In spite of a strong trend toward the use of light monoplanes in the 65-125 h.p. range, much of the primary training in civilian flight schools of the late 1930s was still being done in relatively heavy biplane designs. This reflected the U.S. Army and Navy policy at the time, of giving primary exclusively in 220 h.p. biplanes. However, with monoplanes taking over in all other phases of military aviation, the services began to consider monoplanes for their schools, which were just beginning a rapid expansion in anticipation of World War II needs. A design competition was scheduled for some new trainers, and the specifications allowed monoplanes.

Fairchild Aircraft of Hagerstown, Md., had already sought to develop a new monoplane trainer that would suit both military and civil schools and private owners. The result was the Fairchild Model 62, which flew late in 1938.

This was still a "heavy" trainer, its main departures from Army tradition being the low-wing monoplane design, a slight decrease in horsepower, and the use of a canopy over both cockpits. The fuselage was welded steel tube with fabric cover, and the wings and fixed tail surfaces were cantilever wood structures with plywood covering for torsional stiffness. The wing was in three panels: a center section that carried the singlestrut landing gear legs, and two outer panels that attached outboard of the landing gear. Movable control surfaces were aluminum frames with fabric covering. The engine was the Ranger 6-440, a 175 h.p., inverted, air-cooled, in-line six that was already famous for its use in the Fairchild 24 [May 1970 PILOT]. This was manufactured by the Ranger Engineering Corporation of Farmingdale, Long Island, a division of the Fairchild Engine and Airplane Corporation.

Minor configuration changes were made during factory testing of the M-62 prototype, including removal of the cockpit canopy and a lowering of the horizontal stabilizer, which straightened out the upper longeron line. The canopy, generally called a hatch at the time, was primarily a crew-comfort feature—enclosing the cockpit of planes in the trainer's speed range hardly added enough speed to justify the additional weight and cost.

In its revised M-62A configuration, the new Fairchild won the Army's design competition against a field of 17 and received an initial order for 270 units with the Army designation of PT-19 (Primary Trainer, 19th model in the series).

Although the Army was the major customer, the M-62 was also certificated as a civil model and received Approved Type Certificate (ATC) 724 in April 1940. With most of the Ranger engine production committed to the military versions by that time, Fairchild quickly developed the M-62B version, which used the 165 h.p. Warner Super Scarab radial engine under a neat NACA cowling similar to that on the Warner-powered Fairchild 24. The prototype M-62B had a canopy similar to the original M-62, but the production versions were open. In spite of the powerplant difference, the M-62B was licensed under the same ATC as the M-62A. Both civil versions were delivered to their owners in the standard Army Air Corps coloring of the period—blue fuselage with chrome-yellow wings and tail.

With the war getting closer, production for the Army was stepped up in a new Fairchild factory. Follow-on orders were received for 3,181 improved PT-19As. Six of these were fitted with electrical systems and redesignated PT-19B. Their success resulted in an order for 774 more as night and instrument flight trainers.

In view of a possible shortage of Ranger engines, Fairchild developed the PT-23. This was simply the PT-19A airframe fitted with a 220 h.p. Continental R-680 radial engine. The original factory designation was M-62B, but became M-62C. Requirements of the Royal Cana-

YESTERDAY'S WINGS The Fairchild M-62

Developed with an eye toward military and civilian flight schools —as well as private owners—monoplane trainer beat out 17 rivals in a prewar Army design competition; gave yeoman service during World War II; now enjoys new status as 'antique'

by PETER M. BOWERS / AOPA 54408

The prototype Fairchild M-62 in its original form, with high stabilizer location. In the final M-62A configuration, the canopy and pants were deleted, the stabilizer was lowered, and the upper longeron was straightened. Note the anti-spin parachute attached to the rudder.

Fairchild Aircraft photo



The Fairchild PT-19 (PT-19A shown here), military version of the M-62A, was the U.S. Army's first monoplane trainer ordered in quantity. Note the turnover pylon between the cockpits. Those built through early 1942 had blue-and-yellow coloring; subsequent models were all-silver. The rudder stripes were deleted from all uncamouflaged Army aircraft in May 1942. John Collins photo





The Fairchild M-62B was a civil model using the 165 h.p. Warner Super Scarab radial engine. The star on the wing does not indicate that this aircraft was drafted into the Army—civil planes operating on the West Coast after Pearl Harbor were required to carry the star insignia, on the upper left and lower right wings (opposite the registration numbers), and the big "US" on the fuselage. Peter M. Bowers photo



The PT-26, built for the exclusive use of the Royal Canadian Air Force, was essentially a PT-19 with a 200 h.p. Ranger engine and enclosed cockpits. Procured under lend-lease funds, these were U.S. property even though used in Canada, and most were returned to the United States after the war, where they appeared on the surplus market.

William T. Larkins photo

dian Air Force produced still another variant, the PT-26. It was essentially the PT-19 with a 200 h.p. Ranger, winterization features, and the old cockpit canopy of the M-62 prototypes. This was a welcome addition under Canadian winter conditions. The PT-26 and PT-26A were Fairchild models M-62A-3 and M-62A-4.

An oddity of procurement shows up here: not one of the 1,727 PT-26s, PT-26As; or PT-26Bs built was used by the U.S. Army or carried U.S. markings—all were for the RCAF. (Photos would appear to contradict this, but they do not. Some of the PT-26 canopies were used on PT-19s.) However, they were purchased with U.S. lend-lease funds channeled through the Army, so they got U.S. Army designations in spite of differences in marking, coloring, and equipment. While each had a Canadian serial number, it also had a U.S. Army serial number and nameplate.

The Canadians followed the British practice of identifying military aircraft by names instead of numbers, so the PT-26s were called Cornells (trainers of the time were named for famous colleges). This name was later applied to the American PT-19s and PT-23s when the government encouraged the use of popular names, rather than exact military designations, as a wartime security measure. This was all right for general public reference, but the distinction between a plain PT-19 and a PT-19B was pretty important to the people directly concerned, so the popular names were seldom used in the service.

Altogether, 7,221 PT-19s, 23s, and 26s were built, according to U.S. Army figures. This number was beyond Fairchild's production capacity and was attained under a licensing program. Aeronca, Howard, St. Louis Aircraft, and Fleet Aviation of Canada built all versions between them. Fairchild produced only three PT-23s: the converted XPT-23 prototype and two production versions. The other four firms built the 1,124 production versions. Oddly, none of the PT-23s built in Canada were used by the RCAF. Fairchild built 5,048 *Cornells* to April 1944, and this figure may include the relatively small civil production.

Since it was already a certificated civil model, the M-62 had no trouble finding civil customers on the postwar surplus market. The PT-23/M-62C, which had not been on the prewar civil market, was added to the original M-62 ATC in March 1945. Fairchild realized that it could not sell new production versions of the M-62 in competition with war surplus, and did not try. It did, however, adapt the M-62 to a four-place M-84 powered with the Warner. With the new Beech Bonanza, the North American Navion, and the revamped Bellanca Cruisaire as competition, the M-84 was not produced.

The postwar schools all went to the new light monoplanes for primary training, so the main market for the surplus M-62s was the private owner. The radialengine PT-23s were particularly popular as towplanes in glider clubs, but the in-line PT-19s and the PT-26s returned from Canada found little specialized work. They couldn't compete with the Stearman/Boeing Kaydets [Nov. 1967 PILOT] in dusting or airshow aerobatics. Some of the privately owned M-62s got good care, along with professional maintenance, and were kept in good hangars. Others, bought primarily as cheap timebuilders, were given minimum care and tied out in all kinds of weather. The attrition rate on these was pretty high. Principal problems were delamination of unprotected wooden propellers and rot in the wooden center section. Since rebuilding the center section could easily cost much more than the few hundred dollars that the plane cost surplus or third-hand, a bad center section usually spelled the end of that particular M-62's career. The high point of all M-62s on the civil register was 1947, with 4,013 listed by the FAA. The rapid drop-off is shown by the 1950 listing, with 1,766 M-62s airworthy out of a total of 3,629, and the 1952 listing, with 905 airworthy out of 2,984 total.

Eventually, time began to work for the M-62 instead of against it. Once the antique airplane boom got rolling in the late 1950s and the M-62s had aged suffi-

ciently, they acquired new status as antiques. This situation virtually halted the scrapping of unairworthy planes, since they were now worth the cost of the necessary work. The latest available figures show 112 M-62s airworthy, out of 954 listed. The nonflying ones are either under restoration or form what can be considered an "antiquer's reserve."

Since the early M-62s date from the immediate pre-World War II years, many, regardless of actual date of manufacture, are restored and painted in the prewar Air Corps colors. Even some PT-26s, which never used them, are now flying with prewar Army markings. The Army changed the old blue-and-yellow to all-silver early in 1942, but many older PT-19s got through the war with their original paint. The pretty tail stripes, however, were deleted from all uncamouflaged Army airplanes (the only ones then using them) in May 1942. So, while the color scheme of the restorations may or may not be compatible with the date on the airplane nameplate, it does reflect the spirit of a particular era of aviation.

SPECIFICATIONS AND PERFORMANCE

	PT-19A/M-62A	PT-23/M-62C
Span	36 ft. 11 in.	36 ft. 11 in.
Length	27 ft. 11 in.	25 ft. 11 in.
Area	200 sq. ft.	200 sq. ft.
Powerplant	Ranger	Continental
	6-440C-2,	R-680-4,
	175 h.p.	220 h.p.
Empty weight	1,851 lbs.	2,046 lbs.
Gross weight	2,518 lbs.	2,747 lbs.
High speed	124.3 m.p.h.	131 m.p.h.
Cruising speed	102 m.p.h.	109 m.p.h.
Climb	655 ft./min.	965 ft./min.
Service ceiling	13,200 ft.	13,250 ft.
Range	422 mi.	373 mi.
Original cost	\$11,230	\$11,200