First, continue the compression curves *H. F.* of Figs. 8 and 9 to the line of highest pressure of each diagram, as shown.

Next continue the expansion curves of Figs. 7 and 8 to the intersection of the line of lowest pressure of each diagram as shown.

Assuming that the lengths of these diagrams representing the piston travel are the same, and that the line *G.* $B_2$ in Fig. 9 represents the same pressure as the line *H.* $E_{1\frac{1}{2}}$ (Fig. 8), it is only necessary to compare the length of the line *G.* $B_2$ with *H.* $E_{1\frac{1}{2}}$, and

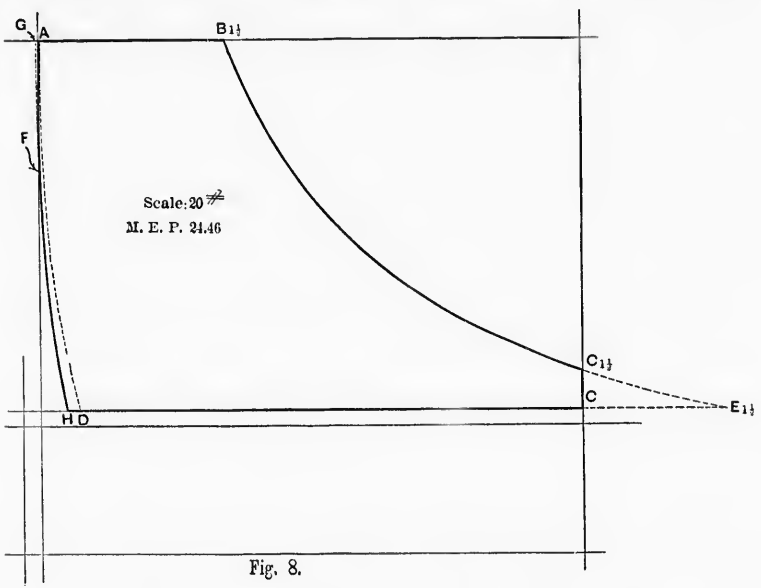


Fig. 8.

the inverse ratio will be the ratio sought. Thus, in this case, the line *G.* $B_2$ measured, with a scale of 100 to the inch, measures 92, and in the same manner *H.* $E_{1\frac{1}{2}}$ measures 368, therefore the ratio of the intermediate to low cylinder will be $\frac{368}{92} = 4$.

By the same method *G.* $B_1$ (Fig. 8) measures 104, and *H.* $E_1$ (Fig. 7) = 342, and therefore the ratio of high to intermediate cylinders will be $\frac{343}{104} = 3\,3$.

Reviewing these figures we have the ration of high to intermediate 3.3, and of intermediate to low 4, and consequently of high to low 13.2.