J. GARSED.

Steam-Engine Register.

No. 84,622. Patented Dec. 1, 1868.

Fig: 1.

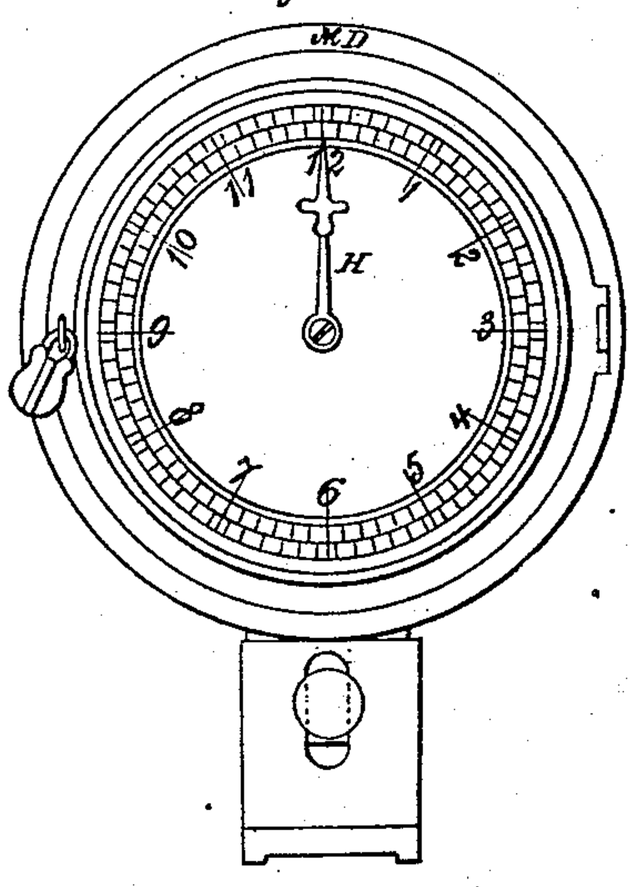


Fig: 2

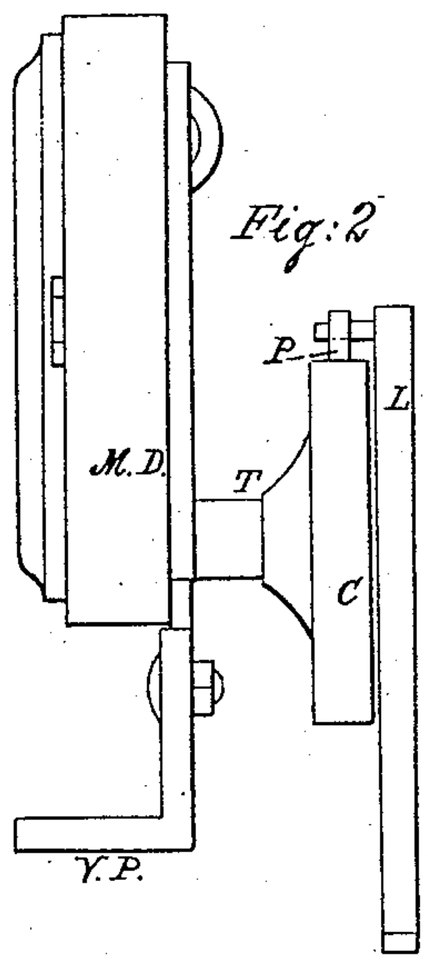


Fig: 3.

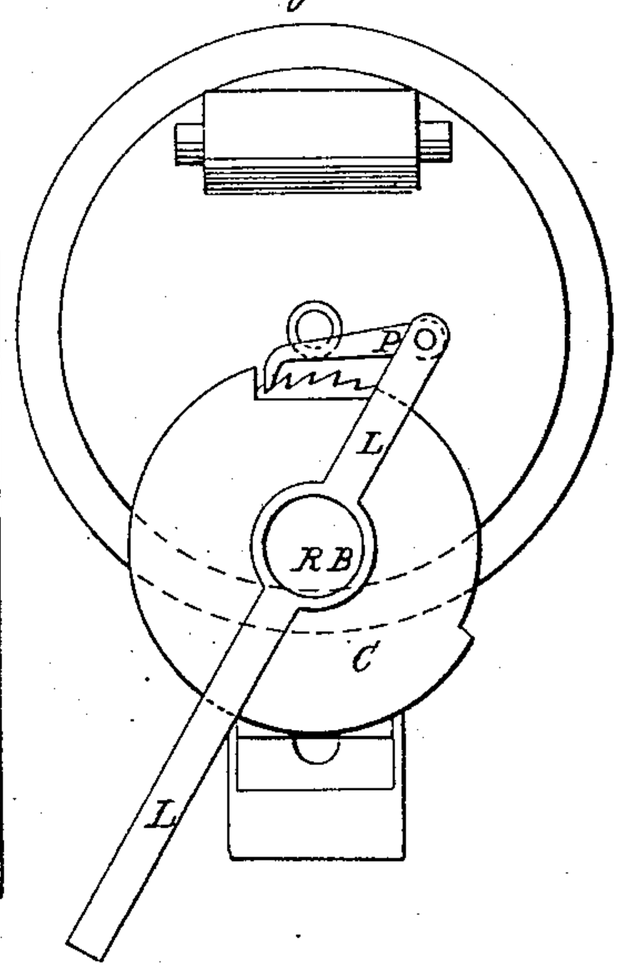


Fig: 4.

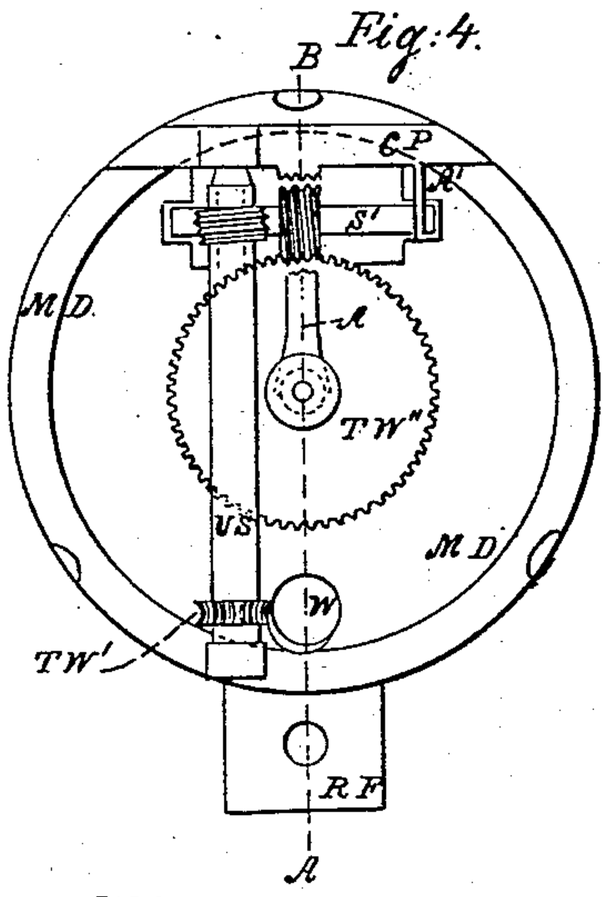


Fig: 5.

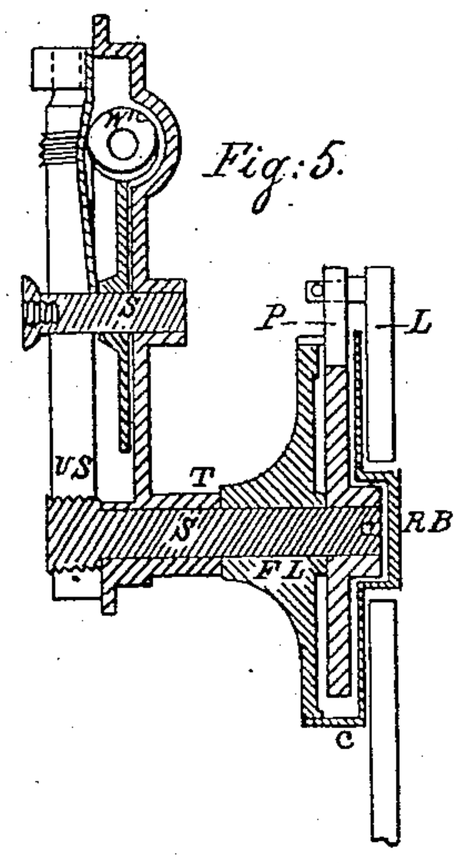


Fig: 6.

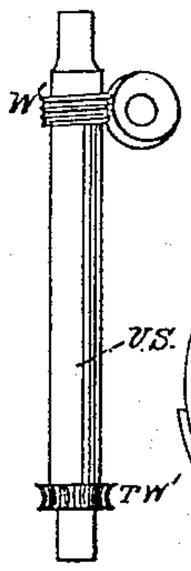
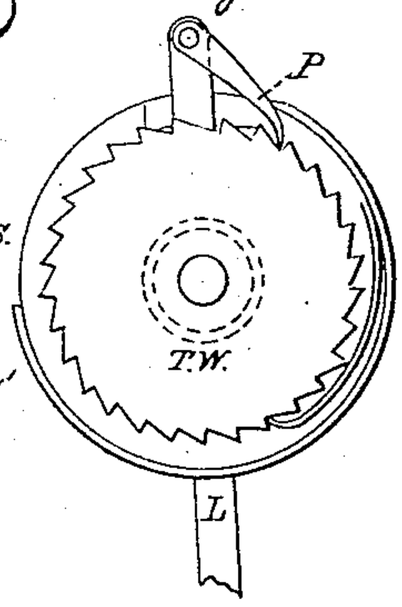


Fig: 7.



Witnesses:

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JOSHUA GARSED, OF FRANKFORD, PENNSYLVANIA.

Letters Patent No. 84,622, *dated December* 1, 1868; *antedated November* 21, 1868.

IMPROVEMENT IN STEAM-ENGINE REGISTERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOSHUA GARSED, of Frankford, in the county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in "Steam-Engine Registers;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, plate 1, is a front view of my register.

Figure 2, plate 1, is a side view of same.

Figure 3, plate 1, is a back view of same.

Figure 4, plate 2, is a view, with the face removed.

Figure 5, plate 2, is a section on A–B.

Figure 6, plate 2, is a detached view of the upright shaft.

Figure 7, plate 2, is a view of the ratchet.

The object of my invention consists in constructing a register for steam-engines or any other revolving machinery, for the purpose of regulating the speed and indicating the number of revolutions, and is especially adapted to cotton or woollen-mills, to enable the superintendent to determine the amount of work accomplished in a given time.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

M D, fig. 4, is a metallic disk, having on its lower edge a rectangular flange, R F.

On the outer circumference of the disk M D are three small lugs.

On the inside and lower part, and on a line with the centre of the disk M D, and passing through it, is a horizontal shaft, S, fig. 5, the said shaft having on its front end a screw-worm, W, and on the rear end a toothed wheel, T W, fig. 7.

On the back part of the disk M D, through which the shaft S passes, is formed a tube, T, fig. 5, which serves as a bearing for said shaft.

On the end of the tube T is a flange, F L, made slightly larger in diameter than the toothed wheel T W.

Fitting on the edge of flange F L, and covering the wheel T W, is a cap, C, fig. 3, said cap having on the outside, and in the centre, a round boss, R B, on which works a lever, L.

On the short arm of the lever L is a pawl, P, which works in the toothed wheel T W, and forms a ratchet.

The long end of lever L is made of any length to suit.

The outer edge of the round boss R B is turned down over the lever L, and secures it in proper position.

On the front part of the disk M D is placed an upright shaft, U S, fig. 4, the upper and lower ends of the same working in bearings, cast on the flange.

On the lower part of the shaft U S is a toothed wheel, T W′, which gears with the worm W on the shaft S, and on the upper part of U S is a worm, W′, which gears with a wheel placed on the horizontal shaft S′, the said shaft working in bearings, cast on the disk M D.

On the centre of shaft S′ is a worm, W″, which gears with the toothed wheel T W″, and operates the hand H, on the face of the register. The back part of the disk M D is rounded out, to allow the worm W″ to revolve.

Running across and secured to the upper part of the flange of M D is a cross-piece, C P, in the centre of which is an arm, A, which passes half way over the shaft S″, on which the wheel T W is placed. The shaft S″ works in a bearing cast or formed on the back and centre of M D.

In the cross-piece C P is also placed a short arm, A′, for the purpose of keeping the shaft S′ in proper place.

The disk M D is secured to the pedestal or upright, U P, by means of the rectangular flange R F.

The cover and face of the register is secured to the disk M D by means of the lugs above mentioned.

Operation.

The register can be attached to any revolving machinery, but, to illustrate, we will suppose it to be placed in the engine-room, in a conspicuous place. The face of the register is divided off into twelve divisions, representing twelve hours. Each division is again subdivided, each one representing ten minutes; and again divided into divisions of five minutes each.

The long arm of lever L is operated from the shaft or cross-head of the engine.

Now, when the engine is put in operation, motion is communicated to the hand H, on the face of the register, by means of the ratchet and intervening gear.

Having thus described my invention, its construction and operation,

What I claim, and desire to secure by Letters Patent of the United States, is—

1. The disk M D, cross-piece C P, arms A and A′, shaft S, and worm W, flange F L, wheel T W, cap, C, and its boss R B, lever L and its pawl P, shaft U S, wheel T W′ and worm W′, shaft S′ and worm W″, wheel T W″, and hand H, all arranged, constructed, and combined, in the manner and for the purposes herein set forth.

2. A register for steam-engines, or other purposes, arranged and operating substantially in the manner herein specified.

JOSHUA GARSED.

Witnesses:

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