

FIG. 1.

Vertical Section through Steam Chest and Valve, Taking Steam and Exhausting.

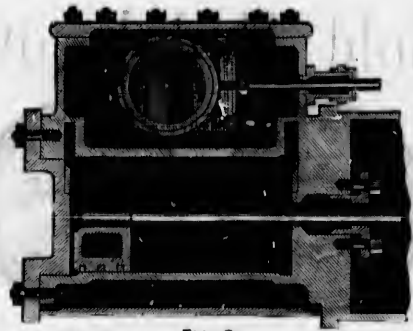


FIG. 2.

Horizontal Section through Steam Chest-Valve and Cylinder.

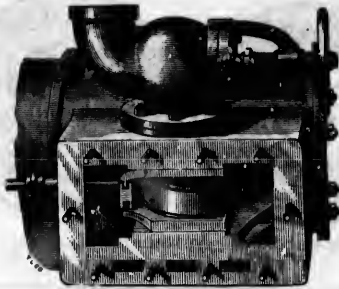


FIG. 3.

View of Steam Chest with Cover removed, showing VALVE IN POSITION.

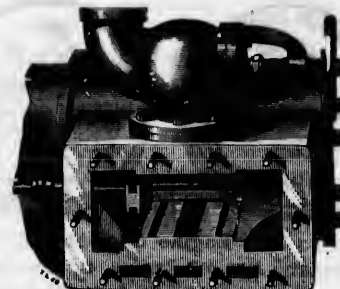
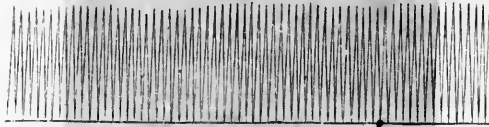


FIG. 4.

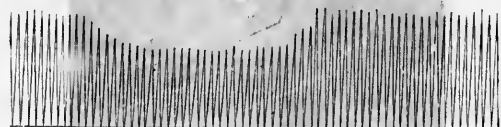
View of Steam Chest with Cover and VALVE REMOVED, showing lower Valve Seat and Port.

## SPEED AND REGULATION DIAGRAMS.



**SPEED DIAGRAM FROM A BALL GOVERNOR.**

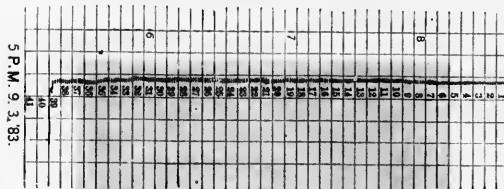
LOAD THROWN ON AND OFF.



**SPEED DIAGRAM FROM A COMMON GOVERNOR.**

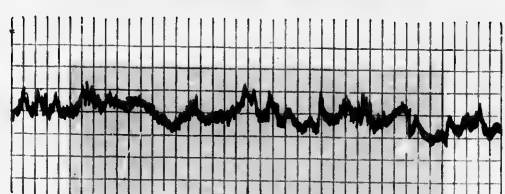
LOAD THROWN ON AND OFF.

Taken from the same Engine, under the same conditions and changes of load.



**Showing a continuous Record of Speed for several hours.**

Diagram made from 9 x 12 Engine at the Boston Fair of 1883, making electric lights from four dynamos, which were thrown on or off at pleasure. The record began at 5.10 p.m., and is shown until nearly 9 o'clock. Not for one instant, or for one revolution, did the speed vary more than a small fraction of one per cent.



**A SAMPLE OF NOT UNCOMMON REGULATION.**

Diagram taken from a Two Hundred Horse-Power Automatic Cut-off Engine driving a paper mill, and is by no means an extreme case of bad governing.