

Henry Struck's chaser for the "Cabruler" was Rikitikitavi, long gone since this July 1940 photo was taken. Other than photo in Jan. 1940 Flying Aces, design was never published.

STRUCK'S "CABRULER"

Here's a model that will even make hardened old timers do a double-take. Never previously published, it's a Class A cabin version of the famous New Ruler by its equally famous designer, HANK STRUCK.

● Based upon the proportions of the New Ruler, this Class A cabin was built to enjoy the advantages of the sensational new Bantam 19 engine. The Bantam was developed by Ben Shereshaw, creator of many beautiful aircraft of the early days of gas modeling. The Class A category of up to .20 cu. in. had just been established, chiefly due to the remarkable performance of Ray Arden's Atom engine.

To actually get one of these new "Benny's Beauties" was not easy. In fact it took about a year. Ben was building these first engines at his home in Nutley, N.J.. One day, a word-of-mouth message reached me that one was ready. So early in the morning, onto the subway in Jackson Heights, L.I., to the Hudson tubes and under the river to Newark, N.J.. There to the Bamberger store, sponsor of the famous Bamberger Aero Club, in which Ben was a leading light. . . But he was in Nutley, they said, and so onto a bus. . . but he wasn't there

either. Nor was there any more than 5c in the engine seeker's pocket. Now it came down to the feet to get the pilgrim to where 5c would get him back to his far-away work bench. This was accomplished eight miles later, after crossing the George Washington Bridge back into Manhattan. Another subway ride and the end of a great day, and the inspiring memory of a trek across those empty Jersey meadows.

One day, however, Serial No. 294 arrived by mail! And it was all worthwhile, because it was in a class by itself. Today, several airplanes and many years later, it still runs, though its magnesium crankcase is darkened, plastic tank dissolved, needle valve replaced, and slight play has developed in its journals. . . a treasure.

After emigrating to Connecticut to work in the Ludington/Griswold Smoke tunnel as a model maker and smoke generator, evenings were put to building a model for the new Bantam. When de-

monstrated to aero engineers, its steep altitude-grabbing climb was not too impressive. . . a too-light unrealistic airplane! Of course, today, the F-15 reaches 39,000 feet in 59 seconds from a standing start. Now it's real!

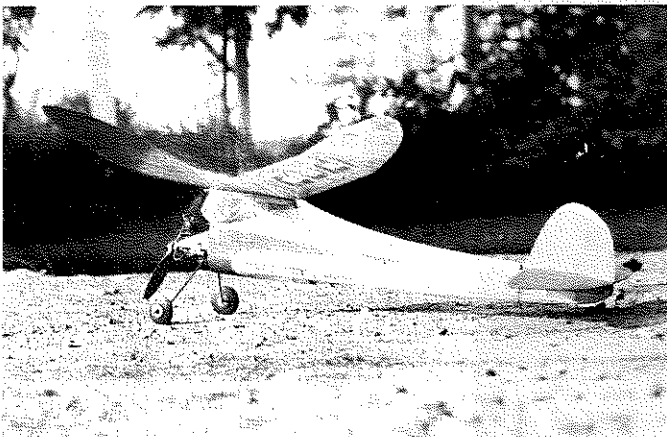
Away from history and humor. The "Cabruler" is along the constructional lines of most of my ships of this period. The fuselage is erected on a basic "crutch" frame, and finished free-handed off the plan. Wing features the NACA 6409 section, with sheet balsa top leading edge to maintain the airfoil shape to the high point, and to stiffen the wing against bending.

The motor mount assembly is removable from the fuselage for inspection and clean up, and now provides an obvious way to add simple R.C. gear for directed free flight. The actuator can be left in the airplane for free flight, or removed through an access panel in the fuselage.

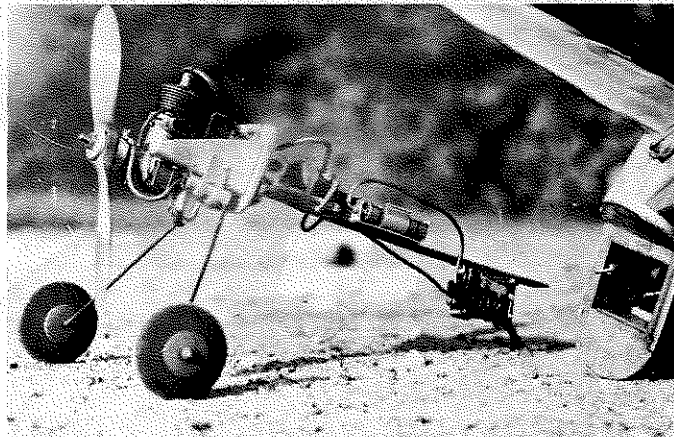
The original was covered with white silk on the fuselage, and red cross-grained double tissue on the wing and stab. If Monokote is to be used, diagonals should be fitted between the spars, and between the leading edge and the lower spar, to box in the leading edge and increase torsional rigidity.

The ship was adjusted for a right climbing pattern, with right glide. This requires some slight left thrust shims between the motor mount and the firewall. Glide circle was controlled by the rudder tab setting. A further development of this design, the Connecticut Yankee, flew well in right climb and left glide. Using stabilizer tilt, unknown to me at the time, will no doubt help obtain either flight pattern, if you can stand crooked airplanes. . . but they admittedly are better than cracked airplanes.

For R/C flying, the glide should be trimmed just a little faster than free flight, as much rudder action as possible should be employed, in order to roll rapidly from one circling direction to the opposite without stalling in the cross over. ●



With a little imagination, the famous New Ruler lines can be discovered in this cabin version. The cowling just never made it.



Typical of the period, the ignition tray came out with the engine. Timer arm stuck through bottom of fuselage. Looka that Bantam!

the plaster can be finished with sanding, and details can be added with tapes and carving.

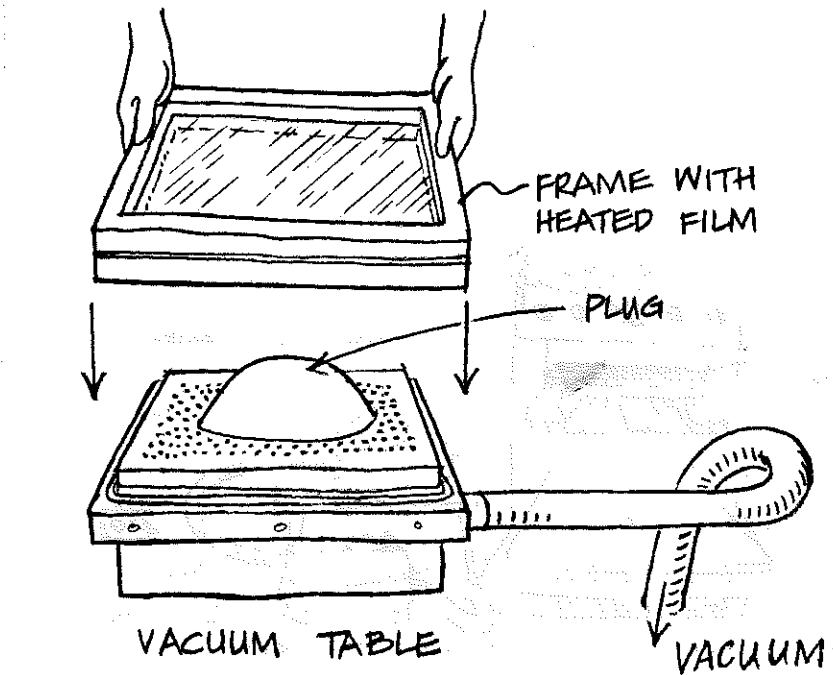
Four plastics are generally available for vacuum forming. They are, in order of their formability, butyrate, styrene, vinyl and acetate. Butyrate is fuel proof, somewhat unstable over long periods, hard and clear. Styrene is usually hard to find, tends to be fragile . . . smells like vomit. Acetate and vinyl are tough, but are susceptible to some fuel ingredients and cleaning solvents. Acetate tends to fog when cooled too quickly or not heated enough; it tends toward brittleness. Vinyl is obnoxious (an unclear description, but if you use it you'll know) and the original dust collector, but is more resilient than the others; it requires lower temperatures.

Smaller objects and pieces of film can be accommodated by adding heavy bond paper edge-to-edge to the smaller plastic sheet. Use masking tape on both sides of the joint, pressing the tape firmly to make a strong connection. More than one small object can be formed on the table at the same time. Just leave a generous space between each object for clean forming and ease of trimming.

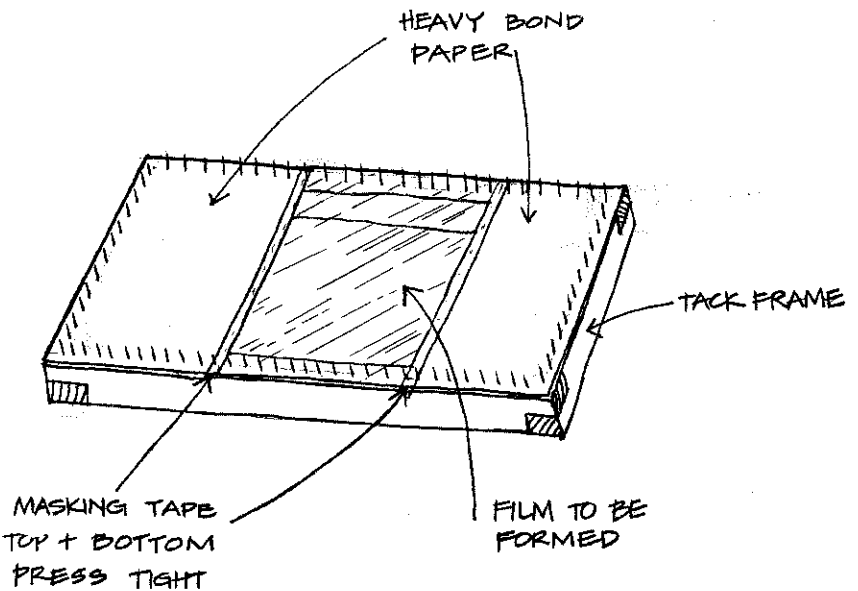
Small parts can be formed from .0075 to .015 film, and larger parts can be formed with .020 to .040 film. Film of up to .050 thickness can be formed, but it is difficult to work with. However, the results can be outstanding on the larger size model. The maximum pull I've attempted with the unit described here is about 3 inches, with a 2 by 8 inch plug, and .040 film. Experience is, as usual, the best teacher.

Craft shops sell glass cutters for cutting bottles. These can be used to cut glass bottle bottoms off for making cowl forms. After making the first plastic form, make a plaster plug. Remove (?) words like "Coors", "Rheingold", or "Olympia", add details, and re-form. The possibilities are quite extensive. I'm about to do some compartmented trays for small parts, my wife would like a few original Christmas tree ornaments, and the kids have thoughtful looks when they watch me pull canopies.

So, there it is. All those planes that looked promising for a building project



Pressing frame down on vacuum table. For proper removal of plug after forming a part, plug sides must be straight, or taper toward a wider base. Undercuts will stick in finished part.



Set-up for making smaller parts. Heavy bond paper is taped (both sides) to sheet plastic to bring it out to tack frame. Basic frame dimensions can be changed to suit your expectations.

but for the wheel-pants, fillets, cowling, etc., etc. are suddenly possible . . . Well, not so suddenly, but the forming process itself does seem to be anti-climatic;

it all happens very quickly. Look through the heavy-scrap box, pick-up what's necessary, inject a bit of ingenuity and improvisation and . . . Pop! . . . Voila!

