

# FLIGHT PASSENGERS

By W. E. Hill

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"Oh you bad boy! You forgot the safety belt again!" (Showing cute stewardess making big hit with traveling salesman.)



Just two beautiful girls who have won a trip to California by plane. Advertising or beauty contest. They expect a screen test in Hollywood.



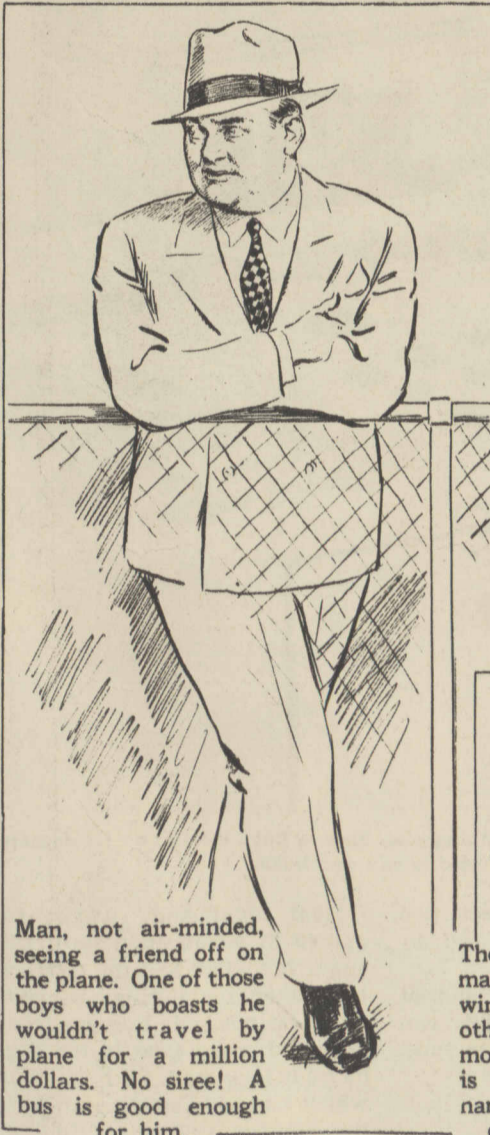
"He's crazy about planes and I'm wondering if you'd let him in the room where the controls are, so he can see how they work!"



Plane passenger forcing a big yawn to get the old ear passages in order, before landing.



The ten-minute stop, showing passengers who want to get back on the plane waiting for the boys with the camera to finish posing on the gangway.



Man, not air-minded, seeing a friend off on the plane. One of those boys who boasts he wouldn't travel by plane for a million dollars. No siree! A bus is good enough for him.



Plane flirtation. He offered her a stick of gum and at first she wouldn't think of depriving him, but he told her he had a loose filling and wouldn't be using it anyway. Then she told him all about the dental work she'd had done last Spring and he was sympathetic, and in no time at all they were old friends.

# A Helicopter That Works

By WAYNE THOMIS

CERTAINLY the most remarkable airplane in the world today—the plane that gives the most promise for safety, ultimate economy, and general all-around usefulness for the vast majority of persons who never could fly high-speed craft with their proportionally high landing speeds—is the Focke helicopter.

From all accounts it is the perfect airplane—in embryo. It takes off in a vertical ascent. It hovers stock still at the height chosen by its pilot. It flies backward—actually tail first—or it can fly sidewise.

In case of motor failure it becomes an autogiro and glides to earth at a steep or shallow angle of descent under control of its pilot. In landing with motor on, the machine sinks vertically at any speed desired.

This remarkable airplane is sustained and flown by means of airfoils or wings that move through the air. This advancement of the theory of the autogiro was achieved by Prof. Heinrich Focke, chief engineer at the Focke-Wolfe airplane plant in Germany.

Five general requirements were set up by Focke and his assistants. They were: (1) The possibility of making emergency landings in case of motor failure; (2) good controllability and stability; (3) general reliability; (4) simplicity of essential controls; (5) performance rivaling that of fixed-wing airplanes.

The first problem was that of



The Focke helicopter at rest after one of its experimental flights. No attempt has been made as yet to cover the outriggers or to streamline the plane in order to increase the efficiency of its performance.

determining just what lifting air screw would be used. The decision to use two rotors side by side, with separate hubs and separate carrying structures, was made in the interests of controllability and stability. The rotors turn in opposite directions, canceling out torque effects destructive in earlier helicopter designs.

Control itself was a difficult problem. Professor Focke attempted to utilize ailerons, rudder, and elevators, but found that they were entirely inadequate. Ultimately the solution was found in changing the angle incidence of the rotor blades at the hubs. Motion in any direction is achieved in this way, eliminating necessity for a tractor propeller such as used in a fixed-wing plane or autogiro.

The methods of applying the control forces for the Focke helicopter are exactly the same as

those used by airplane pilots in flying the normal fixed-wing machine—by throttle, stick, and rudder bar. Tests show that the same control is perfectly adequate for flight as a helicopter or autogiro.

A word of explanation here. As a helicopter all the engine power save that used for turning a cooling fan is applied to the air screws or rotor blades to produce motion either vertically or in any horizontal direction. As an autogiro the machine has no power applied to the blades. They continue to turn and to generate lift because of "self-turning" forces, as in the conventional autogiro. The Focke machine utilizes the autogiro principle only for landing without motor—a distinct safety improvement over earlier helicopters.

The helicopter was evolved

from a flying model powered by a 7/10-horsepower two-cylinder motor. Later full-sized motors, rotors, and gears were attached to a stock light plane fuselage and the machine "flown" many times while held captive by short cables. The first free flight was made on June 26, 1936.

To prove the craft's ability to perform without benefit of wind Professor Focke had the machine demonstrated in a closed arena. It rose vertically, flew the length of the hall, turned in its own length, flew backward, hovered near the rafters and then just a foot above ground.

Although the present plane has excessive weight and no streamlining, it has a faster rate of climb than the average fixed-wing plane or autogiro of similar power. "Cleaned up," it should have a top speed comparable to modern ships.

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STAR IN TRUE COLORS. Shirley Temple receives from Eddie Johnson, chief of the Tribune color photo studio, a portrait of herself taken with the Tribune "one-shot" natural color camera—the only one of its kind owned by any newspaper in America. This portrait and those of scores of other screen celebrities were taken by the color photo staff during a recent six-week trip to Hollywood to gather material for reproduction in full color in the Sunday Tribune.

WHERE THERE'S SMOKE. Albert Cassel (left), co-partner, Sam Cassel & Co., Chicago distributors of General Cigar products; J. E. Whitwell (center), gen. sales mgr., midwest div., General Cigar Co., and M. J. Dempsey, Tribune nat. adv. staf, analyze the Sunday Tribune Graphic section in which Van Dyck cigars are now being featured in a series of full page advertisements in color. More General Cigar advertising appears in the Tribune than in all other Chicago newspapers combined.



TO SELL HAMS. James C. Ewell (left), vice pres., U. S. Advertising Corp., and Don Smith, adv. and sales prom. mgr., Wilson & Co., inspect portfolio of four-color full page advertisements featuring Tender Made Ham which appeared this year in the Tribune. Practically as much Wilson advertising appears in the Tribune as in all other Chicago newspapers combined.



EXCLUSIVE CAMPAIGN. S. J. Saad (right), regional mgr., the Maytag Chicago Co., demonstrates for J. E. Dalinghaus, Tribune nat. adv. staf, the new Maytag washing machine presented in the rotogravure advertising campaign now running in the Sunday Tribune Picture section. In Chicago, Maytag newspaper advertising appears exclusively in the Tribune.

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