COX-KLEMIN AIRCRAFT CORPORATION

CONSULTING, DESIGNING AND CONSTRUCTING ENGINEERS

CONTRACTORS TO U. S. NAVY, U. S. ARMY AIR SERVICE, AIR MAIL

MEMBERS OF THE AERONAUTICAL CHAMBER OF COMMERCE

BALDWIN, L. I., N. Y.

FIFTY MINUTES FROM PENN STATION ON L. I. R. R.

ORGANIZATION, PLANT FACILITIES AND PERSONNEL

Location:

The plant is situated in Baldwin, L. I., and is within a few miles of a number of flying fields and air ports. It is located right at the Baldwin Station of the Long Island Railroad, which is about fifty minutes from the Pennsylvania Terminal in New York City, with trains every hour.

It is right in the center of airplane activities in Long Island, an abundant supply of skilled airplane mechanics being always available.

Its proximity to such industrial centers as New York, Brooklyn and Long Island City, is ideal for the prompt securing of materials of every kind.

Layout of the Plant.

The general layout of the plant is ideal for the construction of aircraft, with offices engineering and drafting rooms, metal shop, forge shop, wood mill, assembly shop, and engine testing stand, close together and suitably laid out relative to one another with every facility for moving raw material to the shops and finished parts to the assembly room. The equipment of the metal shop, forge shop, wood mill and assembly is complete and specially provided for seaplane or airplane construction in either metal or wood. The floor space comprises 35,000 square feet. The metal shop comprises heavy lathes, milling machines, power and hand presses, metal saws, hand and power brakes, bench equipment and similar equipment. The wood shop is equipped with a full line of saws, planes, joiners, universals, drills, and other wood-working machines. A full line of equipment for sand testing parts of planes and entire planes has been constructed in the shops.

Executive Personnel.

The Directors include a small number of prominent business men, who bring to bear a solid business experience and solid financial backing to the work of the corporation. The officers are airplane men fully conversant with the problems of aircraft construction and the requirements of commercial aeronautics. The President of the Corporation has a war record 3½ years flying, long experience in testing and cross-country flying work, and holds the American record for carrying the largest number of passengers, as well as the altitude record for 15 passengers.

The Engineering Personnel.

Includes engineers of the highest standing in the industry, working in close co-operation with an experienced test pilot, and good shop men, together with a number of skilled airplane draftsmen. The engineering department is supported by a well-equipped library, technical magazine, airplane records, files and blue-prints the result of eight years careful work, kept scrupulously up-to-date.

The engineering department, and its original organization under the firm of Alexander Klemin and Associates, Consulting Aeronautical Engineers, New York, has since the Armistice in November, 1918, been responsible for the successful design of a small single-seater for commercial purposes, of a small single-seater for Navy ship board use, of a Marine Expeditionary Plane, of an Army Training Plane, among other ships, and has also a 100 per cent record of successes in design competitions of the Navy, and Army Air Service.

Shop Personnel.

The shop personnel comprises a superintendent with many years experience in the construction of aircraft, and highly skilled aircraft mechanics, specialists in wood construction, metal construction, aviation engine work and assembly. Skill, experience and loyalty are to be found in every man employed in the shop.

COX-KLEMIN AIRCRAFT CORPORATION

Baldwin, L. I., N. Y.

SPECIFICATIONS FOR MODEL CK-2A TRAINING PLANE

The Cox-Klemin CK-2A Airplaane is designed for training pilots. It has all the flying qualities that such an airplane should have, and has been completely tested under all conditions of manoeuver by numerous different pilots. Exceptional merit has also been demonstrated in long distance cross country flying. One trip for instance was made from New York to San Antonio, Texas, with fuel capacity for continuous flights of five hundred miles.

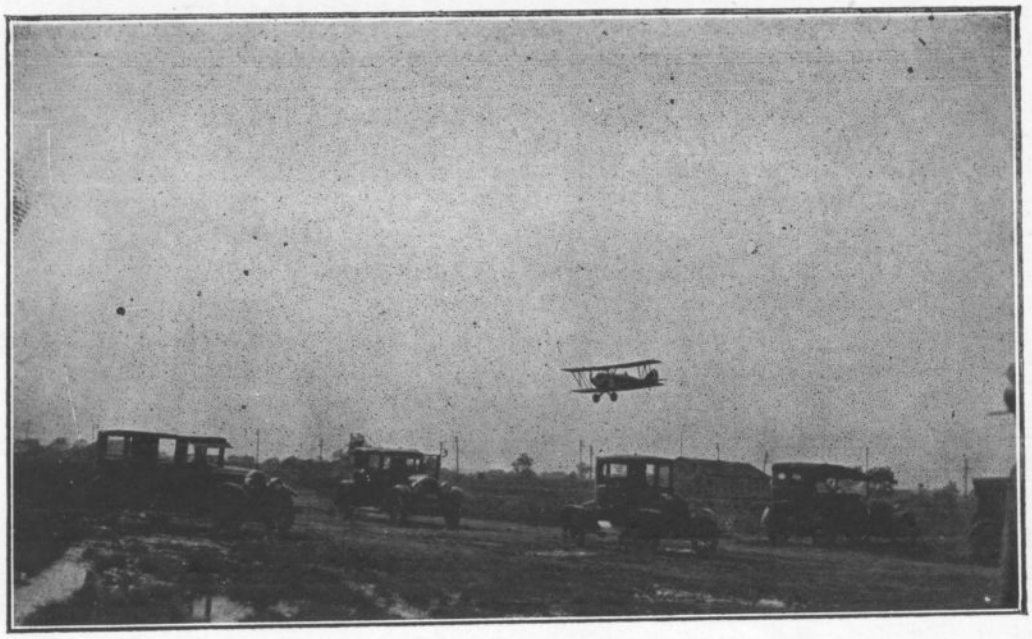
In regard to its general structural characteristics this airplane represents the latest word in aircraft construction.

The fuselage frame is constructed entirely of welded steel tubing, no wires being used except over the gasoline tank to facilitate easy removal of the tank and over the motor mount to facilitate easy engine installation. The motor mount is exceptionally rigid.

The upper and lower wings are interchangeable. The external wires are streamline.

The interplane struts are of steel tubing with adjustable ends where adjustment is desirable. The rib webs are of mahogany plywood with capstrips and reinforcements of spruce. The box spars are of spruce.

The fuel system is a combined gravity and direct pump feed. The pump is a wind driven gear pump and supplies the fuel directly to the carbureter in regular flight. There is a surplus of fuel from the pump that goes to the gravity tank which is always kept full as an emergency reserve with a small continuous overflow going back to the main tank through a sight guage.



The landing gear is notable for its clean design of the divided axle type, its durability, and ease of assembly, no wires being used. It is constructed of welded steel tubing and special heat treated alloy steel tubing.

The highest engineering standards have been maintained thruout the structure.

From the manufacturing viewpoint this airplane is a production job. It is not only easy to manufacture but is also very easy to repair, a very important consideration for training planes.

Type of Motor:

180 H. P. Wright-Hispano.

Performance:

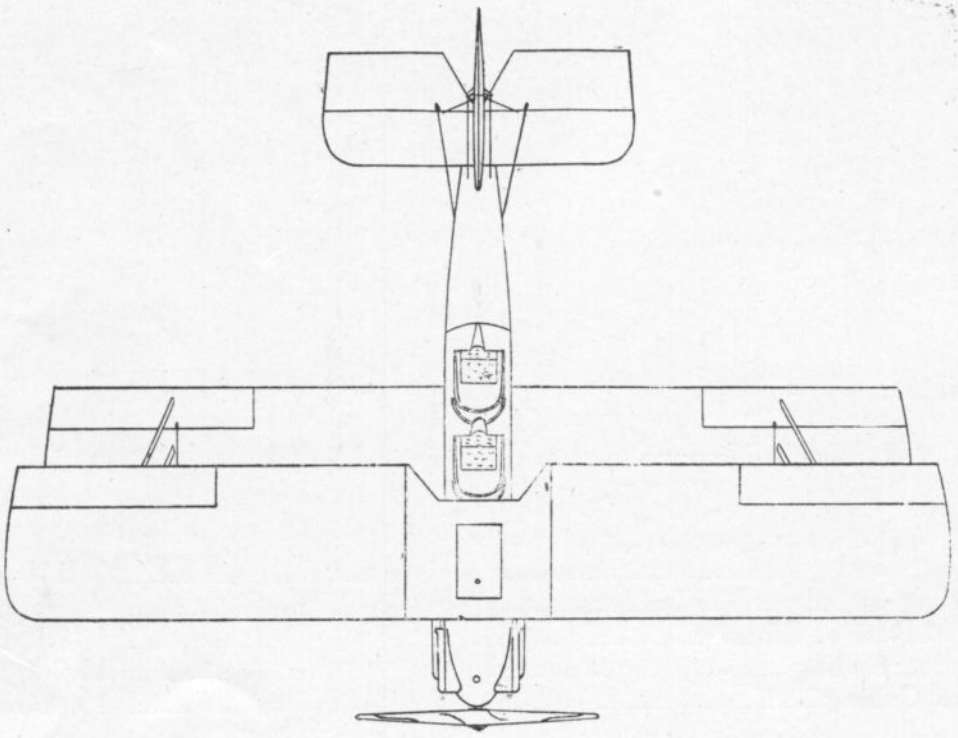
High Speed	110 m.p.h.
Stalling Speed	40 m.p.h.
Initial Rate of Climb	900 ft. per min.
Service Ceiling	13,300 ft.
True Ceiling	15,000 ft.

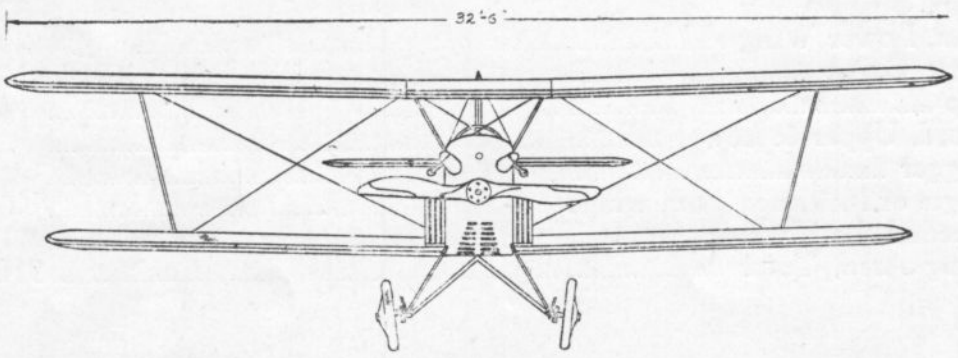
Main Dimensions:

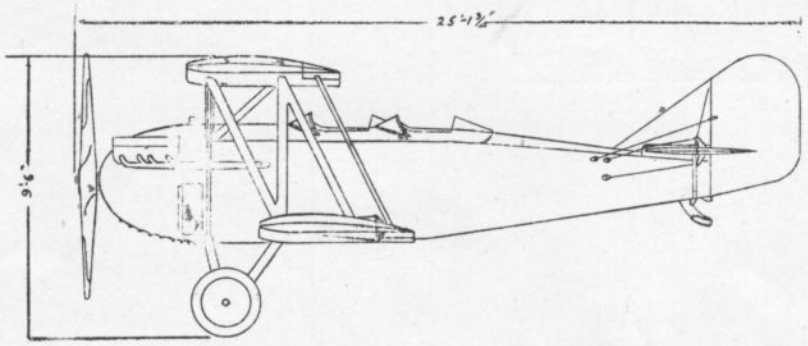
Overall Length		25 ft. 1¾ in.
Overall Height		9 ft. 6 in.
Span, Upper Wing		32 ft. 6 in.
Span, Lower Wing		29 ft. 10 in.
Wing Curve	Clark Y	
Gap		64 in
Chord, Upper & Lower		64 in
Stagger		30 in.
Angle of Incidence, both wings	0°	
Dihedral, both wings	1½°	
Wing Area, Total	310 sq. ft.	

Weight:

Weight Empty with Water		1,508 lbs.
Crew (2)	360 lbs.	
Gasoline (43 gal.)	258 lbs.	
Oil (4.5 gal.)	34 lbs.	
Equipment	65 lbs	717 lbs.
Weight Fully Loaded		2,225 lbs.







COX-KLEMIN CK-2A 180 H. P. MOTOR

COX-KLEMIN AIRCRAFT CORPORATION

Baldwin, L. I., N. Y.

SPECIFICATIONS FOR MODEL XS-1 SEAPLANE SINGLE SEATER

This Airplane built for the U. S. Navy has attracted considerable favorable attention in this country and abroad. It is a small seaplane used for short distance reconnaisance service and is capable of taking off the deck of a vessel with the aid of a catapult and from the water under its own power.

This twin float seaplane is specially designed to be readily taken down and assembled on the deck of a vessel.

The fuselage is of the welded steel structure type.

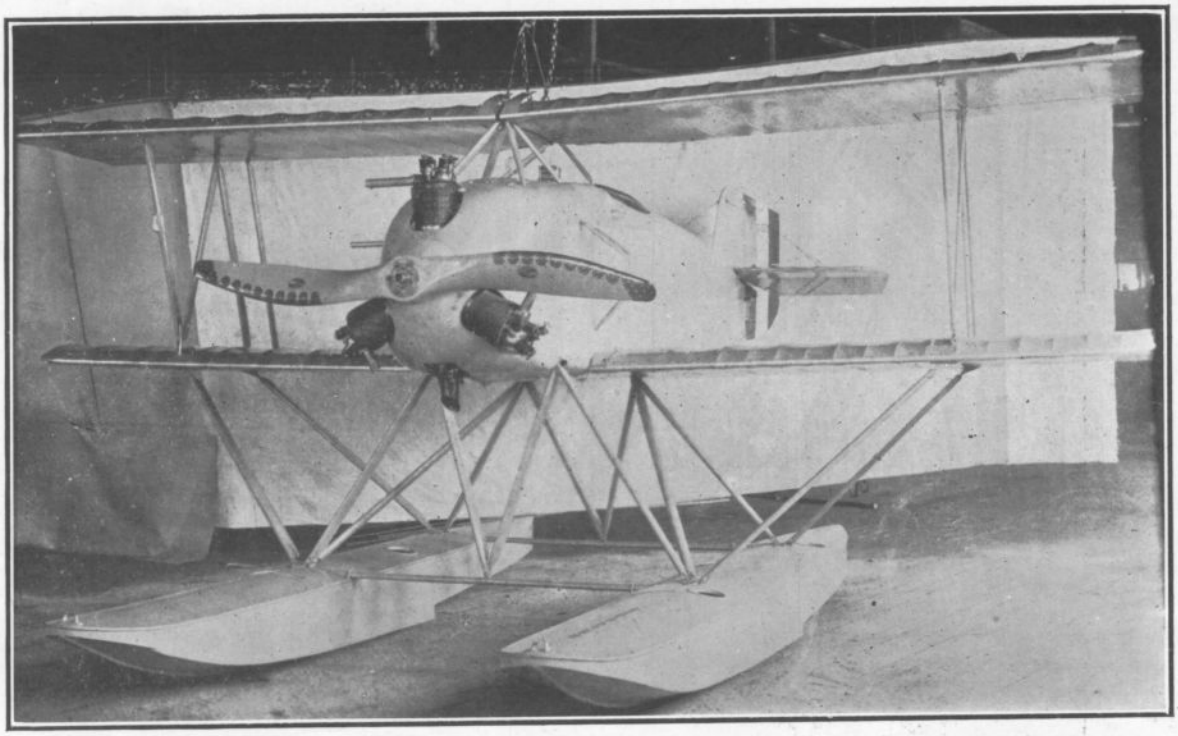
The wing truss is a continuation of the pontoon bracing. There are no exposed wires in this system and all the struts are made of steel tubes.

The pontoons are constructed of a series of spruce frames and bulkheads fastened together by means of duralumin gussets and rivets.

The top and side planking is made of white pine over which is laid cotton sheeting treated with marine glue. The bottom is double diagonal planking of cedar.

The ailerons are connected to the control stick by means of steel tube push rods. Tail surfaces are braced to the fuselage by steel wires and are connected to the controls by flexible cables. The stabilizer is adjustable on the ground.

The motor can be started, while afloat, by the pilot with a hand crank. The motor is mounted on a plywood bulkhead with a system of steel tube bracing carrying the stresses directly into the fuselage.



Main Dimensions:

Overall Length	18 ft.
Overall Height	8 ft.
Span	18 ft.
Wing Curve	U. S. A. 27
Gap	3 ft. 6 ins.
Chord, Upper & Lower	3 ft.
Stagger	10¾ ins.
Angle of Incidence, both wings	2°
Dihedral, both wings	1½°
Wing Area, total, including ailerons	99 sq. ft.

Weight:

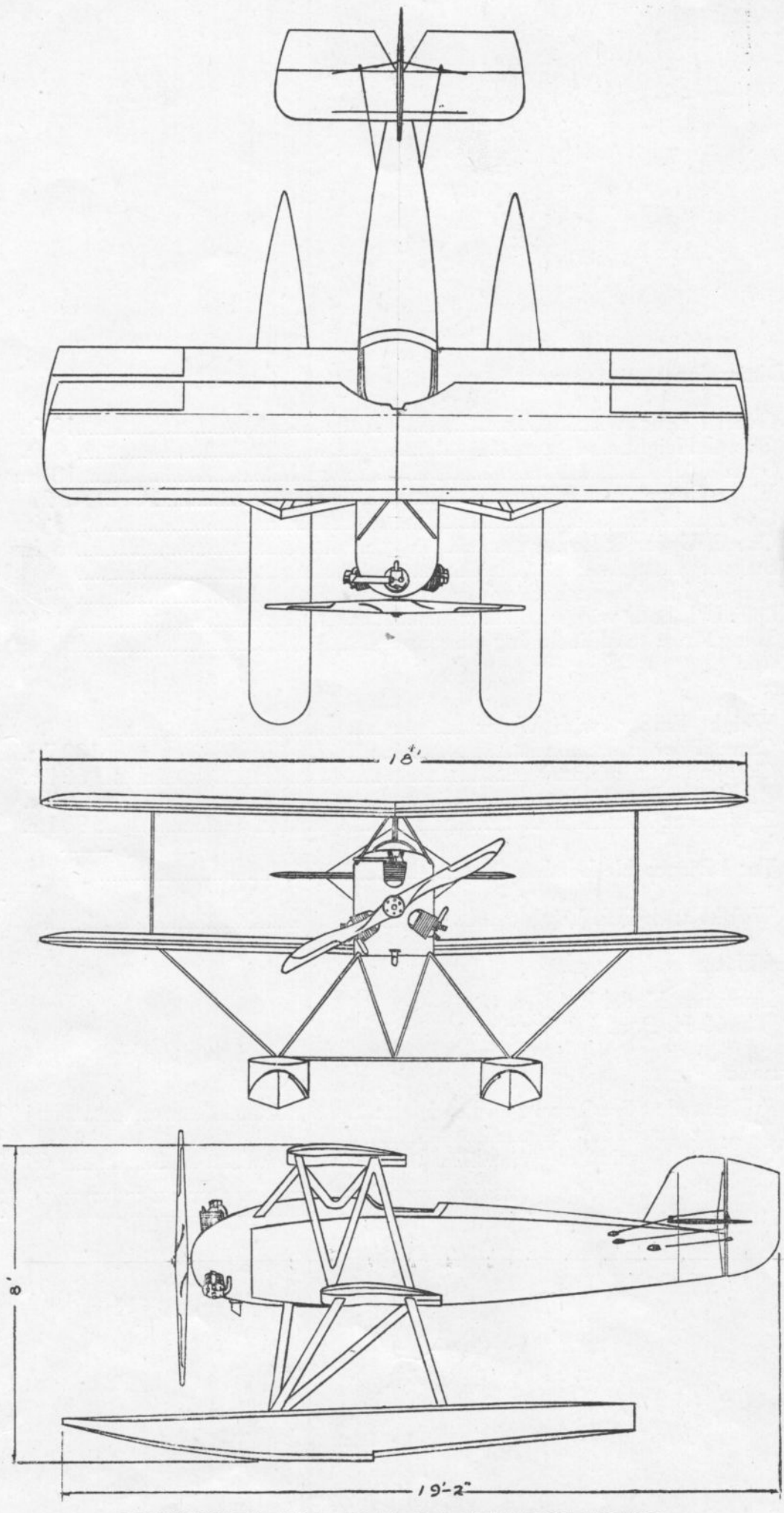
Weight Empty, with Water		642 lbs.
Crew, Pilot	180 lbs.	
Gasoline (11 gallons)	66 lbs.	
Oil (0.8 gallons)	6 lbs.	
Equipment	98 lbs.	
Total Disposable Load		350 lbs.
Weight with Full Load		992 lbs.

Type of Motor:

Lawrance Model L 4
60 H. P. at 1,800 r.p.m.

Performance:

Full Speed at Sea Level Full Load	100 m.p.h.
Landing Speed	46 m.p.h.
Climb in 10 minutes	6,200 ft.
Ceiling	9,700 ft.
Endurance, Full Speed	2 hrs.



COX-KLEMIN XS-1 60 H. P. LAWRANCE MOTOR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