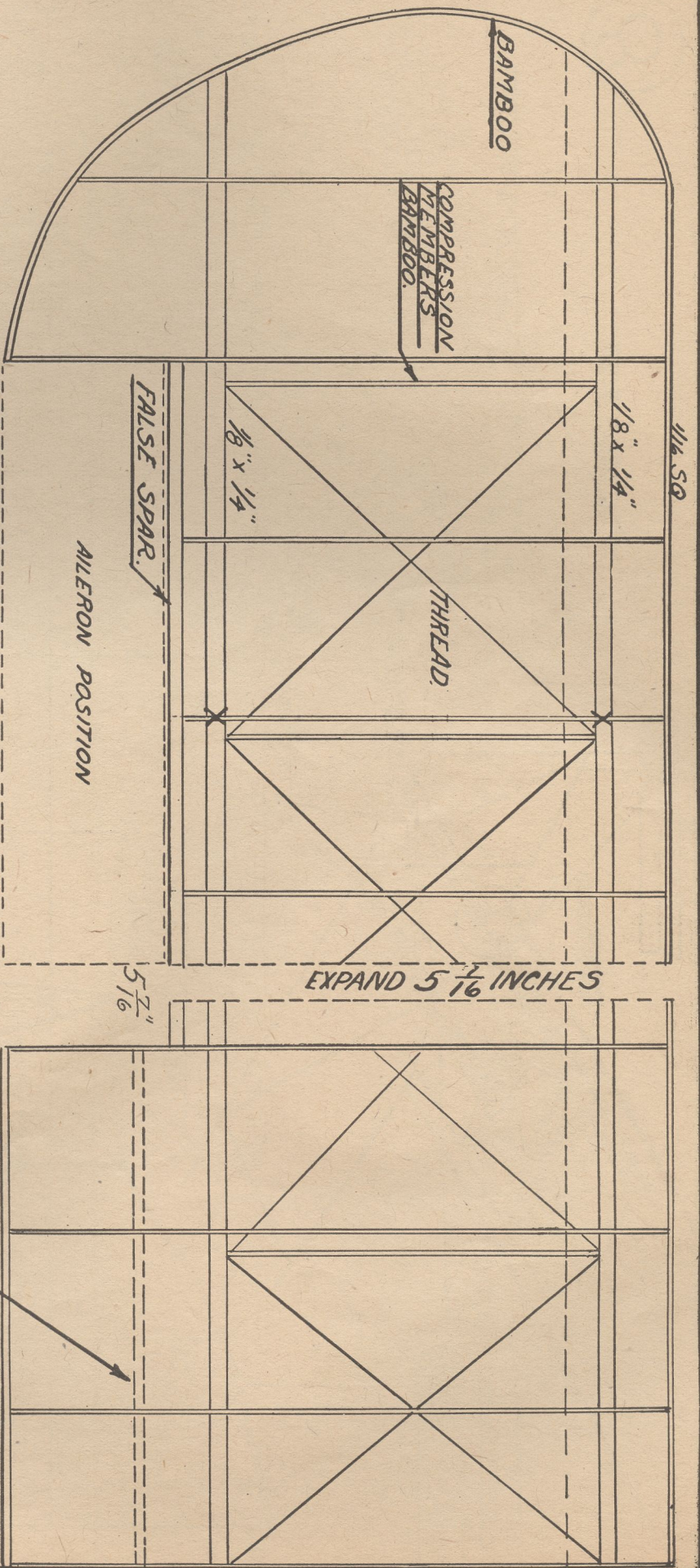
PLAN OF TOP WING



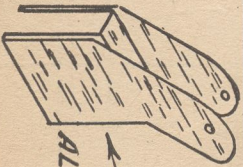
G. J. Rice

6

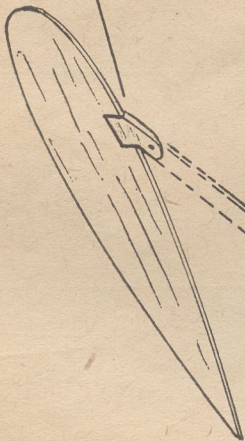
NOTE: SPARS ARE SLIGHTLY
TAPERED AS IT APPROACHES
THE TIP



FITTING TO ATTACH
STRUTS.



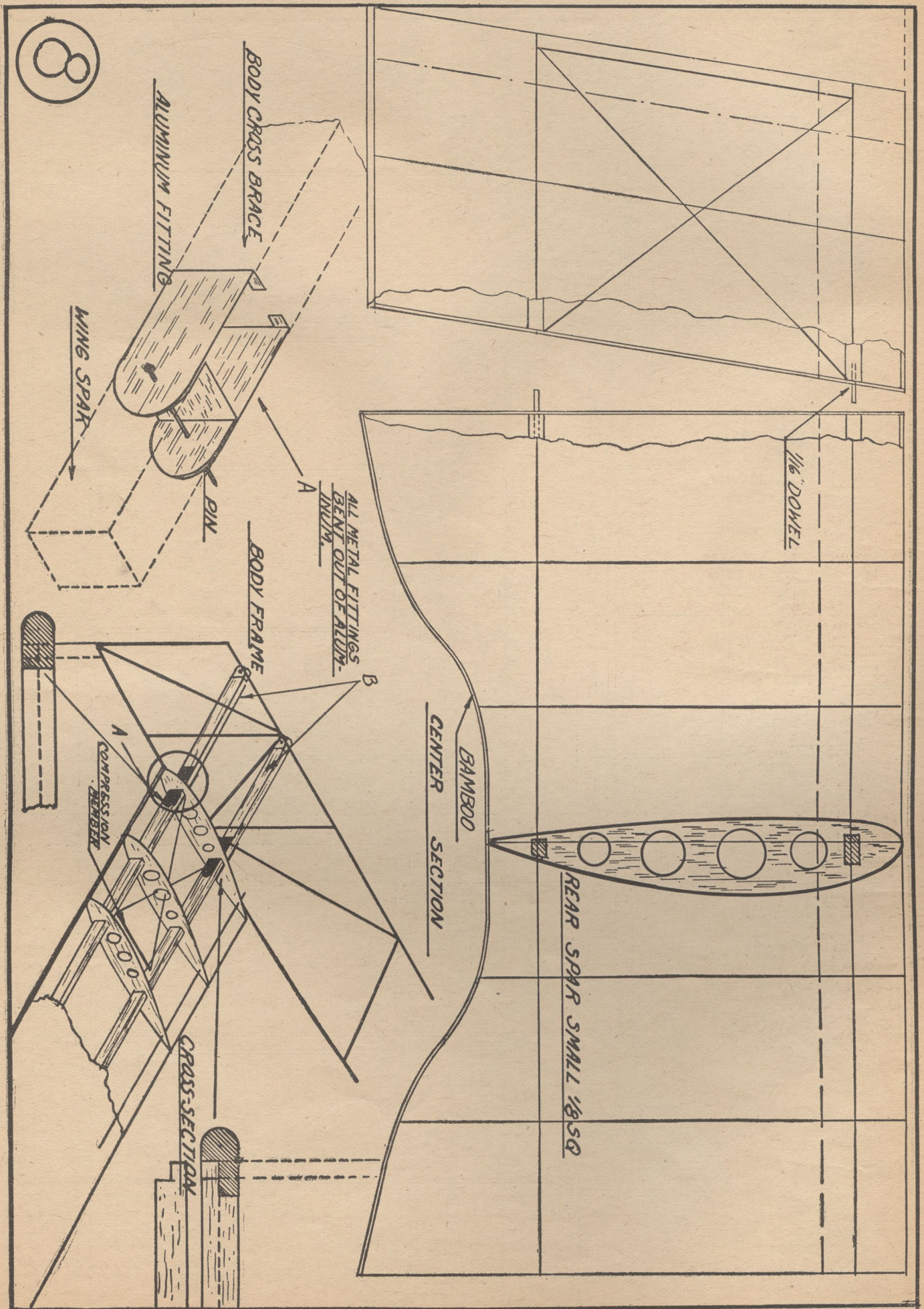
ALUMINUM

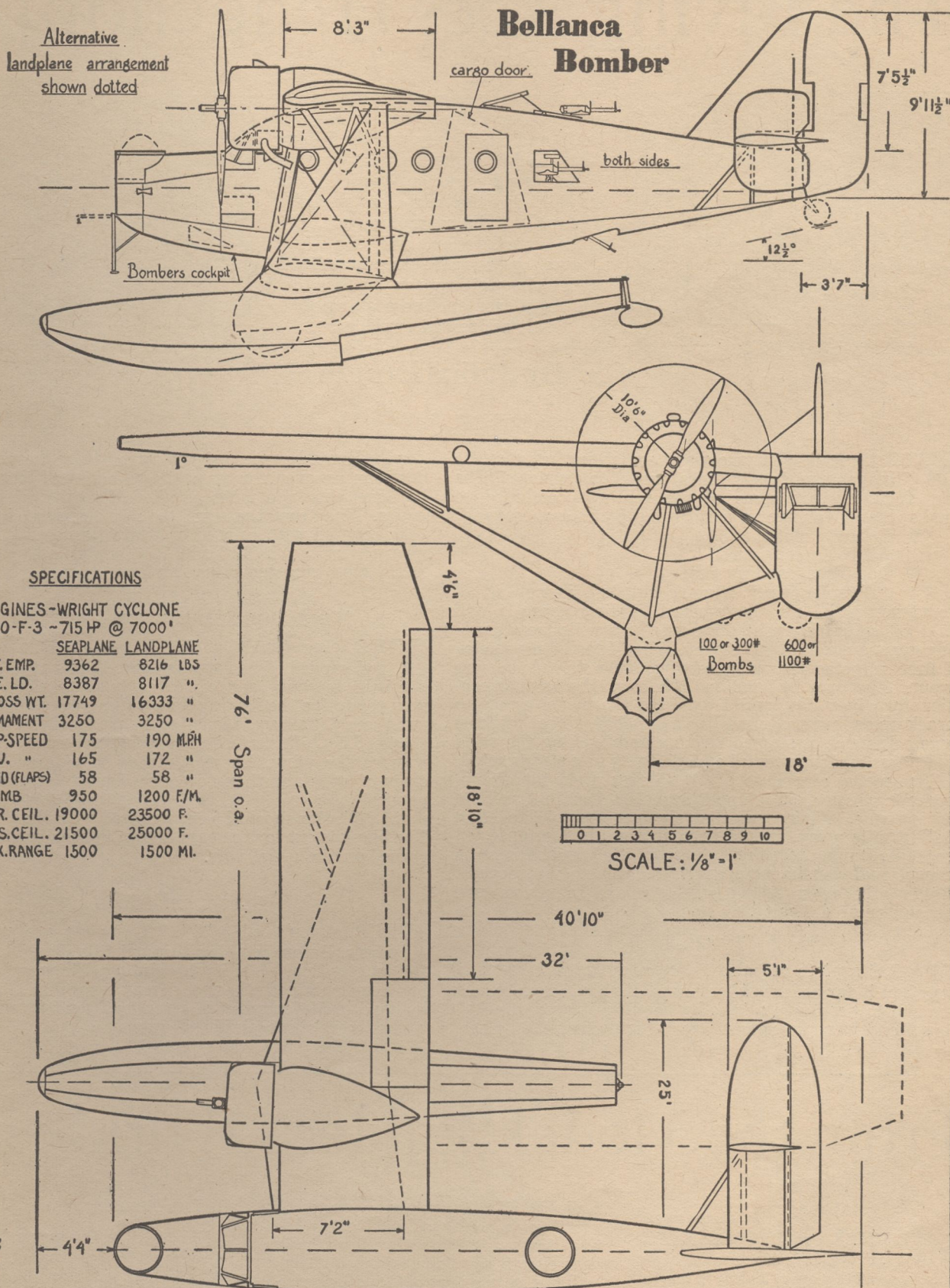


CONTROL ROD

7

Q.300

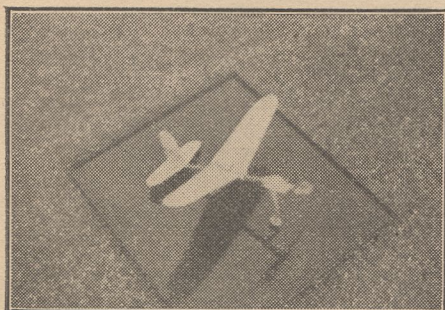




The Bellanca Bimotor Bomber can easily be changed from a land plane to a sea plane. It may be used for bombing, troop-carrying, photography, ambulance work, cargo or fighting. These ships are being built for export, Colombia, South America, being the principal buyer, so far. The cabin, which is about thirteen feet long and six high, will accommodate eighteen soldiers, cargo, or six litters. The tankage consists of a 180-gallon belly tank beneath the cabin, a 200-gallon tank in the cabin, 90 gallons in each wing stub (between engine and fuselage) and 60 gallons in each nacelle, making 680 gallons of gas in all. The plane is almost entirely covered with fabric, and has panels covering the various machine-gun openings. The crew is made up of four—a gunner in the front cockpit, a pilot, a bomber, whose place is on the right-hand side beneath the pilot's cockpit, and a rear gunner, who has access to four gun emplacements.

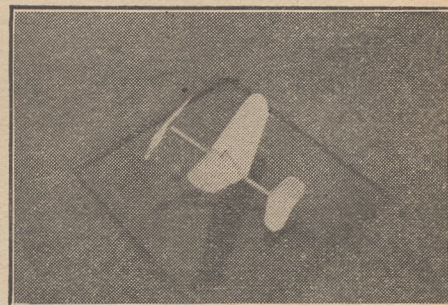
Guns are Browning, Airfoil Bellanca.

The Flying Aces Hedgehopper



This model looks as lively as it is. Meet the Flying Aces Hedgehopper—and watch its speed!

If you want something different in models, something that is easy to build and easy to fly, try the Flying Aces Hedgehopper, which lives up to its name by taking off quickly and staying in the air for amazing flights. A tubular motor-stick, all-balsa construction, and one-wheel landing gear make this a unique model. In writing for further details, please enclose a stamped, self-addressed envelope.



Another view of the Flying Aces Hedgehopper, showing the main points in its construction. This model stayed in the air for one minute, 43 seconds.

By Julius Unrath

FOR those of you who want something unique, the "Hedgehopper" is the ideal model to construct. The following are some of the features combined to make this model strong, easy to build and a good flyer:

- (1) Tubular motor-stick.
- (2) All balsa construction.
- (3) One-wheel landing gear.

The "Hedgehopper," when completed, is not at all handicapped by its single-wheel landing gear. It will take off so quickly that the need for a wide-tread landing gear is not at all necessary. When I tested my model, I first adjusted the wing setting. Then the model was wound 325 turns by hand and launched. It was an exceptionally windy day, and I expected the model either to crack up or flutter around like a dry leaf, since it was so small. Instead, it started circling and bucking the wind like a gas model powerful enough to fly in a strong wind.

The model circled to about 75 feet, then hit an up-current which shot it up to over 100 feet in less than 15 seconds. When the Hedgehopper finally landed a half a mile away, it had been in the air 1 minute, 43 seconds. During test flights indoors, the model flew with exceptional consistency, averaging 30 to 45 seconds. Follow the instructions carefully and you, too, will encounter no difficulty.

FUSELAGE

TAKE a piece of balsa $1/32'' \times 19/32'' \times 11\frac{3}{4}''$ and boil it for at least 15 minutes. It should now be soft enough to bend into a tube by bending it around a $\frac{3}{8}''$ dowel and wrapping gauze around it to keep it in place.

Drying may be speeded up by putting the tube and dowel in an oven for at least two hours. If this cannot be done, the tube must be allowed to dry at least 24 hours. When dry, the seam should be cemented and the tube covered with colored or white tissue. The landing gear is built of $1/32'' \times 1/16''$ bamboo, covered with $1/32''$ balsa and cemented in place.

WING, TAIL SURFACES AND PROPELLER

THE wing panels ($1/32''$ balsa) are cut to shape and sanded. When this is done, the ribs ($1/32''$ sq.) are bent to shape and cemented in place. The wing is now ready for the leading and trailing edges. These are cut from $3/32''$ sq., cemented in place, then sanded to shape. The tail surfaces are constructed in the same way as the wing. These surfaces should receive four coats of dope and then be polished with very fine sandpaper.

No difficulty should be encountered with the propeller. The blank is cut to the shape shown in the drawing, then carved in the usual way.

FLYING THE MODEL

FOUR strands of $3/32''$ flat rubber are used for power. Before winding the model, it should be tested for longitudinal stability by gliding. When a flat glide has been obtained, the model may be wound 350 turns by hand or 500 turns with a winder. Don't fly the model where there's not plenty of room.

From the Model Builder's Workbench

A HOLE IN ONE

SOMETIMES, as in making nose-plugs, it is necessary to make a pin-hole in a small piece of balsa. Often this is found difficult, due to the tendency of the wood to split. In order to drill such holes easily, push the pin through the wood before cutting it down to the small size. Make the hole at least one-half inch from the end. This may seem wasteful, but it will really save both your balsa and your temper.

Drilling holes in balsa is another problem. To cut them out with a razor

blade is difficult and unnecessary. A pencil or a steel pen will do the job more easily and efficiently. Most pencils have the eraser held in by a metal band. Pull the rubber part out, and by twisting the pencil between the thumb and forefinger, you can cut out a hole the size of the inside of the metal part.

To use the steel pen, merely insert it in the holder backwards and twist it in the same manner. Sometimes small round metal boxes are found. These can be used in the same manner for cutting out tires from balsa.

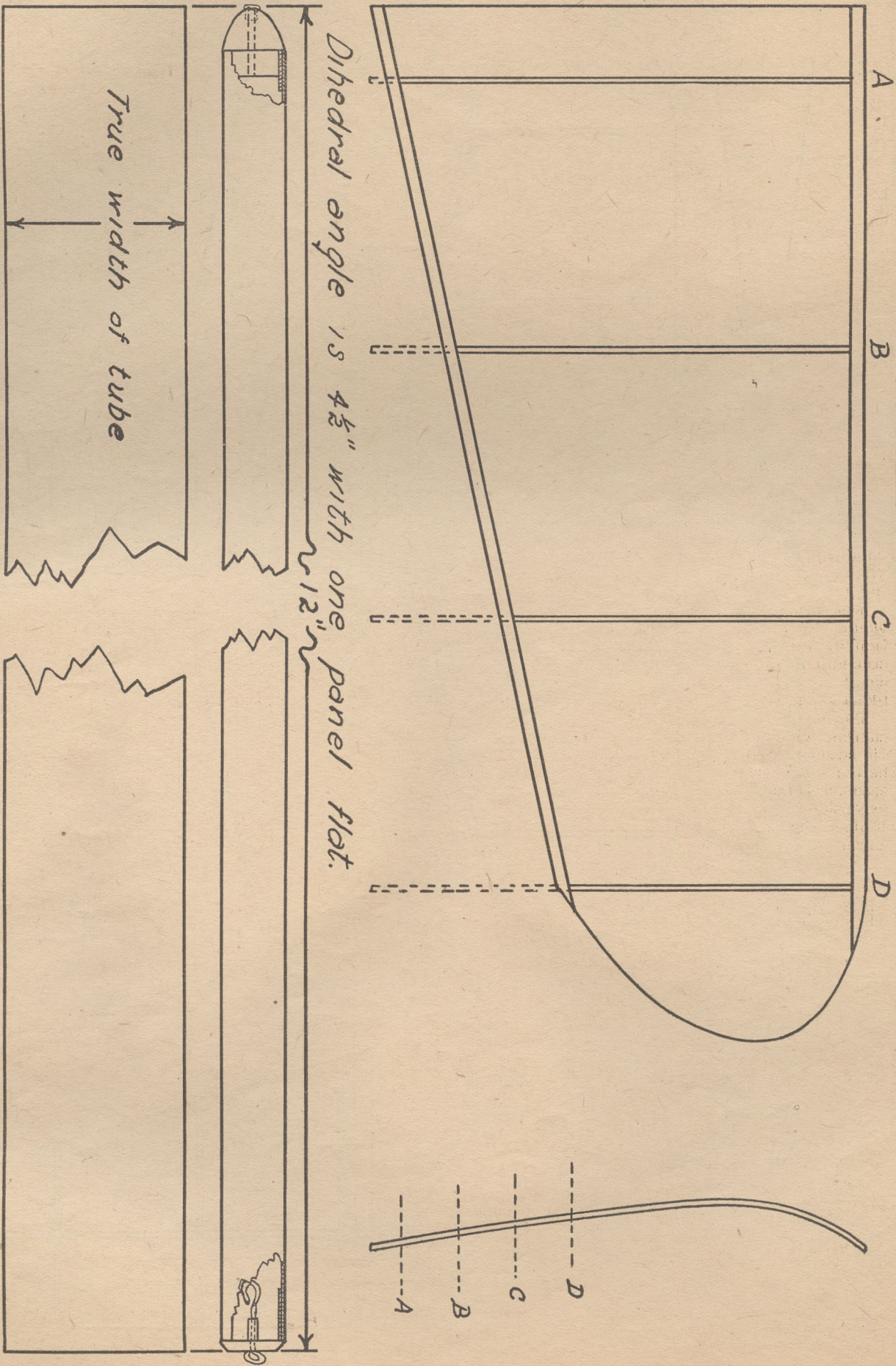
GLEN TASSIE.

THE NEW ALL-BALSA WING

A NUMBER of requests have been received for information about the construction of the new all-balsa wing. The following article will describe in detail this new type of construction.

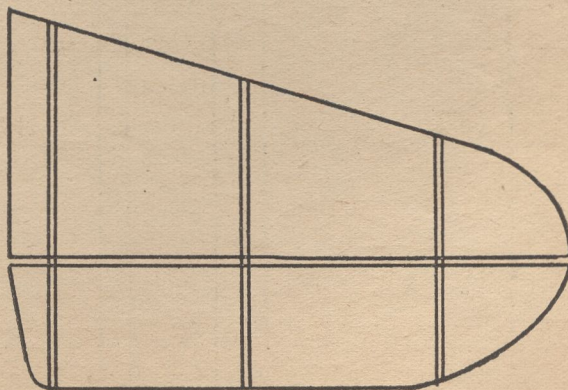
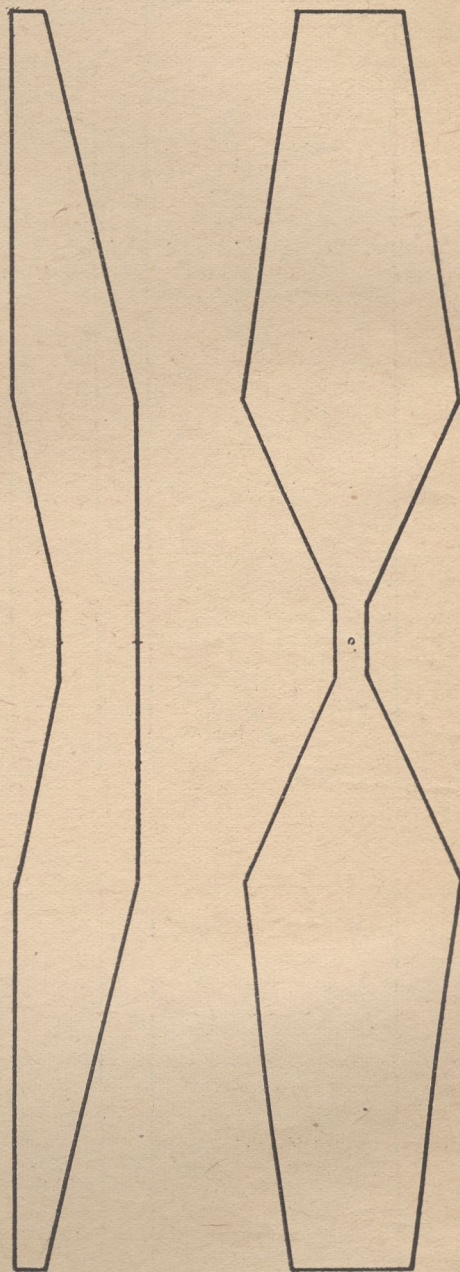
The first thing to do is to obtain a piece of $1/32''$ flat balsa as wide as the chord. This balsa should then be cut to the shape of the wing panels. You now have two wing panels without an airfoil shape. This is remedied by bending a piece of bamboo to the shape of the air-

(Continued on page 44)



Sheet - 1

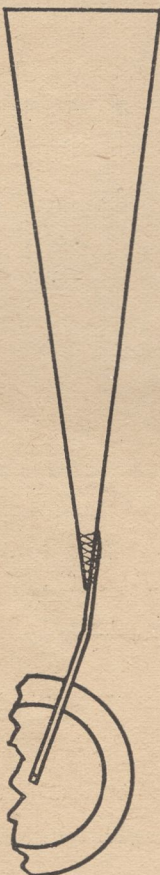
JULIUS UNRATH



Tail plug



Nose plug



Landing gear

Sheet - 2

JULIUS UNRAITH

Citation and Awards

of the Flying Aces Club

The Distinguished Service Medal of the Flying Aces Club has been awarded to the following members of G-2 for exceptional services to the club:

Hugh Thompson	Robert Simonson
Bernard Glassman	Joe Steen
Fred Phillips, Jr.	David Horowitz
Leeland Reeser	Edward Nasin
Henry Bukowski	Edmund Searchilli
Charles Heinrich	Donald Leiter
Sidney B. Schulman	Earl Baggs
Dana Cunningham	Ernest Slavin
Herbert Thiele	Joseph Cameron
Blakley Hargis	Carl Jlanowicz
Louis H. Ouren	LeRoy Wilderman
Ralph Norman	Joseph Von Waldron
Edward Wozniak	Jack Sullivan
Alfred Costen	Sanford Dinetz
Ted Jacobs	Fred R. Mahoney
Jack Cody	Henry Hermanovich
Arthur Look	Leslie Papier
Norman Wrightson	Raymond Dowsett
Harold Lloyd	Kenneth Zarrilli
Geraldine Pyl	Arthur Newman
William Purviance	Railley Macey, Jr.
	John Arnold

The following winners of the Distinguished Service Medal of the Flying Aces Club have been given the first award of the bronze props for additional services to the club:

Eloise Vanderveen	Owen Walker, Jr.
William Griswold	John Trotta
David Moffat	Albert Rumpf
Robert Jones	Fred R. Gustafson
Morris Maskaron	Fred Resch
Ernest Turner	Frank Burgenheim
Lawrence Sutton	James Hudgers
George Chenot	Lawrence McNutt
Frank Bidwell, Jr.	Jordan Koster
Raymond Wagner	William Tymeson
John Kihm	David F. Jamison
F. V. Decker	Stanley Swanson

The following winners of the first award of the bronze props have been given the second award of the bronze props for additional services to the club:

Harrison Brennan	Gordon Morton
Charles Treen, Jr.	Jos. Pospisil, Jr.
Ward Lanitot	Walter W. Schriber
Thos. Sheldon	Wilbert Baumgardner
George Bertolozzi	Louis Wozniak
Casimier Trowinski	John De Pinto
Jack Brown	Melvin Kaplan
Russell Feiereisel	Fred L. Smith
Saul White	John E. Sawhill, Jr.
John Marshall	Rod Penfield
Robert K. Field	Leo Hershkowitz

The following members of G-2 have been cited by the Flying Aces Club for exceptional services to the club and are being considered for the Distinguished Service Medal:

Russell Lanning	Edward Diller
Gerald Lanning	George Siragusa
William Barthlow	Bob McCalley
Harold Robinson	Howard Oakley
Charles Steinmetz	Junior Paris
Edwin Tucker	Alfred Aurio
Robert Christopher	Robert Vahan
William Boss	John Samuelson
Joe Smith	Victor Daly
Norman McGeorge	Jack Nelson
Harry Euker	Edward Mosher
Albert Gagnon	Bruce Paterson
Edward O'Connor	Ralph Woodcock
George Rohde	Donald Hoeschele
Robert Archer	Frank Ahern
Edward Massey	

JOIN THE FLYING ACES CLUB

No Dues! Easy to Join! Organize Your Own Squadron!

To advance the cause of aviation, over 35,000 men and women, boys and girls, have banded together to form the Flying Aces Club. It's easy to become a regular member. Fill in and mail the application coupon at the bottom of this page with a stamped, self-addressed envelope for the return of your Official Membership Card in the largest aviation club in the world.

It costs nothing, no dues. After becoming a member, you will be all set to win your Cadet Wings, Pilot Wings, Ace's Star and, perhaps, the Distinguished Service Medal. Take the first step now. Fill out and mail the Membership Application Coupon.

You will find it easy to start an F.A.C. Flight or Squadron. Tell your friends and acquaintances about the F.A.C. and its official magazine, FLYING ACES. Ask them to get a copy of FLYING ACES. Ask them to join the famous F.A.C. Counting yourself, it takes a minimum of six members to form a Flight, eighteen for a Squadron. To become a member, each applicant must fill out and mail to G.H.Q. the application coupon. Be sure, when writing to Headquarters, to enclose a stamped, self-addressed envelope for your reply. This is important.

Honorary Members

President and Mrs. Franklin D. Roosevelt	
Casey Jones	Rear-Admiral Byrd
Wiley Post	Capt. Edward Rickenbacker
Al Williams	Colonel W. A. Bishop
Col. Scaroni	Major G. A. Vaughn, Jr.
Gov. Gifford Pinchot	Mrs. Gifford Pinchot
Major von Schleich	Willy Coppins
Lieut.-Col. Pinsard	General Balbo
C. E. Kingsford-Smith	Josef Veltjens
G. M. Bellanca	Amelia Earhart Putnam
Capt. Boris Sergievsky	Senator David L. Walsh
Colonel Roscoe Turner	Lowell Thomas
Lieut.-Col. Theodore Roosevelt	

AWARDS AND HONORS

The D.S.M.

The Flying Aces Club Distinguished Service Medal is the highest award of the Club and is given to those whose work on behalf of the F.A.C. is "beyond and above the call of duty." It has been awarded for obtaining prominent men and women as Honorary Members, for exceptionally successful activity in the promotion of the Club, for outstanding work in covering the secret assignments of G-2.

Winners of the D.S.M. who merit further awards will be given beautiful bronze props. Worn on the ribbon of the D.S.M., they may be compared to the bronze palms awarded to winners of the Croix de Guerre. The highest award of the F.A.C. is the D.S.M. with three props.

The Ace's Star

The Ace's Star is awarded to regular members of the F.A.C. who have qualified for their Cadet and Pilot Wings and who have succeeded in enrolling five new members in the Flying Aces Club. Each new member must fill out the Application Coupon below. Get five of your friends to do this, send in their applications all together and win the F.A.C. Ace's Star.

Official Charters

F.A.C. Flights and Squadrons are recognized only when they have been awarded Official Charters. These Charters are illustrated to depict the various steps of advancement in aviation, and the wording is in keeping with the high ideals and purposes of the Club. They are printed on a very fine grade of paper and the names of the Squadrons are hand-lettered. Charter applications must always be accompanied by a complete list of members with their addresses. For the Flight Charter send 25c, for the Squadron Charter 50c, to cover costs.

Volunteers for G-2

G-2, the Inner Circle of the F.A.C., is open to a restricted number of members who are qualified for Secret Service activities. Those who are chosen will have unusual opportunities to win the Club's Distinguished Service Medal. Those who are accepted will be given a secret number and identification card as well as the secret code. Assignments will be made by letter and code.



COUPON
No. 26

Save This Coupon for PILOT'S WINGS of the Flying Aces Club

All enrolled members who have already won their Cadet Wings are eligible for Pilot's Wings. This coupon, with four other similar coupons from any other four issues of FLYING ACES Magazine and 10c, entitles Cadets of the F.A.C. to Pilot's Wings. Do not send in this coupon alone. Save it until you have five of them. Then send them in all together with a self-addressed envelope and 10c to cover cost of wrapping and mailing. Only one pair of Wings to a member. If you lose yours, send 25c for new ones.

Canadians send International Reply Coupon for 15c. British send one shilling in coin or International Reply Coupon for one shilling.

COUPON
No. 29



Save This Coupon for CADET WINGS of the Flying Aces Club

All members who have Official Membership Cards are eligible for Cadet Wings. This coupon, with two other similar coupons from any other two issues of FLYING ACES Magazine and 10c, entitles members of the F.A.C. to Cadet Wings. Do not send in this coupon alone. Save it until you have three of them. Then send them in all together with a self-addressed envelope and 10c to cover cost of wrapping and mailing. Only one pair of Wings to a member. If you lose yours, send 25c for new ones.

Canadians send International Reply Coupon for 15c. British send one shilling in coin or International Reply Coupon for one shilling.

April Application for F. A. C. Membership

I, the undersigned, hereby make application for membership in the Flying Aces Club. I agree to live up to its rules and regulations; to foster the growth and development of aviation; and cooperate with all other members in the work of spreading aviation information, building up confidence in flying for national defence and transportation. I will aim to build up the Club and its membership, and do my best to win the honors that the Flying Aces Club offers.

My name is

Age

Street

City State

Mail this application, and with it, enclose a self-addressed, stamped envelope. Canadians send an International Reply Coupon worth 5c. British send a similar coupon worth sixpence.

FLYING ACES CLUB—67 W. 44th St., New York City

Flying Aces Club News

Line up for the latest news from the Flying Aces Club airdrome, F.A.C.'s! Let's get together on what the members of your Club are doing, near and far—from Chicago to South Africa, from New Jersey to the Philippines, and all points between!

CONTACT! Here we come for another three-point landing on the Flying Aces Club tarmac! So much news has poured in from near and far this month that we're going to start sharing it with you right away.

First we want to report three new honorary members—State Senator Elmer F. Quinn, of New York, whose membership was secured through Richard Campbell, of the Bloomfield, N. J., Squadron; State Senator Kathryn E. Malstrom and Mayor George A. Smitley, both of Tacoma, Washington. Major Paul Guerrero, well-known leader of Washington Squadron No. 1 and organizer of two F.A.C. Squadrons in the Philippines, sends us word of these last two honorary members. The two Philippine Squadrons have now received their official charters and are going ahead busily with plans for the future, Major Guerrero reports. Good luck to you!

And good luck to another new F.A.C. member—Frankie Thomas, famous RKO film star, who joined our club a couple of months ago. Frankie, who scored a personal hit in the picture, "Wednesday's Child," is coming out in a new one, "A Dog of Flanders." Probably you've all read the book, and we know you'll all want to see the picture, with one of your own club members as its star.

How many of you knew that you had a professional stunt pilot and parachute jumper as a fellow-member? Well, you have, and he recently sent us an interesting newspaper account of a thrill he had last fall. This daring F.A.C. is Lieutenant Richard C. Thorpe, of Altoona, Pa., and here's his own first-hand story of a thrill that comes once—he hopes!—in a lifetime.

"I was performing before about 2,000 people. Logan Kelley, Manager of the Coatesville, Pa., Airport, was piloting the plane from which I was to make a jump about a mile in the air. Upon reaching the desired altitude, I climbed out on a wing, and with a wave of my hand, dropped off into space. Then things began to happen! For some reason or other, my ripcord failed to release. Luckily, I carried an emergency chute, but this became tangled in my feet, and before I could get to open it, I had fallen over 2,000 feet. Can you imagine what it felt like to be all wrapped up in a parachute hundreds of feet in the air, and falling through space?"

No, we can't imagine, not having tried it, and we're glad to know the rest of the story. Lieutenant Thorpe managed to extricate himself, and landed—with a good jolt, to be sure—on some large stones, near a highway. His ankle was broken in the fall, but nothing more serious resulted, and Lieutenant Thorpe is able to stunt again. As the newspaper account says, "He is not only a fearless parachute jumper, but is also famous for his extraordinary feats of horsemanship." There's a member for us all to be proud of, F.A.C.'s!

And here's news from far away!

Squadron No. 1 of Sydney, Australia, sends word through Major H. M. Cameron, their leader, that they now have 30 full-fledged members, and more are joining up all the time. Of these, 16 build and fly their own models, and we're going to print some photos of these models in this magazine soon. Watch for them on the "With the Model Builders" page. This energetic Squadron has its own clubhouse, with meetings every Saturday night, and its own flying field, with flying meetings every Sunday morning. Three of the members are attending aviation schools. Others have started work on a practical ground trainer for Squadron use—and when that's finished, everyone will have a chance to learn to fly. That's great news, Aussies. Keep it up!

Another far-distant Squadron that has 30 members hails from Germiston, South Africa, where C. P. Street, Squadron Leader, has organized a lively group of F.A.C.'s. "I hope to have 130 members when I next write to you," says Squadron Leader Street. That's a splendid goal, and we hope you make it.

Now for some spot news from nearer home. Captain Carl Ulanowicz, leader of the Grand Rapids, Michigan, Squadron, writes us that as soon as the football season ended, he and his outfit organized a basketball team, under the name of the F.A.C., and they've been going great. We hope you win all your games. Major Charles Riley, District C. O. of Philadelphia, sends word that he wants more action from Philadelphia members, both girls and boys, and since he is organizing a band, he is especially interested in getting musical members. How about it, you saxophone players?

Jersey Cityites who want to join a lively squadron should contact Stanley Dowgiala, 332 1st Street, Jersey City, N. J. Clyde Peck, of 734 E. Walnut St., Lakeland, Florida, wants all F.A.C.'s in his neighborhood to get in touch with him. And up in Hamilton, Ontario, Canada, all those of 18 or over who are interested in any branch of aviation and desirous of joining the Club should lose no time in contacting Major Bert Macpherson, 875 Main St. E., who is leader of Ontario Squadron No. 3.

There's more news, but we'll have to let it go until next month. See you then.

Would You be Interested in Getting an F.A.C. Uniform?

Quite a large number of inquiries have been received at National Headquarters about an F.A.C. uniform. We will be glad to adopt an official uniform if enough of you fellows want them. If you are interested, drop a line to the National Adjutant of the Flying Aces Club at 67 W. 44th Street, New York City. Be sure to enclose a stamped, addressed envelope for a reply. Tell him what kind of a uniform you would like and how much you would be willing to pay for it.

All Questions Answered

This section of FLYING ACES is at your service, F.A.C.'s. Send in your questions and requests for air information, and we will be glad to answer them here in the order received.

George Greenough, Middleton, N. S.:—The present Spad company is now the Bleriot Aeronautique, 1-7 Quay Gallieni, Suresnes (Seine) France. I cannot tell you where you can purchase a Spad, or how much it would cost. A private license costs about \$350, and a mechanics' course runs anywhere from \$150 to \$300, depending on the subjects taken.

J. Perlman, New York City:—Soarers and gliders are flown and landed just the same as ordinary power ships. Some have landing skids, others wheels.

Robert Schipf, New York City:—The picture you enclosed in your letter is so small it is hard to identify the plane, but it looks like a Vought Corsair. This is the same ship as is used on the battleship you named. I have answered your other questions.

Kurt Ilgen, St. Louis, Mo.:—Roscoe Turner flew the Wedell-Williams racer in the transcontinental trips. Jimmy Wedell flew it when it made the world's land-plane record. The Shell company uses many ships in its aviation experimental department. I do not know whether they own them or rent them for the purpose. The Spad was equipped with Vickers guns.

Stanley Wilson, New York:—I do not know where you can buy a Spad today, unless you get in touch with one of the movie companies that used them in war pictures. F.A.C. cards are honored at most air fields. We publish pictures of war aces regularly. Do not know where you can get them unless you try the noted picture-feature companies like Underwood & Underwood. Monoplanes are the easiest to build.

Bill Box, Los Angeles:—Frankly, I cannot tell you where there is a school today in this country that teaches gliding. A number started up, but they have flopped because they were not satisfied with just gliding. They tried to make gliders do all the stunts a power ship would do and had a lot of accidents. Result—every one lost interest. Send ten cents and we will send you a glider book; or get in touch with the National Glider Association, Dime Bank Building, Detroit, Mich.

Ed Turner, Ponca City, Okla.:—The Germans used Spandau and Parabellum guns in the air. They had no cannon ships that I know of. Yes, they used the Paulus parachute, a seat-pack type of parachute, in their Zeppelins, and in the last few weeks of the war a few were issued to airplane pilots.

Leonard Tarver, Aiken, S. C.:—We have been trying for years to give you all types of fighting planes, modern and wartime. Where have you been? We hope to give an article on various markings in a short time, so watch for it. You might try the yearly "Aircraft Year Book," issued by the Department of Commerce for Aviation (\$3.00), or the yearly "All the World's Aircraft," published in London (\$16.75), for the ships you want. There is no book out with all modern and wartime fighting ships. We are offering good scale models here and in SKY BIRDS magazine.

Benny Farbanier, Elizabeth, N. J.:—You can join the Navy, all right, but you stand little chance of becoming a pilot with your limited education.

Jimmy Weimer, Chicago:—I am afraid your eyesight will prevent you from becoming a service pilot in the Navy. Sight is very important.

W. B. Royall, El Paso, Texas:—The Corsairs are usually powered with 450 h.p. Wasps. The S-42 is a flying boat. The Marines carry Navy insignia as well as their own corps insignia on their planes, and in many cases they have "U. S. Marine Corps" painted on. Why? How should I know? I presume the Northrop people were thinking of Greek letters that had some air of significance, when they used Gamma and Delta.

Bill Schwen:—A seaplane is not necessarily faster than the landplane. It just happens that speed ships have been designed more as seaplanes for the Schneider Cup race than landplanes. Then the floats provide better streamline in landing gear and provide space for tankage, oil-coolers and other equipment. Retractable landing gears seldom aid the speed of a ship, because the machinery involved is very heavy and takes up whatever speed might be gained by withdrawing the wheels.

Jim Wailes, London, England:—Thanks for the clippings and the kind things you said about this department. We could do even better if our readers did not ask the same questions over and over again, but that's the game. Your detail on the air pageant was very interesting, and of course we over here watched it through the movies with much interest. Yes, I often read the magazine you mention, as often as I can get it, and I am very friendly with the editor. Your drawings are good, but should be done in India drawing ink.

J. Perlman, Brooklyn:—There is no advantage in either design. The matter is concerned with the area of the rudder desired and the space taken up to accommodate it. In your "B" example, you have a balanced rudder which is usually narrower in chord and makes up for the part that is forward of the axis.

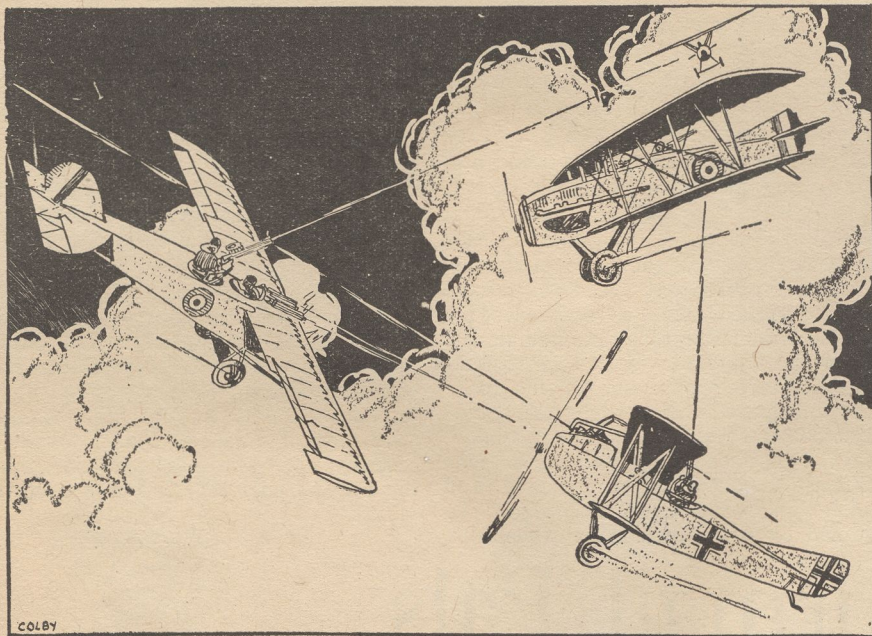
By ARCH WHITEHOUSE

Airmail Pals

In order not to keep you waiting so long for Airmail Pals, we are printing here a list of those who want to hear from other F.A.C.'s. We are sorry that we do not have space to print the entire letters, but the right-hand column will give you an idea of the writers' interests.

Name	Address	Description
ARMAND THERRIEN	77 Melrose St., Springfield, Mass.	16. Likes them his own age.
BERNICE VOIGHT	7251 So. Marshfield Ave., Chicago, Ill.	18. Pilots especially welcome.
J. A. GROSHAM	1110 E. Osborn Rd., Phoenix, Arizona	Has been grounded in bed a year. Write him.
HELEN KEELER	1229 Calvert Ave., Detroit, Mich.	Girl athlete. Likes he-men, so she says.
SEYMOUR THAV	453 East Houston St., New York City	Reading FLYING ACES is his hobby. Not a bad one.
EDWIN TUCKER	859 Brighton, El Centro, Cal.	12. Has hard luck with models. Help him out.
GORDON CUMMING	143 Alexandra St., Sault Ste. Marie, Ont., Can.	Knows Canadian pilots.
HERBERT WILLIAMS	Riverside Hospital, North Bros. Island, New York, N. Y.	Send him your spare plane snapshots—if any.
CLAYTON STATER	3018 West St., Cleveland, Ohio	Likes the ladies—if they're air-minded.
ALFRED FEATHERSTONE	418 Washburn St., Lockport, New York	Will tell you of his first flight.
MARY PLEUSS	7808 Jamaica Ave., Woodhaven, New York	14. Another girl athlete on the tarmac.
ELMER WYATT	186 Hobart St., Welch, West Virginia	18. Hill-billy wants mountain-climbing pal.
BRUCE LANE	88-25 179th Place, Jamaica, New York	Would swap plans and snaps with foreign correspondent.
WALTER CALDWELL	602 S. Grand Ave., Independence, Missouri	Lived three years at an airport.
HAROLD W. APEL	1613 6th St., Portsmouth, Ohio	Who'll give him solid Fokker tripe plans?
JACK WILLIAMSON	931 West Ferry St., Buffalo, New York	Has war souvenirs to trade.
GEO. BLUEMLEIN	5002 Christy Blvd., St. Louis, Missouri	Another one having model trouble. Who can help?
WALTER LARSON	69 W. Third St., Hobart, Indiana.	World War or transport pilots, please write.
DAN O'FLAHERTY	853 Euclid Ave., Santa Monica, Cal.	S.O.S. for Los Angeles F.A.C.'s.
JIMMIE WALTAM	6002 Hayes Ave., Los Angeles, Cal.	Tell him your idea of the perfect plane.

MISSING WORDS CONTEST, No. 12



Win a Flying Scale Model of the WACO F-3

in Missing Words Contest No. 12

FIVE PRIZES

First—Flying scale model of the Waco F-3, latest model of this famous modern line.

Second—Regulation flying helmet and goggles.

And Three Prizes—Kit for Sopwith Camel model—guaranteed to fly.

To Win This Contest:

In the above picture the artist has told a story—and the same story is told in words below. Some of the words have been left out—for example, observer is the word missing from the first line of the story. What you should do to win this contest is fill in all the missing words to fit the picture above. Send us the list of missing words, in their correct order, with a letter telling us whether the school that you attend or have attended has a course in model building, and if so, what is the name of the school and of the instructor in the course.

Here's the Story:

Returning from a photographing flight, the
in the rear seat of the Allied biplane, or two-seater
saw diving down upon them a speedy German Fokker
or, as it was called by the majority of pilots,
Almost as he turned to tap the shoulder of the
he saw below him, climbing to the attack, another
ship upon whose sides and rudder gleamed the
of the enemy. As it climbed nearer, he saw it was an
armored biplane, and a worthy rival in any sort of
Caught between the fire of these two enemy ships, the
of the Allied ship dived to gain speed, and the
unlimbered his machine gun and sent bullets at the
climbing to intercept them. The film in the
must be saved at all costs—but how? The two enemy
were both firing at them from below and above, so that the
in the nose of the Allied ship was useless, and the
could only fire at one plane at a time, leaving the
to fire unmolested. Just when things looked desperate, a
monoplane bearing the welcome Allied insignia
toward them from above, with tracers pouring from
machine guns at the same time. Its pilot shattered the
of the lower German ship, putting it out of the
while the observer in the rear cockpit of the
poured a stream of deadly fire into the cockpit of the
thereby putting both out of the fight and saving the

Don't Forget:

The winners of the contest will be judged by the correctness of their list of missing words and by their letters. All decisions by the judges will be final.

Be sure to mention in your letter the name and number of this contest, and the issue in which it appears. All answers on Missing Words Contest No. 12 must be mailed by the time the next issue of FLYING ACES is on sale. Send to

Missing Words Contest No. 12

FLYING ACES Magazine

67 West 44th St.

New York, N. Y.

Model Builder's Workbench

(Continued from page 38)

foil, and splitting it into a number of ribs of the correct size. The next step is to cement these ribs into place. Each rib should be cemented with the leading edge flush with the leading edge of the wing panel. Later, the trailing edge of each rib is clipped off flush with the wing panel.

The leading and trailing edges are now ready to be cemented on. The top of the leading and trailing edges should be cemented flush to the top of the wing panels. When dry, they are rounded so as to conform to the general shape. The two panels are now shaped so that they fit when put together at the correct dihedral angle. The wing is finished by doping, sanding and polishing.

JULIUS UNRATH.

Satan's Shroud

(Continued from page 4)

Killing his own comrade agents, shooting down women!

With a groan, Strange jerked the gun from under his blouse. A dozen doughboys were trying to rush the stage, but he knew they would fail. As the first khaki-clad figure slumped, Strange leveled the gun and fired. His hand was shaking, and the shot went wild. He fired again, just as the two British officers fled from the box. The murder-lit face back of the Lewis distorted in sudden pain.

A film came over Strange's eyes. It was like shooting his own brother.

Then he saw that he had not killed Noisy. The machine gun broke its snarl for only a moment. The Jay twin clutched at his shoulder; then his red-stained hand flicked back to the trigger. The glaring face behind the Lewis jerked toward the box.

Strange threw himself back. The rat-a-tat of the Lewis cut through the cries of the panic-stricken crowd. Bullets ripped into the rail of the box, gouged a pillar above his head. As the weapon tilted toward him, three doughboys charged up the left steps to the stage. Without slacking the trigger, the Jay twin whirled the gun through an arc. The tracers raked over the orchestra pit, left a trail of flying splinters at the edge of the stage. Caught in that vicious blast, the three doughboys tumbled down the steps.

Strange had tossed his pince-nez aside. As he lifted his pistol again, he saw Dix Harrison clamber over the dead-strewn seats. Dix also had a gun. He was raising it to fire

Somewhere, a whistle shrilled. Abruptly, the theater was plunged into darkness and the machine gun ceased its hellish roar. Strange saw a pistol blaze from Harrison's direction. The yells and shrieks of the crowd increased as hundreds fought in the dark to escape

from the theater. Strange swung over the bullet-gashed rail, dropped to the stage ten feet below.

The curtain was swishing down. He dashed ahead, heard the thud of the curtain-weights hitting the stage behind him. Suddenly he brought up with a jolt against one of the cabinets. He was about to wheel toward the left wing when he heard Tom Jay cry out in a stricken voice.

"Noisy! My God, have you lost your mind?"

The words seemed to come from the floor. In a flash Strange remembered the vanishing trick. Gripping his pistol, he felt with his other hand for the cabinet door. It opened, and he sprang inside. Feverishly he swept his hand down one side of the cabinet as the door swung shut. There should be a spring or a catch to release the trap-bottom, and there would be another trap in the stage directly beneath, which would open at the weight of a man's body.

In the trick, he knew, Tom Jay had dropped through into the space beneath the stage. The passage of his body and opening of the traps had been concealed by the lights around the base of the cabinet, which blinded the audience, while seeming to illuminate the space underneath.

ABOVE the shouts of the crowd came the crash of gun fire at the rear of the stage. Strange saw the flare of the guns through airholes in the back of the cabinet. Then his hand touched a small projection, and the trap dropped from under him. He fell from the darkness of the cabinet into a dim-lit property room behind the orchestra pit. He struck near several sprawled bodies—musicians and stage-hands, he saw at a glance.

A thickly-padded mat took the shock of his fall, and he was on his feet in a second. Near a door on the right he saw another body. Light from a single bulb by the entry fell on the white expanse of a dress shirt, stained crimson close to the heart. Strange saw Norwood's tortured face, knew the magician was dead.

Some one rushed past the door, and a voice rasped a German oath. From the alley at the rear of the stage came the roar of an automobile engine. Strange ran up a flight of iron steps to the stage level. The headlights of a car slanted through the stage door for a second. Strange spun around as a figure darted close to him. He saw Tom Jay, hands still manacled behind him.

Another man appeared in the doorway, jerked a pistol toward Tom. Tom gave a cry and jumped back.

"Noisy! For God's sake—"

The roar of Strange's gun drowned the last. The other man gave a strangled oath, tottered back. Then a fierce voice rasped from the car.

"Drag him in here, fools! Schnell—the police will be coming!"

Two men leaped to the swaying figure, rushed him to the machine. The car started with a crash of gears. A

spotlight from a second car whipped around toward the stage door. Strange fired above the light. A man gave an agonized screech, fell sideways out of the driver's seat. The spotlight beam flicked around, revealing two more men in the rear.

Tom Jay had dashed into the alley. One of the men swung a gun toward him. Strange's finger closed on his trigger. The two shots came almost at once. Tom Jay pitched to his knees. The other man fell back with a bullet through his head. His companion was halfway over into the driver's seat. Strange drilled him with his last bullet, whirled around to Tom Jay. To his relief, Tom was getting to his feet. The Jay Bird pulled back as Strange hastily helped him up; then he saw the uniform and colonel's insignia.

"I'm all right," he said hoarsely. "I dropped so they'd think—" He broke off, struggling at his handcuffs.

"You've got to get away, Tom!" Strange said tensely. "The mob will tear you to pieces in another minute. Hurry! Come with me."

Tom gave a violent start as he heard Strange's undisguised voice.

"Phil!" he cried.

"Yes," said Strange. "But there's no time—"

Tom clutched at his arm. "We thought you were dead! When Jordan told us—" His voice changed to a moan as the surprise of meeting Strange passed, and he remembered Noisy. "Phil, you saw—back there! Noisy, my own brother—"

"I know," Strange said huskily. "But he must have been out of his mind."

A commotion from one end of the alley drove him to swift action. He dragged the dead man from the front seat of the car, shoved Tom into the rear. As he threw the machine into gear, he saw a dozen *gendarmes* and military police running toward them.

"Duck!" he shouted at Tom. The car lurched forward, and instantly there was a volley from behind. Bullets thudded into the rear of the car, tore through fenders. Strange held his breath, expecting the pop of a riddled tire, but in a few seconds the gunfire ceased. As the car swung into the Rue St. Marc, he looked back at Tom.

"Keep down low," he directed. "They'll flash your description all over Paris. They'll think you were in on those murders."

In the Next Issue

of

FLYING ACES—

Gripping Stories—

Complete "Philip Strange" Novel

by DONALD E. KEYHOE

Cinema Bums, "Phineas" Laugh

by JOE ARCHIBALD

Amazing Modern Air Mystery

by ORLANDO RIGONI

and Others

Thrilling Articles—

by ARCH WHITEHOUSE

LIEUT. H. LATANE LEWIS II

and Others

Model Plans—

BRITISH LEOPARD MOTH

AERONCA COLLEGIAN

FLYING ACES BUMBLEBEE

and Model Hints

Wings of the Navy Hawks—New Photos and Many Other Great Features

In the
May FLYING ACES

On Sale
March 25th

"Let them get me," Tom said hopelessly. "It doesn't matter now."

Strange had no time to answer. He saw the other machine a block ahead, careening into the Rue Montmartre. He shoved down on the throttle, sped after the killers. Driving with one hand, he turned the spotlight beam on the fleeing car. The other machine swerved on shrieking tires to pass a taxicab. Strange jammed the throttle to the floor, raced around the other side of the cab. His maneuver brought him within a hundred feet of the first car. He threw a quick look over his shoulder.

"Tom! Put a clip in my gun!" he ordered. "It's in my upper right pocket."

Tom obeyed, his hand shaking. "Noisy's in there!" he said hoarsely.

Before Strange could reply, a startled face appeared at the rear window of the other car. Strange swore in amazement. Norwood! But he had seen Norwood lying dead in the theater!

For a second more, the magician's features were visible in the glare of Strange's spotlight. Strange gave an exclamation. Down the man's right cheek was a curious streak, like a pinkish scar at least two inches wide. With a snarl of sudden understanding, Strange seized the gun Tom Jay had loaded.

The magician's face disappeared from the window as Strange leaned out to fire. The man next to the driver thrust a flare-gun into the air. A rocket scorched up into the night, broke in a cluster of red stars. Strange saw the driver tilt his spotlight vertically upward. The next moment, a pistol snout poked back from one of the side windows.

Strange fired, saw the hand stiffen and the gun fall to the street. He placed a shot in the direction of the driver. The car swerved, caught itself, thundered on. Above the roar of the two machines Strange heard a deeper thunder. The fierce drone of diving planes!

CHAPTER II

DEATH OVER PARIS

DAZZLING light, blossomed in the sky. Strange had a brief glimpse of hurtling ships, of guns already tipped with flame. Then with a muffled hiss, a stream of dense black smoke shot from the car ahead, billowing about him. Blinded, half-choked with acrid fumes, he jammed on the brakes and shot to one side. The other car raced away, hidden by the black cloud from its exhaust pipe.

Down the Rue Montmartre three machines charged in pursuit of the fugitives. The leading one slanted toward the spot where Strange had stopped. He leaped from his seat as he saw a *gendarme* on the running-board. In a flash he had the rear door open.

"Come on!" he shouted at Tom. "We'll have to run—"

A deafening howl of wings cut him off. As Tom jumped out, the first diving plane pitched down into the street. The

parachute flare drifting at two thousand feet shone on the gray wings of a Fokker. Spandaus hammering, the ship plunged straight at the first of the three cars.

The driver jerked wildly toward the curb, throwing the *gendarme* into the street. Spandau slugs chipped into the pavement, swept toward the prostrate form. The unfortunate policeman got to his knees. Then the deadly blast hit him. The Fokker pilot leaned out, and Strange saw the funereal *crêpe* flying from his helmet—dead-black like the streamers which whipped from the tail.

The man seemed to be laughing savagely. With swift precision, he rocked the Fokker's rudder. Right and left shot the scorching Spandau streams. Terrified pedestrians tried to reach area-ways or doors of near-by shops. Some succeeded, but Strange saw a score go down before those venomous guns.

The plane was almost to the ground. Strange pumped three shots from his pistol as the ship roared by. As the Fokker zoomed, he saw the pilot glare back at him. The ship screamed into a tight chandelle. By the light of the descending flare, its tilted wings were clearly visible. Instead of the German cross at each tip was a black flag, and on each flag was a leering skull and crossbones.

More Fokkers, marked like the first, plunged down at the Rue Montmartre. Tom Jay gave a yell as he saw them.

"It's the Black Flag *Staffel*! Get back, Phil! They'll kill everyone in sight!"

The first car the *gendarmes* had commandeered was wrecked against a light-pole. The second had mounted the sidewalk, and police and soldiers were running for shelter. Guns snarling, the second Fokker dived after them. Three of the men slumped to the street.

A dying M.P. pulled himself up for a last shot. The ship's nose dipped lower. Smoking bullets lanced into the M.P.'s body, battered it down into lifeless flesh. As the plane streaked upward, the third automobile raced beneath and charged down the avenue. Two more of the raiders pitched after it. Just as it reached the thinning black smokescreen, there was a flash and a loud explosion. The car blew up, throwing its blazing fragments in all directions. Incendiary bullets had found the fuel tank.

Strange and Tom Jay had pressed back against the wall of a building as the second plane dived. For several moments, that scene of horror held Strange motionless. Then, as his sickened eyes met those of Tom Jay, he remembered his former aid's plight. Tom still wore that betraying jacket and the manacles. There would soon be more police . . .

"Look out!" Tom cried suddenly. "That devil—he's coming back!"

The flare, now down to five hundred feet, had concealed the screeching ship. Guns flaming, it shot down under the light. At terrific speed, it slashed around toward Strange and Tom. As the Spandaus' fiery eyes glared toward

them, Strange hurled Tom to the ground. The first hail of slugs pounded into the brick wall behind them. Handicapped by the manacles, Tom was trying to scramble under the car. Strange gave him a shove, crouched in the lee of the hood.

The Fokker screamed down at the car. Windows shattered under a furious burst. Strange heard the impact of bullets against the sides and the engine. Then, abruptly, the fusillade was ended. The ship stood on its tail to clear the buildings. Strange emptied his gun, saw a bit of black *crêpe* flutter down in the prop stream, but that was all. The Fokker corkscrewed into the clear.

BY now, searchlights had sprung up from a hundred points in Paris. The ship which had just dived swept into a sharp turn. A signal rocket blazed, and the rest of the Black Flag *Staffel* raced after the leader. Machine guns began to chatter from the roofs of several buildings. The leader wagged his wings. Quickly, three of the Fokkers dropped back from the rest. Black smoke shot from their tails in a thin stream, swiftly spread into an opaque, ebony cloud. In vain, the searchlights probed for the fleeing ships. Hidden as though by a gigantic curtain, they drilled up into the night.

The magnesium flare which the leader had released had already struck and gone out, but the twisting searchlights lit the Rue Montmartre, with its gruesome scene of slaughter. Strange helped Tom Jay to his feet, drew him quickly toward the nearest alley.

"Wait here," he whispered, as they reached a dark spot.

He hurried back with a coat and a cap he had stripped from the dead man in the rear of the car.

"What about these cuffs?" muttered Tom. "Norwood snapped them so tight I can't slip them."

"I brought a piece of wire from the tool-box," said Strange. He worked hastily, managed to open one lock.

"Let the other wait," Tom said. He pulled off the jacket, put on the coat and pulled the cap low over his eyes.

Strange led him down the dingy alley. Not till they had put several blocks behind them did he decide it was safe to look for a taxi. They found one with difficulty, for it seemed that all Paris was trying to get to the scenes of disaster. As they settled back in the machine, Strange leaned close to Tom.

"Buck up. We'll get to the bottom of this and clear you."

"That doesn't matter," Tom said dully. "I was thinking about Noisy—" His voice grew husky, trailed off.

"I know," said Strange. He had always realized the unusual bond between the Jay twins.

"I can still see him," Tom said brokenly, "raising that gun to shoot me—"

Strange gave an exclamation. "Tom, we've both been blind! Did you ever see Noisy hold a gun in his right hand?"

"No, he's left-handed, but—" Tom jumped erect. "You mean it was some one else?"

"Of course! Made up to pass for either of you. And there were two Norwoods! It's all part of some Boche trick."

"Good Lord! Then where's Noisy?"

"Either they captured him, or—"

"He may be back at the theater. The police will arrest him!" Tom sprang forward to change the driver's order, but Strange hauled him back.

"You can't go there. You'll get yourself in trouble."

"But Noisy may be in danger."

"I'll go back there as soon as I've hidden you. But I'll have to know all about this, to be of any use. When did you last see Noisy?"

"Just before the act," gulped Tom. "He was dressed like me, so that he could get into the other cabinet from below."

"Why were you in that act?"

Tom stared at him. "Why, I thought Jordan had told you. He sent us to meet you. There have been some bad leaks at G-2, and he wanted your help."

"When was this?" rapped Strange.

"Two days ago. He called us off the Black Flag Staffel affair, had us meet him at his quarters in Chaumont. He told us you were alive, said he'd arrange for you to meet us at the Hotel Calvaire—"

"Why didn't he contact me by our special code?"

"Too much to risk even in a cipher message, he said. He was badly worried. The Brass Hats were hounding him to find the leak, because of Thursday's offensive. Anyway, we came to Paris. We were glad to get away from the 82nd Squadron."

"Why?" asked Strange.

"We knocked off one of the Black Flag mob, and that means we're on their murder list." Tom's voice had hardened. "I don't think we're yellow, but nobody's escaped them yet."

Strange gazed into space, his eyes narrowed.

"There must be more to it than a butcher mob, from tonight's business," he said. "But go ahead. How did you get into Norwood's act?"

"Colonel Jordan sent us a message, telling us to substitute in the act in place of Norwood's regular twins. A G-2 major from Paris H.Q. was at the theater to explain it. They had a tip that three important Boche spies would meet at the show tonight."

"And so they wanted you to watch those seats from the stage, where you wouldn't be noticed?"

"Yes, they didn't want to plant a lot of agents out in front, for fear the Germans would get wise. But they must have changed their minds. I saw Harrison and a couple more—"

"The place was packed with them," Strange told him. "But for a hunch, I'd have been there myself. It was a smooth scheme, a double-barreled frame-up."

He described the massacre, which Tom had missed seeing. Tom groaned.

"They'll think Noisy or I did it. Phil, we've got to go back!"

"No, we're almost at this place—"

Strange lowered his voice. "It's in a cheap hotel, where no questions are

asked. I've another spot for emergency use, but I keep a few uniforms and make-up here."

He had the driver stop a block from their destination. They walked the rest of the way, and in a few minutes entered a small, curtained room at the rear of the building.

"While I'm gone," Strange said to Tom, "stain your face brown, and dye your hair jet-black. Better inject some paraffin into the sides of your nose, too. This isn't going to be any one-night stand."

"Can't you make me up temporarily so I'll pass?" pleaded Tom. "Enough so I can go with you?"

"Too dangerous." Strange turned to the door, a lump in his throat as he saw the look in Tom's eyes. His heart was heavy as he left the room. He had tried to hide his fears, but in his mind he already saw the body of Noisy Jay

IT was after ten-thirty when he returned. Tom sprang to the door. His face, now a swarthy color, held a desperate look.

"Quick—tell me!" he burst out.

"He wasn't there," Strange answered.

Tom gave a sigh of relief. "Then he's alive! Maybe he's just hiding out till things have quieted down so he can explain."

"I hope so," Strange said slowly. At the sound of his voice, Tom gave him a quick look.

"What's the matter?"

"This is a bad mess," Strange muttered. He took off his blouse, sat down before his improvised make-up table. "I'd better leave you here on your own, Tom."

"Where are you going?" Tom demanded.

"To Chaumont. I can't let Jordan down after all he's done for me. He's going to be in a spot. This whole trap was sprung by some one at G-2, and the damning part is that the tip came over Jordan's private wire!"

Tom looked stunned. "But he couldn't—"

"No, of course not," snapped Strange. "I'd as soon suspect Foch or Pershing. But André and a British air officer are heading for Chaumont in the next hour or two, to accuse Jordan of criminal negligence. It will ruin his Army career."

"But I don't understand why he gets the whole blame," interposed Tom.

"Because the fiend back of this planned it that way. French and British Intelligence had been informed from Jordan's office that Baron von Zastrov, Chief of Boche Field Intelligence, would be in one of those three seats with one of his leading spies. They were supposed to be meeting some high Allied Intelligence officer who was going to sell out to Germany."

Tom shook his head. "It's got me muddled," he said. "We get orders that must have been faked. So do you, and now—"

"Exactly. It all goes back to Jordan. Unless he can spot the leak and prove

it—" Strange did not finish.

Silence fell while he began to alter his features. He snipped crêpe hair into short lengths, applied spirit gum to his upper lip. In a few moments, a shaggy mustache began to grow there. He built up his eyebrows, worked deep lines into his cheeks. Tom gave an exclamation as he saw the reflection in the mirror.

"Holy smoke! What's the idea of making up as Thorne?"

Strange surveyed himself in the glass.

"Because only the Chief of Air Service could get fast action at Orly tonight. And I've got to beat those others to Chaumont."

"But you're liable to get into a jam—"

"The general's at Toul. I overheard that from Dix Harrison, at the *Variétés*. He was there with André and the rest. He'd been creased by a bullet—so close he's still scared—and he's going to Chaumont to report that you or Noisy or both of you have turned traitor. He had just phoned Thorne to get special authority for a ship and a pilot."

"I'm not going to stick here while he accuses us of that," Tom burst out hotly. "I'm going to Chaumont, too!"

Strange paused in the act of changing insignia on his blouse. He eyed Tom critically. With his darkened hair and skin, the Jay Bird looked entirely different. His nose, thickened with paraffin and bulging at one side, gave him a somewhat belligerent expression. Strange finally nodded.

"All right, I'll pass you off as a courier going with me to bring back dispatches to Paris. Take one of my uniforms. It'll be a little large, but you can get by."

CHAPTER III

BLACK FLAG FOKKERS

TEN minutes later, they were on their way to the Air Service acceptance field at Orly. At the promise of double fare, the driver made good speed. They were stopped at the fortifications and once beyond, but the sight of Strange's uniform gave them swift passage. As they neared Orly, Tom looked uneasily at Strange.

"What if we run into somebody who heard that the general went to Toul?"

"The average man believes his eyes first. You saw what one man did tonight with the same trick."

"You mean the one who doubled for Noisy?"

"No, he was just a killer made up by that clever fiend who played Norwood."

"Then you've an idea who he is?" exclaimed Tom.

Strange nodded slowly, as if to himself.

"I thought he was locked up in Vincennes," he muttered, "but no one else fits. Quick-change artist, knew about magic—Norwood's act especially." He turned abruptly to Tom. "How long has this Black Flag outfit been operating?"

"Less than ten days, but it's raised the devil. Must be at least thirty of them. They started out jumping flights at odds of four or five to one. Then they split up, and two or three groups would hit at different places well apart. They've even used Allied ships."

"Any hint that they're connected with those leaks at G-2?" rapped Strange.

"Yes, that's what stumped Jordan. Several new dumps and gun emplacements for the Thursday offensive have been bombed as soon as they were completed, though they were heavily camouflaged. Also, the Black Flag mob has shot up two or three squadrons which had just moved into hidden dromes. This *Rittmeister* Wolgast must be a clever Boche."

"What makes you think he's in on this?" demanded Strange.

"It's fairly well-known. In fact, his old *Staffel* is supposed to be the backbone of this group. He's the one who led that strafe tonight."

"Butcher Wolgast, eh? I remember that fine gentleman." Strange's long fingers tapped restlessly upon the flat make-up kit he had brought along. "An unholy trio—Wolgast and the two Z's. If we only knew—"

He broke off as the cab slowed for a sentry post. A few moments later, they stopped before the administration building. A haughty O.D. appeared, looked coldly at Tom, who was the first to climb out.

"If you think you're going to get a ship at this hour—"

"Lieutenant!" snapped Strange.

The O.D. turned; then his frigid air dissolved into dismay.

"Y-yes, sir," he stammered. "I didn't see you, general—"

"Break out a working squad!" barked Strange. "I want two Spads, full equipment, at once."

The O.D. gave him an arm-jolting salute, dashed away. Half-clad ack emmas were quickly aroused. Two brand-new planes were shoved out to the line, engines started. Strange ordered flying gear brought. He and Tom were about to take over the ships when an Army Cadillac rolled to a stop in front of the office. Strange hid a start as he saw Harrison and an Air Service captain enter the building. He swung around to the O.D.

"I think those men are the ones I okayed through Toul H.Q., a while ago for a two-seater. Let them have the ship, but don't mention my presence here. This is a secret flight on G.H.Q. business."

"Yes, sir," responded the kiwi, swelling importantly at being entrusted with this information. "I'll tell them you're just two pilots ferrying new ships to your squadrons."

STRANGE quickly motioned Tom into his Spad as Harrison came out of the office and started toward the line. He climbed into his own ship and bent over, carefully adjusting his helmet and goggles. His make-up was not the ordinary kind of theatrical grease-paint, but a sharp scratch might show

through to the skin underneath.

He kept low in the pit as the mechanics pulled the chocks. There was a slim chance that Harrison had talked directly to General Thorne at Toul. Recognition, in that case, would be fatal. Then another disturbing thought jabbed at him. One of the men in the office might have seen him, might have mentioned to the G-2 agent that the Chief of Air Service was at the field . . .

A quick look showed him that Harrison was not looking at the two Spads. He was talking irritably with the O.D., exhibiting his credentials. A bandage showed under his cap, evidence of his recent close call at the *Variétés*. His pilot was giving directions to a hangar sergeant.

Strange taxied out to where Tom was waiting. The Hispanos roared, and the two ships swept down the field and into the night. Strange banked to the east, glanced down for a second. By the light of the torch flares, he saw a Bristol Fighter being wheeled out. He straightened quickly on the course to Chaumont. With a fast ship like the Bristol, Harrison would arrive at G.H.Q. very soon after the Spads. Strange looked off toward Le Bourget. The French drome was dark. André and the others either were late or had already taken off.

Strange frowned, again opened the throttle he had partly retarded for cruising. He had to get to Jordan first, tell him the truth of what had happened, warn him of what he suspected. He cast a savage glance back at Paris. If he was right, then somewhere in that huge city was the center of that devil's web!

He might have kept on the trail of the killers' car, if only he had been given a moment's warning about that smokescreen. Before the war he had learned the secret of Yoga breathing, the means by which the Hindu religious men sometimes carried out their miracle of being buried alive for days. Like other queer things he had learned in the Orient, Yoga so-called magic, hypnotism and developed telepathy, had more than once served him in dangerous situations.

Tom Jay's Spad edged in a little closer to Strange's ship; he could see the flames of the exhaust as they spat blue and red into the night. He caught the Jay Bird's thoughts almost as though Tom had spoken into his ear. Tom thought he had forgotten the wide-open Hispanos, pounding above their safe cruising speed. He rolled his wings as a signal to maintain the speed, then hunched down in the pit.

The Marne fell behind, and the ships thundered steadily southeast. Strange held the course subconsciously, his mind far away. Enough had happened that night to give him the key to the riddle, if he could only work it out. Enough—almost too much. That was it. There was too much! That business about the *Staffel*—it had not been needed. The car could have escaped, probably. Then that other part had been to attract attention, unless the master-spy was get-

ting unwontedly cautious. Why?

Whatever the cause, the timing had been perfect. Strange flicked a glance over the luminous instruments before him, returned to his thoughts. For twenty minutes he sat there, crouched over the stick, projecting his machine-like brain back to the *Variétés*, into the details of Tom's story, to that mysterious leak at G-2.

He sat up with a jerk, his green eyes gleaming. The Jays had been given those orders at Colonel Jordan's quarters, not at the G-2 chief's office. He had the key!

With an oath, he rammed his fist against the throttle, forcing out the last bit of power in the roaring Hisso. The whole thing was changed. Five minutes at Chaumont and he would know if he was right.

THE minutes seemed to drag on leaden feet. He saw the Aube River wind away below, tried to curb his impatience as the Spad ploughed on in the darkness. At last he passed above Jessaines. As he slanted down between Bologne and Bricon, toward the A.E.F. Headquarters town, he looked around for Tom Jay's ship. Tom had kept pace with him until the last minute or two.

An orange blob of flame showed, down on the G.H.Q. drome. Another torch flared up; then the special floodlights made a white lane along the east-west runway. Strange jammed his stick forward as he saw a gliding ship. If André or some irate Englishman got there first . . .

T-t-t-t-t-t-t! Sharp, staccato, came the rattle of guns from up in the night. Instinctively, Strange hit the throttle, renversed. As he kicked around, he saw not one but three ships silhouetted by the floods below. The nearest was Tom Jay's plane, the others French Spads.

Abruptly, the flooding searchlight beam leaped skyward. Almost in the same moment, Strange heard a crescendo howl of wings above the sound of his own. A gray ship plummeted out of the heavens, sable streamers flying from its tail. Strange whipped into a frantic chandelle as Spandau lead scorched in his direction. Tracers gashed through the fuselage behind his pit. He rolled fiercely, jerked the charging-handles of his Vickers. The guns stuttered at his quick squeeze of the trips. He saw the glowing streaks from their muzzles stab at the gray ship's tail.

The other man snapped into an Immelmann. Strange felt a sudden murder-lust as he saw the death's-head flag painted on its wing. There was black crêpe whipping from the pilot's helmet, and as Strange saw the plunging horde above, he knew this was Wolgast, the leader.

The three Spads below had spread out hastily, then rushed together for mutual protection. Seven ships of the Black Flag *Staffel* screeched down with blazing guns. Strange pitched beneath Wolgast's Fokker, dropped like a thunderbolt in the midst of the seven. The rearmost Boche jerked around as the Vickers hammered. Strange's first

burst caught him squarely. He fell back in a bullet-torn heap. His ship stood on its nose, hurtled for the ground. Its left wing struck the tail of another Boche, cut it clear from the ship.

The rest of the Fokkers sheered out as the two planes fell. It was only for an instant, but it gave a fighting chance to the three men in the Spads. Strange whirled on the nearest Boche, drove him away from Tom Jay's tail. The German slashed around in a vertical bank, Spandaus flaming. Strange cut inside the turn, tripped his guns. His nicked slugs were eating their way toward the other man's pit when Butcher Wolgast struck.

German slugs crashed through the Spad's right wing, leaving fabric in tatters. Strange kicked away, but the hail of bullets followed, leaped in toward his cowl. Another fusillade commenced at his left wing tip, started inward. Strange swore. He was being boxed—and those were incendiary bullets! If one of them reached his tank . . .

The Spad screamed as he hauled the stick to his chest. He kicked hard, came out crookedly, Vickers spouting. A Fokker tail with a death's-head flag whirled before his sights. He straightened the Spad, drove his tracers forward. Spandaus were panting again behind him, but he held on grimly. The Boche in front darted up in a climbing turn. Strange backsticked, hammered hot lead into the German's back. As he snapped into a left split, the man behind him suddenly threw up one hand and toppled down over his stick.

Tom Jay zoomed, Vickers smoking. Two Black Flag ships charged in diagonally to cut him down. Strange brought his Spad roaring out of its turn, centered his sights. Wolgast was drilling down again. Strange ripped a burst into the other plane, pulled up to meet the *Rittmeister*. Wolgast pumped in a venomous torrent, but the fire-packed slugs lanced into space. Strange held his fire, swerved abruptly. For an instant the Vickers poured a withering blast over the Fokker's tail.

Wolgast looped madly. Strange started to follow through, then kicked out just in time. Blackish smoke puffed from the Fokker's tail, as though the streamers which flew there suddenly grew to gigantic proportions. As Strange banked hastily to avoid the smokescreen, Wolgast twisted off at the top of his loop, dropped like a meteor. Two Fokkers were coming in from right and left to finish the three-cornered box. Strange gulped a deep breath, renversed and plunged straight into the billowing black cloud.

He had not had time to get ready, but he knew he could hold his breath for at least a minute. The fierce hammer of slugs against his wings ceased. He curved away from a brighter spot in the black gloom. Tears were coming into his eyes from the chemicals in the smoke. He nosed down, picked up speed, then thundered into clear air.

A blazing ship loomed up before him. His heart caught as he saw that it was a Spad. Then he saw Tom pitching to

the help of the other French pilot.

"Thank God!" he muttered. But his relief was short-lived. Down a searchlight beam raced Wolgast's Fokker, funereal streamers flying. Two short bursts from his Spandaus, and the French ship reeled off toward the ground. Tom was left almost in the *Rittmeister's* fire. Strange rasped out an oath.

"Hold on, Tom!" he shouted, as though by some magic his words could reach Tom's ears. He crossed controls with a reckless jerk. The Spad groaned, shuddered into the turn. A terrified Black Flag pilot skidded out of his path. Strange missed him by scant feet, curved in at the *Staffel* leader.

As his tracers shot into the Fokker's tilting wings, Wolgast spun in his pit. One hand flashed down inside, but this time Strange was ready. The Spad leaped sidewise, taking the skid without loss of control because of its furious speed. The German swerved wildly as the Vickers probed toward his back. The smokescreen gushed back and enveloped Tom Jay's zooming ship. Tom's hand flew to his nostrils, but his guns kept on their vicious pound.

With a shout of triumph, Strange closed in for the kill. The Fokker was almost in his sights when a searchlight suddenly crossed his diving ship. cursing the crew at the light, he clamped down on his trips. He couldn't see, but he might get a lucky break.

The light held tenaciously to his Spad. He rolled out, glaring down at the ground. Then abruptly he realized that the Black Flag ships were fleeing. He stared up, saw a rocket streak down the sky like a falling star. Revealed in a dozen searchlights were the ships of the raiding Germans. Machine guns began to clatter from the Chaumont defenses; then Archie joined in as the Boche planes widened the gap between them and the Allied ships.

It was then, as Strange took a long breath and looked around him, that he saw the two S.E.5's. One was going down with a splintered prop. The other was seemingly unhurt. Both carried British cocardes. Apparently they had arrived at the last of the battle. Strange stiffened as he saw that Tom's ship was nowhere near him. He glimpsed it a second later, wobbling down to a landing. He was about to follow when he heard a shrill howl of wings strained in a rushing dive.

He shot a quick look skyward. One of the Black Flag ships was pitching down, with a Bristol Fighter on its tail. The Fokker seemed to be crippled. Twice the pilot tried to pull up and escape. Each time its nose dropped again. In a last desperate attempt, the Boche gave his ship hard rudder. The Fokker slued out of its straight plunge. Strange saw the flippers come partly back. The plane grudgingly started to twist away.

The Bristol cut in to head it off. The Boche tripped his guns, and with an effort forced his tracers toward the banking two-seater. Strange was almost in range, but his Vickers were not

needed. He saw the man in the rear pit pull himself up, recognized Harrison. The agent's helmet was gone, and a red-stained bandage flapped from his head. Clinging to the spade-grip, he loosed a short but deadly burst from the rear-pit guns.

The Fokker went over on one wing, greasy smoke pouring back from the cowl. With a distinct explosion, it burst into flames and roared toward the earth.

Strange looked back at Harrison, saw the agent slump in his seat. The Bristol pilot glanced around hastily, dived to a landing as he saw his passenger's condition. Strange put his Spad down swiftly. It would be a miracle if he reached Jordan in time now. He let his ship roll close to Tom Jay's. Tom's Spad had been all but shot to pieces. Strange cut off his engine, jumped down.

"Are you hurt?" he asked anxiously.

Tom raised his head. There was a trickle of blood on his darkened face.

"Just scratched by some broken glass," he said in an undertone. "I wanted to warn you—"

He had no time to finish. With an exclamation, an officer with the stars of a major-general strode toward Strange from a group by the field office. Strange groaned under his breath as he recognized the stiff figure and sternly dignified features of Bradshaw, the Chief of Staff. Bradshaw and Thorne worked together daily. If there was any flaw in his rôle, those critical eyes would spot it.

"Good Heavens, Thorne," Bradshaw exclaimed, "were you in that scrap?"

Strange thanked his lucky stars that he knew "Wild Bill" Thorne's gruff manner.

"Why not?" he barked. "Just because I've got a few years on some of these half-baked kids doesn't mean I can't handle a ship!"

Bradshaw shot a look at Tom. Strange caught a hint of uneasiness in the general's manner.

"Who's this?" Bradshaw said in a low tone.

"Lieutenant Martin, my personal courier for the drive—"

"Not so loud," muttered Bradshaw. "It's still supposed to be a secret, in spite of—" He turned sharply as an angry voice rose above the general confusion on the field.

"*Sacré bleu!* I tell you I will not wait. I will see this Colonel Jordan at once or know the reason why!"

Bradshaw beckoned Strange to follow, strode hastily toward the speaker.

"Who are you?" he asked brusquely.

"I am *Commandant André!*" Strange saw the little Frenchman's eyes blaze angrily. "I came here by order of—"

"Come inside, major," Bradshaw said hurriedly. "I received the message from your Headquarters. I have something to tell you."

"Wait, *monsieur le general*, there are others who came for the same purpose." André waved a hand and Strange saw the two S.E.5 pilots. "One of my countrymen came with me, too, but he died at the hands of those butchers!"

CHAPTER IV

TRAITOR TRAP

AS the two pilots came forward, Strange started. The first was the lanky, bronzed major who had been in the box at the *Variétés*! The other Englishman had been injured. He was holding his right arm tightly above the elbow, and there was blood running down his sleeve. The major seemed to notice his companion's wound for the first time.

"Radcliffe, you're hurt!"

"It's nothing, Willemby." The wounded man smiled through set teeth.

"You had better get that arm bandaged," interrupted Bradshaw. He turned to a junior officer near by. "Is there a first-aid man here?"

"No, general, but we're sending that other man into town, and this officer can go, too."

Strange followed the man's gesture and saw Dix Harrison's chalky face as the Intelligence man stumbled into the rear of a small car. The agent was dazedly holding the red-stained bandage which had come loose during the fight. As Bradshaw saw Harrison's face, he muttered a brief apology and hurried to the side of the car. Strange's heart sank. Unless Dix was too stunned to remember anything, his hope of warning Jordan was lost.

In a minute the general returned. Radcliffe, the wounded Englishman, climbed into the car with Harrison, and the machine started toward Chaumont. Bradshaw's face was grave as he rejoined Strange and the others. He led them to an inner office, looked hesitantly at Strange.

"Would you mind, general, waiting in the C.O.'s office while I talk to these men a moment?"

Strange frowned. "It's important that I get to Headquarters immediately," he said brusquely.

Bradshaw went with him to the door. "I'm sorry, Thorne," he said in a lowered voice, "but I'll have to ask you to wait. I'll explain in a few minutes."

Strange restlessly paced the floor of the other room until Bradshaw returned. The general's stern face was drawn into hard lines.

"Thorne, I've got to tell you something that will give you a terrible jolt. But first, I want to tell you that you were sent to Toul to spare your feelings during this ugly business. I know of your friendship for Jordan—"

"What are you driving at?" Strange demanded in Thorne's gruff accents.

"We've uncovered a traitor in G.H.Q." Bradshaw did not meet his eyes. "Thorne, that man is Colonel Jordan!"

Strange felt a coldness grip at his heart. This was far worse than he had thought.

"You're mad!" he snarled. "If you mean those leaks in G-2, anyone could have—"

"I hate to believe it myself," Bradshaw said, unhappily, "but there's no doubt. Those officers just brought word of a fiendish trap by which Jordan

caused the death of twenty-nine Allied agents. And this treachery includes one and probably both of the Jay twins. You remember them—those two who were Captain Strange's aids?"

Strange's face was like granite. "I know them, yes, and I don't believe a word of it," he said harshly. "It's some Boche frame-up."

"That's only part of the evidence. Earlier today, we intercepted a secret message a German agent was about to deliver to Jordan. The man escaped, but we broke the code by means of a stencil hidden in Jordan's quarters. The message arranged for a rendezvous in his quarters tonight, a meeting with some high German officer to conclude the details of his selling out to the Boche.

"We found that Jordan has sent messages in that same code, by wireless; he told the communications chief it was to one of his operatives, but no one in G-2 knows the code."

"This—this rendezvous," Strange said thickly, "when is it to be?"

"After midnight. It wasn't definite. We've planted a dictaphone and have hidden men around to keep watch." Bradshaw hesitated, cleared his throat. "We—ah—we've had to use your quarters; it's the only place close enough—"

"So that's why you got rid of me!" Strange fumed.

"It was necessary. And now that you know this, you'll have to go with us."

"No! I'll be damned if I'll spy on an innocent man."

"I'm speaking as Chief of Staff," Bradshaw said coldly.

IN silence, Strange took off his flying kit, followed Bradshaw to a G.H.Q. limousine. André and the Englishman were waiting by the car. Strange nodded curtly to André, whom he knew Thorne had met. Bradshaw introduced the other man.

"This is Major Willemby. He happened to see that terrible business in Paris, so the British air office there sent him to represent them."

Strange made a gruff response, climbed into the rear seat and sank back in the shadow. He had hoped to avoid André. The little Frenchman and he had been on more than one mission together. André was one of the few who knew he still lived. He was glad when Bradshaw drew the little Frenchman's attention, as the car started into the town.

"You're sure, Major André, that it was one of the Jay twins who shot down those agents?"

"I saw it myself," André said bitterly. "But that I came in late, I, too, would have been killed. I could hardly believe my eyes. I knew the Jays well from my friendship with *Capitaine* Strange."

Strange winced. If he could only declare himself, and explain what he suspected! But Bradshaw would never understand his pretending to have died, nor his present masquerade.

"This Norwood was obviously tricked," André was saying, "but I do not think the Jays intended those mur-

ders at first. We found a concealed camera which photographed the agents when the magician fired his flashlight pistol. It must have been intended to identify them so they could be killed less publicly, but that unfortunate *gendarme* discovered something and upset their plans."

Strange shook his head, unnoticed in the gloom. The whole thing had been carefully arranged.

"Who is this Radcliffe?" Bradshaw asked suddenly.

"He's an Intelligence Johnny, sir," drawled Willemby. "Been on this beastly Black Flag *Staffel* affair. Since they had some connection with tonight's atrocity—"

"I see." Bradshaw looked back toward the drome. "Queer how they dropped on you. Seemed to know exactly when you would arrive. It looks like a desperate attempt to keep you from adding the final proof."

No one answered. The car passed a sentry post, slowed as it came into Chaumont. In a minute, the driver turned off his dimmed lights, let the car roll noiselessly down a tree-shaded street near Jordan's quarters. Strange cast a longing glance toward an old brick house lying back in the dark on a side street. This was the house which covered the entrance to the secret quarters he had used when Boche spies were so hot on his trail. If he could only have slipped away from the drome . . .

"Stop this side of General Thorne's house," Bradshaw ordered the driver.

Thorne's quarters were on the corner, and only a hundred feet from the smaller stone residence which Colonel Jordan had rented. The car halted below the side entrance, and Bradshaw motioned the others to come with him. A figure emerged from the shadows as they neared the house.

"No sign yet, general," he said, saluting Bradshaw.

"Give the spy plenty of room to get in," whispered the Chief of Staff. "We want to hear what they—"

"I'm sick of this business," Strange cut in harshly. "I've certain evidence I'm going to submit to Pershing—right now!"

"He's gone to the War Council—" Bradshaw's mouth snapped shut. He was drawing Strange to one side for a hasty word when the side door of Thorne's house opened and a man ran down the steps.

"General! The German's in there already. It's coming over the dictaphone. The colonel's telling everything he knows!"

Bradshaw swore furiously.

"Raid the place! Take them alive if possible!"

The man whirled toward the door, summoned his squad, and dashed around to the front of the building. Bradshaw charged after them, Willemby and André at his heels. Strange ran to the rear of the house, hastily choosing the shortest direction to the old brick house. The gate was locked. He swung himself up and over the wall, but as he landed on the other side, he

saw several of Bradshaw's men farther back. He would never be able to get past.

He ran along in the shadow of the wall toward the front of Jordan's residence. One of the men in the back yard gave a shout. Strange raced around to the veranda. Bradshaw and two G.H.Q. officers were crashing in through a window farther along. Strange halted at the window and stared inside.

THROUGH the living room he could see into Jordan's study. Two figures had whirled at sound of the raiders' entrance. Strange saw Jordan's face, stricken with a look of fear. The Intelligence colonel was snatching a gun from the pocket of his dressing-gown. Back of him was a man in civilian clothes.

The civilian suddenly dashed toward the other end of the study. As Bradshaw and the first two officers leaped into the house, the colonel sprang back. One shot blazed from his pistol, went wide. Then he turned and fled after the civilian. Strange whirled around. He jumped to the ground and ran to the other side of the house. Two men sprang at him in the darkness, and he went down with a jolt.

A third man sprinted to the spot, and a light flashed into Strange's face.

"Hell's bells!" a voice exclaimed in consternation. "That's General Thorne!"

The two men released Strange, helped him to his feet. He waved aside their stammered apologies.

"Get that Headquarters car around here!" he snapped.

One of the men dashed away. Strange smoothed his uniform, was feeling his mustache when he heard a triumphant shout from within the house.

"We got him, general!"

Strange hurried inside. Two G.H.Q. captains were bringing Jordan out of the study. The G-2 chief had a stunned expression. There was a bruise on the side of his face and his dressing-gown was almost torn off, showing he had merely removed his uniform blouse. Bradshaw faced him sternly.

"So it was true! You're a traitor!"

Jordan put out a shaking hand. "Wait—let me explain," he pleaded.

"Explain this," grated Bradshaw. He pointed to a packet of gold-franc notes which had evidently been dropped by the spy.

Strange stepped forward quickly. "Where's your German?" he flung at the two Headquarters men.

One of them looked at him, then turned uneasily to Bradshaw.

"I'm afraid that Kraut got away, general. A couple of men are after him, but we weren't expecting that secret passage business—"

"What's that?" demanded the Chief of Staff.

"Here, you can see for yourself, sir."

Bradshaw shoved by him. Strange followed into the familiar alcove across the hall from the study. He saw the open trapdoor and the steps which led down to his old quarters under Jordan's house.

"What the devil!" exclaimed Bradshaw. Then he saw Strange. "Thorne, this means Jordan has been playing us crooked all along!"

He stopped as a red-faced major appeared at the foot of the steps. The major was cursing sourly.

"You'd better order a dragnet, sir," he said as he saw Bradshaw. "That spy escaped."

"Where does that passage go?" rasped Bradshaw.

"Through some rooms and into an empty house on the other street," answered the major. He reached the alcove level, wiped perspiration from his forehead. "I chased that Heinie and took a shot at him, but he knew the way and I didn't."

Bradshaw wheeled back to the study. "Get everyone after that man," he ordered the major. "Take these two—" He pointed to the men holding Jordan. "Flash an alarm to M.P.'s and sentry-posts on the roads."

CHAPTER V

THE DEVIL'S DISGUISE

THERE was a brief hush after the officers hurried out. Bradshaw had taken a .45 from one of the men. He held it significantly as he looked at Jordan. The G-2 colonel's bulldog face had lost its dazed expression. He glared at the Chief of Staff.

"You're crazy if you think you can pin this on me. The whole thing's a conspiracy!"

"Then what were you doing in here with that spy? Why did you run?" snarled Bradshaw.

Two or three men were coming into the adjacent room, but Jordan disregarded them.

"I've been a prisoner down below for the last two hours," he said savagely. "If you don't believe it, look at the rope marks on my arms. Four men sneaked in from that alcove after my manservant left tonight. They grabbed me before I could reach the phone."

"A pretty story," sneered the Chief of Staff.

Strange looked past Jordan. André and Willemby were staring in from the living-room. Dix Harrison had just arrived, and was watching, open-mouthed. Bradshaw started to close the study door, but Jordan blocked his way.

"Let them hear! You branded me publicly, and now they'll hear my explanation. Till fifteen minutes ago I was tied up below. Then some one came in through the passage, and one of my guards untied me and gave him my dressing-gown. I didn't see his face, for he kept back in the dark. He put it over his uniform and came up here with one of the others. I heard a shot a few minutes later. Two men dashed down the passage. One of the guards knocked me down, threw this dressing-gown around me and ran. Your men burst in a second later."

A scornful smile curled Bradshaw's lips. "I suppose you'll tell us you had this secret passage for playing games,"

he said tartly. "Was that it?"

Jordan hesitated. "There's no harm in explaining it now," he said slowly. "Those rooms were secret quarters for Philip Strange when the Boche were making it so hot for him. We fitted up rooms in an old wine cellar, and I rented that brick house privately so that no one would suspect it covered the end of that connection tunnel."

"Humph! A convenient alibi—with Captain Strange dead so he can't deny it."

Strange took a step forward. "It happens that I know of those secret quarters," he said gruffly. "Strange told me about them a month before he—died."

He thought he heard a smothered exclamation from some one in the group, but if so, it was unnoticed by the rest as there came a sound of argument out on the walk. An M.P. captain appeared with Radcliffe. The Englishman's arm had been placed in a sling. He was looking angrily at the military policeman.

"General," began the M.P., "this bird says—"

"It's all right," rapped Bradshaw. "You can wait outside, captain."

Radcliffe raised his unbandaged arm and handed a sealed envelope to André. "Wireless from Paris to you, major. They thought you were at the dispensary."

André bowed hastily to Bradshaw. "With your permission, general—" He ripped the envelope and ran his eyes over the message. "*Mon Dieu!* This matter becomes more puzzling every minute."

"What now?" Bradshaw asked stiffly. "From the Sûreté medical examination, it is certain that the magician Norwood was dead at least an hour before the first act went on; some one doubled for him the entire evening."

Bradshaw stared from André to Jordan.

"Doubled," he muttered. "And now you claim—" He gazed hard at Jordan's wrists. The red marks were fading, but still visible. "I'd like to believe you, but I'd have sworn—"

"Did you ever stop to think," Strange asked in a harsh tone, "that there are skilled agents who can impersonate almost anyone?"

He saw André staring at him. The little Frenchman seemed about to speak, but Dix Harrison pushed by him. The Intelligence man's head had been re-banded and his face had lost some of its sickly color.

"You've hit it, general!" he said excitedly to Strange. "It all fits—"

"What is this?" demanded Bradshaw irritably.

The agent turned toward him. "Don't you see? Captain Strange is the only one who could have done it! He must not be dead at all!"

Strange went rigid.

"Don't be a fool," snapped Bradshaw. "Everyone knows the Germans shot him down."

"Suppose they reported that—for a reason. What if he switched over to the Germans—"

"You damned ghoul!" flared Jordan.

"You were always jealous of him. Now you try to defame his name—"

"You said somebody posed for you," said the agent sullenly. "Strange knew about that passage. He could have made up as you."

"*Mon Dieu!*" André suddenly cried. "We are stupid ones not to think of it before! Von Zenden, the Man of a Thousand Faces!"

BRADSHAW spun around. "Impossible! That devil is behind bars, waiting to be shot."

"That's right," Jordan told André dully.

"Wrong, *mes amis!* He was spirited out of Vincennes two weeks ago. The bribed guards have already paid the penalty, but we have kept silence about the miserable affair because of the blot on France's name."

Jordan turned with an exclamation to Bradshaw.

"Then that explains Norwood's double. I was keeping still for fear it would—would give evidence to this silly story of Strange's being alive." No one appeared to notice the break in Jordan's words. "Strange seldom talked of the days when he was on the stage. He was a 'boy wonder' and he hated it. But he told me he first saw von Zenden when the German was doing impersonations and lightning-change stunts. They were on the same bill, in New York—and this magician, Norwood, was at the same theater. Strange said Norwood took his side in a row with the Boche. Von Zenden would know Norwood's act. As a quick-change artist, he probably knew most of those tricks, anyway."

Strange stood like a graven image. Jordan was trying to clear him, but he could see where it was leading. Some one would think of it at any second.

"Good Lord!" Bradshaw burst out. "What if Strange and von Zenden were one and the same?"

Despair took hold of Strange. He could never come back, now—he would be eternally damned . . .

Then, abruptly, something flashed over him. He sensed a sudden gloating.

Swift realization of the truth took his breath. He dared not look up for fear he would betray himself. A fierce exultation swept through him. His mind was pitted against the brain of that clever fiend!

"And remember," Bradshaw was saying triumphantly. "Strange disappeared—was supposed to be killed—about the same time von Zenden was caught."

"You're crazy!" Jordan suddenly raged. "I can produce five officers who saw them at the same time. Why, damn it, Strange was the one who captured that rat!"

Bradshaw turned purple. "Don't forget you're speaking to—"

The roar of a rapidly approaching motorcycle cut him off. Brakes squealed, then there was a sound of some one dashing up the steps from the street.

"Get out of my way!" came a thundering voice. "By Heaven, I'll show them they can't frame—"

The door burst open, and General Thorne plunged into the room. But for the warning boom of that familiar voice, Strange would have been trapped. As Thorne stopped, dumbfounded, Strange whirled to the amazed Chief of Staff. Before Bradshaw could move, Strange wrenched the .45 from his grasp. He spun back, saw the M.P. captain behind Thorne start to snatch at his pistol.

"Stand still!" Strange's voice was like the crack of a whip. "I'll kill the first Yankee *Schwein* that moves!"

"Von Zenden!" Jordan burst out. "You devil—you're the one who impersonated me!"

Strange smiled ironically. "Poor flat-tery, *mein Freund*. It was badly done. The man I coached for the part forgot to hold that bulldog expression. Besides, even von Zenden cannot be in two places at once."

He flicked the .45 sharply around.

"Keep your hands up, my double!" he told Thorne sardonically. Then his narrowed eyes shifted over the group. A grim satisfaction went through him as he saw the baffled rage and dismay in Dix Harrison's grayish face.

"Come here, Heinrich!" he snapped. "Don't think you will sneak off and leave me to handle these pigs alone!"

A look of terror raced into the agent's eyes. Jordan saw it.

"So you're the one who betrayed me!" he snarled.

"No, no!" the other man moaned. "He's lying—"

"Be still, you coward," Strange said contemptuously. "The game is finished. Not even that disguise I put on your face would save you now."

The other man's panic showed, despite his frantic effort to hide it. Strange knew then he was right. Under that pallid make-up and the red-smeared bandage was the face of the real von Zenden!

"*ACH,*" Strange said disgustedly, "it is a wonder you were not caught in Paris, the way your ugly face shows through my handiwork. And that idiot Woermer—with two days' rehearsal he gets stage fright while impersonating one of those *verdammte* Jay twins, and almost—"

"*Diab!*" cried André. "It was you who caused the murder of my best agents!"

"Get back!" rasped Strange. Under his savage glare André fell silent. The rest stood sullenly with lifted hands, but he knew they would be on him like tigers if he made one tiny slip. He backed toward the center of the study, let his pistol center near von Zenden.

"Take this package of money that Greimar dropped," he ordered the spy coldly. "Now that our scheme to trap this stupid colonel has failed, we will save what wreckage we can."

Von Zenden's eyes held a murderous light, but he moved toward the desk and reached for the packet of notes.

"Wait," rapped Strange, as the spy was about to slip the money inside his blouse. "I'll take it, after all." He saw the disappointment in the Prussian's

face, knew he had meant to snatch out a gun. "Be ready to run through the passage, but wait for my signal."

His swift-roving gaze caught the change in Thorne's position. The battling general was about to make a break. The act was almost ended, but every move at the last would have to be perfect . . .

"*Auf Wiedersehen, meine Herren,*" he flung mockingly at the angry faces before him. "And you, Colonel Jordan—perhaps you will learn to bar up secret passages under your house, now that your Brain-Devil pet is dead. It was a convenient hiding-place while we listened in on your private wires—"

"You butcher!" Thorne suddenly stormed. "What have you done with Tom Jay?"

Startled by the question, Strange threw a glance toward the general. Like a panther, Jordan leaped. Strange sprang aside, fired high above the colonel's head. Von Zenden was diving madly to one side, hand within his blouse. Strange whirled to the left study door, hit the light switch as he ran.

In the darkness he heard some one collide with Jordan. Thorne was shouting fiercely for lights. Strange seized the alcove door, jerked it back to the wall. Then, wheeling at right angles, he ran through the side hall. It opened, he knew, into the dining-room. He jumped through and closed the door barely a second before the lights went on behind him. He flattened himself against the dining-room wall, expecting that at least one or two of the group would be in sight. Apparently, they had followed Thorne and Jordan.

Then he saw the M.P. captain crumpled up on the floor, a bloody gash above one ear. Almost in the same moment there was a muffled shout from outside. He dashed for the entrance. As he ran down from the veranda, a motorcycle rocketed away from the curb. He swore. Von Zenden had come this way instead of through the passage!

A man was picking himself up from the ground as Strange reached the street. He swung around with his fist drawn back, then saw Strange's altered features.

"Somebody socked me, general, grabbed the machine—"

Strange almost let go of his pistol. The man before him was Noisy Jay!

Shouts from the house drowned the cry of astonishment which escaped him. He seized Noisy's arm, propelled him toward the G.H.Q. car he had intended to use earlier for a dash to the passage outlet.

"Come on! We'll catch that devil!"

The driver was not in sight. Strange jumped into the driver's seat, hastily started the engine. Noisy sprang in beside him as the car lurched forward. A man ran out of the house as they raced away. Noisy gave a yell as a pistol bullet ricocheted from the hood.

"Say, what in blazes is going on?"

Strange jerked the car around the corner on two wheels. As he straightened out, he came to a swift decision.

"Noisy!" he said sharply.

"Yes, sir—"

"I'm not Thorne. I'm Philip Strange!"

"What?" Noisy yelped. "Phil! For the luvva—why didn't you let me know all this time?"

"That was really Thorne who went in—"

"Well, for Pete's sake!"

"I'll explain later. How did you get from Paris to Toul?"

Noisy started. "How did you know about that?"

"I was there." Strange swung the car into a street which led toward the G.H.Q. field. Far ahead he saw the motorcycle speeding by a street light. He jammed down the throttle. As the car raced on, he hastily told Noisy the main points of what had happened in Paris.

"Then Tom's all right!" Noisy cried.

"Yes, he's at the field. But tell me, what does Thorne know?"

"As much as you've covered. I got away during that scrap in the alley. I thought they'd captured Tom, and I had to get help. The police were after me, and I thought Jordan was crazy or something, so I beat it to le Bourget and grabbed a ship before they found who I was. I needed help, and I knew Thorne would believe me—"

"You guessed it was von Zenden back of it?"

"No. I heard some one use his name there in the alley."

A SENTRY post loomed up ahead. Strange bore down on the klaxon button.

"Get down low. He may fire at us!"

To his surprise, the sentry waved them on excitedly.

"Lucky break," Strange muttered as they charged on. "I was afraid they'd have phoned ahead."

"What's wrong?"

"I'm in a jam." Strange hurriedly explained the salient facts of von Zenden's trap. "He thought he was safe in using that place until he found out I was alive. He probably overheard Jordan tell you and Tom, and mention that stencil code. I've a hunch he's been hiding there most of the time since he broke out of Vincennes. It explains those leaks at G-2, and how that Black Flag *Staffel* knew the new dumps and bases to strafe."

"But this Paris business—I don't get that."

"The whole thing was planned to lead back to Jordan, to bring French and British in on that frame-up scene at his quarters. Von Zenden rushed back to the *Variétés* after getting rid of that Norwood make-up. He or his agents probably killed Dix Harrison or kidnaped him. When I saw von Zenden at the theater, made up as Dix, he was urging André and the others to go straight to Chaumont, not wait till Jordan had a chance to cover up if he were guilty."

"Yes, but why did he want Jordan arrested?" demanded Noisy. "To cover those leaks at G-2?"

"Partly. But I think the main idea

was to spread the story through French and British Headquarters that American Intelligence had been dealing with Germany for a long time. Jordan would be blamed for everything that's gone wrong since we entered the war. General Pershing would be ruined. There'd be a terrible scandal, and maybe a split between us and the Allies. They'd distrust every American in France—"

"Gosh, and I thought it was just a scheme to get Tom and me in a fix!"

"Killing those agents was only a step in the plan," said Strange. "Von Zenden framed you and Tom to make sure it would lead to Jordan, and he added me to the list because I'm one of the few who know him. Heaven knows what else he may have intended to—"

Strange sat up, threw an anxious look toward the drome. Lights were bobbing along the line.

"If he reaches a ship, I'm out of luck!" he told Noisy. "Hang on!"

The machine thundered into the main road to the field. Strange leaned sideways toward Noisy, shouted over the roar of the engine.

"If I can't catch him, I'll have to run for it. Bradshaw will never believe my story without von Zenden there to prove it. You be ready to duck out of sight. You can tell Thorne and Jordan the truth later."

"I'm sticking!" yelped Noisy.

The car slowed for the turn at the gates. Two sentries ran out from the box. Strange thrust out his head, belowered in a voice which would have done credit to Thorne himself. The men jumped back, and the car plunged through onto the drome.

The motorcycle was bouncing over the tarmac toward the other end of the line. Suddenly an officer dashed from the administration building. Hope flashed into Strange's heart; then he saw the officer's hand jab toward the car. Enlisted men with rifles ran to intercept them.

Strange spun the wheel, sent the car roaring back of the fuel sheds and down behind the hangars. Guns barked viciously. He drove between the last two hangars, jammed on the brakes.

"Run! Get away from this car!" he snapped at Noisy. "Forget you saw me—"

"Like hell—" The rest of Noisy's words were cut off by the boom of an Hispano.

Strange sprinted for the line. As he passed the end of the hangars, he saw a Spad taxi out hastily. A cloud of dust eddied back into his face. He twisted his head, swore as he glimpsed the figure trotting behind him.

"You idiot, I told you to beat it!"

Noisy did not answer. Strange whirled to one side of the billowing dust cloud, fired hurriedly at the Spad. The pilot jerked around, pumped three shots toward him. Then the plane swept down the field. Strange cast a feverish look along the line. Another ship was moving—the Bristol in which Harrison and his pilot—

Strange stiffened. Not Harrison—that was von Zenden's ship! The pilot must have been a spy, too!

Gun raised for a quick shot, he charged toward the two-seater. Men were running from the other direction, from the barracks and O.D.'s office. Lights were springing up.

The Bristol ground-looped into the wind. Strange was almost at the wing-tip as it swerved. He sprang forward fiercely. The pilot saw him at the same moment and consternation surged into his face. His hand flicked down.

Crack! Strange's bullet hit him squarely in the chest. The impact of the heavy .45 slug drove the man backward, bending him over the cockpit.

From up the line, a rifle spurted flame. The bullet kicked up dirt near Strange's feet. He groaned. They would kill him before he could explain, if he stayed on the ground. He vaulted up on the step to the front cockpit. Suddenly he became aware that some one was behind him. He half-wheeled, expecting to see Noisy. The blood froze in his veins.

It was von Zenden!

In that fraction of a second before the spy's gun crashed down on his head, he saw Noisy staggering out from the direction of the car. Then his brain seemed to explode, and he fell.

CHAPTER VI

THE MURDER MASK

A BLINDING headache brought Philip Strange back to consciousness. He felt the vibration of a ship at high speed, slowly opened his eyes, and saw he was in the front pit of the Bristol. The sky was gray with the approach of dawn. He was trying to clear his muddled brain when the roar of the Rolls-Royce diminished, and the Fighter slanted down in a fast power glide.

Alarm brought a flow of strength back to Strange's muscles. He moved his hands, and found not even a safety belt hampered his body. Evidently von Zenden had tumbled the dead pilot out of the pit, shoved him in and taken off instantly. The spy must have been in the rear seat of that car—probably had knocked out the driver and was about to escape when he and Noisy dashed up.

Strange cautiously turned his head as the ship steeply banked. They were spiraling down behind a rugged, wooded slope, from the east side of which extended a small plateau of cleared ground. He saw cleverly camouflaged hangars, and huts back under a group of trees. They were less than a thousand feet below. If he could act in time.

He put all his strength into the sudden leap toward the rear cockpit. Von Zenden whipped to one side, kicked the rudder hard over. The violent jerk made Strange clutch at the ship to keep from being hurled into space. The spy's fist crashed on his jaw, and he fell back into the front pit.

Everything swam before his eyes. He had taxed himself too soon after that venomous blow from von Zenden's gun. Half-dazed, he felt the Bristol

level out and land. He was hauled out and dumped to the ground a minute later.

He forced his eyes open for a moment as two men roughly picked him up. A scanty force of mechanics was bringing ships from the hangars—gray Fokkers, on their wings the grim emblem of the Black Flag *Staffel*. He saw sullen-faced German pilots come out of a low-roofed hutment under the trees. One, a powerfully-built man in *Rittmeister's* uniform, stalked toward the two who were carrying Strange. Strange closed his eyes, but not before he had recognized the seamed and brutal face of Butcher Wolgast.

"*Gott und der Teufel!*" he heard Wolgast's thick voice. "I thought he was not to be captured till—"

"This is not the one," snapped von Zenden, from a few feet behind Strange. "The plan stands—by a miracle," he added half under his breath.

Wolgast growled something Strange did not hear. As he was carried into one of the buildings, he heard the spy and Wolgast wrangling fiercely. He was dropped to the floor, the jolt sending waves of pain through his aching head. He forced back the groan which came to his lips.

"Get out," he heard von Zenden tell the two mechanics. The door closed. "Now, *Herr Rittmeister*," the spy said icily. "I shall warn you for the last time. Obey my orders to the letter, or you'll find yourself in prison."

"No *verdammte* sniveling *Spion* can threaten me!" snarled Wolgast.

There was a smacking sound. Strange opened his eyes in time to see von Zenden crack Wolgast across the face with the back of his hand. The *Rittmeister* took a step back; then a murderous fury flamed into his seamed face. But before he could leap, a wicked-looking Luger appeared as if by magic in the spy's other hand.

"Stay where you are!" von Zenden rasped. He had removed most of his make-up, evidently while in the air, and his face held all of its natural cruelty.

For an instant, Strange thought Wolgast would hurl himself on the Prussian in spite of the gun. Then a door opened at the other end of the room. Some of the color went out of Wolgast's face, except where the mark of the spy's hand showed. Strange, following his glance under lowered lids, felt a new despair as he saw the gaunt, cold face of Baron von Zastrov, Chief of German Intelligence.

Von Zenden or Wolgast alone would have been bad enough. But together with von Zastrov—his own words came back to him. . . . An unholy trio—the two Z's and Butcher Wolgast.

THE baron stalked toward the two men, and Strange saw the brief uneasiness in von Zenden's eyes.

"You fools," the Intelligence Chief said in a low, lashing voice. "Here we are about to play the greatest trick of all, and you fight like squabbling children."

"My men are on the verge of mutiny," Wolgast said, with a glare at

Von Zenden. "It is bad enough to risk our lives to protect him, without his shooting us down to convince the Allies he is—"

"I tell you again, that fool was firing on the Bristol!" fumed the spy. "And you almost ruined my plans, shooting down the wrong men. My wireless said only the American Spads—"

"Enough!" snapped von Zastrov. "One man's death is not important with all there is at stake—" He started as he saw Strange back in the corner. "*Grosser Gott! The Amerikaner Air Chief—*"

"No," said von Zenden. Strange had shut his eyes, but he felt the spy's glare. "Wait. You will have a surprise."

Strange heard him fumbling with something; then the Prussian bent over him and began to rub off the make-up. Fumes from the alcohol which removed the greaseless paint set Strange to choking. He opened his eyes as a look of amazed disbelief came into the baron's gaunt face.

"The Brain-Devil! *Gott im Himmel*—but I saw him buried!"

"Another man was in that burning plane," said von Zenden. He smiled coldly down at Strange. "I must thank you for getting me to the Chaumont drome so efficiently. It was interesting to listen from the back seat."

"Explain this," grated von Zastrov. His sunken cheeks were pale. "Tell me—how many know this *Schwein* is alive?"

"Not enough for it to have reached the Kaiser's ears," von Zenden said meaningly. "I suppose you are thinking of His Majesty's order to destroy him, and his commending your success."

Von Zastrov cursed him, glowered toward Wolgast.

"One word of this to anyone, and you know what will happen to you!"

Wolgast's eyes held a thinly concealed hatred, but he gave a sullen nod.

"I understand, *Herr Baron*. Give me this Brain-Devil, and you won't need to worry about him again."

"No, I'll see to that myself this time." Von Zastrov's eyes held an evil brilliance. He looked suddenly at a clock on the wall. "*Ach du Lieber*, look at the hour! You will have to hurry."

"There is plenty of time," said von Zenden. "He and the party are not due to arrive until seven-thirty. Everything is arranged, though this Yankee pig wrecked the other plan."

"What?" snarled the baron. "After all our careful work?"

"Ja," growled von Zenden. "I had this stupid Jordan painted black with guilt, and this meddling *Hund* makes him innocent as a new-born babe. Not only that, but they nearly captured me."

He removed his uniform, went to a cabinet and took out an immaculate one of olive drab. He sat down before a mirror, tersely began to explain the incidents of the evening to von Zastrov. Strange could see the gaunt baron's fury mounting. Wolgast swore fiercely as the spy described the air fight at the G.H.Q. field.

"Then it was this dirty swine who almost killed me!" he roared. "*Herr Baron*, let me have him! My men and I will make short work of him."

"Short work? Imbecile, I intend to make this man pay for all the trouble he has caused me." Von Zastrov looked back at von Zenden, who was inspecting the carefully creased breeches and polished boots he had put on. "It is time Wolgast gave last instructions to his men. Is there any change?"

"No. That bridge's being destroyed forces them to go through the Forêt d'Ardencourt." The spy gave Wolgast a sour glance. "Remember to keep up high till you get my signal from the two-seater. They must be caught at the clearing, and nowhere else."

WOLGAST muttered a surly answer, turned to go. As he passed Strange, he looked furtively over his shoulder, planted a brutal kick into Strange's ribs. The two Prussians missed the blow, but von Zastrov saw Strange squirming on the floor. He took the spy's Luger.

"Lie still," he said savagely. "Von Zenden, hurry up with your work. I am anxious to get this man away from here, to a quiet spot."

"I wish I could be present." The spy's back was toward Strange, and he was working with scrupulous care before the glass. "But wait. If you are leaving here, what of our expected guest?"

"Tell the pilot to land at the other field." The baron chuckled drily. "I'll have an honor guard waiting."

There was a long silence; then von Zenden stood up and reached for the tailored American Army blouse he had placed near by. As Strange saw the spy's face, he gave a gasp.

"Ah, I had hoped for that," von Zenden said with a grin. "It gives me more confidence."

"You'll never get away with it," Strange said grimly.

"Not in Chaumont, perhaps—but this will not be Chaumont, *mein Freund*. Your own reaction satisfies me."

"Enough of that," snapped von Zastrov. "You're positive you have full information, to cover anything that may be mentioned?"

"Why do you think I spent two weeks under that fool colonel's house?" Von Zenden buttoned his tunic, fastened his shining Sam Browne belt, glanced at the medal ribbons on his breast. He stood there, an erect, dignified figure, his altered face filled with mock gravity as he looked down at Strange. "What—a lowly captain refuses to stand in my presence?"

The gaunt baron gestured with his gun.

"Get up," he ordered Strange curtly.

Strange obeyed silently, though his side gave a fierce twinge. Jaws hard-set, he preceded the two Germans, the baron's Luger now and then prodding at his back. A D.H.4, newly painted and marked with G.H.Q. insignia, was waiting on the line. The Black Flag *Staffel* was in position for formation take-off.

Von Zenden climbed into the rear seat of the D.H. *Rittmeister* Wolgast stalked to the leading Fokker. Smoke belched from the Mercedes' stacks; then the ship leaped down the field, its black streamers pluming behind. The rest of the squadron followed, their piratical insignia showing in the dawn.

The D.H. pilot was waiting till the dust settled. Strange eyed the ship hungrily, but von Zastrov still poised the Luger, and there were twenty mechanics between him and the plane. Miserably, he watched the D.H. swing out and take off. The baron watched till it climbed through the low dawn clouds. Then he gave a sharp command to one of the mechanics.

The man sped away, and in a moment a long gray car nosed around the main barracks, on its side the black eagle emblem of the Imperial German Army. Strange's last hope began to fade. There were planes left in one hangar—one of them a Hanover two-seater. He had been praying that von Zastrov would have him trussed up and put in the rear cockpit. But in that car, with guards. . . .

"Tie his hands behind him," snapped the baron, as the car stopped and two smartly dressed soldiers jumped down.

A mechanic went for a rope. He was returning with it when the drone of a Mercedes sounded. A Halberstadt two-seater dived out of the clouds at the east, plunged for a landing. Von Zastrov scowled as the ship hastily swung in toward the line.

"What now? From their hurry, it must be bad news."

The Halberstadt pivoted around, a few yards from the line. The man in the rear pit stood up quickly, as though to jump out. Suddenly he whirled. The twin Parabellum guns whipped back over the tail. Strange jumped as he saw the dark-stained face of Tom Jay, and heard the words, "*Handen hoch!*"

TOM'S shout was partly lost in the engine's drone, but that swift, menacing jerk of the guns held only one meaning. Twenty pairs of hands shot into the air. Von Zastrov, after a stunned instant, sprang behind Strange to use him as a shield. Strange spun as the Luger flicked up toward the man in the ship. He struck out as the baron fired, and the shot went into the sky.

Von Zastrov wildly tried to wrench the Luger away. Strange forced his arm up, drove in a vicious right hook. The baron stumbled, and Strange followed up with a second smashing blow. As the gaunt German went down, a machine gun clattered suddenly from the other end of the line. Strange dashed toward the Halberstadt. Tom Jay had swung the twin-mount, and was firing toward the Boche gun-crew. Three or four mechanics started to rush the Halberstadt. Then a hulking Boche pointed into the sky, with a shout of dismay.

Strange drilled a furtive Boche who was almost at the ship. Another went down as the Luger blasted again. The rest scattered madly. The German machine gun abruptly ceased to hammer.

Tom swung the Parabellums, raked five or six men who were running toward the Maxim. As Strange reached the side of the plane, Noisy Jay reached down from the front pit and gripped his shoulder.

"Get on the wing, Phil!"

"No, I've got to take one of those ships—" Strange jabbed his hand toward one of the Black Flag Fokkers. "Taxi down there—hold those devils off."

He raced toward the nearest ship. Noisy taxied after him, and Strange heard the twin-guns pound again. The Fokker's engine refused to start. He cursed it, sprang to the next. It was scarred and bullet-torn, evidently a reserve ship, but the engine started after his second throw of the prop. He ran to the side of the Halberstadt. Noisy Jay vaulted out of the pit at his frantic signal.

"Get to the nearest American squadron!" Strange shouted. "Tell them—"

"Wait—there's a wireless in this spy-crate! I grabbed the ship from the G-2 hangar when I saw you captured—"

"Any other pilots follow you from Chaumont?" Strange asked hastily.

"No—wasn't time to explain—we trailed the Bristol here. Tom wireless back that we'd found this base. We saw the *Staffel* leave and then they brought you out—"

"You saved my neck, all right! But we've got to reach the Forêt d'Ardoncourt—" Strange rattled off a swift order. Noisy's eyes popped. "Tell Tom to keep sending that message," Strange finished tensely.

"Got it," gulped Noisy.

A bullet ripped through the wind-screen of the Fokker as Strange ran back to the ship. He jumped into the seat, saw Tom Jay raking a hut which concealed the sniper. Two Boche mechanics ran out with rifles as the ships took off. Tom downed one, and the other jumped for shelter. Then the two planes streaked down the narrow plateau and into the air.

They climbed steeply. Strange held his engine full open, noting that Noisy was doing the same, as he had ordered. They went through the low clouds, raced toward the Front. Strange scanned the sky anxiously. The men back at the base might not think to get out a quick warning to the Front, but there was a chance of it.

He drew a breath of relief as through the breaks in clouds beneath he saw the flash of artillery. An Albatross flight appeared, off to the south, but paid no attention to the supposed German planes.

Strange's heart was thumping. He flashed a look at his wristwatch. It would be close. . . .

He went rigid as he saw the circling Fokkers, ahead and at their ceiling. Von Zenden had not signaled yet! If only the message he had given Noisy had reached Thorne at once!

He grated out an oath. The Fokkers were diving. Below he saw a lone ship, another Fokker, from which the signal had come. That meant that von Zenden

was close to the ground. He had used the other for relaying the order.

NOISY was plunging, keeping pace with the Fokker as Strange hurtled down. The clouds thickened; they dropped through at terrific speed, and came into almost clear air. The ground seemed to be whirling upward. It took form from vague masses, became the dark bulk of the Forêt d'Ardoncourt, a winding road, a clearing near the center.

Six of Wolgast's ships were already in column behind their leader. Wolgast was pulling up slowly, sweeping into a narrowing circle. Strange's tense eyes flicked toward the road beneath. He saw the two cars speeding to get past the clearing.

Suddenly, Wolgast drilled a fiery blast into the path of the two machines. The pilot behind him loosed his guns. Spandau slugs tore across the road, shot through bordering trees. The other planes followed, and a wall of hurtling steel was built across the path of the G.H.Q. machines.

The two cars came to a halt. One driver backed madly, turned to flee in the other direction. The swarming Black Flag ships cut off his retreat, forced him to a stop. Strange hooked his trips with his thumb, watched the scene beneath. They were not in range—and it was the D.H. he wanted. . . .

Then he saw it, skimming over the trees, dipping down to land. He kicked the Fokker around and thundered toward the spot. He was down to two thousand feet when he glimpsed the Halberstadt. Noisy had opened fire, and three Black Flag ships were sheering around to meet the Jays' attack.

Strange groaned. If he went to the aid of the Jays. . . .

Black streamers swam before him, and Wolgast dived under another ship to plunge on the Halberstadt. Strange clamped the trips. The Spandaus beat out a snarling rhythm. He saw his tracers stab at the *Rittmeister's* tail. Wolgast reversed violently. His turn was so swift that their two ships almost scraped wings. Strange saw murderous rage sweep into Wolgast's face as he recognized his attacker. The *Rittmeister* came around in a grinding turn, pumped a withering burst toward Strange's back.

Strange snapped through an Immelmann, zoomed over another Fokker. Two Boche pilots were lancing in at the Jays. Tom swung the rear guns, drove off the nearest man. Strange crashed a deadly hail into the second ship, spun on moaning wings toward the clearing.

The D.H. was on the ground. He saw von Zenden jump down, while behind him, the pilot covered one of the cars with his guns. Strange slammed his stick forward. Tracers smoked past him as he pitched down. He ruddered, kicked to the opposite side. The tracers whipped back toward him. He tripped the Spandaus again, drove a double lane of slugs toward the D.H.

Von Zenden threw himself down. At the same moment, a loud howling came from the sky, above the already fright-

ful din of battle. The pound of bullets into Strange's wings suddenly lessened. He cast a look around as he bent back on the stick.

A shout burst from his throat. At least two full Yank squadrons were racing into the fight! Thank God for "Wild Bill" Thorne!

Like an avalanche, the American Spads fell on the Black Flag Fokkers. The raiders pulled up frantically from their strafe of the road. Strange dropped on a zooming ship, knifed it with a hurried Spandau blast. The Fokker smoked, fell off in flames. Strange banked tightly, and saw von Zenden racing back to the D.H. He nosed down to cut him off.

T-t-t-t-t-t! A crooked line of black dots stitched along his right wing. He kicked away, slammed the Fokker up into a violent half-roll. A Black Flag ship charged beneath. He saw the black cloth fluttering from the pilot's helmet. With a swift pull at the stick, he completed the split. Wolgast whirled in sudden terror as Strange charged down on his tail. Strange saw his hand fling down to release the blinding black smoke.

One spurt came from the Fokker's tail. Then the grinding Spandaus on Strange's cowl throbbed their song of death. Wolgast sprang up in his pit, went rigid as a statue. For a second he held that stiffened pose; then he wilted down into the pit. The Fokker went down to a blazing, crashing end.

STRANGE closed the throttle, slipped down into the clear. Above, still another Spad squadron was burning its way down the sky. A few of the Fokker pilots had opened their smokescreens, but that flood of Spads was evening the advantage. Two-thirds of the raiders were down in flames or crashed. The rest were trying to flee.

As the Fokker rolled to a stop, Strange saw an olive-drab figure almost at the D.H. He ruddered hard, cut loose with his guns. The burst was over the other man's head, but he saw the spy whirl and race toward a clump of brush by the roadway.

The Fokker stopped. Strange sprang down and tore after the fleeing man. The screech of wings and rattle of guns above was deafening. He cursed the ache in his side as he saw the spy gaining. Von Zenden was almost near the stretch of brush, with a chance for screening his escape into the woods, when he tripped and fell. Strange put everything into that last sprint to the spot. He saw von Zenden claw at the gun he had dropped. Before the spy could reach it, he had him covered.

"Stand up!" he rasped.

The words were almost inaudible in the uproar, but the Prussian saw Strange's eyes. He stood up, stark hate showing through his astonishing make-up. Strange stared at him a second, grudgingly admiring the devilish skill of the man.

For the face before him was the face of the American Commander-in-Chief! Even now, immaculate uniform mud-died, rage blazing in his eyes, he

seemed still the general—the chief of the A.E.F.

Strange shook his head, pointed with the gun. Von Zenden climbed through the brush up onto the road. Several men near one of the cars were watching the rest of the air battle. One of them gave a cry of amazement at sight of von Zenden. The others turned.

Strange saw Colonel Jordan, his pugnacious face as startled as the rest. Beside Jordan stood the Commander-in-Chief. The great general's eyes rested incredulously on the disguised face of the spy, but before he could speak Jordan looked past von Zenden.

"Strange!" he exclaimed. "What in Heaven's name is this?"

Strange managed a twisted grin. Shifting the gun with which he was covering von Zenden, he saluted the Commander-in-Chief.

"Captain Strange, general—reporting with a prisoner."

The general still looked dazed, but a light of understanding dawned in Jordan's eyes.

"Von Zenden! But what on earth—"

"A plot to kidnap the general, and take his place at this morning's conference with the French," Strange said calmly. "He had some men hidden in the woods to take the place of the driver and the bodyguards. Probably the rest of you would have been killed—I don't think they expected any of the Staff—"

"Last night's business changed everything," cut in Jordan. "General Bradshaw and I came to explain away any idea the French might get that G-2 was full of traitors."

The Commander-in-Chief stepped forward. He held out his hand to Strange and smiled.

"Captain, I was hardly over the welcome surprise of hearing you were alive, when this happened. I still don't understand—"

"I think von Zenden hoped to learn the entire Allied plans you would probably discuss at the conference," Strange told him.

The general sobered.

"The Allies are deeply in your debt, captain. And perhaps sometime I can show my personal gratitude—"

A booming voice sounded from the edge of the clearing. "Wild Bill" Thorne strode up from where he had landed a bullet-torn Spad. Back of him came the Jays, Tom's dark face and twisted nose in odd contrast to Noisy's grinning features. All three came to a halt and gaped from von Zenden to the A.E.F. chieftain. The Commander-in-Chief motioned to his bodyguards.

"Take this prisoner back to the second car, or we shall be explaining all day."

VON ZENDEN was led off, his face a sullen mask. Thorne was pumping Strange's hand, and Jordan was trying to get a word in through the Jays' excited chatter, when there came sounds of a scuffle from down the road. Strange wheeled and saw three men sprawled in a heap.

The second G.H.Q. machine suddenly started down the road toward the woods. Jordan whirled toward the other car, stopped with a blistering oath as he saw a tire which had been gashed by a bullet. Strange turned from grimly watching the stolen machine vanish into the woods.

"Not much use to spread the alarm. Imagine telling road patrols to stop the Commander-in-Chief in a G.H.Q. car. He'll be rid of that rôle and into another, anyway, before we could reach a phone."

Jordan nodded gloomily. There was a brief silence, then a groan was audible from down the road. General Bradshaw got to his feet, glared at the two bodyguards.

"Why didn't you tell me the Old Man had gone nuts? I wouldn't have tried to help him—" His voice broke in a gasp as he turned and saw the A.E.F. leader. He dashed to the spot. "B—but I—I just saw you, sir—Good Lord! I see now—it was that German. Oh, what have I done!"

"Fathead," said a voice. The word seemed to come from the Commander-in-Chief, but oddly his lips did not appear to move. Bradshaw turned purple.

"Yes, sir," he gulped.

The Commander-in-Chief looked surprised, then his gaze shifted suspiciously to the Jay twins. Both of them were looking pensively at the ground. The general raised his hand to his lips, coughed, and turned away hastily. As he went to his car, followed by Bradshaw, General Thorne eyed the Jays with mock severity.

"Which of you two hellions pulled that ventriloquist stunt?"

Tom looked reprovingly at Noisy.

"You poor sap—haven't you any respect for rank?"

"Why, you brown-faced baboon!" yelled Noisy. "If your nose wasn't already spread over your mug, I'd—"

Their voices rose indignantly, as though a few hours ago they had not been desperately risking their lives to save each other. Thorne looked at Strange with a twinkle in his deep-set eyes. Strange felt a warmth surge through him. It was good to see Wild Bill Thorne's face again.

He turned as a hand dropped onto his shoulder, and found Jordan at his elbow. The stocky G-2 chief cleared his throat.

"About last night, Phil—I—hell's bells, why did you take a risk like that? I—why, I might have shot you myself—" His thick fingers were tight on Strange's arm, and his voice was husky.

The weight of desolate months lifted from Strange's heart. He was hungry and tired, and von Zenden had escaped again, but all that was suddenly forgotten. He heard the Jays' mock wrangling, and grinned. He looked at Jordan and Thorne, and that tugging warmth at his heart swelled. He was back with the ones he had missed so long.

"What the devil are you laughing at?" demanded Jordan.

"I was just thinking," Strange said, "I'm officially alive again."

Brood of the Black Dragon

(Continued from page 14)

ghastly death Oriental cruelty could devise. Tanaka arose and bowed.

"I merit your judgment," he said in a firm voice, "but even so, for the glory of our native land, I shall make amends. *Sayonara*, farewell, Brothers of the Dragon. I go now with the last consignment of our death wind."

He hurried down the dark streets of the Haytian village to a small wharf to which a Lockheed amphibian was moored. At a barked command, the engine was started. Tanaka cast off the lines and glided out into the harbor. A few minutes later, he was in the air.

JOHN CALDWELL'S report to Base Eighteen on the destruction of a Seminole village stirred the Coast Guard from Maine to the Florida Keys.

A surgeon flew out to the death-stricken isle, and returned to announce that the wholesale deaths were due to poison by a strange and unidentified gas or dust, new to science.

"But where did it come from?" Commander Dennison asked over and over.

Washington also demanded an explanation. The wireless throbbed. The wires sizzled. Telephones rang constantly. Swift ships flew down from the capital, bringing Admiral Harper and other ranking officers. John Caldwell was put through a cross-examination. Tonomana was brought in and questioned.

Mention of the little brown man, Tanaka, stirred the Guard commanders still more.

Airplanes swept over Lake Okeechobee, but found no trace of the strange visitor. Soldiers penetrated the depths of the Indian reservation and returned with empty hands.

A deadly gas, more deadly than anything the Chemical Warfare Corps had discovered, was credited with these wholesale deaths.

"Whoever they are, whatever it is, they're not in Florida," Commander Dennison finally declared.

"That's no sign they won't come back," Caldwell countered.

"That's what the admiral says," the base commandant retorted. "Beginning tonight, we'll have night as well as day flights. You'll take the *Polaris* out and patrol from Boca Raton to Miami."

But with the *Polaris* sweeping along the Atlantic waterfront, Caldwell studied the map spread out before him. Ensign Barlow was at the controls.

"Those birds are slick," he told himself, over and over. "They're not going to fly over patrol territory."

Suddenly he made a decision. It might cost him his commission, but the Coast Guard got results by taking chances.

"I'll take her," he called to Ensign Barlow.

Grasping the wheel on his side of the control room, he threw it over,

swinging the heavy stick with the same movement. The *Polaris* careened upon her heavy wing tip, and the nose pointed inland. There was a roar as the pilot sauced the Cyclones still more, and straightened his course to head for the Everglades.

"Tanaka—Tanaka." The name pounded in his ear. "'Funny man—him say White Father no good.' Damn it, it looks to me as though something devilish is being hatched. That Seminole thing was either an accident—or an experiment."

Five upon mile of Everglades stretched out before him, shimmering in the moonlight. Below were the haunts of strange beasts and birds, fish held over from an age when the whole world was flooded, reptiles of all types, from man-eating alligators to the colorful but deadly coral snakes. Unending vistas of swampland were broken here and there by clumps of melancholy trees. Silvery vapors hung like fairy veils, beautiful, yet freighted with death.

Sound of the cruiser's motors drowned the night cries of the world below, the throaty bellow of the alligators and the weird call of the swamp birds. The *Polaris* continued onward, sweeping in a wide circle. Caldwell's frown became a scowl.

Then he felt a touch on his arm, and turned to see Guy Tompkins, the radio operator, staring at him.

"Some funny beacon signals coming in, sir," the man said. "They aren't any of ourn."

Caldwell pantomimed to Barlow to take over the controls; then he clamped the headphones to his ears.

"N-N-N-N-N-N-N." The pulsing rhythm came with mathematical precision. It was not a sign used by either the Coast Guard or any of the commercial air routes skirting the Florida Coast. Caldwell's scowl returned, and he barked an order for the *Polaris* to circle again.

"Q-Q-Q-Q-Q-Q-Q-Q." Like its predecessor, the signal was repeated with mechanical regularity.

Caldwell made notes upon the tiny table used by the radio operator, and then gestured Ensign Barlow to veer from the direction they were flying.

"H-H-H-H-H-H-H-H." The dots snapped out as though they were being sent by cog wheel. John Caldwell snatched the headphones from his ears and leaped into the navigating cabin. Now he knew his hunch had been good. He was on the trail of something as weird and unclean as the miasmatic mists below.

CALDWELL guided the *Polaris* until it was in the "Q" current again and straightened out. Instead of following the path toward its source, Caldwell flew in the opposite direction. He glanced at a chart covering lower Florida, the Keys, Cuba and Antilles.

A line following the beacon's direction stretched from the center of the Everglades toward the dark island of Hayti, from the land of voodoo worship to the heart of the dismal swampland.

"Lieutenant! Lieutenant!"

Caldwell looked up to see Ensign Barlow pointing straight ahead. John snatched the night glasses from his aide's hand, and his thumb and finger swiftly focused on an object he had glimpsed speeding through the tropic night.

The outline of an all-black, low-winged monoplane flashed into the field of his vision. Scudding over the uninhabited stretches of swampland, it looked like a great vampire bat, flying upside-down. Even through his night glasses, Caldwell could see no sign of registry numbers upon the broad, sable wings. The fuselage contained no markings that might identify its make or country of origin. The outlines were those of the improved type of Lockheed amphibian, yet there were certain modifications which were confusing.

"What have you got that will shoot, chief?" Caldwell called back to Melvin Lord, chief petty officer, who also acted as gunner.

"Admiral Harper ordered all machine guns off, you know, sir. He said we must take peaceful possession. 'No warlike acts' were his words, sir."

"Yes, but—"

"I didn't exactly follow orders, sir. I forgot one of those Tommy guns."

Caldwell grinned. He could not grip Lord's hand and congratulate him on his foresight, in the presence of Ensign Barlow and an enlisted man. He merely winked and ordered the man into the forward gun pit.

"I'll take over the controls, Barlow," he shouted. "Break out some signal rockets and order that fellow down."

"Aye, aye, sir."

Caldwell threw the *Polaris'* wheel over and headed for the oncoming Lockheed. The machines were nearing each other at tremendous speed. He now could see the strange craft plainly without the use of night glasses.

There was a burst of light above the *Polaris* as Barlow sent a rocket into the air. Colored balls of dazzling color broke above and behind the Coast Guard cruiser. The oncoming Lockheed could not fail to see them.

Instead of nosing down, the amphibian shot toward the *Polaris*. A flicker of light appeared upon its cowl, and the men in the control room saw cherry streaks whiz through the night.

"He's firing at us," Barlow yelled.

"Yes, I noticed it," Caldwell growled.

He took up the speaking tube leading to the gun pit in the cruiser's snub nose.

"Give it to him, chief," he yelled to Melvin Lord.

"Aye, aye, sir."

A clatter rang out as the Thompson machine gun answered the fire of the

vampire ship. Lord had no tracer ammunition, so was forced to shoot blindly. The Lockheed, however, raised its nose and hurled another drag at the Polaris.

Splintering glass filled the control room. Ensign Barlow staggered from his seat, clutching his arm. John Caldwell threw his big craft into a sideslip as the stranger fired again.

In another moment, they were battling over the stagnant waters of the Everglades. They were miles from any human habitation. The loser would plunge into the unending swamps to sink to destruction and leave no trace.

Caldwell turned to Guy Tompkins, his radio operator, with an order that set the man laboring with the wireless telephone and calling into the transmitter.

"Base eighteen. Base eighteen," he said over and over, "Base eighteen—Polaris calling. Base eighteen—cruiser Polaris calling. Base eighteen."

MEANTIME, Caldwell had maneuvered to where he could strike at the Lockheed from an angle. Lord's gun was clattering briskly, but it was no match for the vampire's finely tuned weapons. The Lockheed had a master pilot at the stick and a man who had been trained in aerial warfare. Instead of turning and scudding away when attacked, he had pivoted and lunged at the cruiser, his guns aflame. Crashing bursts rang out, and the control room was ripped and torn.

Maneuvering at high speed, each pilot tried to get in a burst that would kill the other's engine. The tactics of the two differed. The vampire ship sought to destroy its adversary, sinking it without trace. Caldwell sought only a prisoner. He wanted to capture this man, and learn the secret of the strange signals and weird night flights over the swampland.

"Never mind the pilot. Try for the motor," he yelled to Lord.

"Aye, aye, sir."

The planes dodged, charged and whirled away, neither able to get in a disabling blow. Meantime, Guy Tompkins was repeating in monotone, "Base eighteen—Polaris calling. Base eighteen—Base eighteen."

He paused as a buzzing rang in his ear, then turned the dials of the receiving instruments to clarify the sound.

"Polaris. Polaris. Base Eighteen answering Polaris." The words were clear and distinct.

"Polaris engaged in battle with unidentified monoplane over Everglades," Tompkins reported. "Aid urgently—"

A crash of machine-gun fire ripped the tiny radio room. Tompkins dodged back, to see his instruments scattered in fragments upon the table and the deck. All communication had been broken with that single burst. He, himself, had not been touched, but the Polaris had been cut off from its base.

The Lockheed was carrying the battle to its large adversary. Taking advantage of its superior armament, it plunged in, hurling one burst after another

at short range. John Caldwell maneuvered with all the skill he knew, but a master pilot was assailing him, remorselessly driving him down.

The Lockheed spun and circled.

"Got no more ammo, sir," Melvin Lord yelled through the tube.

The vampire ship lunged once more and a burst raked the Polaris from end to end. Its tail went around, spinning the craft. The starboard motor had been struck and put out of action. Caldwell threw over the wheel to compensate for the loss of power. He knew he could keep the cruiser aloft, but its ability to maneuver was gone. They were out of ammunition, and at the mercy of a vampire ship whose pilot was determined to kill.

"Get parachutes out and stand by to jump when we reach the first land," he called to his men.

Another blast came from the Lockheed. This time, the pilot drew in close, and his drag crashed into the port motor. It was silenced before the jabber of the machine guns ended.

Caldwell thrust forward, gliding toward a stretch of shallow water glistering in the moonlight. He would be fortunate to keep afloat in the face of the lashing the Lockheed was giving them.

Another burst barged into the cabin. Ensign Barlow sank to the deck. Instruments were shattered. The starboard wheel was torn to bits. Traveling aft, the radio room was riddled. Tompkins escaped with a wound. Neither Lord nor Caldwell was touched.

"We'll get it next time," the man at the wheel muttered. "This fellow has got to kill us or—"

Bullets screeched and shrieked about them, but no one was hit. Then the deluge ended and the Lockheed wheeled. Caldwell watched it. He could see the pilot examining his guns. Limp belts were thrown aside, and the barrel-like body turned around. Their foe was out of ammunition.

Even as Caldwell watched, a misty cloud enveloped the other ship's sable wings. The silver shafts of the moonlight shone upon fleecy fog, and sight of the enemy was lost.

As the mysterious visitor winged away, John Caldwell listened intently to the beat of the engine. It was none of the well-known American makes. Its sound recalled some of the fast pursuit ships he had seen in England.

"Jupiter motor—that's what it is," he told himself.

But Caldwell was too engaged in bringing the Polaris down with a dead stick to search the skies. Immediate peril of destruction from gun fire had passed. Now he faced the danger of landing without power upon a stretch of slimy water or sodden swampland. Although an amphibian, the Polaris was not equipped to navigate the surface of the Everglades.

Edging off to the left, Caldwell nosed for a sheet of water whose mirrorlike surface reflected the moon. His pontoons touched, sending up a cloud of spray. Then the cruiser all but stood upon its nose. The water was only

inches deep, and the protruding wheels of the undercarriage caught in the stringy vegetation that makes the Everglades a morass.

All motion ceased. They were down, safe—at least for the time being. John Caldwell turned to examine his wounded aid, Ensign Barlow. The youth was beyond help. Although he still breathed, his life was ebbing swiftly.

"What was it?" the young man managed to ask.

"I wish I knew," Caldwell answered.

AROUND them was the mystery of the Everglades, with its strange life and stranger deaths. A sinister, batlike plane had raced out of the dark night to shoot the sturdy Polaris into ribbons and then dash away in a fleecy cloud. The wrecked air cruiser was miles from human habitation. They could not get out and walk to any settlement. The ooze would swallow them before they could go fifty yards.

John Caldwell tried to tie up Barlow's wounds, but his work was vain. He had not completed the task when the young ensign died. Outside the cabin was a weirdly unknown world. The passing of the youthful officer's soul seemed to stir prehistoric beasts to life. Caldwell heard the hoarse croaking of giant frogs, the eerie call of nightbirds, the throaty bellow of alligators. Slimy things raced through the air about them. Batlike creatures flitted by on noiseless wings.

They stowed Barlow's body in one of the bunks in which the Polaris carried sick men when rendering aid at sea. Then they sat down to wait for morning. Dawn came with a rush, as is the way of the tropics, and the sun was shining brightly when Caldwell aroused himself and looked out.

The glory of the moonlight had departed, and the harsh light of swelling day revealed the dangers of the Everglades. The Polaris, surrounded by high-growing rushes, rested in a shallow pool upon a slippery bed of ooze. It would be impossible to walk in any direction. The collapsible boat which the cruiser carried had been riddled by bullets. Even if it were serviceable, they might row for weeks in the trackless maze.

Slimy things crawled through the reeds and grasses. The woody heads of alligators appeared, staring at the wounded airship with small, unblinking eyes. The still waters of the pond were rippled by swimming snakes, cotton-mouthed moccasins whose bite was death. Turtles, gigantic frogs and strange lizards added to the weird medley of life.

Although the sun rose swiftly, the miasmic mists remained. The cooling touch of the sea breeze failed to reach that rush-walled spot, and damp, clinging heat began to mount before the sun touched its halfway mark. Trickles of perspiration started down the faces of the three men. They stared into each other's eyes, each holding back his thoughts.

"We'll have to go easy on that water," John Caldwell finally said.

"Plenty around here—and it's not salt." Lord gestured to the pond and scum-covered canals.

"Drinking that stuff is just another word for suicide," Caldwell answered.

The hours dragged. Their thirst grew. Their only food was the emergency rations the *Polaris* carried. Guy Tompkins, the radio operator, was wounded, and the heat and strain were telling upon him. He glanced furtively at the bunk upon which lay the body of Ensign Barlow.

Midday came, and then the long, dragging afternoon. They were more closely held than if barbed wire surrounded them. The sun sank in fiery glory and the swift tropic twilight deepened into night. Once more the Everglades resounded with the uncanny noises of its life. The sinister mists descended and clouds blotted out the moon. The beauty of twenty-four hours ago was gone, and in its place was dark, foreboding loneliness.

"Water's almost gone, skipper," Chief Petty Officer Lord reported.

"Let Tompkins have what's left."

Caldwell could not sleep. His mind was too active. He was on the trail of something that might prove staggering. During the past week, wireless messages had been intercepted that stirred suspicion in both Coast Guard and Navy. They were in a code that cryptographers immediately pronounced Oriental. The experts had already started to unravel them. Then there was that gas menacing the life of a nation. Satan was abroad, and his home was in the Everglades.

Caldwell turned to the radio set that had been demolished by the vampire's shots. An electric torch was his only light, but he labored half the night—in vain. The tubes were broken.

Morning came, and the sun mounted to swell the moist, clinging heat. Parched and hungry, Caldwell and Lord refused water and insisted on Tompkins' taking what remained. The Everglades seemed to boil. Weakness sapped the prisoners' energy. They talked of plans for escape, but cast them aside, one after another.

Tompkins finally staggered to his feet, staring out through the shattered windows of the control room. The man looked up to scan the brazen sky, and then reached for field glasses.

"What's the matter?" Lord demanded eagerly.

"Sounds like a motor."

John Caldwell leaped to his feet. He could hear the sounds now. He took the field glasses from the radio man's hand. Swinging over the Everglades were three Coast Guard cruisers. Nearest was the *Arcturus*, a sister ship of the *Polaris*. Farther on were the *Orion* and *Cassandra*. The Coast Guard was searching for its own.

"They must have got my message," Guy Tompkins announced.

"What message?"

"I told them we were fighting the bat-wing just before he cracked up our radio."

Caldwell was silent for the moment. Then he spoke in an even voice. "If you

weren't wounded, I'd knock you for a loop for not telling me that before," he said. "Now get busy, and fire some day rockets to show them where we are."

A few minutes later, the *Arcturus* had descended to one of the canals opening off the pond. A collapsible boat was launched and came alongside. Commander Dennison, chief of the base, was the first to step aboard the *Polaris*.

"The cryptographers have decoded that wireless," he informed Caldwell.

"What was it?"

"Orders about poison gas. The name of Tanaka appears—also the Black Dragon."

"Black Dragon?" Caldwell spoke in a tense whisper. "Isn't that the society that engineered the Manchuria deal and tried to make China swallow the famous Twenty-one demands?"

Commander Dennison nodded. "They are the most ruthless body of men in the world. They would commit a million murders as quickly as they would kill flies with a patent spray."

"Women, children and everything," Caldwell added. "They'd sweep the cities clean of life. That gas at Olahasse would have destroyed New York if it had been let loose there."

Once more Dennison nodded. "We've got to clip the Dragon's wings, Caldwell, and we can't wait long."

"Just give me a chance, sir."

"You'll have it. We'll all have a chance—and the navy, too."

DISCOVERY that the sinister power of the Black Dragon was behind the mystery of the Everglades stirred the Coast Guard into activities that mounted until they reached a hectic stage. Utterly official, there was no diplomatic channel that could be used in approaching the dark secret order that had played such a powerful game in the Orient. Guile must meet guile, and force combat force.

Both sides prepared for the final test. In the sleepy little Haytian village of Gonaives, Yogo Kinomoto lashed his aids to a pitch that equaled the Coast Guards' efforts. Tanaka was spared the torments of *li chi*, for the moment, at least. The climax of their plot was too near to spare the services of the aviator.

"Their cities will be shambles before the week is done," the Dragon chief declaimed. "With the Atlantic coast a charnel house, the west will be our prey without a struggle."

"*Banzai!*" shouted the members of his band.

"One more flight for you, Tanaka San," the aged chief told the pilot.

The young man nodded. His lean face was pale. He was ready to meet death in any form, even the dread *li chi*, if the glory of the Black Dragon would be enhanced.

"I shall make it tonight, Honored Father," he replied.

Meantime, John Caldwell was grooming a new ship for flight above the Everglades. The *Polaris* would never sweep the skies again, but another cruiser, the *Sirius*, had been placed at his disposal. The Coast Guard hangars

hummed. Then a fresh code message was intercepted. The Black Dragon was ready to strike.

Evening found the *Sirius* ready to take to the air. The presence of more than one Coast Guard cruiser over the Everglades might reveal the plan, so the *Cassandra* and *Orion* were detailed to patrol the lower coast and the straits toward the eastern end of Hayti.

A new relief pilot sat in the control room with John Caldwell, but both Tompkins and Lord were in their accustomed places. In addition, a gunner equipped with twin Brownings was stationed in the after gun pit. Armed with machine guns, bombs and aerial torpedoes, the cruiser was ready for any kind of combat. In the press of battle, every member of the crew could operate a gun except the man at the controls.

Once more they swept into the Everglades. Dazzling moonlight and somber shadows alternated in coloring the vast scene. One moment, the swampland looked like a fairy vista. Another, it was a desolate waste, inhabited by unearthly monsters.

John Caldwell took the *Sirius* in a circle as Guy Tompkins worked his radio direction finder. They had salvaged the chart from the *Polaris* and flew by dead reckoning.

Once more they picked up the beacon that had led them into adventure. This time, however, Tompkins discovered that it was coming from the south-east.

"So much the better," Caldwell answered. "We know that he's on this side, making ready to hop. We'll cruise toward the lake."

The *Sirius* swung around, following the "Q" current. Soon the sweeping waters of Lake Okeechobee spread out before them, fringed with swampland, dark and sinister. Caldwell set the course and turned the controls over to the relief pilot. Then he took up his night glasses.

"Short wave message coming in code from the northeast," Tompkins yelled from the radio cabin.

Caldwell gave an order to nose the *Sirius* in that direction, then took up his glasses again. The howling Cyclones were sauced to their limit, and the cruiser leaped ahead with the speed of a pursuit plane.

"Clearer now and on course," Tompkins shouted. "We're almost—"

"I see him," Caldwell broke in.

He shouted to Melvin Lord in the forward cockpit, and the twin Brownings were broken out. The gunner in the after-emplacements got his weapons ready. Portable Thompsons had been issued to Ensign Browning, the co-pilot, and Tompkins, the radio man.

"Now give him a rocket ordering him to come down on the lake," Caldwell commanded.

Once more, flashing lights broke in the heavens, above and behind the Coast Guard cruiser. The vampire ship was coming toward it at dizzy speed, but made no effort to heed the command. There was a second shower of colored balls. Then Guy Tompkins began speak-

ing sharply into his transmitter.

"Base Eighteen—Base Eighteen, Sirius calling."

This time he did not have to wait for an answer.

"Sirius engaged with unidentified monoplane. Now at 18-19—J-K—will keep advised." His message gave the scene of battle on a co-ordinated map which showed the whole of Southern Florida.

THE ponderous Douglas and low-winged Lockheed approached each other at tremendous speed. Each was capable of two hundred miles an hour under full throttle, and they leaped at each other like angry birds of prey.

The vampire was the first to open fire, a streak of saffron shooting from its cowl. John Caldwell listened to the clatter of the machine gun. Like the rhythm of the engine, it attracted his attention. Its beat was similar to a Vickers—similar yet different.

"They make their own, but steal the main idea. Even the ship is a copied patent design," he told his co-pilot, as he gauged his enemy.

Another drag came from the black bat, and Caldwell shouted to his gunners, "Commence firing!"

Chief Petty Officer Lord and the Browning gunner in the after-pit unleashed their weapons at the same time. Ensign Browning opened a window and tripped his Tommy guns. Tompkins, the radio operator, added to the deluge.

Criss-crossing lines of tracer sped toward the Lockheed. The pilot shot toward the Sirius, his weapons blazing. Tracers spattered against the windows of the navigating cabin. Caldwell had seen that bullet-proof glass had been installed.

Now their foe dropped his aim, firing at the cabin proper. Again his bullets were turned back by light armor. A drag was aimed at the forward machine-gun pit, but Melvin Lord dropped behind a steel rampart. The Lockheed veered. Then its tail straightened out, and it turned back into the depths of Okeechobee. Instead of continuing on its course, the vampire ship was seeking sanctuary at the base from which it had hopped. Caldwell grinned. He had foreseen such a contingency, and he gunned the Sirius to its limit.

Racing through the alternating moonlight and shadow, the Sirius held to the tail of the mystery ship. Clouds swept over the moon, cloaking the scene, but Caldwell was able to follow the Lockheed's course by the bright sparks of its exhaust.

Soon he saw his enemy circling. He was climbing, mounting with a speed that told of a powerful motor. Before they realized it, the Lockheed had shot toward them holding a level of several hundred feet above.

"Look out for gas," Caldwell yelled.

A gray mist came from the vampire's *empennage* as it shot overhead, but the Sirius wheeled. At the same time Caldwell ordered Guy Tompkins to break out the gas masks that had

been stored in the tool locker. And now the cruiser wheeled to engage the enemy again. But instead of releasing a fresh supply of poison, the vampire tried to burn the cruiser with incendiary bombs. The sky blazed with strange fire. Caldwell hauled back to mount to his enemy's level. The vampire, however, continued to climb.

"We're getting a touch of what the next war's going to be like," John called to Ensign Browning.

A blast stood the Sirius on her wing tips. Although the vampire had not been able to get into position for a direct hit, it had unleashed an aerial torpedo, detonated by a time fuse. The sky was struck by a mighty explosion, whose concussion hurled the cruiser through the air as though it were a ship upon an angry ocean.

John Caldwell was forced to fight to regain control. The Sirius plunged toward the waters of Lake Okeechobee as though it had suffered a mortal wound. The Lockheed followed, spraying the almost helpless craft, while Chief Petty Officer Lord and his fellow gunner fought back viciously.

Cutting the engines and hauling back leveled the Sirius, and Caldwell swung around. The vampire ship darted to the north once more. Through his night glasses Caldwell could see that they were nearing a lonely island.

"New signals coming in," Guy Tompkins yelled. "They're right ahead."

"He's running for his base," Caldwell broke in.

The Lockheed nosed down, diving for the island, but the Sirius plunged at the same time. Caldwell's jaw was tightly clamped. His eyes narrowed as he stared into the pale moonlight.

A flash below swelled into a geyser of flame. Although it weighed several tons, the Sirius was hurled upward, like a rock thrown by a quarry blast. The earth seemed to part, to form a fiery cauldron into which the cruiser would fall and be consumed.

Any ship but a Coast Guard Douglas would have been torn to bits by that blast. Built to ride the Western Indian hurricanes, the Siries staggered and pitched. For a moment Caldwell feared the wings would buckle. He realized that the issue was far greater than the survival of himself and his crew. He must catch or crash the Lockheed and its pilot. The gas released near Olahasse had shown that secret enemies had a weapon that could kill half the population of the United States within a few days. That power must be destroyed, and Caldwell knew he was at grips with one of its chiefs.

CALDWELL crowded on the sauce and raised his night glasses. The Lockheed had flown off course and was now quartering to get in the center of the radio beacon. The Sirius might overtake it if the power were crowded to the limit. Caldwell sauced the Cyclones until they could take no more gas.

Hurling on at dizzy speed, he gauged the progress of his adversary. The Sirius was gaining. Perhaps the Lock-

heed's engine had been hit, and it was not developing its full power. The moon was sinking as they roared over the Tamiami trail, leading from Miami to Tampa.

"Something's gone wrong with my sets," Guy Tompkins, the radio man complained. "Looks as though he shot away all the antennae we ever had."

They were now flying over the most deserted section of continental America. Mile upon mile stretched away, inhabited only by strange reptiles, birds and beasts. With the moonlight fading, the scene took on a sinister appearance, like some greedy monster waiting for the victim that would fall into its maw.

The Sirius rushed onward, like a maddened, tireless thing. The distance between the two ships was closing. With Tompkins' radio out of order, Caldwell knew he would have to fight it out alone with his batlike adversary. The swift dawn of the tropics broke, brightening the dank vegetation below. The water turned from dark, Stygian stretches to iridescent shade. Birds arose in swarms to circle the lower air.

"We're gaining," Lord called through the speaking tube. "I'll be able to—"

A clatter of guns broke in upon his words. The Lockheed had spun on its wing tip and was lunging at the cruiser. Its thick, barrel-like cowl blazed. Lord's Browning answered. The ships rushed at each other like charging knights. Caldwell held the controls steadily, his cool gray eyes judging the tactics of his foe. The vampire ship was not wavering. It made no attempt to maneuver.

"Look out, skipper. He's going to ram us," Lord screeched.

A fresh burst came from the Lockheed, and Caldwell hauled back. His enemy executed the same maneuver. For an instant, it looked as though nothing would keep the ships from crashing, but Caldwell cut his right motor and spun in the cruiser's length.

The ships were so near together that Caldwell had a good look at the Lockheed's pilot. He was small, bronzed, with ratlike teeth showing in a mirthless smile. His slanting eyes were discernible even through his goggles. Tanaka was of a warrior race. No coolie blood flowed in his veins.

"Look out! He's—" The warning came from the gunner in the after-pit.

The Lockheed was plunging down on their tail. Brownings burst into a jabber, but the low-wing dropped down out of range and shot a blast that made the Sirius reel.

Caldwell spun the wheel over. His face suddenly froze as he felt the rudder's resistance gone. Tanaka's final blast had damaged the cables. If they had parted, the cruiser would be helpless. It would not take the stuttering Vickers guns long to rip the Sirius to bits, in spite of the light protective armor.

Browning, the relief pilot, had noted the action of the controls. He looked across the small cabin, his young lips white, but firm.

"He stung us that time, skipper," he said.

Caldwell nodded glumly.

The Lockheed had spun to strike again. Tanaka had noted the effect of his shots and was quick to take advantage of them. With the Sirius unable to maneuver, he could choose his point of attack.

Caldwell scanned the sky in all directions. Loss of radio power left him without ability to call for help. Although disabled, he must fight or perish. This time, he knew, Tanaka would not permit him to descend to the Everglades. Death would be the portion of the vanquished.

A long-drawn clatter sounded from behind. Tanaka was striking again. Involuntarily, Caldwell looked around. He saw the body of the gunner who had manned the Brownings come tumbling through the hatch. It struck the deck and remained motionless.

Caldwell snatched up the speaking tube. "Rudder cable's out of commission, Lord," he snapped. "Give that fellow all you've got while he's in sight. Try for his motor."

Next he turned to Ensign Browning. "Take over. Hold her level. You'll have to use the ailerons. Rudder's gone."

Caldwell raced back to the after gun pit. The Lockheed had circled and was coming down to give the killing shot. Tanaka had seen the gunner fall. The Sirius was both blind and defenseless in the rear.

TENSE with the realization of what defeat would mean, Caldwell made ready for the attack. He paused until the Vickers guns began to splutter, then leaped into the gun pit and swung the Brownings upward.

Bullets struck around him. Tanaka was pouring death into the almost helpless Sirius. If the Oriental could shake off the cruiser, escape would be easy. His guns fired steadily as he drew closer.

A burst tore the fabric on either side of Caldwell, and bullets struck the belts feeding into the loading blocks. The guns were all but out of action. Scarcely half a dozen shots remained.

He peered through the sights, seeking the center of Tanaka's madly spinning prop. A blow in the shoulder half spun him around. He looked down to see a splotch of crimson on his uniform. He had been wounded. Another like that, and he would tumble down the hatch, to lie beside the lifeless body of the gunner.

Caldwell stiffened. The Lockheed had spun and was charging again. This time, Tanaka held his shots until less than fifty yards divided the two planes. The final moment had arrived. The steadiest nerves, the coolest brain, would win. Caldwell peered through his sights. He could see Tanaka's leer- ing face and ratlike teeth.

Now his cross wires were on the Lockheed's prop. A burst came from the Vickers gun, and again bullets screeched around Caldwell's head. He did not move, but tightened his hold on the trip. The Brownings clattered.

Their first shot went high, but Caldwell dropped the muzzle.

Another burst threatened to hurl him from the gun pit, but he fired again—a short savage burst. Caldwell followed the flight of his bullets. He saw their gray trail end in the Lockheed's whirling prop. His eyes narrowed. A splinter was thrown off by the spinning blades. Then came a mad scramble of metal, fabric and wood. The tight lines melted from Caldwell's taut face. He stood up in the cockpit to watch the final act of the drama.

The Lockheed zoomed, shot upward by force of its dive. Its prop was no longer spinning. Caldwell's burst had killed the engine. Tanaka would soon be a prisoner.

"Stand by to land," John called to Browning.

"Aye, aye, sir."

The Lockheed had leveled. Tanaka would have to come down on the waters of one of the many canals over which they had fought. Caldwell felt a glow shoot through him. With Tanaka a prisoner, the dark mystery of the past few weeks would be solved. He would force the man to talk.

But instead of piquing down for a pontoon landing, the Lockheed's black tail was thrown into the air until it pointed toward the zenith. For a moment, the vampire ship seemed to hesitate. Then it plunged, straight as an arrow, for the green scum below. John Caldwell watched with held-in breath.

A black streak shot toward the Everglades, gaining speed with every yard. A geyser of mud and water came up as it struck.

Horror-gripped, Caldwell saw the blunt nose disappear beneath the surface. Wings and body followed and then the tail. The soft, green ooze closed over the rudder fin. No trace remained of what had been a man and ship. The Everglades had clutched the nation's enemy and buried him there.

"Did you see—" Lord had quit his post in the forward gun pit.

Caldwell nodded. His lips were bloodless, his eyes drained of expression. Destruction of the Lockheed had solved the immediate problem, but John knew that the pilot was but one of a ring of sinister fanatics. The death of one would only delay the plot.

"We've got to get back in a hurry," he said.

"Yes, sir. Now that other fellow's gone, we can splice the control cables while we rest on the pontoons."

"Okay. Let's hurry."

BACK at the base once more, John Caldwell hurried the servicing of his battered ship. No major repairs were demanded, and he was soon ready to take to the air again. Brother officers tried to congratulate him, but he waved them aside. He had no time for kind words.

"Catch anything over the radio?" he asked the chief electrician in charge of the communications.

"Nothing except a message from a Pan-American pilot on the Porto Rican run, saying they were stopping at

Gonaives, Hayti, for a party that was in a hurry to catch a steamer at Havana."

Caldwell's bleak eyes lighted. "What steamer?" he asked.

"*Kayo Maru*."

John spun on his heel. In another moment he was racing for the Sirius, and soon the cruiser was in the air, roaring southward. Caldwell kept his eyes upon the map showing the Straits of Florida. The Pan-American passenger liner followed it to Havana. With just a little luck, he would intercept it above neutral waters.

An hour dragged by, and they glimpsed the hilly shores of Cuba, straight ahead. The Sirius banked and turned toward the east. Caldwell held his marine glasses to his eyes. Browning, his aide, also scanned the skies.

"There's a Sikorsky Duck coming this way," the co-pilot shouted.

"That's the bird we're looking for," John answered. "Break out some 'stop' signals, Tompkins," he ordered the radio operator.

Black and white balls of smoke appeared high in the air and the Sikorsky nosed for the surface. The Sirius circled. Caldwell again raised his marine glasses and held them on the passenger ship. Peering from the cabin window were a dozen brown faces, pale and taut.

Next the Duck was bobbing on the waves. The Sirius drew alongside and Caldwell climbed aboard the Pan-American craft.

"Who you got here?" he asked of the pilot.

The man's face was pale. He had seen the automatic pistol in the Coast Guard officer's hand.

"They're trying to catch the *Kayo Maru*, but—"

"Too bad! They've missed it," John broke in.

"Then what shall I do?"

"Fly straight to the base. I'll follow," Caldwell told him.

After another hour in the air, the Sikorsky Duck and the Sirius alighted in the Coast Guard harbor. John conducted his prisoners ashore and herded them into the office of Commander Dennison.

"This is the Hayti branch of the Black Dragon, sir," he said.

Dennison's lips tightened. Caldwell had made a clean sweep. Not only had the vampire ship been sunk, but the plotters had been captured.

"We'll have to get in touch with Washington on this," he muttered to John.

Caldwell nodded.

"And hold them in the meantime," the commander went on.

Caldwell's head bobbed again. "But don't search them, sir," he said.

Dennison glanced at the pilot, then ordered a chief petty officer to lock up the prisoners.

Yogo Kinomoto, their leader, glanced at his companions. A thin smile bared his yellow teeth. His small eyes glittered, while his sinister face took on an almost joyful expression. John Caldwell watched the play upon the captives'

features, but his own were bleak as marble.

With the prisoners away, Commander Dennison got in communication with Washington over the long-distance telephone. After a hurried report, he listened to instructions from the admiral commanding. His lips tightened. His only words were an occasional "Yes, sir." Finally he returned the telephone to its cradle.

"The chief says we can't do a thing with them," he told John Caldwell. "Whatever they did was done in Hayti, and the government can only prosecute them for a conspiracy against a friendly power, which it won't. We're lucky

not to get into trouble for arresting them on the high seas."

Once more John Caldwell nodded. "So we'll have to turn them loose, with apologies, to plot some more and try to murder our people by the million. Tanaka, the only one we could proceed against, is dead. These fellows are beyond our reach."

"I wouldn't be surprised if they were," Caldwell said in a level tone.

Something in the sound of the young man's voice made Dennison start from his chair. He dashed out and crossed to the shore brig maintained at the base.

"They're all calm and quiet. Not a

peep out of 'em, sir," the chief petty officer in charge of the guard nodded toward the jail.

Commander Dennison said nothing, but threw open the door and looked inside. His eyes protruded, and the color drained from his face. Then he closed the door softly and faced John Caldwell.

"All dead? Hara-kiri?" the young man asked.

"Yes. How did you—"

"I know the breed, sir."

"And that's why you suggested not to search them?"

Once more John Caldwell nodded. He had been right. He knew the breed.

Ghost Gauntlets

(Continued from page 19)

Price," he yelled. Suiting words to action, he clawed at one as it breasted him. It knocked him flat, but he held on, and the drag swung the heavy Albatross about.

Bruised, brush-burned, Wings Wyman scrambled to his feet and turned to the pit of the German crate. A pilot was sitting in it, looking straight ahead. Wyman scowled. "Well," he grated, "when you come down, Kraut, you come down fast, don't you?"

The German made no reply. He sat his pit silently, sullenly, gazing straight ahead.

"What's the matter—hurt?" asked Wyman sharply.

Still the German failed to reply, and Wyman, now alarmed, jumped to the span of the Albatross with a quick move. A hurried exclamation sent a chill down his spine.

"Here, fellows," he barked. "I think he's conked. Get Doctor Freeman right away. Maybe something can be done."

"Already here, Wings," the doctor's piping voice replied. "Saw that Kraut come down here, and I figured something might just be wrong with him. Let me have a look at him."

He mounted the wing and reached into the pit to feel the pilot's wrist. As he did so, he stiffened. Then he said, in an icy tone, "This man is dead. He's been dead for hours—and maybe days!"

"What's that?" echoed Wings, unbelievably. "Why, he just flew that crate in!"

The doctor shook his head. "Then he flew it in dead at the stick," he said solemnly.

Wings Wyman's eyes met Price's.

"Wings, I don't believe in supernatural things, especially where Krauts are concerned," Price intoned, "but I am willing to admit this is a little queer."

Wings grunted. He watched the body being taken away, heard the doctor say he would make a thorough examination of the body. Then he fell to examining the crate. He went over it minutely, but nothing unusual was found. Although there was an invis-

ible door in the fuselage of the crate where a hidden pilot might stay, there was apparently no possible way he could maneuver the ship.

It was at that moment that Price caught sight of an orderly making his way across the tarmac, and he gave Wings a sharp poke. "Here it comes," he breathed in a cautioning tone. "Colonel Burleigh from G.H.Q. wants you on the mat for not stopping those Kraut trucks."

Wyman savagely spun about and shot a glance at the approaching figure. A look of pain suddenly gathered in his eyes. Was this his last? Had his failure to stop those trucks from reaching the Nestorne sector cost him his post as patrol leader?

Then Price gave him a shove, spinning him about in spite of his bulk. "Get to your crate," he snapped. "I'll stall him off."

Wyman disappeared into the night. A call floated over the tarmac for his bomber, and seconds later a powerful D.H. left the deadline in a lumbering rush.

"Now it's up to us, pilots," Price said, addressing the grim-faced pilots who formed a semi-circle about him. "Wings Wyman is the best patrol leader any of you will ever have. G.H.Q. is after him right now because of those Kraut trucks. Now, are you going to keep your eyes open and stop the trucks? Are you going to let G.H.Q. oust him and make somebody else patrol leader—or are you going to keep him?"

"We'll keep Wyman," one of the pilots said, grinning. "Let's go. We'll fix things for Wings."

Price nodded, smiled. He liked this rugged little group of eagles. "On your way, then," he said.

There were five roads leading to the German lines of the Nestorne sector, and the German trucks might go over any one of these roads. Advance information on which road the Germans would take was rather meager, and so far they had had no difficulty in getting powder and supplies to the front.

For two long months, the Allies had

been "dug in" on the Nestorne. Five times they had attempted to crash the German trenches, but each time the heavy loss of life had written failure. It became more and more apparent to G.H.Q. that the only way to take Nestorne from the Boche was to cut off ammunition supplies.

This had been the assignment of the 66th Bombing Squadron, but after five weeks of bombing these roads, not one truck had been stopped from reaching the sector. What was the answer? G.H.Q. wrote it down as the patrol leader's fault, or maybe the C.O.'s.

BYOND Nestorne, Wings Wyman's face set grimly as he led his patrol along the Tulaine-Nestorne road. He let the infantry rear lines of the Germans see him wing over this road; took his time over the anti-air nest three miles up the road, and ran into a mass of knifing lights. Archies puffed under the patrol, but he continued on.

Five minutes later, or some seven miles farther on, Wings suddenly changed his course sharply to the right. The patrol followed, and twenty minutes later, over the Quoin-Nestorne road, the patrol suddenly dipped earthward.

Two green streaks suddenly left Wyman's D.H. and swished earthward. As they struck the ground, a pair of blazing white flares showed an enormous field, while off to the left, a straight ribbon of peculiar color caught Wyman's eye.

"The road," he called to his bomber, pointing.

The bomber nodded. If they could tear that road to pieces with bombs, no trucks would reach Nestorne that night over it.

Wyman banked his crate toward the road. Another flare smeared its eerie light over the terrain below. The road drew nearer. At the fourth flare, Wyman banked with the road and leveled out. A series of flares fell in rapid succession now, turning the night into day. Then a rain of bombs twisted through the sky. Explosion after ex-

plosion hacked the road, twisting it, cratering it, and piling it mountain high.

Grim-faced Monty Price ordered his bomber to drop all bombs at once, and the explosion was deafening. When the sand had finally settled, one great crater and one mountain of ruin lay right in the path of any moving vehicle. Price grinned as he saw it, but there were four other roads for the Kraut trucks to take to the Front, and the odds were that one of them would be taken. The mission was largely a failure, in spite of the thoroughness of the bombing.

When the patrol of D.H. bombers drew to a halt before the taped line in front of the hangars, Wyman was instantly faced by an orderly, who said, "Colonel Burleigh from G.H.Q. is in the C.O.'s quarters. He wants to see you right away, Wings."

Wyman nodded. It had come at last. G.H.Q. was about to put on the screws for his repeated failure to stop the trucks, and had sent Colonel Burleigh to do it.

Colonel Burleigh stood behind the C.O.'s desk. He was a big man, and powerful, with a large, florid face mooning small, fishlike eyes. It was easy to dislike him, yet in spite of this, he had a reputation for being a square shooter.

He lost no time in coming to the point. "Captain Wyman, for a man with the reputation of being the nerviest, best patrol leader in France, you are just about the biggest mess of slipstream I ever saw," he said angrily. "You have had orders to keep those ammo trucks from reaching the Nestorne sector, and you haven't stopped one of them. Either you stop the trucks from reaching Nestorne, or you are through!"

His voice softened suddenly, and he faded into the chair. He continued more quietly. "I'm here to help you, if I can." His fishlike eyes went hard again. "But I'm here also to see that the job is done—if not by you, by somebody else." He rubbed his chin with a heavy hand, and his round eyes lifted. "Wyman, did you ever consider the fact that some one in this squadron might be giving information to the enemy?"

Under this blunt question, Wyman fell back. Could he suspect one of his patrol of being a German agent? Hell, no! He had risked his life for each and every man on that patrol.

"I'd as soon suspect my own father," he snapped.

"Well, G.H.Q. knows positively that some one is giving information to the enemy," Colonel Burleigh continued.

"It's not reaching them through my patrol," Wyman echoed resolutely, his eyes flashing.

"Good enough." The colonel shrugged, as though he had more under his hat than he was admitting. "But tonight you are going to stop those trucks from reaching Nestorne. How? By keeping the location of your bombing a secret."

"We are going out again?" quizzed Wyman.

Advertiser's CONTACT

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VOLUME 9

APRIL, 1935

WHOLE NUMBER 20

JUNIOR LITERARY GUILD LANDS ON HEADQUARTERS TARMAC

Model Contest Idea Goes Over In Big Way

From down in Jackson, Mississippi, comes an excellent suggestion from the imaginative mind of Arthur Meade, F.A.C., G-2. He called on a local merchant and convinced him that it would attract a good many customers to the store if he staged a model airplane contest, the winning models to be displayed in the store window.

The rules were very simple, and small cash prizes were awarded. Anyone within certain definite age limits was permitted to enter the contest. First prize was \$5.00, second \$3.00 and third \$1.50. The all important point was that all parts used in making models entered the contest had to be purchased from firms advertising in FLYING ACES.

The Staff at National Headquarters endorses this idea most enthusiastically. It's swell! And if those models were displayed in the window with a few copies of FLYING ACES, it would promote greater interest in your magazine, and help more in building up membership in local F.A.C. units. Let's see some of you other fellows put over the same idea. It's easy. Be sure, however, that you send complete details to G.H.Q. so that you may be given full credit for putting over this promotion stunt. Give us the name of the merchant, the names of the winners and all other important details.

Colonel Davis Forms Squadron of Riflemen

Colonel Charles E. Davis, D.S.M., Commander of the Eastern Pennsylvania Division, has started a Squadron of Riflemen. As Colonel Davis is himself an expert shot, being the winner of two silver medals from the U. S. Army for marksmanship, it looks as if this new Squadron is going to be a crack outfit. There won't be any bull's-eye left when they finish shooting!

It isn't a bit too early for some of you other birds to start things going along the same lines. Now is the time to get set for the big F.A.C. Rifle Contest. Plans are going forward slowly but surely. Headquarters had hoped to be able to give all the details of the Contest in this issue of FLYING ACES—but it's better to be sure than sorry. And everything must be all set, the last little detail all worked out before we go ahead. Then you fellows will get the good news, but not until we're sure that the rules are such that everyone will have as good a chance as the next fellow.

In the meantime, G.H.Q. would like to have the names of any Rifle Teams that have already been formed in the F.A.C. Then we will be able to put you in touch with other outfits that are rarin' to go. But remember, all members of any contesting Rifle Team must be a member in good standing in the F.A.C. All set? Ready! Aim! FIRE!

The Junior Literary Guild has just come in for a three-pointer on the tarmac at National Headquarters. And it wasn't any forced landing, either. The sock gave them their wind direction and they set her down, neat as you please, right on the runway.

What's it all about? Just this—so many of you fellows have been writing to the Junior Literary Guild, telling them to advertise in FLYING ACES, that they couldn't disregard it any longer. The tarmac in this case is the advertising section of FLYING ACES, and their particular runway is the back cover of this issue.

It took a lot of convincing from you fellows to bring them in. Now that they are advertising in your magazine, they have every right to expect a flock of orders. That's what it's going to take to get them to keep on advertising every month. They've passed the buck right back to you readers. It's your move.

So hop to it, buzzards! Turn over to the back cover right now. Fill your fountain pens and sharpen your pencils. Then answer that advertisement before you're five minutes older. You'll be glad you did—for they have something for you that you are going to find mighty interesting. Get going, you Kiwis, Cadets, Pilots and Aces—every last mother's son; yes, and the daughters, too. Answer that advertisement right now!

New Way To Promote Aviation And Get New Members

Captain Carl Ulanowicz, 475 Emerald Avenue, Grand Rapids, Michigan, has thought up a new way in which to promote interest in aviation, in the F.A.C. and to get new members—all at the same time.

He made a display of his Membership Card, Cadet Wings, Pilot Wings, Ace's Star and Citation. To this he added a picture of the D.S.M. clipped from FLYING ACES and exhibited the entire display in the General Shop of his Alma Mater, Davis Technical High School. As a result, he tells us that another new club is being formed.

Captain Ulanowicz says that his next move will be to exhibit the display in some of the stores that sell model airplane supplies. G.H.Q. has just one suggestion to add to this—be sure that the exhibit is displayed in those stores that sell the merchandise advertised in FLYING ACES. That will do just as good a job of promoting aviation, the F.A.C. and the local units. Moreover, it will help the local merchant and the advertisers. Another good tie-up would be to exhibit the display in the windows of magazine dealers who sell FLYING ACES.

Constructive ideas such as this are made a part of the record here at G.H.Q. of the individual members who make those suggestions, as well as those who put them into effect. And you can bet your bottom dollar that those records will count heavily when members are being considered for the D.S.M.

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SUPERMARINE S6.B

New "Filled in" features. R.O.W. Span 22 $\frac{3}{4}$ ", length 21 $\frac{1}{2}$ ". Silver and blue. Complete Kit SF-19, \$2.50. Kit D-19 (Span 15"). No liquids. **65c**



WACO C-3

Very popular cabin. Span 24 $\frac{1}{2}$ ", length 19 $\frac{1}{4}$ ". Silver and red. Complete Kit SF-37, \$3.25. Kit D-37 (Span 16 $\frac{1}{2}$ "). No liquids. **75c**



LOCKHEED VEGA

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"You are. And the only ones who will know where you are going will be you, G.H.Q., and myself. When you leave here, you take to the air immediately. Your crates are being serviced now. And tonight I'll bet you stop those trucks from reaching Nestorne—stop them because the spy in your squadron won't know where he is headed."

"And the road we are to bomb now?" asked Wyman.

"Is the Guile-Nestorne road. It is in the best condition, and the German trucks are most likely to use it."

At that instant, a Liberty motor suddenly broke into life, its roar deafening. A series of screams and shouts darted over the tarmac, reaching Wings Wyman's ears. He swung to the door and hurled it open.

Out on the tarmac, a heavy D.H. moved away from its line and started across the oily pan. It moved swiftly, as if under an open gun. Then Wings was on the run. He was a fast man in spite of his size, but the roaring crate rapidly outdistanced him. Across the dark tarmac it raced, like an eerie shadow, faster and faster, lurching violently, first on one wing and then on the other. Wyman drew up, abandoning pursuit. His face was lined with a deep frown, and he cursed.

"Who the hell is manning that ship?" he shouted.

"Nobody!" a voice behind him returned, and he swung around to face the grim eyes of the chisel-faced Price. "It's gone off on its own solo."

FAR across the pan of the tarmac, the D.H. suddenly lurched to one side, twisted, and pushed into the air, as the wind swung under the wings and over the ailerons. Rapidly it climbed twenty-five feet, where it met a counter-current of air. A finger of light stabbed the darkness, picked out the crate for a second, then disappeared into the trees as the plane stumbled earthward in a wild flop.

There was no saving that D.H. now, for suddenly Wyman realized that the ship had been loaded, at the colonel's orders, for its second flight that night. It was heavy with bombs!

"Fall flat!" Wyman bellowed at the top of his lungs. "Flat on your faces!"

Fitting action to words, he fell to the earth just as a splintering crash broke on the night air. A second later, the tarmac rocked as a wall of hot air passed over it like the blast of a cyclone.

A terrific flare of light coned the sky. Hangars trembled. Windows folded in their frames and jingled to the ground, while everything loose danced and tumbled about as though jerked by strings. It was over as quickly as it had started, and the night seemed filled with a strange, ringing silence.

It was an awed and gasping group that regained its feet when the rush of scorching wind had passed over. What had once been a rugged D.H. was not even splinters, while where it crashed, a great crater had appeared on the tarmac.

"There wasn't a soul near that crate

when it took off," Price told Wyman with dry lips. "It was on the deadline with the rest of the crates, prop revving idly. The men were huddled together, waiting for you, when all of a sudden it burst into life, and—you know the rest."

"Some one had to set it off," Wyman snapped.

Price shrugged, and dug a fist into his pocket, extracting a slip of paper. "You just don't understand things," he said, "and the reason you don't understand them is because you haven't read that letter from von Leefeldt."

He held it forth. With a grunt of disgust and reproach, Wings snatched it from his hands and moved quickly inside the nearest hangar. There, he lighted a dirty-glassed kerosene lamp, and by its dim, flickering light he read:

"Our forefathers battled Charlemagne on the battle fields where your hangar now stands. Their bodies are its very dust, but their souls ride on. Unless you obey, and return the gauntlets by six o'clock this evening, the shadow of von Leefeldt will be on your tarmac! You will see dead men fly Albatrosses; D.H.'s will move under their own will—and the gauntlets will finally disappear as though by magic. All this will happen before dawn.

Hauptmann Otto von Leefeldt."

With an oath, Wyman balled the letter and flung it to the earth. It wasn't enough to have Colonel Burleigh ride him—he had to face this foolishness. Yet was it foolishness? He had seen the dead fly an Albatross. He had witnessed an unpiloted D.H. do a song and dance—and certainly, if these impossible things could happen, what was to keep the gauntlets from disappearing?

Startled, he swung around and made a rush toward his cubicle. Were the gauntlets already gone? In the inky darkness of the shack, he reached under his bunk and pulled the mailed gloves forth. He breathed a sigh of relief as he felt them, and tucking them under his arm, he strode to the C.O.'s office.

Major Clayton, C.O. of the squadron, had just returned. His white hair seemed whiter than ever, while his kindly face and smiling blue eyes were pathetic and troubled. He turned as Wyman entered; extended a hand that was not quite steady.

"Colonel Burleigh—you have seen him?" he asked. At Wings' nod, he said hopelessly, "He told you we are through if—"

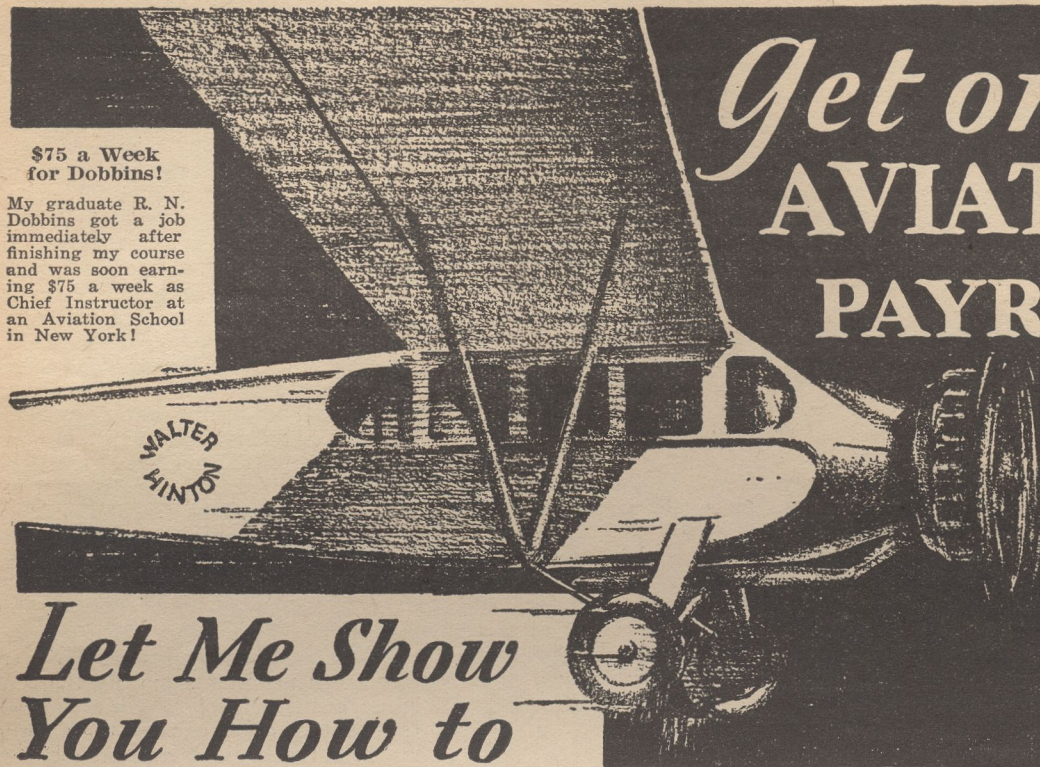
"We?" echoed Wyman like an exploding bomb. "You mean you will lose out, too?"

The C.O.'s jaw trembled. This squadron had been the C.O.'s life work. He had coached it, and watched it, and developed it from an *escadrille* with one crate, to an American bombing squadron with seventeen heavy bombers. He had seen it rise to glory, and now was about to see it smashed in disgrace.

Suddenly a laugh broke upon Wyman's face. It was a bold act to show Major Clayton that he, for one, was not worried. His arm found the C.O.'s shoulder in affectionate reassurance,

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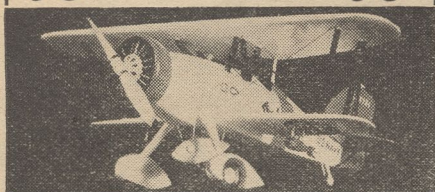
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CORRECTION

Through error in the Heath Model Airplane Company advertisement in our March issue we printed: "They gave 16 sheets of Balsa free," this should have read "6 sheets free."

Signed FLYING ACES MAGAZINE,
Advertising Department.

but it was with a confidence that wasn't genuine.

"Don't worry, major," he said. "We'll be in this squadron as long as war is popping. No trucks will get to Nestorne tonight—you can bet your last dollar on that."

The C.O. placed a trembling hand on Wyman's arm. "If they don't, it will be just like admitting there is a spy in the squadron," he breathed. "That would be reason enough for Burleigh to tear this squadron to pieces, and he'd do it, too."

Wyman knew the C.O. was right. Burleigh was ruthless when he had to be. And no matter which way things turned out, the squadron was bound to go under the hatchet. The thought threw a chill down his spine, and to get away from it, he jerked the gauntlets from under his arm and handed them to the C.O.

"Keep these gauntlets for me, major," he said. "The Huns are going to a lot of trouble to get them back, and I don't want to take any chances on their disappearing. They will be safer with you than in my cubicle."

The C.O. took them wordlessly, and as Wyman turned to leave, he said, "Good luck!"

Wyman smiled. It would take more than luck to straighten this night's work out.

Outside the C.O.'s quarters again, Wyman ran abruptly into the white-faced Doctor Freeman. His eyes were wide and scared, as though he had just seen a ghost. The sight brought a laugh to Wyman's lips, but it dissolved as he listened.

"I saw that Albatross wing in with a dead pilot at the stick," the doctor was saying, "or I wouldn't believe it. Because that man wasn't only dead—he was embalmed!" A knife of ice sliced down Wyman's spine as the M.D. continued. "And he's been dead a week or more!"

The thought of such a pilot's bringing an Albatross to a perfect landing on a strange tarmac in the dark was not easy to take. Wings' broad shoulders hunched in an impatient shrug. He thanked the medico, turned, and strode away.

THE remaining D.H.'s were on the deadline, props revving. Pilots and bombers were grouped about the crates. They were taking no chances on having more crates wing off. Chisel-faced Monty Price watched both his own D.H. and Wyman's.

Wings strode up, tugging a heavy tunic about his shoulders. His face was grim and emotionless. "Everything ready?" he asked.

Price nodded. "Cromwell and his half-wing are out. It was their crate that did the exploding stunt." He paused, then asked carelessly, "Where are we going tonight?"

Wings Wyman eyed him sharply. He remembered what Colonel Burleigh had said. "Out to play some more Easter with the Kraut," he replied, tersely.

"Yeah?" grunted Price. "Well, where are we playing it?"

A half-startled stare appeared in Wings' eyes. His forehead wrinkled heavily with doubt, and his tongue went dry. "You seem darned anxious to find out," he snapped.

Monty Price looked at him in amazement. "Of course." Then he laughed good-naturedly. "Come on, open up! Where are we headed?"

Wyman could only gaze at Price as if he were seeing a ghost. Could this really be true? He shook his head as though answering himself. "Just follow me, that's all!" he said curtly.

He swung, and mounted the D.H. A greasewall jumped forward and kicked the chocks from under the enormous wheels, while Wings gazed over the fuselage. As he did so, his eyes met those of Colonel Burleigh. The colonel stepped forward.

"Now do you think there might be a spy in the squadron?" he asked with a taunting smile. "I'd keep my eyes on that bird if I were you."

At a thousand feet, the roaring squadron keeled off and started toward the German lines. Wings set his crate at a seven per cent climb. By the time it reached the Front, it would be three thousand feet up, and by the time it reached the Guile-Nestorne road, it would be seven thousand.

Wyman settled back in his seat for the long grind. Colonel Burleigh had been pretty insistent about not allowing anyone to know the destination of the patrol. That was fair enough, Wyman admitted to himself. But already G.H.Q. and Burleigh himself knew. That wasn't exactly fair to the pilots, and—

"Damn it!" Wyman cursed to himself. "Why let even the Colonel know? If he wants an unknown bombing raid, I'll give him one."

He shifted his route slightly to the left. One road was already destroyed. G.H.Q. and Burleigh knew of the Guile-Nestorne road. That left only three that might be used, and one of those, the Brille-Nestorne road, had been bombed for two nights in succession. That left only two roads.

Now, if he, Wyman, were at the desk of the German High Command, which of the two roads would he pick? That was a sticker. Both roads were in good condition; both were about equal in advantage, but it might be a safe bet to try the Brille-Nestorne road again, for twice the Krauts had failed to try to send trucks through when the road was bombed. That was it—the Brille road. The German High Command would never expect the bombing to be there three nights in succession.

An hour passed. Wyman threw his stick forward and nosed down. Seven other bombers followed suit. At seven hundred feet, he leveled off and signaled his bomber. They should be somewhere near the Brille road now. Instantly, a flare streaked to the earth, and erupted in a blazing green and blue light. By it, he could see a bridge far to the right. He banked toward it, and again the inky velvet of night folded over the earth. A second later, another flare washed the night with an eerie

blaze. The patrol was almost over the bridge.

One bomb on that bridge would stop any trucks from reaching Nestorne, Wyman knew, but G.H.Q. wanted to save that bridge if it were possible. In the advance that was planned, the bridge would be important.

A white, sandy road led from the bridge. Wyman nosed his crate nearer the earth, banked along it. At three hundred feet, he again leveled off. Another flare spluttered to the ground, then a second, turning the highway into daylight brilliance.

As they did, Wyman's eyes went wide, and his brows twisted skyward in astonishment. He was scarcely able to believe what he saw. For below him, and not far ahead, were the shadows of trucks—trucks trying to swing about in the narrow highway. They were the ammo trucks of the enemy.

"What a break!" Wyman yelled excitedly to his bomber. "Do you see what I see?"

The bomber nodded. He wasn't in an enthusiastic mood. "What's the difference?" he asked. "If we plant an egg in one of those trucks, the exploding shells will kill every pilot in the skies. And the Hun General Staff would gladly give eight trucks of ammunition for these eight eagles."

Wings agreed. The trucks couldn't be destroyed, but he had other ideas. Nevertheless, he said with a grin, "Just think of the fun we are going to have, scaring hell out of them!"

He was roaring over the first truck now. Behind him, Monty Price winged his heavy cargo of destruction. The road at this point was on a sharp ledge, dropping off twenty feet on the sides. The trucks would never be able to get down those sides without somersaulting, and that spelled disaster.

Wings Wyman gathered this fact into his survey. Flares were dropped regularly now, keeping the road a well-lighted highway. The trucks were those which had given Wyman so much trouble in the past; whose elusiveness had brought him face to face with dismissal. He was grimly determined that they should never return to Germany to make another successful trip. It wasn't enough that they should be hindered from reaching Nestorne tonight. They must be destroyed, yet he could not bomb them from this low altitude.

Suddenly he turned. "A green Very!" he called.

The Very spat through the night air. Instantly the earth trembled. The bomber behind Wyman's crate unloaded half its bombs at once. When the earth and smoke settled, a flare showed clearly a crater the size of a cañon.

Number three bomber pulled up. A second green Very streaked the night, followed by a second cone of torn sand in the road, as Wings gunned to the other end of the truck line. A bomb from his own truck brought the line to a jumbled halt.

The thunder of explosions, the bursting of sand pockets, and the blazing of green-blue flares made the night ghast-

ly. Bomber after bomber now took position and raked the highway on each end of the truck line. When they had finished, Wings banked his crate about the entire line of trucks, and a smile creased his lips.

"Now," he called to his bomber, "we will keep them together. I will gun down on each end of the line. Empty half your cargo each time, and get it as close to the trucks as possible."

He threw his stick forward. The wires of his wings sang under the pressure, as he tossed off altitude with reckless abandon. The de Havilland was almost on the road before he jerked the stick back, roaring into a sharp climb.

Kazam! Brrroooooom! A giant mushroom of yellow flame burst the night with a million scorching spears. A wave of torrid air puffed skyward, aiding the zooming D.H. that had dropped half its load. Wings gazed over the coaming, his face clouded; for the ground was still thick with smoke. When the smoke had rolled away, his face brightened. For right against the first truck, a crater the size of a volcano had sprung as if by magic.

He gave his de Havilland the gun and banked it sharply over the farther end of the line of trucks. Again he threw it down and then pulled it up sharply as a hail of hundred-pounders left their clamps.

"I don't think those trucks will get out of that mess now," he called to his bomber. "And when it comes dawn, we will be back for some high-altitude bombing. Eight trucks going off ought to make a lot of noise."

"And do I like noise!" echoed the bomber.

It was after three a.m. when the bombers returned to the 66th Bombing Squadron. Word had been flashed almost an hour back that the trucks had been bottled up, and Colonel Burleigh was waiting for the patrol.

"Reload and refuel these crates at once," Wyman said. "We are going right back." Greaseballs scurried in obedience.

Colonel Burleigh beamed. "I told you what would happen when you kept your destination a secret," he exulted, patting Wyman on the shoulder. "Now I am definitely certain that somebody in this squadron is a spy." His hard eyes turned to Monty Price.

Wyman said nothing, as he coldly watched the greaseballs go to work. He still had an ace up his tunic, in case Burleigh got rough. Now, he waited for the proper time to use it.

"Well, man, haven't you anything to say?" Burleigh exploded.

Wings nodded. "At the proper time, yes. I've got a reputation for being a good patrol leader. You said I was just prop wash, and I had to listen to you. Now you can listen to me if you want, or you can bank wind under your feet and move on. If you are wise, colonel, you won't try conking this squadron for any spy."

Colonel Burleigh suddenly flamed scarlet. When he spoke, it was like an

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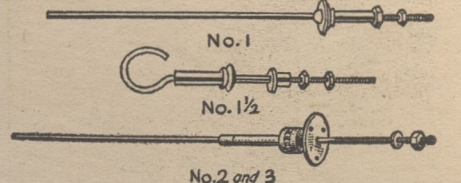
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explosion. "That's just what's going to happen unless I find out who the spy is. I'll bust this squadron wide open!" "Maybe you're the spy," suggested Wings. "I don't know."

"Me?" gulped Burleigh. "It was somebody who did not know where you bombed tonight—not somebody who did."

"You didn't know," Wings continued, his voice like ice.

"I didn't what?" The colonel almost screamed the words.

"I didn't bomb where you told me. I bombed the Brille-Nestorne road," Wings explained frigidly. "So there is a chance that even you are the spy!" He smiled grimly. "When you tell me I'm not a good pilot or patrol leader, you want to be ready for surprises."

He stalked quickly across the apron of the hangars, leaving the puffing official behind him. At the door of the C.O.'s quarters, he pushed through without knocking, but as he swung the wooden barrier inward, he stopped, went rigid, his wind taken from him.

On the floor, head against a leg of the desk, a pool of thick blood beside his right ear, lay the senseless form of Major Clayton.

There were signs of a short, savage struggle, followed by a thorough ransacking. Wings Wyman knew instantly that the gauntlets were gone. So, hurling a call for help over his shoulder, he pushed into the room. He grasped the C.O. gently but firmly under the shoulders and pulled him to the doorway, then demanded brandy from the man who mounted the steps. After a little of the liquor was forced between the inert major's lips, his eyes flickered, then opened.

"The gauntlets," Wings shot at him. "Where are they?"

"Top drawer, Wings," the C.O. gasped. "My head—"

Wings passed him to Doctor Freeman, who came up at that moment. The pilot kicked his way to the desk, and looked through the ransacked drawers; but the mail gloves were not there.

Wings Wyman never cursed himself more thoroughly. Only too well he now realized that he had played into a clever trap. But of this much he was certain—a German was on the tarmac right now, and in all probability it was von Leefeldt. Only too well did Wings understand the German's plan now.

Those gloves were, for some unknown reason, vitally important to his squadron, or to the German High Command. No ace would have taken such risks for the sake of merely retrieving family gloves. Von Leefeldt had failed to scare the squadron into returning the precious gloves, and so had come for them himself.

"But that Boche is still on the tarmac," snarled Wyman through clamped teeth. "And by the high skies, he is going to stay here!"

From out on the tarmac came the noise of a sudden burst of an idling Liberty. As though shot from a gun, Wings whirled, and bounded through the open doorway. Price was beside him.

"There isn't anybody over there,

Wings. It's another one of those shadow crates," panted Price between breaths.

"Not this time, Price. There is a smart Kraut in that crate or— Sound the siren for lights," he added suddenly.

Wyman pounded along the grassy border of the tarmac with long, rapid strides. A de Havilland was moving forward slowly. It gathered speed as the gun roared under pressure of the throttle. A siren split the night air with three sharp blasts, and instantly the sky was ablaze with darting ribbons of light. On and on the D.H. rolled, faster and faster.

Wings reached the side of its fuselage, but the fast sprint had winded him. The fins of the crate lifted. Wyman saw the fuselage rise. Horror and dismay swept him. In a second, only a second, the wings would lift, and then it would be too late. He acted between one stride and the next, as something screamed in his brain, "Jump, Wings, jump!"

Like a bolt from a catapult, he hurtled. No neater, speedier flying tackle was ever made. Arms outstretched, he fingered the guy wires, clawing at them with grappling hands. As his palm slid across them, they burnt like red-hot brands, yet he clung on, pulled himself slowly, painfully up.

The wings were probably two feet off the ground when he caught the guy wires. His heavy body hit the wing and lay there. It threw the de Havilland off balance, and it slid over on one wing, as the German pilot fought the controls.

Snap! Crash! The plane righted itself again and climbed higher, but with a wave of fear passing through him, Wings realized that the D.H. was now without an undercarriage. He knew in that split second that it would never be able to land. Every single bomb loaded on its wings would explode the minute it touched ground.

Now he saw the deep pit where one other de Havilland had done an uncontrolled landing act earlier in the evening. It was an all too grim reminder of what would happen to the crate he was now on.

He scrambled to his feet and moved among the wires of the wing—moved toward the fuselage and cockpit, toward his enemy, von Leefeldt. The German saw him, and screamed. He was a thin, gangling fellow, and very tall. He showed plenty of fight. His free fist was ready to make a swipe at Wyman when he drew near enough; his other hand was ready to throw the crate off balance and toss Wings into space.

Wings moved with caution, his right hand knotted into a ball of bone. Then suddenly he lunged forward. The German drove his fist straight from the shoulder, as the D.H. rocked. The blow went wild, and Wyman's iron ball of a fist shot out. The German's head snapped back, and his eyes blinked closed.

Wyman was quick to grab the controls. He maneuvered them from his position on the wing. With his free hand, he unbuckled von Leefeldt and

hauled him from his seat. Foot after foot of the German pilot slid over the coaming. He appeared to have the thinness of a cobra and the length of a boa constrictor.

At length, securing a firm footing, Wyman dragged the entire body to the wing, flat, almost on the edge. With his feet, he straightened the body out, pushing it over to the edge, where a slight roll would tumble it into space.

Wyman wanted that pilot, and he wanted him alive. Such was his thought when he climbed into the pit and buckled himself in; but landing him and keeping him alive when he was less than a foot away from a horrible death from the bombs would not be an easy matter.

Wyman banked flatly about, and circled the hangars. Coming around and before them, he pushed the de Havilland into a sudden dip. He struck the grassy pan with the disabled undercarriage. The sharp blow carried it away, and Wings pulled up, a satisfied smile on his face.

ON the ground, Colonel Burleigh stood frozen in his tracks, a chilled sweat washing down his entire body. Behind and beside him, stood Monty Price, who now carried a worried look. For the first time in his life, Price was willing to admit that Captain Wings Wyman was in a tough spot.

"That man is as good as dead right now," Colonel Burleigh breathed, and the remark brought forth no contradictory sally.

Again the heavy de Havilland roared in front of the hangars. This time it was terribly low—so low that any little movement of wind would crash it to the ground, bombs and all. The space before the hangars had the least wind movement, however, and Wings knew it. Now he swung nearer and nearer the earth, fairly riding the bombs! Then, with a sudden movement, he jerked the crate back on its tail, almost in a dead stall. The crate chandelled, hanging on its revving prop. As it did, von Leefeldt rolled off. He wasn't thrown—he was dropped, and a drop of eight feet could not have hurt him less than the fall he now took.

The clever, dangerous trick brought a gasp of surprise and delight from Colonel Burleigh. Instantly, ten men were helping the German, but it was Price who reached him first, and deftly slipped the gauntlets from his hands.

Out over the center of the tarmac now, Wings Wyman again coached his D.H. If he weren't blown to bits, the best he could hope for would be a broken neck. There was one thing he could do and be safe, and that was to fly. Even then, he might fly around for hours, but when his gas gave out, he would be forced to slide in on the bombs. Whether he slid in on them now or later, what difference would it make?

His train of thought broke off suddenly. He wasn't going to slide in on any bombs. There was a chance, a slim chance, to escape that fate. The de Havilland rose under the gun, banking over the tarmac. Winging to the far

side, Wings circled around and flew back, counting aloud, "One, two, three, four—" up to forty-seven. Once more he flew over the tarmac, and counted. The number was forty-six, this time.

"Make it forty-five," he said, firmly. "I've got until I count forty-five to do what I want to, to save my life. If I can't stop this crate in that time, I'll crack into that stone wall on the far side of the tarmac."

He moved back for the third time. Pulling far out from the tarmac before he banked around, he swung low as he flopped the heavy crate over on its back. Across the tarmac the bomber swept. Once more he counted. "One, two, three—" The numbers peeled off quickly.

His wings dropped. He tried to drop the tail. "Thirty-one, thirty-two . . ." The tail wouldn't drop. A nauseating feeling surged through his body, and he pushed his stick forward and pressed the gun into the D.H., hauling for the sky.

"Failure number one," he said, "but still breathing."

Then he was far out on the tarmac again. A shadowy gray appeared in the east. Once more he banked about and headed toward the tarmac, laying the D.H. on its back. He gave it the gun full on. The crate throbbed under the strain.

"Twenty-one, twenty-two—" He toyed with the stick. The fins came down, down! They almost touched the ground. "Thirty-one, thirty-two . . ." Wyman fought to keep the wings high from the ground. What he was trying to do was to keep them up until they were forced to flop. And they must flop before he reached forty-five! The stone wall now was directly ahead, and dangerously near.

"Thirty-nine, forty—" The fins cut the ground, plowed the tarmac, leaving a gutter a foot deep. The speed of the de Havilland slackened, as foot after foot of the fuselage was chewed away by the ripping ground.

"Forty-three, forty-four!" The stone wall was upon him. Then the wings pancaked. Crash! Wyman folded, sandwiching, as he breathed an entire prayer in the space of a split second. Would those heavy bombs drop through the now topmost wings? He held his breath until it hurt.

Then, swiftly, he moved into action. In an instant, he was free of his straps, and with an amazingly quick twist, he righted himself. He drove his elbow like a knife through the doped fabric, ripping a large hole. Through this, he scrambled.

Instantly a milling mob was about him, but he forced his way through it. He even brushed brusquely past Colonel Burleigh.

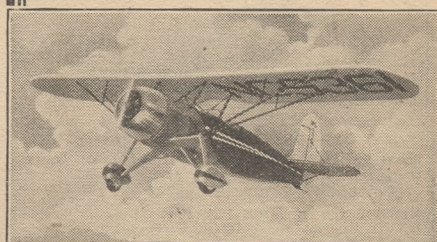
"Price," he called at the top of his lungs. "Price! Did you get those gauntlets?"

"Did I!" shouted Price, enthusiastically. "Look at what else I got—and see where it came from!"

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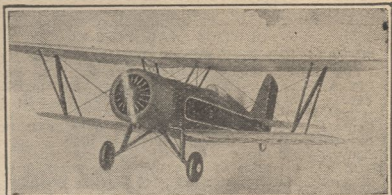
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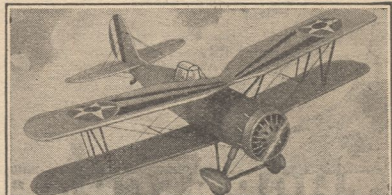
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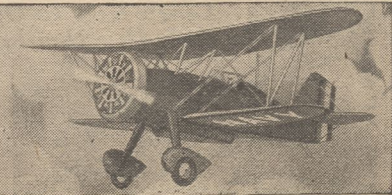


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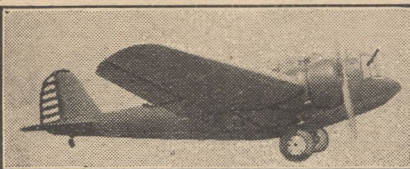
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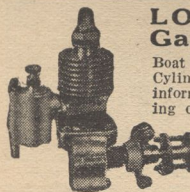


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mail. It was small and cleverly hidden, being little more than a slit in the fur.

WINGS looked at the paper that had been found in the gauntlet. There were seven short lines of figures:

"120-12-37-234-202
11-1-619-8
120-12-37-234-202
189-4
189-4
120-12-37-234-202
16"

Wings Wyman grew all eyes. Seven lines—that meant something, something to this squadron. He spun about, called for Colonel Burleigh, who came up instantly.

"Colonel, what days are we to bomb the Brille-Nestorne road this week?" he asked.

The colonel shot a suspicious glance at Price, but nevertheless replied, "Thursday and Friday."

Wings pointed out the fourth and fifth lines. They corresponded. "And the Trumaine-Nestorne road?" he asked tersely.

"Not until next Sunday."

Wings shook his head. "Now I'll tell you one," he said. "If we hadn't succeeded tonight, we would bomb the Guile-Nestorne road again Wednesday night, and next Saturday!"

The colonel fell back. "You know that?"

"And so would the Krauts, if these gauntlets had reached them," Wyman returned. "Somebody at G.H.Q. has been passing out the information about what roads we would bomb. Recognize that yellow paper?"

Colonel Burleigh studied the paper. A cryptographic expert would get to work on it shortly, but meantime the G.H.Q. official was willing to admit that the paper was from G.H.Q. itself. He shook his head in resignation.

"We have an extra large staff at G.H.Q.," he admitted in a toneless voice. "Doctors, orderlies, officers, cooks, telegraphers, Secret Service agents, cryptographers, and the devil knows who all. Any one of them might—"

Wings nodded. "And you have to come all the way down here to find a spy," he said, grinning.

Price pulled Wyman aside, tugging something from his tunic. "Take a look at these," he said.

He had two leather holsters that looked like subway straps on the ends

of which were strong, heavy clamps. It would be easy to clamp them on the wires of the ailerons and fins and operate an Albatross from inside the fuselage with them. Then Price produced a second pair, a pair formed like stirrups.

Wings sucked in a deep breath. "One pair clamped to the rudder and ailerons," he said, "and the other clamped to the fins."

Price nodded, agreed. "And that von Leefeldt dumped himself out on the far side of the tarmac in the dark. When we weren't looking, he slid into the hangars, and probably hid on one of the roof rafters."

From von Leefeldt, they learned how he had set the D.H. off by attaching a cord to the throttle when it was near the hangars, being gassed. When he wanted to turn it loose, he did it from his perch on a rafter.

Family pride made the aristocratic von Leefeldt talk freely of his brother's exploits.

"My brother," he said, haughtily, "lowered himself to the work of spying—for the Vaterland. He would never trust anyone else to deliver his messages, and so had a pilot drop down in a plane at certain times."

"Where?" Wings said, incredulously. "It would have been seen."

The German smiled disdainfully. "The plane would descend within three miles of your admirable Colonel Burleigh's G.H.Q.—generally at night, with muffled engine, of course." He ignored Wings' uncomplimentary remark about the colonel, and proceeded. "There, the pilot would give up his place to my brother, and hide there until my brother returned from delivering his message."

"But the gauntlets," Price interposed. "Why did he bother—"

"Bother?" The German's voice was freezing. "My brother traveled in full German uniform, when he risked detection in the air. It was fitting for him to die only as an Imperial ace—and wearing the heirloom of the great von Leefeldt family. And it was thus that he did die—honorably. The Allied pilot who shot him down—you, Herr Wyman—did so only because my brother was worn out. And you failed to find the secret message hidden in the gauntlets. I regret that I had to hurt your Oberleutnant Clayton to secure that message from him."

Wyman sighed. "You certainly went to a lot of trouble to scare the living daylight out of us, with all those tricks. But you spoke of the 'Shadow' of von Leefeldt. Was that just bunk?"

For the first time, a hint of real mirth crept into the German's saturnine face. "I am the shadow of the von Leefeldt family," he said. "Six feet, six inches tall, and weighing less than a hundred and thirty pounds. Every other von Leefeldt weighs over two hundred. And German history admits that Eric von Leefeldt, the knight who battled Charlemagne, weighed over three hundred. So when I said that the shadow of von Leefeldt would be on the tarmac, I was telling the truth."

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"I'll be damned!" grinned Wyman. "And I thought I was smart!" Impulsively, he reached out and shook the German's hand. "If you get back to Germany—and I think you will, some-

how," he said, "you can tell them that a shadow can be a pretty tough proposition sometimes—even when the man against him does happen to weigh over two hundred pounds."

Geese Monkeys

(Continued from page 10)

knock before you go in, as there is one chair left an'—well—" Phineas broke into song.

"Oh-h-h, major, may we go out to swim?"

"Why, yes, you great big aces.

But look out for poison spinach,

As it grows in funny places!" Haw-w!"

Captain Howell and three pilots got up in a hurry and made a dive for the Britisher who wanted to take a poke at Phineas. A brawl was averted as Sergeant Casey came tearing into the house. The Flight Sergeant skidded to a stop.

"I don't care if you are generals," he yelled. "I'm comin' right to the point. Lieutenant Pinkham has got to git that mule to hell outa the hangar. It's kicked the tail of a Spad off an' has bit three groundhogs. Where's the Old M—er, Major Garrity? Look where it kicked me! I'm fed up. I'm—"

Howell shooed Casey out, then turned on Phineas. "You know what you're doin', you big ape? You're just framin' us all up nice for the book they will print about aviators after the *guerre*. Our maps'll all have black borders, you homely cluck! We needed those British guys to help wash up von Beerbohm and the Pfalzes over by Metz, an' you go—"

Perhaps it would be well at this point to explain the situation that stared the Allied forces in the face at that stage of the big fuss. According to the observation crates, the Jerries were concentrating ammo and supplies over close to Metz, preparatory to a gigantic leap at the Democrats' throats. It would be a juicy bone for the Allied dogs of war to snatch, but one *Rittmeister* Ludwig von Beerbohm and a dozen and a half Pfalz crates had established a camouflaged drome close by the big dump to insure it against a wash-up.

For days, von Beerbohm's Pfalzes had made it hot for Allied buses. The drome had been pitched somewhere between Metz and Chambley, and telephone connections had naturally been established between it and a Boche observation post that reared its ugly head right above the Jerry trenches. No hostile flight could get by this Jerry hawk-eye. Always, von Beerbohm had been waiting with full strength spread out around him.

G.H.Q. was relying on the Spads to get through the von Beerbohm sky barrier, and it was only a question of hours when the order would come through to Garrity and L'Eclair to combine forces and knock off the Pfalz flight by mass attack. So it was no wonder that the members of the Ninth Pursuit Squadron were watching Phineas

Pinkham with palpitating power plants.

"You would think you were fightin' for the Krauts," Bump Gillis shot at him. "They should shoot ya for treason, you freckled—"

"When they hand out medals, who is always waitin' for them, huh?" retorted Phineas with a grin. "I ain't worried about von Beerbohm, as I will fix his wagon, also. Haw-w-w-w! Well, if you'll excuse me, I must go now, as the biscuits are in the oven an'—"

"I don't know why we just don't kick the hell out of him until we get the dump," Howell growled. "If he ever gets the Frogs mad at us, it is all over but the burial services."

THEN came the eventful hour when Lieutenant Phineas Pinkham ducked Howell's returning flight and went back toward Metz to take a squint at the pattern of the Boche linoleum. Von Beerbohm had jumped A Flight with ten Pfalz pursuit ships, and had convinced Captain Howell that it was not his day to gloat. Phineas' playmates had battled it out until they had spotted another flight of Boche spearing up from the mosaic. Discretion had handed valor a punch in the solar plexus, and back to the drome the Spads had raced. But *Herr* Pinkham had grown very indignant.

"I'm goin' back an' take a look," he growled. "Maybe I will catch the bums unawares." As fate decreed it, a Pfalz had also remained aloft, and it was inevitable that an argument should result as to who had the most right upstairs. Phineas soon spotted the Pfalz, and girded his loins for battle. Von Beerbohm's scout proved to be a set-up. After a series of maneuvers that made Phineas dizzy, he poked at the Pfalz' blind spot.

"Ach—Gott!" the Boche pilot yipped, and winged over. "*Himmel!*" coughed the squarehead, as the Pfalz shivered again. "Nefer shouldt I coom oop *mit* sooch *ein* headache, *nein*. Ach, I been feel shakes *mit* shudders."

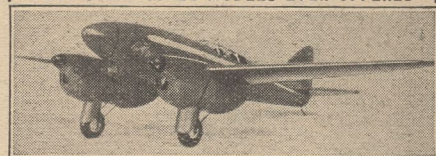
Phineas was getting ready for another punch, when another ship spun down out of the cloud mass above his head. It bore the cocardes of L'Eclair's squadron, and the Yankee yelled bloody murder as the ship slammed a burst into the Von.

"It's my Von, ya big snail-eater!" the Boonetown pilot roared. "Lay off, as I will forget you're on my side. Oh, the Kraut is goin' down—you fresh Frog! Well, if ya think you kin cheat me—"

The Pfalz went into a spin, snapped out of it, then glided down into Allied

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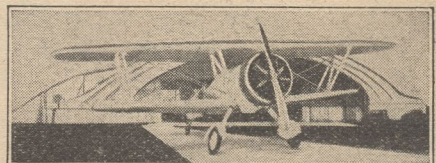
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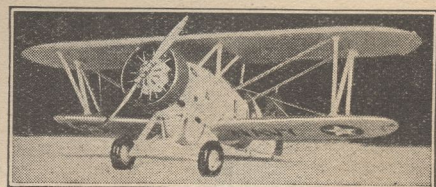
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real estate. Its wheels smacked the bumpy sod of a pasture devoted to the feeding of sheep, bounced high into the air, and then came down once more to land on the bias. Phineas, as he wing-slapped down, saw that the Frog Spad was wasting altitude fast, and it looked like a toss-up as to who would collar the Von first. But Phineas' crate kissed the turf ahead of the Frog bus, and the Iowa miracle man left his ship in a hurry. An excited, swearing, gesticulating Frenchman was lifting himself out of his pit when Phineas skidded to a stop not ten feet from the Kraut, who was leaning up against the side of his ruined Pfalz.

"*Handen hoch!*" grinned Phineas. "Did I bring ya down, or didn't I, huh? Hurry up, as the U. S. treats ya better than the Frogs, ya know that. Well—I—er—" Phineas gulped, then backed away as he took a good look at the grounded Von. Just then the pilot of the other Spad came up, uttering lusty protests. Phineas looked at him, then laughed to himself. It was Major L'Eclair once more.

"Oh, so we meet ag'in, you wrecker of love-lives," yipped Phineas. "Well, I always play fair, an' the Von is yours. There's lots more of 'em in the *guerre*, haw-w-w-w!"

"*Merci beaucoup*," prattled the French squadron leader. "You are ze *bon homme*, Lieutenant Peenckham, *oui*. I—"

A groan came from the Boche. He was passing a hand over his brow. Major L'Eclair stepped up and gloated over the prize.

"*Regardez*," he thrust at Phineas. "Ashamed he ees, an' his face eet ees *tres rouge*, non? Ha, ha!"

"Yeah, haw-w-w-w!" chuckled Phineas, as he continued to backstep. "Look, the Kraut is even shakin' just lookin' at voose. Well, adoo, majair, as I will leave ya with your prisoner, haw-w-w-w!" And as Phineas climbed into his Spad, he murmured to himself, "No wonder he was a set-up. Oh, boys!"

Phineas' intentions about returning to the drome were good, but his Spad had other ideas. Somehow, during the brief set-to with the Von, his Hisso had been poisoned with lead. It quit, not far from the village of Revigny, and Phineas nursed it down right into a Frog farmyard. The Boonetown trickster climbed out, and wondered what all the noise was about. A tiller of the soil soon enlightened Phineas.

"Peeg!" the farmer screeched. "Almos' you have break up all ze geese coops, *oui!* Crazee *Americain!* *Sacré!* *Mon Dieu!* *Vite, vite*, get ze fly' machine away!"

"I guess you think that's just a go-cart, huh?" retorted Phineas. "Let me see ya pick it up an' throw it under the apple tree over there. Huh, now just relax, as what is the use of git-tin' all worked up. Boys, look at the geese! You must be Papa Goose, huh? Haw-w-w-w!"

"Bah," snorted the Frog peasant, and stamped away.

Phineas followed him, and became

very interested in the wire pen that was filled with the honkers. "That's a big flock," he tossed out. "Are they wild?"

Evidently the farmer had a yen for the squat fowl with the big feet. He began to brag about how much he knew of the feathered creatures.

"I have fin' ze wild goose eggs," he explained proudly. "Ze geese she go up nort' to lay heem some egg. When zey have hatch' an' geet *tres gros*, zey fly back to ze sout', pouf! *Oui*, I, Pierre Bretay, am ze champyon gooze raiser, non? When zey weel fly away eef I let zem out, I keep zem mebbe wan year, an' zen they don' go."

"I bet they're good eatin', huh?" grinned Phineas, suggestively licking his lips.

"So?" exploded the Frog. "You steal zem I bet you. Seex shot guns I have, an' loaded up. *Aussi* Pierre, he does *ne* sleep *pas*, *comprenez vous?*"

"Haw-w-w-w!" guffawed Phineas. "A word to a wise guy is plenty, huh? Well, I'll *allez* now, an' send somebody out to fix up the Hisso. Don't start usin' it for a hen coop while I'm gone, Pierre. Adoo!"

As Phineas strolled across country, his mind began to churn, and evolved a batch of ideas, the possibilities of which were positively astounding. Like the Count of Monte Cristo, he was laying the foundation of sweet revenge on all his persecutors. Babette, he felt sure, was ruing the day that she incurred the Pinkham wrath. The British wisenheimers had tasted bitter reprisal. If he was not sadly mistaken, Phineas mused, Major L'Eclair and his Frog pilots would soon regret the day that Phineas Pinkham had made them a present of a Jerry Von.

IT was late when the errant Ninth Pursuit pilot returned to his home drome. The pilots were at mess, and Major Garrity was in his sanctum listening to the woes of emissaries from G.H.Q.

"Evenin', bums!" blared a familiar voice. "It was a long walk, but you have no idea how exercise in the open stimulates me. Where is Goomer, as I am famished."

"Tell him," Bump Gillis said darkly. "He won't have no appetite then, captain."

"Day after tomorrow night the show starts," Howell informed the prodigal gloomily, idly sopping up gravy from his plate with a hunk of bread. "We go over an' wash up the dump—maybe. Ha, ha! Well, we've lived longer than most guys, anyway."

"It's about time!" gurgled Phineas. "I've been waitin' for the day. Do ya think the Frogs will be much help, huh?"

"They'd better be," groaned Howell, "or else—excuse me. I have to write a letter home, an' then you can have the rest of my writin' paper. The R.O. is thinkin' up nice telegrams already and—"

The door burst open, and Major Garrity stamped out of his quarters with two Brass Hats hard at his heels. The

Old Man caught sight of Phineas' physiognomy, and his shoulders sagged.

"I thought it was too good to be true," he moaned. "Where you been, you—"

"Why, I was out studyin' the wild life of our feathered friends," Phineas informed him. "Up until now, I was never interested in the goose, but did you know of their breedin' habits? Major, it is somethin' all of you must look into more. I—"

Captain Howell and Bump Gillis kicked back their chairs with deep sighs. They saluted their superiors listlessly, and filed out.

"That's just like them guys," Phineas said scornfully. "They never want to talk on educational matters. Major, if a goose got out, an' it wasn't time to fly south, what direction would it go?"

"Ah—er—excuse him," the Old Man explained to the Brass Hats. "Lieutenant Pinkham is carrying on just on his stamina alone. Ha, ha! Well, anybody is liable to go nuts in this *guerre*, eh?"

"Too bad," commented a colonel, shaking his head. "And so young, major."

"I'm just as sane as you bums—er—officers," yipped Phineas.

"That's a sure sign he's crazy," the brigadier said to Garrity. "Ah—er—aren't you afraid he'll get violent?"

"Ha, ha," laughed the C.O., "I wouldn't know if he did."

They all walked out and left Phineas alone. Glad Tidings Goomer, the mess monkey, came out with a platter of beef, set it down and ducked fast.

"They say I'm nuts. Ha, ha!" Phineas laughed hollowly.

"Don't ya b-believe th-them, lootenant," said Goomer, but he broke into a run, dived into the kitchen, and bolted the door behind him.

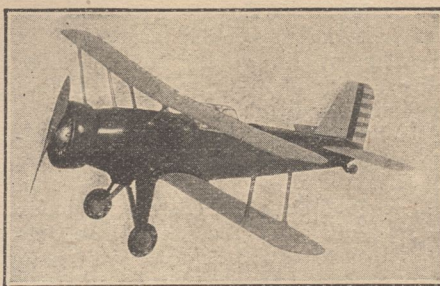
"Oh, yeah?" Phineas sniffed indignantly. "I'll show them fatheads."

A Flight patrolled again at noon of the next day. Von Beerbohm chased them out of his front yard, and singed them with tracers. Phineas took quite a pasting from the Von himself, but managed to get back and set down a Spad that looked like the carcass of a turkey on Christmas night. Its wish-bone was laid bare, its ribs were knocked awry, and fabric hung from it in shreds.

"You'd better call off flyin' until tomorrow night," Howell tossed at Garrity, "or we won't have anythin' to fly over to the ammo dump but kites. Look at them crates!"

"No, thanks," groaned Garrity, and turned his eyes away. He knew that if he could put eight Spads in the air on the morrow, he would be very lucky indeed.

But it was the next morning early that the last straw which broke the well-known camel's back was wafted in on the breeze. A Renault boiler roared onto the drome and unloaded two Frog officers. They waved their arms and chattered like lemurs as they scrambled into squadron headquarters. Garrity came running out, suspenders dragging. Pilots who were not up on the early go, also appeared to investigate.



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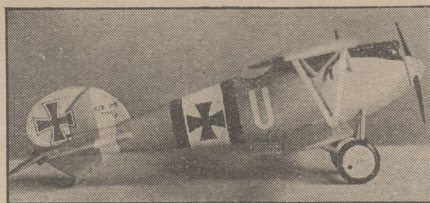
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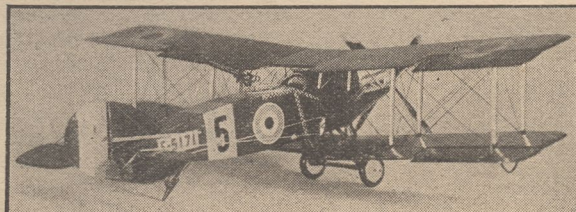
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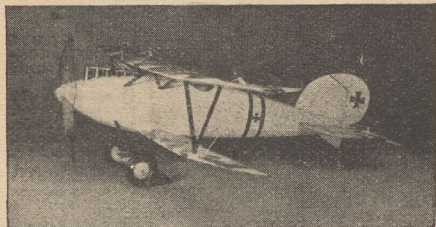
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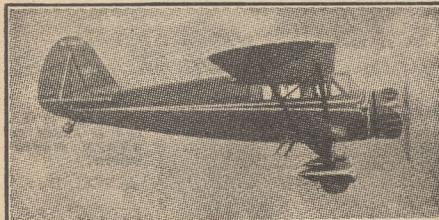
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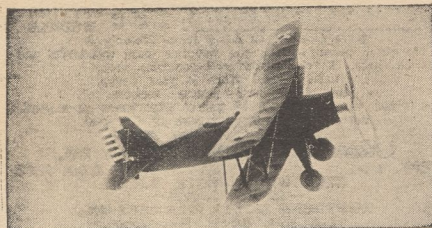


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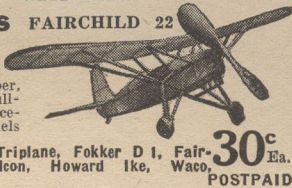
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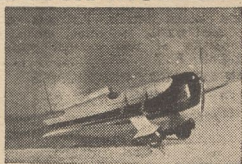
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"Ze Majair L'Eclair's squadron, she ees all kaput—pouff!" squeaked a French captain at the major. "*Mon Dieu, sacré bleu*—they have get *tres mal* in ze beds, *oui*."

"Wha-a-a-at?" The Old Man swallowed hard as his heart zoomed for his tonsils.

The Frog stumbled on. "Ze prisonair ze Boche he ees ver' seeck with ze German measles, an' ze majair an' *beau-coup* peelots catch eet. Ah, *Mon Dieu*!"

"Frogs with German measles, huh?" yipped Phineas. "I declare—the Eskimos will git malaria, next. Haw-w-w!"

"You shot down that Hun, huh?" Garrity roared. "Oh, I heard you did. An infantry outfit saw you. You saw that the Jerry had—why, you big spotted gargoyle, you let the French C.O. have him and didn't tell him? Why, you—"

"Blamin' me again, huh?" snorted Phineas. "Why—huh—maybe it was careless of me not to have my stethoscopes with me, an' my temperature thermometer. I would've examined him an' made out a chart. Oh, you can't pin this on me. I says to myself, 'I'm not takin' any Von with the measles back so that my dear C. O. will get them.' An' what thanks do I git, huh? Oh, boys, I hope I knock one down that has got leprosy. I'd show ya!"

The Old Man groaned, "Cripes!" and fell into a chair. He began to count on his fingers. One, two, three—up to eight. That was the number of ships which would try and smash their way through the Jerry protecting screen to the concentration center near Metz.

"Well, I'm square with everybody now—all but von Beerbum," Phineas said complacently, quite unabashed. "I will cross him off next. Well, compared to me, the Count of Monte Cristo was just a wall flower. Adoo, as I must go out an' brush up on wild life."

Captain Howell tried to get the Frog officer's gun away from him. Bump Gillis and the Old Man helped tear the flight leader loose.

"Go ahead, Pinkham—run!" Garrity roared. "We'll hold Howell for just five seconds and then give him the gun. I don't know why I'm stopping this."

The wires buzzed all over the sector until dusk. Wing Headquarters went haywire, but assured Garrity that he was to carry on with what equipment and manpower he had, and like it. The C.O. of the Ninth locked himself up in his quarters and paced the floor like an actor rehearsing his lines. And while he contemplated packing up and getting to the Swiss frontier in disguise, Phineas Pinkham was put-putting out of the Ninth Pursuit Squadron on a motorcycle. One of Casey's best ack emmas was sitting in the sidecar with a bag of tools in his lap. Major Rufus Garrity had given orders that the Pinkham Spad should be in shape to take the air if they had to borrow parts from every other battle wagon on the drome.

"That is like the old turtle," yipped Phineas to the mechanic. "Always thinkin' of me, huh? It is little things like that that help me to bear up in this

guerre, haw-w-w-w!" With the guffaw, Phineas took a curve at fifty miles per hour and the bathtub attachment was lifted off the ground.

"Hey, you damfool," the non-com yelped. "I ain't no flyer. Cripes, will I git even with Casey for this!"

THE Frog farmer was finishing up his nightly chores when Lieutenant Pinkham and his passenger got out of the motorcycle and strode up to where the Spad crouched. The ack emma scratched his head as he surveyed the crate.

Phineas grinned. "Well, let's take a look at the Spad's giblets. C'mon."

The non-com climbed up and began to poke around. Suddenly he swore and looked down at his superior. "Only a couple of wires knocked loose," he snapped. "It'll take about four seconds, an' here I give up a date in Barley Duck an'—"

"You can take the motorcycle an' go back," Phineas told him. "The Old Man said ya could have it for the evenin'."

"Did he?" the ack emma yipped gleefully. "That was sure nice of the old boy. I kin take my dame ridin' an'—he's a swell guy, huh, lootenant?"

"Yeah," agreed Phineas and turned to the Frog, who was watching the proceedings with avid interest. "How are ze goose, *non*? How much would ya take for the lot, huh?"

"*Non, non*, ze million francs I take not," protested the Frog vigorously, using much emphasis and a flock of gestures. "*Mais non!*"

"Well, lootenant," grinned the ack emma, climbing down from the Spad, "it'll perk now. I'll help ya git the crate out where ya kin git a good start, an' then I'm off to Barley Duck."

Ten minutes later, the motorcycle chugged away.

"Boy, will he git hell!" grinned Phineas. He turned back to the Frog farmer. "You wouldn't have some *vin rouge* by any chance, would ya?" the inimitable Yank tossed out carelessly. "I can't wait until ya tell me more about them swell geese of yours, *oui*."

Until the wee small hours, Phineas sat in the farmhouse of the gullible old Frog listening to Pierre Bretlay's lengthy discourse on the life and habits of the gray-lag goose. When the Frog began to yawn, Phineas suggested that he would like to hit the hay, but that it was too late to get back to the drome.

"Oh, *m'sieu, ici avec moi* you stay," the peasant eagerly suggested.

"Mercy beaucoop," grinned the Yank.

Later, in the privacy of his chamber, the great Pinkham began to burn the midnight tallow and, aided by the light shed from it, he began to work on an intricate design. With pencil and paper he toiled until the crack of dawn. He had figured out the distances between Bar-le-Duc and Revigny, between Revigny and Ars, a small town near the spot where von Beerbohm and his Pfalzes had to be. He had figured the speed of a Spad with Hisso wide open, and the speed of the same bus throttled down. At length the miracle man yawned, grinned, and then prepared

for bed, muttering to himself.

"Stranger things have happened," he murmured. "If it don't work, I'll just go over an' git me a pair of wings with the rest of the bums, as I am willing to give up all for the Stars an' Stripes. Goodnight to yourself, Mr. Pinkham. Haw-w-w-w!"

Dawn on the drome of the Ninth brought more grief to the Old Man. Bump Gillis woke up to find that Phineas Pinkham had not slept in his bunk. Major Garrity was duly acquainted with the fact and the C.O. sent for Casey and the ack emma who had gone out the night before. Casey showed up, but the groundman was nowhere to be found.

"They didn't come back," announced Casey. "They—" His words curled up and lay down. Onto the drome came the motorcycle, wide open. It described a zigzag course across the field and headed for the Old Man. Casey flattened himself just as the mechanical bug threatened to wash him out.

"Whoop-e-e-e-e!" yipped the occupant, and headed for the groundmen's barracks. Crash! The ack emma bounced out, went right through a window, taking sash and all with him.

"He won't be able to tell us nothin', I can see that," Casey groaned. "That crazy loopy! He did this, I know. He—oh, what's the use?"

By afternoon the ack emma had recovered his marbles enough to tell the Old Man where Lieutenant Pinkham could be found. In less than a half hour, the squadron Cadillac squealed to a stop in the Frog farmyard outside of Revigny. Garrity saw the Spad, but no Phineas. The Frog peasant appeared, doffed his cap and handed the Old Man a letter. It read:

"Dear Sir:

I have run away. I am afraid to die, as I am still young. Forgive me and try to forget. Phineas."

The old Frog ran to a well and got a pail of water. After a while, Garrity could walk under his own power, so he got into the car and headed back to the drome. All the way, he mumbled to himself like a hermit. He pinched himself, rolled over in the back seat of the car to see if that would wake him up. Three grim-jawed Brass Hats from Wing headquarters were awaiting him when he arrived at the field. The Old Man pulled himself together and nodded.

"Go ahead," he mumbled weakly. "How many pilots do you want killed? Ha, ha, the show has to go on, huh?"

It had to, the Brass Hats assured the major. All the Spads he could muster would take off at six. The ceiling promised to be low, but that made no difference. Probably the Pfalz outfit would not expect the visit under those conditions. Four ships would carry bombs.

"Uh-huh," was all the Old Man said during the entire powwow.

Pilots began to make themselves ready. Spads were looked over. The day wore on. The news of the Pinkham farewell *billet doux* had sent morale

down forty points, and the stock of the Ninth Pursuit Squadron had slid right off the Allied exchange.

"It can't be so," Bump Gillis protested. "Aw cripes, it ain't so—not Car-buncle."

"We'll carry on, huh?" Howell said. "Nothin' will daunt us, anyway, huh?"

"Nope," somebody groaned, "only about two dozen Krauts, ha, ha!"

One hour later, eight Spads rolled away. Four had bombs snuggling close to their abdomens.

"There goes what's left," Major Garrity muttered. "Pinkham, some day I'll find you. I'll devote my life to discovering a new slow poison and—"

MEANWHILE, at the farm outside of Revigny, Phineas Pinkham was crouching behind a clump of bushes close to the goose pen. Old Bretay was in an outbuilding doing some chores. Heart thumping, Phineas kept his eye on a watch in his hand. The chart he had made the night before was spread out in front of him.

"It is time," he said at last. "The bums'll be headin' out in about fifteen minutes." He got up, went to the pen and ripped open the door. Geese honked and started for the great outdoors.

"He-e-e-y!" the culprit howled. "The geese are out, Frenchy."

Old Pierre tumbled out of the shed, saw the feathered creatures pouring from the pen. The Frog made a big mistake. He chased the geese with a pitchfork. The young geese honked with alarm and hopped clear of the ground. They felt buoyancy under their wings. Instinct did the rest. Lieutenant Phineas Pinkham ran to the Spad that had been warming up for ten minutes. As he jumped in and jammed the throttle into place, he looked back. Geese were soaring into the leaden sky. A score or more. And when the Boone-town pilot reached an altitude of a thousand feet, he saw that the geese were getting into formation high over the church steeple of Revigny.

"Oh, boys!" the Yank enthused. "They're headin' north the way I figured, an' they're makin' speed. Now I must figure this out so I will be way

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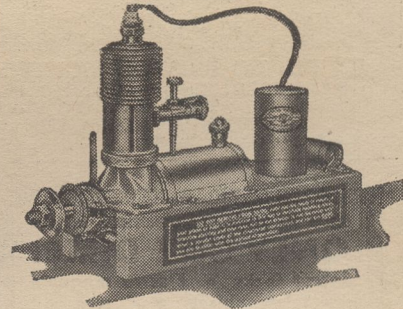
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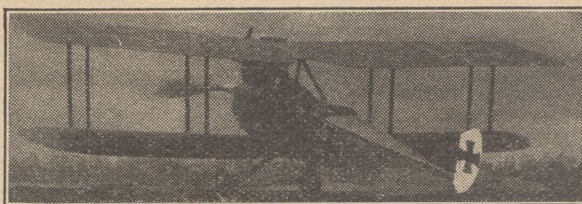
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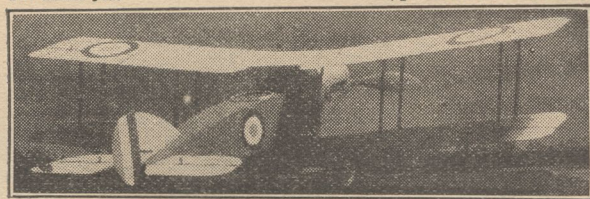
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behind and above them so I will look as small as they are. Von Beerbum, I am on my way with my squadron, haw-w-w-w-w!"

Phineas cut his speed down ten miles from Revigny. He saw the big V swerve and his heart flopped. He gave the Spad its head and circled the flight of birds. The honkers changed their course, and Phineas eased up on the gas.

Over Ars, von Beerbohm's fifteen Pfalzes poured down on Captain Howell and his seven warriors. Right away, Garrity's brood saw their finish, but they gritted their teeth and hampered away. Spandaus spat back at them. The four Spads carrying the bombs fought to get through, but a wall of Pfalz hellions kicked them back. Bump Gillis said, "To hell with it," and dumped his bombs overside.

Rittmeister von Beerbohm yelped exultantly as he plied his trade. "Ach, Dumkopfs. Sendink der mouse vhat shouldt lick der moose vunce. Where iss idt der greadt Pingham, ha-a-a-a-a?"

Across the heavens the mêlée swept. Captain Howell speared a Pfalz with a stream of lead, then zoomed high to take stock of the one-sided battle. He winged over as von Beerbohm lanced at him, and Howell signaled as best he could that he had had enough. Bump Gillis nodded with approval and began to fight his way out. Then von Beerbohm yipped, "Himmel!" and rocked his Pfalz. From the direction of the Allied lines, a great V had become visible. Higher than the rest was an escorting ship. Howell saw it, too, and uttered a blood-curdling yell. Pfalz ships turned tail and raced back into Germany. Six Spads chased the laggards, cut two down. Then Howell knifed close to a Spad that carried bombs, and stabbed a gloved hand toward the great Boche ammo and supply dump.

"There they go," shouted Phineas Pinkham. "If the Boche don't turn back—Haw-w-w-w-w, have I got a squadron, oh, boys!"

Five miles away, von Beerbohm headed for a Jerry drome. Ten Pfalz ships followed after him. And then the Rittmeister watched that great V, with his lower jaw dropping right down into his lap. It had changed its course and headed for the Channel.

"Ach, Donner und Blitzen, ships it ain't. Geese—Gott!" He waved an arm, yanked back the stick. As the nose jerked up, he heard a terrific crash. "Der doomp, ach du Lieber!" he groaned. "Too late vunce—Geese idt giffs, und—"

Bo-o-o-om! Von Beerbohm looked down at the Kraut carpet. Another bomb hit. High explosives were shaken to their vitals, and great gobs of flame and smoke began to well up from the concentration center. Von Beerbohm and his Vons tried to bridge the gap, but the Spads were leaping toward the Allied lines like greyhounds chasing a rabbit. Phineas Pinkham hurled his Spad down close to Howell's and wagged his wings. The flight leader responded, and even tossed the prodigal son a kiss.

"Boy, did I make monkeys out of von Beerbum and his other bums!" the Boonetown wizard roared at Howell. "Geese monkeys, haw-w-w-w-w! Well, when I git back to the Old Man, I will have the flying manuals burnt up an' put Mother Goose books in their place. That makes me even with everybody now. I marvel at myself. Can't nothin' stop me?" And although nobody could hear him, Phineas chattered all the way to the Ninth Pursuit's drome.

Old Man Garrity spotted seven Spads returning, and ran back into the farmhouse. He grabbed at the R.O.

"Go out an' look!" he squeaked. "See if you see the same thing I do, then I'll believe it. Hurry up, as I can't wait."

"Come on out, major," the R.O. yelled from outdoors. "It is right."

One by one, Garrity's crates landed, but they paid no attention to their C.O. As they got out, the pilots formed into a group and waited until the last battle wagon had taxied to a stop. Then they barged forward and stormed a Spad that bore the markings of Lieutenant Phineas Pinkham. Like a man who had just made the winning touchdown, Phineas rode over to his C.O. on the shoulders of Bump Gillis and Captain Howell.

"Somethin' is wrong," groaned Garrity. "He—that fathead, he—"

"Haw-w-w-w-w!" yowled Phineas. "I am Papa Goose. Major, you better give me a flight leader's job, as if I can lead geese, I can lead these bums. Let me tell ya about wild life, as—"

"Startin' that again, are you?" stormed the major. "Put him down, you men, and I'll knock his ears off."

"We blew up the dump," chortled Captain Howell.

"Phineas did it—"

"He was leadin' some geese an'—"

The Old Man pawed at spots in front of his eyes, turned and staggered into the farmhouse. "Geese—poison ivy—German measles," he muttered. "Ha, ha, get me my rug as I must go out and meet von Sinbad at dawn. Oh, let go of me, I will not go to Elba—ha, ha!"

Some time later, Garrity was finally convinced. Phineas Pinkham sat at the head of the table in his place, and produced the diagram he had made.

"You see, I figured the speed of geese against Spads, and added up the miles between. Well, I also figured how I could make myself smaller than I seemed by flyin' back of the geese. Multiply the speed of a goose in flight by eighty-five miles per hour—oh, it's simple, huh? Did you bums know the ceiling of a goose is only maybe three thousand feet? But you can scare them higher. Now, them geese—"

The phone buzzed in Garrity's sanctum. The Old Man blinked his eyes and staggered in to answer it.

"Yeah," he said to the Wing Commander. "Oh, that? Ha, ha! It is all in a day's work. Yeah, all right, we'll be expecting Pershing. How? Oh, we used geese as we are short of—"

Over at the Wing, the Brass Hat plunked down the receiver. "I guess the strain has been too much for him. Garrity's been under terrific pressure. Too bad," he said sadly.

The other Brass Hats nodded gravely, sighed in unison and then asked if there was any cognac about.

Chuting the Chutes

(Continued from page 7)

ought to be over land, and began trying to find the ground. After several attempts, he decided that it would take X-ray eyes to see anything through that fog. And he was afraid to come too low, for he did not know but what there might be a hill or precipice that would jump up and smack his ship into a pile of junk.

Suddenly, there was a cough, a sputter, and the engine died. The gas tank was dry. Webster glided down, straining his weary eyes in a last effort to find the earth. Nothing could be seen anywhere—just a great white emptiness swallowing him up. When he figured that the ground must be getting pretty close but still was not visible, he gave up.

Quickly cutting in the emergency gravity tank, giving him a few minutes' additional supply, he started to climb back up, gathering up his goggles, helmet, and flashlight and fastening the parachute harness. At an altitude of 4,400 feet, the engine cut out cold and the big plane began to plunge downward.

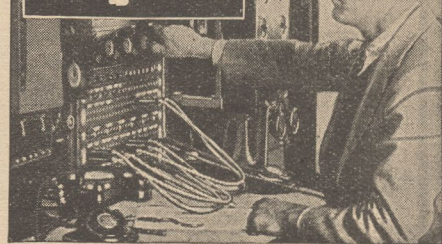
Webster paused long enough to shut

off the ignition switches, navigation lights and instrument board lights so that when the plane crashed it would not catch afire and burn up the mail. He then crawled out of his cockpit and climbed down on to the bottom step. Pushing upward on the exhaust pipe, he was thrown clear of the diving plane. Not a thing was visible, and he could not even tell which way he was falling. However, he lost no time in yanking the rip-cord ring, and the chute opened.

He landed in some trees in Suffield, Connecticut, while the plane crashed across a river a short distance away. When Webster arrived, after locating it through a radio broadcast, the postmaster had already removed the mail and it was on its way by train. Not a letter had been damaged.

THE initiation of Lieutenant Apollo Soucek of the Navy into the select fraternity of Caterpillars was a wild experience, to say the least. Soucek was holder of one of the world's altitude records for airplanes, but his experiences in altitude flying were tame in comparison with his act of joining the Caterpil-

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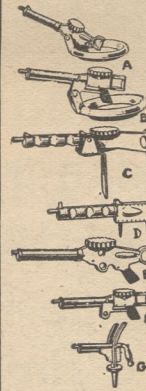
Dear Mr. Smith: Without obligating me, send free book about spare-time and full-time Radio opportunities and how I can train for them at home. (Please print plainly.)

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ADDRESS.....

CITY..... STATE.....



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think of Selley—orders shipped
within 24 hours.**ACCESSORIES****6 14 INCH WING SPAN
FLYING MODEL KITS****\$1.25**
25c
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Fairchild
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KIT
CON-****TAINS—**
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plans, Print-
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Balsa Wood spray,
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Wheels, Wire, Bam-
boo and Reed, suf-
ficient materials to
build a complete
plane in each box.
1 model 25c 10c
extra postage.**New Guns Die Cast****WITH RING
MOUNT**1 1/4" long B 25c
1 3/8" long A 30c**SWIVEL TYPE
GUNS C**2" Double
Action ... 15c**PURSUIT TYPE
GUNS D**3/4" long ... 5c
1" long ... 5c
1 1/2" long ... 5c**TYPE F**

1 1/4" long ... 10c

TYPE E

1 1/4" long ... 15c

**G DUMMY
RATCHET GUN**

7/8" long ... 10c

Postage 3c each

Bombs**and****TORPEDOES**18/16" ... 5c
1 1/4" ... 10c
3" Torpedo ... 15c**DUMMY
MOTORS**Something New
1" dia. 9 cyl. 30c
1 1/2" dia. 9 cyl. 50c

Postage 3c each

Aluminum Disc Rub-**ber Tired Air Wheels**1 1/4" dia. ... 18c pr.
1 1/2" dia. ... 20c pr.
1 3/4" dia. ... 25c pr.**Balloon Tire Alum.**1 1/4" dia. ... 25c pr.
1 1/2" dia. ... 28c pr.
1 3/4" dia. ... 30c pr.**Disc Wheel**1 1/4" dia. ... 30c pr.
1 1/2" dia. ... 35c pr.
1 3/4" dia. ... 35c pr.**Celluloid Balsa**Wheels
3/4" dia. 08c pr. 08c pr.
1" dia. 10c pr. 10c pr.
1 1/4" dia. 15c pr. 10c pr.
1 1/2" dia. 20c pr. 15c pr.
1 3/4" dia. 40c pr. 40c pr.**Swivel Joint Fork****and Axle**3/4" up to 5/8" wheel 10c
5/8" up to 7/8" wheel 15c

Postage 3c pair—on Rubber Tired Wheels, 4c pair

WHEELS**AXLES Threaded and****fitted with washers,****bushings and nuts.**

Lengths 1/16 3/32 1/8

2" 3" 4" 5" 6" 7" 8" 9" 10" 11" 12" 13" 14" 15" 16" 17" 18" 19" 20" 21" 22" 23" 24" 25" 26" 27" 28" 29" 30" 31" 32" 33" 34" 35" 36" 37" 38" 39" 40" 41" 42" 43" 44" 45" 46" 47" 48" 49" 50"

10-11-12" 18 15 25

Aluminum Disc Rub-**ber Tired Tail Wheels**1/2" dia. ... 5c ea.
3/4" dia. ... 6c ea.
1" dia. ... 7c ea.
1 1/4" dia. ... 8c ea.
1 1/2" dia. ... 9c ea.
1 3/4" dia. ... 10c ea.
1 1/2" dia. ... 11c ea.**Treaded Rubber****Aluminum Disc**1 3/8" dia. ... 30c pr.
1 1/2" dia. ... 40c pr.
2" dia. ... 50c pr.
3" dia. ... 60c pr.
5" dia. ... 80c pr.
6" dia. ... 90c pr.
7" dia. ... 1.00 pr.5" dia. ... \$1.25 pr.
6" dia. ... \$2.00 pr.
7" dia. ... \$2.50 pr.SEND 5c
FOR
CATALOG**PROPELLERS****Hawk Type****DIE CAST****Standard**

2-bladed 3-bladed 2-bladed 3-bladed

3" ... 25c 4" ... 35c 1 1/2" ... 15c 2 1/2" ... 15c

4" ... 30c 5" ... 40c 2" ... 20c 3" ... 20c

5" ... 35c 6" ... 45c 2 1/4" ... 25c 3 1/4" ... 30c

6" ... 40c 7" ... 50c 2 1/2" ... 30c 3 1/2" ... 35c

7" ... 45c 8" ... 55c 2 3/4" ... 35c 3 3/4" ... 40c

8" ... 50c 9" ... 60c 3" ... 40c 4" ... 45c

9" ... 55c 10" ... 65c 3 1/4" ... 45c 4 1/4" ... 50c

10" ... 60c 11" ... 70c 3 1/2" ... 50c 4 1/2" ... 55c

11" ... 65c 12" ... 75c 3 3/4" ... 55c 4 3/4" ... 60c

12" ... 70c 13" ... 80c 4" ... 60c 5" ... 65c

13" ... 75c 14" ... 85c 4 1/4" ... 65c 5 1/4" ... 70c

14" ... 80c 15" ... 90c 4 1/2" ... 70c 5 1/2" ... 75c

15" ... 85c 16" ... 95c 4 3/4" ... 75c 5 3/4" ... 80c

16" ... 90c 17" ... 1.00 5" ... 80c 6" ... 85c

17" ... 95c 18" ... 1.05 5 1/4" ... 85c 6 1/4" ... 90c

18" ... 1.00 19" ... 1.10 5 1/2" ... 90c 6 1/2" ... 95c

19" ... 1.05 20" ... 1.15 5 3/4" ... 95c 6 3/4" ... 1.00

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120" ... 6.10 121" ... 6.20 31" ... 6.00 32

Build the Great Lakes Trainer

(Continued from page 28)

cut out of celluloid. As it is impossible to give a template for the cockpit, it is necessary to leave that to the builder who, with a bit of accuracy, can easily make his own template by observing the top and side of the cockpit which I show clearly, for this purpose.

MOTOR AND PROPELLER

THE hood is constructed out of balsa as shown on the plan. One half of the top is covered with aluminum and hinged on paper so that it can be opened when necessary. The bottom of the hood is carved from a solid block, upright on the sides. Sheet balsa is glued. Attached to the sheet balsa is a very thin sheet of balsa which, as you can see from the rear view of the hood, extends to the top dead center. It is at this point that the sheet metal or aluminum attaches and hinges.

The three-to-one motor is installed and reinforced by cross dowels passing into the block of balsa. The shaft of the geared motor is made to protrude about $\frac{1}{2}$ inch out. As there are various types of balsa, I suggest that you reinforce the motor according to the strength of the balsa. Cut out the air vents, as they will allow the gears to cool.

When you are flying the model, it is essential to oil the gears before winding the propeller. Use castor oil.

Glue the hood to the first former, making sure that it is extremely accurate as to the line of thrust. It may also be worth mentioning that the motor must be placed in with equal, if not greater, accuracy, as the slightest angle off the thrust line will result in bad, if not fatal, performance. The amount of rubber used in the first model was eight strands of 3/16 flat. The propeller is not carved but can be bought at the same concern which sells the motor. Attach the propeller, making sure that it is in track.

LANDING GEAR

THE landing gear is constructed of balsa and attached to the fuselage with aluminum fittings. The fittings are shown clearly on the plan. The top view will give you the position of the struts. You will notice that the cross brace on the fuselage has a single fitting which allows the two struts to attach. This fitting is bent around the brace and glued. The strut enters the fitting and is attached to it by a pin. An ordinary pin cut down is satisfactory.

The axle is a small piece of dowel glued to the joint where the landing gear comes together. The shock strut is attached to a small spring which, in return, is attached to the protruding struts coming from the side of the body. The spring is covered with an aluminum cover. Note plan. It is important that you test the landing gear to see that all the struts operate easily. Test the spring for its compression. Two-inch wheels are used.

The landing gear is placed on after the motor has been lined with great accuracy. Streamline all the struts as far up as the fittings.

TAIL CONSTRUCTION

THE complete layouts of the tail can be found on Sheet 4. The rib members are all cut out of 1/32" stock. The outline is bamboo bent over a flame. The two spars, one for the stabilizer and one for the elevator, are 1/16" dowel. The two parts are made separately and attached by an aluminum sleeve.

Cut out all the ribs from 1/16" sheet. It is important that you cut the ribs to the proper airfoil. The stabilizer is made in two separate parts, left and right. Each part consists of one half of stabilizer and elevator. The elevator is attached to the fuselage by the small metal fitting shown in the control detail. This attachment consists of a piece of dowel with another piece of aluminum glued in an upright position in the center. All the spars are made of dowel with the exception of the diagonal, which is bamboo. The complete horizontal surface is attached by means of the small extended dowels, which fit into the small piece of tubing. See Sheet 4.

CONTROLS

THE controls are clearly detailed on the plan and the builders should not have any difficulty in installing them. The ailerons are operated, as you will notice, by a torque tube. This tube, or dowel, is attached to another piece of dowel which is extended from the fuselage. As you will notice on the plan, this is attached to another piece, "E," which is at right angles to the dowel, and is attached so that it turns directly with the extended piece.

The control of the aileron operates in the following manner. As the stick is pushed sidewise, it turns the tubing on which it is attached. At the rear of the tubing, a piece of bamboo is inserted at right angles (note plan). This bamboo also turns. In turning, it forces the extended piece "E" either up or down, thus turning the dowel which operates the aileron. This is clearly illustrated on the plan.

The floor board is constructed to fit the inside frame of the fuselage. The turning tube on which the control stick is attached is held in place on the under side of the board by an aluminum strip which fits around it and is held to the floorboard by glue.

The seat is optional and can be made as the builder sees fit.

WINGS

LAST but not least, construct the wings. It may be worthwhile at this point to remind you that you are building or constructing the wing in the same manner as the large wing is con-

BALSA

150 strips, assorted sizes 15 sheets, assorted sizes 10 propeller blocks, assorted sizes 18 inch lengths 175 items standard sizes enough balsa to build 10 or more large models satisfaction guaranteed finest quality obtainable all of the above sent postpaid for one dollar bill write for balsa assortment no. 3 prompt shipment.

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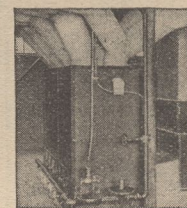
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HAWK MODEL AEROPLANES

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structed at the airplane factory.

All the ribs are cut out of 1/32" sheet. As you can see, the rib or airfoil is a special type known as the M-12. This section was plotted. Therefore it is extremely essential to cut the ribs to the same shape. The layout of the top wing is shown in full, while the bottom one is cut in two parts. There is a little error which the author would like to have changed. Expanding the wing 5 1/16 inches would make the bottom wing fifteen. But fifteen is too large, since half of the fuselage takes up some space. It is therefore necessary to decrease the expansion until the wing measures 13¾ inches from tip to the side of the body. Check this measurement to be accurate. The wing tips lie upon the same vertical line.

The spars are made out of ½" x ¼" tapered so as to fit into the wing tip and ribs at the tip. The tips are flame-bent bamboo. Cover the leading edge, as explained on the plan, with sheet veneer. The bottom wings are attached to the fuselage by means of metal fittings whose shape is clearly drawn on the plan. It is advisable to use nose pliers when bending these fittings so

that you can be sure of having accurate bends. The metal fittings slide onto the spar and a small pin is inserted. To make the removing of the wing easier, do not cover the rib section near the fuselage.

STRUTS AND COVERING

ALL struts are built out of balsa and attached to the fuselage or wings with metal fittings. These fittings are shown in picture form and therefore need little explanation. Streamline all the struts.

Cover the model with ordinary tissue, and spray water over it to shrink the paper. Give the model a few coats of banana oil and sand all wooded parts to a smooth finish. All parts must be covered before attached to the plane. Rig the model with thread giving both wings a dihedral angle of 3 degrees.

FLYING THE MODEL

FIRST test the model over high grass, giving it a few turns. Adjust the model, using the controls to offset any tendency to turn or twist.

What U. S. Air Corps Insignia Mean

(Continued from page 17)

are markings within the squadron, and enable the commanding officer to pick out the different planes while in flight.

They may also have a "chevron" with a number in it, on the center of the upper wing. This, also, is to enable the commanding officer or squadron leader to identify the different planes while flying above them. A stripe around the fuselage is to signify rank, either of a section leader or of the squadron commander. Numbers on the side of the airplane denote the squadron from which it is attached.

All Navy aircraft that are of the heavier-than-air type are in squadrons with a "V" designation. Thus, if Squadron 6 is an observation outfit, it is known as Squadron VO-6 or Heavier-Than-Air (Airplane) Squadron No. 6. In a like manner, all lighter-than-air

types (airships or dirigibles or blimps) are designated with a "Z."

Some of the latest equipment on Navy airplanes includes flotation gear, which is a device to keep a landplane afloat when it is forced down while flying over water. There are two gas bags attached to the airplane just behind the engine and above the lower wing. These are deflated normally, and inflated with a gas, when necessary, which will support the airplane when forced down on water. Hooking devices for landing on carrier decks are now carried, but as this is one of Uncle Sam's latest military designs, information on it cannot be given out. For dirigible contact work, the Macon fighters, the Curtiss F9C-2's, are equipped with a hook to hook on and off a trapeze carried by the Macon.

Happy Landings

(Continued from page 22)

plant is at Buffalo. The Keystone works are at Bristol, Pennsylvania, and no enemy outfit is going to chance those Alleghany Mountains, even though Bristol is only just across the Delaware River from New Jersey. The Glenn L. Martin Company is situated at Baltimore, well on the east coast, to be sure, but it is too close to the big city to be picked out easily.

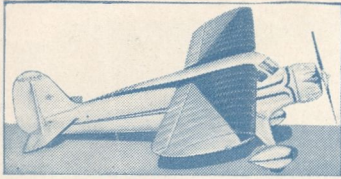
The Northrop Company is at Inglewood, California, which is between Los Angeles and the coast, and is well

snuggled away. The Seversky Aircraft Corporation is at College Point, Long Island, and unfortunately is easy to pick out from the air, while the Sikorsky plant near Bridgeport would be pie for a raiding squadron coming in from the Atlantic. The Chance Vought plant is near by at East Hartford, Conn., and would be an easy target. Waco at Troy, Ohio, seems to be the best located of the lot.

It may sound like a lot of hoop-la but it might be worth considering.

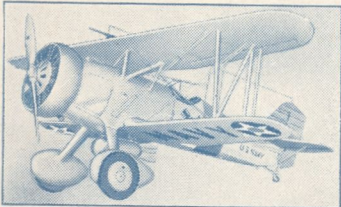
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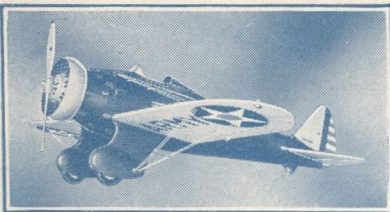
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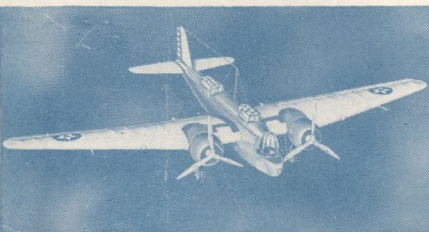
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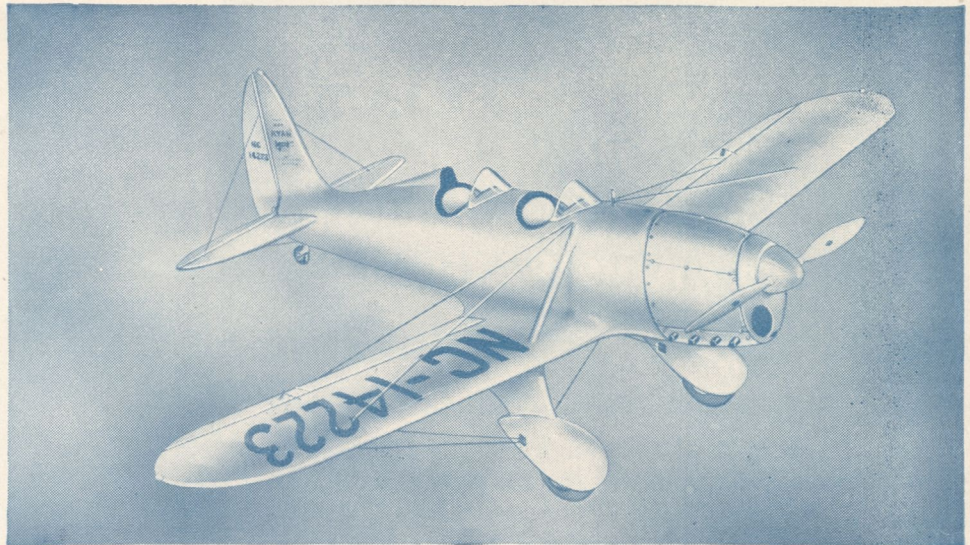
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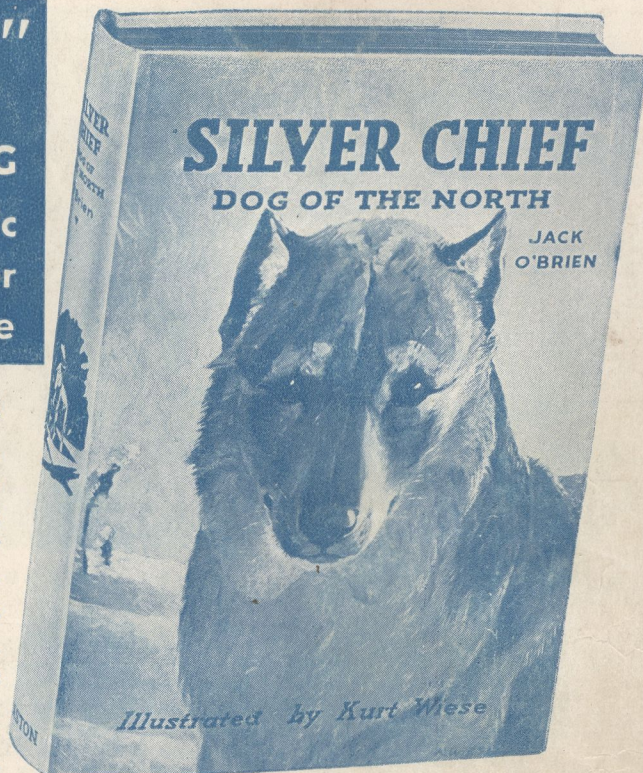
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