W. N. COSGROVE & T. MEE.

GOVERNOR.

No. 186,116. Patented Jan. 9, 1877.

Fig. 1.

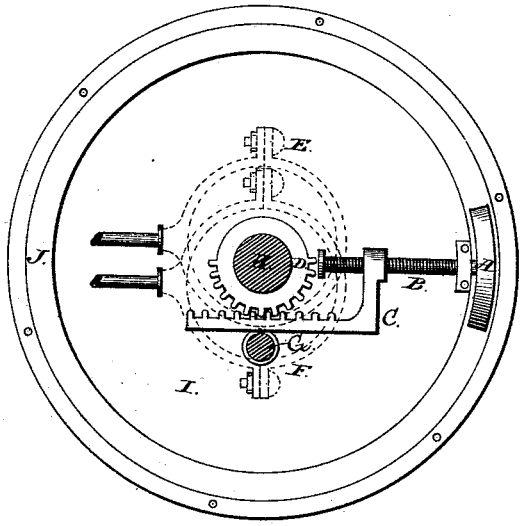
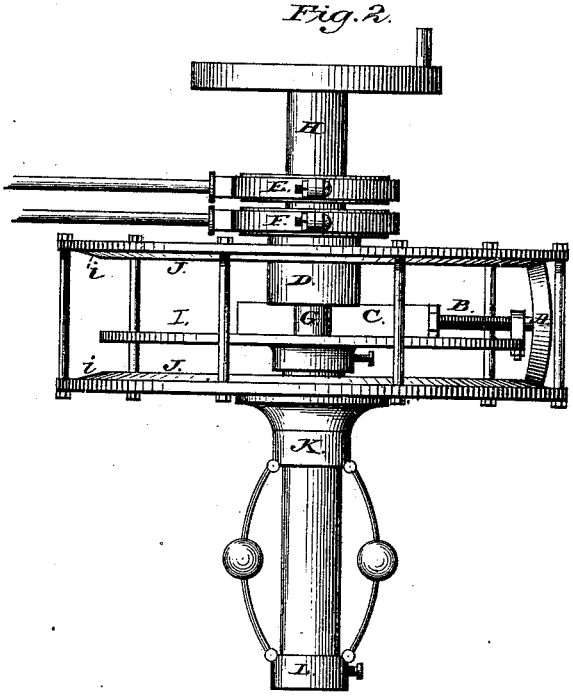


Fig. 2.



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UNITED STATES PATENT OFFICE

WILLIAM N. COSGROVE AND THOMAS MEE, OF FARIBAULT, MINNESOTA.

IMPROVEMENT IN GOVERNORS.

Specification forming part of Letters Patent No. **186,116**, dated January 9, 1877; application filed February 14, 1876.

To all whom it may concern:

Be it known that we, WILLIAM N. COSGROVE and THOMAS MEE, of Faribault, in the county of Rice and State of Minnesota, have invented a new and useful Improvement in Governors for an Automatic Cut-Off, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of our invention is to furnish an automatic cut-off, whereby steam can be used in the cylinder of a steam-engine with great economy by cutting off steam at any point in the cylinder where the regular motion of the engine requires it.

In the accompanying drawings, Figure 1 is a sectional or end view of an automatic cut-off.

A is a friction-wheel attached to screw B, which is located on flange I by two bearings, one at the point of the screw and one at the verge of flange I. Screw B is intended to raise and lower rack C, which is held into place by flange friction-wheel G, and meshes into spur-gear D on main shaft H. Spur-gear D is a part of a long sleeve or hub of eccentric F. Eccentric F is intended to work the cut-off valve. J represents the face of one of the flanges which works friction-wheel A. The face of the flanges is made of a softer material than friction-wheel A by cutting a groove in the wheel J and filling it with leather or other suitable material *i*. Eccentric E is stationary on shaft H, and works the inside valve.

Fig. 2 represents a longitudinal view of an automatic cut-off on a section of main shaft H. Flanges J are bolted together at a sufficient distance apart to allow friction-wheel A to revolve between them. The verge of flanges J is fastened to a point on the bed of the engine, and not allowed to revolve with the main shaft.

Flange I carries friction-wheel A, screw B, rack C, and friction-roller G, and is stationary on main shaft H.

When the speed of the engine is increased or decreased the governor acts at once by moving flanges J horizontally on main shaft, which is to set friction-wheel A in motion, and screw B to raise or lower rack C, geared to the hub of eccentric F, which will set it immediately in the required position.

Steam is always admitted into the cylinder at boiler-pressure, and is cut off at a point necessary to do the work.

When the engine is running at its regular speed friction-wheel A is allowed to revolve between flanges J without any interference, and holds eccentric F unchanged. When the governor-weights drop and move flanges J toward the eccentrics screw B moves rack and gives the engine more steam. When the governor-weights are thrown out, and draw flanges back, the motion of friction-wheel A is reversed and motion of engine retarded.

This cut-off can be worked by any steam-governor.

What we claim is—

In combination with the eccentrics E F, the latter being movable on main shaft H of the parallel beveled flanges J, the angular rack C, the screw-shaft B, carrying the beveled friction-wheel A, the segment gear-wheel D, and a governor mechanism, substantially as specified.

WILLIAM N. COSGROVE.
THOS. MEE.

Witnesses:
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