

# An .020 "Lincoln Sport"

by Hurst G. Bowers



Photos by the Author

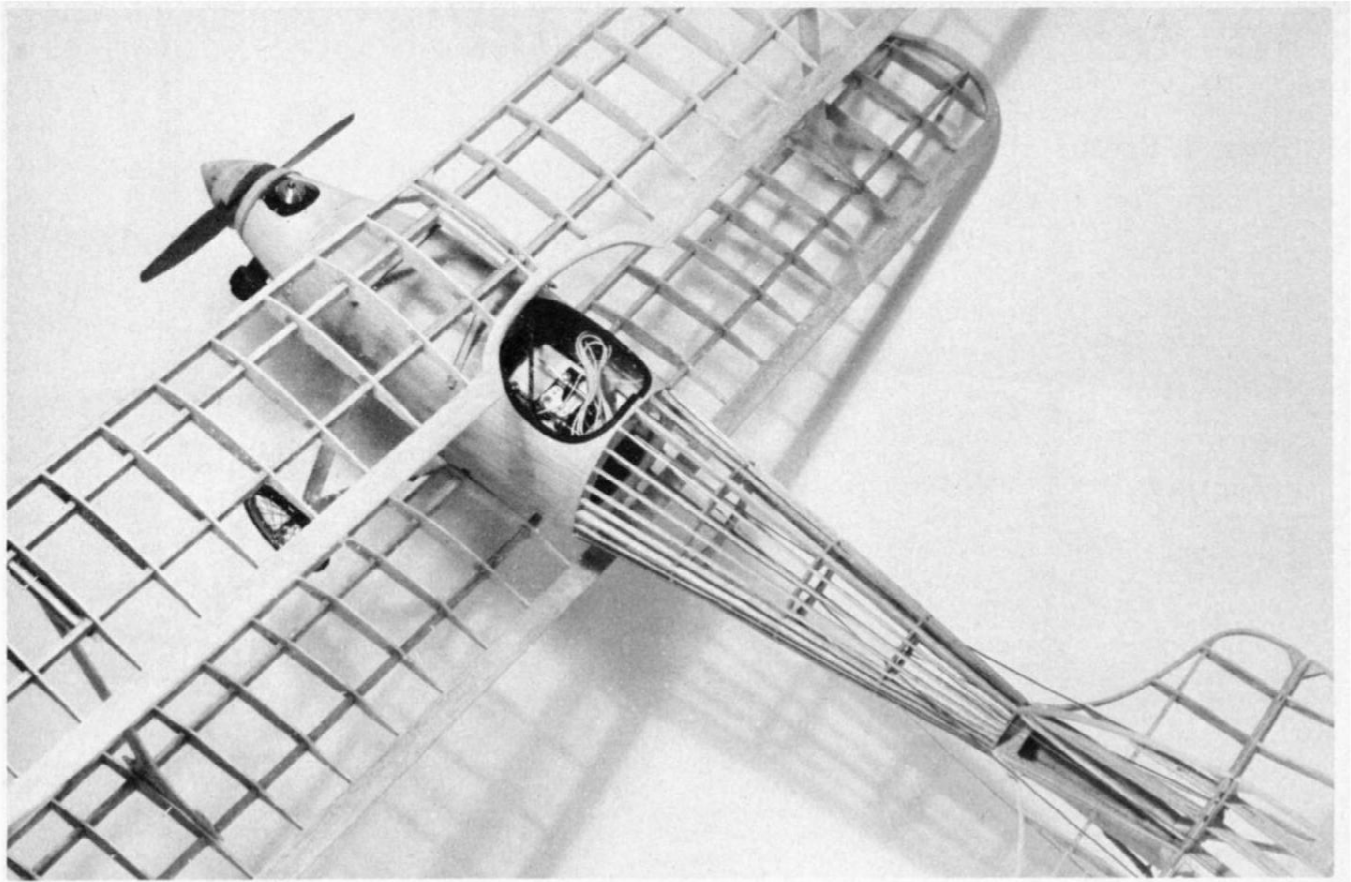
In America during the mid 1920's the fascination that aviation held for the young may be compared with that which sport cars, rock music, and sex holds today. During that era, throughout the rural hinterland there existed an institution often referred to as the "castle of the half-moon." In addition to providing the service presently taken for granted today as an inherent convenience, it was considered a place of solitude; a place for day dreaming, and for making grandiose plans; all of which were inspired by the readily available copy of the mail order catalog and other maga-

zines of the day. Usually these publications were found with many pages missing. One such magazine that I well remember was the July 1926 issue of Science and Invention which featured an article on how to construct your own airplane. Beautiful two page drawings were included along with complete construction details, costs for components, etc. For the affluent, the completed aircraft including the powerful Anzani engine could be purchased at the Lincoln Standard Airplane Company factory in Lincoln, Nebraska for \$1500. It could also be obtained with the Lawrence engine

for slightly less. Complete, detailed construction drawings could be purchased for only \$15.00, and if you were not a qualified pilot, an additional five dollar "practical home study course" to become one took care of this trivial matter.

During those great days my plans to build the "Lincoln Sport" never materialized, but some 25 years later, after browsing through some musty old magazines in which I found the Science and Invention for July 1926, the fire was rekindled. Being a major in the USAF at that time, with a more practical approach as to what I could





or could not build, I settled for a 1½ inch to the foot Free-Flight scale model of the little plane. I installed an old K&B .035 Torp Jr. engine and the 30" biplane proved to be a real success. During subsequent assignments about the world, the model remained in storage in the home of my old friend, the late Manley Mills, of Royston, Georgia. A couple of years ago I brought the model back to my home in McLean,

Virginia where it hung in my shop. One evening Charley Roth, a fellow modeler of extraordinary talent, and I were looking at it and speculating as to its possibilities if restored and converted to either pulse or 2-channel radio control. Charley had just acquired a new Cannon Tini-Twin radio unit which looked like a natural, so I asked him to have a go at it. After 18 years covering becomes rather hard to remove from

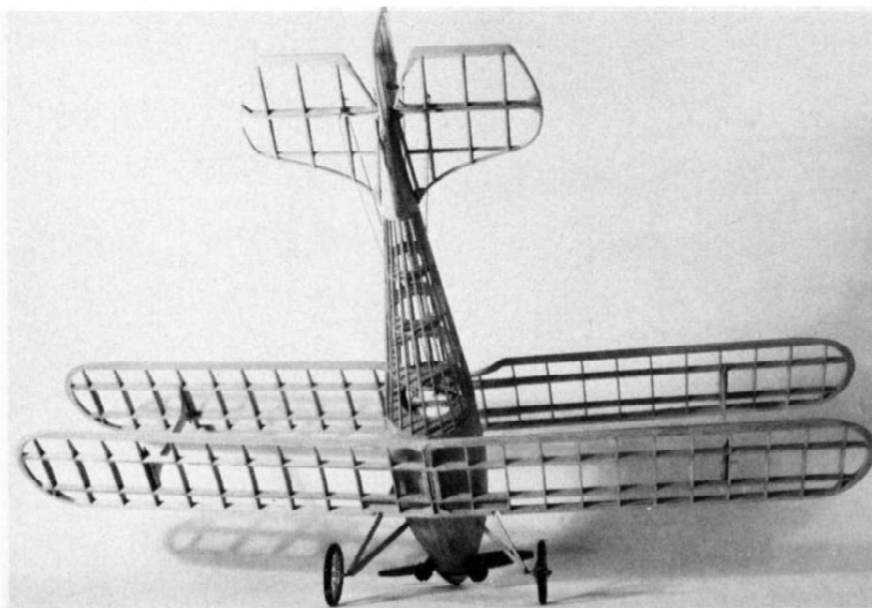
light balsa stringers, ribs, etc., but Charley got the job done and the structure was sound as a Swiss Franc. He installed an .020 Cox Tee-Dee engine, all the radio components, and recovered the little gem with yellow Jap tissue, along with adding all the scale details. Believe it or not, the pictures accompanying this article were made 17 years after its construction. I believe this speaks well not only for the initial design, but for Charley Roth's restorative talents as well.

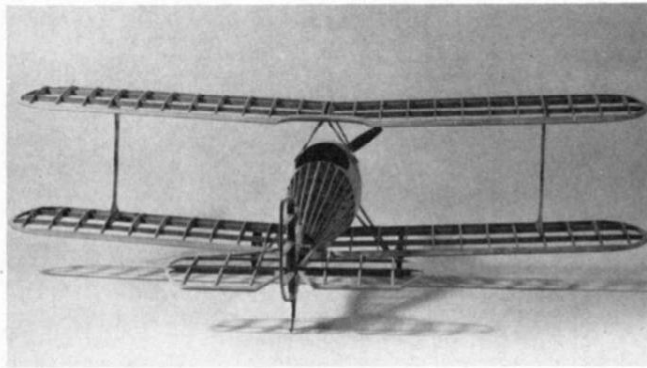
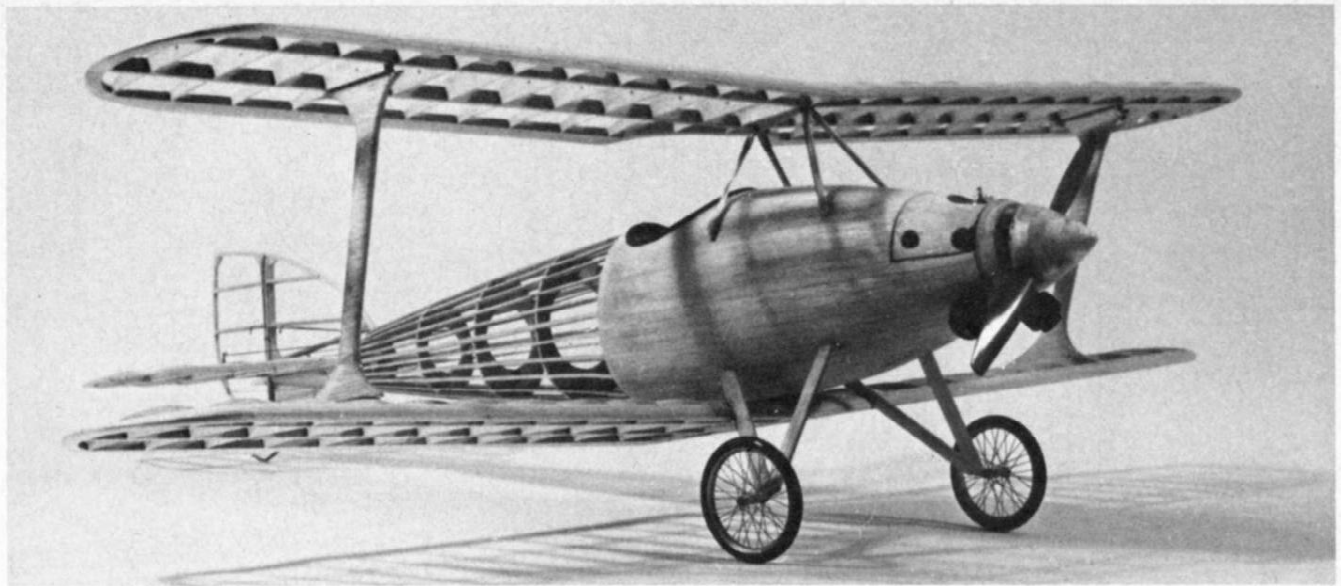
The R/C brains occupy the cockpit. Where else? Planking forward, enough stringers to the rear. Below: Well ribbed, light yet sturdy. Posed in an all too typical 3-point landing the hard way.

I have always considered it an insult to the intelligence of the average modeler to include a glue joint by glue joint description for every phase of construction, so I will not bore you with such detail. Instead I will only call your attention to construction highlights where some difficulty could possibly be encountered.

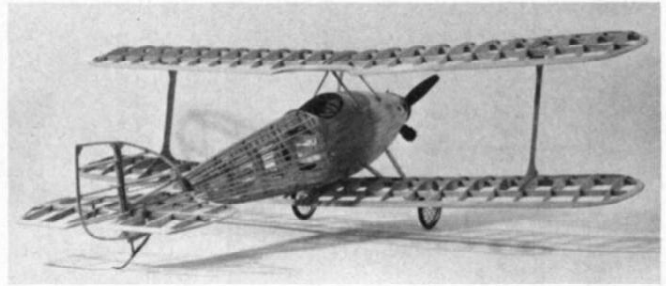
Usually on a biplane one of the major problems is the proper alignment and mounting of the wings, particularly when the lower wing is located beneath the fuselage. By including the lower wing saddle on the keel piece and by use of the centerpoint strut mounting for the upper wing, these problems are non-existent. The single "I" type interplane wing struts are also quite helpful, as well as being simple. My original model did not have laminated wing tips and tail outlines, however, I strongly recommend this technique. It is very simple to laminate surfaces by soaking the strips of balsa in hot water for a few minutes, then using thinned out Titebond glue as they are wrapped around a slightly undersized form. Hold in place with masking tape while drying.

Should the builder elect to make the model single channel, pulse R/C, or Free-Flight,





A restoration job. Old tissue had to be carefully removed, which is not an easy task. Structure then modified for modern power and a lightweight Cannon R/C system. **Bottom Photo:** Fresh skin and high hopes, flies well.



eliminate one of the elevator and/or rudder spars as appropriate. Although the photographs show Fulton Hungerford wheels (Charley and I couldn't resist them), the 2½ inch Williams Brothers old time wheels should be used for flying. Build the scale cylinders from corks wrapped with thread, or you may wish to use some other method. This is left to the judgement of the builder. It is possible that some of the Williams Brothers scale cylinders such as the Le Rhone could be adapted.

The full size aircraft was fabric covered with five coats of nitrate dope and two coats of Valspar varnish. This gave a yellow appearance; consequently our selection of yellow Jap tissue. Numbers may be decals from the scrap box or cut from black tissue. We strongly recommend the latter. Other details are done in black and silver.

Adjustments, trimming, and flying will depend on which option is selected and is conventional for that configuration. Naturally if you intend to fly the model Free-

Flight or pulse rudder, trimming will be more acute than if two channels are used, however, under no circumstances should improper balance and trim be forgiven in view of the more positive control available through the use of multi-channel proportional gear.

Charley and I are quite sure that you will enjoy your "Lincoln Sport" as much as we have, and if you will hurry and build it you will have a real fine "schoolyard scale" flyer for those long summer evenings. ☺

