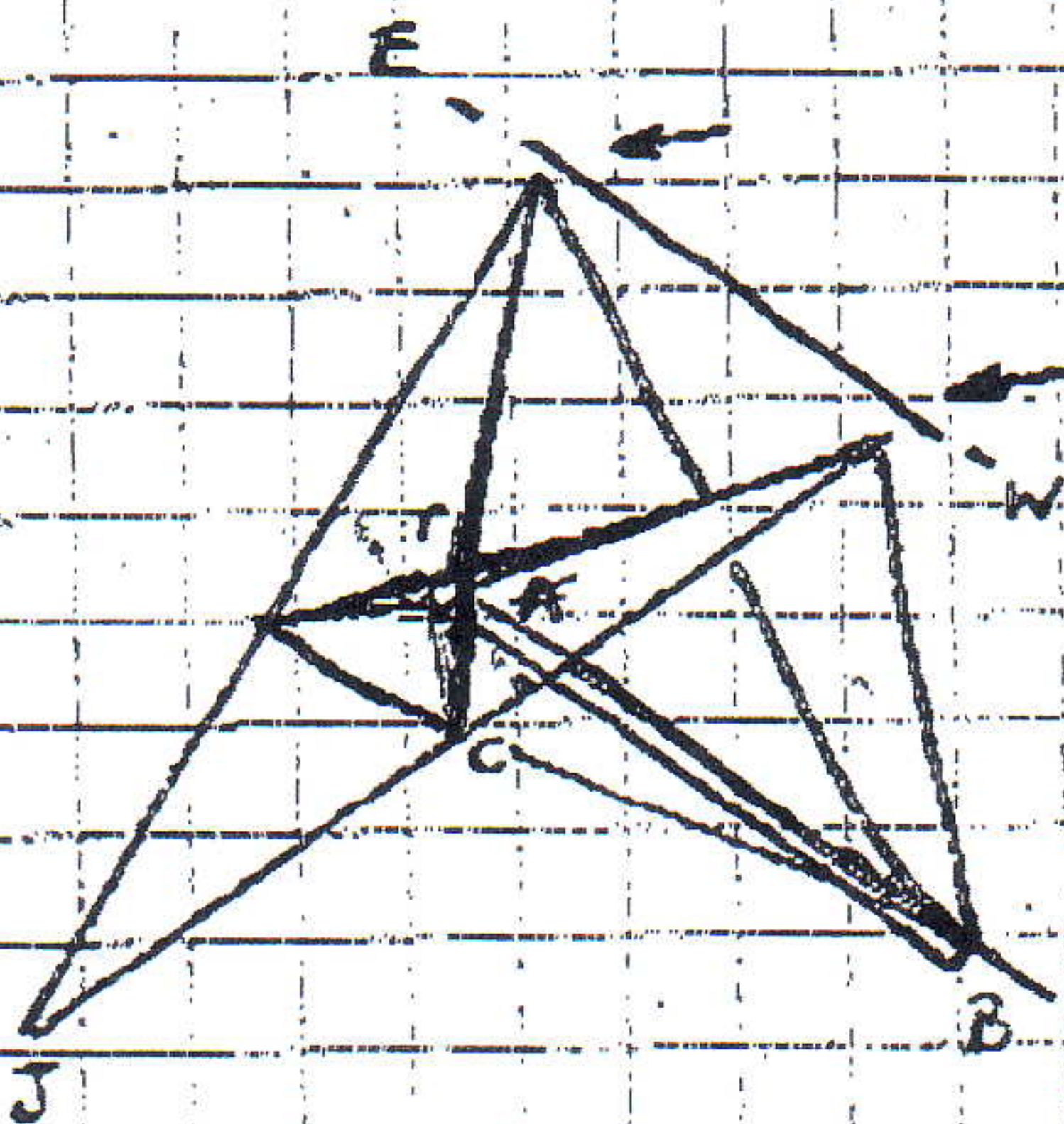


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YOKE



Worst loading is horizontal wind load of 57,000 lb shared between declination bearings. This produces a load of 26,000 lb in WB, but the 30,000 lb load is

shared between WA and WC. Since the plane WBC contains the horizontal wind vector, very nearly (horiz trace BT), the 30,000 goes essentially into WC. If the wind blows from

the east and all the load is taken on one bearing, WA and WC will receive abt.

3 times that load. The

projected area seen from the east $\bigcirc$ could be as much as $\frac{1}{3}$ area of 60' circle.

Wind load = 20,000 lb, load in WA is 60,000 lb.

Loads of over 20,000 lb are produced in CE to resist east wind

The yoke evidently requires some careful attention to get the loads down. If we proceed as with the hub, and say that the members need to be about 4 times their weight we get 10 in² or 35 lb/ft, say a 10 x 5 I beam, which looks rather heavy. Total wt $\approx$ 70,000 lb. This is partly due to long members and may be price paid for relieving requirements on HA and dec. drive methods. But if we use 17,000 lb/in² as allowable compression, we get 2 in² or 6 lb/ft.