THIS MONTH dealers all over the country are announcing the MEGOW MODEL AIRPLANE CONTEST. It will be exciting, there will be loads of fun . . . and thousands of prize-winners will be happy!

Two GRAND PRIZES . . . All-Expenses-Paid Trips to the NATIONAL MODEL AIRPLANE MEET in Chicago this summer . . . head the list. There will be CASH PRIZES, and thousands of gas-powered and rubber-powered model kits that will go to winners.

Don’t wait and be sorry. Hurry down and ask your Megow Dealer to tell you about it right away. Register your name, and get your Contest Membership Button.

Get started on your model now. Because of the tremendous interest in the contest, the closing date has been advanced to June 1st, so you still have time. All types of model airplanes are eligible to enter — so long as they are built from Megow kits . . . the easiest in the world to build!

Send 5c postage today for your copy of this big, profusely illustrated catalog of Model Airplanes, Ships and Railroads.

or 217 N. Desplaines St., Chicago, Ill.
or 718 Mission St., San Francisco, Cal.
2:48 A.M., MARCH 26!
That one minute in 1940 was mighty significant—for it marked the completion of a full year of U. S. airline operation in which not a single passenger or employee met with a fatal accident! FLYING ACES acclaims this brilliant air travel safety record and lauds every one of the many American aviation men who contributed to its accomplishment.

ON OUR FACT AND FICTION RUNWAY

A MODELER LEARNS TO SOAR
ROBT. McLAREN

Balsa Artist Bob got a new slant—and it took him right into the air.

"THIS SQUADRON IS DOOMED!"
DON KEYHOE

Dick Knight was utterly baffled. Then he climbed into—the wrong Romanio.

IS THE RED AIR MENACE EXPLODED?

What Finland discovered about Stalin’s scaring sky threat. Our cover story.

THE PARACHUTE GOES TO WAR
DAVE GOLD

Many new roles are being played by the fighting “silk” of ‘40.

PHARAOH AND WARMER
JOE ARCHIBALD

Mummy’s the word—as Phineas learned in short order!

HATS OFF TO HELENA!
MARVIN LUPTON

That city put its sky program over with a lot more than a bang.

PICK-UP PILOT
ARCH WHITEHOUSE

A toy bell rang Grant Sayer right out of that DC-3—and into a Cadillac!

MODEL MAKERS’ HANGAR

WITH THE MODEL BUILDERS
PAUL PLECAN

PLECAN’S “PARAGON”

NEWS OF THE MODELERS
E. COPELAND

“MAIKE” GAS MODEL

“MOSQUITO” SPORTSTER

LOGGING THE MOTOR MARKET

WHAT DO YOU SAY?

MESSERSCHMITT ME 110 “DESTROYER”

WORKBENCH TIPS

REPUBLIC’S SPEEDY XP-47

DEPARTMENTS AND FEATURES

THEY HAD WHAT IT TAKES

WISECRACK-UPS

THROUGH THE AERO LENS

HAPPY LANDINGS

AERO BOOK REVIEWS

ON THE LIGHT PLANE TARMAC

YOUTH AIR MOVEMENT NEWS

THE AIRMAIL PALS

MODERN PLANES ALBUM

ALL QUESTIONS ANSWERED

NOW WE’LL ASK YOU A FEW

JOIN THE FLYING ACES CLUB

IN OUR NEXT ISSUE

Cover Painting by August Schomburg


Subscription rate: $1.50 for twelve issues in the United States and Canada; and $2.00 in all other foreign countries. Single copies, fifteen cents.
A Modeler Learns To Soar

By Robert McLaren

This, fellows, is my first attempt to talk about myself in all the years I’ve been knocking out aero articles. All my former stuff, you see, was found on the editorial “we”—despite the fact only a guy with a tapeworm seems to have a real right to use that “we.”

However, the experience I’m now going to relate was just good old vertical pronoun “I” from start to finish. And, brother, when you’re 4,000 feet up in the blue alone with no motor that “I” becomes a most important consideration!

After eating, talking, writing, and sleeping aviation for some fifteen years, I figured I at least had a conversational acquaintance with it. But, believe it or not, in all those fifteen years I had never seen a glider! Somehow, my reading on that specific subject had given me the dim opinion that gliding was a passive, unthrill-

ing proposition. Well, I no longer labor under that screwy misapprehension. Instead, I now call gliding the greatest sport in the entire aviation game.

What happened to bring me to this conclusion? Suppose I first spout a couple of fundamentals as seen from my model building background:

Every day, more balsa builders are graduating from models to real ships. Several of those up-and-flying lads have, in fact, told you F.A. fans the stirring stories of how they went about it. But Modeler Bob McLaren doped out a different slant. Already a power-job pilot, he decided that models really have more in common with gliders. And then he was off—to become a soaring skyman himself!

The true forerunner of the first airplane was the glider. And it’s always appeared to me that the model airplane more closely approaches the characteristics of the glider, both in design and behavior, than does the powered airplane. In scaling down a real ship for flying model reproduction, we modelers have learned to enlarge the tail surfaces and wing area, among other things. And we have seen, too, how the glider possesses a much larger proportion of tail surface and wing area than does the powered plane.

Moreover, once deprived of power, all planes and models become gliders. And the function of a model’s power plant is to gain altitude for the ship—generally, to lift it into an effective thermal (rising air) current—and then our flight really begins. The case of the man-sized glider is not dissimilar. For once towed to an altitude offering thermals, a glider pilot drops his tow line and is off.

Therefore, it finally came to me that some first-hand experience in the gliding field would be a progressive addition to my modeling. And here goes the story of how I got it, when, and where.

Stanley A. Hall is one of gliding’s pioneers. Indeed, I’d say he’s the West Coast’s most passionate advocate of motorless flight. At the tender age of 13 years, he designed, built, and flew one of the first primary gliders in the Southwest, and that’s when guys like me were just donning our first long pants. Today, after eight successful gliders and more than 4,000 glider flights, Stan Hall is a Southern California Soaring Association officer, a consulting glider engineer, and a North American firm engineer as well.

After listening to him, I was soon biting my nails for my first motorless flight.

Having passed the primary stage years ago, Stan had to borrow a ten-year-old re-built training glider from Bill Barker and Tony Weissenberger of the North American Stress Department. We quickly hooked the trailer up and hauled the job out to the Dycey Airport on Los Angeles’ famous Western Avenue.

This field, once a thriving ace center, is now abandoned to its memory of being the port at which Corrigan reworked his renowned Curtiss Robins for extra fuel tanks. Residents in the vicinity yipped about the field’s dust, noise and danger, so the CAA and City Council closed it.

Just the spot, we figured—close to home, vacant, and plenty of room for towing. We pulled into it the following Saturday afternoon and had the glider parts laid out ready for assembly when a police prowl car screamed up and laid a firm hand on our feverish activity.

"Yes, we know all about airplines being forbidden here—but a glider isn’t an airplane!" we argued.

Modeler McLaren (left) gets the lowdown on soaring from Glider Pioneer Stan Hall. "I intently absorbed all he said," relates Mac. "Then I climbed into Cherokee's pit alone. I was ready to sole!"

[2]
"There's no noise, no dust, and no danger to the houses around here, since we won't go beyond the field boundaries."

"The injunction includes lighter-than-air jobs, too!" the minions of the law went on decisively. But that didn't stump Stan. He proved our bus wasn't lighter than air—and hanged if the cops didn't drive off after we promised (1) to quit at sundown, (2) to keep generally quiet, and (3) to not get killed!

**HOW ABOUT first giving me a few simple pointers?** I asked Stan meekly after we got the glider set. Frankly, I was a little afraid of the blamed thing. For in a primary you sit right out in the middle of nowhere with just a small stick and two tiny pedals between you and empty space. So to me that glider looked about as inviting as flag pole sitting without the flag pole.

Every time I sneaked a glance at it, one big fact kept popping up to plague me: NO MOTOR! You see, when I pondered on sky gliding I always thought of black cylinders, propellers, exhaust stacks, and a healthy throttle knob in the pit. And I can fly that sort of thing. But here sat a forlorn collection of wings and tubing with nothing up front but thin air!

"The first three rules of gliding," Stan began with a grin, "are keep the nose down, keep the nose down, and keep the nose down!"

"Yeah," I laughed emptily. "I see."

We unsnapped about 800 feet of tow-wire and hooked it up to the glider and to Stan's powerful convertible coupé. Then I wedged myself into the tiny seat. As Stan fastened the safety belt and I tested the controls, that same business of NO MOTOR hit me again. I was really nervous now, and I don't mean a little bit!

"Now don't be shaky, Mac!" Stan chided.

"Why—what makes you think I am?" I cracked back bravely. And I went on to repeat how often I'd flown power jobs, hoping that would cover my nervousness.

"Never mind all that," Stan replied. "You're plenty nervous—everybody is. Anyhow, just remember to keep that nose down and follow your aileron through with your rudder. Then you'll be okay."

He thrust a small, ring-ended wire into my hand. "Here's your tow-line release. Keep it in your hand all the time. When you're ready to let the glider go, pull it. Also, if I slow the auto down, pull it. And if anything unusual happens, PULL IT!"

Then he set my mind at ease, if you'll pardon my sarcasm, by telling me about the poor devils who'd been pulled into the ground and badly shaken up by forgetting to yank that release cable.

"Don't let go of it for an instant!" he concluded. Then he walked back to the auto.

Meanwhile, there was a young neighborhood lad on the left wing holding the ship level, and he smiled at me as if I were Lindbergh or some-one. If you've got a glider, there'll always be a flock of airminded boys around ready to help you. And their aid is appreciated in holding the wings of the glider level until enough speed is gained for lateral control.

Stan now honked twice from somewhere that seemed miles down the runway, and the boy, following instructions, waggled a signal that we were ready.

I saw the cable take up slack all the way along its length as Stan slowly drove forward. Finally, the nose jerked a bit and he halted for our final signal. The boy waggled the wing as an Okay—and contemplating my immediate future I felt three squadrons of butterflies going into a deep echelon in my stomach. Following orders, I quickly rocked the ship fore and aft to break the ground friction of the primary's long skid. And I began to move forward.

Stan wasted no time getting into second gear, and in about three seconds the boy had released the wing...
Left: This striking self-photo snapped by Walt Craig, of Selma, Ala., gives you a graphic idea of what it feels like to be up in an open glider. Walt worked it by attaching a camera to his Franklin glider’s wing and then running a string from its “clicker” to his cockpit. Fuel for the inner-man is all you need in a glider, and in this case it’s a refreshing bottle of pop.

he’d said. My ring wing dropped, and instead of ruddering into a right bank I yanked the stick left and mechanically reached for the throttle that wasn’t there. Then—Eureka! I felt the release ring in my hand. And I remembered what to do with it.

I gave a snap on the cable and found myself free—but still in a real mess. The ship was stalling fast. I fisted the stick forward and the glider shuddered for an instant and dipped. I was headed for my first glider landing. But I prefer to skip telling you about that. Sure, the glider is still in one piece. But my heart—also the base of my spine—took a terrific beating!

No matter, though, that rugged primary taught me a lot of things in these four flights I made in it that afternoon. It gave me basic principles, as it’s supposed to do. And when Stan told me his plans for the next week-end, I was rarin’ to go—for it meant I’d get a crack at flying his Cherokee!

Just a few words here about Cherokee, Stan Hal’s famous utility soarer: Designed and built in his own backyard, this red and silver twoseater has carried Stan Hall to two records. And in the interim it’s been jockeyed around the sky by more of gliding’s great—including the great German soaring ace, Peter Reidal—than any other Southern California product. Cherokee has a span of 42 ft. 8 in., a wing area of 210 sq. ft., and a length of 19 ft. It weighs 839 lbs. empty, and has a wing loading of 3.3 lbs. per sq. ft., an aspect ratio of 8.7, and a stalling speed (or best gliding speed) of 35 m.p.h. Cherokee cost just $250 to build.

We DROVE to Torrence, a suburb, the following Saturday afternoon. There, at the shops of Jay Buxton, grand old man of gliding, Stan stores his prize twoseater. And now, just a brief word on soaring, as distinguished from gliding, for the benefit of you chaps who “just came in”.

Anyway, man has been gliding since ancient times—but it was not until about 1929 that Americans got to learning about soaring. There are two forms of soaring: slope soaring and thermal soaring. Both are practically self-explanatory—that is, slope soaring means cavorting about among the mountains, hills, and slopes, from which air currents bounce off and upward. And thermal soaring, on the other hand, makes use of rising currents of warm air. These currents are not found within fifty miles of open ocean, but the desert region east of Los Angeles offers perfect spots for this type of sport.

There are a number of dry lake beds in this Death Valley area. Muroc Dry Lake is the best known. But since the Air Corps had taken over Muroc for practice bombing, we decided on Rosemond Dry Lake, some twenty miles farther north. It offered the same extensive, flat, pavement-hard stretch—just what we needed.

After some minor repairs and the installation of a new sensitive altimeter, we hitched Cherokee to the auto, said good-bye to Jay Buxton and also to Famed-Scarer Hawley Bowlius, who’d dropped in. Then, at about 3 a.m. Sunday morning we left for Rosemond, eighty miles away.

As we drove onto the big dry lake, we found one section of the flats being churned into a dusty froth by a flock of so-called “gow jobs”—hopped-up Model A and V8 racing cars which find these dry lakes made to order for Sunday afternoon speed shows. We rolled by them and pulled up in

(Continued on page 64)
They Had What It Takes

XLI—"LON" YANCEY—ACE AVIGATOR

By ALDEN McWILLIAMS

1—Born in Chicago on September 16, 1895, Lewis Alonzo Yancey completed a public high school course, then went on to study law and English. He enlisted in the United States Navy in 1911 and remained in service until his retirement in 1921. "Lon" was one of the best rifle shots in our sea-arm. Then in 1925 he joined the United States Coast Guard.

2—Early in 1926, while at sea with the C.G.ers, Lon became interested in aviation—primarily in avigation which was to become the major pursuit of his aero career. His sea experiences, he found, aided him in mastering flying problems. And because of the complete knowledge of avigation he developed, Lon was in great demand among the ocean-hopping pilots.

3—Captain Yancey and Pilot Roger Q. Williams took off on July 8, 1927, from Old Orchard Beach, Me., in the Bellanca Pathfinder for a flight to Rome. Thirty-one hours after taking off, the plane made an emergency landing in Spain. They then flew on to their original destination, where they were accorded greetings almost as fervent as those given Lindbergh.

4—The next year Lon, Pilot Bill Alexander, and Zeb Bouck made another Atlantic flight, this time to Bermuda. They set a precedent on this sea hop by being the first men to spend a night on the ocean and then taking off again under their ship's own power. The plane, which was equipped with pontoons, flew into Hamilton Harbor early the next morning.

5—Lon's next exciting exploit came in the Spring and Summer of 1930 when he flew down the east coast of South America and back up the west coast. Later, he became interested in the autogiro and was reputedly the only pilot ever to loop one. In 1938 he again practiced his expert avigation when he accompanied Richard Archbold, air explorer, to New Guinea.

6—Captain Yancey died at his home in Yonkers, N. Y., on March 2, and was buried in the Arlington National Cemetery. He had received decorations from the Pope, Italy's King Victor Emanuel and Benito Mussolini, also King Albert of Belgium. Moreover, he received a medal from our Navy for his meteorology work in the World War. We hail the memory of Lon Yancey!
ACK in the misty darkness, the two agente de police waited, watching the British destroyer which had just been moored at Pier Four. It was almost nine o'clock when two men came down the gangway. Neither was in uniform. The first man was tall, and he moved with a swift, poised step like that of a fencer. The dim blue war-lamp at the foot of the gangway revealed an alert face as he paused to peer around into the gloom. Behind him came a stocky, belligerent figure, fists automatically doubled at his sides, head thrust forward.

"There they are—the Americans," whispered the senior agente de police. "The tall one is Knight, and the hard-looking man with the broken nose is the former Marine, Doyle."

"Then why do we wait?" said the other policeman.

"This is not the place," replied the first agente, looking uneasily at Doyle's fists and Knight's powerful shoulders. "There is a guard-post at the end of the pier. We may need help."

Keeping in the shadows as much as possible, the two men tiptoed after the Americans...

"I still say it's fishy," growled Doyle. "Last time we were in Paris, the Embassy gave us th' bum's-rush. Now it's 'Please come back. All is forgiven.'"

"Now that we're off that Limey ship, I'll admit something's peculiar," said Dick Knight. "Just because we did the British a little favor on that ferry-route affair don't mean they're going to let us hitch-hike around on the Royal Navy."

"Yeah, and how'd they know we were headin' for Le Havre, anyway?" demanded Doyle.

Knight paused as though to inspect the radiolite hands of his wrist watch. He glanced sidewise, and his eyes narrowed for a second.

"Don't start any fireworks, Lothario," he said in a lowered voice, as they went on. "But we seem to have company."

"You mean th' Limeys are havin' us tailed?" erupted Doyle.

"I don't know. But some one seems decidedly interested in us—" Knight broke off, staring up into the misty darkness. A faint moan grew swiftly into the howl of a diving plane, then a motor was switched on with a thundering roar. Almost instantly, a searchlight flashed up, a hundred yards beyond the pier. A patrol station of the French naval air service was revealed, a ramp in front of a hangar with three or four Romano R.90 seaplanes drawn up on cradles. Mechanics were running toward the trim little fighters, and several pilots came dashing out of a building beyond the hangar.

DIVING HEADLONG down the searchlight beam, a black Messerschmitt Bf.109 hurtled into view. So fast it was only a blur, it plunged through the light, its four guns blazing. Half a dozen mechanics wilted under that murderous fire, and the nearest pilot sprawled to the ramp, his body riddled. The Messerschmitt pulled up with a screech of wings, whipped into a tight turn at less than two hundred feet from the pier.

Knight stiffened. A small, bright crimson light had suddenly appeared on the Messerschmitt's cowl, pointing back at the cockpit. And there in that eerie glow was a gaunt and hideous face, as the pilot looked down with a fiendish grin at the sudden death he had wrought. Knight felt a shiver run up his back. There was something unhuman about that face; it was as though, in that dreadful light, it were bathed with blood.

"Mon Dieu—the Red Nazi!" he heard a voice cry hoarsely somewhere near him. One of the
NEW WORLD WAR MYSTERY THAT BLAZES WITH ACTION

By Donald E. Keyhoe

Author of "Death Flies Blind," "Ark Royal Riddle," etc.

Illustrated by Jon L. Blummer

two men trailing them had emerged from the shadows, and Knight saw he was an agente de police. The man seemed to have forgotten their existence as he stared up at that blood-red face.

A wounded poilu had reached one of the Romanos, was dragging himself up to the cockpit. Just as the motor started, with a flash of the prop in the searchlight’s rays, the Messerschmitt nosed down again. From the far end of the patrol squadron ramp, a machine-gun stabbed wild tracers up into the murk, missing the Nazi ship by a hundred feet. The black fighter swooped past the pier, and that dreadful crimson face twitched a lightning glance down at the destroyer, and at the men on the dock. Then his guns spat—again, and an inferno of blasting lead and tracers mowed down the terrified Frenchmen who were still trying to reach the seaplanes.

“The butcher!” muttered Knight. The next instant he was racing down the steps that led to the ramp.

“Non, non—halt!” shouted the agente de police, and from the corner of his eye Knight saw a second policeman run to join the first. Doyle wheeled, and a huge fist landed on the first man’s jaw. He went sailing backward, landed in a heap, and Doyle sprinted after Knight.

Knight reached the cockpit of the idling Romano. The mechanic, cut down by the second attack of the Red Nazi, was dangling half out of the ship. The plane’s turtleneck was gouged with bullet-holes. Knight lifted the dead man down, sprang into the pit, and hastily tried the stick and rudder. The controls seemed to be intact. Just as he shoved the throttle open, to send the wheeled-cradle tumbling down into the water, one of the French pilots opened fire with his pistol. Knight ducked, opened the 720-h.p. Hisso to full take-off speed. The seaplane lunged down the ramp, tore loose of the cradle, and roared away. Knight backstepped, swiftly brought the ship onto the step. As he worked it up to take-off speed he cast a quick glance backward.

Doyle had reached one of the other seaplanes, was battling two mechanics and a policeman in the attempt to gain the cockpit. A pilot was running out from the squadron office toward one of the Romanos at the other end of the ramp, Knight crouched over the controls, lifted the fighter clear of the water. As he hurriedly fastened his belt, he saw the Messerschmitt pitch down for still another strafe.

Knight tripped the two 20-mm. quick-firing guns mounted in the floats, felt their faint throbbing as tracers sparkled ahead of the seaplane. The Hisso was revving up without a break, and he saw from the temperature gauge that it had been recently warmed up. With a swift turn,
he whirled back to intercept the diving Messerschmitt. The weird red light was still on, and he could see the pilot’s gaunt face jerk toward him. The black fighter whipped around, guns blasting. Knight stared through the V of the gull-wing, caught the side of the Messerschmitt in a hasty burst. The Nazi ship chandelier furiously, then shot back with four prows of fire stabbing from its guns. The Romano’s right wing trembled under a brief but venomous burst, and Knight saw bullets smash the right float as he kicked clear.

The Messerschmitt overshot, streaked down across the patrol base. Knight plunged after it, saw one of the Romanos speed across the ruffled waters of the bay and take off steeply. The Red Nazi twisted back for a hasty attack, but the searchlight flashed across his wings, and he zoomed in apparent fear of a machine-gun burst from the ground. Knight reversed to keep from being silhouetted by the light. When he whirled back, the Messerschmitt was out of the beam and charging in at him, wing-root and cowl guns Winking four red eyes that matched the sinister glow near the cockpit.

Almost head-on, Knight hurled the seaplane at the Red Nazi. The other Romanos, pilot hastily unleashed his guns, kicked around toward the Messerschmitt. But his bullets went wild, and before he could cease firing his tracers were smoking into Knight’s wingtip. The American secret agent swore through set teeth, held to his headlong attack. There was a split-second when he thought the Red Nazi would crash him out of the sky.

A split-second...flaming tracers hitting the head-rest behind him...gouging the fuselage...

Then the Red Nazi frantically whirled to one side, and their wingtips missed by the hair-raising margin that meant life instead of death. Knight saw the red light vanish. Before he could reverse, the Messerschmitt was gone, a black wraith now swallowed up in the mists.

THE SEARCHLIGHTS on the British destroyer belatedly came on, pawing the murky skies. Knight nosed down, and the other Romano followed. He landed, taxied to the ramp, and cut off the engine. The other pilot taxied in alongside, jumped down just as the agents de police seized Knight. He was a junior lieutenant, young, solidly built, with a square-jawed face just now a combination of bewilderment and anger.

“Have no fear, Lieutenant,” said the senior agent. “Both men are under arrest.”

Knight saw Doyle nearby, handcuffed, two mechanics hanging onto his arms, bearing signs of battle. The lieutenant stared at him, turned back to Knight.

“Perhaps you will now explain, Monsieur. Who are you? Why did you steal that plane?”

“I don’t like butchers,” Knight said curtly.

The other man’s eyes lost their uncertain look. “So, then you were trying to kill the Red Nazi?”

Knight gave him a grim smile. “I was hardly playing tidying-winks with him.”

The lieutenant looked along the blood-stained ramp from which the bodies of the slain men had now been removed. His dark eyes lifted to the misty sky, then came back slowly to Knight.

“I am Lieutenant Boussac, acting temporarily as commanding officer,” he said in an altered tone. “Come inside, you and your comrade. I wish to ask you some questions.”

“Sorry, mon Lieutenant,” interrupted the senior agent. “We have other orders.” He drew the young officer aside, showed him a typewritten paper. Knight glimpsed the official letterhead of the French War Ministry. Boussac stared at the agent.

“Then these two just arrived on the British destroyer?”

“Oui, and we are wasting time if we do not carry out the orders.”

“Very well, go ahead,” muttered Boussac. “I will look into this myself. There is more here than meets the eye.”

“What was all the row about?” growled Doyle, as the police and the two mechanics took him and Knight to a waiting Surete car. “I thought they’d be hangin’ medals on you, after trying to knock off that devil.”

“Something’s up,” said Knight. “I’ve a hunch that message from the Embassy was a fake. Be on your guard—”

“You will speak French, or not at all,” broke in the senior agent sharply. Knight did not answer, and the group remained silent until the car drew up at the side entrance of a gloomy building black-out like the rest of Le Havre. The two Americans were marched inside to an elevator, then taken down a third-floor hall to an unmarked wooden door. The senior agent rapped, and a prim-faced civilian opened the door.

“Ah, the Americans,” he said. “Bring them in. There was no need to handcuff this man!”

“Non!” said the junior agent, sarcastically. “Then look at my face—and the two sailors who helped me.”

“Take off the handcuffs,” said the prim civilian. “Leave the Americans here.”

The policemen dourly obeyed, withdrew. The door had hardly clicked behind them when a dapper little Frenchman in general’s uniform came in from another room. He had a beard entirely too large for him, and twinkling blue eyes under enormous eyebrows.

“General La Roche!” howled Doyle. “So you put those bums up to this! I thought you were a friend of ours.”

“But I am, indeed!” beamed the general. “France and I will never forget what you did when you recovered the stolen plans of the Maginot Line.”

“If you don’t mind my saying it,” Knight said drily, “you’ve an odd way of showing appreciation.”

“But it was to protect you, mes amis,” protested La Roche. The twinkle went out of his eyes, and he pumbled nervously with his beard. “We are in deep trouble. I need your help again, and I was afraid some one might try to keep you from getting here.”

“Then it was you who sent that forged Embassy message and got the British to bring us over?” said Knight.

“I must confess it. Oui, I am guilty,” said the general. “Perhaps when this is over, I can—what you say?—make all square.”

“This trouble of yours,” said Knight, “it wouldn’t have anything to do with the Red Nazi?”

THE GENERAL started, and the prim-faced civilian gaped at Knight. “The British, they told you this?” exclaimed La Roche.

“No, I just met the gentleman,” Knight said. He described what had happened. La Roche listened, with his eyes slowly regaining their twinkle. “Name of a little pig! But did I not say these two were miracle workers?” he demanded of the civilian.

“Messesur, this is Gaston, my—what you say?—under-the-covers man. A one-man Intelligence system for La Roche—to make sure the Army and Navy Intelligence they do not hold back something.”

Gaston bowed solemnly. Then La Roche abruptly sobered. “But why did we not hear of this (Continued on page 56)
BRAVE LITTLE FINLAND has fallen! But it certainly didn’t fall before the pilots, gunners, and observers of the Finnish Air Service had fought themselves into a state of physical exhaustion in their determined effort to hold back the Red invader.

And above all, the Finns drew the curtain from the mystery of the so-called Red air menace.

To be sure, the publicity on the Russo-Finnish war was mainly centered on the ski-patrols and the truly gallant snow soldiers. But it was the air soldiers of Finland that really enabled the little nation to hold out as long as it did.

On our cover this month, Artist August Schomburg depicts an actual air battle between a Finnish Air Service Bristol Blenheim and a Russian Z.K.B.19 single-seat fighter somewhere over the ill-fated Karelian Isthmus—a scene that was duplicated practically every day during the course of the Finn-Red war. No matter what the air odds, the Finns proved that Russian planes could hardly be bagged—and in job lots.

Now that the war is over, much can be told and much can be denied. We of FLYING Aces disclosed, in our recent April issue, many faults in the Finnish Air Force. But we stated, too, that in spite of the obvious sky weaknesses of the Reds, “the multitudinous reserves will likely overcome Finland eventually.”

This is exactly what happened. The Finns fought bravely and skillfully, but the human frame can stand just so much and no more when it comes to continued conflict. It’s murder to expect airmen to fight on without rest, day after day. The Finns had a fair number of planes, but they did not have enough pilots to provide opportunities for needed leave and furlough periods, and six weeks of unbroken action is all the best air fighters in the world can efficiently stand without cracking.

During the World War, airmen were never allowed to remain about the front more than three months at a time. After that, they got fourteen days leave away from the front and its airplanes and machine guns. Even then, the physical breakdowns experienced by hundreds of war-time aviators was a great problem.

What, then, must have been the sufferings of the Finnish aviators when they—a comparative handful—were compelled to fly and fight continually week after week without respite? They had plenty of planes according to reports.

They started out with between 80 and 100 first-line fighters and bombers. They had many British Bristol Bulldogs which they did very well with in the first three weeks of war, outfighting the Red fighters and bombers consistently. As a matter of fact, recent figures disclose that this short Russo-Finnish war cost Russia nearly 1,500 planes! But Russia had more than 1,500 planes, no matter how good or how poor they were.

After all, it takes a fight and a certain amount of fuel, pilot time, and the proper number of machine gun bullets to shoot down a plane, whether it is capable of 150 m.p.h. or 400 m.p.h. There came, then, that ultimate period of breakdown—and that was when the Russians scored.

Had the Finns doubled the number of pilots the story might have been different.

After the fighting started, the Finns increased their air power to approximately 500 first-line machines. A number of American Volunteer fighter planes were obtained, France released some Curtiss Hawks, and Great Britain sent over 200 Bristol Blenheims, Gosport Gauntlets, and Gladiators. Some Hurricanes and Spitfires were also available, but they had not been loaded for shipment when the war ended. This resume indicates also that Britain can’t be so terribly short of fighting planes if she can afford to send them off to the assistance of Finland in hundreds.

However, Finland had to give up. And Russia won out, as was to be expected, not because of skill but because of her great amount of manpower. This is a point that will effect any war. Manpower comes above high speed fighters, no matter how many of them you have. The American Brewster fighters did not get to Finland, for Finland was unable to get them there before the scrap ended. Britain and France might have offered more help, but a glance at a map will show the great difficulties of getting an expeditorious force into Finland.

Authoritative military experts declared early in the war that any manpower aid intended for Finland would have been impossible because of the problems of equipping men for sub-zero Arctic conditions.

BUT LET US get to our big question—“Is the Red air menace exploded?” We’d say that it is, considering the fact that Finland, with what little she had, so consistently battled off the Russian sky invasion. Certainly, after this graphic show-up of Stalin’s supposedly-unbeatable aero threat, no major air power need (Continued on page 79)
The Parachute Goes To War

By Dave Gold
Certified Rigger
Author of "What Makes a Parachute Tick?"

New roles for the parachute in modern warfare are today the object of plenty of study and experimentation—not only by the belligerent nations but also by the major neutrals. This is all in graphic contrast to the part played by the "silk umbrella" in the First World War when its use was naturally limited because of the lack of perfection in its design.

Most of us are quite familiar with the much-quoted statistics regarding the great number of lives that might have been saved had a practical parachute been available for the pilots of the 1914-1918 scrap. When that world conflict broke out, parachute descents from balloons were already comparatively common. A little experimentation had likewise been attempted early in the 'teens in equipping pilots of airplanes with parachutes.

In fact, a Capt. Berry successfully jumped from a Benoist biplane pusher piloted by Tony Jannus, over St. Louis in 1912. But because of a great lack of technical data and experience, it wasn't until 1918 that any real number of war pilots got parachutes. And the ones they got wouldn't have rated too high in a 10th Avenue rummage sale.

The observer of the sausage balloon, on the other hand, found his special parachute to be an excellent life-saver. As mentioned before, jumps from balloons had early become quite the thing—at such shindigs as state fairs, you know. So it was a simple matter, considering the knowledge already on hand, to equip observation balloonists with chutes.

During that initial 20th Century war, two types were employed by these look-out men. One was the individual chute designed to lower a single person back to Mother Earth. The other type, a "basket" chute, floated the entire wicker-basket of the balloon to safety.

All of these air life-preservers were then similar in appearance and operation, however. They were all packed in simple containers and securely fastened to the basket, or to the rigging above the basket. In use, the weight of the load pulled the parachute out of its container, and it quickly opened once free. Because of this method of fitting, these chutes were known as "attached-type" parachutes.

It has been estimated that more than 700 lives have been saved by this type of chute. So this balloon device was surely an okay piece of goods.

Parachutes were also used at that time to drop flares. As you know, these flares turned the dark nights into temporary days and were thus of great value to the artillery and night bombers. They aided in night landings, too. Also the problem of supplying necessities to ground forces was frequently solved in those days by dropping supplies via the silk.

Today, the use of the parachute in modern warfare has increased four-fold. Especially has it become important in the saving of lives. In peace-time activities alone, almost 5,000 flyers throughout the world have gone on living in excellent health because the modern parachute trumped the old black card that bore their names. This life-saving was achieved through the remarkable advances made in developing a prac-
tactical parachute for heavier-than-air machine personnel. The interesting story of this development would fill several volumes. Indeed, the great chute-designing pioneers each would fill a separate book in this absorbing history.

Airmen of the various countries in combat today are all equipped with practical chutes. And though it may sound like a pat on the back, it still remains that the United States leads the world in designs and technical advances in this field.

The Irvin chute—the direct result of the pioneering work done in the years that followed the end of the First World War by the U.S. Air Service’s Parachute Division—is now used all over the world as standard equipment. England and the U.S.S.R. are but a couple of the countries in which the Irvin design is standard for fighting airmen. Other American designs, like the Sweitlik, have also enjoyed success in foreign markets.

HOWEVER, foreign countries have not been asleep in designing parachutes of their own. The Pak Parachute, a Czech design also used in England, and the G.Q. Parachute, a British design, although similar to American chutes in many respects, nevertheless present many interesting and worthy features. On the other hand, Italian sky fighters are equipped with the Salvator parachute. While in France, which employs quite a number of different types, the Aivoexc is highly popular.

The Salvator and Aivoexc designs are quite interesting in their departure from parachute design as we know it over here in the States. They employ a single wide belt that encircles the wearer’s body. This instead of the sling type of harness that we use in our chutes. A single metal unit enables these get-down devices to be easily attached and taken off. Also, they are readily adjustable to all sizes of flyers.

Another interesting feature here is the employment of two systems of operation. That is, both a manual system (employing a ripcord pulled by hand at the jumper’s discretion) and an automatic system (using a static lanyard that is attached to the ship and which pulls the ripcord when the falling jumper takes up the slack in the line).

Left: More and more, chutes are being used to drop supplies to advanced or cut-off troops. Modern tactics of this type were brought to perfection in peacetime by such men as our U.S. Foresters, seen here attaching water cans to the silk. Right: This is the standard Irvin seat-pack, which was developed after pioneering work by our U.S. Military Parachute Division. Irvins are also regulation equipment with several foreign nations, and no doubt many lives have already been saved by them in the New World War.

Down to the earth in a basket! Thus this First World War French observer is eluding a raiding Fokker’s bullets. Scores of look-out airmen saved their lives in the ‘14-18 conflict by “balling out in the wicker.” (Air Corps photo.)

parachute is more than fulfilling its task as the life-saver of the air.

Parachutes are also playing their part in ground operations of troops, and they may some day work a great change in tactics of the artillery and infantry in combat.

The use, for instance, of parachutes to drop men behind enemy lines is attracting the attention of many a military strategist. Because of the numerous experiments in the past that Russia has conducted in this work, it is commonly thought that such aerial warfare is an original Soviet idea. But the truth of the matter is that both England and the United States, years back, did experimental work in this type of fighting.

Of course, the newspapers have frequently related that Russia’s “vertical surrounding”—dropping troops behind the enemy lines—wasn’t any too successful in the fight with Finland. This fact, though, reflects more on the poor efficiency of Stalin’s command than it does on the idea of vertical surrounding. Undoubtedly, there is technical value in the scheme—when it’s done right.

In 1929 and later, experiments were likewise made here in an attempt to develop plane-chutes—silk umbrellas large enough to lower entire aircraft to the ground. England, in fact, toyed with the idea of equipping planes with these chutes in such fashion that their cabins, filled with soldiers, could be dropped at strategic points during warfare. And even before 1929 actual drops of machine gun crews and their equipment, all by parachute, were made by our Air Corps at Chanute Field, Rantoul, Illinois.

(Continued on page 31)
Pharaoh and Warmer

By Joe Archibald
Author of "Flight To The Finnish," "Briny Deep Stuff," etc.
Illustrated by the Author

PHINEAS PINKHAM sat on the veranda of the Continental-Savoy Hotel in Cairo—and we do not mean Cairo, Illinois. Phineas was in mufti and he lolled in his basket chair like a coupon clipper taking a rest from the trials and tribulations of Wall street.

"Huh," the Boonetown, Iowa, native, chuckled. "You would never think a guerre was going on anywhere—sittin' here. I wish the bums in Bar-le-Duc could see me. But I guess everybody can't be a Intelligent man. Still, I can't wait until I git my empenmannage into a crate an' fly over some o' them oasisies."

A tall character came out of the hotel and stood on the veranda for a moment. He had a black mustache and pointed beard decorating a face that was as dark as the Kaiser's chances of ever getting a Biergarten advertisement on the side of the Eiffel tower. The man wore a fez and he smoked a cigarette in a holder as long as his right arm.

He took a look at the rain that was coming down out of Egyptian skies and scowled like a Stock-company heavy. He turned and gave Phineas a gander. "The rain she falls, Bah! She rains so little in Egypt, why must she rain tonight?"

"Haw-w-w!" Phineas replied. "I didn't start it. Go an' beef to Allah if you are a rug kneeler."

The fezzed ginzo took another look at Phineas, muttered something, then went out in the street. Major Rufus Garrity's agent touched a match to a Pharaoh Pippin cigarette and lolled in his basket chair some more. "It is good to be incog," Phineas told himself. "They know me too well around Alsace Lorraine by now. Anyhow, that spy, Herr Doktor Number Seven, is probably around here somewhere.

But he never saw me in his life. Haw-w-w-w-w!" Phineas went into the hotel and walked to the bar. A man with black glasses covering his glimmers figured Phineas was an Englishman and invited him to have a drink.

"Raw-w-w-w-ther," Phineas said. "Bloomin' stout of you, and all that, y'know. I'll take a Sphinx Flip. It's a nice quiet drink. Haw-w-w-w!"

The man with the smoked cheaters squinted at Phineas. "Er—aw—you think they'll catch the Mad Mullah? Beastly trouble maker. Embarrass the British no end if he gets the African desert tribes united. Imagine it, my good fellow. The Berbers, the Tauregs, and the Mahdists joining forces with the Gallas, Abigals, Barawas, Jidus, and Kalallas. Then there's the tribes in Libya and the French Sudan—"

"Don't forget the cannibals," Phineas said a little whoozy. "Well, I think I will take a stroll through the native quarter and buy some souvenirs for the bums back in Bar-le-Barlysshire-on-the-Tyne. A d o o, Allah eel Allah, and all that."

"That bum will bear watching," Phineas mumbled as he ventured forth into the drizzle. "I'll bet he's the Herr Doktor instead of the other guy. He don't fool me none."

Mummy's the word! Phineas learned that in short order when Chaumont sent him to the land of the pyramids to find out if the Krauts could take it. Anyhow, Herr Doktor Number Seven figured he'd grab off as many sheiks as there were tombs—plus a lot more, if any. But when Phineas went to work, the Dok grabbed one tomb any!
Dusk was crowding Cairo fast as he wormed his way through the crowd toward the eastern part of the city. He made his way down a narrow street lined with bazaars and filled with smells the like of which never had come out of an Occidental pigpen. Merchants yelled at Phineas in every language that had been spilled out of the Tower of Babel, and they tried to sell him everything from a trained scorpion to the pelt of a defunct Rameses. The Boonetown miracle man turned into a dark side street and looked up at a lighted window. And he spoke up when he saw a pair of sloe eyes surveying him. "Hi, Fatima! Take off yer face mask an' let me see ya—ugh!"

A club swept down and conked the Iowan infidel. A cloak was dropped over the unconscious Pinkham's shoulders, then he was picked up and carried through the door of an evil looking Egyptian tepee.

SOMETIME later, Phineas finally opened his eyes and got them back in focus. He was in a very small room lighted by a single candle. There was a narghile, an Eastern water-cooled dudence, on the floor. A lizard crawled across Phineas' face and a rodent squeaked at him. The dirty matting hanging over a door was pulled aside and a Colorado Claro character as big as Jess Willard came in and ran the ball of his thumb along the edge of a scimitar big enough to sever the head of a croc in one swipe.

"Dog of an infidel," the Tar-baby of the Nile said to the Yank flyer. "So you come find him Mad Mullah! BiSmillah! In-fidel weeth beeg teeths an' spots of a hyena—!"

"Now-er-let's talk this o-ver," Phineas said, getting to his feet. "I-er—there h-has been a mis-take, an'—"

The big Nubian flashed a mean grin and measured Phineas for the massacre. "Wa-a-a-ugh! Jelai Bin pay well for infidel's head. BiS- millah—what is I see!" The big black lowered his noggin remover and stabbed a finger as big as a banana at a pin stuck to the Pinkham linen lapel. "BiSmi- lah-h-h!"

"That is my lodge pin," Phineas gulped out. "I-er—am an Ex-Exalted Ruler Of The Knights Of The Red Fez, Aleppo Bazaar, Boonetown, Iowa."

A big dark flipper was extended toward Phineas. It gave him a grip he knew well. "Me, too! Lodge 401, Abou-Kir, white fellah. I don't keel. I get rooster and bring it here. Cut off head an' make much blood. I show you way to Abou-Kir."

"Yeah? That was the place I was goin' anyway. Er—git me out of here before that mad Arab comes back. It was that bum with the black glasses, I bet. He is the H E R R D O K T O R N U M B E R S E V E N, huh? Well, I better git my bag an' allez out of Cairo, as if I don't—"

The black handed Phineas a bundle of old clothes he had pulled out from under a bench. "Fellah! Put 'em on—over white suit, yassuh!"

"I will git leprosy if I do," Phineas sniffed. "Say where did you learn to talk U.S., you—"

"I travel with circus as beeg wild man. I run away—then come back Africa. Put 'em on Moslem clothes, fellah. Somebody come—"

"Awright," Phineas gulped. "I'm an Arab, huh? Help me wrap these things around me, Sambo. What a smell—ugh!"

His burned pulled up over the lower part of his face, Phineas stepped out into the dark street. "Rainin' worse than ever," he growled. "It is worse here than where the Frogs live. Well, thanks, Sam- bo. I—"

"White fellah do not speak about weather while in Moslem suit. He get throat cut. Moslems know he is not son of Allah ... Moslems don't talk about weather."

"The same to you," Phineas growled. "Adoo—"

Phineas walked into the Continent-al-Savoy a few minutes later and four attendants seized him and hustled him out. "What is the idea?" Phineas yelped. "I am a U.S. citizen—in dis guise. Let me peel off this kimoner, an'—"

"Sorry, old chap," the porter said. "Blimey! Spy ain't yer?"

"Sh-h-h-h-h-h-h-h-h!" P h i n e a s hissed. "That Kraut will hear you. I there he is! Right there in that chair. He is H E R R D O K T O R N U M B E R S E V E N. Arrest him! He tried to kill me. Po-o-o-o-o-o-o-o-oice!"

Seven Cairo cops seized the husky citizen with the dark glasses. He put up a whale of a scrap but was finally dragged off the veranda and into the lobby. He was asked to own up to being a Potsdam snooper.

"Blast your blinkin' cheek," the accused roared. "Let me up at once, I say! This is a beastly kettle of fish, what?"

"We're askin' you," Phineas said. "You sicked a throat slitter onto me, an'. But you do look like a Limy without them windshields, an' maybe we have made a mistake. But who else knew I—?"

"I am Major Pilbert Smythe-Brothers, commanding Squadron 56, Royal Air Force at Mehr-Raj! And awfter me offering you a drink only this awftemoon, my man! You are a dashed ingrate, and all that!"
F L Y I N G  A C E S

JUNE, 1940

Herr Doktor Number Seven! Tommy-rot and balderdash! Bah!"

"Eh—I am Leftenant Pinkham of the Ninth Pursuit Squadron, U.S. Air Corps, an' am down here to help catch the Mad Mullah of Somailand. H-haw-w-w-w! You can't trust nobody. I was followed by a Nubian who would have opened up my jugular if he had not belonged to The Knights Of The Red Fez. A Heiney must have hired him, as nobody else would want to kill me, an'—"

A man with a walrus mustache tipped his pith helmet back over his coco and stepped up close to Phineas.

"Gad, your face is deucedly familiar, old bean. But I know we have never met before. Fawncys—er—permit me to introduce myself. I am Majaw Chauncey Reach-bottom. Archaeologist y'know. Been waiting until this bally war ends so I can go back to excavating near the oasis of Wadda-Youmein. A n c i e n t Egyptian city, and all that, y'know. But what makes me think I've seen you before, old thing, what? Deucedly queer, by Jove!"

Phineas was getting more gaga by the minute. "Er—I have no idea. Maybe you saw me in another world. Haw-w-w-w! Anyhow, you guys dig up a good show. This rain'll let up and maybe tomorrow I will go out to see the Sphinx and pyramids at Geezer, an'—huh!" Phineas got white around the jowls and flopped down in a cane chair. "Uh-er—weather! Moslems don't speak about—he-e-y! I demand to see the manager, veet veet! Where is he?"

"Right here, old chap. What seems to be—?"

"You had a guest here who wore a fez, huh? An Allah guy with a red sash tied around his middle, Phineas yelped. "What is his name and where was he from, huh? Oh-h-h-h-h!

The manager consulted with his desk clerks. The manager was told that the man with the fez had not been registered at the hotel. He had been sitting in a corner of the bar most of the afternoon, all by himself.

Phineas went into the bar and looked at the table where the fezzed character had been sitting. The ash tray had not been emptied. There were three long cigarette stubs in the dish. Phineas pointed at them. "They've all been bent in a half-circle an' didn't break. He is no Scotchman, as he don't smoke more than half a cigarette at a time, huh? I guess I am Sherlock Holmes, haw-w-w-w! Yeah, I sure am!"

"A real Moslem, no doubt, old chap," the manager said. "He likes to make crecients. Odd sort of chap he was. Egyptians are dashed creepy, and all that."

"Uh-er-bawn sour," Phineas said. "I must go up and pour cold water down my back. I have had butterflies in my dome since I got to this country." And Garry's agent went up to his room and looked out the window. "I never have been here before," he said. "Maybe I dreamed it, but things look like I had seen them before." The jokesmith shivered and the temperature was hitting a hun-

band together and make war on the unbelievers. The heads of all the tribes are going to meet and name the day to strike. Natives near the Tripoli border have already been shaking their fists at our Camels. Deucedly strange about this Jelal Bin, Grandfather was once Amir of Eastern Sudan. The Mullah was very friendly up to a month ago.

"Turned fanatic overnight," the Englishman went on. "He's got hold of a few planes—seen them flying over the drome. You know what I jolly well think, Leftenant? He means to expedite matters to fly the shieks to a meeting place—take them weeks if they rode camels. This mad Mullah is progressive, what?"

"Huh? You use Camels at the drome?" Phineas asked. "Do they go six days without needing water in the power-plants. Haw-w-w-w! I bet them Camel pushers got a lot of dates out there in the desert. Bet they got lots of sand, too. Haw-w-w-w-w!"

"Aw-er—ha-ha—ha-a-a-a!" the Major laughed sickly. He threw his cigar out the window for it had suddenly gone sour. "Place for Intelligence officer with brains is out at the airdrome. I blarsted well think the Mullah himself is riding around in a plane. Er—strange—my hatman saw a plane—looked like an Avro—flying over Cairo four hours ago. Private hangar somewhere—"

"Wha-a-a-a-a-a-a?" Phineas gulped and hopped out of his chair. "Maybe it was—when do we leave for the airdrome, huh?"

"First thing in the morning. Go to Abou-Kir, Leftenant. Have a Bristol there. Make you comfortable out at Mehr-Raj, no end."

"What can I lose, haw-w-w?" Phineas said. "I amitchin' to hear a prop blast. Adoo for now."

When the Major had gone, Phineas looked out the window. And over the city line of the old part of Cairo looked as familiar to him as the marquee of the Boonetown Bijou flicker theatre. Phineas knew he was getting looney. He had forgotten to give Major Smythe-Brouthers a shooting cigar. He tested his sanity by taking an inventory of the novels he had brought from Bar-le-Duc. One little number intrigued him. He wondered if an occasion would arise to give him an excuse to use it. On the package were the words:

(Continued on page 72)
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 jokes which we can use here, FLYING ACES will pay $1. Contributions cannot be returned. Address all letters to WISECRACK-UPS.

**DESERVES SOME CREDIT**

**Visiting officer:** After all, I'm the man who made you great.

**Conceited Ace** (bristling): That's absurd! Why, I never saw you before in my life.

**Visiting officer:** What I'm driving at is that I'm the man who kept your confirmation records over at Headquarters.

**SIGNING OFF**

**Radio commentator** (in plane that's about to crash): "Well, folks, we're going straight down... faster and faster... and now the earth is just a few feet below us, and—well, for further details see your local newspaper.

Dumb Dora thinks leap year is when they teach all the new parachute students.

**POISON, FOR INSTANCE**

**Plane salesman:** Come now, man! Suppose you bought a plane for ten dollars and on your first flight nothing happened? What would you do?

**Pilot:** I'd try some other way of committing suicide.

**FINIS**

**Korporal:** Leutnant Weinschmitz just took off in ein Messerschmitt und attackedt single handed der whole squadron uf Hurricanes!

**Herr Oberst:** Himmel! Dot's der last t'ing he should have done, yedt! **Korporal:** It vas, Excellenz.

**PROOF WANTED**

**Astronomer:** Look! A meteor!

**Plastered flyer:** Ya sure it ain't jus' a firefly doin' a B-G dive?

**SKIP IT**

**Goofus:** Whatya think Jim got that airplane for?

**Blooms:** For flying, I imagine.

**Goofus:** Nope, for a thousand bucks. And whatya think he wanted it for?

**Blooms:** I suppose for flying.

**Goofus:** Naw, he wanted it for eight hundred bucks.

According to Dumb Dora, the zero designers are way behind times. "When," she asks, "will they get around to installing escalators on planes instead of elevators?"

**THEIR FINN-IISH!**

"Is it true that Stalin purged all the Russian aircraft designers?"

"Sure. He got mad when he found out that every Soviet machine had a fin on its tail."

**RISKY BUSINESS**

**Phineas:** Oh, boy! Did I fool that Brass Hat when I offered him that cigar!

**Goomer:** But that wasn't one o' yer loaded cigars, Lootenant.

**Phineas:** Nope. But he thought it was—all he didn't take it! Haw-w-w-w-w-w!
Hats Off To Helena!

It's Blazed the Way In Youth Aeronautics

Yes, our cheers are for Montana's capital, which so clearly demonstrated the great value of a high school aviation course covering both shop and air practice. And we're here to tell you that this Western city put its sky program over with something more than a bang. It put it over with—an earthquake!

By Marvin C. Lupton

Helena—and be sure you pronounce it Helena—today boasts of producing more men for the nation's aviation than any other city in North America according to the per capita figure based on her population of some 12,000 plus. And the residents of this capital city of Montana are further proud of the fact that the local high school is listed by the Civil Aeronautics Authority as tops in flight training among those high schools, which have sponsored pilot instruction work. A first-class honor!

What's most amazing about all this is that the city's pioneering in the field of educational aviation may primarily be attributed to the devastating earthquakes that smacked Helena back in October 1935! For as an aftermath of those earthquakes, Helena High School is now turning a full 12 per cent of her pupils into aeronautical channels. And here's the dramatic story—

Helena had finished a brand new $500,000 school building in the summer of that memorable year of 1935—only to have the destructive temblings reduce it to a smouldering heap after only 34 days of occupancy. Immediately, the city education system launched revolutionary measures to care for the school-less students. Then it was that aviation was given its chance on an unprecedented scale.

"Sure, take the boys to the city hangar! Teach them the aero game." That was the school board's favor-

able reaction when Lieut. Landon W. Fahrenh came along during that hectic period of stress and reconstruction and suggested the grand idea of aviation training right at the airfield itself. And since Lieutenant Fahrenh had already won wide popularity for launching aeronautical studies in the school during 1933, his plan won the whole community's support. However, that was only the beginning—for the real work was yet to come!

So for two years, while more than a thousand students of the district jammed two dozen handy railway coaches for their "classroom" sessions, the 40 youngsters under Lieutenant Fahrenh's tutelage met regularly at the municipal hangar for their training in aeronautics. While their brothers and sisters worried over
grammar and Latin assignments in their improvised classrooms, the Helena Flying Cadets were concentrating on such subjects as internal combustion, engine maintenance, aerodynamics, and theories of flight.

Today, to a man, those same forty youths are busy in varied aeronautical fields. Some are flying for Uncle Sam's Army and Navy, others are designing and repairing modern revolutionary craft for Lockheed and Boeing, and many have established themselves in general civil aviation.

At the city port, Lieutenant Fahrner turned over his own private plane for the use of his charges. He taught them to fly, to overhaul planes, and to weld and construct new parts. They developed into real craftsmen. It may be said that their accomplishments, under this special course, were little short of phenomenal.

Meanwhile, the board of trustees, sensing the promising possibilities of the fine program, allotted $7,500 for the construction of a school aeronautical building at the airport. A great step forward!

Even so, this amount of money was meager in the light of the dream which was in Lieutenant Fahrner's mind. He pondered the situation and finally called a meeting of all the boys. Present was Perry G. Means, engineer in charge of the huge reconstruction program for the school system. And together a special working plan was drafted whereby the money would, after cooperative construction work on the part of the boys, be stretched out to cover better quarters and a lot of needed extras, to boot.

Meanwhile, Mr. Means, in a rapid survey of the earthquake damage, made careful note of all the salvageable material left from the demolished school buildings. And the possibilities were great. Huge timbers, sheathing, plumbing fixtures, and whatnot were to be had for the taking. Doors and windows were easily available. Then a local engineering plant contributed more than two carloads of scrap steel which was subsequently straightened, welded, and incorporated in the structural frame of the new plant.

(Continued on page 72)
Through the Aero Lens

Knot-Hole Clubs are popular in New York City. Here's one that's been erected around the excavation for the new air passenger terminal on 34th St. These placards along the top of the fence read "Lock Here." The lower holes are tagged "Pebbles." As you can see, the apertures are placed at varying levels so that any size person can peep in comfort. The peep-holes look plenty worn, too! (Kulick photo.)

This shot shows a Bristol Blenheim that just returned from an observation flight over Nazi-land. Exposed film has been quickly handed to a waiting Corporal who is seen sprinting off to a waiting Photographic car, where it will be developed and printed and made ready for inspection by the Brass Hats. The crew of the camouflaged plane is seen on the left preparing to jump from the wing and then check out for a deserved rest.

These lucky, British Roy Scouts have been selected for special aero training under the new Air Defence Cadet Corps scheme. They are being shown the details of a Pobjoy radial engine mounted in an Airspeed transport. The armament instructor is believed to be the famous Major "Tuffy" Jones, noted R.A.F. Ace who commanded the great Mickey Mantle in the last war and who wrote the history of the "Fighting Mich." And how do you American Scouts like the jersey uniforms the British brotherhood sports?
No matter how many hours a pilot may have logged, there’s always plenty to learn to keep up with his job. And at LaGuardia Field, American Airlines has more than 200 persons answering school-bells. Some 30 skilled pilots are taking training, 50 men are absorbed in operations practice, 105 apprentice mechanics are boning on aero A-B-C’s, and 33 nurses are learning to be stewardesses. The photos on this page show how the flyers—from beginners to veterans—are trained by American.

New engines are so complex that even the old pilots have to step into the repair shops to find out what’s more inside ‘em. Here we see J. D. McConnell watching a skilled mechanic sanding a connecting rod in the Engine Overhaul Department.

The ground guy who makes veteran pilots cry. This chap is Instructor V. K. Evans, who directs the Link Trainer. He shows the flyers how they were “three miles off the beam” by submitting the evidence on the map in front of him marked by the flight-path recorder.

Would-be co-pilots have to make up flight-plans from current weather data. And as this chap works, a “never fooled” Flight Officer is looking on. If you’re not perfect, they’ll show you how you would have headed into three snowstorms, a line squall, andinnie’s washing!

What the airline students actually look like. Here’s a group of ’em, anyway—but they can only kind at the way they feel after being drilled on flight data all day long. Some of these men were with the Army and Navy, but they’re now down to earth studying more with American Airlines.

One pilot they all rely on—“George,” the robot. Here in the Instrument Overhaul Department, a studie is getting a formal introduction to “George,” who in turn is being checked prior to re-fitting in a ship. The expert gear-and-gadget plane flyer continually undergoes rigid tests to keep him in perfect working order.

Of course, they finally get around to letting the student fly a plane. But the student hardly knows he’s in the air when the cockpit is hooded over for instrument flying practice. After six weeks in the training school, the new man is ready to go to work. Yet even then his rounds with the Link Trainer continue.
Pick-Up Pilot

By Arch Whitehouse
Author of "Rip-Cord Ruse," "Dorniers Disguised," etc.
Illustrated by Alden McWilliams

GRANT SAYER hated everything and everyone in the world—himself most of all. But on second thought, there was one exception. She was Maureen Prentice. No one could really hate her.

Everyone connected with Pan-Central liked Maureen, and more than several of them would have jumped at the chance to harbor deeper feelings for her.

But there was Grant Sayer. And they just couldn’t figure him—and Maureen Prentice. Taken on first glance, if you eyed that situation at LaGuardia Field, you would get the impression that Flight Stewardess Maureen Prentice was a little weak in the bonnet to go for the guy who drove the pick-up car from the Commodore Hotel on 42nd Street out to the half moon of concrete and steel that embraced Pan-Central’s eastern terminal. After all, Maureen could have hooked arms with Flight Captains, First-Officers, Chief Dispatchers or Traffic Managers. They all paid their income taxes on the big sheets.

But Maureen would rather have taken the arm of Grant Sayer—and did. Not that this is a love story, for you won’t find love in it. But there was an element of loyalty—which no one on the Pan-Central apron seemed to consider and which is why they never understood Maureen Prentice’s going along with Grant Sayer.

AIRLINES are business propositions. A flock of people have sunk a flock of money in them. Such organizations must be intent on showing profits and meanwhile work for the utmost in safety. And airlines are still getting a healthy chunk of Government subsidy which goes far toward keeping the props turning, the pilots in uniforms, the mechanics in tools, and the hostesses in trim outfits. All of which in turn draws the business man customer.

Grant Sayer knew all this—especially that safety angle. He’d mulled it over time and again trying to jibe it with his being behind the wheel of a pick-up car instead of in the left-hand seat in a DC-3 cockpit.

He was now waiting for Flight 4 to come in. Howie Layland was pilot on that run. Sayer knew that automatically. He knew everything about Pan-Central. He knew that Layland would be double-talking his orders to Co-pilot Gould, a swell kid who was going places. They’d be dropping the wheels down now. Young Gould would be doing that, locking them fast.

They’d also be checking manifold temperatures and tapping the button calling for safety belt adjustments. Maureen Prentice would be seeing to that. She was Stewardess on Flight 4 coming north. Maybe she could check in quickly enough to go out with the pick-up car. She had a small apartment with Jetty Binns, hostess on No. 3 now heading south.

Those girls, mused Grant, were better off than he was driving the pick-up car. He sat there and watched No. 4 bank into view, his elbow resting on the sill of the Cadillac driver’s window. He had sat this way for hundreds of landings now. He knew every twist of the flying game—but he was still driving the pick-up car.

No. 4 came around beautifully in a splash of sunshine that forked through a rolling bank of cumulus. Grant Sayer wished he could paint a picture of it. He would do it in faint blues, burnt oranges, and silver—for a DC-3 coming in like Layland did it was glorious. It seemed that Howie held ‘em on the glide as if he were considering exactly which slab of concrete he would touch first. With flaps down, there’d be the faintest hint of a ballooning lift as she settled toward the concrete. As for the actual contact, it was impossible to tell just when the tires touched.

“Now I’m going places!” That’s what Grant Sayer optimistically told himself when Pan-Central handed him his DC-3 command. And go he did—until a tiny, tinkling, toy bell rang him right out of his sleek Douglas and into that company Cadillac. Yes, for Sayer the lights were all red. For how far can you get tooling an auto over a traffic-mobbed closed course? But Fate hadn’t slated him to stay in hot water. Abruptly a gun butt swung—and whirled him right into the fire!
muttered Sayer. "I hope he never has any bad luck."

That was it—bad luck! You might be a great pilot like Layland. But if you had bad luck you were fortunate to wind up with a pick-up car job.

"That’s the way to do it, Sayer," a voice said behind Grant’s left shoulder. "That’s how they become Flight Officers on Pan-Central ships. See that great landing?"

"Look," said Grant, twisting his head slightly, "if you take a little arsenic on the tip of a teaspoon and swallow it quickly—it does a good job."

"I would if I was driving this Pullman of yours."

"Sure, you would. But I won’t I’ll be back again tooling those babies through—yet!"

"Not while I’m checking around here, you won’t," came the reply. The speaker was Clayton Malloy, the Inspector who hammered conservatism into the pilots thereabouts. He didn’t tolerate any tangents.

"When most Inspectors are such grand fellows—why can’t you be? Don’t they ever shift you guys around?" growled Sayer. "You ought to be out at Albuquerque, wrapped up in a blanket and selling souvenir ca-

noes made in Hoboken. Go away. You make me tired." ... More smoke, more heat—then sinister, lancing fingers of fire! Grant Sayer bit his lip, grimly pressed the Douglas down ... down. Could he clear that flaming shack? Could they survive that inferno beyond it?

GRANT SAYER watched it all. The passengers were heading toward the Administration Building. They would come out the side door in a few minutes, their baggage would be stacked behind on the Cadillac, and it would be another jaunt back to Manhattan.

Pick-up pilot! Sayer frowned as he watched Malloy head for the gangway. Layland was signing his papers and young Gould was still aboard, waiting to run her into the hangar for a check. Malloy was talking quietly to Miss Prentice. She was obviously busy and annoyed with the interruption. But he persisted. Sayer wanted to go over

STARRING GRANT SAYER — AND LADY LUCK
and punch him in the nose, but instead he had to put on his flouncy act assisting the passengers in. Buttons was tucking the luggage away and handed over the check list to Sayer.

"Malloy is trying to edge in on your girl, Grant," Buttons was saying. "He's trying to date her for a dinner tonight. You'd better look out for that guy."

"And how many more passengers to get aboard this bus?" demanded Grant.

"Three more. They're sending telegrams telling their old ladies they ain't dead yet and to put the insurance policies back in the tin box—as if those wives wouldn't know quick if we ever bumped theirubbies off. What's it like to crack up bad, Grant?"

"Shut up! Get those three out here. I got plenty more runs to do today."

Grant climbed up into his seat, sat for a minute or two listening to the clacking of the passengers, some of whom had just completed their first air trip. The conversation was always the same: "Funny, I never felt a bit dizzy ... I'm never gonna take that seat again—you don't see nothing ... The worst of this air-travel racket is getting back to civilization once you get down ... This is your fourth trip? How wonderful! ... It's swell, but you can't get a drink on board."

Then she was there, just under his elbow her long slender fingers pressing his arm.

Maureen Prentice was like Cartier's jewelry, 1928 champagne, the front cover of Vogue, and something turned out by Charles of the Ritz—Miss America dressed in Pan-Central livery. What more could a fellow ask? Grant Sayer always had to repress a gasp when he saw Maureen Prentice. She added horsepower to a Pratt & Whitney and lifted to a Lockheed. She made the interior of a Douglas warm up like Peacock Alley in the Waldorf Astoria.

Well, anyway you get the idea.

This was what Pan-Central was paying $125 a month. She could have got a grand a week in the Folliies, but she would rather do Flight 4 and have Grant Sayer. Her hair was auburn, her eyes of a shade best described as sparkling bluish silver. Her profile ... "Hi, Grant!" the vision greeted. "We had a lovely trip."

"Hi, Murrie," he said back, still amazed that such a beauty even spoke to him. "Coming back to town with me—this trip?"

"Sorry, Grant. I've got to do a class. They want me to take the new hostess class and lecture on "The Care of Babies During Flight"—Miss Lawrence is ill today. But I'll make it with you on the No. 6 trip. Okay?"

"Yeah, I suppose so. But say, is that guy Malloy annoying you?"

"Malloy? No, he's just handing me the same old line."

"Wanted you to go to dinner, didn't he?"

"Told him I wasn't that hungry, ever."

"Maybe you ought to take him up once, Murrie," said Grant bitterly. "He might unlash and become human for the good of everybody around here."

"We don't need to give him the cure that way, Grant. We'll do it some other way," Maureen looked full in the face of Grant Sayer. She said nothing more, but she might just as well have shouted: "I'm with you to the limit. But I'm not going to work this thing out by stooping to that chump. It's not the right approach."

More doors slammed and Buttons gave him the signal.

"Quer about that lecture, Murrie—that business about babies, and all that. You sure could tell 'em a story, if you wanted to, eh?"

"Don't worry, I won't. They'll never get the inside on that trip from me."

She patted his arm again and smiled. That alone almost turned the Cadillac's engine over: "Any way tonight, then. I'll see what I can do with some eggs, some Canadian bacon, and a waffle iron."

Grant winked as he touched the starter. "You'd be smarter if you took up that Malloy guy and got a real meal once in awhile."

"Don't forget, we hostesses have to keep below 120—or out we go. Why, I might wind up in a sight-seeing bus."

"Like me," added Grant resentfully. He looked suspiciously like a depth charge about to explode.

"Don't say that," the girl answered. "I didn't mean it that way. You'll get back, Grant. I know."

"Yeah? Well, you should think more about yourself instead of me."

The vision stood, flaming with beautiful rage: "Grant Sayer, you have another thing coming. I'll be bacon and eggs and maybe some waffles—or it will be nothing at all."

(SHE STRODE toward the passengers' ramp and saw Pop Naismith, the Chief Pilot of the line. They called him Pop because he was the Old Man of the flight outfit. His real name was Munro Somerset Naismith, but he had lived all that down more than twenty years before—on the Western Front when he had been the 18-year-old idol of the flying A.E.F. Anyhow, the Munro Somerset part of his name had faded into the mists of antiquity along with his first aerial gunnery test and the citation he had received for his initial over-the-line patrol. He still wore a narrow row of ribbons which Pan-Central had ordered him to put up under his wings to show the traveling public that Pan-Central had real background in Pop Naismith, Chief Pilot. A British D.S.O., a French Croix de Guerre, a Belgian Medaille Militaire, and the Congressional Medal of Honor were, they figured, tributes to the efficiency of Pan-Central. There seemed to be a conspiracy to forget they actually represented deeds performed in a "Flying Coffin" 18,000 feet over Metz in 1918.

Maureen caught up with Pop under the wings of a Douglas that was getting its tanks filled from a fuel well.

"Pop," she had called—and he already knew what was coming.

He smiled, stuck his fingers into the pocket of his jacket, Navy fashion, and lollled against the wheel of the Douglas.

"What? Again, Murrie?" he asked with a smile. "But it's the same answer. You get Malloy lined up, and I'll do the rest."

"But Grant can fly, Pop. That was just hard luck, that crack-up. It wasn't his fault."

"He was at the controls, Murrie," Pop Naismith reminded her for the twentieth time. "He was lucky to live through it. So were you. And a good many girls would have chucked this game after that."

"I don't quit that easy, Pop. And I'm for having Grant back on the left. He got a bad deal."

"You like the guy, don't you, Murrie?" Naismith said with a wry smile without looking at her.

"You would, too, if you really tried to understand him. He's got all it takes."

"You going to marry him, Murrie?" Naismith asked, still staring off into space, almost giving the impression that he was fumbling for words, that he really wanted Maureen for himself, but that he realized the many years that separated them.

"I don't know, Pop," she replied.

"Anyway, I've tried to help him, but things just won't jell."

(Continued on page 65)
Air Races Coming East? . . . Who's Buying What?

WHILE most of the rest of the world struggles along with warfare, the really salient aero talk in these United States concerns the possibility of the colorful National Air Races classic being held in the East this year.

Newark, which has lost much prestige over the shift of sky business from its municipal airport over to LaGuardia Field in New York, is naturally making a strong effort to pull itself out of the slough of despond which is the sad aftermath of the big airlines moving out. If Newark Airport can get the National Air Races, it will be a big feather in its cap. No doubt that would help a lot in making up for the loss that community has suffered.

But whether Newark Airport is capable of handling such a spectacle is not yet clear.

The National Air Races have become the most important annual affair of its type in the world. The accommodation of such an event demands the finest in field, grandstand, and air facilities. The meet requires the best in authority.

With everything else equal, however, if the National Air Race committee can switch its vast organization from Cleveland, and if the field is found suitable for the show events and for the high-speed triangular race course, we are all for bringing the event to Newark.

There can be no question but that with the New York World's Fair only a short distance away, Newark is in a grand spot to attract at least a million people with the three-day sky meet. The details are the problem. A million people would probably bring 250,000 automobiles. Accommodation and comfort would have to be provided. Huge grandstands will have to be erected, and extra field crews would have to be trained in dealing with such crowds.

We who know the Newark Airport layout only too well realize what the handling of that much traffic on the Pulaski Auto Skyway and Route 29 can be on a Sunday night.

A new triangular course for the Thompson Trophy Race is something to conjure with, too. We wonder a bit how such a course can be lined up in the Newark Airport area free from ground obstructions. The area surrounding the Cleveland Airport offered comparatively open country and a reasonable amount of safety in case of forced landings by the high speed racers. Even then, however, we have seen Roman Holidays at Cleveland.

A ten-mile triangular course with a finishing pylons at the Newark Airport involves the tough proposition of steering clear of vast industrial areas, the city of Newark, lower New York City and its skyscrapers and a batch of thickly populated communities to boot. Can it be done? There might not be any minor accidents on the course. They'd probably all be fatalities.

Newark may want the National Air Races. But most certainly a lot would have to be done to work out true safety for the spectacle. We of FLYING ACES, here in New York City, would get a big kick out of having the National Air Races at Newark this year. It would be a great thrill to all of us; for we have as much sporting blood in us as the next. But knowing races, knowing crowds, and knowing Newark Airport, we wonder whether the CAA will okay the proposition.

As for bolstering Newark Airport's nipped aero rating, the Newark officials made a smart move in bringing the Breaster Aircraft Corporation there. And they can go much further along those lines; for there are dozens of fine manufacturing concerns looking for opportunities to obtain factory space near New York City.

But to keep the record straight on the National Air Races, we must point out that the National Aeronautical Association reports, as we go to press, that no city has yet made a formal application for the classic. Newark, though talking up the proposition, has made no official bid at this writing. And time is getting short.

Who's Buying What?

THE ORDERS being given by Allied countries for American military aircraft have now reached the staggering figures of $1,000,000—00—00—00—00—the reports are correct. We are told that the Allies want 8,000 planes by next fall from our American factories.

Yet our manufacturers admit they can't turn out 1,300 planes a month, as the orders demand. And on top of all this we read that Allied purchasing officers are holding up commitments on all future aircraft purchases.

None of this makes much sense to us. We do know that about 250 Lockheed bombers have been built and delivered.

(Continued on page 78)
EVEryONE TALKS about the CAA pilot training program, but very few persons seem to know much about its real fundamentals. We get a slew of letters every month asking questions about the training plan, and it has become obvious to us that the real details and workings of the scheme may still profitably be discussed for you readers.

It might be well, then, if we took time out and perused the Air Commerce Bulletin, issued by the Civil Aeronautics Authority, to analyze, once more, what this pilot training business is all about. And since light plane flying is the basis of the program, the subject fits nicely into our Tarmac, here.

In the first place, the Civilian Pilot Training Act of 1939 authorized the CAA "to conduct a program for the training of civilian pilots through educational institutions and pursuant to such regulations as the Authority may prescribe." In plain English, this means the CAA is in charge of a program designed to train civilians to fly, but they will have to go through this program the way the CAA decides—and no other way. The reason much of this is a bit dark to many persons is that the official details are usually written in formal, Congressional language.

The program calls for sufficient training to prepare a student for a private pilot certificate of competency. That means, if you finish, you get a Private Pilot’s ticket and you can fly and do anything that type of ticket allows—if you can foot the bill for plane rentals or if you can buy your own job and cover upkeep and fuel bills.

The course is divided into two parts. The student is initially given 72 hours of ground school training at the particular university he attends. This teaching is by qualified CAA instructors and it includes history of aviation, Civil Air Regulations, navigation, meteorology, parachutes, theory of flight, engines, instruments, and radio.

The flying course includes a minimum of 35 and a maximum of 50 hours of flight instruction. This sky work, also under the supervision of the CAA, is offered in "stages". In Stage "A" the student gets preliminary ground instruction, including an explanation of plane, instruments, throttle, brakes, fuel systems, and the use of the safety belt. Then he learns to swing a prop, warm up an engine, inspect his aircraft, and more on parachutes. He is taught to taxi in all kinds and directions of wind. He is given flight instruction involving the usual series of elementary maneuvers, and if he has progressed sufficiently in eight hours of this he is allowed to go solo.

Stage "B" carries him on for three more hours, which include a one-hour solo-check and two hours of solo practice, take-offs, and landings. Stage "C" designates the advanced solo period which follows and includes eight more hours of dual instruction and fifteen hours of solo flight. Here the student gets precision landings, stalls, spins, power turns, cross-wind take-offs and landings, power approaches and power landings, and a 50-mile cross country over a triangular course with two full-stops at different airports.

On the whole, the student gets a pretty fair idea of flying. And he should be pretty good if he gets through it.

But the average person wants particularly to know how a fellow goes about getting in on this swell program. What does it actually cost? And what is the general application set-up?

THE COLLEGE SYSTEM

FIRST off, applications were restricted to students (generally sophomores or better) in designated universities, colleges, technical institutions, 4-year teachers colleges, and junior colleges. These institutions were required to enter into a contract with the CAA to train a fixed number of students in conjunction with a field operator who provided the flight training. The air field had to be within ten miles of the school. The CAA at the same time entered into a contract with the operator.

How is it all financed? Well, the college may charge each student a laboratory fee up to $40. The CAA will, in turn, pay the college $20 per student for ground school training. The CAA then pays the flight operator something in the neighborhood of $300 per student for the flight course, with local charges for similar instruction the de-
terminating factor in arriving at the exact rate paid.

Under these contracts, the operator provides approved flight instructors, certificated flying equipment, and public liability and property damage insurance, while the college will provide ground school instructors who are qualified for a rating in this work under the Civil Air Regulations. The operator, in addition, must supply one aircraft (of not less than 50 h.p.) and one instructor for each ten students assigned to his field.

Speaking of insurance, the student must furnish a statement signed by himself and his parents or guardian, releasing the college, the flight operator, and the Government in case of a passenger accident.

Those who wish to apply for this training under the college system must first be citizens of the United States. They must have reached their eighteenth birthday but must not have passed their twenty-fifth birthday. And they must not have had any solo flight experience. Out of the laboratory fee paid by the student, the college is required to pay for his medical examination, which is now six dollars instead of ten. The college also provides a minimum of $3,000 accidental death and dismemberment insurance coverage. This coverage is on a 24-hour basis and must include all ground as well as flight risks in connection with the program.

"That's swell," you readers may say, "for the college man. But what about us poor lads who aren't in colleges? Many of us have had a tough time getting through two years of high school. But now where do we come in? Don't we get a break?"

These are fair questions, and they've caused something of a furor, as has been reported from time to time in our "Youth Air Movement News" section which has been running several months.

Yes, for the past six months or so there has been considerable pressure brought to bear on the CAA to alter the pilot training plan to include an equitable proportion of non-college men.

World War who was as fine a pilot as he ever saw handle a plane—yet the man was an absolute ignoramus. He could only read the most simple sentences. He could just about sign his name in his log book and no more. He positively could not read a map, take six words a minute at Morse, or lay out a simple compass course. How did he learn to fly? Well, he bought flying instructions at a school near London out of his own pocket—just so that he could get into the R.F.C.

He never got in. But he did become one of the finest test pilots of the old war days—and a little mechanic wrote out his reports.

Anyhow, this problem of finding a standard educational background in a group of non-college candidates is one of the leading reasons why the CAA program has opened fire, as you might say, on the college man front. But while we said that first off the program was restricted to collegians, it is now true that the CAA is starting to do something for the non-college lads.

The Authority began working with a rule that not less than 5 percent of the group trained should be non-collegians. And the actual number being currently put through outside the university group is 700, or roughly 7 percent of the present total of 10,000 being trained. But it must be borne in mind that this is even less than the 10 percent of women enjoying the program in the colleges.

This has been looked down upon as mighty poor justice for non-collegians in a great democracy. Indeed, the National Aeronautic Association members recently went on record that the non-college quota should be

(Continued on page 78)
Here's our bright clearing house of info regarding the CAA pilot training program and kindred subjects. Brief, newsy bits—of interest to casual fans as well as actual candidates—will be our specialty each month in these columns.

By Herb Powell

Pilot Program Info
From Washington, as we went to press, came an official tab on the Civilian Pilot Training Program: By February 8, the 9,267 collegians then active had amassed 80,000 flying hours without serious accident and well over 3,000 of them had gained the solo stage where they chalked up 12,000 "by-themselves" hours. At that date, more than 7,600 were reported taking in the 75 non-college ground courses underway. But with only 760 flight courses offered in this off-campus category, hardly one in ten of these enthusiasts will win their way into the sky.

From Coupons To Flying
Remember our mentioning Al Bennett's plan to teach 100,000 common citizens to fly? Well, the scheme devised by this popular Hightstown, N. J., Cub operator is now getting some hopeful attention down Washington way. If the idea is adopted, the Government would deal out $50 coupons through aero medical examiners. Each prospective flyer would get two of them, one of which he could redeem after he solos, the second when he finishes ten solo hours. And it wouldn't make any difference whether he was a college man or not. Such Government financial encouragement would undoubtedly go far in aviationizing America. "Every patriotic citizen," says AI, "should ask his congressman and senator to see that ten to twenty million dollars are appropriated to put this program into effect."

The Soaring Way
Another plan—one to get thousands of boys between 16 and 21 into the air—is being sponsored by the Licensed Airmen of America. Sparkling the lads into the building and flying of gliders and soarers compares the LAA, says AI, and the Southern California Soaring Association will cooperate. Sounds swell to us. And if it also does to you, why not write to our old friend Charley McReynolds of the LAA? His address is 9121 Dalton Ave., Los Angeles. If you're interested in buying a soarer in kit form, by the way, you might contact Bowlus Sailplanes, Inc., 13785 Paxton St., San Francisco, Calif. One of the newest things we've seen is that company's new sales folder, and it includes an "A-B-C Of Soaring."

Private Hopping Safer
A bright piece of news is that safety in private flying is continually improving. The CAA, you see, estimates that nearly a million miles were flown per fatal accident last year. In the private department—a record almost three times better than that of 1932.

Job Tips
You fellows who plan on getting into aviation will be interested in several slants just brought out by Carl Norcross (author of Getting a Job in Aviation) in Air Youth Horizons, the AYA organ. Echoing CAA Chairman Hinckley, Norcross states that civil aviation will continue to grow on its own regardless of militia flight plans. "If we're going to be this business, let's do it right," putting gosh-awful, dizzy, minus-visibility windows in our modern transports. Why our sky-traveling public stands for it is beyond us. Yeah, Mr. Douglas—when are you transport builders going to give us passenger jobs featuring really decent-sized windows a guy can see something out of, huh?

Feeder Line Problem
The insistent and growing demand for a flock of feeder airlines in this country is now giving the CAA people plenty to think about. Says AI in a Washington report. And Malden Bishop's Airline For All article (May Flying Aces) will, we hope, aid the fight for a solution. Meanwhile, CAA Administrator Hester points out that only 7.2 percent of the world's air taxicab mileage is within the U. S.—which certainly backs up Bishop's arguments.

On the Lighter Side
Did you know that the U. S. produced 31715 planes last year? We didn't. Either. But to cut the kidding we'll explain that Art Peirce handed us that figure when he hit a "1" in-
stead of a "2," while jabbing for the right number—3,715—in typing his latest Piper Cub release. But never you mind, Art. Like all great thinkers, you're just a mile ahead of your time. Why, the way those Cubs are coming out, 3,715 will soon be off the cichin!... The other month we mentioned a strange statistical report we'd received which had it that "313½ flyers" had done something or other. Well, now we think we've located that ½ flyer they were talking about. He's not a flyer by any way, but Bobby Draper, who just got his Private ticket and bought a Cub up in Boston. For (you guessed it!) Bobby's a 3½-ft. tall midget. Speaking of plane salesmanship, Jack Wood and Dick McVey, Cub-men out in Mo. and Ill., recently did it the hard way. In 20-below-zero weather, they rode six hours in the cab of a round house locomotive, helped pitch coal—and sold Engineer Eric Darwitz a plane!

In the Slipstream
Three four-engined Vought-Sikorsky VS-44A passenger jobs will be used by American Export Airlines non-stop between the U. S. and Italy, if and when they get the CAA's Okay to start service. The VS-44A design is a commercial version of the Navy XPBS-1. ... Artist McClellan Barclay has proposed a method for camouflaging planes "to confuse the enemy as to their size, shape, speed and direction." The scheme calls for painting ships with special "tapestry" designs. After a Russe fuselage flap invented by Major Seversky to give a plane slower landing speeds and greater lift. ... Blind persons were said to have employed to operate Britain's First World War enemy raid sound location, thereby being that their sense of hearing was especially acute. But that plan is "out" in this scrap, says England's War Office, because "sight has been found needed to perform related duties."... Japan, like Germany, is now reported to be making swell aviation gas out of coal. ... Eastern Air Lines broke its one-day passenger record by flying 1,060 persons on March 1. ... Strongest aerial death of the month was that of Peter Larzen. He suffocated inside a sea-plane float while checking it for internal repairs. ... It has been estimated that 1,155 planes were lost in the Russo-Finnish war, 794 by the Red Army and 361 by the Finns. Lt. Guardia Field is getting the razz for being the only airport demanding landing fees of military flyers. Disgruntled officers are arguing that the cost of the 100-plane free show the Army put on by request at the field's dedication could far offset any total landing fees through the years. ... Omaha's Junior Chamber of Commerce is planning to continue its (Continued on page 31)

The Airmail Pas

LAST MONTH, ladys, your R.H.P.D. said that a new record had been set up by you fellows requesting postal pals. Well, even that mark has been shattered now—for this trip we had a full twenty letters more than ever before! Here's just a few of the ink slingers and their home towns—to show how our letters cover territory—

Bill G. Russ, of Syracuse, N.Y., and Leroy Merrill of Munroe Ind.; Curtis Branam of Los Angeles, Calif., and Bill Crues, of Lawrence, Mass.; Stuart Beck and Carl MacPhee, of South Paris, Me.; Robert Lindwehr, of Astoria, Oregon, and Howard Soper, of Minneapolis, Minn.; Vetal Luckas, of Cleveland, Ohio, and Larry Bigler, of Bayard, Nebraska; Charles Bower, of Indianapolis, Ind., and John Abell, of Lebanon, Ky.; Robert Fox, of Lansing, Mich., and Bob Fisher, of Boston, Mass.

There were many others, too, but it's almost impossible to list all the names. Anyhow, to all the fellows who wrote in during March—congratulations on setting up a record!

In the September, 1939, issue of FLYING ACES we announced our first A.P. 3-view winner. Ten issues have flown through the propwash since that date, bringing us many interesting missives telling what you lads have done. Well, here's the latest happenings by Dwight Evans, of Plainfield, N. J., who says:

"In the March FLYING ACES I saw the letter that my foreign pal, Roy Bennett, of England, sent in, and I'd like to thank you for teaming us up. Boy, it's really been swell writing to Roy."

"He tells me how they go around all the time over there with their gas masks and how the schools are equipped with air-raid shelters. Incidentally, as soon as the war is over, he hopes to come to the U. S. and see the New York World's Fair. Let's hope that the Fair is still going when he does come!"

That's pretty dog-gonned swell, Dwight. We know you'll have a zooming trip in Roy's Crop Cub can certainly make his jaunt over here. And for that letter of yours we're putting a set of 3-views into the mail for you—Craph Carringer's Hale Hellion, Kerry Keen's old Black Bullet, and the Westland Pterodactyl V. Your Black Bullet plan is autographed by Arch Whitehouse, too. On second thought, though, we're going to be different this month and enclose two sets, Ship one of 'em on to Roy. We're sure he'll like 'em.

Would the rest of you missive makers like to win yourself those 3-views.

Well, we'll repeat the full dope once again. Here's how:

Just sit down and tell the R.H.P.D. what you've done by mail that you'd like to let us all in on. You might not think of anything at first, but keep trying. And when you finish your letter, address it to R.H.P.D. Letter Contest, c/o FLYING ACES, 67 West 44 St., New York City.

And now for a personal to Floyd Todd of Kalamazoo, Mich.: Floyd, Sunao Muranaka, of P.O. Box 1225, Lihue, Kauai, Hawaii, says he's written several letters to you lately but has not received answers to his notes. How's about loosening up and shooting a missive to Sunao pronto. Also, Sunao says he'd like to correspond with other American fellows—especially ones on the West Coast or Pacific Coast. There's a hint, boys.

Well, that's all we've got space for, pals. 'Long.

THE R.H.P.D.

HOW TO GET AN AIRMAIL PAL

First, write the best possible letter you know how. Use your best pen-and-ink handwriting. Introduce yourself, introduce your pal, introduce yourself fully—for this is the letter we'll forward to the pal we'll forward on to you. For your age, your interests in aviation, your other hobbies, and any additional items that might interest a new friend.

Then on a separate sheet tell the Right Honorable Pal Distributor what kind of an Airmail Pal you want. Send your letters to Airmail Pal, FLYING ACES, 67 West 44th St., New York, N.Y. Be sure to enclose a stamped, self-addressed return envelope, plus five cents in stamps or coins for each pal requested (our fee for the R.H.P.D.'s "Kitty"). We'll try to supply a pal in line with your speci- fications, although we cannot guarantee to fill all requests. Your new pal's letter will be sent to you, and yours to him—after which you will correspond direct. Do not ask for "lists" of pals. We cannot supply them.

Regarding foreign pen pals please note that because of the present European war we cannot forward letters to or from foreign countries at this time. However, we will fill as many requests as possible, when the supply runs short we will substitute domestic pen pals.

If you are an American resident and want an overseas pen pal, do not write a pen pal letter. Instead, send us a short note telling us in a general way what kind of a chap you are and what kind of a pal you seek. Enclose a self-addressed stamped return envelope and five cents for each pal called for. A foreign writer's letter will be sent to you, then you may correspond with him direct.

If you live outside of the United States and want an American pal, write a complete letter as described in the first paragraph of this box, and send it without the return envelope but with an International Reply Coupon worth five cents. Get the coupon from your local postoffice, Your letter will be forwarded to an American correspondent, after which you need only wait for his reply.

[27]
HANDLEY PAGE HARROW

HANDLEY PAGE HARROW

This Handley Page Harrow is what the British call a heavy bomber. It is powered with two Bristol Pegasus XX engines of 925 h.p. each, giving a top speed of 200 m.p.h. with a bomb load of about 10,000 lbs. The plane has been designed mainly for long distance night raids for which it offers a maximum range of 1,840 miles. It carries a crew of four, has a power turret in the nose, another set amidships, and a third in the tail.

There’s nothing particularly graceful about this machine, but from all accounts it has been doing a grand job over Germany.

It is a high-wing cantilever monoplane. The wing is built up in three sections, making it very suitable for active service work and quick replacement.

CONSOLIDATED XB-24

CONSOLIDATED Aircraft Company, of San Diego, Calif., recently completed a new four-engined bomber for the U. S. Army Air Corps, and flight tests began at Lindbergh Field during February. The machine, labeled the XB-24, is a high-wing monoplane of all-metal construction. The wing is full cantilever and of high-aspect ratio, and the four tractor engine nacelles are mounted flush to the upper surface of the center section. Fowler flaps extend inboard of the ailerons.

Power is furnished by Pratt & Whitney 18-cylinder twin-row radial air-cooled engines rated by the makers at 1,200-h.p. each. The props are Hamilton Standard 3-bladed hydromatic constant-speed types and are 12 feet in diameter.

Gross weight of the airplane is 40,000 lbs. It has a span of 110 feet and is 64 ft. long and 19 ft. high. Fuselage accommodations will care for a crew of from six to nine, depending on tactical requirements or the mission to be performed.

All control surfaces are fabric covered and fully counterweighted. The full cantilever horizontal tailplane has twin fins and rudders mounted at the tip. The all-metal stressed skin fuselage is equipped with hatches and windows in the nose, tail, and turtleneck. The landing gear is of the tricycle type, with the forward wheel retracting into the fuselage. The two main landing wheels retract into the wing wells.

As usual, there is a lot of hush-hush about the XB-24’s exact performance. The company simply speaks of “a speed of over 300 m.p.h., a range of approximately 3,000 miles, and a bomb carrying capacity of approximately four tons.”

A tail turret is one of the plane’s outstanding features.
FOUR LATE AMERICAN AND BRITISH MILITARY JOBS

England's Harrow bomber and Roc two-seat fighter are the overseas contributions and the XB-24 bomber and Dragonfly observation craft the domestic products in this month's review.

BLACKBURN ROC

There's really no explaining the British. On the one hand, they design some of the best-looking military airplanes in the world—and on the other, some of the worst. There seem to be no half-measures in the Royal Air Force.

Take a look at this Blackburn Roc, for instance. A Roc, in case you don't know, was a mythical bird said to have had such great strength and size that it often carried off elephants for its lunch. That should give you the general idea.

This weird-looking machine—and you haven't seen anything until you've caught a side view of it—is listed as a Naval two-seat fighter. It is designed for action from aircraft carriers, or it can be fitted with floats and used as a seaplane. A 900-h.p. Bristol Perseus sleeve-valve engine gives it a top speed which is "as yet a secret." Actually, the Roc is a "refined" version of the Blackburn Skua dive-bomber, which we'd call an insult to the Skua.

Structurally a low-wing monoplane with folding wheel gear, the Roc has metal-stressed skin, folding wings, and a metal monocoque fuselage. The tail-unit, when actually seen from the side, amazes one most. Its fixed fin and rudder are placed well ahead of the leading edge of the tail plane. Then the tail wheel nests in a chunk of dural which appears to have no reason for existence.

The Roc's cockpit arrangements are something else. Here, the pilot has a wind screen which, being almost flat to the line of flight, must take plenty of m.p.h. off the "secret" speed of the sky monster.

But anyway, the gunner or observer has a new Thompson-Nash automatic multi-gun turret, which perhaps makes up for a lot.

RYAN DRAGONFLY

We are especially pleased, first off, to find that this new Ryan job for the Army Air Corps has a name, thus saving us from being restricted to a confusing letter-and-number designation! Known as the Dragonfly, it's intended as a new type of observation ship capable of special and unusual performances. In the trade lists and Air Corps books it will be known as the Ryan YO-51, but to us it will stand by its tag of Ryan Dragonfly.

Probably many of you have seen this machine in the news reels. It can take off and land in an extremely limited area and boasts an unprecedented range in speed, from almost a hover in mid-air to stepping out at a fast clip. Moreover, the Dragonfly, which is powered by a 420-h.p. Wasp Jr. engine, is able to make almost unbelievably quick take-offs, steep climbs over obstacles, and approaches at an angle that appears to be nearly vertical.

Again the hush-hush is plastered on thick. Due to military regulations, exact performances and details of construction have not been released for publication. But anyhow the aim of the designers was to "establish new standards of control of aircraft at extremely slow speeds."

Generally speaking, the Dragonfly is a high-wing all-metal monoplane. Its wing, of some 50-ft. span, exhibits a generous dose of leading edge slots, a lot of flaps, and in addition a section which can be slid out to give the wing a greater lifting area. The pilot can change the fore and aft position of the flaps by means of a crank control set just above his head. With all this, there appears to be very little upward visibility.

[ 29 ]
All Questions Answered

This section of FLYING ACES is at your service. So if you have an aero query, fire away and we'll answer it here. All questions will be considered in the order they are received. For a personal reply, send stamped, self-addressed envelope.

John Hughes, 428 Locust St., Waterloo, Ia.:—We hope in some future issues to run a plan or two of First World War planes. Meanwhile, perhaps readers who have such plans will get in touch with you after seeing this item.

Jack Smoligan, Jr., Omaha, Neb.:—Tough, fellow, but we have no swap column in this mag of the type you refer to. Hope you can work out your deal, though, through our Airmail Pal department. Suggest you write the R.H.P.D. that you want a pal in the modeling line who's connected with a club.

Leslie Liddick, 1717 Walnut St., Harrisburg, Pa.:—You have model mags you want to trade for F.A. issues prior to 1937. Well, how about it? You fix Les up? Les, by the way, is also looking for plans of World War ships of the more unusual and unpublicized types.

Jim "Falcon" Parker, 595 Runnymede, Rd., Toronto, Can.:—Sure, we'll give your regards to the Griffin and Crash Carringer, and for the Fokker D-7 and Jones S-125 appeared in our April, 1938, issue. And the Jenny was in June, 1938, while the "Pylon Polisher" was September, 1937. We hope our readers can supply you to.

Arthur S. Berg, St. John, Kan.:—Several of our writers have been written up in F.A. Arch Whitehouse and Major Fred Lord, for example, were covered in our "They Had What It Takes" department in the October, 1939, and December, 1939, issues, respectively. And Joe Archibald was "typied up" in the Club News of our April, 1940, number. What's more, we hope to have something on Don Keyhoe for you soon. Philip Strange was discontinued back when the Second World War started. As for Phineas, he had a slew of adventures, you know, which even back there in '17 and '18 bore prophesy of the current doings in Europe. And all the readers who've written in have been cheering Joe on to tell about those razzle-dazzle exploits.

Pete Malone, San Francisco, Calif.:—Brother, you're sure a hound for detail! Yes, Kerry K. did have several other Black Bullets. But he preferred to call the latest one his No. 2 job—perhaps to put off the income tax investigators. No, wait a minute. The fact was that he told Barney to keep track of how many Bullets they'd had—and Barney added 'em up just after he'd killed his sixth bottle of O'Doul's! Yes, that was it. As for that "XY1P-46," mentioned in Wings of the Black Eagle, September, 1939, we'll let you in on a dark secret: That designation was made up just for the story—because we didn't want to say an actual ship had been crashed. We didn't want to create a wrong impression, you know. That's great about your Uncle. We'll bet he has some swell yarns to tell you. Those were special Heinkel two-place planes in that Golden Strafe adventure. By this time, you must have read Don Keyhoe's first Eric Trent novel—and we'll wager you found it ace-high.

Austin Sheldon, Hartford, Conn.:—Mighty glad to hear you get such a kick out of our fiction characters. And we're sure you've found Eric Trent a dashing addition to our crew of flying adventurers. On that matter of detailed dope on cockpit models, we've turned your request over to the Model Editor.

William Gouthier, 163 Carteret St., Glen Ridge, N. J.:—Yes, some readers did write in to say they were seeking the January, 1938, F.A. So you'll trade yours for the August, 1938, number? Okay, then—and how about it, readers?

Charles Rogers, Delevan, N. Y.:—We could not list those items you have to sell in our editorial columns. Suggest you contact our advertising department.

John Cristaldi, 152 Kearny Ave., Kearny, N. J.:—Sorry, we have no more copies of the January, 1935, issue for sale. For that's a real old timer. But maybe some reader will note this item and make some trade with you.

E. Sommers, 5130 University Ave., Chicago, Ill.:—For information on the N.A.A. contact Al Lewis, c/o National Aeronautical Association, Willard Hotel down at Washington, D. C. We published a number of plans for Waco jobs during 1936 and 1937. Perhaps some of the other readers can help you out on that score.

Sherman R. Miller, Washington, D. C.:—You'll note that our Youth Air Movement News section had that info you sent us (March number). Yes, we get all those releases. Since you are in that non-college branch of the CAA, you should by now have your share of plans in your experiences with which to compose a winning letter to our On the Light Plane Tarmac. Let's hear from you.

Gene Sommerich, St. Louis, Mo.:—Sorry, but we'll have to tell you and several others. The writer in that Snapshots of the War went out due to the increased interest in modern and New World War stuff. We gave that space over to Through the Aero Lens, you know. And the majority of the readers have hailed that double-spread of facts. Not counting the "more votes," less than a score of fellows have argued with us for return of the Snapshots of the W. page. And even with the pressure vote, the ballots in favor of that department were far outnumbered by the fans who want us to continue with our modern air policy. So what? But one of these months we'll come through for the minority with a lively feature on comparisons of sky jobs, and then a number of old shots will be brought out again to illustrate our points.

Raymond Smith, 14556 Archdale Ave., Detroit, Mich.:—So you have a lot of extra 1935 and 1936 copies of F.A. to trade? Swell! We're sure a number of readers will be writing you. And maybe they'll have the April '34, June '37, August '37, September '37, November '37, and April '38 issues that you're after. Ray.

Billy Randolph:—Sorry you feel that way, Billy. To be sure, we have to take all the info we get with a grain of salt—or rather a whole shaker full of it—but nevertheless,

And Now—We'll Ask You a Few

1. What is a double radial engine?
2. Just what is meant by a dog fight?
3. What is a flat spin?
4. What is a throttle gate?
5. How is a plane's power loading computed?
6. What is meant by the safety factor of a plane?
7. What is meant by the term Coastal Command?
8. Explain the true meaning of the word "navigation."
9. A pilot skilled in aerostation flies what?
10. Who was Walter Wellman?

(Answers on page 66)
we feel that we allow for that element in our copy. There are plenty of authentic facts regarding massacres, purges, inhuman acts in concentration camps, and all that, as representations of the dictator type of rule. Hence, those characters that pop into the general run of modern fiction in nearly every magazine you see on the newsstands—and in movies, too, such as Confessions of a Nazi Spy—are not really out of line. It's all an expression against the hateful dictatorship policies. But it's true, as you say, that practically no country has clean hands in its international relations, and the Editors of FLYING ACES are very much without a clear idea of what is going on in our backyard. Meanwhile, most Americans favor the Allied side, realizing that a victory for the dictators would menace our own democracy after the wiping out of the democratic elements in France and England.

Jack Martin, Joliet, Ill.:-The letter you sent our Light Plane Tarmac department wasn't long enough, Jack. Maybe you've now gone ahead with your flying, though, and have a stack of sky experiences to tell us. Let's hear from you if you have.

Ray Keiser, Dayton, Ohio:- Glad to know you get so much enjoyment out of Dick Knight and Kerry Keen. Yes, we are giving more fact articles in the book now, as you'll note by glancing through our present issues.

Stephen Leonhard, Detroit, Mich.:—Pleased to hear your hurrals for Through the Aero Lens. As for Modern Planes Album, most readers say they prefer the new photo system. But we'll keep your vote, and if the majority turn out to want the sketches back, we'll go after them.

Richard Martin, Portland, Ore.:—So you're another Eric Trent rooter? Swell! We can assure you that Trent will be right all the time fighting from now on. Phil Strange was dropped when the New World War started because so many readers kept asking us to slow down on the old First World War stuff. That overwhelming vote also knocked off Snapshots of the War. Majority rules, you know.

George F. Schminke II, New Orleans, La.:—They change those colors and rank indications so often, George, that an article in F.A. would be out of date too quick. But we'll be on the watch and shoot at that feature in as soon as we find things more standardized. Your best bet, meanwhile, is to contact your nearest service office.

Charles Knapp, Cooperstown, N. Y.:—Sorry, I am not a doctor and so can't give advice on medical matters. However, if you definitely need glasses now, you stand little chance of passing a medical examination for a pilot's commission in the Army or Navy Air Services. Had you passed first and then developed the eye trouble, they probably would have called from fleets in use of correcting lenses in your goggles. We hope many other readers who have written in on this subject will, however, first consult a suitable medical authority before they give up hope.

Jack Finkelstein, Brooklyn, N. Y.:—Most modern planes today carry automatic fire-fighting equipment forward of the engine fire-walls. These devices spurt streams of firesuffocating chemical after thermovales are released by flame.

George Bineth Brooklyn, N. Y.:—I'm afraid your father has information that has not been available to us. We have never heard of any German war plane carrying machine guns on the wings like the S.E.5 and the Nieuport, and our hun-

The Parachute Goes To War (Continued from page 11)

However, large scale development of this art of raining warriors from the sky was not actually begun until the Soviet Union undertook it. The world was, therefore, surprised when Moscow reported first 25, then 100, then about 300 men and women had parachuted from large Russian planes. And military experts decidedly sat up and took notice when the stage was reached where as many as 2,000 Bolos jumped at once. Many other nations then began experiments with mass descents.

In attack on Poland, parachuting troops were used with salient success. Soldiers landed behind the enemy barricades at several important points and cut much-needed lines of communication. To make sure that the men holding the Highest, the Reds took over the important Petsamo sector in this manner, but the sturdy Finns wiped out these "silk" troops, then quickly put a crimp to Stalin's Petsamo drive by gallant counter attacks.

IN HELPING to solve the problem of keeping men supplied with much needed articles, the parachute has more than ever shown its worth. Victims of time-place disasters such as floods, earthquakes, avalanches, and the like, have many times been thankful for the bundles of necessities dropped from planes with chutes. So today are the soldiers in the present conflicts to whom supplies have been dropped.

Two graphic war incidents illustrating such use of parachutes can be cited. In China, when the Japanese, the forces of Nippon, have gone deep into Cathay territory. The problem of keeping them in food and clothes is an immense one, especially with the lack in that land of decent ground facilities for transportation. So planes have frequently dropped required food, clothing, and equipment. On one occasion a flock of ten extra large parachutes carrying supplies were dropped to troops in the Valley of the Yangtze, near Nanjing, by the Japs' Tanaka Squadron. Then, in the Russian-Czechoslovakian campaign, likewise, Italy put the white canopies to use in overcoming its problem of supply. Marching across 120 miles of arid land—the Danakai Desert—the Italians found that the heat made the

AND SO the parachute has not only drastically alleviated the disaster of air fighting by saving lives but it has also injected pertinent new schemes and methods into the tactics of ground fighting where airplanes cooperate.

True, the full effect of modern warfare on the parachute is not yet apparent. But the battle skies of Europe are proving a thorough testing ground—though an expensive one—for all aeronautical appliances, parachutes included. Thus even greater perfection of the parachute is logically prophesied.

Youth News (Continued from page 27)

popular aero ground school. Nice going—and let's see more C of C's follow in Omaha's steps: Old-time John Charles Thomas was mad as all get-out the other day because he missed an American Airlines plane which the line didn't hold for him more than seven minutes. Well, we can't see why it was even held that long. In fact, Mr. Thomas didn't care about the passengers and other passengers to consider. They don't hold the 20th Century Limited, do they? . . . Boeing Flying Fortresses are so complicated that raw materials to make them come from all 48 states: . . . Tom Hardin, chairman of the CAA Air Safety Board says: "We consider the development of aircraft requiring less skill to operate to be of major importance. Today, spin-proof, 'stall-safe' aircraft can be built, and their use should save many lives each ear." The CAA's new semi-monthly publication, the Civil Aeronautics Journal, is packed full of handy facts and statistics, and we editors surely want to be without it.
Flying Aces Club News

By Clint Randall
National Adjutant, Flying Aces Club

Yes, Clubsters, Spring’s definitely here at last! And robins have nothing to do with our evidence—instead, the vernal season’s arrival is proved conclusively by the flocks of people who are swimming out to the airports these sun-bathed week-ends. And when Clint made his usual trip down to Roosevelt Field last Saturday to get in a little flying, there were so many cars there that your N.A. even had a hard job trying to find a place to park!

You should have seen the hop-pilots faces beam when they saw the crowds! The frigid weather this past winter kept a lot of people away. But now—well, the story’s plenty different!

And here’s another hot-shot sign that the ice skating and skiing season is done for: Two New Jersey Club members recently biked over to the Big City to say hello to Clint. Frank Schmalfield and Jim Winston, the lads who made the trip, said that their FAC unit was already out of “hibernation” and that they were planning some big things for the coming warm weather.

‘Nuff said on that. Now for a batch of aero info and news—

We on the staff of FLYING ACES recently took in the première showing of a new motion picture dealing with aviation’s history—Conquest of the Air.

Prepared by RKO Pathé News for Films Incorporated, who will distribute it, the film traces man’s long attempt to conquer the air from the days of ancient Chinese kites and the early helicopters to the first balloon ascent above Paris in 1783, and on to the present day when aviation has become a commercial and military necessity.

Except for the earlier sequence, the film is composed entirely of authentic documentary material dating back to the first years of the motion picture camera. Technical assistance was given the producers by many aero authorities, including the CAA and the Section of Aeronautics of the Smithsonian Institution.

We got a great kick out of seeing those old crates laboriously struggling to get into the air in this film which so graphically portrays how the pioneers fought on through the years to make aviation a reality. It would have been swell if you buzzards could have sat beside us and seen it all, too. But anyhow if you’ll glance over on the opposite page you’ll see three shots from the picture. They’ll give you some idea what great progress has been made.

The film is scheduled for showings at schools and universities throughout the country. And if it eventually gets around to your neighborhood—don’t fail to see it!

Incidentally, that great flyer, Jimmy Doolittle, sat in on the showing of Conquest of the Air—and it was great saying hello to him again.

Before going further, let’s cut our gun here for a few paragraphs and hand out all the dope on our most recent D.S.M. winner:

Duane Berg, of Sullivan, Ind., wins the F.A. Distinguished Service Medal this trip as our Master Model Builder of the Month. Duane’s seen here holding the craft that brought him the award—the “Scotch Monoped” built from plans in our December, 1939, issue.

Mail us photos of models you’ve built from F.A. plans. And if your picture proves you to be the top-notch modeler of the month, we’ll send you a handsome Distinguished Service Medal as your award. Just address your letters to Clint Randall, D.S.M. Contest, FLYING ACES, 67 West 44th St., New York, N. Y.

We can’t return photos submitted, and the decision of the judges—Wing Commander Herb Powell, Model Editor Dave Cooke, and National Adjutant Clint Randall—will be final. The picture of the winning model will appear on the Club page in each issue. And, of course, only FLYING ACES CLUB members are allowed to participate.

That’s all there is to it, fellows. Just build a model, making it the best you possibly can, ship a good, detailed photo to Clint—and then wait and see if you’re named our Master Model Builder of the Month and Distinguished Service Medal winner.

And now for the “regular” Club News. Letter Number One in our batch is from Robert Ferrazes, of Highland, Ill. He says:

“The F.A. readers in Highland, immediately after reading the March issue, asked me to write this letter and request more Eric Trent stories. We think they are even better than the Richard Knight yarns. Please put more adventures of that dare-devil, care-free young man in F.A.

“Here in Highland,” Bob continues, “we have formed a FLYING ACES CLUB. Every one of the members is a reader of F.A., and only those who buy the magazine are eligible to join. There are eleven members besides myself.”

Okay, Bob. Thanks for your swell letter. So far, only two Eric Trent stories have been run true enough—but there are a lot more coming! In fact, we’ll have one every other month for you. Also, Bob, you fellows are well on your way toward that 18 number’s necessary to form a Squadron. But you can get a Flight Charter now. Look it up on our “Join the Flying Aces Club” page.

And now listen to Ken Steel, of Albany, N. Y.: “I’m mighty proud of my FAC membership card,” says Ken. “It ar-
Once again Clint Randall is revved up and ready to take-off for his usual hangar flying session. And his prop-wash is blasting back and leaving a smoke-screen of flash news: All about a swell new aero film . . . The latest D.S.M. winner . . . A Clubster’s story of the air-raid emergency system in Britain—Yes, and plenty more.

rived just this morning, and already I’ve framed it and hung it on the wall in my bedroom. I’ve got nigh on to sixty pictures of airplanes and famous aviators hanging on my wall, but I’d rather have that membership card than all of those snaps put together!

“Now,” his letter goes on, “I intend to start looking up enough members to start a flight. And then when I get to that step, I expect to put the fellows in the Flight to work getting enough members for a Squadron. Keep your eyes peeled, Clint, because you’re going to hear plenty from Albany in the future!”

We call that Determination with a capital “D”! Here, Ken’s only a new member—and already he’s got swell plans underway. We wish you all the luck in the world, fellow, and assure you of our fullest co-operation in getting things humming—and keeping them that way.

Another bit of news is that the newly-formed Griffon’s Squadron No. 1, of the Bronx, recently had an election of officers. Here’s the result of their vote: Commander, Thomas Jens; Captain, Harold Alexander; Personnel Director, Harry Pilbauer; Treasurer, Richard Halloran; Sergeant at Arms, Edward Jacobberger; Library Committee, Samuel Berkowitz; Publicity Committee, Julius Gang; Secretary, Modesto Cordero; Technical Advisor, Matthew Siegel; Proficiency Committee, Bernard Siegel; and Designing Committee, Rudolph Kobel.

Harold Alexander and Harry Pilbauer, of that outfit, contacted G.H.Q. the other day and asked that we repeat the information about their Squadron that appeared in the April issue. Here it is—

The Griffon outfit would like all Metropolitan FAC outfits to contact them immediately. They’ve got a great plan to consolidate all of the N.Y. groups into one big Wing. Address all communications to Thomas Jens, 965 Rogers Place, Bronx.

“WELL, Clint,” says Fred Cory, of St. James, Northampton, England, “I suppose you’re reading this while sitting in a big arm-chair with your feet propped up on the desk in the approved American style. On the other hand, Clint, I’m sitting in a dingy office and trying my darnedest to get enough light to write. My office, you see, is sand-bagged and padded against air attack.

“I am surrounded by telephones,” Fred’s letter goes on. “One for the Decontamination Squad, another for the Auxiliary Fire Service, another for the Ambulance Squad, and yet another for the Control Room—and I’m the only one in the place. In front of me there’s a big code chart which reads:

**Warning Yellow:** Planes over coast.
**Arouse men on duty.**
**Warning Red:** Possibility of local raids. Men to stand by pumps.
**Warning Green:** All clear.

“Yes, you’ve guessed it, Clint. I’m a telephonist on duty at St. James No. 2 AFS depot. Behind me there hang gas-masks, tin-hats, decontamination outfits (olisks), splinter masks, and rubber boots. Incidentally, the last time I tried to get it all on it took me 30 minutes. And we’re supposed to be ready in 7 minutes!

“In addition to being an A.R.P. telephonist, I also belong to the Northampton Air Defense Cadet Corps. You will remember reading at the beginning of the year that there were only 2,000 ‘reckoned’ on joining the A.D.C.C. At the end of six months there were about 10,000 members, and now there are about 20,000. The R.A.F., incidentally, has now taken over the group.”

That, lads, is one of the most interesting letters we’ve received since the war began. And to make it even better, Fred enclosed a note from the A.D.C.C. that said, in part: “Congratulations, American aviation. Your Curtiss fighters sure did show the German Messerschmitt planes how to fight last night.”

(Continued on page 71)
Do Your Full Share to Advance Aviation

TO advance the cause of aviation, over 50,000 men and women, boys and girls, have banded together to form the FLYING ACES CLUB. It is the easiest club in the world to join. Just clip this newspaper article, fill it out, and mail it to GHQ with a stamped, self-addressed envelope. Your official card will then be forwarded to you. All you then need do is pay your membership dues and the right to wear the various insignia of the Club.

In the FLYING ACES CLUB there are two kinds of local organizations, known respectively as Squadrons and Flights. A Squadron must have eighteen members, including its leader. A Flight must have a total of six. You can start either of these groups in your own community by enrolling your friends in the Club, then applying for an official charter as detailed in the column at the left. Each member must hold an F.A.C. card. Meetings and activities are conducted among the squadrons and flights according to the wishes of the members. GHQ has established no rulings in this respect, nor are there any dues or red tape whatsoever. The entire idea of the Club is a common meeting ground in an international organization for the lovers of aviation in its various phases. Many local Squadrons and Flights hold regular contests and public events. Many young people are then eligible for membership in the FLYING ACES ESCADRILLE. Then you may win truly handsome awards. Among these are the Distinguished Service Medal and the Medal of Honor, two of the finest decorations that have ever been designed.

Any member who has reached the rank of Ace is eligible for membership in the FLYING ACES ESCADRILLE, an advanced organization which replaces the old G-2 unit and opens the way for participation in a definite program contributing to the forward movement of aviation.

To enroll, an Ace must apply direct to Escadrille Headquarters, giving his name, age, address, rank, and highest award already won in the GHQ system. All other application schedules, as for return envelope. If he is approved for membership his instructions will be forwarded. Members of the Club meet for model building, and instruction, and even regular flight training.

Awards and the Aces Escadrille

After the membership card, and Cadet and Pilot's wings, comes the Ace a Star. This is awarded for enrolling five new members, using, of course, a separate coupon for each. As an Ace you are then eligible for membership in the FLYING ACES ESCADRILLE. Then you may win truly handsome awards. Among these are the Distinguished Service Medal and the Medal of Honor, two of the finest decorations that have ever been designed.

Any member who has reached the rank of Ace is eligible for membership in the FLYING ACES ESCADRILLE, an advanced organization which replaces the old G-2 unit and opens the way for participation in a definite program contributing to the forward movement of aviation.

To enroll, an Ace must apply direct to Escadrille Headquarters, giving his name, age, address, rank, and highest award already won in the GHQ system. All other application schedules, as for return envelope. If he is approved for membership his instructions will be forwarded. Members of the Club meet for model building, and instruction, and even regular flight training.

Correspondence

In all correspondence with GHQ we are a new official address, enclosing a stamped, self-addressed return envelope with your letter. GHQ receives thousands of letters weekly, and cannot undertake to answer those who do not heed this rule.

Official Supplies

Due to popular request, we have or ordered a new supply of F.A.C. paper pens. These attractive pencils, which have glue on the back so that they may be attached onto a shirt collar, etc., sell at $6 for 10c, or 20 for 25c. We also have a new supply of swell embroidered wings, worn top-notch on your sweater. They're made of satin and embroidered in blue and gold, and are available at 25c each. Order now before the supply is exhausted.

Overseas prices: Penants, 25c for 25c; wing insignias, 1/6.

Juno Membership

1. The undersigned hereby makes application for membership in the Flying Aces Club. I agree to live up to the principles; to foster the growth and development of aviation; and cooperate with all other members in the promotion of widespread aviation information, building up confidence in flying for national defense and transportation. I will also 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

City

State

Do you build airplane models?

Mail this application, enclosing a self-addressed, stamped envelope, to Canadian and overseas readers send the application only to Canada and be registered as an International Reply Coupon worth 50c, secured at the Post Office.
With the Model Builders

Billy Scholl, of Oklahoma City, Ind., sends us this striking photograph of his Ray Heyl-designed "Scram" gas job, plans for which appeared in our July, 1939, F.A. Shortly after this shot was taken, Billy put the finishing touches on his job and powered her with a "Baby Cyclone" engine. He reports she revs up top-notch flights.

Bill Derian, of New Orleans, La., sends us this realistic photo of his completely-sealed World War Newport Clf Cl. The ship has a 21-in. span, is equipped with movable controls, and carries a built-up Gnome rotary engine. What's more, the craft mounts two machine guns that are constructed exactly to scale, also wrapped struts and authentic markings. Whoa, what a job! But the finished product is certainly worth it.

Left: Pete Bowern, who's now attending the Boeing School of Aeronautics, sends us this shot to show what he's done with his "Gas Powered Duck" (August, 1938, F.A.). As you can see, the ship is now a flying boat instead of a seaplane. By the way, another Bowern gas job will appear in an early issue of F.A. Be on the lookout for it. Below: Our Gas Model of the Month is this beautifully finished Douglas 0-21A observation miniature built from plans in our December, 1938, F.A. Fred Paschke, of Ashbury Park, N.J., our expert builder, says that the ship has a 29-in. span, weighs 2 1/2 lbs., and is covered with silk. He also says that she is a snappy flyer and lands hot, due to her extra weight. This is one of the best models we've ever seen.

Below we have a swell shot of a self-designed solid transport, conceived and built by David Alexander, of Aiken, S.C., the ship is "powered" with two Allison pushers. Those TWA markings and the celluloid props give a very realistic appearance to the model. And that gray backdrop makes one think that the ship is a passenger job, flying into ceiling zero.

Paul Nail, of Lubbock, Texas, made a corking job on this "Scientific" model, judging from the photo. But he says he hasn't flown the craft yet because of the seasonal high winds up his way. When those breezes calm down, though, watch his slipstream!

Rae Davis, of the San Diego (Calif.) Aeromors, is the locale in this pic. She's displaying her "Mystery Maid" gas buggy which recently took first place in a California tournament. The ship is a pull-clean, cabin job, painted vividly so that it may be seen when flying high.
Plecan's "Paragon"

Here, Boys, is a class "C" contest model that refuses to stay on the ground. During its ramblings through the ozone, it has had its share of roof-top and tree-top landings, yet it's still in one piece! What's more, all repair work that's been necessary has been minor.

The trophy this job won (see photos) was awarded for the highest average time in the cabin event at the first Metropolitan Model Airplane Council contest held last year at Holmes Airport, New York City. The first two official flights the "Paragon" made were of two minutes duration each. But on the third try, the model was taken in hand by a kind thermal, raising the three-flight average to three minutes, plus. In tests conducted during cool evenings after the contest, the average flight time was two minutes.

This model is intended for the model builder who has already achieved success with other designs. And if you have successfully built and flown a cabin model like Earl Stahl's now-famous "Hi-Climber," then you can easily construct the "Paragon." Note, incidentally, that all ribs and wing outlines are given full size, relieving you of the time and energy required in scaling-up parts.

By Paul Plecan
Author of "The F.A. Gas Flea," etc.

FUSELAGE CONSTRUCTION
USE HARD balsa for the longerons. Medium balsa may be used for the cross-braces as these parts are not subjected to the strains that the longerons carry from the rubber tension.

After the fuselage sides have been assembled, they should be lifted from the plan and pried apart with a razor blade. Now, the cross-braces are cemented between these two sides, resulting in a framework as shown in step one on the fuselage plate. In step two, balsa blocks, approximately 1/8" thick, are glued to each side of fuselage as shown. Use 3/4" thick soft stock on the tail portion. Remember that these blocks are for fairness and need not be strong.

While the framework is drying, cut from 1/8" stock four soft stringers and shape as shown above the fuselage side drawing. These four stringers are cemented in place next, care being exercised in centering each one. All joints in the fuselage should be cemented a second time for extra strength, and the landing gear should be glued in place before the fuselage is covered. Make sure that the landing gear strut is anchored solidly in the fuselage, and, if necessary, bind the strut with thread wherever it contacts balsa.

The nose and tail blocks should be sanded to a circular cross-section. The fuselage is covered with plain tissue and clear doped three times. Carve the 13/4" wheel from hard balsa, 1/4" thick, and mount a large-faced bushing through the center to keep the axle from wearing the wheel center away. The cross section of the wheel should be an approximate streamline, and the wheel should revolve freely on the axle.

The pylon on which the wing rests is tilted so that the wing has 1/4" incidence in relation to the fuselage centerline. Note the "U" shaped hooks on the front and rear of the pylon. These hooks allow the wing to disengage immediately if the plane strikes anything while in flight. Do not forget to cement the tail incidence blocks in place now.

The tail plug is carved from medium balsa and should be a snug fit. The 1/16" steel wire tail hook is well anchored in the tail plug, as it has to stand a lot of punishment when the motor is stretched and wound. A piece of cambric or rubber tubing slipped

Above: Here, boys, we have a swell one-quarter front view of the "Paragon." Doesn't she look powerful with that big prop up front? Left: In this pic, our model's lines are brought out even more graphically. Sure, that stab's big—but it's also a sure-fire thermal-catcher that makes for long flights.
Nose Plug and Prop

The nose plug is carved from medium balsa, and when the prop shaft is being formed, it should be so drilled that the prop points down and to the right. This is necessary to overcome stalling under full power and to provide a slight right circle. The nose plug should have a bushing or large washer cemented to its front and rear face to keep the rapidly revolving shaft from chewing up the wood and changing the amount of right and down thrust.

Carve the plug from a block the size indicated in the drawing and work in a slight amount of undercamber in each blade. The cross-section, “B-B,” gives the approximate airfoil that should be carved into each blade.

The free-wheeling feature is absolutely necessary in a design of this type, but the particular one to use is left to the choice of the builder, since there are so many types to pick from. The type shown, however, is very simple and practically fool-proof. This ingenious jigger is the brain-work of Louis Garami, who needs no introduction to old Flying Aces readers. Oh yes, don’t forget to use a ball-bearing washer, as the motor exerts a lot of pressure between the prop and plug. The ball-bearing washer will decrease the friction, also, making it easier for the propeller to free-wheel.

For best results, the prop should have a smooth finish. Gloss is obtained by six coats of dope with intermediate sanding, permitting the propeller to slide through the air with the greatest of ease.

A motor consisting of 24 strands of ½″ flat rubber should be used, and it should be well lubricated with a good brand of lubricant, so that plenty of turns can be packed into it to provide ample power for long, flat-glide flights.

Bill of Materials

- Six strips ¾″ sq. by 36″ hard balsa for longerons and cross-braces;
- Two sheets ¼″ by 2″ by 36″ soft balsa for stringers, wing trailing edge, and pylon;
- Two strips ½″ by ½″ by 36″ medium balsa for wing leading edge and stabilizer trailing edge;
- Two sheets 1/16″ by 2″ by 36″ medium balsa for ribs and spars;
- One block ¾″ by 2″ by 36″ very soft balsa for nose and tail fairing;
- One length 1/16″ spring steel wire for strut and prop-shaft;
- One block ½″ by ⅛″ by 1¼″ for prop;
- One sheet 3/16″ by 1½″ by 36″ soft balsa for stabilizer leading edge;
- One sheet 1/32″ by 2″ by 36″ balsa for leading edge covering;
- One length cambric or tough rubber tubing for covering prop shaft and rear hook;
- One length .030″ wire for tail skins and free-wheeling hook;
- One ball bearing, one 1½″ hard balsa wheel, two sheets colored tissue, fifty feet ½″ flat rubber, two ounces cement, two ounces dope, and a bit of elbow grease.

Wing and Stabilizer

The wing and stabilizer outlines should be drawn to double the size shown on the plans, bringing them up to full size. The ribs are shown full size, as are the curved wing trailing edges. The spars and leading edges should be tapered before assembly, as per instructions on the drawings. Note that no dimensions are given for the size of the wing leading edges; they are made from ⅛″ thick stock tapered to the height indicated on the leading edge of each rib.

The piece indicated by the number 12 is the dihedral joiner, and should be cemented to the rear of the spar of each wing half. When this has been done, each tip should have 3½″ dihedral when the wing is in a level position. The 1/32″ sheet balsa used for the leading edge covering should not be cemented in place until the entire wing has been completed, with dihedral.

In covering the wing and stabilizer, brightly colored tissue should be used in order to offer the best visibility possible when the model is outlined at a high altitude against the sky. Red is an excellent color for this as it can be distinguished more easily against the sky or a green and brown background on the ground after the model has landed.

The stabilizer should be glued directly to the tail incidence strips. Cement the stabilizer on “cock-eyed”—that is, leaning toward one side so that the rudders are offset slightly for a right circle. Looking from above, the right tip of the stabilizer should be slightly nearer to the nose of the model than the left tip end.

Flying and Adjusting

After the model is completed, it should be glided to see if it is balanced properly. Any diving tendencies should be counteracted by using small incidence blocks cemented to the leading edge of the wing where it rests on the pylon. Conversely, stalling tendencies should be diminished by using incidence blocks under the trailing edge. Due to the slight offset in the rudders, the model should glide in right-hand circles, and should climb in circles smaller than those in the glide.

After the model has been flown under 100 hand winds, the wing and stabilizer should both be left alone, further ad-

(Continued on page 80)
WING AREA: 145 sq. in.
SPAN: 33 in.
LENGTH: 30 in.
REQ. WEIGHT: 4.5 oz.
ACTUAL WEIGHT: 4.9 oz.
REQUIRED CROSS-SECTION: 8.1 sq. in.
ACTUAL CROSS-SECTION: 8.8 sq. in.

PROP FREEWHEELING DETAIL: .030" wire hook shown in engaged position. Dotted lines indicate position of hook when freewheeling.

13" x 1/8" x 1/8" PROP BLOCK

PROP AIRFOIL AT B-B

LANDING GEAR IS BENT FROM STEEL WIRE 1/16" Diam.

DETAIL OF LANDING GEAR ATTACHMENT

1/16" Diam.

TYPICAL FUSELAGE CROSS-SECTION

NOTE TAIL INCIDENCE BLOCK AND PIECES "L" AND "T" ARE GIVEN FULL SIZE.

FUSELAGE ASSEMBLY

ASSEMBLE TWO SIDES AND CEMENT CROSS BRACES IN.

CEMENT NOSE AND TAIL BLOCKS IN PLACE AND SET ASIDE TO DRY.

CEMENT STRINGERS ON AND SAND NOSE AND TAIL ENDS TO ROUND CROSS-SECTION.

COVER WITH TISSUE AND SPRAY WITH WATER. CEMENT PYLON BASE ON WHEN TISSUE IS DRY.

CEMENT UPPER PORTION OF PYLON IN PLACE. PLACE WING ON IT AND CHECK FOR SNUG FIT. IF CORRECT, APPLY TISSUE COVERING GRAIN OF TISSUE SHOULD BE VERTICAL FOR BEST RESULTS. FUSELAGE SHOULD BE DOPED TWO OR THREE TIMES FOR EXTRA STRENGTH.
FULL SIZE, PROP SHAFT AND FREE WHEELING HOOK

BIND WITH THREAD AT THESE POINTS

FULL SIZE PROP BLADE OUTLINE

.030" WIRE

TAIL SKID (TWO REQUIRED)

FRONT AND REAR WING HOOKS

DETAIL OF TAIL PORTION OF FUSELAGE — NOTE POSITION OF TAIL INCIDENCE BLOCKS.

1/16 STEEL WIRE

FRONT AND SIDE VIEWS OF LANDING GEAR STRUT

DIAMETER COPPER WASHERS SOLDERED TO STRUT.
News of the Modelers

All model clubs are urged to send us reports of activities for inclusion in this department—advance dope on contests, club activities, and results of meets. Such news should be sent to us as promptly as possible, and advance notice of contests should be in our hands at least six weeks before the tourney. Address letters to Model Editor, FLYING ACES, 67 West 44th St., New York City.

Sky-Scrapers Clean Up

CAPPING eight places out of a possible ten in the two gas events contested at Creedmore, N. Y., on February 22, the Brooklyn Sky-Scrapers club, directed by Carroll Moon, proved once again that they are one of the leading model organizations in the East.

The meet, which was run under the new NAA rules and sponsored by the MMAC, was directed by Al Young, NAA Contest Director. Winners:

Contest Kits Ready

THE AMA's new official contest kits are now ready for distribution to Contest Directors of NAA-sanctioned meets. These kits contain 35 official competition armbands, 40 score cards for recording flights, 4 timing pads each containing 50 official flight timing slips, and other helpful supplies for conducting a model tourney. The kit comes in a durable "fibrestock" carrying folder with a flap to protect the supplies.

In the case of larger meets (where this supply might be inadequate) additional materials may be purchased as follows: armbands, 3 for 5c; timing pads, 10c each; score cards, 10c each; additional containers, 10c each.

Aero Course For Teachers

AN EXTENSION course in the elements of aviation has been inaugurated at the Teachers College of Connecticut. The course is under the direction of Prof. Orma E. Underhill, of the Science Department, in cooperation with the State Department of Aeronautics and a number of aviation organizations.


According to present plans, the director will make use of sound motion pictures and airplane models. Also, trips will be conducted to various airports and aviation personalities will be invited to give talks.

Prospective AMA Member List

RECENTLY, the AMA mailed to all Academy Chapters in good standing a list of prospective members who have written to Headquarters for membership details. The AMA has urged those who received the list to contact all nearby prospective members.

Texans Hold Annual Convention

IN A FIVE HOUR session, the 90-odd delegates to the annual Southwest Gas Model Association, held February 24-25 in Corpus Christi, Texas, voted to place a maximum of $80 for first prizes in any forthcoming single class of model competition sanctioned by the SWGMA, thus eliminating "professionalizing" of contests. However, it was agreed that a cash award of $25 and a trophy may also be presented.

In addition, the group held an election of officials. The new officers are: President, E. F. Burgdorf; Vice-President, Jerry Heller; Secretary-Treasurer, Mrs. Herbert Fisher; and Publicity Director, Byron Buzbee.

E. F. Burgdorf was also named State NAA Contest Director.

Fort Worth was officially selected as next year's convention city, and already bids have been sent out to hotels, restaurants, etc., to assure accommodations.

Committees and their chairmen reporting to the convention were: Rules, Ralph Pressler; Constitution and By-Laws, E. F. Burgdorf; Contests and Activities, Johnny Clemmons; Awards, Sid Smart.

Floor delegates: Willie Gunn, Fort Worth, Texas; Tommy Givens, Graham, Texas; Bob Barlow, Oklahoma City, Okla.; E. F. Burgdorf, Houston, Texas; C. S. Morse, College Station, Texas; R. L. Kirkley, Austin, Texas; Garver Murray, Harlingen, Texas; Robert Obsburn, Galveston, Texas; Herbert Fisher, San Antonio, Texas; Burnell Brown, Dallas, Texas; and S. M. Udden, Corpus Christi, Texas.

Pittsburgh Leadership Training

IN KEEPING with the demand for more and better qualified leaders in model aviation practices, techniques, and building, the Recreation- Education Division of the WPA, Allegheny County, with headquarters in Pittsburgh, Pa., has started training a group of leaders for this work.

The classes are under the direction of Harry G. Vogler, Jr., of the Boys'
Club of Pittsburgh. With a thorough program of shop practices, nomenclature, theory of flight, contest procedure, and instruction in the building of model aircraft, it is intended that this program will enable outstanding candidates to learn all phases of model aviation through actual experience and instruction and thus qualify for the training of others.

Badger Case Cleared Up

We are happy to report that word has come from the NAA saying that the case of the Wisconsin contest regulations, reported under the heading "Badgers Censure Rules" in our May issue, has been cleared up. Al Lewis, Secretary of the AMA, states: "The State NAA-Academy Contest Director of Wisconsin, Conrad Hansen, on behalf of the Contest Directors from his State, has now made arrangements with the NAA that without exception all Wisconsin gas meets are to be conducted according to the rules set forth in the proper regulations. Part of the Wisconsin State Headquarters in pledging their strict adherence to NAA rules enabled the NAA Contest Board to sanction forthcoming Wisconsin Meets."

New AMA Address

The Academy of Model Aeronautics, along with the NAA and other divisional affiliated associates, has moved to a new location in a more central section of Washington Wil- lard Hotel, Washington, D. C.

"Cub" As First Prize!

A Piper Cub will be given as first prize at a Summer Greenville, S. C., Torque Fliers contest. Also, liberal cash awards will be presented. Jimmy Metcalfe, president of the group, says that so far the only logi- cal nobel prize winner to have figured out by which to award the Cub is to present it to the group of modelers who score the most points at the meet. However, he's wide open for other suggestions. If you have any, address your letters to Jimmy at 107 W. Washington St., Greenville, S. C.

Dyask Smashes World Mark

Aided by a powerful spiralling thermal which blew over the field on the heels of an offshore wind, Vy Dyask, 14 year old modeler of the Cashaplay Aeroslappers of Caribou, R. I., chalked up an amazing new world gas job mark on February 30. The new standard—no less than 3 hrs., 10 min., 31.7 sec.—wiped out the time from the record books by a generous 2 hrs., 46 min., 23.7 sec. margin.

Dyask's startling flight ran his competitors into the ground. For Hal Ispedekkals, the second-placer, had to take off with a 23.2 min., 7.9 sec. hop when the wind which had favored the winner died to a whine. Meteorologists credited Dyask's record to "a cyclonic mass of air (Continued on page 62)"

Contest Calendar

Clubs and organizations sponsoring model airplane meets are urged to send us advance notice of their meet dates so we can stand in the Classified News column. Such notices also help to keep our hands on at least six weeks in advance of the tourney. Results of meets, and pictures when possible, are likewise desired for publication in this model news column. Address Editor, Model Department, FLYING ACES, 47 West 33rd St., New York City.

Boston, Mass.—April 27: Junior Aviation League outdoor meet to be held at Smith Play- ground, Allston, NAA sanctioned. Write Gunnar Munnick, 101 Aldred St., Quincy.


San Diego, Calif.—April 29: San Diego Aeroscience Fifth Annual Gas Model Airplane Contest at all places. Outdoor meet on Mission Beach Boardwalk, San Diego. Info from Art Halsey, 8376 Dale St.

Boston, Mass.—April 25: Indoor meet of Junior Aviation League to be held at Irvington St. Armory. NAA sanctioned. Details from Gunnar Munnick, 101 Aldred St., Quincy.

Wyandotte, Mich.—April 9: Detroit City Model Club meet at High School. All classes for merchan- dice awards. NAA sanctioned. Dope from Fred Bashore, 553 Bondie St.

Salt Lake City, Utah—May 5: Class "E" meet at Central Airport. NAA sanctioned. Info from Juds. B. Bird, 112 E. 3rd, Salt Lake City.

East Paterson, N. J.—May 12: 2nd Annual Gas Meet at Cherry Hill for all classes. Generous cash and merchandise prizes. Info from Vincent J. Bere. 18 Hoboken, Garfield, N. J.

Beloit, Wis.—May 12: Seventh Annual Southern Wisconsin & Northern Illinois Model Airplane Meet at Beloit County Airport. NAA rules. Full info from Conrad Hansen, Jr., 2372 Riverside Drive.

Boston, Mass.—May 18: Outdoor meet of Junior Aviation League to be held at Smith Play- ground, Allston. NAA sanctioned. Details from Gunnar Munnick, 101 Aldred St., Quincy.

South Plainfield, N. J.—May 18: 3rd Annual Queen City Gas Meet for all classes at Hadley Field. Trophies, cash, and merchandise. NAA sanctioned. Info from Walter Mariensche, 1809 Myrtle Ave, Plainfield.

Saugus, Mass.—May 19: N. E. States Gas Championships at Saugus race track. Trophies and merchandise. NAA sanctioned. Address letters to Howard Clark, 639 Dorchester Ave., South Boston.

Pittsburgh, Pa.—May 19: Allegheny Mt. Area Model Club meet at Butler Airport. NAA sanctioned. Info from John Stash, 1301 Combination Candy, Pittsburgh.


Boston, Mass.—June 1: Indoor Meet of Junior Aviation League to be held at Irvington St. Armory. NAA sanctioned. Details from Gunnar Munnick, 101 Aldred St., Quincy.


Fort Wayne, Ind.—June 2: 2nd Annual Mad Modelers' Gas Model Contest to be held at Municipal Airport. Tourney under NAA rules. Contact Walter Krie, 414 E. Washington St., Fort Wayne.

Boston, Mass.—June 5: Indoor events of New England Championship Rubber Meet to be held at Harvard College practice field. NAA sanctioned. Info from gunnar Munnick, 101 Aldred St., Quincy.

Madison, Wis.—June 6: Madison Gas Model Club contest at Royal Airport. NAA sanctioned. Contact Marvin Schumacher, 2842 E. Dayton St.

Williamsport, Pa.—June 18: Penn. Championship Gas Meet at Williamsport airport, Mont- gomery County, Pa. Write Dr. John Holmes, Jr., 389 Pine Ave., Williamsport.

Pittsburgh, Pa.—June 16: Allegheny Mt. Area Model Club meet at Butler Airport. NAA sanctioned. Info from Harry Vogler, 1633 Duffield St.

Oldsboro City, Ohio—June 16: Gas model contest for all classes. Cash prizes and High Points Visiting Club Trophy. NAA sanctioned. Contact Carl Huddleston, 317 S.W. 90 St.


Bowling Green, Ohio—June 23: Bowling Green Model Airplane Club rubber meet. NAA rules. Info from Dr. J. M. Jackson, 204 South Main, Bowling Green.


Chicago, Ill.—July 17: National Model Airplane Meet sponsored by the Chicago Times in cooperation with the Park District. Application blanks and complete information will be available soon. Watch FLYING ACES for announcement of where to write for further news.

Salt Lake City, Utah—July 7: Class "A" meet at Central Airport. NAA sanctioned. Info from Jack Douglas, 99 E. 2 St., South, Boston.

Boston, Mass.—July 13: Outdoor meet of Junior Aviation League to be held at Smith Play- ground, Allston. NAA sanctioned. Write Gunnar Munnick, 101 Aldred St., Quincy.


Baltimore, Md.—July 28: Balt. Model Airplane Assoc. contest for rubber and gas to be held at Municipal Airport. Merchandise and trophies. NAA sanctioned. Write George Geil, 5812 Eutaw Place, Baltimore.

Ottauma, Iowa—July 28: Annual All-Iowa gas and rubber meet at Municipal Airport. Cash, trophies, and merchandise. NAA sanctioned. Dope from C. P. Osmon, c/o Municipal Airport.

Pittsburgh, Pa.—July 28: Allegheny Mt. Area Model Club meet at Butler Airport. Info from Harry Vogler, 1633 Duffield St.

Boston, Mass.—Aug. 16: Outdoor Meet of Junior Aviation League to be held at Smith Play- ground, Allston. NAA sanctioned. Write Gunnar Munnick, 101 Aldred St., Quincy.

Pittsburgh, Pa.—Aug. 18: Allegheny Mt. Area Model Club gas meet at Butler Airport. Contact Harry Vogler, 1633 Duffield St.


Salt Lake City, Utah—Sept. 1: 2nd Annual Douglas Trophy Gas Model Meet at Central Air- port. Write Carl Hansen, 102 E. 25 St., Salt Lake City.

Philadelphia, Pa.—Sept. 7: Fourth Annual Invitation Meet of Quaker City Gas Model Airplane Association to be held at Northeast Philadelphia Airport. NAA rules. Dope from Wm. G. Evans, 1426 W. 65th St.

Wyandotte, Mich.—Sept. 8: Indiana 2nd Annual Gas Meet at Fort and Penn. Ave. field. NAA sanctioned. Contact Fred Bashore, 556 Bondie St.


Pittsburgh, Pa.—Sept. 15: Allegheny Mt. Area Model Club meet at Butler Airport. Write Harry Vogler, 1633 Duffield St.

Pittsburgh, Pa.—Oct. 6; Allegheny Mt. Area Model Club Championships at Butler Airport. Dope from Harry Vogler, 1633 Duffield St.
This Job's Got Everything!
Our second contest craft of the month! Yes, power fans, here's a sleek sky scooter for you that's a natural tourney taker. If you live in the city and need a ship that'll give those other guys a run for their money—then here's your meat. And if you hang your hat in the country you'll want to build this baby to cash in on her top-notch flights. Anyhow, you'll be missing a good bet if you don't listen closely while Ace-designer Gil Shirman gives you the dope on his latest petrol pretty!

"Mike" Gas Model

JUST WHAT is an "ideal" model? We'd say that in order to come under that head a ship would have to be comparatively small—about five foot span—and weigh about two pounds. Also, it must necessarily have the ability to stay up for long, flat-glide flights.

Well, builders, this month's gas job has all of those features! Its small size allows for easy transportation, and packing is facilitated by the removable motor unit, as well as the detachable wing and tail. And its light weight automatically assures a fast climb.

Yes, we're talking about "Mike." This little job has everything that comes under the head of "desirability"—including a retractable undercarriage!

Whereas some retraction gears for models are difficult to keep in good working condition, the one that's incorporated into "Mike" is fool-proof. And the single wheel retracts so cleanly that parasitic resistance is cut down a great deal, thus making possible flatter and longer glides.

The general appearance of "Mike" is one of clean lines without the loss of simplicity. This one-wheeler is no more difficult to build than a "box-like" gas job, yet is streamlined enough for the most critical builder.

Okay, boys, that's just about enough gab for now, so let's turn to the instructions and see what's what. All set? Then hold tight—because it's coming fast!

By Gilbert Shirman
Author of "Ramblor" Gasoliner

FUSELAGE AND LANDING GEAR

NOTE THAT the side view of the fuselage is symmetrical. The height of the basic rectangle at the first upright is 4 1/2"; the second upright, 4 3/4"; the fourth upright, 4". The widths of the basic rectangles are 3 1/2", 3 3/8" and 3" respectively. From the fourth upright back the fuselage is straight. A full size drawing, using these measurements, should be made to insure a good basic structure.

The rectangular framework of 1/4" square balsa is built directly on the plans. When finished, the 1/4" by 1" stringers are added to the top and bottom of the framework, and the 3/16" stringers to the sides. The addition of the 1/4" sheet stabilizer mount and 1/4" sheet wing mount completes the fuselage.

The landing gear should be bent accurately from 3/32" steel wire. All the soldered joints are bound first with copper wire. Tie the aluminum tubing sockets to a piece of hard 1/4" square balsa, glue this unit at its proper station, and then add the various cross braces as shown on Plate 8. Note that the bottom stringer becomes two pieces from the landing gear forward and forms a slot in which the landing leg slides.

Slight adjustments may be necessary to get the retracting system to work correctly. The weight of the
model should hold the wheel out without having the job tip forward. And when the plane is lifted, the wheel should swing up under the cowl. By adjusting the tension of the rubber band and the angle of the landing gear leg, the correct balance of forces may be obtained.

**Motor Mount and Hook-Up**

**PLATE 1** carries detailed views of the motor mount. The runners are made from 1/2" by 3/8" pine, and 1/20" plywood gussets are glued and nailed to these for strength. The mounts are bolted to the 1/4" plywood bulkhead with 3/4" brass bolts. The spacings shown on the plans are for a Brown engine, but any 1/50 h.p. motor may be used by simply changing the position of the bolt holes to conform with those on your power plant. The coil and condenser are mounted to the rear of the fire wall with aluminum straps and wood screws.

The battery box shown on Plate 2 is made of 1/8" hard sheet balsa. The box is made for two intermediate batteries which should prove sufficient for running your engine. Glue two brass contacts at one end of the inside of the box and cement the wire spring to the other end.

The ignition diagram is detailed on Plate 1. By using "alligator" clips in connecting the wires to the coil and condenser, the motor may be completely removed from the rest of the plane.

**Tail and Wing**

The tail construction used is simple, light, and strong. Start by pinning the 3/4" by 1/2" trailing edge to your full-size plans. After

---

**Bill of Materials**

(Complete plans on the following pages)

- Ten strips 1/4" sq. by 5' for longerons, wing spars, and wing leading edge;
- Eight sheets 1/16" by 2" by 36" for wing and stabilizer ribs;
- Five sheets 1/32" by 3" by 36" for wing leading edge and center section covering;
- Four strips 3/16" by 3" by 36" for fuselage stringers and stabilizer mount;
- Four feet 3/4" diam. aluminum wire for wing tips;
- Two feet 3/32" diam. steel wire for landing gear;
- Three strips 1/16" by 1/4" bamboo for battery box and wing pegs;
- Two strips 3/16" sq. by 5' for stringers;
- One sheet 1/4" by 8' by 36" for rudders;
- One strip 3/8" by 1/2" by 36" for stabilizer trailing edge;
- One strip 3/16" by 3/8" by 5' for wing trailing edge;
- One strip 3/4" by 3/8" by 36" for stabilizer leading edge;
- One strip 5/16" by 1/4" by 36" for stabilizer spar;
- One strip 3/8" by 1/2" by 3/8" pine for motor mounts;
- One sheet 6" by 6" by 1/20" plywood for motor mounts;
- One sheet 3/4" by 5" by 7" plywood for motor bulkhead;
- One sheet 3/4" by 2" by 36" for wing mounts and back of bulkhead;
- One 6" length aluminum tubing, one 3/8" diam. landing gear bearing, one pint dope, half pint cement, eight sheets tissue, yard and a half silk, 3' hook-up wire, sheet brass scraps for battery contacts, soft balsa blocks for cowling, .010 sheet aluminum tabs, one 3/4" air wheel, bolts, nails, pins, sandpaper, etc.

...
The Mosquito Sportster

Yes, O’l Sol has at last thawed out the ponds, and soon there’ll be squadrons of hypo-carrying winged hellions on your trail—mosquitoes! But if you want to beat Mom Nature’s buzzing buzzards to the punch, just turn out THIS “Mosquito.” You’ll be able to run any ’skeeet into the ground after the track practice Ernie’s hot-shot flyer will give you. And we don’t mean Citronella!

By Ernest Copeland
Author of “Try This Galloping Gull,” etc.

IT’S A pretty tough job to find a ship that can be flown out of a small lot and still be dependable. A craft of that sort must be, small, light, and strong—which is an unusual combination on any model tarmac. The “Mosquito Sportster,” though, can meet these specifications and still have plenty to spare. Sure, that backyard type of flying is really tough on a model, but the “Mosquito” has survived over six months of it!

This month’s stick job has sampled just about every obstacle you can think of—roof-tops, parked cars, trees, and iron fences included. That all-balsa tubular fuselage has had five rubber motors break inside it without any sign of strain. But in spite of its strength, a high standard of lightness is maintained. The long flights of the “Mosquito” can be traced to this and the careful design of the ship.

And now that you’re all steamed up about the “Mosquito Sportster,” get out your supplies, grab your trusty razor blade, and hop to work!

FUSELAGE CONSTRUCTION

ALL-BALSA fuselages are usually good things for the beginner to pass up, since they generally have to be either planked or hollowed or shaped from intricate slats of balsa. The “Mosquito” fuselage, however, is a departure from the above methods since it is formed almost entirely from one sheet of balsa. This sheet should be of soft, clear balsa measuring 1/20” by 2” by 13”. The sheet is sanded smooth on both sides and submerged in hot water until it is soft and pliable. It is then bent around a ½” diameter dowel, wrapped with gauche, and set aside to dry. After the wood is dry, remove it from the dowel and cement the seam.

The entire unit is now given two coats of thin dope with sandings between coats. Your model shop probably has the six and ten nought sandpapers which are just right for this operation.

The landing gear and other wire parts are bent from 0.030 music wire. Those landing gear parts are cut from 1/20” sheet balsa and cemented firmly to the legs of the landing gear. Be sure the grain runs as shown in the plan, otherwise your fairings will crack off.

WING, TAIL, AND PROP

MAKE all wing parts from medium balsa. In assembling the wing, the trailing edge is laid down first. Then the ribs are cemented in position and the spar and leading edge are anchored in their respective notches. The structure is then removed from the plan so that the upturned tips may be mounted. Finish the wing by sanding smooth and covering with colored tissue.

The tail surfaces of the “Mosquito” are a balsa butcher’s idea of heaven. Why, we even used a sharp pair of scissors to cut out the originals! The outlines can be traced directly from the plans since they are full size. When laying out the tail skin be sure that the grain runs vertically. The tail surfaces are sanded smooth but not doped.

The prop is carved from a block of hard balsa to the preliminary shape shown on the plans. Each blade should have an under-camber of about 3/32”. A length of aluminum

(Continued on page 71)
TRY THIS "MOSQUITO SPORTSTER" STICK JOB—Plate 2

RUDDER: 1/32" SHEET BALSA

PROP BLANK: 3/4" X 1 1/8" X 7"

MAKE TWO

1/8" SHEET

WASHERS

1/16" ALUM. TUBING

1/8" SHEET

1/20" SHEET

ELEVATOR: 1/32" SHEET BALSA

RIBS 2 TO 6 ARE 1/20" SHEET

BY ERNEST COPELAND
Logging the Motor Market

Super Cyclone “G”

Among the new features included in the 1940 Super Cyclone of the “G” series are its optional dual and single ignition system, transparent gas tank, and down draft carburetion utilizing the propeller air blast, according to the maker. Engines of the “G” series may be converted to operate in six different manners, namely: upright single ignition, inverted single ignition, upright dual ignition, inverted dual ignition, single ignition with flywheel, and dual ignition with flywheel.

The dual ignition motors are supplied with a special “hot” coil which fires both spark plugs simultaneously. In the event one of them should foul or a plug lead becomes disconnected, the engine continues to run on either plug.

The upright engines may be easily and quickly changed, it is stated, to an inverted running position, or vice versa, without additional parts. The cylinder construction is arranged so that it may be turned 180 degrees for either right or left exhaust. The needle valve seat may also be changed to function on either side.

The crankshaft is of one piece construction with crank pin and counter weight integral. The connecting rod is “H” sectioned aluminum alloy with oversized bronze bearing inserts with both ends bushed. The main bearing is of 7/16” diameter.

A tubular shaped full-floating wrist pin is hardened and ground. The light weight piston is lapped to obtain a perfect fit. The crankcase carries the usual air cooling fins.

Specifications: Bare weight, approximately 7 oz.; flying weight, approximately 20 oz.; displacement, .647; bore, 15/16”; stroke, 15/16”; h.p., 1/5 to 1/2; minimum and maximum r.p.m., 1,000 to 7,300.

---

The Ohlsson “19”

THE OHLSSON “19” is the latest powerplant to join the rapidly growing group of Class “A” motors. Its cubic inch displacement, being .197, is at the top border of the Class “A” competitive division, is reported to be quite large enough and powerful enough to fly many of the Class “B” models.

The “19,” with the exception of its cylinder, is identical in appearance to the Ohlsson “23.” The crankcase, fuel tank, needle valve, and timer are the same on both motors. This allows ease of replacement or exchange of the two engines for competitive flying in Class “B” and “A,” the mounting dimensions and over-all specifications being the same. The cylinder head on the “19,” however, is 3/32” lower than that on the “23.”

The fuel tank on the “19,” which carries a poppet-valve type gas cap, is known as the Ohlsson “Jiffy-Fill Tank.” Gas caps of the type just mentioned are found on all 1940 Ohlsson motors.

Features of the “19” include individually ground, matched, and lapped piston and cylinder, enclosed fool-proof timing, one piece spot welded crankcase-cylinder construction, and ball bearing thrust bearing. The engine may be mounted radially or upon beam mounts, and is reported to function equally well upright or inverted. Also, all engines are block-tested before shipment from the factory.

Specifications: Bare weight, 3½ oz.; bore, 11/16”; stroke 17/32”; cycle, 2; ports, 3; h.p., 1/7; maximum r.p.m., 7,000; minimum r.p.m., 500; static thrust (ounces) 24; fuel parts, 3 to 1; recommended propeller and pitch, 9”-10” by 5”.

---

What Do You Say?

Here’s your corner, buzzards, and it’s open to all readers who have a model argument they want to get off their respective chests. Make your comments short and snappy, and we’ll try to squeeze ’em in.

They Laughed—But He Placed Model Editor, Flying Aces: My favorite and longest lasting model was a 16-inch “Fuss Moth.” I had her for seven months and fitted her with pontoons for wet weather, skis for the snowy season, and wheels for clear days. This job copped second place for me at an airplane model meet, too. The other contestants laughed when they saw my little plane, for they all had three and four foot endurance models. But I took second, anyway. Boy, did those other guys have red faces!

But you know the old saying, “All good things must come to an end.” Yep, poor “Ginny,” as I called her, cracked-up when on her longest flight. The nose actually kissed the tail! I’ve now started making small 2” solids. I’ve constructed about twelve to date. Also, I’ve made a small “Hale Hellion” from your plans. Her span is 13¼” and her guns are 1/16” long.

FRED SAFFORD
Teaneck, N. J.

Overseas Test of “Snoopy” Model Editor, Flying Aces: May I give my belated opinion of “Snoopy”? I quite agree with Vargas—that is, that “Snoopy” was a great flyer. I was more than satisfied with the results. But I can say in support of “Irish” that I took off the prop (though not the landing gear) and found she also makes a nifty glider. I can’t account for the fact that she balanced as a glider, for the model should have been tail heavy without the nose plug. But anyway, I can speak well of the “Snoopy”—even though she nearly parted my hair after coming out of one of her loops!

WALLACE JESSE
Liverpool, Lancashire, Eng.

Desperate for “Moth” Plans Model Editor, Flying Aces: What do I say? Well, I say give me plans for the “Moth” (August, 1937, Continued on page 54)
HERE'S THE NAZI MESSERSCHMITT ME 110 "DESTROYER"

Mессершмитт Me 110

Zwei motored German fighter

Daimler-Benz DB601 1150 H.P.

Top speed 365 M.P.H. at 16,500’
What Do You Say?
(Continued from page 52)

F.A.) before I go nuts! A friend of mine built that bus, and the way it flies don't seem possible. I asked him for the plans—but he lost 'em! Now I'm willing to buy the plans for that job from anyone who can supply them. Kick through, huh, boys?

BILL ANDERSON
26 Greenwood Hill
Stamford, Conn.

Editor's note: We haven't any of those plans handy at the office any more, Bill. But we are hoping one of our readers will faze you up—for we'd hate to see any of our fans end up in the funny factory.

Bomb and Glider Fan
Model Editor, FLYING ACES:
I really enjoyed that article in the March issue in which you wrote about your intentions to open a shop. I am planning to make a flock of them out of hard wood. Also, I built the "Hutter Sailplane" (April, 1939, F.A.) but there hasn't been any good flying weather hereabouts in which to test it. I will send you a photo of it as soon as I can. She's a beauty.

ALVIN GEYER
Lafayette, La.

Wants Contest Commercial
Model Editor, FLYING ACES:
I have no complaints about F.A. except I think the model section is slipping. For months I have bought each issue and hoped to find some plans of a commercial job along the lines of the "Hi-Climber" or Herb Spatz' "Moth" and "Sky Gull"—but each time I have been disappointed.

I am writing this letter in the hopes that you will satisfy my desire in one of your early issues by publishing a really good commercial.

FLYING ACES

Incidentally, the best flying I ever saw in my neighborhood was made by an F.A. "Hi-Climber" belonging to a friend of mine, A. E. DENNON, JR.
Fort William, Ont., Can.

Editor's note: We feel sure that "Plecob's Paragon," which is featured in this issue, will answer your request. Why not build it and let us know how you make out?

Proud of His "Monoped"
Model Editor, FLYING ACES:
The "Scotch Monoped" (December, 1939, F.A.) is the first model I ever built from F.A. plans, and I'm certainly proud of the ship. It has been the center of attraction around my neighborhood for some time now. Not only is it a good looker, but it also flies swell. I was surprised at the climb and glide of this ship. And when I flew it minus one rudder—it still kept its stability very well!

I also made a Bell XP-39 stick (January, 1940, F.A.). But it turned out terrible as a flyer, though pretty fair for looks. Still, it's probably my fault my Bell wouldn't fly. You see, I changed the design a little to suit my own taste. Oh, why? Oh, why?

RONALD KIRKPATRICK
Covington, Ky.

George vs. "Specialists"
Model Editor, FLYING ACES:
While looking through some back copies of F.A., I read several "What Do You Say?" letters that I couldn't quite understand. I noticed some of the lads want nothing but solid jobs, while others tell you to toss out the solids and print more plans of flying scale models.

Well, to my way of thinking, these fellows are not neglecting the old gray matter. A real modeler is one who can turn out anything from a sim-

Workbench Tips

Sanding Sticks
ARE YOU one of those modelers who bend and fold sandpaper to get into small corners or to clean out notches? Well, if you are, then you'll be interested to know that those sanding sticks your sister uses on her fingernails are really top-notch for that work. They're coarse on one side, smooth on the other. And every dime store has 'em.

—JOE BROWN

Tailor-Made Ribs
I HAD always found it quite difficult to make all ribs the same size, even when using a template. And so I devised the following method: Buy a stamping pad from the dime store, then cut only one rib of the required size. Fasten a handle perpendicular to this rib. Now, utilizing the pad, employ the rib as a stamp and mark on a sheet of balsa the required number of ribs. Also, it's a good idea to mark a few extra, for splitting, as you know, is something that very rarely can be avoided.

—EDWARD ST. JOHN

LINE UP ON THE RUNWAY

Next Smashing FLYING ACES

FACT—"I Trained Chinese Sky Fighters!" Capt. Alex Kentrell's amazing story of his experiences at a Canton flying base.

"Raid On A Maginot Drome." A smashing cover painting and the story behind it.
Also Ned Cady's "Eyes For The Air"—giving you the inside dope on sky-going glimmers.

FICTION—Eric Trent, devil-may-care skyman, in a new air-war mystery novel.
Crash Carringer meets "The Griffon." An Arch Whitehouse "extra special."
Who else? Why none other than that master of laffs—P. Pinkham!

MODEL BUILDING—Plans for the "Hurricane" low-wing commercial—by Earl Stahl, who gave you the famed "Hi-Climber."
The "Red Ripper" gas job—a swell 6-footer that's bettered 11 minutes. Plus a peppy stick model. And other A-1 features.

In July FLYING ACES
On Sale May 24th (Canada One Week Later)
REPUBLIC AIRCRAFT'S SPEEDY ARMY PURSUIT—THE XP-41
A number of this type are being constructed for our Air Corps

Scale \( \frac{1}{4}'' = 1 \text{ Foot} \)
U.S. ARMY AIR CORPS XP-41
Republic Aircraft Corp.
latest attack by the Red Nazi? I left strict orders—" he stopped, as a double-rap, repeated twice, sounded at the hall door. Gaston opened it, guardedly, and Lieutenant Boussac came in. He looked at Knight and Doyle, lost some of his worried expression.

"Then it is all right, mon General? I was afraid it was some trick and I should have kept these men—"

"I vouch for these gentlemen," nodded Gaston. "But what of the Red Nazi? They just told me he struck again."

Boussac's squarish face shadowed. "Without warning, oui. He must have approached from the sea, gliding with his motor off. On a night like this, who would have expected—"

"I would expect that mad diable even if the fog were down to the ground," said the general. "Sit down. Now that you are here, you may as well listen to what I tell Messeigneurs Knight and Doyle. If I omit any part of the story—"

Boussac looked apologetically at Knight. "I am sorry if I did not understand, back there. With all that happened—those poor men dead—and my first day of command—"

"Forget it," said Knight. "I'd have warned you if Boussac had come barging into my squadron like that. But I still don't understand about the Red Nazi. Why does he spot his face with that light?"

"The man is insane," cut in La Roche. "He is trying to destroy the entire squadron, to avenge the death of his brother—his twin. But that is only a part of it. Madman or not, he has some diabolical method of knowing our plans, even within minutes after some decision is made. He proves it with the most insulting message—"but I am ahead of my story."

The general brought out a bottle of cognac, some glasses.

"Help yourselves, mes amis. It is not a pretty story, and the brandy may help. It goes back to one of our pilots who through unnecessary enthusiasm killed the crew of a German U-boat after they had surrendered. Boussac, here, had disabled the submarine with a bomb, and the crew was scrambling on deck with their hands raised to prevent further bombing. Then this other pilot—La Roche, General. Gaston, the "Red Nazi" turned his machine gun on the vessel. Everything was torn to pieces—wrecked the vessel with machine-gun fire. Most of the crew were killed, but a few rescued and the story became known. Boussac was later sum- momed, and he confirmed it."

"I think Gouraud must have really understood that revenge motive then, but to destroy an entire squadron for what one man did—no, that is madness, not war."

"You say the Red Nazi is the twin brother of one of the Germans who were killed last night, I think?"

"The brother of the U-boat commander," said La Roche. He fumbled with his beard. "We are not sure of the name—the prisoners may be lying—but we think it is Mannrich Streim, a former secret agent who joined the Nazi air force when war broke out. He had been a twin brother in the submarine service, according to our Intelligence.

"But that does not matter. The point is that one by one the pilots and many of the mechanics of Squadron 85 have been killed by this mad German, just like that. He had been seen that closely only once before, but almost every time he has sent his warnings that he would strike—or a hint that some one in Squadron 85 would die."

"Perhaps these gentlemen would like to look at the Red Nazi file," suggested Gaston.

"Very well," said La Roche, "bring it in."

Gaston went into the other room. "How many pilots of Squadron 85 have been killed?" asked Knight.

"Eleven, since the unfortunate men tonight," Boussac said gravely. "Of the original Flight 'A,' I am the last man to—"

All four men jumped as the roar of a diving plane came with startling suddenness. The sound swiftly increased, until it seemed that the unseen ship must be headed directly for the building. Then its wings howled in a furious zoom, and from somewhere nearby there came the boom of an explosion.

CHAPTER II
THE WARNING

GENERAL LA ROCHE ran to the other room, Knight and the others at his heels. Gaston had jerked back the black curtain, was staring out into the courtyard. Knight could see three or four men huddled against a wall. One of them had a flashlight, and by the glare Knight saw a cloud of smoke and dust and battered masonry, where the side of the adjacent building had been blown open.

"General, I saw the plane!" Gas- ton said hoarsely. "It was the Red Nazi. I saw the red light shining on his face!"

"La Roche turned pale, clear under his beard. "Sacre nom!" he whis- pered. "How could that fiend have found out where this office is hid- den?"

Police whistles shrilled out in the misty night, and there was a growing commotion below as excited pedestrians poured into the courtyard. Gas- ton closed the window quickly.

"Go down there and have the gateway blocked." La Roche ordered Gaston. "Above all, don't let anyone know about this secret office."

He drew the curtain as Gaston hurried out. La Roche frowned intently, but the sound of the mysterious plane had faded out. He shook his head. "Even if he knew about this place, General, how could he spot it on a night like this?"

"He must have the eyes of a cat," said La Roche. He wiped his perspiring forehead. "Monsieur Doyle, I think I will have some of that brandy, too. The red devil is getting on my nerves."

"You and me both, General," grinned Doyle. "Hey, what's that I hear now?"

The sound of fire-engines speeding by came, half-muffled, through the darkened windows. Knight peered around the edge of the curtain.

"He must have let go an incendiary bomb somewhere—looks like a real fire fight."

Boussac sprung to the telephone. While he was calling the squadron office, Gaston came into the room, panting. "General La Roche—the mad German dropped another message."

La Roche snatched the canvas news-bag Gaston had in hand. There was a long crimson paper streamer attached to it, and the edge of a crumpled paper was protruding from the bag. In heavy letters at the top were the words—

THIS SQUADRON IS DOOMED!!

The general eyed it tensely. "Look, Messieurs! A roster of the original Squadron 85. The evil pig has crossed off the names of the dead!"

"But this time he missed!" said Gaston excitedly. "Boussac's name is crossed off with red crayon—with the time '9:51!' He thought that bomb would kill Boussac."

The telephone clattered back on its cradle, and Boussac came around the desk, a frightened look on his face. He stared at the roster a moment, then managed a shaky smile.

"So, I am dead, non?" He splashed some cognac into a glass. "Well, the dead man can still drink. That should be a hopeful sign, eh, messieurs?"

"Never mind the bravado, Boussac," snapped La Roche. "This mat- ter takes more serious every moment. What do you learn?"

"Three pilots took off the instant the Red Nazi was heard," said Boussac soberly. "But he was gone before the searchlights could locate the plane. A thermite bomb was dropped on Pier Seven, and fire is sweeping the whole place."

La Roche groaned. "And only this morning twenty new American Hawks were unloaded there. How in Heaven's name did that madman know?"
Boussac slowly put down his glass, and Knight saw that his hand was shaking.

"That I might understand, Monsieur General. But how could he know I would be at this place at 9:51 when I alone knew I was coming here?"

_THERE WAS a brief silence, while the others stared at him. Boussac grimly smiled. "Now, Monsieur de Boussac, I can understand how your terror has swept our squadron—and elsewhere—when the name of the Red Nazi is mentioned."

"You think this German has supernatural powers?" Knight asked drily.

"I have stopped thinking," Boussac said in a weary voice. "I know myself have not long to live. I try to hide what I fear, so the replacement pilots will not see it. Beyond that—" he shrugged, emptied his glass.

"I'd like to see that file Gaston mentioned," said Knight.

"How is it?" replied La Roche. He opened a large folder and Knight saw a number of messages scrawled in French and some radio codes typed on French Navy blanks. "The first message was this one—the radio in our BF code. It says, 'Gourand, the murderer, will die today.' There was no name present. The message was sent on the wavelength assigned to Squadron 85."

"I remember when it came," said Boussac dully. "Gourand pretended to laugh, but I knew he was afraid. He took off in charge of the evening patrol. There were heavy clouds that day. Gourand was climbing up through, with the other planes spread out for safety, when tracers were seen blazing through the cloud. Then there was an explosion, and when the rest of the patrol dived out of the clouds they saw Gourand's wrecked R.90 flaming down into the sea. A moment later the black Messerschmitt appeared, and one more of the patrol was shot down before the Nazi devil fled back into the clouds."

"Was the red light on his cowling?" Knight asked.

"Oh, even though it was hardly dusk."

"So he established that name right at the start," Knight said musingly.

"What do you mean by that?" General La Roche said quickly.

"I was only thinking your Red Nazi phenomenon is a sad, sad story," said Boussac.

"But all his acts bear it out," insisted La Roche. "It is obvious he is vengeance-mad. Look at these messages he dropped—the frightful threats he makes. Glaubing over killing some poor pilot who had nothing to do with Gourand's act. Taunting the rest with warnings of their death, even naming the hour."

"You said all the original Flight 'A' had been destroyed, except you?"

Knight asked Boussac.

"Yes, and I escaped by a miracle, as the general can tell you," Boussac said with a grimace. "I was starting on a special mission the night after Gourand was killed. General La Roche had brought me some confidential papers to take to London. I had taken off, and was at about five hundred yards, when a blast of tracers came from the dark. One blast—and my ship was afire! I jumped just in time. For my gas tank exploded a few seconds later. The Red Nazi dived after me. And I had to wait until I was almost down before opening my parachute, or he would have riddled me."

"It was a close escape," agreed La Roche. "Three seconds more and Boussac would have been dead. But how the Red Nazi could see his plane so well in the dark, I still do not understand."

"Have you considered abolishing Squadron 85?" asked Knight.

"It would do no good," said La Roche gloomily. "The Red Nazi would probably follow the pilots into other squadrons."

Knight lit a cigarette, looked thoughtfully at the Red Nazi's messages and then, with a shrug, said, "I doubt the German officials permit this pilot to carry on that revenge business so freely?"

"Why shouldn't they?" said La Roche bitterly. "He is destroying one of our finest squadrons. And he does not care if he is not fitted in with his other plans. Take the burning of Pier Seven tonight, for example. Moreover, there have been other such instances."

"That's just what I meant," said Knight enigmatically. He glanced at Doyle. "What do you make of it, Lothario?"

"Somethin' mighty screwy," said Doyle. "But where do we come in?"

"I want you to join Squadron 85," said the general. "As senior member of the Joint Army-Navy Board, I can arrange it. We need cool heads—brains not paralyzed with fear of this fiendish German."

Knight looked at the bearded little general, and then his thoughts went back to that one at the ramp, with the black Messerschmitt diving into the group of terrified Frenchmen, cutting down the helpless mechanics and pilots.

"We're not at war with Germany," he said slowly. "But of course, if you were to cancel the special discharge—"

Knight asked Boussac about the place lost the disappointed look it had had at Knight's first words. "Merce, my good friends! I knew you would not fail me. Come, we will go to my hotel and discuss the rest over a good dinner and a bottle of wine."

** A CROSS darkened France, across the Maginot Line and the Westwall, the much publicized arrival of a German Staff car at a little woods not far from Lebeur. A narrow strip of cleared ground lay close to the woods, and back under the trees was a temporary hangar large enough for two or three planes. Close by was a shed with a small barracks, one end of which housed an office.

The officer who had come in the Staff car entered the office, looked quickly at a satirine major who straightened up from a radio set in one corner.

"Guten Abend, Herr Oberst," said the major. His face had a peculiar expression—"

"Was ist?" said the colonel, anxiously.

"The French have called in those two verdammte Americans," muttered the junior man. "Knight and Doyle—the ones who wrecked our scheme in the Maginot Line."

The colonel scowled. "That must be attended to swiftly. Mannrich Streim should—"

"... has it struck you as odd that the German officials permit this pilot to carry on that revenge business so freely?" came a crisp voice from the radio, as the major turned up the volume again.

The colonel started, and the major looked at him tautly, "You see, Herr Oberst? That is the voice of the American, Knight. If he follows up this thought—"

"... He is destroying one of our finest squadrons," came the unhappy voice of General La Roche. "And he does not neglect military objectives... take the burning of Pier Seven tonight . . ."

The two German officers waited silently until the conversation from the distant room in Le Havre was ended. Then the colonel grimly faced the satirine major.

"This Knight has been a thorn in Germany's side for too long. This time he and that ugly clown Doyle must be destroyed!"

"Streim had the chance," mumbled the other man. "I wonder why he did not take advantage of it."

He probably had a good reason. If they ever suspect the truth about the Red Nazi, everything would be ruined. But he must be given orders tonight to get rid of the Americans immediately. You will have one of your men ready to carry on whenever Streim sends the word."

"One man is always standing by ready to go, said the major. He smiled sourly. "Ach, what a thing it will be, sometime, when the real story of the Red Nazi becomes known."

"Be careful you do not laugh too soon," said the Oberst curtly. "I will feel better when I hear that Knight is dead."
CHAPTER III
FACE TO FACE

LIEUTENANT BOUSSAC carefully closed the door to the squadron pilots' messroom, emptied since the luncheon hour.

"It is quieter in here—we use this room for all our conferences," he told Knight and Doyle. He glanced at the French uniforms with which they had been outfitted; 'I telephoned General La Roche you were now ready for duty, and he said he was sending Gaston with a message of some kind."

"I see you don't like Gaston," observed Knight, as Boussac paused.

The young squadron commander shrugged. "It is nothing important. I don't like mixing civilians in with the Service—especially when this Gaston is nothing but a private spy for General La Roche, But the man is clever, and he undoubtedly has served La Roche well. There are always new and surprising airs the Staff officers have to know."

"What's this map over here?" cut in Doyle, pointing to the wall.

"The map of our operations area," explained Boussac. "Squadron 85 is entrusted with the key defense of the St. Nazaire area. From here, we radio to the Flights of B-29s and the seven Romanos R.90's. Boussac motioned to a perspex warrant officer. "Have Number 11 and Number 13 brought out," he shouted above the roar of the engines."

"No, that'll waste time," said Knight. "Let's talk about these ships that are already started."

"Very well," said Boussac. He caught the arm of a blond young pilot running by. "Monsieur Knight will take your ship—use a reserve plane."

He assigned one of the other "B" Flight Romanos, and the replacements pilot hurried to get another plane. Three minutes later, the flight thundered across the Baie de la Seine and up into the leaden afternoon sky, heading out to sea. There were broken clouds, with a ceiling less than three thousand feet. Boussac ordered the flight in a steady climb, leveled out below the clouds. Ahead, the sea stretched gray and empty. Knight strained his eyes trying to see the distant horizon, but there was no vessel in sight. Near the reported position Boussac raised his hand-him to his lips, and Knight heard staccato French words rattle into his headphones:

"Three and Five, descend and search—vite! Six and Seven, remain at—"

A bright flash somewhere back of Knight made him whir in his cockpit. He stared in consternation.

One of the Romanos had exploded and was in flames!

AS HE WATCHED, Gickened, the unfortunate pilot tumbled out of the ship, his clothes on fire, and went hurtling down to the sea. His parachute opened, burned away. Knight jerked his stick back, sent the R.90 roaring up into the clouds. There was a break nearby, and he zoomed the seaplane toward it in a tight climb.

The ship was half-way through the break, its wingtips lancing the cotton mists at one edge, when two streams of tracer shot from out of the cloud. A furious burst ripped his left wing, smoked across the cowl before him. He rolled swiftly, and the tracers curved away. He had a fleeting glimpse of another ship. But it was only a blur in the cloud.

Then his guns, came around on shrieking wings. His tracers probing through the misty grayness before him, and as he climbed he thought he saw the other plane for an instant. But when he broke through on top of the clouds there was nothing in sight. He circled, watching sharply.

Suddenly, wings showed on his left. He was about to trip the guns for another burst when he saw it was a Romano, and then he recognized Doyle's homely countenance. Doyle stared across at him, pointed down into the cloud. Knight shook his head, made a puzzled gesture. They circled a few minutes longer, then spread apart and dived through separate holes in the clouds.

Flight B-7 had reformed, was waiting to climb up beyond the clouds a mile away. Knight motioned to Doyle, pointed back toward Le Havre. When they landed, ten minutes later, he quickly drew Doyle aside.

"See if you can find Gaston. Keep him away from anyone else away from this mess for a little while."

"Hold on," Doyle blurted out.

"What about that business back there—what hit that seaplane?"

"You know as much as I do. See you later."

A few minutes afterward, Knight stepped to the messroom window and saw the planes of Flight "B" landing. Doyle had located Gaston, was engaging him in conversation out on the ramp. The prim-faced Frenchman was watching the seaplanes as they taxied away, Knight thought, had a strange expression.

Boussac came into the messroom, with Gaston and Doyle behind him. Knight turned away from the patrol-area map.

"Did you see anything of the Red Nazi?" he asked quickly.

Boussac shook his head. His face had a haunted look. "It all happened so swiftly—poor Deveraux, going like that." He shivered. "It's exactly the way my ship burned—but I was lucky."

"Did any of your pilots see the attack?" asked Knight.

"One man says he saw a flash of tracers, but when he looked up there was only a wingtip visible from the cloud, and it was gone before he could tell what kind of plane it was."

"The point is," Gaston said primly. "that this was simply a trick to get part of Squadron 85 out there."

"Obviously," snapped Boussac, "since there was no firelight. The S.O.S. must have come from the plane which shot down Deveraux."

"I've been studying this map," said Knight. "Perhaps we can set a trap for Herr Streim."

"What do you mean, monsieur?" Gaston inquired solemnly.

"According to this bulletin targeted
FLYING ACES

"I don’t like this, Monsieur Knight," said Boussac. "You are taking the risk I should take. At least let me go with you. Two against that devil might be better than one."

"You’ve had two narrow shaves already," said Knight. "No, you stay here. If I see it is too much for me, I can duck into a cloud. But I’ve made one change. Have your operator send that false rendezvous message to read ‘Kid has landed west of Pointe de Barfleur.’ And wait until I’m in the air, so I’ll be sure to get there first. It will take me about thirty minutes at cruising speed."

"But I have already sent the other message," exclaimed Boussac. "I thought you would arrive at once, before the Red Nazi had time to start back to his own lines."

"A good idea," said Knight. "But this other will give me more time to get there ahead of him. If he really has swallowed the bait, he’ll be listening to get any other messages."

Knight climbed into the ship, and the mechanics pulled the ropes from in front of the cradle wheels. As the Romano slid down into the water he put on the head-phone helmet, plugged in his earphone, and, in the roar of the air, headed West, when he heard the message cracking into the phones. He smiled to himself, climbed steeply until the clouds were below him. Then he changed course and shoved the throttle full on.

His route would take him ten miles south of the false rendezvous named in the last message, and he would have to swing north and come in, circling, to carry out his scheme. At cruising speed he would never make it. But with the Hisso wide open, he would try it. The ship glided down until he was flying in the top of the cloud formation, hidden from all but the keenest eyes, and still able to scan the skies above and to the northeast.

A trap. It was more than that, a double trap, and unless he had luck he might be the one to be caught. He switched on the radio transmitter, waited for the output gauge to come to life. The needle quivered, sank back to zero. Dead! Knight’s eyes narrowed. He had half expected it, but he had not been sure.

AFTER TWENTY MINUTES he slanted the Romano carefully down through the clouds, saw the Pointe de Barfleur almost directly beneath. He flew West for three minutes, swung North, then climbed back and then making a circle that would bring him over the rendezvous announced in the message. Above the clouds, the setting sun was bright and red, and he nodded with satisfaction as the ship settled with the sun at his back.

The Hispano was beginning to heat up. He slackened its speed a bit. After that minute he dipped through the clouds for a swift look below. There was nothing to be seen but a tawler putting out to open sea. He backstecked, surveyed the clear sky above the clouds. Twice he repeated the manoeuvre.

The third time, as he warily brought the Romano up to the top of the cottony mists, his sharp eyes caught the flash of sunlight on tilted wings, a mile away. Another ship was skulking along in the top of the cleft ship back for another attack before Knight could align his guns on the spot he wished to hit. The Romano staggered as a pounding blast struck the right wing. Knight slammed the stick back, lifted the bullet-torn seaplane out of range in a desperate double-rape, and did not look up after him, guns still spouting. Knight plunged the Romano into the clouds, reversed and came out with hand taut on the gun switch-button.

The Red Nazi was now again charging out of the mists, hardly two hundred feet distant. As he saw Knight, he snapped the Messerschmitt into a lightning turn. But Knight’s guns were already pouting.

The tracers sparked across the gap, struck into the tail of the German fighter. The Red Nazi frantically hauled back on his stick and the Hun’s gaudy color flashed forward, toward his pit. Suddenly the Messerschmitt’s nose dropped, and Knight ceased fire instantly. He thought, for a second, he had wrenched the flppers. Then he
saw the pilot had sagged over in the cockpit, half falling onto the stick.

With an effort, the Red Nazi pulled himself erect, trying to turn away and escape. His eyes, however, had flipped a burst past his wingtip, drove him in toward the coast. The gaunt face twitched around, glaring at him, fixedly, then one hand lifted in token of surrender, Knight watched, eyes slitted. But the man made no attempt to break away.

They approached the shore in a long, flat glide, and at an altitude of three hundred feet the Red Nazi looked back again. Knight had already spotted a stretch of beach on which a landing could be made, and he pointed down. The Messerschmitt angled into the wind, then its flaps went down and Knight knew that the German had given up any hope of escape. He reached inside his uniform tunic, loosened the automatic in his armpit holster. Then he made a swift landing and taxied the R.90 up onto the beach.

The Messerschmitt had stopped a little over two hundred feet away. Knight climbed down onto one pontoon, jumped to the beach and ran toward the black ship, leaving the Romano's engine idling. The Messerschmitt was turning over slowly, but the pilot made no attempt to escape as Knight approached.

Warily, the secret agent came in from the left, gun poised. The gaunt face of the Red Nazi looked out at him, and the man slowly, painfully moved his arm toward his pistol. There was something strange, unreal about the face that was revealed when the cockpit enclosure slid open.

The pilot climbed out, stumbled from the wing to the ground, and Knight accidentally struck him at the base of his right shoulder. Slowly unsteadily, the man came toward him, his right arm dangling.

He was within ten feet of Knight when the secret agent's eyes caught a sudden tensing of the man's right hand.

CHAPTER IV
SECRET OF GOURAND

"UP with your hands! Handen hoch!" he snarled. "And be quick about it."

The pilot's right hand jerked up, and Knight swiftly reached out, took the gun at the man's hip.

"A good act, mein Herr. But you overdid it—just like your friend Mannrich-Streim!"

The deep-set eyes stared at him. "Ach, then you know even that?" he said haughtily.

"Right," said Knight calmly. "And now you can take off that mask."

Without a word, the pilot reached up and unfastened his helmet, and with it a cleverly made papier-maché mask. In place of the gaunt, savage countenance of the Red Nazi, the white, defiant face of a young German pilot was revealed.

"So you're one of Streim's puppets?" Knight said grimly.

The pilot looked at him sullenly, but did not answer. Knight could read a fanatical hatred in the young German eyes, a readiness for any trick that might save him.

"If you're smart," the American said coldly, "you'll talk and save yourself trouble. There are some Frenchmen back at Le Havre who wouldn't hesitate to tear you to pieces if I took you back there."

"What do you want?" questioned the pilot, frowning.

"The names of Streim's aides—your whole system," rapped Knight.

"Nein, I tell you nothing," snarled the young Nazi. His lips set obstinately. Knight saw him glance toward the Romano, and then beyond the seaplane toward three coast patrolmen who were hurrying along the beach.

"They won't help you," Knight said curtly. "Take off your belt and get over here. I'm going to take you back on the wing."

To his surprise, the young pilot turned deathly pale. "No, no—you have no right—I am a prisoner of war—"

"Get going," Knight said grimly. He fired his gun. The pilot took a step backward, his eyes twitching toward the seaplane.

"Wait—I will tell you whatever you want. Only do not make me go—"

There was a sudden spurt of flame from under the cowl of the Romano. Both Knight and the young German were knocked flat by the blast. Knight scrambled up, dragged the pilot back from the flaming wreckage.

"So that was it," he said harshly. "Your squadron received the bomb in there, about due to go off."

"Too bad it did not explode sooner!" cried the other man. "At least, the other verdammt Amerikaner did not get here, so there is one less of you meddling swine."

"You think I will tell you now?" said the pilot mockingly.

Knight turned, hurled the German's gun far out into the water; one patrolmen will take care of you! And if Doyle's been killed I'll see you shot for it!"

"You're too late!" shouted the young Nazi, as Knight whirled toward the idling Messerschmitt, the helmet and red mask in one hand. "Your Schweinehund friend is already in the air!"

Knight vaulted into the Messerschmitt's cockpit, blipped the motor swiftly. The coast patrolmen broke into a run, waving their arms. But there was no time to explain. Knight shoved the throttle open, and the black fighter lunged down the beach. Then he released a pistol and fired frantically, then threw himself flat as the Messerschmitt roared over his head. Knight pulled up in a tight climbing turn, raced back on a straight course for Le Havre.

A tiny green light was glowing at the side of a special radio in the cockpit. On the other side was a map with a course laid out from a point in the Saar Basin to Etretat. It had been changed, midway in that swift dash across France, to lead to the false rendezvous position East of the Pointe du Barly.

Knight hastily plugged in the head- set wires which dangled from the helmet he had taken. The mask slipped down over his face, and he fastened it securely so that he could see through the eyepits. The earphones were tuned to one against him. A line from somewhere high up in the ultra high-frequency band. But he could not make it out. He changed the wavelength to the assigned band of Squadron 83, and a familiar voice sounded excitedly in the phones. It was General Doolittle.

"Lieutenant Boussac, make for the coast ten kilometers north of Saint Mere Eglise!" the general shouted. "The Red Nazi has just killed Knight and escaped after landing on the beach."

RICHARD KNIGHT'S jaw set grimly. This was a fine jam. Some one back at the coast patrol station must have been watching with field glasses and had jumped to the wrong conclusion on seeing him take off in the Messerschmitt after the Red Nazi. But it was the true story from the young German, it might not be relayed to Le Havre in time. He reached for the generator switch to cut in the transmitter, then stopped. Boussac was in the air—and probably some of the squadron with him, in the plan to have the entire outfit grounded temporarily. And Doyle would be with them, seething with lust for vengeance on the Red Nazi.

Knight swore to himself. There was only one way—and the odds were against it. But he didn't take that chance. Lethario Doyle would die.

At top speed, the Messerschmitt thundered across the bay toward Le Havre. He could see the faint blur of the coastline ahead, dim in the fading daylight. For the last second he thought he had missed the squadron ships—then he saw them. They made almost a full flight. And one more R.90, out at the side, was racing in straight at his Messerschmitt.

The ship flying apart from the others made a swift turn to the north for a broadside, and Knight saw Doyle, bareheaded, crouched over in the cockpit. Doyle's guns blazed furiously, and Knight felt the pound
FLYING ACES

of bullets back somewhere in the tail. He nosed down, heading straight for the squadron base. Doyle charged after him fiercely. And as Knight stared back he saw Boussac and the squadron pilots whirl around in swift pursuit.

Knight's pulses were hammering, but it was not fear of the blazing guns behind him. The fast Messerschmitt had easily put him safely out of range. But hidden somewhere in Doyle's craft was a time-bomb like the one which had destroyed the Romano on the beach. At any moment now, Doyle would be blasted into eternity. And if he carried out his mad scheme too soon, Doyle would be drowned.

A flitght flickered up through the growing twilight, and Knight saw the station directly ahead and less than a thousand feet below the roaring black fighter. He slipped the throttle back to cruising, banking swiftly to meet Doyle's savage onslaught. Then the fire-blasts of Doyle's six-fifteen flamed viciously, sending tracers sparkling across the Messerschmitt's left wing. Knight ruddered clear, cut in sharply and tripped his cowl guns. The first burst went wide, as he intended. He pressed the rudder, fired again. He was on the other Romanos, now almost in range.

Doyle banked in a lightning turn, tried to cut inside the Messerschmitt's turn. Back of the mask, Knight's eyes fixed desperately on the tail of Doyle's ship. If he missed, he would kill Doyle. He roused the Bousac and his dangerous life, fighting side by side with him... If he lifted the mask and revealed himself, Doyle still would die...

The Messerschmitt's cowl guns rapped, and for an instant Knight's hands were wet with red that welled up inside him. For Doyle's ship was nosing over, the tail shot half off—and Doyle was bailing out!

The Messerschmitt trembled under a sudden terrific barrage. Knight jerked his eyes away from Doyle as his vision wavered. He saw a Bousac and two patrol pilots were charging in, and beyond them two more Romanos were darting around to catch him with a crossfire. Knight whirled the black fighter, cut loose all four guns.

The Romano on Boussac's left tonight, the German's guns www.chnum.de/geschichte/d canine-guns gouged across the wing. The pilot leaped convulsively under a blast of hot lead, tumbled over his stick. The seaplane went holling down into the water, crashing headlong, not far from the ramp. It had barely hit when there came a blinding flash nearby. The bomb in Doyle's wrecked plane had gone off as the ship struck.

Boussac and the nearest patrol pilot cut in wildly, as Knight swung back above the station. The Messerschmitt's cockpit enclosure split under a lash of French bullets. Knight ducked, as a hot chut of the Bousac and a screeching chandele and whipped back at a zooming Romano. A searchlight slashed across his cowl, blinded him for a second, but he tripped his guns, held to the dive. When the light shifted, the Romano was tumbling into the bay, one wing crumpled.

One of the patrol pilots banked hastily, red off into the gloom. But the other pilot had closed in for one last frenzied attempt to down the Messerschmitt. Knight heard a howl through the earphones. It was La Roche, wildly exhorting the patrol leader to down the "Red Nazi!"

A BURST from Boussac's guns raked the cowl of the black fighter. Knight hurled himself aside, as glass and alcohol flooded back from the shattered compass. Fragments of glass and splinters of metal flew into his face, but the mask saved him. The nose of the Messerschmitt was whirling in a vertical bank, with Boussac's ship almost under Knight's guns.

Thin red lines of flame shot from the wing-root guns as Knight pressed the stick-button. The Romano flung a dazzling trail of tracer fire. The left wing was on fire. The prop, the wing, the motors. The smoke was beginning to block the pilot's vision. The Messerschmitt was whirling in a vertical bank, with Boussac's ship almost under Knight's guns.

That was near work.

It was nothing," said Gaston. "I am a dead shot. I could have killed him. In fact, I should have liked to."

"Dien, will somebody please tell me what all this is about?" growled General La Roche.

"You've been the victim of a clever little trick worked out by Herr Mannlich Streim," said Knight. He motioned toward Boussac. "There you are, General. He is a bloody butcher as any man who ever lived.

"Yankee scum!" snarled the man who had called himself Boussac. "I should have killed you last night when I had the chance."

That thought should give you a lot to think about, for they stand you in front of a wall. General, you might tell your guards not to let anyone leave the station. If you'll come into the mess I'll show you something that I'm sure will interest you."

"SO you see," said Knight, "it was a scheme to get control of Squadron 85, as well as access to considerable secret information. That dictaphone planted behind the map shows how thoroughly Streim worked it out. When your men trace the wire I think they'll find it goes to the radio room, and that Streim's spy's cooks were relaying conversations verbatim to Germany, by a special ultra-high frequency set hidden somewhere in the shed and hooked up with the regular transmitter.

There's probably another dictaphone in some 'secret' office of yours, connected up the same way. It's obvious that the Germans knew just when to rush over one of their 'Red Nazi' pilots, and they were getting the information too fast for any intermediate defensive steps."

La Roche furled helplessly with his beard. "But I still do not understand. What of Gourand? And the strafing of the U-boat?"

"We can't be sure, but it's probable that Gourand was making a regular attack on the U-boat as a matter of course. May be they knew you afterwards, after they got on deck to keep them from firing on him. It's obvious that Streim saw a chance he'd been waiting for while he played the role of Lieutenant Boussac, reserve pilot.
called to the colors. I imagine he had already planned the Red Nazi scheme and was waiting for a good chance to start things rolling. His twin brother was back, but the Red must have given him the idea—but I'll bet money Streim's brother wasn't on that particular sub.

"Anyway, that was the beginning. The Germans sent over a pilot tricked up for the 'Red Nazi' part, to build up the revenge idea. Of course, when the Red could pull off raids on more or less cloudy nights, pretending to be chasing the 'Red Nazi' or other Germans, and blaming the raids on them. The burning of Pier Seven would have been the start. With this area so far from the shore, the coast guard was never burned or bombed a hundred vital points, beside sinking freighters in this area. Every time a pilot or mechanic seemed to be getting a little suspicious, Streim and his men could plant a time-bomb in a ship and blame it on the 'Red Nazi', or perhaps order the men out into range of the Red Nazi's guns, as they did last night."

"Then that red light business and the mask was just to scare th' heck out of everybody?" queried Doyle.

"Simply a good bit of dramatization," nodded Knight. "By having him seem unsavvy, saving when a pilot was going to die, it was sure to charge with negative ions which hung in the atmosphere just above the field. Understood to be a rare phenomenon in Rhode Island, it is said to be caused by icy air from the Arctic colliding with a heated breeze from Long Island Sound.

"And his Spital-baller—" said Doyle, finishing his sentence. "You know what a Spital-baller is?—he's said to have given his job that name because it's a miniature of the British Spitfire—it immediately shot up vertically, partly in a corkscrew and partly on its back, until it had attained a height of between 3 and 4 miles. Then the Spital-baller motor motor snapped off (it could be distinctly heard by the fellows on the ground) and the ship leveled off one wing.

A series of banks to the left and to the right, first over the north side of the field, and then over the south, followed. Higher, then lower, went the Spital-baller, amazing Vy Dyas as much as his modeler friends. All this time, the clock ticked on.

A shout went up as the former record went into oblivion. Still, Dyas, in the second heat, hovered until after the 3 hr. mark was passed. At that time, vibration loosened its neat tricycle landing gear and threw the model's C.G. back, ever backward, toward the tail wheel. Then the Spital-baller shivered throughout its length and thankfully gracefully down to its maker's feet.

Proudly hanging his new gold trophy over the plane's prop, Champion Dyas posed for photos. And officials wired Headquarters seeking acceptance of the new mark.

"Editor's note: We of FLYING Aces feel that Vy Dyas's mark should be accorded the full—Hey! Wait a minute! Maybe we'd better read the desk calendar and see if we've set it all over again. And WHAT does this effect on the world as we write this? April FIRST? Oh, maybe that explains things. Yes, we guess it does. Anyhow, we'll give an original Phineas drawing autographed by Joe Archibald to the first reader who sends us a list of ten mistakes made in this news piece."

Kresse Indoor Results

MARCH 9 marked the date of the Kresse Aero Club's Annual Indoor Contest. Many radical types of gliders were entered in this Nework, N. J., meet, and many new designs won prizes. Results:


Stick—Senior: First, Henry Struck, 9 min., 46 sec. high; second, Frank Haynes, 9 min., 31 sec. high; third, Sidney Reich, 9 min., 21 sec. high. Junior: First, Julius Rudy, 5 min., 9 sec. high; second, Elwood Tiefeld, 4 min., 46 sec. high; third, Michael Gural, 4 min., 30 sec. high.

Scale Meet For Omaha

A MODEL show will be held in Omaha, Neb., in either late April or early May with the assistance of The Omaha World-Herald. The committee, which was appointed by the Omaha Advisory Board of Model Airplane Clubs, is headed by L. B. Bush, State Director of model aeronautics for the NAA. In this non-flying competition, ships entered will be judged for construction, detail, workmanship, fidelity to scale, and originality in design.

New Officers in Syracuse

ROBERT L. HORTON was recently elected President of the Syracuse N.Y., Model Airplane Club, which is sponsored by the Syracuse Exchange Club and directed by Harry C. Copeland. Other officers are: Charles T. Marcy, Vice President;
Virginia Redmond, Secretary-Treasurer; and Jean S. Chadwick, Assistant Secretary-Treasurer.

Lessons for Ohio Beginners

DETROIT's model classes under the Department of Recreation are concentrating on stick-type ROG craft for beginners. The Department has 32 classes a week, 15 for construction and 17 for flying. Stephen Corbett is the director.

Building sessions are held in school rooms, flying in the gymnasiums. A series of simple stick-type contests for builders less than 16 years old, now being held in all centers, will be topped off with a city-wide championship tourney.

Creddmore Novice Meet

DESPITE poor weather, the MMAC-sponsored Novice Meet was held at Creddmore, N. Y., on March 17 according to schedule. Longest flight of the day was made by H. Millar, Metropolitan Model League, 4 min., 35 sec. out of sight. Results:

- Class "A": First, Ralph Moscater, Sky-Scrapers; second, Warren Plohr, MML, Class "B": First, H. Millar,

MML; second, Ralph Moscater, MML, Class "C": First, Jerry Stoloff, Sky-Scrapers; second, George Gilchrist, Sky-Scrapers.

Big Meet for S.C.

TWO PERPETUAL trophies and prizes totaling $500 will be offered to contestants participating in the Columbia, S. C. Aero Midgets' meet scheduled for June 16. It is reported that the perpetual trophies are the first such ever offered in the South. The tourney will be mainly for performance consistency, and the ships that make the most flights over 20 sec, will be named as winners in the contest.

Harris Brothers Win

DON AND DOYLE HARRIS took top honors in a tourney contested by the Durham (N. C.) Model Aeroplane Club on February 24. W. J. Hammit was the director. Results follow:

- Construction: First, Don Harris; second, Doyle Harris; third, Paul Grealis, Endurance Prize: Don Harris; second, Thomas Hubbard, third, Doyle Harris. Altitude: First, Doyle Harris; second, Bill Council.

What Do You Say?

(Continued from page 54)

seen. It glided like a DC-4 with its wings off!

Claude Warnecke
Paducah, Ky.

His Monoped a Heavyweight

Model Editor, FLYING ACES:
I would like to give 100,000,000,000 cheers for Alan Orthof's "Snowbird" (April, 1940, F.A.). I built the job in an afternoon and went right out to a field with it for a test hop. The ship took off like a bird, flew like a feather, and climbed like a skyrocket!

I also built the "Match Box Buzzard" (October, 1938, F.A.) but it was the worst flyer I have ever drees of pictures of war-time planes fail to bear out such evidence. We have seen them mounted outside the engine cowling but never on the top wing. Yes, further information along this line would be interesting. The book you mention can be bought at most drug-book counters for one dollar. Sorry, we do not conduct swap columns.

Bernard Kalnoske, Shenandoah, Pa.:--Mexico has about 160 first-line planes in her air force. There are no true P-36's in France. The French are using about two squadrons of Curtiss Hawk-75A's, a light work in the experimental stage. I do not know whether the Lockheed XP-38 has been accepted by the Army Air Corps or not. No report has come out that another that has been built, even. There are about 61 Douglas torpedo-bombers in our Navy.

Teddy Cohen, Miami Beach, Fla.:--Sorry, but we know nothing of the Bell Airacobra doing 678 miles in a power dive. However, you will find considerable info on the Airacobra in our May number.

All Questions Answered

(Continued from page 31)

er version of the P-36. They have added four more guns to each plane.

Bruce Jaeger, Gerber, Calif.:
The caption you wrote forth that old mag. must certainly was in error. The "Flying Razor" was the Fokker D-8 a monoplane—not the E-5.

George S. Scranton, Jr.:--The Allison firm has a 2,000-h.p. engine in the experimental stage. I do not know whether the Lockheed XP-38 has been accepted by the Army Air Corps or not. No report has come out that another that has been built, even. There are about 61 Douglas
a deserted sector. And with the Cherokee assembly job taking only ten minutes, we were quickly ready to go.

In the sky overhead, Clyde Schlieper and Wes Carroll were droning back and forth in their famed Piper Cub. About four hours later, they landed at Long Beach with a new world altitude record.

Now we unspooled more than 1,800 feet of tow-line, then Stan slid into the tiny cockpit for a first test hop to check the rigging. As per usual, some boys were on hand to aid us. Finally, I walked back to the car (a good third of a mile!) and watched for the wing-wag signal. Stan was ready. So I began driving the car, slowly at first, then in racing style, across the dry lake bed.

Setting the throttle after a bit, I peeked back at Stan. He was now more than a thousand feet up behind me. Cherokee was only a silver and red dot in the sky. A smaller red and white dot — that was me — then got back under the cable end after casting off to prevent its coating on the way down — was flagging back and forth below Cherokee’s nose.

An instant later, Stan had cast off and was heading for parts unknown. I hopped out of the auto and released the tow-line. We took paces. We humped alongside the tow-line curved downward from our nose until it disappeared into the tiny speck that was our tow car. The little red parachute flapped gaily about ten feet below us.

AFTER about six minutes, and at 1,200 feet of altitude, Stan pulled the release and Cherokee hopped upward in a great hundred-foot lunge. She had shuddered throughout her structure as that 85-pound weight of the tow-line was released. And at that precise instant we caught a thermal!

Strange enough, it’s difficult to be sure you’ve really caught a thermal. Some veteran soaring pilots like Stan Hall, Peter Riedel, Dick Dupont, and Bob Stanley have learned to term them “by the seat of their pants.” But most persons must rely on the indicator of the sensitive altimeter, which they suddenly see mysteriously climbing.

At any rate, right when you know you have a thermal, you must swing into a quick bank. For since a “riser” is in reality a miniature cyclone swirling in a great cone upward, it is all too easy to glide straight on through and lose it. But the quick bank catches it square on your wings — and you go up like an express elevator.

Well, Stan nonchalantly labbed this big right-hand nose and we started upward. Later, at 1,700 feet we lost it because of one or two things. Either we banked out of it or it just naturally petered away of its own accord. Meanwhile, Stan and I talked back and forth just as we would in a quiet room. There was only the slow murmur of the wind through our rigging and the sight of the ground 1,700 feet below to tell us we were flying. It was a thrill I’ll never outlive!

Stan now banked slowly to the right just in time to catch a close-up of the endurance flyers in the Cub. We exchanged greetings and they hung around us completely intrigued for several minutes.

On the way back, however, we were treated to a sight which wasn’t so pleasant. A couple of gow riders were doing a 130 m.p.h. straightaway in their racing bus on the dry lake bed. The tow-line was behind them. The gow riders slashed out at well over 100 per and caught them broadside!

From the 600 feet altitude we had at the time, we clearly saw bodies hurtle through the air and crumple on the hard lake bed. Both racing cars — super-charged V8’s — were reduced to wrecks of megaparts. The sight, as you can well imagine, sent a cold shiver down my spine, and Stan, wishing to banish the tension, right away leaned around to me and spoke up: “All right, Mac, you take Cherokee!”

I grasped the stick, mechanically hugged the spray, and thinking of power jobs, reached for the throttle that wasn’t there, with an idea of gaining a little altitude for the swing into the landing field. Yes, I still had a lot to learn about the subconscious reactions of flying a motorless job. Sure enough, I stalled her, lost about 400 feet of altitude, and skimmed across a barbed-wire fence on the border of the dry lake with just inches to spare.

AFTER LANDING, we leaned comfortably against Cherokee’s nose and Stan related to me a wealth of dope on glider flying tactics that I now wouldn’t take a million bucks for. I intently absorbed it all. And when a little later I sat down alone in Cherokee’s streamlined pit, I felt confident I was ready to do some real solo gliding.

The swell soaring experience that followed is a memory I’ll always thrill to. Signals exchanged, Stan raced the auto across the sands. Then Cherokee climbed me into the clear blue sky. Lightly loaded, it reached 1,100 feet before I felt that little pull that meant I was as high as the tow-line would permit. I cast off and watched the parachute flutter earthward. Baby, here I was solo in a soaring — in a plywood and fabric bird that depended upon my own two hands alone!

I kept her there evenly for about two minutes, my eye glued to the altimeter. Then suddenly the needle began to swing up. Slowly, I nosed Cherokee into a shallow bank and began gliding down. shackled. After some 2,500 feet, then I lost the thermal. I proceeded to head across the lake bed with my heart doing happy nips-ups. I was soaring — soundlessly, effortlessly.

In another six minutes I saw the nose bob up again. Once more I was off in an exciting climb, and this time I was determined to stick with the riser. I held her in a tight left turn and watched the dial.

To a full 4,200 feet I stayed with it, but then I nosed out, before getting in the afternoon thermal around the lake. About five miles away she was, nestled down behind the hills. I could just make out the great white expanse and some dust trails of the gow jobs.

I headed for it but on the way I kept out another thermal. Nope, I couldn’t resist taking it — and next thing I knew I was up in the hills of the great Sierra Madre Mountains, soaring on silent wings. I didn’t want to come down. I felt I was nearer to heaven than I’d ever been. I wanted to stay up there till the people of the earth quit fighting and found a lasting peace.

But it was getting late, Stan might be wondering — and I was plenty hungry, not having eaten since a snack the night before. So I headed back West and looked for the lake.

After another hour, I spotted Stan and the trailer in our own private corner of the dry lake, and I nosed into a steep dive. I banked over the car, yelled to Stan, then straightened out for my landing. No three pointers in a glider, you know. You simply keep her level on that single nose wheel.

Without a bounce, I rolled along the packed sand, applied the wheel brake, and came to rest hardly ten
Pick-Up Pilot  
(Continued from page 22)

"He pried that Douglas up, Murrie, no matter how you look at it," the Chief Pilot reminded her again. "He ignored flight orders. He had the wheel. Still, I wouldn't tell you to give up all hope. Why don't you work on Malloy? After all, Malloy is the man we can't transfer ticketless men into flight jobs. He's got to get around Malloy."

"But wasn't there some way?" she pleaded again.

Naismith wagged his chin, lifted his peaked service cap, and scratched his silver gray hair. Somehow Maureen Prentice's eyes followed his long thin hand, and she winced slightly at what she saw. "Poppy, I never knew . . . That wound across your head . . . ?"

Naismith rammed his cap back on. He drew in his breath. "An old wound, Murrie," he said with a rather guilty tone.

"I've never noticed it before Pop. It . . ."

"Yeah, I know. It was a bad one! Yes, and under the circumstances I shouldn't be alive."

"The war, Pop?" she asked faintly peering around his turned-away face.

He nodded. "Walked into a Sopwith prop one day. Careless like. Should have killed me. But it . . . it just turned out to be a bad scalp wound. You know how they leave scars. That's all. Just looks bad."

"You were lucky, weren't you, Pop? Funny about luck. Some have it, a godsend, others—instance, is one who doesn't have it."

"Look, Murrie, forget it. I'll try to work out on Malloy for you. He's a tough guy to shave. But he may want to shoot one of his cousins into one of our co-pilot spots one of these days. I'll do what I can, Murrie."

She watched Naismith stride away. He was still slim and lean. He had a first rank job. He had been a war hero and had lived to enjoy the fruits of wide experience. But there was luck, too, in Pop Naismith's log book. Another man walking into that prop would have had Fate against him. If that had been Grant Sayer, for example . . .

Maureen Prentice flipped a salute to the Assistant Maintenance Manager and hurried away to the hostess classroom to give her lecture on "The Care of Babies During Flight."

GRANT SAYER split the traffic of Manhattan for what seemed hours on end, then turned the car over to Toby Ryan at the city terminal. A o'clock. After washing up, he changed into his civilian clothing, pulled on a polo coat purchased in better days, and belted it tight. Finally he flipped the brim of his hat down over one eye and walked west on 42nd Street.

He remembered Maureen's invitation for a snack supper, but he ignored it. He went into a cafeteria, grabbed a glass of milk, some indigestible pot roast, and a baked apple. He found a table and sat down feeling utterly alone despite the swirl of gorging humanity about him.

This was different from the other days when he was flying into Newark, had his own car, and enjoyed fine rooms at the Douglas in Newark proper. Then it was hot showers, real meals, clothes, and entertainment. A movie, perhaps, or maybe some bowling at the Essex House, plus Monday Q.B. dinners and afternoons of golf out at Crestmount. All the hotels liked the clean cut lads of Pan-Central "just to drop in" with their flight jackets gleaming.

Grant Sayer held a chunk of poorly-cooked beef half way to his mouth and pondered on it all. Yes, Fate had treated him much better then. And considering his ability to fly, it wasn't just, he figured, for Fate to give him the go-by now.

Abruptly, a waitress came and grabbed his empty meat plate with a nasal whine: "You finished with this, Mister?"

"Take it away," he cracked back at her.

"Well, yer don't hafter bite me do yer?"

"I gotta bite something. Not much to chaw on in that pot-roast. I'll bet one of the chefs is minus a shoe. Have a look around when you go in back!"

"Listen, Gable. The Commodore Hotel is down the street. This isn't it. You backed into the wrong stall."

"Yeah? Well, I've been there, too," growled Sayer, bisecting his baked apple with a bent fork. "An' I'll be there again, too, baby!"

"I'll be waitin' for yer, Handsome. I'll be standing near the florist's, and you'll know me because I'll have a cocoanut palm under each arm. An' I'd just as leave wash dishes there as here."

Disclaiming to reply, Grant Sayer went back to his thinking. He saw,
in his mind’s eye, the day that ended his sky career—as clear as though it were being shown on a screen: Flight 10 out of Miami for the north. A storm had slapped them all the way to Newark. A handful of passengers had started, and most of them had quickly checked it for the rattler. Who could blame them? Wasn’t it like riding a mad roller-coaster all the way up?
The teletype had ordered them to stay grounded at Jacksonville. And then it happened—happened fast.
There was an auto—a big car, all bright and new. It had everything from white-walled tires to chromium exhaust ports, plus leather splash guards and a guy in livery. Then Maureen Prentice, his stewardess, had stepped into the picture.
“It’s a baby,” she half screamed.
That was in the waiting room at Jacksonville. Maureen was trembling. She was dripping wet from the rain. The manfest, splashed and torn, hung against her. It was a “baby!” she cried, grabbing him with one hand, “and we’ve got to get it north!”
“We’re grounded, Murrie,” he had pleaded.
“We must get permission to go through. The baby has to go through, Grant. It’s dying! And it’s the only way its life can be saved!”
“Can’t they put it on a train?”
“There’s no time. Too slow by rail. It’s choking to death! A bronchoscope must be used to dislodge something caught in its windpipe.”
“Can’t they do that job here?”
“No, the big surgeon who could handle it in Jacksonville is away and can’t be reached. And the mother is afraid to risk anyone else. Except a specialist she knows of at Rockefeller Foun—”

The telephone rang from New York.
Maureen was clacking away like a twisted news tape running berserk through an automatic typewriting machine.

“Where’s the mother?” demanded Grant.

“collapsed! But hurry, Grant. We can radio through for a car at New—ark. The chauffeur has the baby outside—”

“You’re crazy, we’re grounded!”
“But the baby will die if we don’t get him out of danger out of its lungs!”

There was a face off in the distance—Hell-or-Hoboken Pyle, the Traffic Manager guy. He was shaking his head and holding up a mass- tape. That meant the weather was bad. And if old Fyle admitted it was bad, it must be terrible. Generally, he’d send a guy off in a tornado—
“We’ve got to go, Grant. The baby will die! You fly while I nurse it.”

THEN they brought out the baby. It was in a white basket with frilly ribbons on it. And its face was distorting the effort of breathing. Mouth agape, it was wheezing spasmodically in frilly gasps for life.
“Poor little guy,” said Grant.

“We’ve got to risk it,” Maureen Prentice was saying again.
“Maybe you are—but I’m not going without an okay!” Dick Feverell, Sayer’s co-pilot, was saying.
“I understand...”

“Come on...” shouted Sayer, his mind now made up. But then he realized such orders were out. “Never mind, Feverell,” he reconsidered. “You’re quite right. You can’t risk it. Maureen and I will take the chance—alone. Put the baby aboard!”

To the surprise of all, Pyle was saying. “They’ll take up your ticket, Grant.”

“So what? This kid’s dying. What’s a ticket?”

“He might die anyway, you dope! You’ll be four hours or more getting north in this stuff. The kid can pass out any minute, if it’s got something in its windpipe. Suppose you crack up? That does for three people and a lot of airplane. The airplanes get another black eye because you want to get your name in the papers?”

“You’re getting one without me getting my name in the papers, Pyle!”

It seemed so easy then. Pyle never saw Grant’s left flick out like an adder’s tongue. It caught him just where Sayer aimed it. And it dropped him.

“Come on!” yelled Grant. And they raced the baby to the ship.

THAT TRIP reel-ed off before Grant Sayer’s screen of memory as though it had happened the night before. He sat there in the cafeteria and flew it all over again.

Pyle had raged as they made for the Douglas. Then the ticker tape flipped madly from the teletype:

Reserved flight, unassigned flight—Forbid attempt to complete Flight 10... Demand that Flight Officer Sayer report via telehone or teletype to Newark at once... Positively refuse to allow flight... Situation unfortunate, but can do nothing until weather abates... Pyle was saying.

But Grant Sayer was not to be stopped. He was up front—flying. And into his mike he was barking: “Flight 10... Flight 10... Taking off Jacksonville... Visibility zero... Flight 10 taking off... Time 9:24.”

Maureen had lashed the basket to Seat Two, then had kneaded beside the seat and... closed her eyes. She had mumbled a few lines of a prayer and they lifted from the runway to battle the tempest.

“This flight is forbidden to leave...”

The words had hammered through the air and into Grant’s ear. But “going through!” had been his grim reply as the Twin-Wasp snarled and the props bit into the storm.

For twenty minutes they fought her on instruments, then he reached the clear at 18,000. Thereafter, he sat tense, reported through on schedule, and ignored the repeated demands of “Turn west and get into Atlantic.”

“Who’s there who can take care of this kid, is there?” demanded Sayer of the Division Manager.

“They got one of those gadgets that gets things out of kids what swallow things?”

“How do we know? Anyway, you’ll never get north...”

“Bailout, bail out in New York who can do it. He’s got one of those grimmicks and we’re on our way. Phone him and make sure he doesn’t go out of the town tonight. He’s got a patient. Flight 10... signing off.”

Maureen came in a few minutes later and wagged her had. “You’ve got to come down. The baby can’t take this altitude. We’ll kill him up here. Get down lower, Grant. He’s fighting like a little soldier—but the oxygen’s too thin.”

“Murrie—it’s bad down there. We’ll never get through in time.”

“I tell you, get down, Grant! Say, to about 5,000 feet. Give him a chance. Please!”

“Okay doke! Flight 10 coming down to 5,000 feet... somewhere over Raleigh... I think... Get that bronchoscope guy at the Rockefeller Foundation... Flight 10 coming down to 5,000 feet.”

At 5,000 they took the storm’s brunt again. It lashed them from all sides. They rocked, swayed, and rolled. But somehow Grant Sayer managed to keep her nose pointing NNE.

THAT was many weeks ago. A lot had happened since then. They had moved from Newark to LaGuard...
FLYING ACES

JUNE, 1940

Cleveland's New Soaring Gliders

Cleveland Condon, 7th Class E. Horrler glider with 354 sq. ft. wings. Exclusively efficient high aspect ratio wings make it a great model for beginners. May be flown in Class D by reducing wing span slightly. Hand or towline launched. Complete Kit E-5919, only

$1.00

Cleveland Eagle, Designed along modern lines for speed. Fast single sailer with rod-shaped fuselage, and unusual gliding characteristics. Hand or towline launched. Complete Kit E-5917, only

$1.00

Cleveland Speedster, Airplane. First of its type approved for racing by the C.A.A. Hand or towline launched, Class F. Complete Kit E-5918, only

50c

In

Sure to Build the Amazing CLEVELAND

"SPEEDSTER" AIRCRAFT

The Class of all 3 Gas Classes

Cleveland Playboy

The New "Browning"

Such a hit — and such a good one, too — that one of a kind now built by 1,700 clubs. Each separate class — .20, .35, .45 — all kits complete except power unit

PLAYBOY .20, Class C, with 14-cylinder engine, with all parts except power unit

$1.25

PLAYBOY .35, Class B, with 14-cylinder engine, with all parts except power unit

$3.25

PLAYBOY IN .45, Class A, with 14-cylinder engine, with all parts except power unit

$5.25

Baby Playboy

Class "B" Gas Models

(Complete except for power unit)

Cleveland Cloudster

K19-GP-5906, $2.50

Cleveland Champion

K19-GP-5906, $2.25

Cleveland's Easy to Build, Fun to Fly ENDURANCE GLIDERS

Javelin

25c Class B. 1-4 oz. Glider Great performance. Designed for beginners. Complete Kit E-5011, only

25c

Dart

25c Class B. 2 oz. Glider. Designed for beginners. Complete Kit E-5009, only

25c

Send for New Catalog

Be first with the newest. A regular all- star, high-flying, fast, and Rubber-Driven Model Airplanes. Race Cars, Model airplanes, Model Gliders, parts, books, and the latest in model airplane equipment. Super, Paris, etc. Both name, address, and the day for your order.

150 P.C. Charges on all orders under $1.50

Dealers! Jobbers! Big business ahead. Write!

Cleveland Model & Supply Co., Inc.

45808-45, Lurain Ave., Cleveland, Ohio, U.S.A.

— THEY ADVERTISE — LET'S PATRONIZE —
simply coughed it up again.

That was what the doctor said.

But what the Division Manager said was something else. What Inspector Malloy said was also something else. They did congratulate Miss Prentice, because they believed she had caused the child to emit the foreign body. After all, she WAS a registered nurse and ought to know about such things. They agreed she had acted with rare courage and fidelity.

But a pilot who forgets to lower his wheels—after he had refused to obey flight orders—was quite another thing. After all, it took hours to get that mess off the runway. What's more, Douglas airliners don't sell for hay.

Grant Sayer—pick-up pilot!

The charges were about a mile long and on paper they were all correct. There was nothing much that could be done about it. Inspector Malloy was not mincing words when he said so.

That's how it all had happened.

Later, a father in Jacksonville sent Grant Sayer a very nice note—of thanks. And he wished to know what had become of the little bell because he wanted it for a souvenir to put in Junior's baby book!

Funny, but Grant Sayer could always laugh about that. He laughed again as he went out of the cafeteria.

He trudged along toward Broadway and stood staring up at the news flashes flashing around the sides of the triangular Times building.

It was the same old stuff: Peace talks... Hitler says this... Chamberlain says that... bombers dropping bombs... politicians ranting and raving, campaign election... Police officer shot... serious oil plant fire somewhere in Pennsylvania... another Canadian contingent crosses the Atlantic... Checker... two more trawlers sunk... movie star marries for the eighth time, or something.

Then someone was shouting to Sayer. Someone from an auto at the curb.

"Sayer! Hey, Grant!"

It was Toby Ryan. He was in the pick-up car.

"Sayer! Bin looking for you all over. Telephone and everything. Take over this bus, will you?"

Toby was out like a cork from a bottle. He was showing Grant in.

"Look! Lower Broadway. Quick. There's two guys there with some stuff. They got to get out of that Pennsylvania oil fire right away. Pick them up and get them over to LaGuardia. The Chief's orders. Get it?"

"I saw something about it on the lights up there. Okay. Buzz off."

"Gotta take her. Can't take the other one. So long, Grant!"

Sayer was glad to be doing something again. He'd been thinking too much anyway. He tool the pick-up car west on 42nd and shot down the elevated highway. As he drove, he wondered what it was all about.

They were waiting for him in front of an office building near City Hall. Two important but tough-looking guys. They had a flock of crazy-looking equipment and bundles of crazier-looking papers. They wasted no time. The stuff was thrown into the car and they were off again hell-bent.

"What's this all about?" asked Grant when they were back on the elevated road that skirted the river.

"That oil fire at the Lubecoll plant—it's a killer!"

"Saw a news flash on it... Times Building," said Sayer.

"We gonna try to put it out. Oil fire shooters," explained the man with the big cigar.

"More fun, eh?"

"It's better than workin'. Dough in this racket, brother. We get a couple a year and we don't work much after that."

"Takes nerve, don't it?"

"What's nerve? But of course it's none too safe and afraid of and some you ain't. Them guys of yours, for instance. Flying them planes every night. I wouldn't go for that. That's too nervy."

"I wouldn't know," said Sayer scowling.

"We stay in this boiler, Brother. You always get one foot on the clutch, anyhow, and you can stop when it gets soupy. Personally, I won't be satisfied until we're on the ground packing that dynamite in. That's sport, Brother—when that charge goes off under the light. We'll get the big fire out there, then the little ones around it will be easy."

"It must be sport," agreed Grant.

"Yeah, we make plenty and sock a little away now and then. And you can always drive a red cart when you get your red cart."

"Red cart?"

"Sure! Explosives—dynamite and T.N.T. for the mines. Truck driving."

"Not for me!"

THE MAN LAUGHED and whipped around to his pal: "He says he wouldn't like to drive a red cart, Joe. Tell him how much stuff we got in back here."

"We got enough to blow this boiler all the way to Tonkery."

"Yeah?" said Grant easing up on the accelerator. "Taking that stuff through by air?"

"Sure! But we don't tell 'em that. It's packed pretty nice."

"Baby! Baby!" said Sayer suddenly feeling cold. "Happy landings!"

"Let's hope! I wanna get at that fire. I gotta fight fires!"

Grant Sayer said no more. He was too intent on his driving.

At LaGuardia they ran into Hades let loose. There was a Douglas on the apron, a couple of doctors and several hostesses, Pop Naismith with a map and a pen, Henry Clotier, the newspaperman, plus Malloy, all efficiency and bounce. There were also black bags, large cardboard cartons with red crosses on them, special medical equipment.

And now Maureen Prentice was at Grant's side.

"Grant! So glad you came. They're going out to the fire. Got doctors for some burned men out there. Nurses, too—hostesses because they're used to that sort of thing."

"Yeah, they got something else, too," said Grant, watching the oil shooters packing their queer boxes and asbestos suits aboard. "They sure might need those nurses!"

"It's terrible," she replied excitedly. "A lot of third degree burns. Need all the tannic acid dressings they can get out!"

"Why don't they run out of Cleveland? That's nearer. Three hundred miles from here, isn't it?"

"It's the dressings, Grant. And the men you brought up from downtown. Had to get the dressings in bulk here in the city."

"Come on!" Pop Naismith was calling. "Everyone aboard!"

Naismith had seen third degree burns in France, when blinded, blistered and ravaged by trench fevers, faces charred beyond recognition.

Harry Tilton, the traffic manager, shepherded the doctors and nurses into the cabin. Malloy helped a mechanical stow cartons into the nose compartment.

"Where's Wardell?" Pop Naismith snapped, taking a strip map from Tilton. Then he caught sight of Grant talking to Maureen. He glanced from Sayer to Tilton, then back at Malloy.

"Wardell's not here yet. No time for it. He'll meet us on the city. You'll have to go with us co-pilot. This is an emergency," Tilton barked.

"Nothing doing!" blazed Malloy. "This plane doesn't go out without a full crew. You know the rules, Tilton."

"All right," agreed Naismith. "You got a ticket yourself, Malloy. You come along and make yourself useful for a change."

"No, Naismith, that job isn't for me. You know the rules."

"All right, but you come along anyway. We'll take you up, Sayer, too. He's over there. They can use him after they land. Oke?"

"Well, to cover everything, Okay!" Malloy agreed.

"Come on, Grant!" yelled Naismith.

Sayer found himself being shoved across the apron by Maureen. He was trying to tell her what the oil-switchers had taken aboard, but it was all too dizzy. She was scrunching in his ear and tugging at his arm, and he was wishing he could speak to the next guy with the big cigar who liked to shoot oil fires.

THE EFFICIENCY of the airport was in high gear now. The big Twin-Wasps were wailing and sending the passengers in their needle-nosed up the spiral. Naismith was in the front seat listening to Malloy check the radio set with the control tower. Malloy was seeing that Aviation—the commercial side, at least—was getting a square shake. Pop Naismith wasn't worrying about Aviation. All he could
FLYING ACES

"Take it easy. Don't shout it all over the ship."

"But, I signed it on. It's.... It's true!"

"Yes, it's explosive—and it's not supposed to be on board. Against the rules. Funny, eh, Malloy?"

"I didn't know—did I?"

"You signed the stuff on. I saw you loading some of it yourself."

"Sure, I left it at that. Went aft, and sat down, He saw Malloy attempt to collect his wits, then go back into the control pit.

"If we had a chute, I'd go over with some of the dressings," Sayer said to Maureen. "I might miss the fire some way and land safely."

"I wish you were up front flying her," said Maureen, her fingers clenched on his shoulder.

"If you knew what else we had on board, you wouldn't. Besides, what's wrong with the Chief Pilot?"

She disregarded his question. "You'd get us in, wouldn't you, Grant?"

"I'd get you in? What do you mean? We can't get in, according to the latest report. The whole place is surrounded with burning oil!"

"But it's a big place, isn't it, Grant? These oil refineries usually are.

"Look! Just what are you trying to get at?"

"I don't quite know. All I know is that I wish you were up front."

"Well, I think I will stick my nose in up front at that!"

He went to the pit, moved in close behind the two seats, and stared ahead. Malloy sat dumb. Naismith had two steady hands on the wheel, but he was licking his upper lip with his tongue.

AHEAD, they now sighted a curling black smoke formation hanging over the refinery like an inked-in dragon. A dotted film of sticky soot already flecked their windscreen. Flaming feathery ashes, twisting and tumbling on the cushion of volcanic heat, danced out of the ebony death trap, drew crazy designs, and corkscrewed away. The Douglas thumped on in, and Pop Naismith circled the smoke, the knife-like wings slashing through what seemed like a battalion of fire-snorting Black Huzzars that threatened to storm them and blanket their control surfaces.

Through the base of the smoke a flaming serpent crawled around the projection of land. The refinery was fire-bound on two sides. The third was even worse. There, a savage broken tank head spilled flaming fluid to feed the writhing monster. Meanwhile, the current of the river carried the blazing reptile's tail around under the overhang to sweep on and complete the cordon of death.

Pop Naismith circled again, and studied the distant outbuildings that provided that third flaming side to this triangle of terror. He glanced quickly at Malloy. Then he turned, peered through the slot down the cabin in Maureen, and gave the signal.
for the fastening of the safety belts.

"Whew!" breathed Grant Sayer.

"What are you going to do?" Malloy suddenly raged, facing the Chief Pilot, and seemed on his feet again.

"Sure! Ever been burned?"

"You mean—you mean you're going to try to put this plane down inside there?" Malloy cried, fingering the inside of his collar.

"Why not?" said Naismith calmly.

"Can't get in any other way. Those fellows have been lying there like that for Lord knows how long. I can try, anyway! We have to help them."

"You fool! You'll kill us all! Why, I'll—I'll ground you for ten years! Aviation will get another black eye!"

"Shut up! There's a bunch of fellows down there with black faces, black arms, and black legs—burned. What's a black eye in the face of all that?"

Grant Sayer stood back in the narrow companionway, listening. He thought mechanically of the ad- dress and wondered whether it was as good as what Naismith had just said. And now, closer than ever, he saw the flames roaring and writhing along the banks of the river like a scene from Dante's Inferno.

"This is where in the control pit. Malloy jerked out of his seat, fingered something blue-black! It glinted and Naismith squinted at it, his mouth a tight thin line.

"You're not going down in there, Naismith," Malloy snarled from behind his glasses.

"You're not going to kill all these people just to satisfy your fool hank- ering for heroics. We had enough of that on Sayer's show. You're not going to give the papers a headline! We got dynamite aboard. DYN- AMITE!

"Dynamite?" gagged Naismith.

"Yes, dynamite—belonging to those oil-shooter guys. I didn't know."

"So—you didn't know? Well, suppos I don't know! I'm going to put this ship down at once and confound that plant down there. It can be done!"

"No, I say! Put this ship down outside Elmington, Naismith," Malloy barked. "Let the plant officials arrange to get the stuff from there. Wood funeral? Why kill more people?"

"Funeral?" belloved Pop Nais- smith. "Fifty funerals—unless we get in, Malloy. Those chaps can't wait. any longer. Go ahead—ground me. But I'm going to ground this baby in there if it's the last thing I do. I'm running this bus—dynamite or no dynamite. That part of it's your fault, anyhow."

"You won't, Naismith! Take your hands away from those throttles!"

Malloy's arm came down then, swelling with his blood through the strong lights of the cockpit. There was a thud. Grant Sayer yelled and grabbed Pop Naismith as he lumbered over the edge of the pilot's seat, his peaked cap rolling away. Malloy's gun fell to the floor.

THE DOUGLAS LEAPED like a Baracuda caught on a No. 3 gaff. The aisle floor did a mad tango, and Maureen Prentice stumbled down the center and fell across Grant's legs. Nurses cried out and tugged at their belts while the doctors swore and stared wild-eyed at the tangle in the cockpit doorway.

Sayer, however, was quickly back on his toes. He clambered over Nais- smith's head and fell across Grant's legs. The doctor nodded and rolled back toward the instrument board.

"Take it, Malloy!" he yelled. "Take her over. He's out!"

"I...I can't!" Malloy gasped, standing himself with a trembling hand. "I can't...I must have killed him—Pop Naismith!"

Maureen Prentice was now pulling Pop clear. His polished heels clunked on the floor. She managed to clench the blood above his temple, and she was crying: "Take it, Grant! You can do it!"

Grant!" gasped Maureen. "You surely can do it!"

"And land, too—when I have my wheels down," Grant answered.

His heels pressed a little harder, he brought his wheel back gently, and the Douglas drew up like a majestic charger under a curb rein. She slid down twenty feet from a flaming coal shed.

Maureen let out a triumphant shout. And the next thing Grant Sayer knew, Maureen was ramming his shoulders back against the seat. Her eyes were seven inches from his, pushing against him, "Take it out and—trust."

A quaking voice from somewhere behind them broke it up. "That—that was flying! No other pilot in the East could have brought her in here."

"Know any in the West?" demanded Maureen Prentice.

"You're right. No other pilot I know of could have done as fine a job."

It was Malloy speaking. His face, a parchment mask streaked with blood, was a title page to a whole vol- ume of penitence.

Does he get your Okay for a flight job any more?" asked Maureen.

"He certainly does. I'll sign his application for renewal. But can you get her out of here, Grant?"

Malloy husked.

"Sure I can, once we get these hospital guys out of here—and that dynamite.

"That what?" cried Maureen.

"Oh, nothing. I was just talking figuratively. I mean, it was dynamite for Malloy to let me aboard this ship —with no ticket. That's what I meant, isn't it, Malloy?"

"Crimes, I hope so! You can do me a great favor—if that is what you meant."

Sure I was talking figuratively. I don't know anything about cargoes, anyhow. But now we got to get Pop Naismith out of here, eh? I'm sure glad the doc- tor says he's in good shape. I deserve to face a homicide charge, all right. But I'm mighty happy for poor Pop's sake it wasn't homicide. I only hope he'll find it in his heart to forgive me," moaned Malloy.
Flying Aces Club News
(Continued from page 33)

On that score, we assume that they’re referring to one of those clashes between the French flyers and the Germans.

And thus from Fred’s letter we can see how England is prepared for emergencies which may arise through attacks by the Luftwaffe. And if the Nazis have planned any retaliation is forced through the prop as a bearing.

Several coats of clear dope will strengthen the prop and give it a smooth, glossy finish. Since a “dead” aircrew creates a great deal of resistance during glides a free wheeling device should be added to the hub.

Theyadvertise—let’s patronize—
of your rarin'-to-go “Mosquito.”
When installing the free wheeling, be sure that the prop remains in balance. Exact equilibrium can be obtained by adding small amounts of dope to the lighter blade. This assures a smooth-running, vibrationless prop.

ASSEMBLY AND FLYING

THE RUDDER is cemented into a slot in the indicated position. The tail skid is glued in a vertical position directly under the rudder. A coat of cement along the bottom edge will strengthen the skid for landings. The wings should be given a thin coat of dope and the butt ribs whit-tied until the dihedral angle is set at 1 1/2⁴ for each tip.
Cement the elevators lightly to the fuselage at the angle shown on the plan. When completed, the model is glided indoors to check this angle. Since every craft is slightly different due to variations in balsa the angle might have to be changed.
Don’t permit the tail surfaces to droop while the cement is drying. Add the last drops gently, 4 grains of 1/8 lubricated rubber, and the nose and tail plugs. Before going outdoors, glide the ship again to be sure that the free-wheeling device is “percolating”.

HATS OFF TO HELENA!
(Continued from page 17)

Thereupon, the boys took a hand. They organized into crews, poured cement, salvaged and hauled materials, hoisted the huge girder into place, laid sheet metal, and generally aided in the wood working. Residents and merchants of the town cooperated with them wholeheartedly in their efforts.

AFTER MONTHS of work that lasted into the spring of 1936, the building was completed. Today, it is insured for $30,000, exclusive of planes and equipment. The structure contains 10,000 square feet of floor space, and a new addition, now planned by the board, will supply 7,500 more. The excellence of this layout is graphically evidenced in our accompanying photos.
Great strides in the teaching had already been made by 1935. Since that time three new graduating classes, increasingly large, have gone out into the channels of American aviation. A list of this early establishment, with Boeing Aircraft, alone, is reported to have taken care of all graduates who have applied during the past three years.
The high reputation of the aviation course has spread rapidly over Montana, and in January, a year ago, the state legislature passed a bill by which aviation training at the capital city school was generously thrown open to the youth of the entire state on a tuition exchange basis.
Concerning the Helena school, C. L. Egbert, president of Boeing Aircraft, says: “We are delighted with the quality of work turned out by the graduates of the Helena institution. The nation needs more such schools!”

PHARAOH AND WARMER
(Continued from page 14)

It was apparent that Lieutenant Wallaby could not be trusted to take a kite upstairs. Major Smythe-Brothers promised his Camel pusher that he was through in the guerre and to consider himself under arrest. Just as he finished admonishing the young Limey, there was a commotion in the bed. Phineas looked down and saw a bird stagger out onto the matting on the floor.
“He is guilty of foul play, too, Ma-jor, as look at that thing!” Phineas said.
“Uh-er-what is it?” the C.O. yelped. “Wallaby!”
Bought it to shend letters to my girl in Shilopshire—pip! Hic—”
“Some bingie, what?” the Major growled.
“He wasn’t at no Helipough League rally,” Phineas admitted and picked up a pair of shorta, a topee, a helmet, and goggies. “Well, there is nothing that has got even a half a wing I cannot pick up and put down, Major.”
A half hour later, a Bristol was leaving Abou-Kir. The Major leaned forward and told Phineas how to get to Montreux. Then he settled back in his pit and nodded his noggin. He had been doing a lot of elbow bending in Cairo and had neglected his shot-eye.
The air was hot and the Rolls pow-er plant hummed a lullaby. Lieuten-ant Phineas Pinkham was enthralled and a trifle jittery. His backbone kept tingling and his mental assembly played tricks with him. Mysterious Egypt was giving him a Tribly com-plex. He got off his course and went down to get a gander at the undulat-ing desert. He lifted the Bristol again — and then he saw an oasis up ahead. Palm trees and lush green grass and a white tent or two. Phineas lowered the Bristol’s nose.
The Major banged Phineas on the shoulder, yelled something at him. The former pilot, yelled back. “Sure, I see it. Mehr-Raj! It is a swell drome, huh? Don’t get so ex-cited, Major. I have landed these things in a Frog pigpen without talk-ing down any fence. Haw-w-w-w-w!”
“Y-you balmi? That’s a mirage, Pinkham! Oh-h-h-h dash it all—oh-h-h-h-b-b-b”
Phineas went down for a landing. Too late he saw the oasis dissolve in thin air. The wheels kicked up sand and the prop sucked up bucketfuls
of it and threw it back into their faces.

CRACK! CRACK!

"Arabs!" the British C.O. yelped. "You Arabs!" And landed us almost in their bloomin' laps. Look, Leftenant—the camels are coming."

"Then we are safe, huh?" Phineas grinned. "Just sit tight an'—"

"Not that kind—not what you jolly well mean, Leftenant—any—"

CRACK! PI-IT-ING!

Phineas got a look at the Moslems riding the racing camels. He gave the Bristol the gun and it strained on the bit for several aggravating seconds. The wheels finally got down to the base of the hill and tore across the Libyan desert with Arab lead hammering in its slipstream.

Major Smythe-Broughton hung on for dear life and spat out the stem of his pipe. An Arab slug had wiped away the ten dollars worth of Dunhill briar that had been strapped to the stem. The lobe of his ear was in shreds, and he was telling Phineas what he was going to do to him.

"Oh, shut up!" Phineas yelled into the Major's face. "How is a bum to know what is a prayer colonel? I wish you was one. Well, is that one down there now? You take the stick in back there and land. I will not be a sucker twice. Haw-w-w-w-w-w-w!

The British C.O. picked out the destination of the Mehri-Raj and put the Bristol down in a three-point landing. But all points did not hit at once. "Hi-huh," Phineas said as he climbed out and looked around him. "I am glad this tarmac has a lot of sand on it." He looked at the R.A.F. Libyan layout—The sand-sagged Benson hangars and the pilots' tents. The Operations Office sweltered under a marquee. Three man made Camels were out on the tarmac, and even they looked like they would wilt at any moment.

"Some circus," Phineas told the C.O. "All we need is a lion and a caller. How do you git this spot in the guerre, huh? Is that a mummy you picked up over there?"

"That is the Adjutant, Pinkham!" the Major growled. "If you stay here for a week or two, you won't laugh."

He introduced Phineas all around. One Camel pushed away from him. "That bloomin' nitwit—here? Remember me, Pinkham? Last year in France you used me with a very general's wife—and l had to fight a duel? Take a look at the scar on my noggin. Well, Africa is where you can murder a chap in a dozen ways. Scorpiions, snakes, and poisonous plants. I'm warnin' you. How you ever got here?"

The Major spoke up: "Came to help track down the Mad Mullah. Chaumont thinks he might be working with Herr Doktor Number Seven."

Then he got into the shade, called his bunch of Arabs from behind a bush, and asked him for a barrel of pop. He wanted to know if anything important had happened during his stay in Cairo.

"Interesting Mohammedan fellow here," a pilot said. "Fellow riding in an Avro. Big black beard, and all that, you know. Said he was a friend of the Allies. Left us a treat—pastries and no end of delicacies. You say Pinkham's after the Mad Mullah? Priceless!"

PHINEAS sat down in the shade of a marquee and rested his elbow on the top of a small table. He let the R.A.F. have a big laugh as he poked at a cigarette stub he found in an ash tray on the table. "You chaps would like to git the Mullah, huh? That's why you got a drome here? Why didn't you handcuff the bum when you jolly well had him?"

"Uh-er—I don't follow you, Leftenant," the Major said. "You talk in bloomin' riddles."

"He was here," Phineas grinned.

"It is a good thing I found you pip pips. Have you anythin' here I could try those gifts on he brought, huh? Boys, the Heintzes wipe out dromes with bombs—but these Arabs! Ugh! They know more about poisons than the Borgias. Tell the mess monkey to bring me one o' them pastries."

"You will wait for mess along with every other chap here," the C.O. bridled.

"Haw-w-w-w-w! I am not hungry," Phineas said. "Who owns the white rat in that cage hangin' up in front of that tent over there? I would like to feed it a Moslem muffin." A R.A.F. pilot crawled: "Mine, old custard. Take it, as the climate is killing it anyway. Quite!"

Phineas hailed a little mess attendant. "Bring me a pastry," he
said. The tid-bit was brought forth and Phineas walked over to the re-
dent's cage and dropped it through the wooden grill. The white rat gob-
bled the dessert greedily. For a while it looked at the R.A.F. pilots with a
funny expression in its glimmerers. Then it did a Brodie and panicked for
keeps.

"Fawny!" the Major blurted out. Phineas sniffed. "The Mad Mullah is
foiled. He plays tricks, huh? Then he is my meat. Did he say anything about
the weather?"

"Why, er, yes. Said it was beastly hot, an' all that, Leftenant. Natural
thing to say, what?"

"Not for a prayer-rug squatter," the Boonetown miracle man said.
"Haw-w-w-w-w-w-w-w-w-w! Wonder where Jelal Bin gits his gas and oil. Car-
van brings it to his drome, huh? How about lendin' me a Camel tonight?"

"Sorry, old chap," the Major growled and felt of his slug-kissed
left ear-lobe. "Cawn't let just anyone fly our ships. Not of trouble get-
ting Camels shipped here. Harumph —er— no night flying on this air-
drome. Sorry, and all that."

"You would invite a sea captain to spend three weeks in a garage, and
wouldn't you?" Phineas countered. "You are afraid I will git the Mad
Mullah so you won't git medals, huh? Awright, I will show you bums!"

Phineas wandered about the Limeo
drome. He examined the mess tent and indulged in small talk with the
little cockney who was preparing the evening meal. "Brewin' hot tea, huh?
You cheerios would make ice cream if you was pitched near the North Pole."

The Major and his pilots seemed to
enjoy their mess. The African
night then appeared to be full of
Svensgali giving the Englishmen the evil eye; for they began to nod their
noggins. Major Smythe-Brothers slumped down in his camp chair and
began to dream of gruss in bonny
Scotland. "Why, er — oh-h-h-h-b-h!"
Phineas yelled. "That Arab loaded your
tea, too! We are doomed! We—"

"Wha-a-a-a?" a heavy-eyed R.A.F.
pilot grunted. "P-poisoned, w-what?
Deucedly awkward — I say — er—
godbye, and all that."

Leftenant Phineas Pinkham got up
hurried to a hangar. He grabbed at
two grease monkeys who had not
been sipping tea. "Git me a Camel
out and heat it up. The Mullah has
poisoned the officers, an'—well, I got to git help before the Arabs come,
an— Hurry up, you fatheads! I got to
git to Abou-Kir or Cairo or Lon-
don. An' you better hide in the sand
after I take off, or you will git tor-
tured by them bedsheet claps—
what?"

Phineas got his Camel. He took off
from the drome near Mehr-Raj and
winged out over the African loine. The
"He-neutown. They will wake up in
a half hour as them pills o' mine
don't work long."

The Egyptian night cast a spell
over the flyer from Boonetown, Iowa.
He seemed like somebody else. He
felt as if he had ridden a Camel
through Egypt more than once be-
fore.

He looked overside, spotted a dark
blotch on the desert sands. "Huh,
maybe a ruined city that has bustled
through, he muttered, then dropped
down and made a landing. The hush
that wrapped Egypt up like a blan-
ket. Or—hopes we find the fort or
sledge-hammer when the prop quiet-
ed down.

The Boonetown pilot went over to
the thing that was bogged down in
the sand. It was a big gas buggy with
tractors instead of wheels. On
the side of it was painted the letters
REACHBOTTOM EXPEDITION.
Phineas opened a little door and got
his head and shoulders inside the des-
ert jalopy. He found an old pipe, a
musty tope with a scorpion curled
up inside of it, and an old sheet of
Pinto.

On the sheet of paper Phineas
noticed some strange designs. And
some lettering said:

"Tunnel Leading to Temple from
Pink-Ank-Amen's tomb. God Ra-Ra-
in. He followed out of there. Ap-
ppears to have been ingenious work of
King Pink-Ank-Amen to scare sub-
jects. Arrow points to mummy of
Pink-Ank-Amen. Old boy well pre-
erved."

PHINEAS scratched his head.

Beads of worry dew glistened on
his brow. Pink-Ank-Amen! No! A
times no to! Four thousand years ago—
The Boonetowner shivered. "I wish
I was in Bar-le-Duc. I can git a new
don't like it. I miss my old one. I
am gettin' nutty! I am gettin' out
of here, 1—" He looked at Reach-
bottom's work again. In the lower right
hand corner were big letters that
said—

LOST CITY OF EL-PILLAH
Near Oasis of Wadda-Younim

Phineas got back into his Camel
and got away from there. He swung
north and had not flown two miles
before a big bird swooped down out
of the ozone and began pouring slugs
into his Camel. Phineas pulled his
Vickers dukes and fought back, won-
dering how an Arab could learn so
much about air fisticuffs.
Once the hostile battle bus hung on its prop, spun like a whirling dervish, and dropped down on the Pinkham neck. "Uh-er--" Phineas gulped. "I onilerked and ano--" Nome-Bear-Jelai Bin! That squareheaded snopper from the Wilmhursts could knock off the real Mad Mullah who had not really been mad at the infidels, I'll bet a Kraut's Lexer the Moslems and getting them ready to go in the wake of this threat.

Lead kepingok at the Camel's torso. It looked like curtains for Phineas, who was not too well acquainted with the habits and moods of a Limey Camel. But then the Hand of Providence reached down, scooped up big handfuls of sand, threw them in the teeth of the wind. And the wind threw them into the glimmers of the hostler piloted and helped Phineas get his soul out of jeopardy.

Then something drove against the Camel's back, the eyelids wedged between a strut and a wire, and something else smashed the Iowan on the pan, bounced off the Camel's instrument board, and fell at the unbeliever's feet.

Major Rufus Garrity's stray flew until his gas gave out. Again the mysterious forces in which Egypt is said to be steeped took the initiative and set Phineas down in the Libyan desert just fifty yards from the Operations tent of another British air squadron. He got out of his office and shivered.

"Ier-don't git it. I-er-didn't lend that crate myself," Phineas mumbled. "I smelled something, and it was not perfume, on the way down. Who told me the Camel was another here? Well, I'll git the knife some other time an'--wha-a-a-a-a? I hope I can find a dome specialist soon, as.

"I say! Are you there-r-r-r-reaw-w-w-w-old chap?"

"H-huh? Well, yes old turnip," Phineas called back. "I-er-hope," something tickled Phineas' chin. He reached up and pulled something out of his collar. In the light of the Egyptian moon he saw that it was a feather. That must be what hit me." Phineas walked back to the Camel, climbed up on a wing, and removed a defunct fowl from the superstructure.

A long piece of dirty cloth dangled from the wing, and there was something tied to its leg. Sleepy-eyed Limey pilots then came to get a look at Phineas. They led him back to the main tent, staring at the thing he carried.

"Boy, sweat, old things," Phineas said. "Don't ask me too much, as I am not myself. This is a hoopoo bird. It carries messages to Garcia. Rigor mortis must set into the bird quick, as it still has this long piece of cloth in its beak. Smells awful, this biddie, and it has only been dead a little while, oui. That s-smell—it is like I smelled when my gas give out—an' I can't find the first train out of Egypt, huh? The knife can stay Th—what knife?"

"Balmy, no end!" the Limey C.O. said, and tapped Phineas on the shoulder. "Fix you up, old chap. Just come with me. Ha! Ha!"

"If I didn't Phineas gulped. "This old rag was picked up in a tomb where there is a mummy. The hoopoo bird does not live in a pen but builds nests in trees. It was goin' to use some of the mummy cloth to line its nest. Some of the men threw it to me. It must be nice for Tom Sohoit to use it."

"Now, now, Leftenant. You are among friends, quiet!" a British pilot said. "Show you to a bunk what? Alf—just humor him until I get a sip of cold old rum, right?"

"Oh, I am half-natty, awright," Phineas admitted, his nerves still humming like plucked harp strings. "But I know what I know," he took a small wad of paper off the defunct fowl's undertaker. There were troops over there looking like a laundry check," Phineas sniffed. "Them Arab bums must have awful big washes. Let me lay down some place, as my dome is filled with butterflies. No wonder the Sphinx was scared dumb!"

An officer led Phineas to a tent and left him there in a hurry. The Boontown miracle man tried to scoop up his marbles and get them in a neat pile. The picture was plain. The hoopoo bird had been flying between El Filla, and Cairo, or other points north. The Arab brass hats were going to have a rendezvous there. They would get their signals all set in a huddle and then go out and jump on the unbelievers who thought that Mullahs and wnissmen had cleared the cart." Blood would flow in Africa, enough of it to irrigate the Sahara. And the Heinies would give the sheiks the double cross and come in and take over. Linden trees would be planted in Cairo and Alexandria and the Kaiser would build himself a winter home there. Herr Doktor Number Seven was wearing a turban and false spinach and his epidermis was stained with walnut juice. In Germany he was a blond, in Cairo he was an Egyptian, in the{-} ummamuland a turbaned Mullah. A rat everywhere. Phineas revved his noggin prop, tried to stop his crockery from rattling out.

LET US now look in on the Headquarters of the Ninth Pursuit Squadron in Bar-le-Duc. In the big room adjoining the Operations Office, Major Garrity, Captain Howell, and Pilot Bump Gillis were chatting.

"I bet the crackpot has found Cleopatra's sparklers," the C. O. said.

"Can't help it," Bump said. "In a pool where there is croc as big as Heinie Gothas," said Howell, "A Flight's boss."

"Imagine him in the Intelligence Corps," Bump Gillis snorted. "It is
MY's hair was the color of a rusty tin can.

"It—is—it is me four thousand years from now," Phineas chocked.

"I'll break you锈 bump, rusty bugger! He sent the bear down the hall and led him up a narrow passage. A series of steps that ended in a small opening in a wall above the tomb. The opening was in the shape of a man. Phineas' frame fitted it nicely.

There was a funny contraption built into one side of the cramped space, and Phineas reached up and yanked a lever.

There came a raucous grating sound like stone rubbing against stone. He let go of the lever and some heavy object outside fell back into place. Phineas, as clumsy as some thick, beefy-looking fellow, backed out of the place. He went down into the tomb and then made his exit from the buried Egyptian hamlet. He sat down on an old slab and tried to stop his teeth from chattering.

"I wish I was back in B-B-Barley's Duck Restaurant. Love to the B-Bump! He-ee-ey, Bump! Shake me—hub?" He got up and started moving around again. He walked toward another hole in the ground and stepped through it. He descended a score of cock-eyed stone steps and landed in a great, grand, black Stone image looked at him. It was the God Ra-Ra. Its eyes were pools of black, and when Phineas stepped close to it, he felt air hit him in the face. He played his flash light on the statue and noted it was equipped with a pair of eyes that could see through right through one of its eyes and squinted its own flyer along the light beam. The thing was hollow and Phineas tumbled to the fact that he had stood inside of this same stone image a few moments before.

"Yikes! Up there in the temple to the public. Pharaoh Pink-Ang-Amen was a kidn. H-H-Haw-w-w-w-w-w-w-w-! I am laughin'! B-but it is no joke, as that still down there—"

Something drew Phineas away from the place and took him out into the sunlight. He dragged him down into the tomb of Pink-Ang-Amen again. In one corner of the place was a lot of old rotting cloth. It was in strips. Phineas guessed that Lord Reachbottom had been unrolling the King to see what kind of spices he had been corred with. Phineas, as he dragged the man kept trying to keep his ticker out of his throat. Strangely enough, his think tank then began hitting on all cylinders. He munched on some chow he had bummed from the R. A. F. pilots and sat steeped in the spell of centuries. Phineas had seen the remains of a torch. And there had been a couple of cigarette stubs on the floor. Both had hardly been smoked—and they had been bent into the form of a crescent! Phineas snapped on his flashlight and placed it on top of an over-turned mummy case. He took his bag of tricks and mummified it immediately.

"Well, I will now go to work," Phineas said shakily. "I will try this harness lightnin' that cost me four bits. If—if you are any relation to me King Pinkie, you'll play ball with me."

The Booniet magician left the tomb. He made his way to the temple again and there he chose an old piece of Egyptian china and filled it with spirits of camphor and wine. He touched a match to the stuff and waited until it was all consumed. Very shortly the entrance to the temple and Phineas was covered with sweat when he finally got out of there. "It is for the Allies!" he cried.

The DAY waned. Phineas crouched in the tomb. He went to sleep for a few hours and woke up with a faint memory of a dream. He took his match and went to the narrow opening in the side of the tomb, walked up the steps back of the God Ra-Ra. He pecked out through its hollow eyes—and then heard sounds that lifted his scalp up and down. Four grim figures entered the temple. One of them spoke in the language of Mohammed. A match flared. Then—

WHO-O-O-O-O-OSH! A blinding flash brought hoarse yells from Arab throats.

"Bismillah!" somebody said and a silencer wound was pulled from a temple. In the flash of light, Phineas had seen the four intruders. They were all garbed in the correct sar- torial ensembles of Moslem brass hats. One of them was unloading a line of jittery lingo. Another seemed to be trying to kid him out of his fright.

After awhile another match was struck and applied to a torch that had been stuck into a crevice in the side of the temple. The Moslems still looked a little gaga. But they finally swung down and began to lay the plans for the mass production torch slashing.

Phineas waited until the time was ripe. He pulled down the lever, and the grating sound rumbled through the silence. Phineas knew that Ra-Ra had its own big stone arm that had at its extremity a certain finger. It seemed to take Ra-Ra half a century to lift that hand to the limit. Somebody then yelled, "Ach-Gott! Himmel! I'd moves, undt—!"

Phineas knew he had not opened his mouth. But he must have, for out of his throat came a rumbling sound. It said: "Infidel!"

The three bona fide Allah supporters opened their mouths until Phineas could see their tonsils. Their nutbrown skin turned white for several seconds. Then three pairs of dark eyes swung toward the turbaned chieftain who had exclaimed in a foreign tongue. One of them, a tall powerful Sheikh, got up and drew a sword as long as a camel's leg. The fake Mad
Mullah did not choose to argue the matter. He drew a Luger from under his long Arab Mother Hubbard and started liquidating Moelms.

"Downtreiter! Something ist kaput!" the turbanned Heinie yelped as he threw lead. Phineus let go of the lever and hot-foot it back down into the tomb. "Well, there will be no Arab uprising." Phineus gulped out. "Ra-Ra! Hit us! The statue King Pink-A-Amken rigged up! Boys, he fooled them bums. H-Haw-w-w-w-w-w-w!"

Phineus did not take any more time to think. He knelt down in the corner of the dingy tomb and beggared himself—pulled a tattered cloth around his head, gluing them in place. He used up all the wrappings until he looked like a mummy from the shoulders up. Then he made his way up to the surface and looked the situation over.

Three Avro two-seaters were ticking not over fifty yards away, great crescents painted on their sides. Two Arab pilots were huddled together playing tick-tack-toe in the sand. Herr Doktor Number Seven, Phineus musings, must have piloted the third crate.

Phineus lifted himself a little, let loose a long moaning sound. Stained faces swung toward the blood curdling sound. In the pale Egyptian moonlight, Phineus must have been a terrible thing to look upon. The pilots yelled bloody murder and headed for the oasis. Phineus got into one Heinie bus and gunned it across the sands.

Out at the entrance to the ruined city of El-Pillah there now bolted the "Mad Mullah" throwing a barrage of rich Teuton oaths. He was in a battle wagon and was getting off the ground before Phineus could get orientated in his own Avro's office.

"Well, I hope my old pals are still with me," thought Phineus, reaching for altitude and pointing the prop toward Tripoli. Baron von Blitzkrieg, alias Herr Doktor Number Seven, alias the Mad Mullah, burned up the ozone in his wake. Spandau slugs began chipping at the Pinkham tail-fin, kept working their way up in the world.

The Heinie kept on coming, and Phineus stopped making a race of it and guessed his luck had reached the end of its rope. His mummy wrappings had not scared von Blitzkrieg. In fact, a slug peeled some of the rotten fabric off the Pinkham neck. The pursuing Avro now got overhead for a dive, and Phineus prayed briefly and tried to duck the downward lunge of the bogus Mac Mullah.

Something went wrong with the Kraut's plans. His crate imitated one of Cleopatra's dancing girls and spun down toward the sandy terra firma. Von Blitzkrieg got the nose of the Avro up just before it smacked El-Pillah. Phineus did not put the Avro down like a man placing a baby back in its crib.

Phineus got downstairs and taxied toward the wreck of the Avro. The Von with the stained pan crawled away from it with his eyes bulging out and yelling bloody murder.

"Why, you are alive," Phineus holstered. "But what is scarin' you?" He got out of the Avro and looked over the other Avro—then saw the thing. It was a snake. And not the kind Phineus used to carry to school in his pocket. It was an Egyptian cobra rearing its ugly head above the crash pad of von Blitzkrieg's ship.

"Why on earth did that get in that crate, huh? And why did you pick on the Mad Mullah's bus? It—it is doin' a dance. Somebody is playing a flute, an'—"

There was a flute playing as over the crest of a great swell in the desert sand there now came a caravan of camels. A driver was putting all he had into the flute he held in his long brown fingers. The cobra kept doing a shimmy. "Now you back into your basket, Antony," Phineus said. "I—I—how did you know your name was?" Phineus' legs buckled him and the dark sky broke up and fell down on top of him.

PHINEAS came to with the taste of cognac on his tongue. "Vive la France—w-w-w-w-w!" Phineus yipped. "Oh, boys, am I glad to get back. Great that Heinie! It is Herr Doktor Number Seven!"

"Everything ees fine, Lieutenant. I am named Yera So. I am Spahi, first class. I have cognac. I hear somewhat talk Germany. We have man tied on moehra!"

"I want to git out of here," Phineus said. "I will meet Cleopatra if I don't. I will go back four thousand years. an' it is too far back. Haw-w-w-w-w! If you see my barge on the Nile, don't tell Antony, as—you how much you want to build a pyramid? It is too much. Phineus alone am a gypsy. I will Gypsy Ra-Ra put a curse on you. An' my great, great, great, ecetera, gran'pa, Pharaoh Pink-A-Amken, will—"

Yera So looked at his comrades. He tapped his noggin with a long index finger. "Cafarde—ts-s-ak! We take

--- THEY ADVERTISE—LET'S PATRONIZE ---

--- FIREWORKS ---

JUST COMING IN FROM YALE UNIVERSITY

100 2-In. Cones Crackers .05
30 Green Flash Salutes .05
50 Flash Light Crackers .15
9 Inﬁnity Salutes .15
300 Lady Crackers .15
9 Electric Flash Salutes .35
10-Ball Roman Candles .35
5 Skyrockets with Stars .25
3 Double Report Sky Bombs .25
4 Inch Sparklers .25
1 Shot Automatic Bomb .25
5 Globo and Derby Crackers .25
41 Airsal Flash Bomb .25
14 Roman Candle Bombs .25
1 Whizbang Thundershells .25
12 Black Python Shakers .25
6 Gerbs .15
2 110-in. Red Torches .15
1 Silver Star Salutes .15
10 Silver Star Salutes .15
100 Spark Flash Crackers .25
60 Roman Candles .25
10 Flash Light Crackers .25
12 Pieces of Pompom .25
100 Fort McHenry Salutes FREE

Total Retail Value $6.55

$6.55 WORTH FOR ONLY $2.95

--- CASH WITH ORDER ---

TOTAL VALUE $3.60

--- 30 CENTS SAVINGS ---

--- FOR YOURS — COMPARE OUR PRICES ---

100 Ft. McHenry Salutes WITH EVERY ORDER $1.00 or more

FREE 100 FT. McHENRY SALUTES

BENJAMIN AIR PISTOL WITH HAND PUMP

Over 7,000 GHQ Gas Engine Kits were sold at $8.50. Over 15,000 sold last year. Now is your chance to buy the New Improved Kit for $4.95. Absolutely complete with coil, plug, gas tank, etc. Send only $1. Shipped Express. Collect for balance same day.

REAL ENGINE VALUE

Now only $4.95

--- FOR PREPARE—EASY GAME—CAMPING—ETC. ---

$4.95

Basic unit of the same tried and true design as the GHQ Diesel Model. A neat and compact form of the well-known internal combustion engine. Absolutely complete, ready for immediate operation, including all necessary fuels, controls, accessories, etc. The Perfect Exotic Toy and Educational Tool.

Send for Free Catalog of our complete line of toys and novelties. Write today for complete specifications and free GHQ Catalog.

For Further Information Address:

BENJAMIN AIR PISTOL CO., 505 5th Ave., New York, N.Y.

--- ALL PLANS FINISHED AND GUARANTEED ---

--- ALL MACHINE DONE ---

No Mechanical Knowledge Required.

1/5 Horsepower

For Model Planes, Boats, Mobile Cars.

Average assembly time 30 minutes.

ONLY A SCREW DRIVER NEEDED

Dealers Wanted

20-Page Illustrated Catalog, 6c

G.H.Q. MOTORS, 40F East 21st, New York
sky Lieutenant to the Spahi tents."

The word finally hit Cairo. It skidded across the Mediterranean to Marseille and thence to Paris. Down in St. Denis, its mission would not be believed until they received proof that von Blitzkrieg, alias Herr Doktor et cetera, was actually in a klink in Alexandria. He confessed to the murder of the real Jalibini and begged his captors to let him know the name of the man who had kicked over the Potsdam apple wagon in Africa.

"Leutnant Pinkham," he was told.

"Too bad, Herr Doktor. If the Leutnant had not gone looking for a knife he had misplaced four thousand years ago..."

"Take me out of Egypt, ja! Das Pingsheim, he ist nodt human. I haff interviewed and hired thousands of trained men—women, too—for all types of aircraft work. And he has selected and supervised the training of many additional thousands of inexperienced persons who were required to maintain a properly balanced organization. Here, then, is the man who through experience is competent to advise you on getting a job in aviation.

In his book, Mr. Mattoon has certainly gone to great lengths to explain how to go about getting a job in aviation. He digs into the subject in a series of highly interesting chapters which include details on commercial aviation, apprentice training, radio and meteorology, selecting a school, and salesmanship. He also considers the art of applying for a job.

The only frightening thing about the book is the inclusion of an application blank sent out by American Airlines to those who wish to apply for a position. To our way of thinking, filling out this application looks like a profession in itself. It's so elaborate that you can't help feeling that any chap who completes it, line for line, deserves no less than a vice-presidency. But when your turn comes, the thing is to take it coolly. Don't let it throw you.

Mr. Mattoon helps you a lot. He gives names, addresses, references, and advice. And considering that this little book costs but $1.50 a copy, it should be in the hands of every young man who's really interested in getting into the great old air game.

The book is published by Foster & Stewart, 77 Swan Street, Buffalo, N. Y. You can order it direct from them or obtain it through your local bookseller.

Now we come to Elementary Airplane Structural Analysis by Graphic Methods—-which we admit may sound like pretty deep stuff to a lot of you. But again we say don't let it scare you.

As we said before, the author, James P. Eames, is an aero engineer, so what he offers is right out of the shop, as the saying goes. We might add that he is the writer of a slew of aviation magazine articles, a couple of which have been published in FLYING ACES. Moreover, he is a close friend and collaborator of Willis L. Nye, another noted author of this type of book and the drafter of several F. A. model three-views.

Anyway, once you get into Eames' book, you will see the problems of aviation design and structure in a very clear light. Eames writes simply and explains thoroughly, the result being a very valuable volume. Graphic drawings, well-drafted and logically presented, offer a picture of aircraft construction that fills the bill for those who are out to learn.

The chapters include fuselage structural analysis, wing truss structural studies, stagger loads, general construction requirements, and wooden airplane members. The accompanying text offers plenty of clarified explanations to go with it.

We think this work should go especially well in the hands of advanced students and young draftsmen, or of those who intend to make aircraft work their profession. The publishers—The Aviation Press, 580 Market Street, San Francisco, Calif.—will forward the volume to you postpaid for $3.00. Or your own bookseller will order it for you. Can we say more?

On the Light Plane Tarmac (Continued from page 25)

jumped to 25 percent, instead of a measly 5 or 7 percent. And FLYING ACES is with them on that!

But let's explain how those 700 are getting their training: Through colleges in 70 communities (none of which are true metropolitan centers, by the way) a flock of candidates have entered on a ground course of 72 hours, paying approximately ten dollars each for fees, books, and the like. At the close of the ground training, which is running to completion in most of the locations as we go to press, just 10 of the highest rating students—nine men and one girl—will be chosen in each of the 70 communities to go on into the flight course, costing them each another $30. Thirty-five to 50 hours of flight training is called for.

How can you get in on that? Well, you must first write to the Director of the Civilian Pilot Training Program, CAA, Washington, D.C., and ask for full details. Please do not write to FLYING ACES—for it's Washington that has the literature on it for you.

In any event, you must realize that it'll be tough competing against so many for so few flight-course openings. The only real hope is a healthy boost in the non-collegian percentage.

RAY TRIES THE HARD WAY

THIS MONTH'S best letter is another of those uplift messages that reflects a lad's fine determination and brings a cheer to our lips. It's the old story of another young chap trying to learn to fly—the hard way. And if our two bucks for his letter helps him out, we feel swell about doing him a little good. Sort of our Air Scout good deed for the month.

The letter comes from Ray McPherson. He lives in Washington, D.C., now—and to that point hangs part of the story. Anyway, here's Ray's narrative now, and if you don't think it's worth two bucks, you're welcome to chip in and try to do better—

Light Plane Editor:

In your March issue of FLYING ACES I read Bob Schmidt's account of his first taste of flying. Having had a similar experience, I thought perhaps my story would interest the
aviation gang that reads your mag.

Like Bob, the first time I went up it
was simply a joy ride. The plane was an
Aeronea ‘39 with a Continental-65
in her nose. It was equipped with
floats and owned by Glenn V. Clark of
Charleston, W. Va.

Well, after flying around a while, the
pilot started to glide down for a
landing—and he leaned over to me and
asked me if I would like to glide for
her for a short distance.

I was sort of dumbfounded, and
for a minute all I could do was to
stare at him. Finally, though, it
dawned on me that I’d heard him
right, so I took the controls gingerly
and asked her. Maybe it was lucky,
but I did glide her straight, too.

After we landed, I sure had the bug.
I pilled out and tore home for
more money. The next day I went
again, also the day after that. My
folks couldn’t understand what
the matter with me. Why, I actually
went out and got a job to earn what
it took!

Then one Monday after school, I
tripbartly marched onto the float
and went up for twenty minutes of
real instruction! And then it was a
continual flight for money to fly.

However, before I got a chance to
soo, disaster overtook me—we moved to
Washington, D.C. Now I haven’t
a job, and consequently there’s no
flying. But it always looks darkest
just before the dawn—and before
many more moons I’m going to sooo or
bust trying!

RAY MCOPHERSON
Washington, D.C.

Well, as you say, Ray, it always
looks darkest right before the first
dawn. So our little check for two
dollars is on its way to help add a splash
of light somewhere. We hope it
sparks you to another start again
soon. Yes Sir!

Is the Red Air Menace Exploded?

(Continued from page 9)

worry very much about its chances
against the Red Air Force at this
time.

Indeed, nothing Stalin put up in the
sky against Finland indicates that
his air arm rates any better than
eighth or ninth on this man’s planet.
And the poor quality of the Red aero
personnel might put the rating even
dearer down the list. It is now evi-
dent that Stalin has been decisive-
ly stronger in propaganda power than
in air power. Too much of his sky
strength has been on paper instead
of on the runway.

Another payoff was the firing by
Stalin of Mikhail Kaganovitch from
his job as Commissar of Aviation.

Things like that don’t happen when
everything is going smoothly. And
we don’t have to tell you that plenty
of other Red aero leaders have long
been missing from their usual Mos-
cow and Leningrad haunts. And
perhaps the most striking fact of all is
that Russia’s premier aircraft de-
signer is a man who developed all
the A.N.T. craft—is also reported by
authoritative sources to be minus his
job.

Yes, the terrifying winged bogey of
the Soviet has lost its ability to
frighten the daylight out of every-
body—and it was little Finland that
pulled the white sheet off it and
proved it to be 90 per cent bark
instead of bite.

Going back to our cover painting
it may be pointed out that the Soviet
Z.K.B.19 there depicted is termed
Russia’s best sky fighter. It carries a
fixed 20 mm. air cannon plus four
machine guns in the wings.

It mounts, paradoxically, a French-type
Hispano-Suiza engine enabling it to
do 400 M.P.H.

The Bristol Blenheim, from whose
fuselage turret the Finn gunner is
shown firing, is one of the lot sup-
plied to Finland by Britain, and we
believe this plane is now well known
to our readers.

The Finnish aero insignia, by the
way, is shown on the wing of the
Blenheim up in the right corner. It
is a light blue swastika on a white
circle. Latvia also employs a swas-
tika insignia, so you see this device
is not monopolized by the Nazis.

As a matter of fact, the swastika de-
sign may be traced back to ancient
Persia, and our own American
Indians likewise worked it into their
tribal patterns.

Happy Landings

(Continued from page 23)

livered to the British. Most of them
were pushed across the border into
Canada. Only a handful have, at
this writing, reached Britain proper.
The same goes for the North American
trainers. Meanwhile, France has a
few Curtiss 75A’s, several Douglas
dbombers, and one or two new Martins.

Another feature has been the
orders placed since the original Lock-
heed and N. A. orders were only
optional orders. Not real orders at all.
Late last December, the story
goes, the Allied purchasing mission
laid out a tentative plan to standard-
ize purchases of American planes, but
the program failed to get the approval
of the Allied Supreme War Council,
and so the options have lapsed.

What we can’t make out is whether
the Allies are really buying a big
flock of planes here—or whether all
this talk about tremendous back-log,
gigantic orders, and vast shipments
of planes is just so much oil, perhaps
gasoline for someone to make a stock
market killing on trumped up sales which,
like the proverbial little man, aren’t

THE TIGER SHARK
World’s Fastest Glider
Build and Fly this
extraordinary new "G" Line Controlled Speed Dive-Plane
Speeds up to 76 M.P.H. Send for Illustrated D.J.

--- THEY ADVERTISE—LET’S PATRONIZE ---
BUYERS’ DIRECTORY
Airplanes and Accessories, Schools—
Flying Instruction
$5 per month—Payable in Advance

APPROPRIATE TRAINING
Al-Qaeda young men interested in
flying for the military will find
work immediately,Cdr. P. A. Pantages,
Mechanics Universal Aviation Service Co.,
Wayne County Airport, Box 387, Dept. K,
Detroit, Michigan.

PATENT ATTORNEY
Send a Sketch or Model of your invention for
CONFIDENTIAL ADVICE FREE
NAME.
ADDRESS.

AVIATION
AVIATION APPRENTICES—Alamsted. Young Men in
interested in training for flying as Apprentices.
For information apply Cdr. P. A. Pantages,
Wells, Michigan.

GRADUATE AIRPLANE MECHANIC—Ten weeks’ home
training. Immediate employment. Write for full
information.
American Aviation, 628, Dundie, Illinois.

NEW, CLEVER TIME AND MONEY SAVER
HANDY-SHINE $1.00
The economy outfit for the fastidious. Com-
plete shoe-shine unit only.
STUBS! Your shoes are attached!
Polish Up When Not Needed!
Perfect for Home, Locker, School, Dock. Every
Man must have it!

6 PC. OUTFIT
Folding foot-rest,
Quality Shoe Brush; 2
small polish (black &
tan) 2 polish dusters.
Send $1 for all post-
paid.

YANKEE HOUSEWARE SPECIALTIES
2577 4th Avenue, New York, N. Y.

Build the COMET ZIPPER, JR.
RUBBER-POWERED
But it looks and flies like a GAS MODEL!
Scale down from the champion Comet Zipper,
Designed by Cdr. P. A. Pantages, finished cylinder; best landing gear; finished propeller; finished wings; $2" spiral wing; amusingly complete kit. Ask for Kit No. PA-81, postpaid 8c, none of
ordered from dealer.

COMET MODEL AIRPLANE & SUPPLY CO.
120 W. 25th St., Chicago, Ill., Dept. R-868 Broadway, New York.

—THEY ADVERTISE—LET’S PATRONIZE—

FLYING ACES
JUNE, 1940

The paper only to the edges, spray
again, and apply two or three coats
of dope. The fuselage is covered
with silk, and this, as well as the exposed
wood parts, is painted silver.

Fighting the Model
In all test flights, the ship should be
right. A bladed prop should be used. By
clamping the prop to the crankshaft
in the right position, it will be possi-
able to get the weighted end point-
ing down when the engine stops. This
prevents any damage to the engine
in landings. A two bladed prop, how-
ever, may be used in contest flying.

To fly "Mike" have an assistant
hold the plane while you start the en-
line. When the plants starts, pull out
the wheel and set the model on the
ground with the engine still running.
Set the timer for the desired motor
run, and let the model take off, guid-
ing it by the wing tip.

In landing, the protruding wheel
takes the shock. Occasionally, in a
more severe landing, the motor unit
may pull out. This is okay, though,
for it can be slipped into place again.
The idea of holding the nose of the
ship in with rubber bands reduces the
chances of injury occurring to the
engine, as well as allowing the regu-
laration of the motor from the rest of
plane.

That's all. She's now yours, boys!

“Mike” Gas Model
(Continued from page 45)

Pelecan’s “Paragon”
(Continued from page 37)

just being made through offset-
ting the propeller. As more and more
turns are given on successive flights,
the craft may tend to bank to the
right, starting a spiral dive. Do not
allow the plane flying until the wing
has been warped for a left bank.
(When viewed from the rear, the
right wing should have more inci-
dence than the left.)

Now, under full winds, the “Para-
gon” should bank to the left when
climbing in right hand circles.
In any case, do not give the ship full winds
immediately after warping the wing
or tail surfaces.

Adjustments should always be fol-
lowed by flights of few turns, gradu-
ally increased until full turns are
“packed in” with a winder. The rea-
son for this is that you don’t know
for sure how the model will behave
under new adjustments — so it is best
to work from scratch.

In some cases the model may tend
to stall under power, hanging on its
propeller at a high angle and not
gaining altitude as it should. This
is best remedied by giving the aircrew
a little right thrust, tightening up

the circle under power, and eliminat-
ing the stall.

Under correct adjustments, the
“Paragon” should perform as fol-
lows:

The climb should be fast, in a tight
right-hand circle, with the model
leaning to the left. As the motor un-
winds, the climb should decrease un-
til the model starts to glide with a
free-wheel, and then stall in the motor. The craft
slows down when the propeller starts
to free-wheel, and it should then
glide without banking to either side.

The reason for the level attitude is:
if the model banks to either side
slightly in the glide, it is really in a
side-slip that lasts during all the
gliding time. As you know, a side-slip is used to lose altitude when a large
ship comes in for a landing, so get a
long distance away from your model
while it is flying and see if it is lean-
ing to either side.

Well, if your “Paragon” gets into
an argument with a thermal, you had
better hop onto your bike or into
your car, and give chase. You know,
she won’t stay in sight very long
if you stand there mouth agape!
IN THE VERRY CENTER AND A VERY IMPORTANT PART OF SOUTHERN CALIFORNIA'S GREAT AIRCRAFT INDUSTRY IS LOCATED CURTISS-WRIGHT TECHNICAL INSTITUTE.

Established in 1929, in twelve years this famous school has come to be recognized as the nation's leading institution in the training of Aeronautical Engineers and Master Mechanics. Mr. Donald Douglas, President of the great Douglas Aircraft Company, chose this school for his own son's training which pointedly indicates the high standing this school has attained in the aircraft industry.

You who plan to invest in a course of career training to prepare yourself for the future, must determine in advance what the return will be on your investment before you put cash on the line. This is imperative since your choice of a school in which to take your training will determine how much money you will make all the rest of your life. Your whole future in aviation depends on your training.

Curtiss-Wright Tech's career training is carefully designed to do just one thing — TO MAKE MORE MONEY FOR YOU upon graduation you can be independent and self-supporting for life. For years our hundreds of successful graduates have proven that Curtiss-Wright Tech training gets results and always pays. It has provided them with a profitable occupation and secure future since it trained them in advance for the highest position they could ever expect to occupy. It can do the same for you.

Aviation needs trained men. They are in demand and at a premium. Advancements for them are rapid, especially here in Southern California where there are over $234,000,000 in unfilled aircraft orders on hand and where over fifty per cent of all aircraft manufactured in the United States is made. You can get in on the ground floor by training now. BUT you must choose the right school for your training.

Our graduates are obtaining immediate employment and the demand for them far exceeds the supply. We honestly believe that every student who enrolls here will be able to obtain, with our assistance, immediate employment upon graduation. This school has never guaranteed or promised positions for its graduates, but practically every graduate has obtained immediate employment, and all are advancing steadily.

WARNING: "Don't miss the boat." The greatest opportunity of your lifetime exists today! There never was such an opportunity in aviation for you; there may never be another. A position awaits you. Insure for yourself a steady income and independence for life. Send in your enrollment today, before you "miss the boat."

CURTISS-WRIGHT TECHNICAL INSTITUTE
GRAND CENTRAL AIR TERMINAL - 1227 AIRWAY - GLENDALE (LOS ANGELES) CALIFORNIA
UNDER PERSONAL SUPERVISION OF MAJOR C. C. MOSELEY, OWNER, SINCE ITS ESTABLISHMENT IN 1929
Contractor to the U. S. Army Air Corps

OFFERING SPECIALIZED AND PROVEN TRAINING IN
AERONAUTICAL ENGINEERING
AND
MASTER MECHANICS

THIS TOWER OVERLOOKS AVIATION'S MOST Distinguished SCHOOL OF AERONAUTICS

Without cost or obligation send me full information and catalog on the course checked below.

Major Career Courses

- AERONAUTICAL ENGINEERING
- MASTER AVIATION MECHANIC

Supplementary Courses

- POST GRADUATE ENGINEERING
- AIRCRAFT SHEET METAL
- AERONAUTICAL DRAFTING
- BLUE PRINT READING

Home Study Courses

NAME ____________________________ AGE ________ DATE I PLAN TO ENROLL ____________
ADDRESS ____________________________ CITY ________ STATE _____

DON'T "MISS THE BOAT" — MAIL THIS HANDY COUPON TODAY
CHAMPIONS EVERYWHERE

BERKELEY
MODELS
LEAD THE WAY

Henry STRUCK'S
FLYING CLOUD
FOLDING PROPELLER CONTEST ENDURANCE MODEL
Price $1.00 Complete (less rubber) At Your Dealer, 10c extra by mail

The Flying Cloud is a winning contest endurance model for Wadefield and Moffett International championship competitions.

190 SQ. INCH WING AREA
Flying Cloud is now available to you after having been subjected to one of the most rigid tests. Twenty-three test models were built before the Flying Cloud, wonder of the air, was offered to you. Buy her, build her, wind her up, fly her, and You'll be filled with joy. The rubber band motor on the powerful, streamlined body is wound up to new heights. When the rubber band motor breaks, the powerful body straightens into the fuselage. This gives the flyer extra resistance giving you valuable extra output, flying minutes in the air. No wonder she is hailed as the plane of the year. She is the result of years of consistent experimentation. 1940 champion... the Flying Cloud is the plane with the most success in five years of consistent competition. Henry Struck turned in a record also, having built the Flying Cloud's first flight, disapplying to thecloud... thus giving the plane its ability to fly for one minute on a single tank of gas. She is a true flying model.

VULTEE VANGUARD
28' WINGSPAN
The 400 m.p.h. interceptor fighter that will leave terror in the heart of any adversary. Powered by a new mystery 1600 H.P., radial engine the model is such a faithful replica of the original that you won't believe it possible in a dollar kit. Look at those sleek lines; that wide landing gear; that big spinner. Kit is 100% complete with cement, clear dope, colored dope, wire braced landing gear, detailed plans and instructions.

AMERICAN BELGIAN
BREWSTER FIGHTER
24' WINGSPAN
Here it is! A great ship that is turning in a marvelous performance for our aircraft carriers. A real 462 m.p.h. fighter that is really one of the most deadly fighters in the air today. This kit includes a turned balsa cowling. Kit features cement, clear dope, colored dope, wire braced landing gear, both Finnish and American insignia and typical BERKELEY construction.

MESSERSCHMITT INTERCEPTOR FIGHTER
27' WINGSPAN
No authority on International armament can overlook this ship that broke all existing land speed records at 392 m.p.h. The kit includes everything to build the model as pictured, with the exclusive features of balsa covered leading edges, "semi-planked" fuselage and wire reinforced landing gear. Colors: Silver and Yellow. Complete Kit.

BERKELEY
MODEL SUPPLY CO.
FIRST IN GAS MODELS
230 STEUBEN ST., B’KLYN, N.Y.
DEPT. F6

CATALOG
5c
BERKELEY Catalog today. Send 5c to top Berkley Model Supply Co.

BERKELEY
28' WINGSPAN
U.S. ARMY CURTISS P-40
America's newest, most modern demon of the skies. Powered with a 1300 H.P. chemically cooled Motor and bristling with machine guns, this ship is capable of defending our shores from invaders, in any form. The model has the sleek lines and beauty of her prototype. It is hardy possible to realize that such a monster could be so easily built. Berkeley's exclusive type of construction makes this possible. Balsa covered leading edges, "Gas model type" wire landing gear, and "semi-planked" fuselage make it a crash-proof model.

Colors: Silver and Yellow. Complete Kit.