COPPERHEAD
By William Noonan

NEXT to the actual building and flying of models, I believe any modeler gets most enjoyment out of simply getting together with the guys and having a real hull session, discussing the pros and cons of various types, wing loading, construction, etc.

Although the next door neighbors may complain about one of your pals showing off his new "Colossus Super 60" given out early on a Sunday morning, or the lady across the street may shake her head doubtfully when you demonstrate to a friend how your ten-minute-without-a-thermal job acted, the modeler undoubtedly gains new knowledge of a subject or idea he was ignorant of by participating in these shindigs. One of these discussions involving construction, proportion of a model, power, etc., greatly influenced the design of the Copperhead.

First, size in relation to power was the topic. Although preference varied as to the ideal "universal" size, a 32-inch span was considered a good all-round dimension, allowing engines of practically any displacement to be used. The design was conceived primarily with realism in mind, speed not being a factor.

For realism, it embodies the characteristics of a great many of today's fighting planes; in it may be seen the influence of the Republic P-47, or perhaps the Jap Zeke or Tojo. The model was designed with no specific airplane in mind; I just wanted a model that would resemble a modern fighter. In spite of a fairly high power-to-

weight ratio, the average speed was better than anticipated. The original model was powered with an engine of .23 cu. inch displacement; motors of greater displacement should substantially increase the speed and maneuverability.

Backbone construction (laying a "keel" directly over plans then cementing bulkhead halves in place) was accepted as the most practical and accurate. The old method of first building a box frame, then gluing formers on top, bottom, and sides, was decided to be a little on the heavy side as well as taking more time to build.

The design itself follows the trend of modern fighter aircraft: elliptical wing, bubble canopy; and radial-type engine cowling. Typical, wide, wing-mounted landing gear facilitates smooth take-offs and landings.

It is true that in designing a model (or full-size airplane, for that matter) one thing has to be sacrificed for another: super finishes mean added weight, droppable gear means more abuse on the model, etc. In the case of the Copperhead, the external installation of the bell crank somewhat spoiled the appearance, but ease of adjustment and maintenance make up for this. Mounting controls outside fuselage are used so alterations can be made on the bell crank-to-elevator linkage to insure smooth and efficient operation.

Accessibility of ignition was another thing that was not overlooked. The hatch was made removable far enough aft so that there was