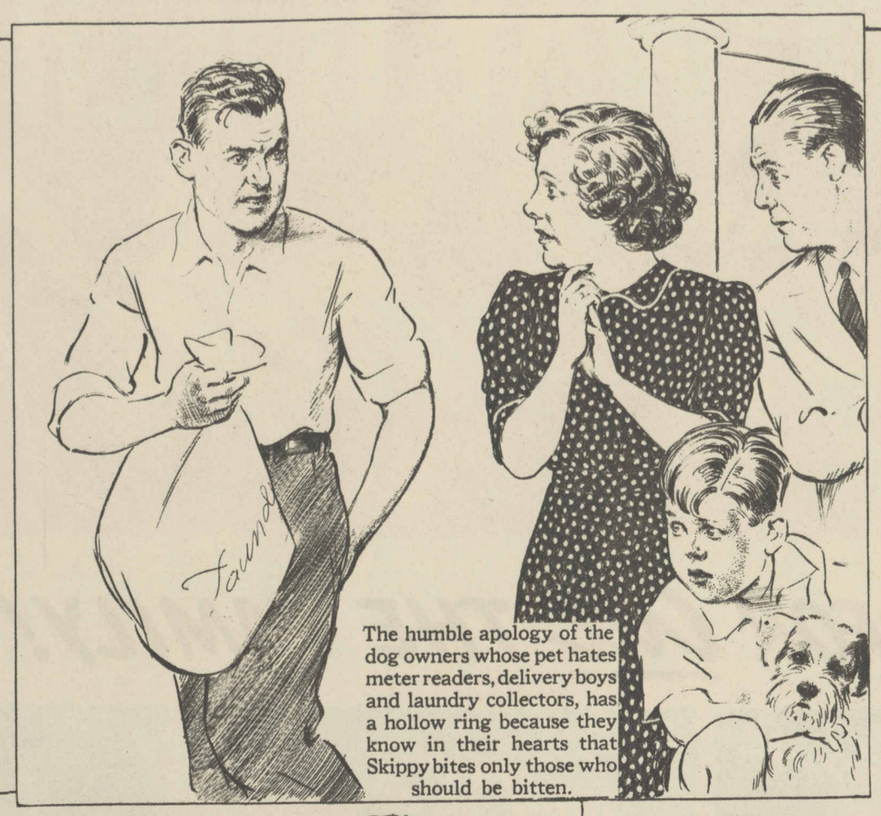
THE APOLOGIZERS

By W. E. Hill



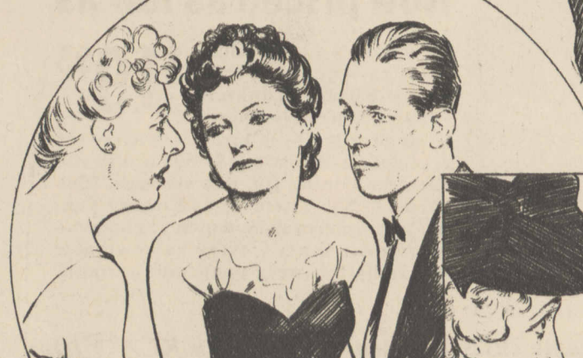
The humble apology of the dog owners whose pet hates meter readers, delivery boys and laundry collectors, has a hollow ring because they know in their hearts that Skippy bites only those who should be bitten.

"I hope you'll pardon my forgetting your name, Mrs. Elmslee. I remembered that wet day I met you, the moment I saw your face, but your name escaped me." (Just one of those bungling apologizers who puts his foot in it.)

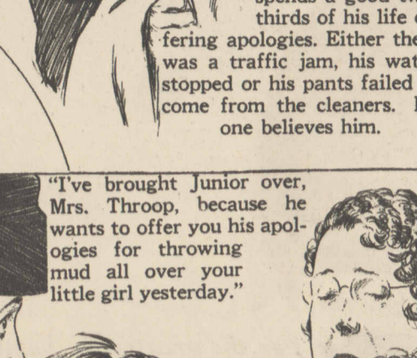
There's no telling how much time and energy Virginia uses up apologizing for her hair, which she just can't do a thing with on account of something or other. Damp weather, dry ditto, or a shampoo, maybe. And people don't like her hair one bit better for all her apologizing.

Mary wastes a page of her letter to Aunt Susan apologizing for not writing sooner, for her spelling, her penmanship, and for writing a dull letter. Then she will add a P. S. apologizing for not being able to think of any news.

Lovely girl motorist apologizing to traffic cop for going the wrong way up a one-way street, not heeding a red light, and other trifles, but Officer Dooley won't accept the apology.



The snippy girls who step all over some one getting out of a bus and murmur, "Sorry."



The young man with the defective time sense never gets places on time and spends a good two-thirds of his life offering apologies. Either there was a traffic jam, his watch stopped or his pants failed to come from the cleaners. No one believes him.

Apologetic hostess. Hopes Mr. and Mrs. Hogan will pardon the looks of her dress, which is too horrible; the dinner, which was too awful, and the other guests, who were too dull for words!

"I've brought Junior over, Mrs. Throop, because he wants to offer you his apologies for throwing mud all over your little girl yesterday."

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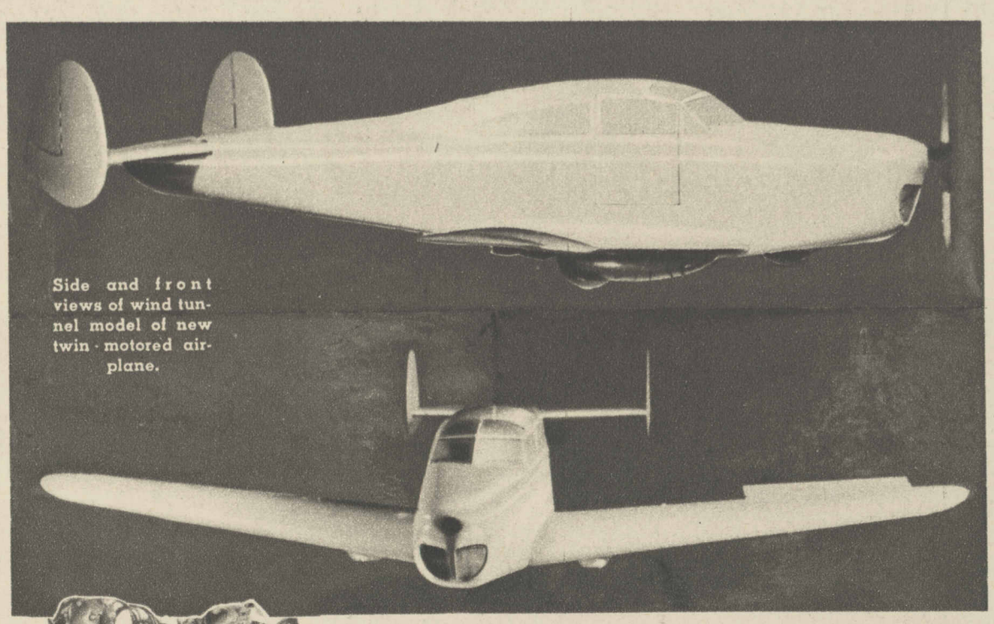
"Siamese" Twin-Motor Plane

Two Engines Turn One Propeller

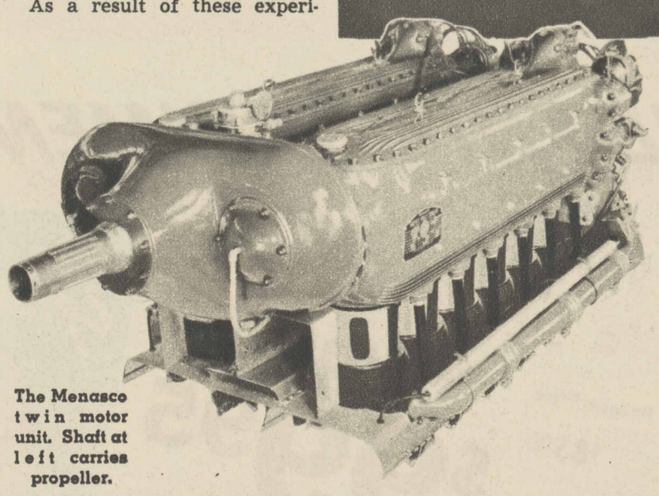
By WAYNE THOMIS



Side and front views of wind tunnel model of new twin-motored airplane.

EXPERIMENTS in gearing two engines to a single propeller have been conducted for years by various governmental and private groups here and abroad. And within recent months engineers of the Menasco Manufacturing company have been successful in building a twin motor that embodies a practical application of the principle that has passed exhaustive ground and flight tests.

As a result of these experiments the Vega Airplane company has been formed at Burbank, Cal., as a subsidiary of the Lockheed Aircraft corporation. The new company already has under construction a new type of medium-sized airplane that may be used as a feeder airliner or an executive type private ship. This new plane is to be equipped with one of the Menasco twin engines turning a single tractor propeller.



The Menasco twin motor unit. Shaft at left carries propeller.

The gearing of the engines is, of course, the heart of the matter. And more than three years of effort by Al Menasco, president of the engine company, and his associates were necessary before a satisfactory solution to the problems inherent in this installation was found.

For instance, it was necessary to design the gears so that the engines would not have to be perfectly synchronized. In other words, the gearing was designed so that one motor could be run at wide-open throttle and the other at only partial throttle, yet the power generated by each would be combined and transmitted to the propeller.

It also was essential that in case one engine failed the second engine would not have to turn against the inertia of the first. The Menasco engineers finally were successful by using a constant-speed propeller and embodying in their gearing certain overrunning clutches. The gearing unit operates on the same principle as the overdrive installation in modern automobiles.

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"With this arrangement," says Menasco, who has developed his small in-line air-cooled engines until they are universally regarded as the best in small-power racing aero motors, "it is apparent that it is not necessary to synchronize the engines closely. They will continue to run at the same speed even though the power output of one may be exceeding that of the other."

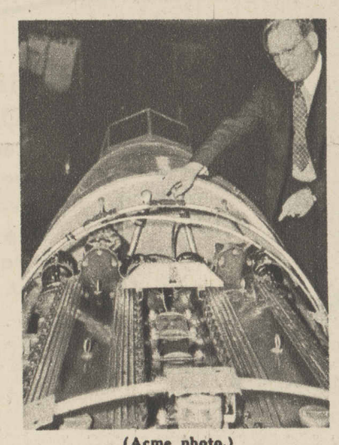
Advantages of the coupling arrangement are many. One important point is that the parasite drag of engine nacelles in addition to the main fuselage is eliminated. The motors are housed in the nose of the plane, thus giving it twin-engine efficiency and safety with single-engine drag.

A second important point is that the extensive wiring, plumbing, extension of engine control lines and fuel, oil, and electric lines from the cockpit out to engine nacelles are eliminated. The lines are short and direct from the cockpit to the engines immediately ahead, as in single-motored airplanes.

The added weight of the gearing is more than offset by the reduction in weight of the accessories of these lines, the engineers say.

After hundreds of hours of testing on the blocks a special airplane was built by the Lockheed company for flight testing. A standard Lockheed Altair low-wing monoplane with retractile landing gear was redesigned. The engine compartment was arranged to hold two Menasco C6S engines — six-cylinder air-cooled in-line motors.

Each of these engines is rated to deliver a maximum of 260 horsepower in level flight and 285 horsepower for two minutes at takeoff.



(Acme photo.)

C. P. Sander, chief engineer of the Menasco company, inspects the motor installation in test ship.

Test Pilot Harry Downes made the first flights in the new machine. He reported, after making a number of takeoffs and landings, that the two motors easily developed their full 570 horsepower without any apparent strain on the gearing device or clutch. The takeoff tests are the most severe that the unit can stand, for the two motors are delivering their maximum power under those conditions.

The new Vega airplane in which the twin-engine unit will be mounted is to be a low-wing monoplane with a span of 41 feet and over-all length of 31 feet 6 inches. It will be of metal construction throughout, with twin fins and rudders, as in all the modern Lockheed designs.

The landing gear will be of the tricycle type, as found on the DC-4 and on the Stearman-Hammond airplane. The nose wheel and the two rear wheels will retract. The cabin will be designed after the manner of the modern automobile, according to information from the Lockheed factory. It will be soundproofed, heated, and ventilated.

Although no definite performance data is available at this time, the machine is expected to be able to maintain a top speed of 210 miles an hour and cruise at 10,000 feet at 190 miles an hour. Its initial rate of climb will be 1,400 feet a minute.

On one engine it will maintain level flight at 11,000 feet with full load. It will take off from a standing start and climb to 11,000 feet on one engine alone and is expected to have a rate of climb on that single engine in excess of that required by the civil aeronautics authority for single-engined aircraft.

(Continued from page three.)

talked of 45,000-ton ships. But Eric Lambert had gone far beyond this. He had actually finished plans for 75,000-ton dreadnaughts!

Think of that! Battleships under the flag of the United States to be nearly twice greater than any afloat. Now do you wonder that Eric Lambert knew fear when he heard the first call from the secret service bureau that the naval archives building was afire and that the vaults had been looted?

You must have heard that broadcast. Eric Lambert had only just begun his radio talk on the new battleship program. It was natural that he would talk from the Washington studio of W-G-N. He was one of the three persons to grow up with W-G-N. Recall them to yourself: Peter Quill, Maida Travers, and Eric Lambert; and the fourth —strange Ivan Molokoff.

I say he had just begun to talk when Mr. Tyler's short-wave call for squad cars came on the air. Mr. Lambert stopped short. Maida Travers had started a song, stopped short; the studio staf in cold terror. You get that way with queer things running at you out of the air from nowhere. Then the call for the fire engines; the whole town in a discord of clamor as the secret service agents began blocking the roads and questioning motorists; the streets in a fury of screaming fire engines.

All this time, between each squad car report, that lugubrious, monotonous, hollow voice over the radio calling out that one name: "Peter Quill . . . Peter Quill . . . Peter Quill."

And Peter Quill heard it, too. Of course, he could not know that the archives building had been robbed and that the fire, put there as a blind to cover the robbery, was even now bringing most of the fire engines to the scene. But Peter Quill, in spite of his fear, drove his car like mad through the streets to reach the studio. He had almost no time to collect himself when three flying motors—his own, a squad car, and a fire truck—crashed. Peter Quill was taken out of the wreckage.

"Crippled for life," said the squad leader when he saw that grotesque form. And then, when he noticed signs of life, "Who are you?"

"I am Peter Quill." And then, with a look that made the secret agents recoil, "I heard my name called on the radio."

He did not say it was Molokoff who had been repeating the name of Peter Quill. But he knew it. And he knew, he must have known, that Ivan Molokoff was plotting to rob him of his invisible lightning and carry that dread secret to Red Circle headquarters.

VI.

All that night Mr. Tyler stayed at the short-wave microphone and the service telephones. One after another the squad cars reported no luck in their pursuit of the agents of the Red Circle. O, it was the Red Circle that planned and executed the fire and robbery. And only two scraps of evidence came to Mr. Tyler's hands. One of them was a phonograph record from the archives building. The secret service keeps record-making devices at all points of danger. We never know when we may catch a fragment of conversation or a sound that may lead to success.

The other scrap of information came from a newsboy. He reported that he saw three strolling musicians near the archives building.

Late in the morning this radiogram was thrust into Mr. Tyler's hands:

"Look out for the Firefly. She is a beautiful and dangerous agent of the Red Circle. She is in America. Shadow Peter Quill. If he does not disappear this week he is marked to go."

Mr. Tyler turned and snapped into the microphone: "All squads . . . all squads . . . Peter Quill . . . repeat . . . Peter Quill . . . a fantastic hunchback . . . has a laboratory at 13 Dizzard street . . . keep him shadowed . . . he is wanted as a witness in the inquiry which I am calling for next Friday evening . . . Peter Quill."

(Continued next Sunday.)

The Crimson Wizard