

S. P. RUGGLES.
Steam-Engine Governors.

No. 142,869.

Patented September 16, 1873.

Fig. 1

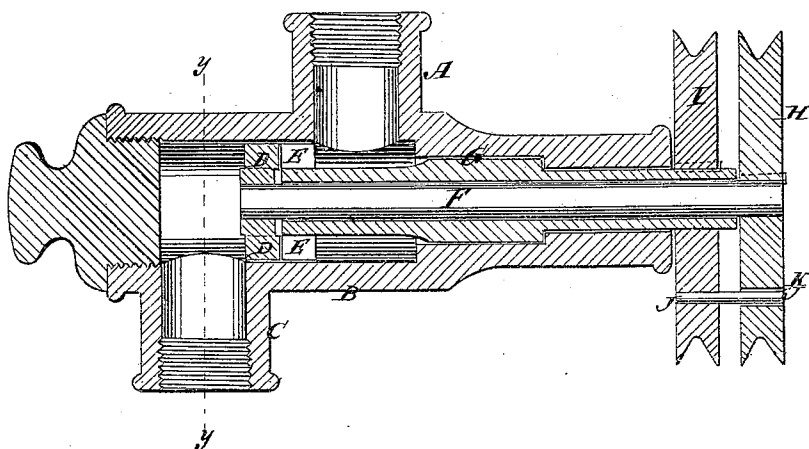
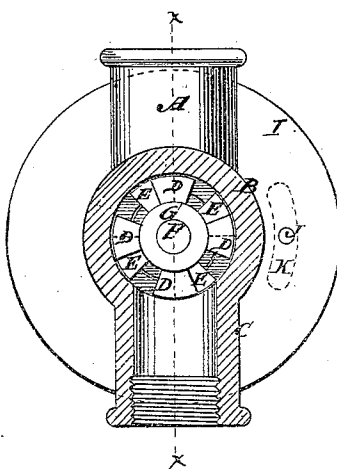


Fig. 2



Witnesses.

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STEPHEN P. RUGGLES, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN STEAM-ENGINE GOVERNORS.

Specification forming part of Letters Patent No. **142,869**, dated September 16, 1873; application filed June 14, 1873.

To all whom it may concern:

Be it known that I, STEPHEN P. RUGGLES, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Steam-Engine Governor, of which the following is a specification:

My invention consists of a pair of rotating registering-disks side by side in the steam-pipe, one of which is turned by clock-work, or any power independent of the engine to be regulated, and the other is turned by the engine. The two are so connected that neither can advance or retrograde relatively to the other more than sufficient to open or close the register. The one turned by the clock is geared to run as fast as the other should be driven by the engine, and they are so set relatively to each other that if an additional labor is imposed on the engine the retrograde motion of its disk will open the register and admit steam; or, if the labor is lessened the advance of the disk will close the register and shut off steam, and thus maintain the required uniform speed.

Figure 1 is a longitudinal sectional elevation of my improved regulator taken on the line *x x*, Fig. 2, and Fig. 2 is a vertical section taken on the line *y y* of Fig. 1.

A B C represent the steam-pipe; D and E, the rotating register disks or valves; F and G, the shafts for turning them; and H and I, the pulleys for turning the shafts. The disks or valves are arranged side by side, and so as to revolve freely in the pipe without much friction, and they have the necessary openings to allow the steam to pass freely when the openings of both coincide, and the openings of one disk will be closed by the other,

or nearly so, when they are shifted relatively to each other suitably for that purpose. The shaft G of valve E is hollow, and shaft F works in it. They project out through a stuffing-box in the steam-pipe and carry the pulleys I H, which are connected together by a pin, J, in the side of one projecting into a slot, K, in the other. The slot is about as long as it is necessary for one disk to shift relatively to the other to open or close the register.

One pulley, say H, will be turned by an unvarying mechanism—say, a donkey-engine, clock, or the like—at the rate of speed it is required that the engine to be regulated shall turn the other one, which will be belted to it, the pulleys being adjusted as near as can be to set the register to the opening required; then any advance or retrograde movement of pulley I, by irregularity of the motion of the engine, will correspondingly change the register and correct the speed.

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

The combination, with the supply-pipe A of an engine, of a pair of register valves or disks, D E, mounted on separate shafts F G, having a connection adapting them to move with different speeds, and one shaft and its valve being driven by the engine to be regulated, and the other by an independent motor not subject to the variations of the said engine, substantially as specified.

STEPHEN P. RUGGLES.

Witnesses:

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