

WINGS OVER AMERICA



The Romance of Aviation

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WITH AN INTRODUCTION BY
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This was the first time the continent had been conquered in less than half a day.

For the next five years, Jimmie Doolittle concentrated on breaking a flock of speed records. He knew that, in war and in peace, speed was essential to aviation. And he also knew that as one speed record was established, plane designers would learn enough from the record flight to design still faster planes.

Jimmie also kept on testing new planes. He was testing a tricky ship in 1932 when the wings started to disintegrate while he was only a hundred feet above the ground. Pointing the nose of the plane upwards sharply, Doolittle managed to gain another three hundred feet before the motor stalled. But he had enough altitude to parachute safely to earth.

The Institute of Aeronautical Sciences chose Jimmie Doolittle to be its president in 1940. But in that year Jimmie also chose to return to the Army, for he saw that the war which Billy Mitchell had prophesied was about to engulf America. The Army put Jimmie to work, first, as co-ordinator of aircraft production in the automobile industry. Then, in 1941—the year Jimmie's son joined the Army Air Corps as a cadet—Jimmie Doolittle got his chance to see flying duty in the Army. Commissioned as a colonel, then promoted to brigadier general, Jimmie Doolittle was more than ready for action when the Japs struck. They found that out, too, when Tokyo was bombed.

→ How many thousands of flyers and air passengers today owe their lives to a great contemporary of Doolittle's, Jimmie Taylor, is almost impossible to calculate. For twenty-four years, Taylor was one of America's leading test pilots. In this time he tested nearly six hundred new planes. Only

once in his career as a test pilot did Jimmie Taylor have to bail out.

Those of us who knew Jimmie Taylor well had a favorite trick we would play on unsuspecting friends with his unwitting help. The trick was simple: we would introduce Jimmie to someone who had never heard of him. They would talk for a while, and then we would ask the man or woman who met Jimmie for the first time what he or she guessed Taylor did for a living. The answers were revealing, to say the least: Jimmie Taylor would be taken for a gentleman farmer, a country doctor, a sports writer, a small town high school principal, or a small businessman.

If ever a man looked like the exact antithesis of the popular conception of a test pilot, Jimmie Taylor was that man. Even poised in the cockpit of an experimental plane, sitting without a jacket, his shirtsleeves rolled up, his lips formed in their characteristic quizzical grin, he looked not like a test pilot but like a flying bond or hardware salesman. Yet the easygoing, short, mild socialite had tested more planes than almost any other man in America, and was recognized by everyone in the industry as one of the country's ace test pilots.

Taylor left Princeton in 1917 to enlist in the Navy air service. He did his first flying for the Navy at the Dinner Key Air Station at Miami, served as a test pilot in the Navy from 1918 until 1920, when he resigned to go into business for himself as a test pilot. From the beginning, Jimmie decided to enlist science on his side, believing that the function of a test pilot was not to prove whether or not a plane would kill the first man who flew it, but to determine just what the characteristics of the plane were.

"Testing then, like aviation engineering, was pretty much of a trial and error proposition," he told me. "You had

more or less to create your own standards of performance and safety as you went along, and that meant risk. In my first two years of Navy testing I had a few lucky escapes. But for the rest of my career I don't think luck had much to do with it. I kept fit, and I learned more and more about stresses and strains and torque and weather until there wasn't very much of the unexpected left to expect."

Taylor took it for granted that a test pilot must have courage. But he always rated knowledge above courage in his business. And he took an almost childish delight in debunking the myths which sprang up about his calling.

The so-called "power dives" test pilots make were a particular butt of Jimmie's humor. Time and again, he would point out to overimpressed feature writers that, while it is true that a pilot starts a terminal velocity dive with his motor wide open, the motor does not remain that way once the dive is under way. If the motor did, it would turn up so far above its rated revolutions that the whole engine would burn up in the pilot's face. "Once the motor gets up to its top speed you don't get any more power in a dive," Taylor would grin. "Gravity does the rest."

Taylor set a still-standing record for terminal-velocity dives. The test called for a pull-out at 8G. This means that the plane being tested shall reach such acceleration that when the pilot pulls out of the dive, the centrifugal force created by that dive will amount to eight times the force of gravity. At 8G, for instance, Taylor's 165 pounds would become 1320 pounds, more than half a ton of weight suddenly thrown on a spine and a frame built to carry 165 pounds.

Taylor took the Navy plane he was testing up to 20,000 feet and put it into its dive. When he pulled out at about 1500 feet, the plane climbed three thousand feet before he opened the throttle again. For the first time in his experi-

ence Jimmie felt the shock. The breath rushed out of his lungs and he felt as if someone had crushed him under a heavy weight. After he landed, the Navy officers read the accelerometer and found that Taylor had reached $13\frac{1}{2}G$.

For that instant at the pull-out, the 165-pound test pilot had weighed $2227\frac{1}{2}$ pounds. The leading edge of the plane's top wing had been crumpled by the force of the dive, but Taylor, back to his 165 pounds, laughed it off, put on his jacket and drove home to dinner with his wife and five children.

I heard him talking about this test a few days later at a Long Island beach. "Dangerous business? Bunk!" As ever, he was highly amused. His eyes sparkled as he laughed. "It's not dangerous for a cautious man. I studied that ship for a week before I took that dive. I went over it with a micrometer and read every blueprint. I wasn't taking chances. I knew what the plane was capable of."

In his twenty-four years of scientific flying, Jimmie Taylor took test flying out of the stunt class and raised it to the level of the science that it should be. After Pearl Harbor, he went back to the Navy as a Lieutenant Commander. Whatever his rank, it was a foregone conclusion that Jimmie was going back as a test pilot.

A few months after the war started, he climbed into the cockpit of a new ship. A mechanic pulled the chocks from under the wheels, and the plane zoomed into the skies over a New Jersey meadow.

It was Jimmie Taylor's last flight. The plane carried him to his death. When the war is over, the full story of that flight will be made known. Then everyone will know of the full measure of Taylor's heroic determination that his country should have the best air force in the world.

Immediately after the funeral, Jimmie's son joined the Navy as an air cadet.