

Pilotless Fighter Plane

Guided missiles made of fabric and steel can intercept the jet-powered enemy bombers of the future. Here's a convincing argument that machines are about to outdistance us mortals

SIMPLY take the components," the owlsh-looking aeronautical engineer said, "and put them together. We have them now. We have parts of the V-1 and parts of the V-2 plus parts of our own experimental gadgets. We have the proximity fuse. We have radar. We have the turbojet engine. We even have a new fuel for it. Put them together; put the components together"—he paused—"and you have your new kind of air war."

So I put the components together—on paper—and here is what I came up with. It may be the fighter plane of tomorrow.

This plane is about 12 feet long, just the length of your automobile. Its fuselage is startlingly slim and its fragile wings have a peculiar, uplifted tilt much like those of a dragonfly skimming across a pond.

It doesn't need a concrete runway, but takes off from a kind of railroad track which can be laid down anywhere in a few hours. Since it carries no pilot, the little ship needs none of the equipment a pilot needs today: a cockpit, for instance. Or oxygen paraphernalia. Or a radio transmitter. Or maps or navigation devices. It carries no guns, no bombs, no rockets. It has no armament. The only metal in the ship is in the nose, in the engine and on the leading edges of the wings. All the rest is fabric.

A man seated in a control tower half a mile away from the railway track pokes at some switches in front of him. The turbojet engine in the little plane responds, turning over steadily faster until it is howling in the characteristic wail of the jet. Suddenly, because it is so lightly loaded, the plane starts screaming down the track and is airborne. As it leaves the ground it automatically jettisons its wheels.

Still guided by the man in the tower, the plane speeds up to and beyond the pace of sound. But even while it is hitting better than 700 miles per hour, it doesn't turn and veer in the manner of piloted aircraft. It flies straight for its target, the enemy bomber coming in at 38,000 feet which was spotted by ground radar.

Two miles from the bomber, the little plane takes over control of its own direction by means of a tiny radar set in its nose. It automatically chokes off the signals coming from the ground, where a small light on an instrument panel tells the tower the little ship has found its target.

From that moment the bomber acts like a gigantic, irresistible magnet and thus becomes the agent of its own destruction.

The bomber, of course, is radar-equipped, too. But the fighter is so tiny it is difficult to detect. It comes so fast that it is little more than a minuscule blur on the enemy ship's radar screen. Moreover, the bomber's crew is baffled because the fighter's radar sends out a mass of confusing, fake radar

We already have all the necessary components for a pilotless fighter—rockets, turbojet engines, radar, special fuels and proximity fuses. All our experts have to do now is fit the parts together



Collier's for October 29, 1949

of Tomorrow

By SAM BOAL



ILLUSTRATED BY BIRNEY LETTICK

signals concerning both its position and its size. The bomber boys have no idea whether they're being attacked by one plane or 100.

About 100 feet from the bomber the little fighter ends its own brief and violent life by exploding a 500-pound charge of gunpowder in its nose. The trick is done by a proximity fuse, a simple gadget set in advance to go off at that distance. Theoretically at least, the explosion takes place close enough to disintegrate the bomber. A wing crumbles off, perhaps. Or the fuselage cracks open. Or the tail assembly is wrenched loose.

If the bomber can get the fighter in its cannon or rocket sights, it may be able to shoot it out of the air. This is difficult because of the fighter's size and phenomenal speed. If a shell hits the fighter's engine or brainlike radar, the tiny attacker would be effectively stopped. On the other hand, the shell may somehow explode the fighter's dynamite charge with the same effect as if the proximity fuse did the job.

What happens to the crew of the bomber if the fighter explodes almost under their noses?

Dilemmas of the Man Who Bails Out

A man who survives the explosion will find himself—at 35,000 feet—in a deep freeze 67 degrees below zero. He will doubtless be wearing an electrically heated suit, but once he leaves the plane he has no electricity. If he is foolish enough to open his parachute at that height (and not to open it takes heroic self-control) it will take him about 22 minutes to reach the earth. By this time he may be frozen to death, or suffocated since the oxygen in his bail-out bottle lasts only nine minutes.

Let us assume a crew member manages to stay with part of the bomber after the breakup. After he loses the momentum of the speed of the ship, he has approximately three minutes to free himself from the bomber splinter before it hits the earth. Unfortunately, as his splinter falls it will be twisting, spinning, lurching, swaying.

The foregoing account of what may happen in tomorrow's war is not set down as a scare piece. The speeds involved, the temperatures to be faced, the probable stresses—all of these are precise facts. The only margin of possible error lies in the way the components are put together.

It would appear that the fighter pilot's sun is setting. Indeed, some aircraft designers think the fighter pilot will be completely unnecessary within six or seven years. This has been said before, it is true, and we still have fighter pilots. But now completely automatic planes can be made, which wasn't so before.

"About all a fighter pilot does these days," one morose combat flier told me, "is to monitor the equipment on his instrument panel."

What has happened is that we are now capable of making superplanes. We aren't yet capable of making superpilots. The machine has almost outdistanced the man. Some present-day experimental planes can actually fly faster than some World War II rockets. This is a mountainous achievement, but in terms of air warfare and aerial gunnery the problems it poses seem almost insuperable.

There are several ways for one plane to down another. One is to outmaneuver, either through greater skill or better equipment, and so quite literally drive it into the ground. This is the trick the British Spitfire boys used (*Continued on page 55*)

The robot craft will be steered toward the enemy bomber from the ground. Two miles from its goal, radar controls in the nose will take over (above) and unerringly carry its explosives to the target

Decorator's Helper

A new glimpse into the eccentric home life of the McCoy's, with Joe the Cat and Vincent the Monkey showing extraordinary bravery under enemy fire



By RICHARD STERN

HONOR DEWITT has just finished redoing her house," Lucas McCoy said to her husband, Tim. They sat in their pleasant bedroom, which also did very well as a sitting room. Lucas sat on the bed against propped-up pillows; Tim sat in a big easy chair, and both were sipping highballs. Lucas hoped her remark sounded casual.

Tim had kicked off one of his shoes and was wriggling his toes. He must have regarded the remark as casual, for he didn't trouble to answer, but merely smiled in her direction with abstracted benevolence. The remark wasn't intended to be *that* casual, and Lucas tried again. "I saw Honor DeWitt this morning," she said. "Just ran into her by accident downtown."

"That must have been nice," said Tim vaguely. Then abruptly he asked, "Don't you think we ought to take a vacation—go away somewhere? I'm entitled to a week, you know, even though I had all that time during the summer. Sort of a bonus, because I am so brilliant and indispensable."

For the moment, Lucas thought, it would be wiser not to be sidetracked. "Honor has redone her house completely," Lucas said. "Floors—walls—wallpaper."

Tim also refused to be sidetracked. "We could take the baby with us, if you like. Or leave him here with the nurse, so it could be a vacation for you too. You've been tied down a lot since he came."

Lucas' eyes grew soft at the mention of young

Thomas, whose age could be reckoned in months and very few of those.

"I don't need a vacation from Thomas," she said. "And he's really why I think the house ought to be done over, Tim. So bad for a child to grow up in an uncongenial atmosphere."

Tim stared. "Uncongenial? Has Thomas been complaining about the wallpaper? Last time I saw him all he did was bubble and make assorted odd noises."

Lucas said coldly, "It's no use trying to make a joke of this, Tim." She sipped her highball, and Tim gulped his. The conversation had got out of hand, and Tim could think of no way to bring it back to the subject of a vacation without seeming to be an unnatural father.

Lucas was bothered by no such nice scruples. "The house does look grubby, Tim," she said. "And Honor says she's found the most marvelous man. Not expensive at all. And he's a character, Tim. Honor says we'll just love him."

Tim parted his lips—a futile movement since Lucas was now thoroughly warmed up. "Honor had such a wonderful idea." She sprang from the bed and opened a closet door. "We went together to a little place—" She backed out of the closet, carrying a large, long package, which she laid on the bed.

"This place has wallpaper at such bargains, Tim," Lucas said. "Some at *ten cents* a roll!" She opened

the package and turned from the bed brandishing a roll of paper. She spread it on the floor. It was yellow, and had green figures of small Oriental men, dancing, climbing trees, fishing, and performing all manner of unlikely activities.

Tim held his glass in both hands and leaned forward. "Was *that* ten cents?" he asked.

"Well—" Lucas began to roll up the paper. "After all, this is an original design. It was only three dollars a roll," Lucas said defiantly. She caressed the paper, which Tim eyed without enthusiasm. Cut the price by one third—Tim thought—and it would still be exorbitant.

There was a tremble in Lucas' voice now. "You just don't care," she said. "You just don't understand. I want to be proud of our house. I want it to look bright and happy for the baby—" She stopped there, because the tremble was uncontrollable. Tears stood in her eyes; emotion came easily to Lucas.

Tim spread his hands in a submissive gesture. "Look," he said. "I just asked. Good Lord, I didn't mean to cause any trouble." He looked gloomily into his highball.

Lucas smiled through the tears, bravely; she was always brave when she was winning. "It's all right, Tim, I'm sorry." She laid the roll on the bed. "We'll forget all about it."

"Now, let's not be hasty," Tim said. "After all, you run the house, and—" He stopped, won-

Collier's for October 29, 1949