

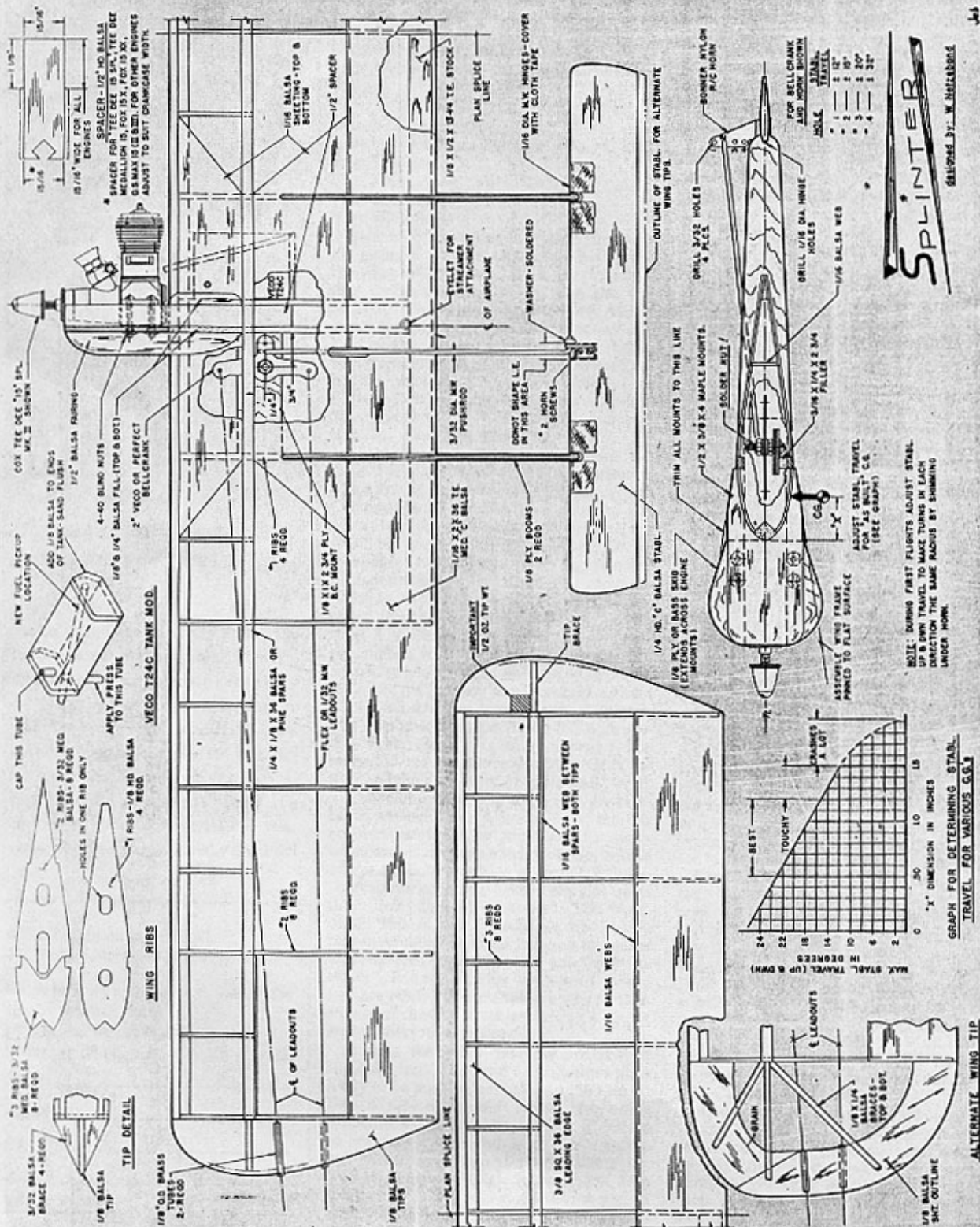
aspect ratio wings best for a speed job, in the drag department. Let's now use it to prove higher aspect ratio for maneuverable types. Most combat ships, currently in use, have aspect ratios between 3 and 4. Assuming several models with equal wing loadings, wing areas, power loadings etc., such that a given turn radius will require the same lift coefficient, it is simple to examine the difference in drag during a turn for sev-

eral aspect ratios. If we establish a C_L of .6 and an α of .95 for each airplane our C_{di} 's are:

AR	C_{di}	Cd	CD
3	.038	.014	.052
4	.029	.014	.043
5	.023	.014	.037
6.25	.018	.014	.032
7	.016	.014	.030

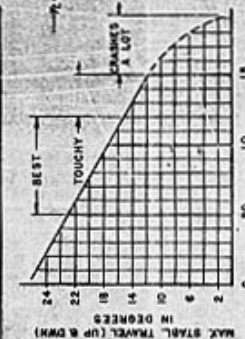
(CD Total Drag of Wing.)

This number is the direct increase of drag added to level flight drag. The combat engine is normally set to run flat out in level, having little torque left over for turns. To take the practical case of Splinter vs conventional ship of 3:1 aspect ratio, the Splinter has less than one-half the induced drag. A 3:1 ship in a loop is developing the induced drag of two Splinter's. Also, the cleaner the airplane—lower (Continued on page 60)



SPLINTER

DESIGNED BY W. H. HENNING



NOTE: DURING FIRST FLIGHTS ADJUST STABILIZER TRAVEL TO MAKE TURN IN EACH DIRECTION THE SAME AS INDICATED BY GRAPH UNDER WORK.