YESTERDAY'S WINGS





by PETER M. BOWERS

The Fleetster line is a prime example of the widespread practice of one aircraft manufacturer spotting a good thing introduced by another and then seeking to improve on it. This has produced some very similar-looking airplanes in the past and continues to do so today; some current products of different firms almost seem to have been designed by the same computer.

Prior to the introduction of the Fleetster in 1929, the Consolidated Aircraft Corp. of Buffalo, N.Y., was primarily a supplier of training planes to the U.S. Army and Navy and in fact held a virtual monopoly of that field from 1925 to 1930. The origin of the company was rather unusual.

Maj. Reuben H. Fleet, Procurement Officer for the Army Air Service Engineering Div., resigned in November 1922 because of cutbacks and a reduction in rank and became the general manager of the ailing Gallaudet Aircraft Co. of East Greenwich, R.I. Almost simultaneously, he had an opportunity to take over an Army training plane contract from the financially troubled Dayton-Wright Co.. To handle this, he formed a new company of his own, Consolidated. Gallaudet wasn't interested in taking the newcomer on as a partner, so Fleet rented space in the same factory for his firm, of which he was president and general manager, while still holding his position with Gallaudet.

Production of the twenty-plane ex-Dayton order was soon completed. The Army wanted more trainers, but didn't like the side-by-side seating of the existing model. Fleet then had the designer, who had come from Dayton-Wright, adapt the same airframe to tandem seating. This, designated PT-1,

Above, the prototype Consolidated Model 17 Fleetster was photographed in October 1929, the same month that the stock market crashed. Note the strong resemblance to the earlier Lockheed Vega. Lockheed later emulated Consolidated in turn by building metal fuselages for some of the final Vegas. continued



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hit the jackpot with orders for 171 units.

This was more work than the tiny dual-company plant could handle, so Fleet resigned his Gallaudet position and moved Consolidated into the vacant wartime plant of the Curtiss Aeroplane & Motor Co. at Buffalo in September 1924. Consolidated went on to produce 250 improved PA-3's for the Army plus 282 near-duplicate NY-1's, -2's, and -3's for the Navy, Some of the rugged 1928 PT-3's remained in service into 1941.

Consolidated sort of backed into the civil field by marketing civil adaptations of existing military models, notably the little Fleet biplane trainer that had been developed for the Navy as the N2Y-1 Husky Jr. and an airline adaptation of the XPY-1 Navy patrol flying boat. The first Consolidated model developed from scratch as a commercial product was the Model 17. The designer was Isaac M. Laddon, a former Air Service design engineer who was later to win renown for developing the PBY, the B-24 and the B-36.

The new model, named Fleetster, drew heavily on the lines of the famous Lockheed Vega, a cabin monoplane that had been introduced in 1927 and was still in production as a small airliner and executive plane at the time the Fleetster appeared. The major differences were that the Fleetster was larger, with a 575-hp Pratt & Whitney Hornet engine in place of the Lockheed 420-hp Wasp, and used a semimonocoque, sheet-metal fuselage, the first in the civil field, instead of Lockheed's famous wood construction. The wing was still wood frame with plywood covering, but the tail surfaces were metal frames with metal skins. Further, the Fleetster had two pilots side-by-side at optional, single or dual controls, instead of isolating a single pilot in a separate cubbyhole as on the Vega.

Seating could be in the form of two lengthwise benches on each side of the cabin or six to eight conventional forward-facing seats with a narrow aisle between them. Seaplane fittings were standard equipment and the Model 17 could be operated on twin floats.

The prototype flew in October 1929, an ominous month, and received Approved Type Certificate (ATC) 291 in January 1930. Only four of the original Model 17's were built. Three went to the newly founded New York, Rio, and Buenos Aires (NYRBA) airline—which Fleet was backing—for short-haul service in South America, and one went to the U.S. Army as a light transport.

The Army ship was something of an oddity. The Army had bought a number of off-the-shelf civil designs for transport work and gave them military markings, designations and serial numbers. This first of four Army Fleetsters, although designated Y1C-11 in the Cargo/Transport series and carrying an Army serial, was flown with civil coloring and registration. Further, its special VIP features and a subsequent engine change compromised the ATC and downgraded it to the lesser Memo Approval 2-219 and changed the Consolidated model number to 17-2.

Since the conventional high-wing

Model 17 wasn't selling well due to the deepening depression, Fleet and Laddon sought to widen its market with a variation, the Model 20 Fleetster. This again followed Lockheed by raising the wing above the fuselage to the parasol position and placing a single pilot aft of the wing in an open cockpit as Lockheed had done when converting the Vega to the Air Express. The engine was still the Hornet, and span and length were unchanged.

the use of low-pressure Goodyear Airwheels in place of the original high-pressure tires.

Two all-cargo Model 20's were built under Memo 2-231 issued in July 1930, and two three-passenger versions were completed under ATC-320.

Meanwhile, the sales potential of the Model 17 was increased by offering an alternate engine, the 575-hp Wright Cyclone, which had gone into the C-11A. One example was licensed originally under Memo 2-273 in September 1930, but was soon upgraded to full ATC 369. Three equivalents had already been sold to the Army as Y1C 22, the designation change resulting from the change to the Cyclone engine. Three Cyclone-powered variants, lengthened 21/2 feet and with span increased to 50, were built under ATC-486 in June 1932. These reduced the crew to a single pilot but increased the passenger capacity to nine. Designated Model 17-AF, all three went to the Ludington Line for use on the New, York-Philadelphia-Washington route.

The parasol Model 20A was also an enlargement of the earlier model, but retained the Hornet engine. TWA bought all seven, which had been licensed under ATC-494 in September 1932 as cargo-passenger planes.

CONSOLIDATED FLEETSTER

Specifications

	Model 17	Model 20A
Powerplant	Pratt & Whit- ney Hornet B 575 hp @ 1,950 rpm	Pratt & Whit- ney Hornet B 575 hp @ 1,950 rpm
Span Length Height Wing loading Power loading Empty weight Gross weight	45 ft 31 ft 9 in 9 ft 2 in 313.5 sq ft 16.9 lb/sq ft 9.2 lb/hp 3,326 lb 5,300 lb	50 ft 33 ft 9 in 12 ft 361 sq ft 18.8 lb/sq ft 11.8 lb/hp 3,850 lb 6,800 lb
Performance		
High speed Cruising speed Landing speed Initial climb Service ceiling Range	180 mph 153 mph 60 mph 1,050 fpm 19,000 ft 750 sm	175 mph 160 mph @ 80% 62 mph 1,050 fpm 18,000 ft 800 sm



The first two Model 20 Fleetsters were nonpassenger models known as Type 1 (above). The other two of four built were Type 2 with passenger seats and more windows. Below is the civil-marked Army Y1C-11 in April 1930. The two stars on the fuselage show that it was being used by a major general. It was soon returned to the factory for change to a Wright Cyclone engine and further modifications to make it the personal transport of the Assistant Secretary of War as the C-11A. The last Fleetster (bottom) built was the XBY-1 developed for a U.S. Navy dive bomber competition.

Commercial production at Consolidated ended with the last 20A (the popular Fleet biplanes were then being built by a wholly owned subsidiary in the same building) and the company again concentrated wholly and successfully on military business. One last attempt was made to continue the Fleetster after the Navy announced a design competition for dive bombers. Laddon developed a beefed-up version of the Model 17 to meet the Navy requirement but, needless to say, this quickie effort at forging a ploughshare into a sword was not successful.

Including the XBY-1, 25 Fleetsters were built.

