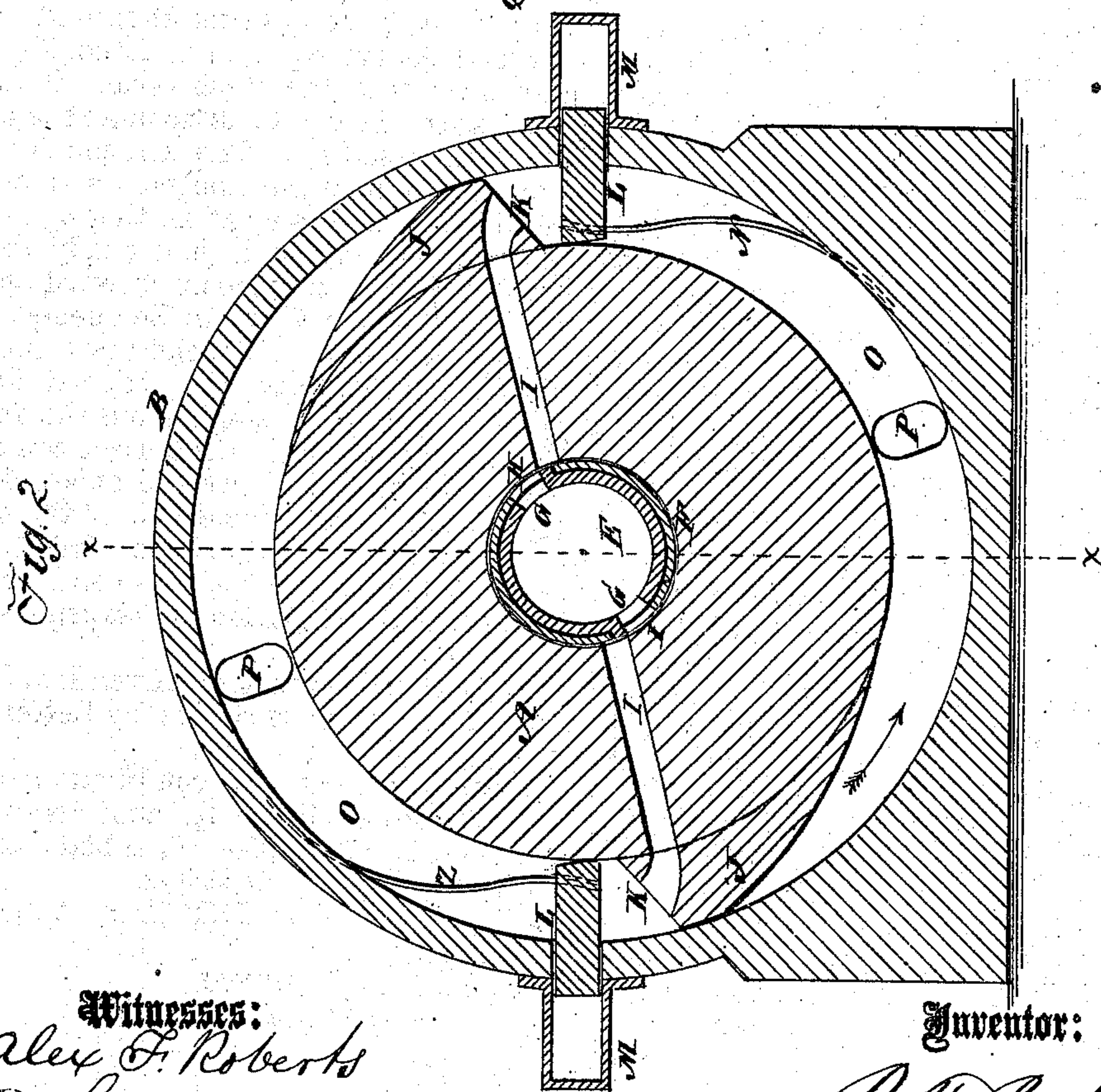
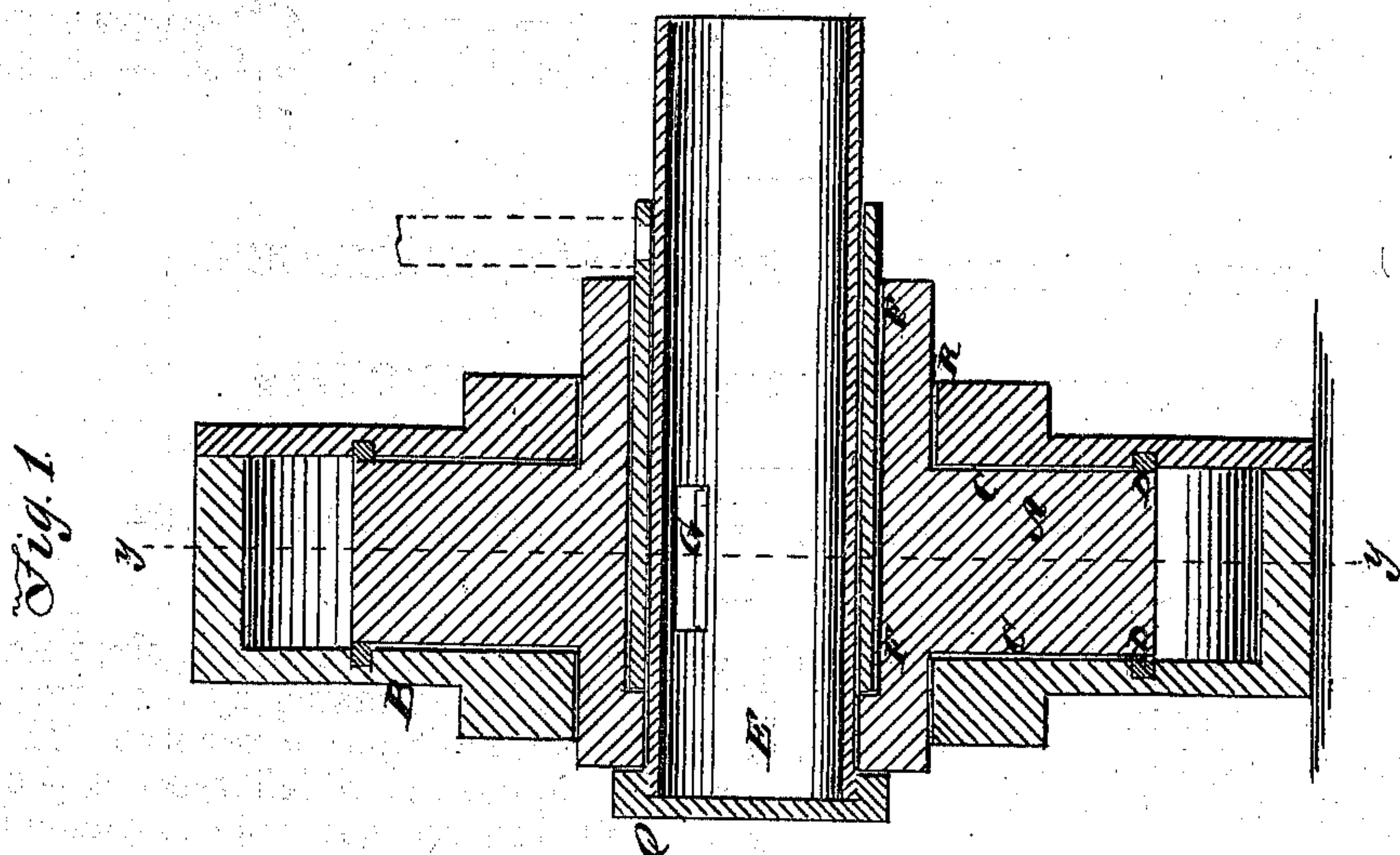


R. T. P. ALLEN.
Rotary Steam-Engines.

No. 129,703.

Patented July 23, 1872.



Witnesses:
Alex F. Roberts
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UNITED STATES PATENT OFFICE.

ROBERT T. P. ALLEN, OF FARMDALE, KENTUCKY.

IMPROVEMENT IN ROTARY STEAM-ENGINES.

Specification forming part of Letters Patent No. 129,703, dated July 23, 1872.

Specification describing a new and useful Improvement in Rotary Steam-Engines, invented by ROBERT T. P. ALLEN, of Farmdale, in the county of Franklin and State of Kentucky.

The object of this invention is to obviate many of the objections to rotary engines heretofore made; and it consists in the novel construction and arrangement of parts hereinafter set forth and described.

In the accompanying drawing, Figure 1 represents a central cross-section of my improved engine taken on the line *x x* of Fig. 2. Fig. 2 is a section of Fig. 1 taken on the line *y y*.

Similar letters of reference indicate corresponding parts.

A is a revolving drum or piston-wheel. B is a stationary surrounding casing, in which the drum revolves, and in which it is made steam-tight by the packing-pieces C and D. E is a stationary steam-pipe from the boiler; and F is a variable cut-off tube around the steam-pipe, around which the steam-drum revolves. The cut-off tube F is connected with the governor of the engine by means of an arm, seen in dotted lines in Fig. 1, by which it is partially rotated on the steam-pipe. G G are steam-ports in the pipe E, and H H represent ports in the cut-off tube. I I are steam ways or channels in the steam-drum. The steam-drum A is a round cylinder with two cams, J J, which form two offsets or pistons, K K, on its periphery, as seen in Fig. 2. The channels I I discharge the steam through these offsets against the sliding abutments L L. The drum revolves in the direction in-

dicated by the arrow, and the abutments are forced through the casing by the cams J J, so as to allow the drum to revolve. M M are caps on the casing, which receive the abutments. N N represent springs, attached to the casing at one end and to the abutments at the other end, so arranged as to force the abutments back into the steam-space O, and in contact with the drum, as soon as the offsets K K have passed by. The tendency of these springs is to keep the abutments in contact with the drum and cams at all times. As seen in Fig. 2, the engine is just ready to take steam. A slight movement forward and the ports in the steam-pipe will be opened. The quantity received will depend upon the position of the cut-off tube, and that will depend upon the speed of the engine and the amount of power required, as indicated and controlled by the governor. P P are the exhaust-openings. Q is the cap on the end of the steam-pipe. R is the hub of the steam-drum, which extends out from the casing so as to receive a gear-wheel or a belt for the transmission of power.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The arrangement and combination of the casing B, steam-drum A, abutments L L, steam-pipe E, and cut-off F, substantially as and for the purposes described.

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