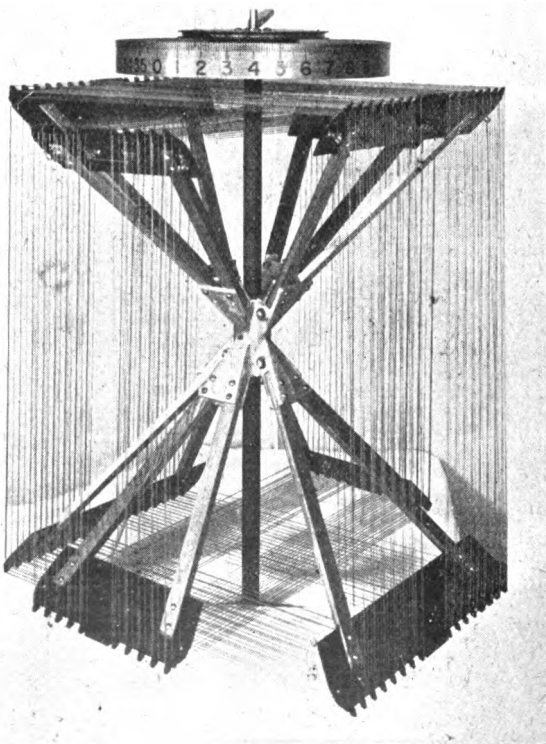


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the increased sensitiveness is in danger of being more than nullified by engine noise and other types of interference. A compromise must therefore be effected, and the Royal Air Force found that a ratio

$$\frac{\text{Aux. coil area-turns}}{\text{Main coil area-turns}} = 2.5 \text{ rendered the}$$

apparatus sensitive to within about 1° and gave the best all-round results (49), (59).



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Fig. 233. Combined Box and Pancake Type Coils used by U.S. Navy.

The question as to whether the zero minimum of the simple frame is more or less easy to detect than the minimum with a superimposed steady signal, has been the subject of some controversy. In an aeroplane in flight there may be enough noise to render the signals in the neighbourhood of the zero