



Golda Cox

The Cabin Version of the Corben Baby Ace

The cabin Baby Ace was a very popular airplane with homebuilders of the 1930 era and by today's standards still possesses many desirable qualities. On the following pages, we are reproducing detailed drawings of all the parts and structures of the cabin version of the Baby Ace. The purpose of presenting these drawings is not necessarily to encourage the construction of this model, but rather to serve as a method of evaluating construction techniques and details, and comparing them against modern day construction techniques. We venture to say that in many instances you'll note construction methods have varied little since this airplane was first built in 1933.

The cabin Baby Ace pictured here was flown to Sun 'n Fun '87 by owner Stephen Walker (EAA 236527), 5 Fair St., Nantucket, Massachusetts 02554, who's owned and flown the plane for the past couple of years. This Ace was one of five which showed up in the homebuilt line during Sun 'n Fun '87. The cabin modification to this Ace was completed by the original builder, Peter Beckloff of Hyannis, Massachusetts, after flying it as an open cockpit plane for a couple of years.



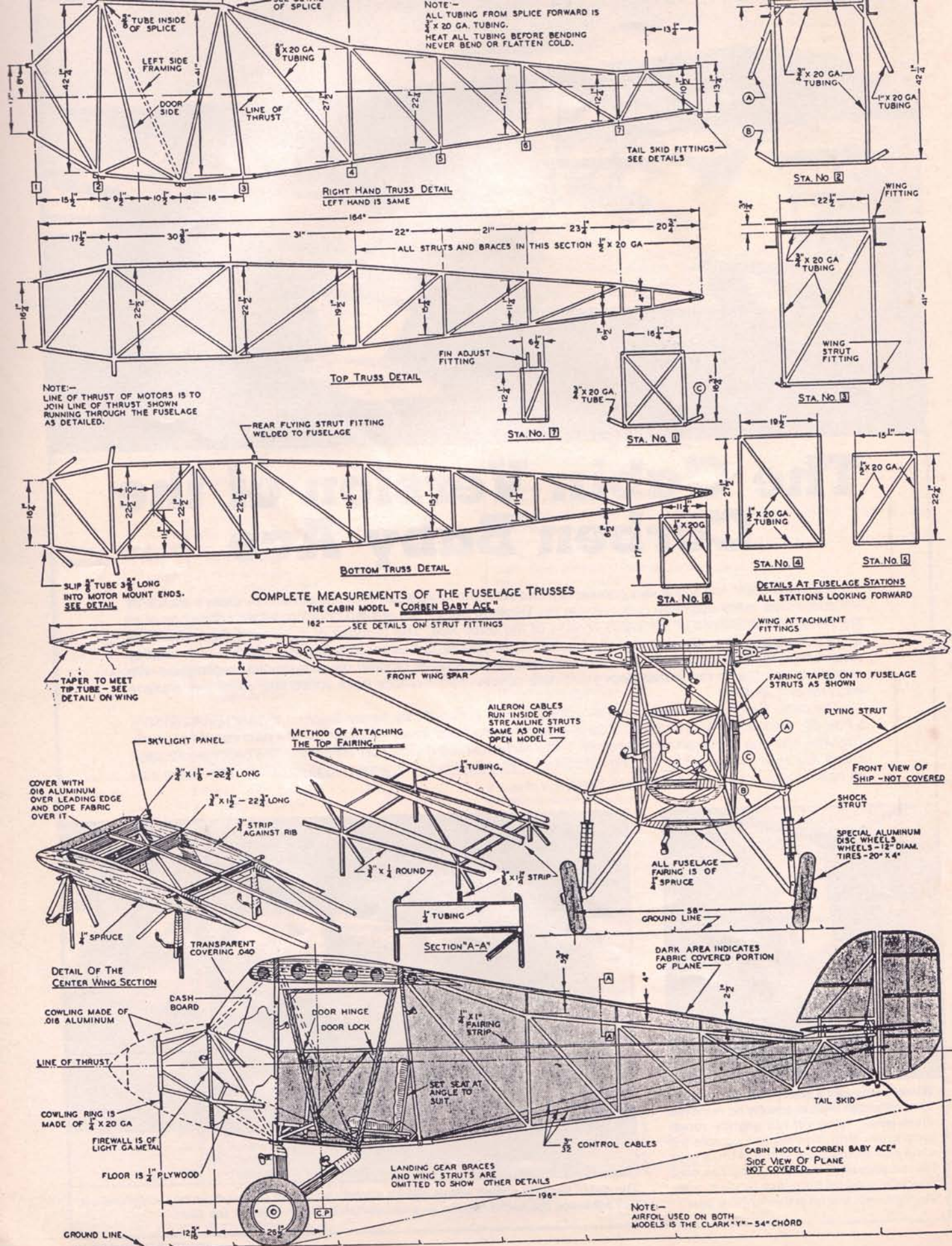
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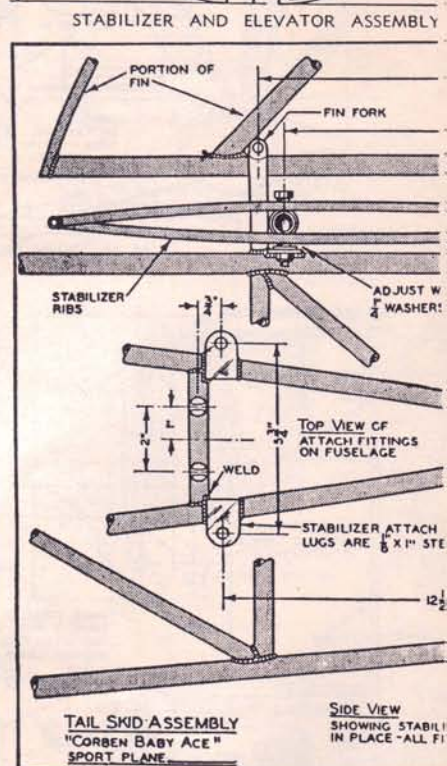
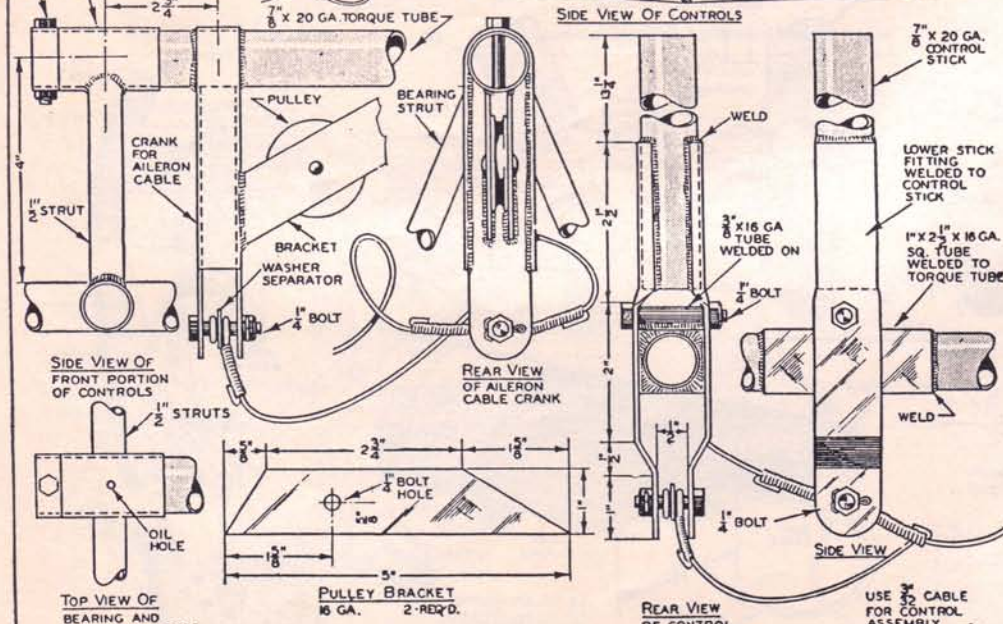
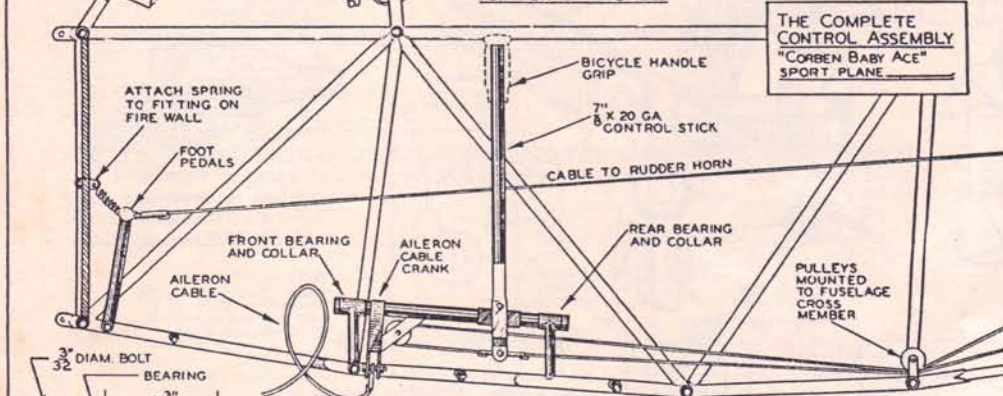
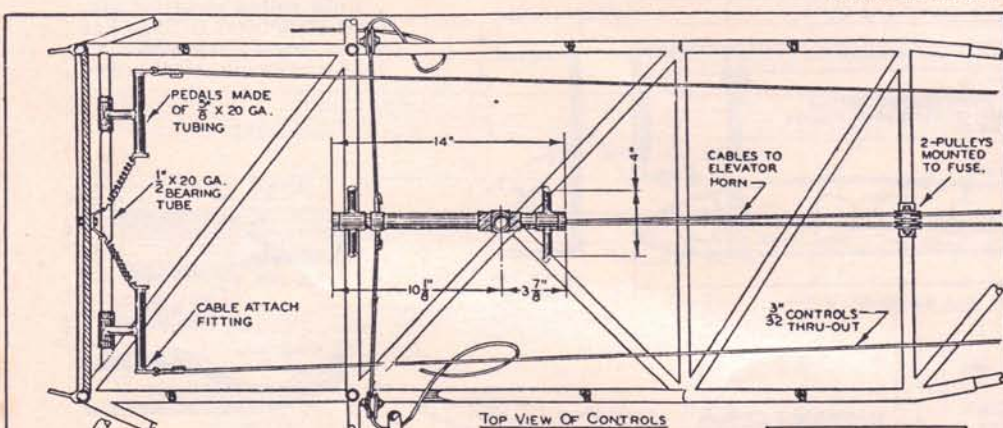
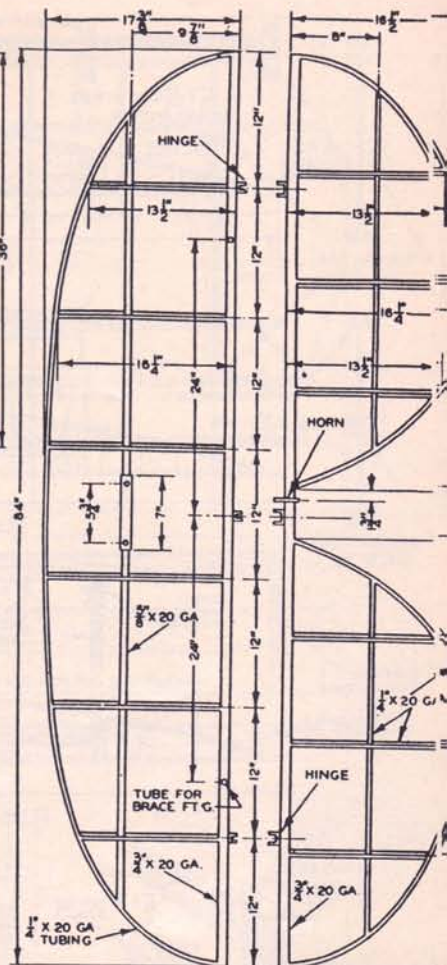
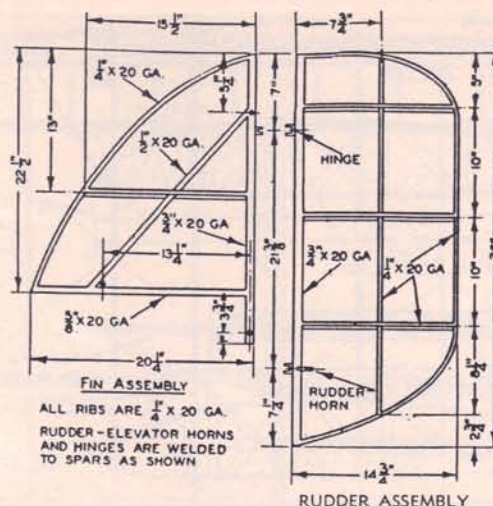
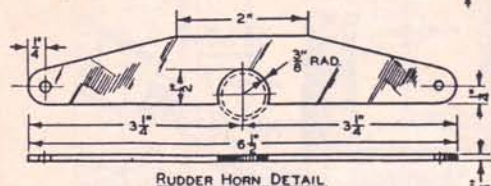
Wheel pants add a saucy look to the Baby Ace, although Walker admits he removes them when flying off his slightly rough local grass strip. You might also note the steel coil spring used in the landing gear (in compression) in place of Bungee cord typically used on Baby Ace models, making for a neat and effective landing gear.



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The cabin version shown above differs slightly from that on the drawings which follow, but achieves the same results — a comfortable, warm ride for the pilot.

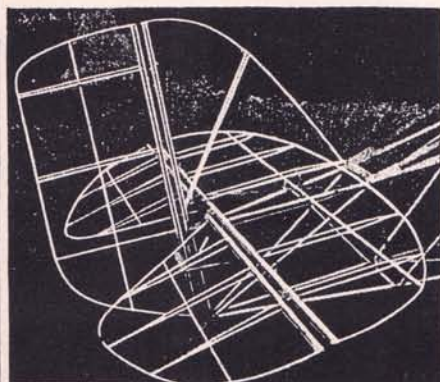




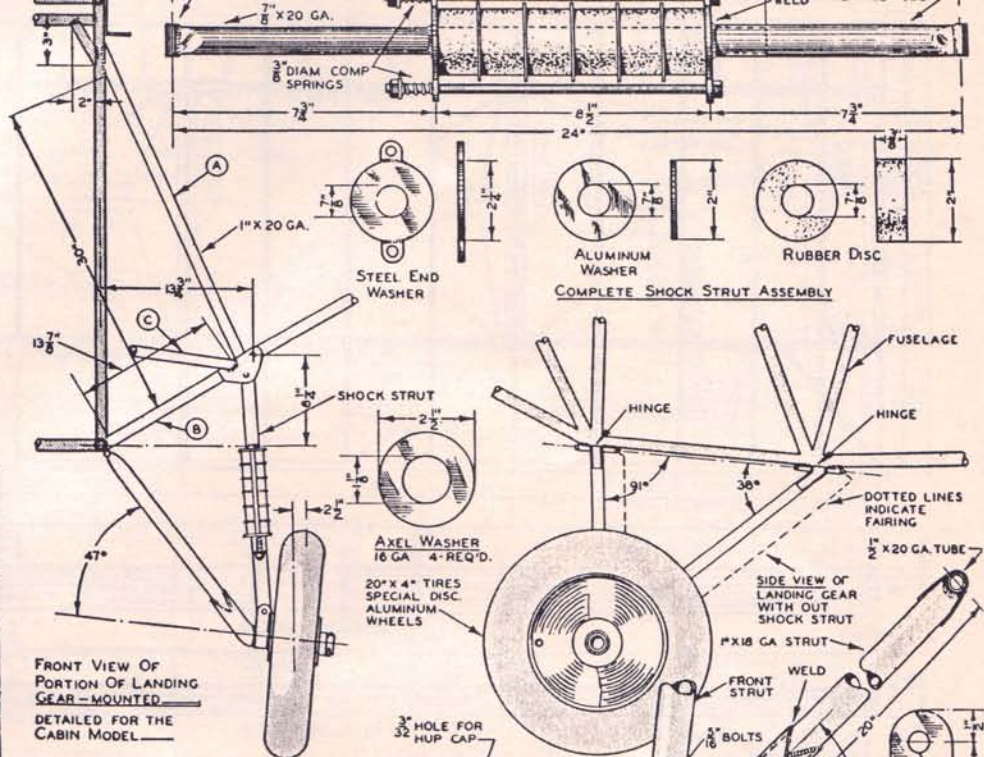
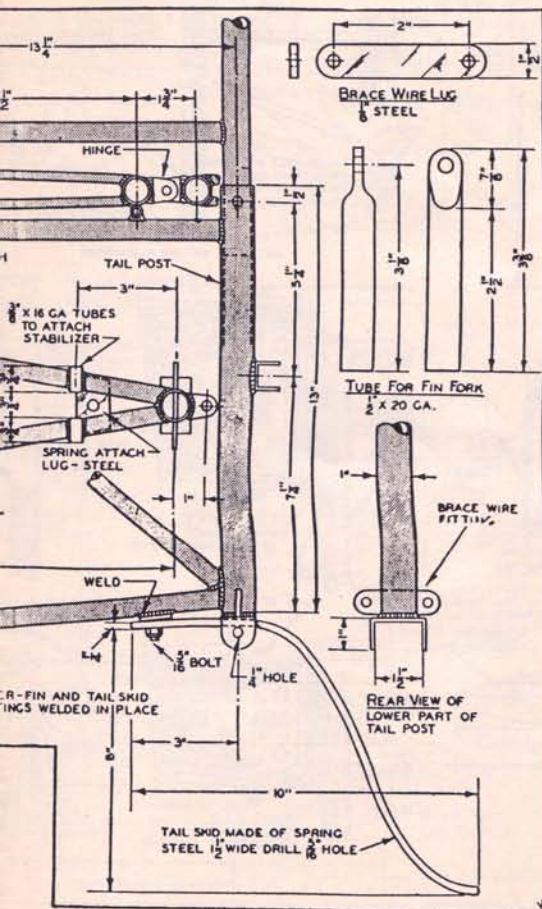
Ground adjustable stabilizers were popular for single place craft in the 1930's. Once flight testing has determined hands off level flight characteristics and the stabilizer was properly adjusted, fuel consumption or difference in pilot's weight made little difference in stick pressures

In reviewing these drawings you will note that landing gear, tail group and wing fittings have been much improved on modern day aircraft.

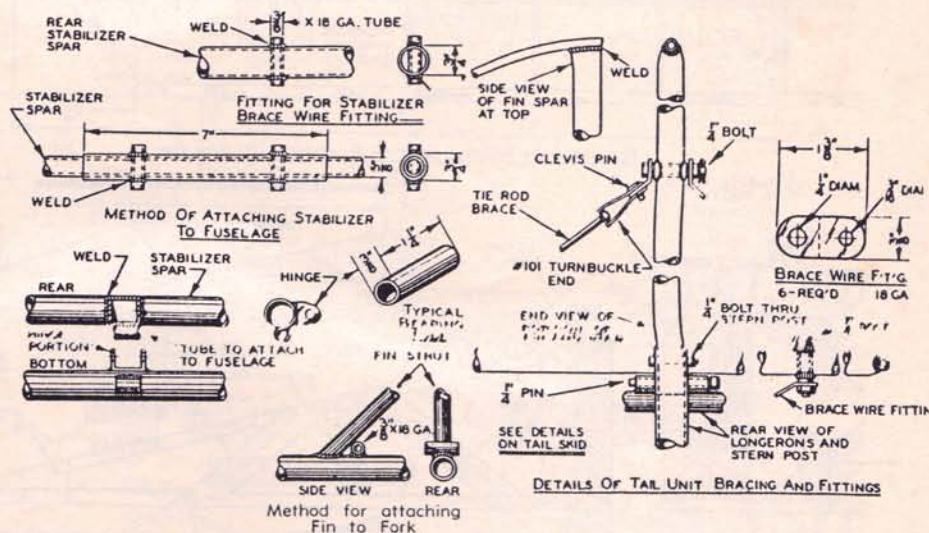
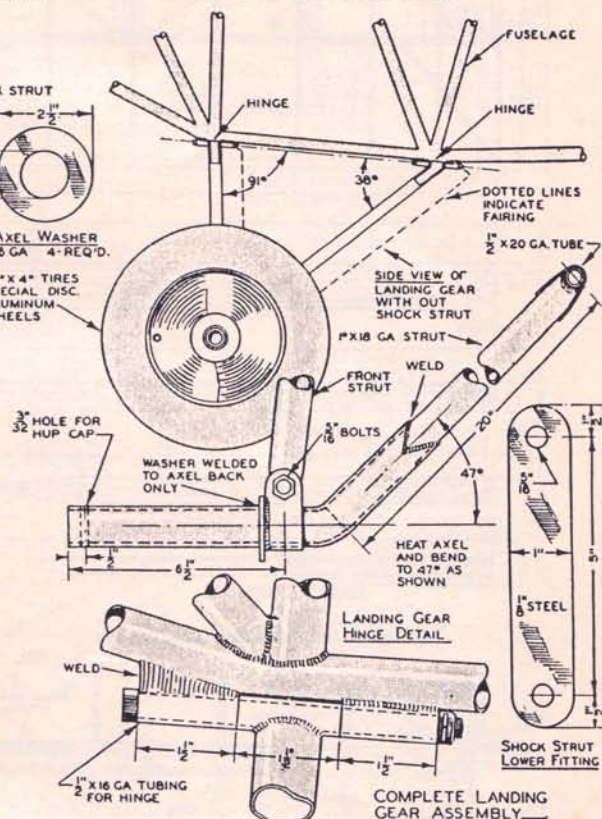
Tail Group of Steel Tube Welded



Beautifully shown here is the neat tail group in seamless steel tubing, welded.

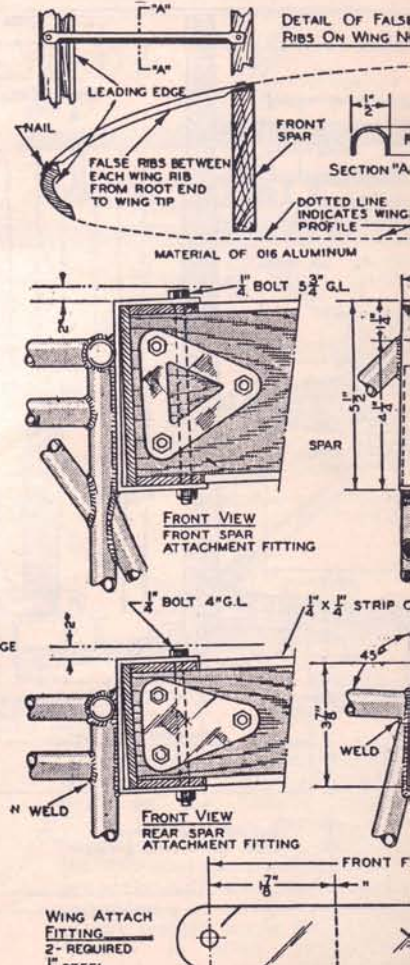
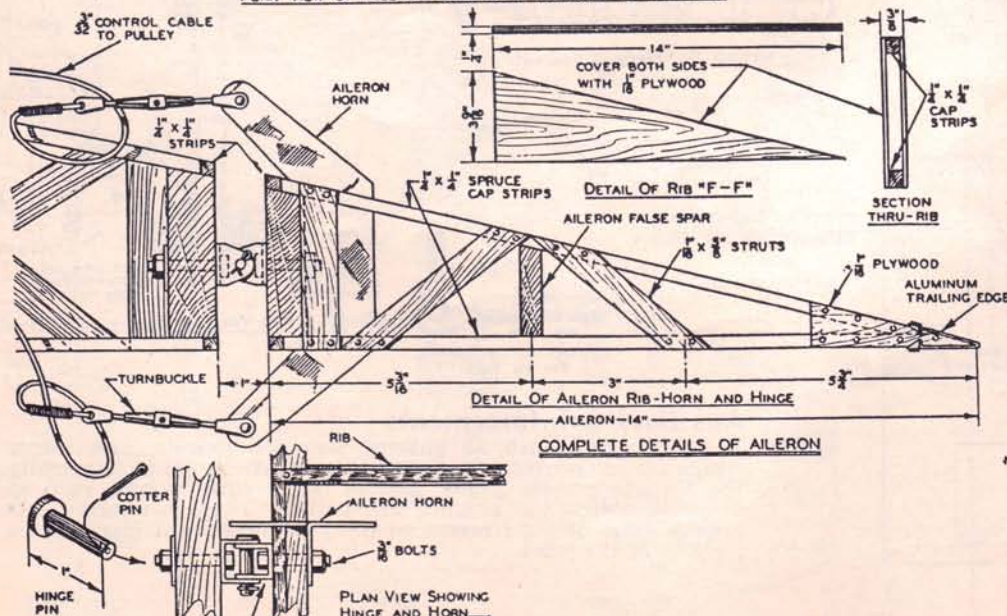
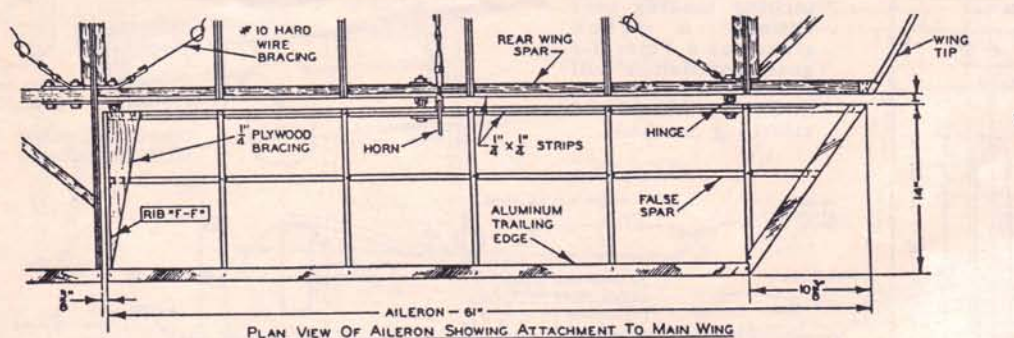
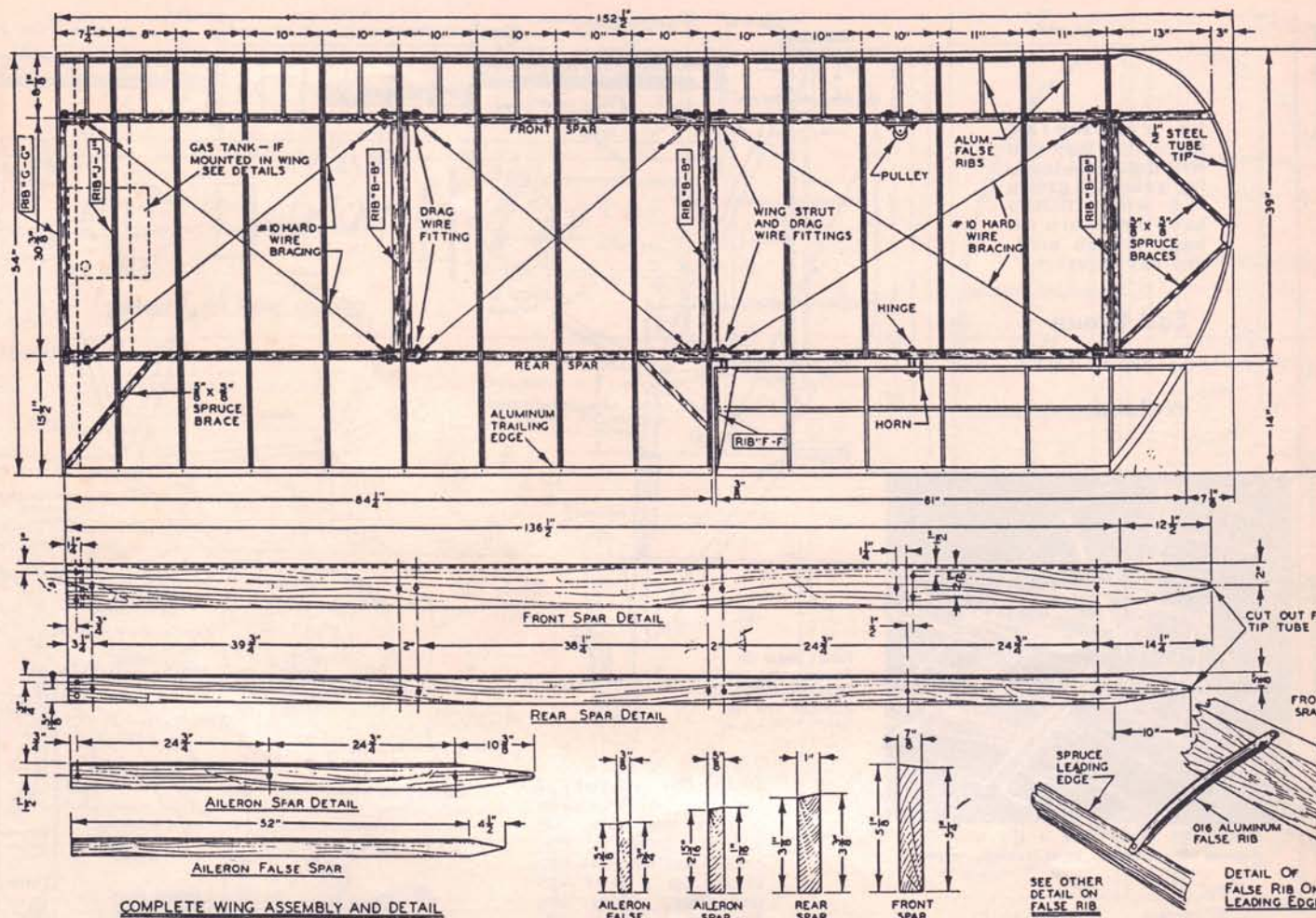


With the advent of reliable hydraulic brakes and the air wheel, today's aircraft landing gear has taken on a new appearance. Note the method used in attaching landing gear fittings. A quick glance at a Piper J-3 gear installation will reveal many improvements in fittings and attaching methods.

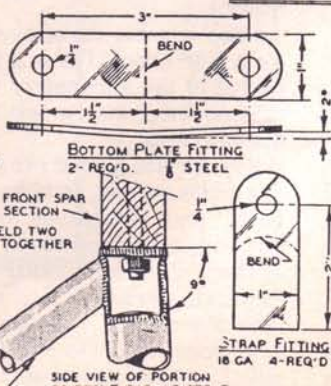
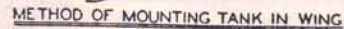
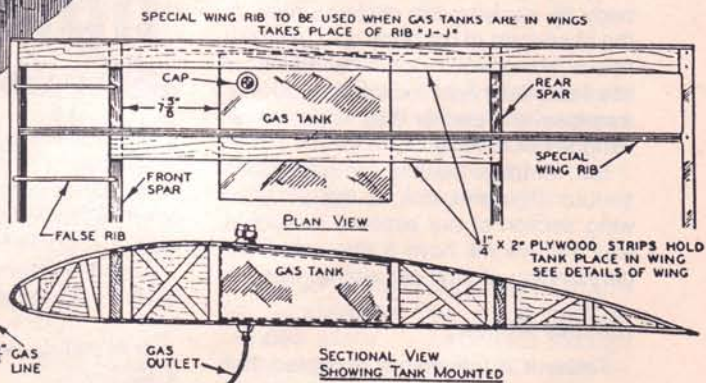
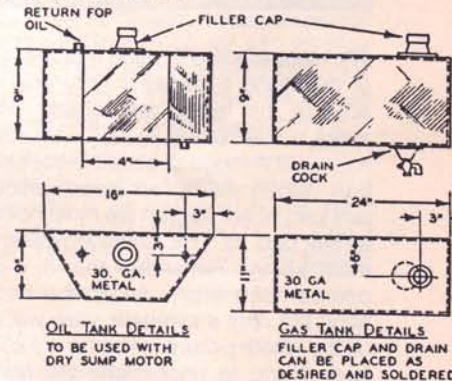
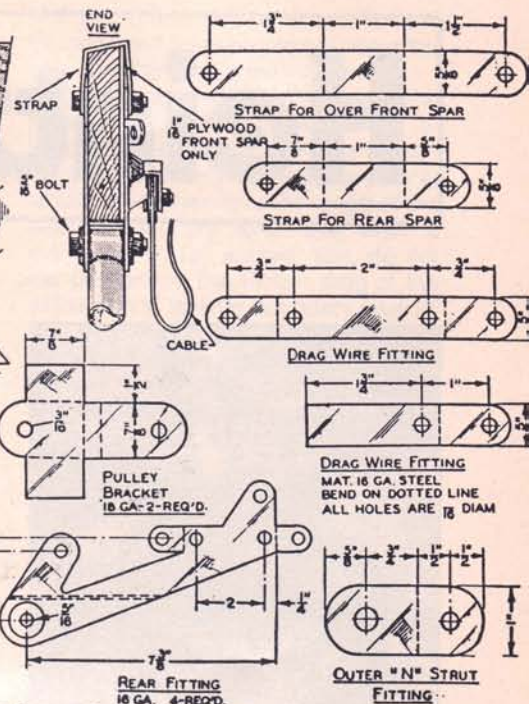
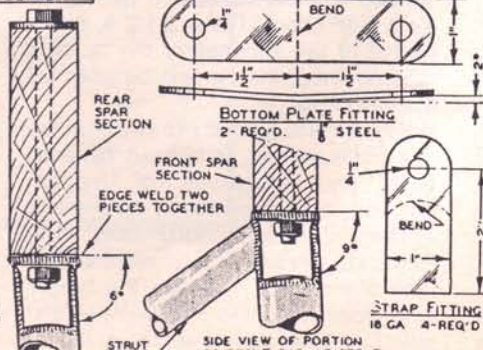
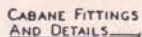
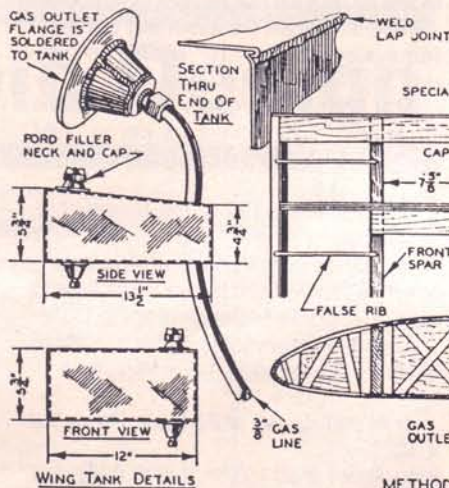
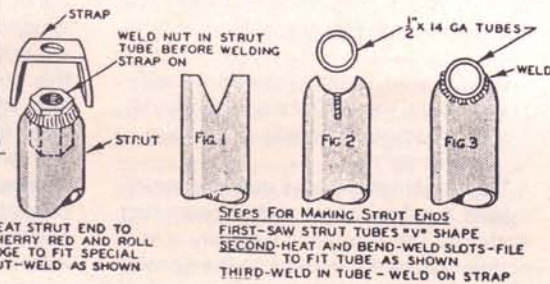
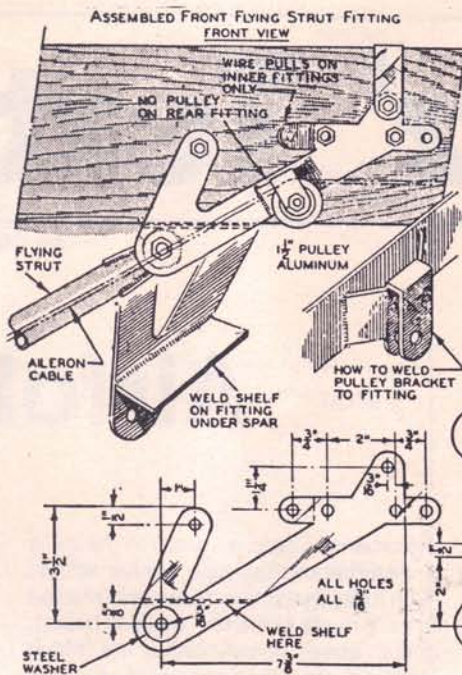
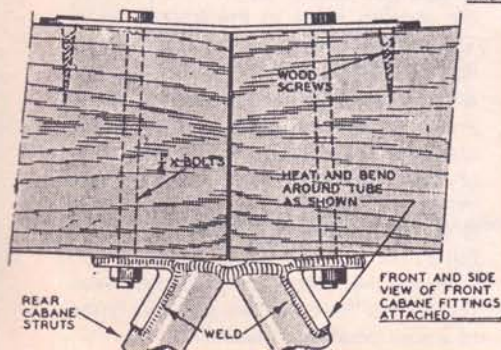
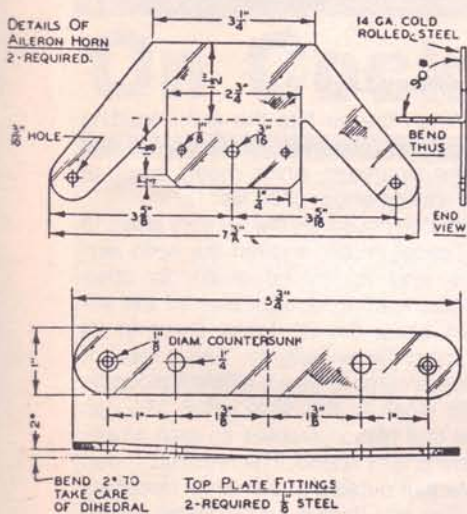
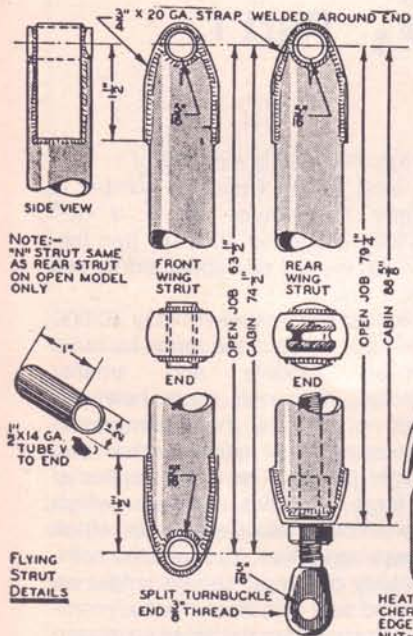


Auxiliary Reinforcements

Reinforcements such as gussets, wrapper gussets, and finger straps are often used in connection with tubular joints, especially the tee and cluster joints, and in reinforcing clamps, such as those to which the engines are bolted. These reinforcements relieve some of the stresses on the joint itself, and increase the rigidity of the joint.



Note that steel reinforcing straps are welded around the flying strut bushing ends for greater strength. This method would have been very desirable for the landing gear fittings. Today's practices call for reinforcing strap ends to be rounded or V shaped so as to divert welding stress.



Vertical spar holes for wing attachment were noted for elongation and have since been replaced with the more reliable methods. This method was popular on the Waco 10 and American Eagle of the late 1920's.

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