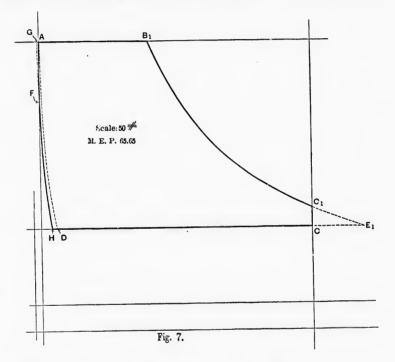
## CYLINDER PROPORTIONS FOR COMPOUND ENGINES.

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unless it has been shown that the best economy is obtained by expanding fully to the line of back pressure, as B. C. (Figs. 1, 2 and 3). Following the law relating to compression curves, suggested in Vol. XIV. of the *Transactions* of the American Society of Mechanical Engineers, page 1070, the curves H. F. have been produced as the compression curves in each case that correspond with the expansion curves that have been adopted. The completed diagrams, then as sought to be produced, are



represented by full lines in Figs. 7, 8 and 9. The next step is to ascertain the ratio of cylinders which will produce these respective diagrams, and to do this the diagrams must be compared as to the relative volumes of steam which they indicate. A very convenient graphical method for doing this is the following.\*

e

8

h

0

g

з,

s. 1.

<sup>\*</sup> The author is indebted to his son, B. C. Ball, member of the class of '95 at Stevens Institute of Technology, for this method, which is believed to have been original with him.—F. H. B.