10 CVLINDER PROPORTIONS FOR COMPOUND ENGINES.

once appear, but even without exact knowledge as to condensation, the range covered between the two assumed conditions is so great that the actual condensation would probably produce a curve between the two, and if so, then the terminal pressure at release in low pressure cylinder of the proposed engine, should not be less than 4 lbs. absolute, nor more than 5 lbs., and the corresponding number of expansions of the system will not be more than 40 nor less than 32. For the purpose of keeping the low pressure cylinder as small as possible, the fewest number of expansions should be employed that promises approximately the best economy, and therefore we will select 32 expansions, and the expansion curve in low pressure cylinder will be B_{a} . C_{a} .

Referring to Fig. 4, the lower curve assumes the greatest cylinder condensation and on this assumption B_{2} , appears to be



the best point of cut-off. The condensation here assumed, if referred to the area of "A. B_2 , C_2 , C. D." will be found to equal 47% of the steam accounted for by the indicator when cutting off at " B_2 ", which in view of the cut-off being later than 1/4 stroke and the total range of pressure in the cylinder only 13 lbs., is an altogether improbable amount. It is also equally improbable