

TEST-FLYING *the*



Giant Boeing clipper taxing in wake of tender. Circle, Consolidated navy patrol bomber on which Eddie Allen was consulting test pilot



THERE was no fighting off this sudden oblivion brought on by rarefied atmosphere at the tremendous altitude. Alone in the tiny pursuit plane, Test Pilot Edmund T. Allen—the conqueror of untried planes—was in the most critical jam of his career.

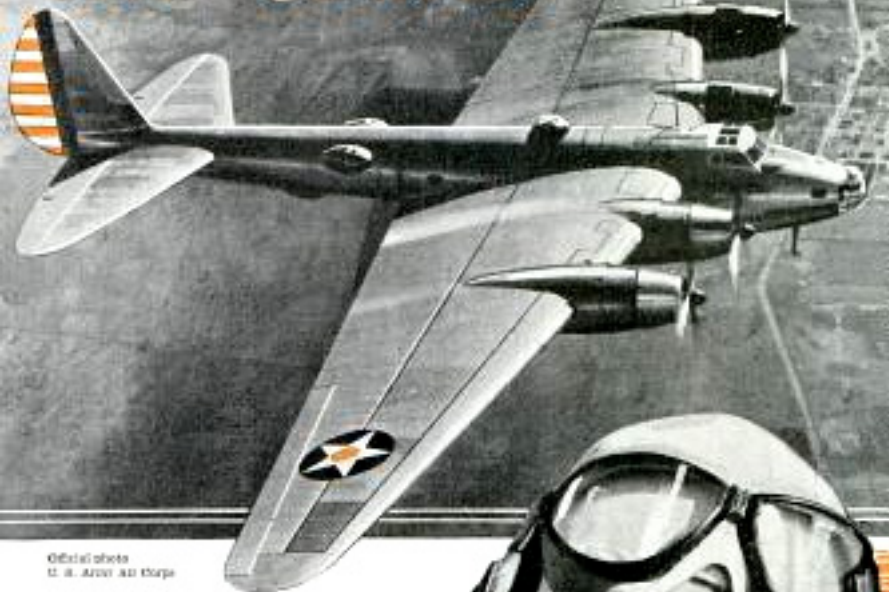
No human could retain consciousness without special equipment to offset the

lack of oxygen. The arrow of the altimeter quivered at the 29,000-foot mark when darkness blotted the throb of the motor from the pilot's ears. Allen's right hand, writing notes—data of the experimental flight—on a pad thonged to a knee of his heavy flying suit, became limp and dropped. His left

hand, maneuvering the controls to drive the plane to its nearly six-mile height, loosened and slipped downward.

The pilot's body wavered as the plane began to buck and sway crazily, then toppled forward, crumpling over the control stick and jamming it forward, throwing the plane into a power dive. With the wind screaming over its wires, the plane hurtled

SKY GIANTS



Official photo
U. S. Army Air Corps

down, down and down, carrying its master toward destruction.

The plane rocketed for 7,000 feet before the more normal air allowed Allen's mind to begin to live again. For seconds the dazed aviator grappled with the problem of whether he was in a bad dream or an out-of-control airplane plummeting downward. Slowly his mind brushed the last of the darkness away and he recovered the controls, then quickly maneuvered the plane into proper flight. Spiraling downward and landing was a simple routine.

Adventures like this are not all in a day's work for Eddie Allen, who since that day ten years ago has burned his name into aviation history as a premier test pilot, or aviation consulting engineer, as he prefers to be known.



Top, taking this huge warplane into the air on its first test flight was Allen's job. Bottom, Allen talks by radio with ground crew while testing open plane



It was, however, the most exciting series of seconds in his twenty years of flying. Allen, like all steady aviators, has no lack of regard for longevity. This makes him careful, almost afraid, of untried planes and undoubtedly is one of the contributing factors to his having been selected to test many of the large planes built for trans-oceanic, commercial sub-stratosphere or military flying.

His hands were at the controls during test flights of the Boeing XB-15 "Flying Fortress," the world's largest military plane the Sikorsky S-43 clippers that span oceans; the forty-one-and-a-quarter ton Boeing clipper, and the Sikorsky XPBS-1 "Flying Dreadnought," pride of the United States navy. And he was consulting test pilot on the Consolidated XPB 2Y-1 patrol bomber built for the navy.

Recently Allen has been



Top, Allen studying clipper's controls before attempting test flight. Center, Baby Clipper which was test-flown by Allen. Bottom, Stetoliner on test hop with Allen at the controls



busy with the new Boeing Stratoliner, the first airplane built commercially for carrying passengers at high altitudes.

Allen's flying days began during the world war when the United States government dispatched him to England to learn test flying from the British. Since then he has flown through the hair-raising boot-and-helmet days when feel of the seat underneath him took the place of instruments, to these days of slide-rule flying.

The test pilot's work, Allen tells you, begins before the first rivet is driven in the new airplane. When the projected plane is being laid out on the drafting board, Allen is called in for advice. He studies the de-

sign and offers suggestions as to making the plane more economical, useful and practical. He watches the material and workmanship that go into the plane after it leaves the engineers' drafting boards, helps with production problems in the factory as they affect construction of the plane and assists in selecting the proper instruments needed for the type and intended use of the airplane.

Then, when the plane is pushed from the hangar for its first flight, it is his job to fly it. And it is his neck that is to be broken if anything goes askew.

(Continued to
page 114A)



Top, another sky giant, the "Flying Dreadnought," which was tested by Eddie Allen. Bottom, gasoline trucks go to sea on barges to service the mighty Boeing clipper during test flights

Test-Flying the Sky Giants

(Continued from page 71E)

Allen does not fit the popular version of the test pilot who climbs aboard and shouts to the mechanics to pull out the wheel blocks so he can swoop aloft. He spends days, and sometimes weeks, on the ground



Pilot Allen lifting the Boeing bomber into its placing stop for a takeoff

with the plane before taking it aloft. Engines must be tuned to perfection. Controls must be adjusted to a fine degree. In the case of the XB-15 bomber, Allen taxied it back and forth on Boeing Field at Seattle for days after most preliminary work had been done. He was not to be hurried. Day after day he wheeled the huge bomber the length of the field, sometimes getting up speed enough to lift the tail wheel into the air, only to taxi back to the hangar for further adjustments. Finally, when he did take the bomber aloft, he knew everything was right. And it was. The immense plane lifted with the ease of the smallest plane. And the first landing was as gentle as if he had flown it for years.

His great amount of practical experience and technical knowledge takes a certain amount of risk out of test hopping. He can size a plane up and know whether to take it aloft or walk away from it. This latter alternative doesn't happen often. Allen merely points out to the manufacturer that such and such should be changed.

Allen always wears a parachute and he insists that any assistants (these huge modern planes require four and five men on test hops) wear parachutes.

A fine code of ethics must be observed by the free-lance test flyer. A pilot like Allen, testing for a half dozen builders, necessarily must have the confidence of each. He has detailed information as to the innovations planned by each manufacturer in the highly competitive military and

commercial fields. This information, Allen finds, must be stored in individual compartments, so to speak, in his mind so that he doesn't accidentally reveal to the Boeing company a secret new tail assembly which Sikorsky engineers have perfected, or vice versa.

Once the War Department had called for bids for a new type of plane and two of Allen's employers were competing. Each asked Allen to demonstrate his plane. The test pilot was in a quandary. But not for long. The solution was simple. He would test both planes. The manufacturers were agreeable. Allen, when the tests got underway, demonstrated both planes to the utmost of his ability and to the planes' abilities, being extremely careful not to



Miniature of the Stratoliner being tested in University of Washington wind tunnel

voluntarily or involuntarily give one or the other an unearned advantage.

Allen predicts with confidence that the day is near at hand when the mechanical hands will replace the human hands in flying even more than they have today.

Seedless Watermelons Grown in Greenhouse Patch

Watermelons without seeds, long sought by scientists, have been grown at Michigan state college by a Chinese graduate student, Cheong-Yin Wong. The exterior shape has been changed somewhat, being more pear-like than oval, but the taste is about the same. The new melon has smaller, whiter, veinier sections than the normal melon, and Mr. Wong said that field production might be difficult but it has decided advantages for growing in greenhouses.