

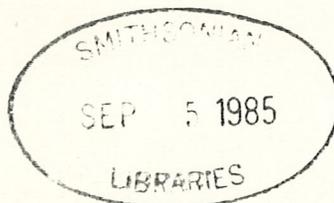
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A.T.C. #122  
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FLEET MODEL 1



Fig. 65. The Fleet Model 1 was powered by a Warner "Scarab" engine; note heavy wing structure.

The "Fleet" sport-trainer definitely shows its parentage from the Consolidated PT and NY service-trainer series, and was a direct development from the Consolidated "Husky Junior", a similar design that was built under A.T.C. # 84 (See U. S. CIVIL AIRCRAFT, Vol. 1). The first few Fleet aircraft were more or less re-named "Husky Juniors"; renamed in honor of Major Ruben Fleet, the guiding genius of "Consolidated" since the beginning way back in 1923. Considerable development went into the various models of the PT and NY trainer series, and much knowledge had been gained; the Fleet was certainly very fortunate to fall heir to such a background of ancestry. As pictured here, the Fleet posed as a brawny little ship that was extremely capable; well suited for the job intended it flew and handled well with a satisfying performance. A few of the early Fleet biplanes still had the one elongated cockpit, seating two in tandem as characteristic in the "Husky Junior", but this arrangement was soon modified to individual open cockpits, as shown. Certainly a stand-out feature on the sporty Fleet were the husky looking wing panels; wings of an unusually thick "Clark Y" airfoil section that had built in fortitude to spare. It was an advertised fact and a known fact that the wings of a Fleet biplane were stout

enough to hold up the weight of two full grown elephants, or 13,125 pounds of sand-bags! Proven beyond any doubt, then and since, the Fleet was an airplane that was eager to answer your every whim, and if you felt so-inclined, you could throw it all over the wild blue yonder in careless abandon, and not have fear of losing a single piece of the stout airframe. Casual observation will soon reveal that the Fleet was no great thing of beauty and lacked the near-feminine quality of the average airplane, but it was a "tom-boy" that was trim and functional and a real satisfying joy to fly.

Typical of the earlier "Husky Junior", the Fleet Model 1 was powered with the smooth-running 7 cylinder Warner "Scarab" engine of 110 h.p. The type certificate number for the Fleet Model 1 was issued in May of 1929 and amended a month later to allow extra fuel in a "belly tank", and an increase in gross weight allowable of some 240 pounds. The Fleet biplane was manufactured by the Fleet Aircraft, Inc., a division of Consolidated Aircraft Corp. at Buffalo, New York where production had soon reached two a day. Lawrence D. "Larry" Bell was the president and general manager; Joseph M. Gwinn Jr. was chief engineer; and William "Bill" Wheatly was the chief pilot in charge of test and deve-

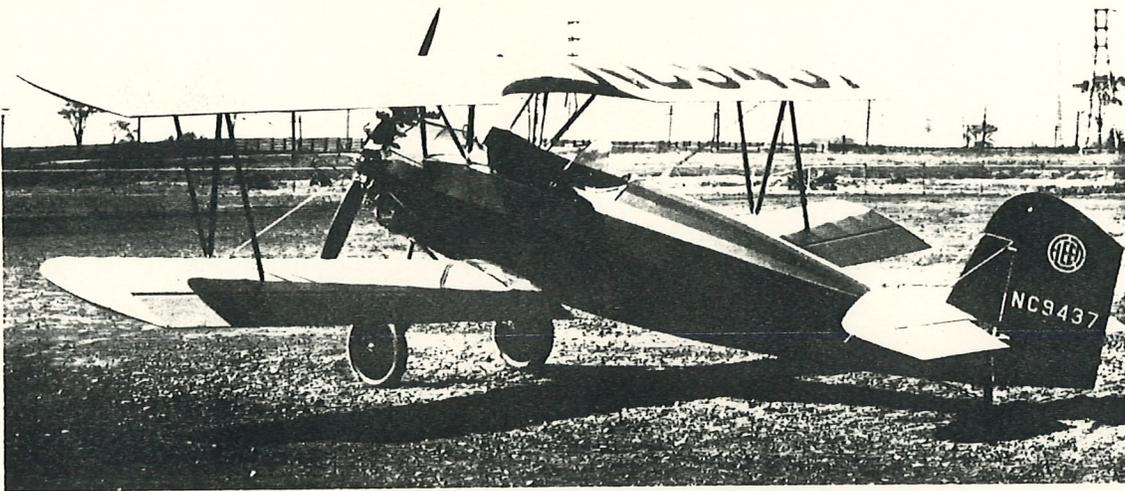


Fig. 66. The Fleet Model 1 was a development of the Consolidated "Husky Junior".

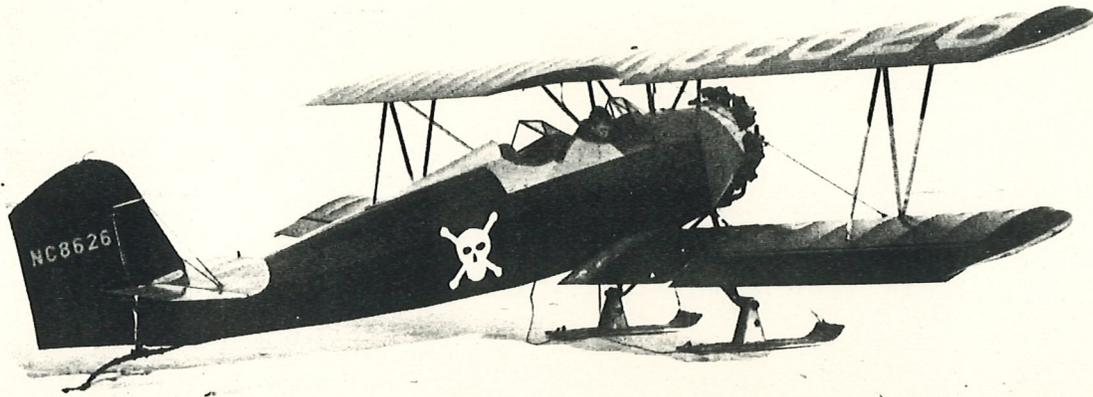
lopment.

Listed below are specifications and performance data for the Fleet Model 1 as powered with the 110 h.p. Warner "Scarab" engine: length overall 20'9"; hite overall 7'10"; wing span upper & lower 28'0"; wing chord both 45"; wing area upper 100 sq.ft.; wing area lower 95 sq.ft.; total wing area 195 sq.ft.; air-foil "Clark Y-15"; wt. empty 1022; useful load 558; payload with 24 gal. fuel was 232 lbs.; gross wt. 1580 lbs.; max. speed 113; cruising speed 95; landing speed 44; climb 780 ft. first min. at sea level; service ceiling 14,300 ft.;

gas cap. 24 gal.; oil cap. 2.5 gal.; cruising range 360 miles; price at the factory was \$5750. A reissue of the amended type certificate allowed extra fuel and a higher gross load, figures are as follows; wt. empty 1075; useful load 745; payload with 55 gal. fuel was 232 lbs.; gross wt. 1820 lbs.; maximum and cruising speeds were still comparable; landing speed jumped to 50 m.p.h.; climb 680 ft. first min. at sea level; service ceiling 13,020 ft.; total gas cap. 55 gal.; cruising range 750 miles. The fuselage framework was built up of welded chrome-moly steel tubing, lightly



Fig. 67. A few of the early Fleets had "bath-tub" cockpits.



*Fig. 68. The Fleet was a versatile craft; it is shown here on skis.*

faired to shape with wood fairing strips and fabric covered. The extra rugged wing framework was built up of heavy-sectioned solid spruce spars and heavy gauge stamped-out aluminum alloy wing ribs, also fabric covered. All wing and center-section struts were of heavy gauge chrome-moly steel tubing in a streamlined section, with interplane bracing wires of heavy gauge steel, also in streamlined section. The landing gear was of the robust "cross-axle" type with an "oleo strut" built into the lower end of each "vee". The upper wing was built into a one-piece section, and the gravity-feed fuel tank was mounted into the center portion. The fabric covered tail-group was built up of welded chrome-moly steel tube spar members and sheet steel ribs and formers. All tail surfaces were of

heavy cross-section, and the horizontal stabilizer was of a cambered "lifting section", a feature that was retained on Fleet models throughout the whole series. The fin was ground adjustable and the horizontal stabilizer was adjustable in flight; ailerons of the Freise offset-hinge type were on the lower panels only and were operated through a positive acting torque tube and bellcrank action. Like the earlier "Husky Junior", the "Fleet" was light and quick on the controls, nimble and eager, and it was capable of the complete retinue of aerobatic maneuvers; maneuvers that were only limited by the pilot's ability and his fortitude. The next development in the Fleet sport-trainer was the Kinner powered Model 2; see chapter for A.T.C. # 131 in this volume.

A.T.C. #131  
(6-29)  
FLEET MODEL 2

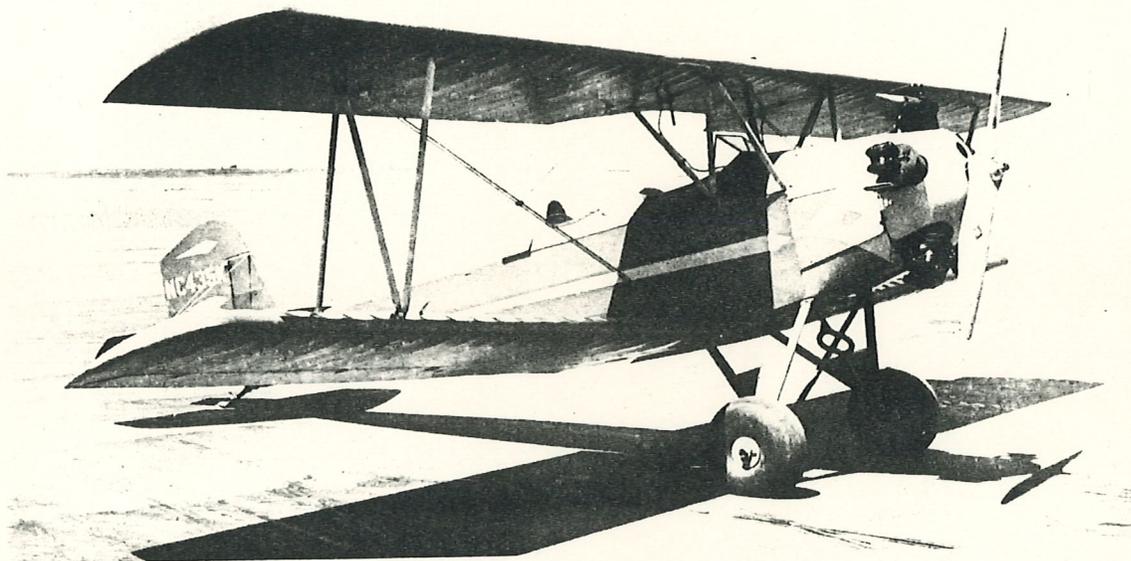


Fig. 105. *The Fleet Model 2 with 100 h.p. Kinner K5 engine.*

The Fleet Model 2 was a companion offering to the Fleet Model 1, and was just about typical in all respects except for the engine installation which in this case was the 5 cylinder Kinner K5 engine of 100 h.p. Performance of this twin to the Model 1 was more or less typical, and it shared all of the inherent qualities and characteristics that made the Fleet sport-trainer such a great favorite. Of the 350 or so that were built into 1930, perhaps well over one-half of this number were of the Model 2 version, which was produced in the greatest quantity and was undoubtedly the most popular. Designed primarily for training purposes, the Fleet Model 2 was being used extensively by flying schools all over the country, and had trained thousands of pilots. Never bragging of speed as one of its cardinal virtues, the Fleet nevertheless cruised along happily at about 90 m.p.h., with an eagerness coursing through it that was easily felt by any pilot. The ability to perform any aerobatic maneuver then known was its outstanding quality, and its rugged structure was well able to withstand the abuse of excessive air loads. Performing outside loops was a mania that developed during 1929 and 1930, the outside loop was an abnormal

maneuver both to airplane and to pilot, that was often used to prove to one and all the excellent design and sound structure of an airplane. Some manufacturers cried loud and long if their product performed one, or maybe two, and before long, the record stood at 19; Paul Mantz, stunt-pilot that he was, decided to get in the act with his Fleet 2 and racked up a record of 46 outside loops in 1930. Though capable, the Fleet was also quite friendly and gentle, and remained quite a favorite with the private-owner for just plain fun flying. Due to the strong character of the Fleet, and in view of the large number that were built, it is not unusual that a very good number have been restored to active life and are flying yet, to this day.

During the course of continuous development, the Fleet biplane was tried out with several of various powerplants; the Fleet Model 3 was a version that was powered with the 5 cylinder Wright J6 series engine of 165 h.p. and two were built as special-purpose aircraft, but the version never reached production; the Fleet Model 4 was a version that was powered with the 6 cylinder Curtiss "Challenger" engine of 170 h.p. for test; the Fleet Model 5 was a version powered with the 6

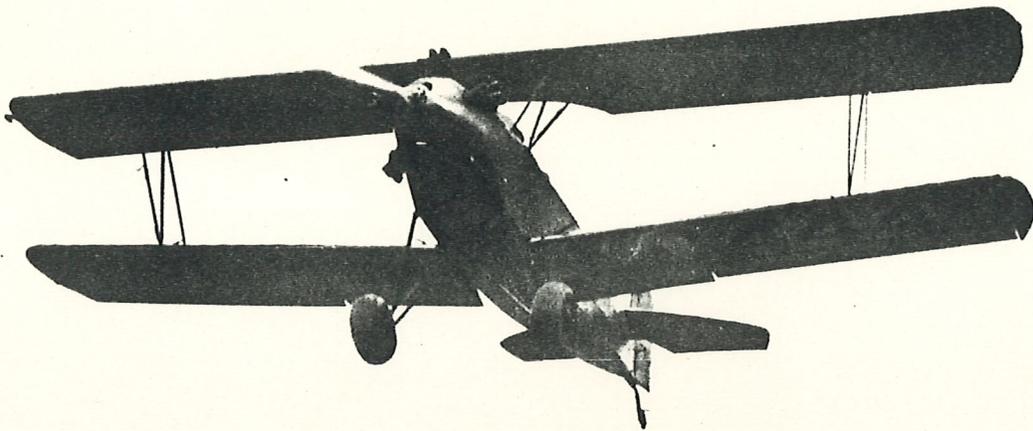


Fig. 106. *The brawny Fleet was not much on speed, but it performed with eagerness.*

cylinder Brownback C-400 engine of 90 h.p. and was to have been slated for limited production but further details beyond the one example built are unknown; a special version of the Fleet was built for testing hook-on pick-ups onto a trapeze affair that projected below the belly of a dirigible, this model is believed to be the Fleet 6; among other versions tested was a Fleet 1 Special that was powered with the new 4 cylinder inverted Menasco "Pirate" engine of 95 h.p.; during the course of all this experimentation with the various combinations, normal production of

about two planes per day, both in the Fleet 1 and Fleet 2, continued and by the end of 1930, some 350 examples had already been built. The type certificate number for the Fleet Model 2 as powered with the Kinner K5 engine, was issued in June of 1929 for a landplane version and amended in October of 1929 to include the seaplane version with twin-float gear; both versions could be equipped with a "belly tank" for a total fuel load of 55 gallons. The Fleet biplane was manufactured by the Fleet Aircraft, Inc. at Buffalo, New York. Lawrence D. "Larry" Bell

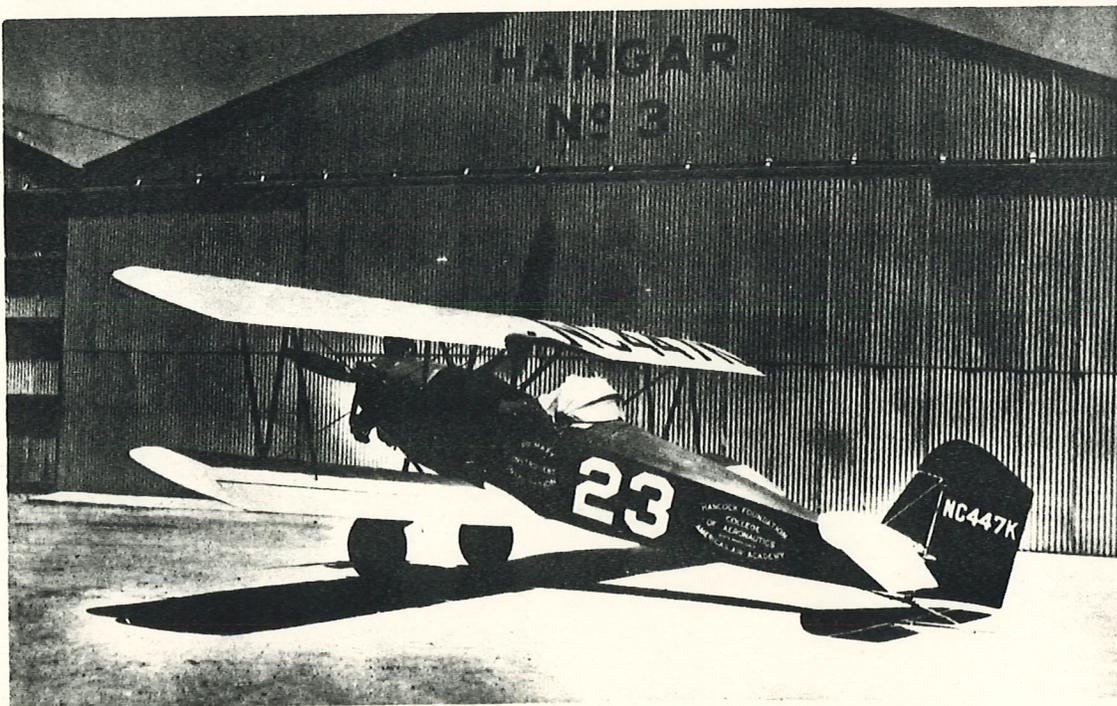


Fig. 107. *An ideal trainer, the Fleet Model 2 is shown here with blind-flying hood.*

was the president and general manager; Joseph M. Gwinn Jr. was the chief engineer; and William B. "Bill" Wheatly was the chief pilot in charge of test and development.

Listed below are specifications and performance data for the Fleet Model 2 as powered with the 100 h.p. Kinner K5 engine; length overall 20'9"; hite overall 7'10"; wing span upper & lower 28'0"; wing chord both 45"; wing area upper 100 sq.ft.; wing area lower 95 sq.ft.; total wing area 195 sq.ft.; airfoil "Clark Y-15"; wt. empty 1010 (1063); useful load 565 (757); payload with 24 gal. fuel was 239 lbs.; payload with 55 gal. fuel was 237 lbs.; gross wt. 1575 (1820) lbs.; max. speed 113; cruising speed 95; landing speed 44 (50); climb 780 (680) ft. first min. at sea level; service ceiling 14,300 (13,020) ft.; gas cap. 24 (55) gal.; oil cap. 2.5 gal.; cruising range 360 (750) miles; price at the factory was \$5500; the figures in brackets represent data for the landplane with "belly tank" and max. fuel load of 55 gallons. The following figures are for the seaplane version as mounted on twin floats; wt. empty 1183 (1223); useful load 543 (728); payload with 24 gal. fuel was 217 lbs.; payload with 55 gal. fuel was 208 lbs.; gross wt. 1726 (1951) lbs.; max. speed 103; cruising speed 88; landing speed 48 (52); climb 700 (620) ft. first min. at sea level; service ceiling 13,000 (12,500) ft.; the figures in brackets represent data for the seaplane version with "belly tank" and a max.

fuel load of 55 gallons.

The fuselage framework was built up of welded chrome-moly steel tubing, lightly faired to shape with wood fairing strips and fabric covered; the fuselage frame was a rugged structure of exceptional rigidity and weighed only 87 pounds. The bucket seats were formed of aluminum sheet and had deep wells for holding a parachute pack; quite unusual were the little rectangular windshields which were a carry-over from the Army PT series. The extra rugged wing framework was built up of heavy-sectioned solid spruce spar beams and heavy gauge stamped-out aluminum alloy wing ribs; the leading edges were covered back to the front spar to preserve the airfoil form and the completed framework was fabric covered. The fabric covering was fastened to the wing ribs with self-threading metal screws that were covered with fabric tape. The upper wing was built into a one-piece section, and the gravity-feed fuel tank was mounted in the center portion; the upper wing also had a large trailing edge cut-out and handgrips for ease of entry and exit to the front cockpit. All wing and center-section struts were of heavy gauge chrome-moly steel tubing in a streamlined section, with interplane bracing wires of heavy gauge steel, also in a streamlined section. The landing gear was of the robust "cross-axle" type with an "oleo strut" built into the lower end of each "vee"; wheels were 24x4. The fabric covered tail-

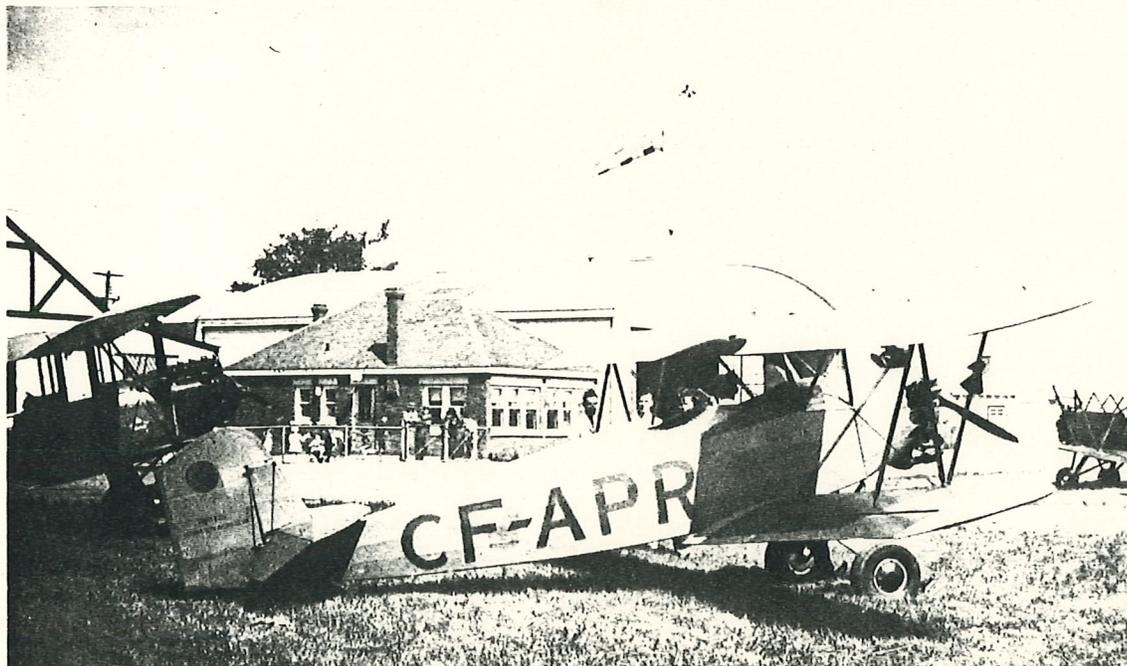


Fig. 108. A Fleet Model 2 in Canadian service; the Fleet was popular for training and sport.



*Fig. 109. The Fleet Model 2 traded its wheels for skis in winter flying.*

group was built up of welded chrome-moly steel tube spar members and sheet steel ribs and formers. All tail surfaces were of heavy cross-section, and the horizontal stabilizer was of a cambered "lifting section", a feature that was retained on Fleet models throughout the whole series. The fin was ground adjustable and the horizontal stabilizer was adjustable in flight; ailerons of the Freise offset-hinge type were on the lower panels only and were operated through a positive acting torque tube and bellcrank action. Like the earlier

"Husky Junior", the "Fleet" was light and quick on the controls, nimble and eager, and it was capable of the complete retinue of aerobatic maneuvers; maneuvers that were only limited by the pilot's ability or his fortitude. The next development in the standard Fleet biplane was the Model 7, that was powered with the 5 cylinder Kinner B5 engine of 125 h.p., and introduced in the latter part of 1930; this model will be discussed in the chapter for A.T.C. # 374.