

densation, therefore it seems desirable that such a modification should be made, but the work will not here be reviewed for that purpose.

GENERAL CONCLUSIONS.

First, that in current engineering too few expansions are obtained in compound engines for best economy.

Second, that with 150 lbs. pressure and a good vacuum at least 32 expansions should be realized in a triple-expansion engine.

Third, that the cylinder ratios ordinarily used are too small, because they give too little "terminal drop" for best economy.

Fourth, that too little attention is given to the compression curve, which should be determined by the expansion curve, and should never reach initial pressure.

The foregoing is submitted with the full knowledge that the conclusions may not be generally accepted because of a very commendable disposition on the part of the fellows of our Society to take more kindly to demonstrated facts than to theory, even of the most plausible kind.

While waiting for the verdict of future experiments the author will still further risk his engineering reputation (if he has any) by venturing the prediction that, when under the conditions assumed on the foregoing pages as to boiler pressure and vacuum, a triple-expansion engine shall be provided with cylinders proportioned to produce approximately the final diagrams of the series in respect to the number of expansions, the terminal drop, and the compression curves, or such slight modification of them as may be suggested by the line of reasoning that has been followed, then a horse-power will be developed from 11 lbs. of steam per hour.