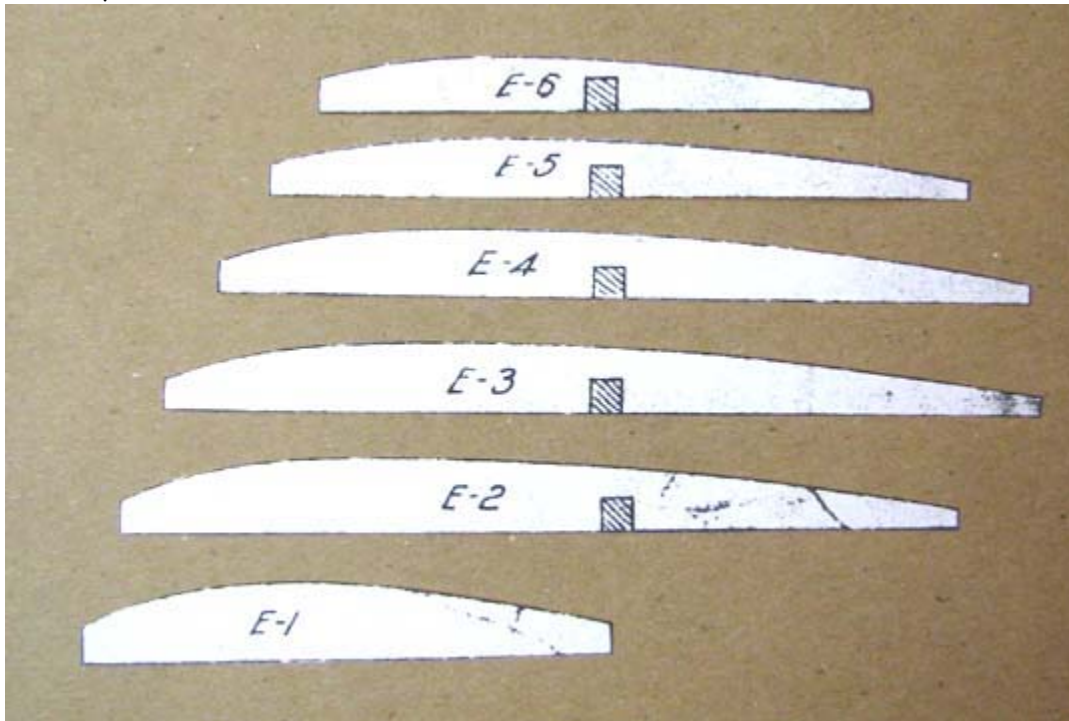


David Harding

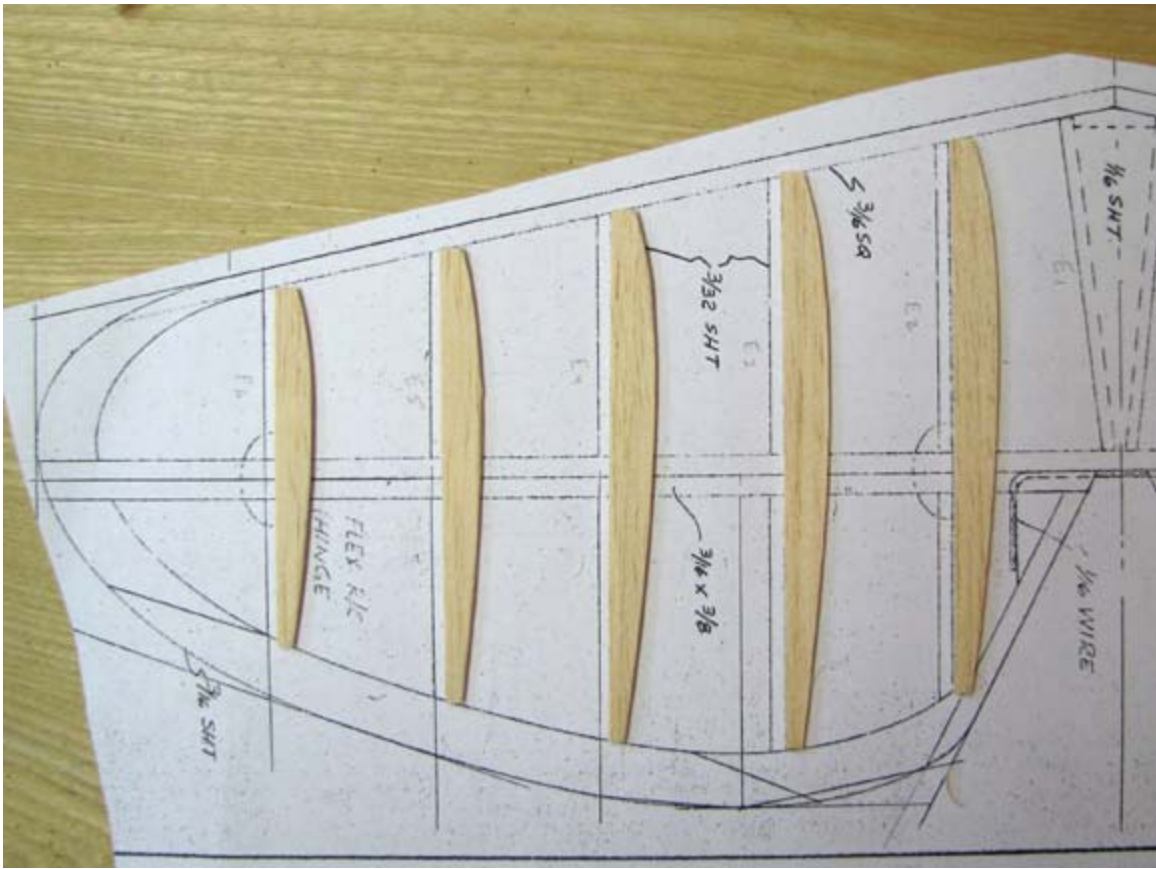
From: Tandy C. Walker [tandyw@flash.net]
Sent: Tuesday, November 10, 2009 11:20 PM
To: Undisclosed-Recipient: ;@smtp105.sbc.mail.mud.yahoo.com
Subject: 12 Speed 400 Cloudster - Construction of the Stab

Speed 400 Cloudster Project

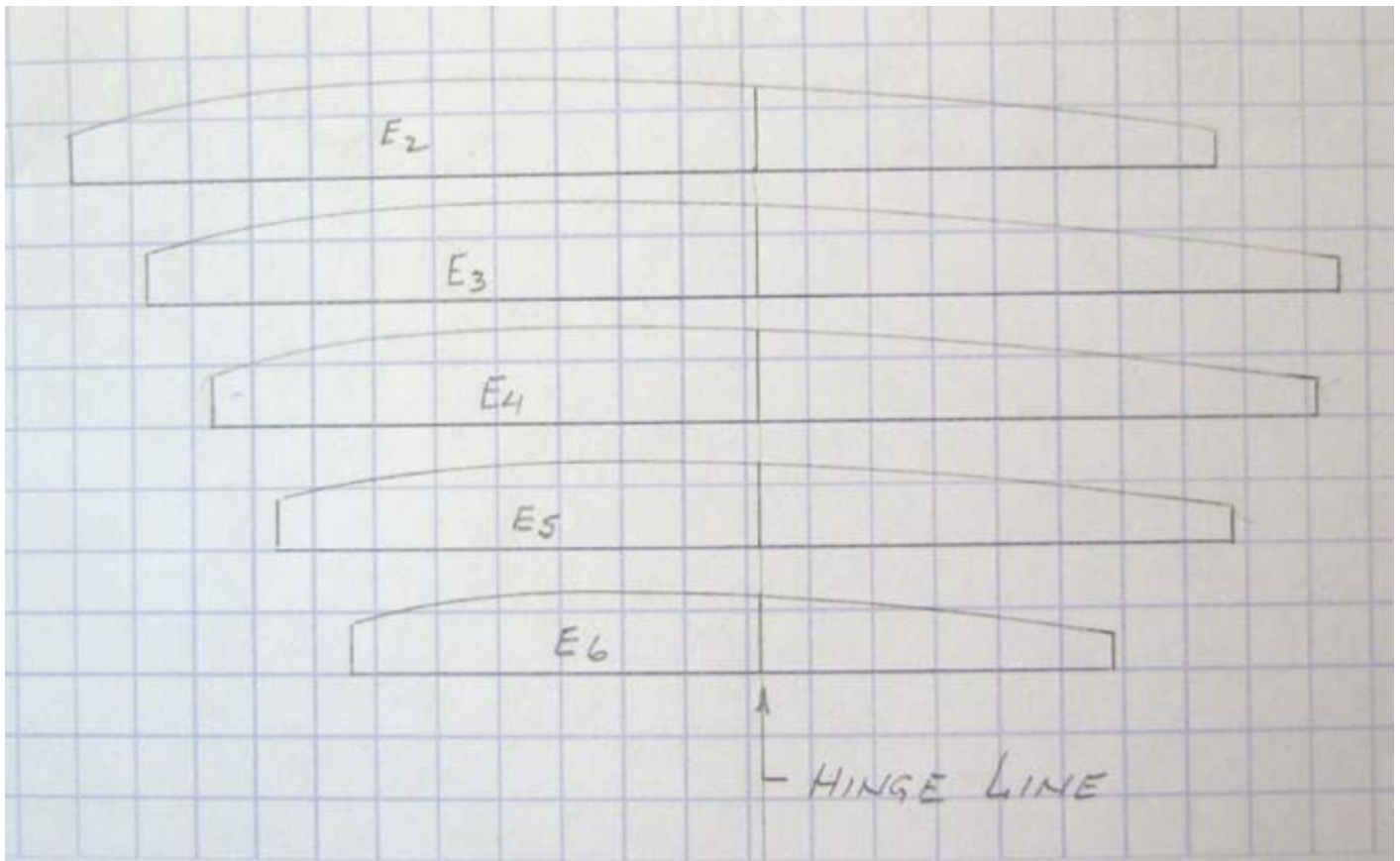
As I reported previously, the Jim Adams plan of the Cloudster does not show the stab ribs as does the Cleveland plan so I went to the copy center and had a copy of the Cleveland plan made reduced by the 0.923 scale factor. This provided the stab rib patterns, which I cut out as shown below.



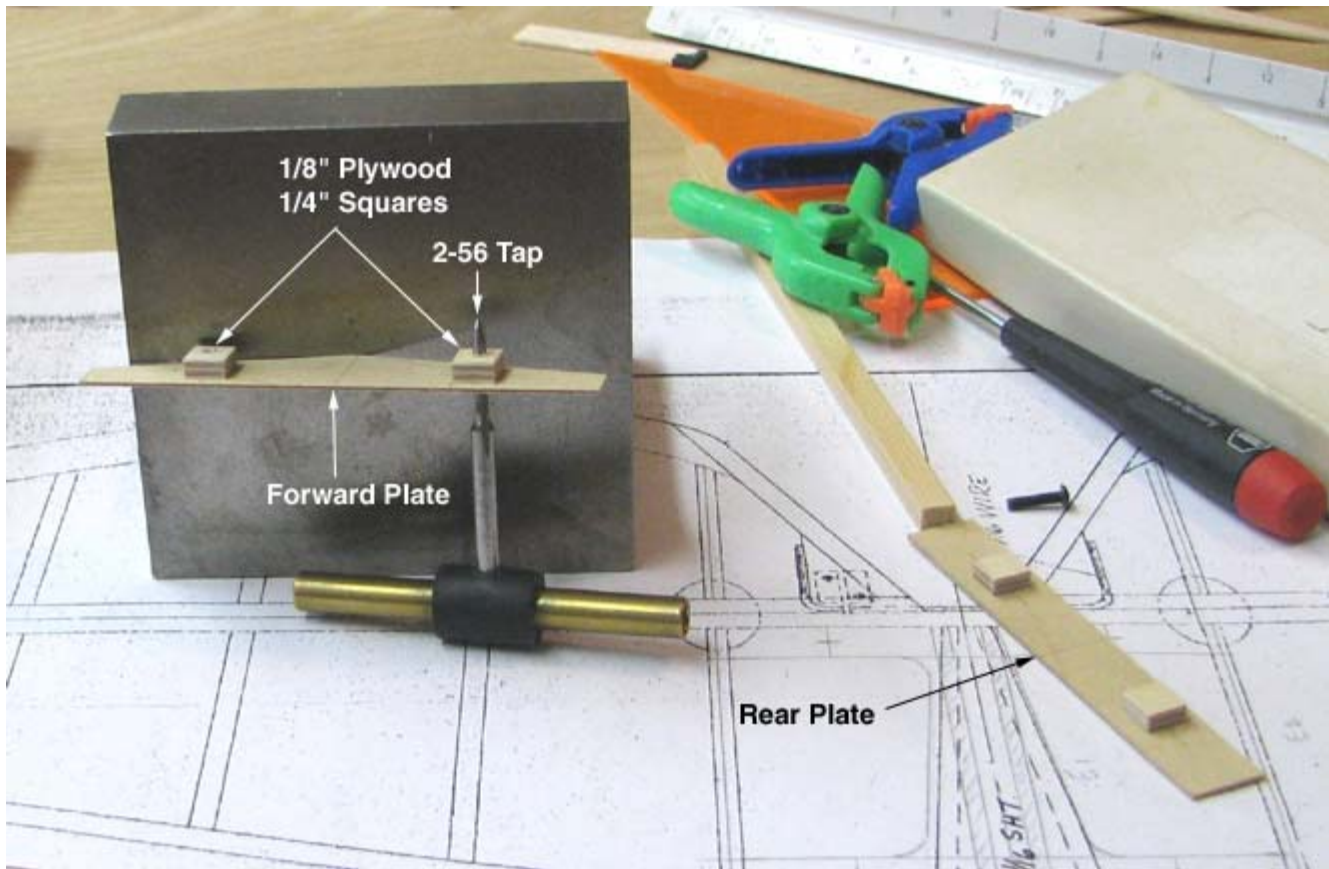
However, these patterns leave a little bit to be desired in their fit. So I used them as a guide to cut out stab ribs that actually fit properly. I made the height of each rib's LE $3/16$ " so it would butt into the LE full height. I also made the height of each rib's TE $1/8$ " because the $3/16$ " TE pieces must be trimmed down to $1/8$ ". The resulting $1/16$ " rib parts are shown below.



Then the ribs (E2, E3, E4, E5, and E6) were traced onto a sheet of quadrille paper to come up with the correct rib patterns as shown below.



The center section of the stab is being modified in order to make the stab removable from the fuselage. This is accomplished with two 1/32" plywood stab plates shown below. As you can see, two 1/8" plywood squares are glued to the stab plates and threaded with a 2-56 tap.



The lay up of the stab structure is shown below. Notice how the two stab 1/32" plywood plates are integrated into the center section on the bottom of the stab.



This is a close up of the stab center section and there are two things to observe: (1) the wedge doubler that reinforces the leading edge joint and (2) the two 3/32" ribs that form the 3/16" slot on the stab's center line for the vertical tail's removable fin. The top and bottom of the center section will be planked with 1/32" sheet balsa a little later.....Tandy

