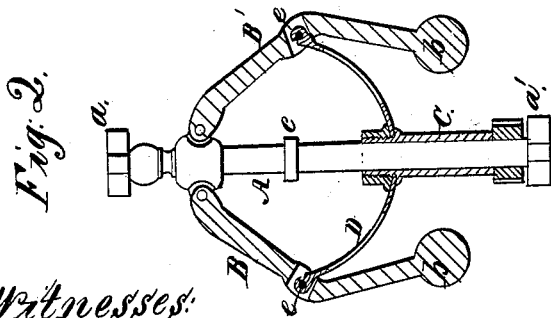
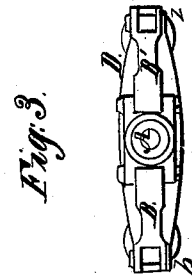
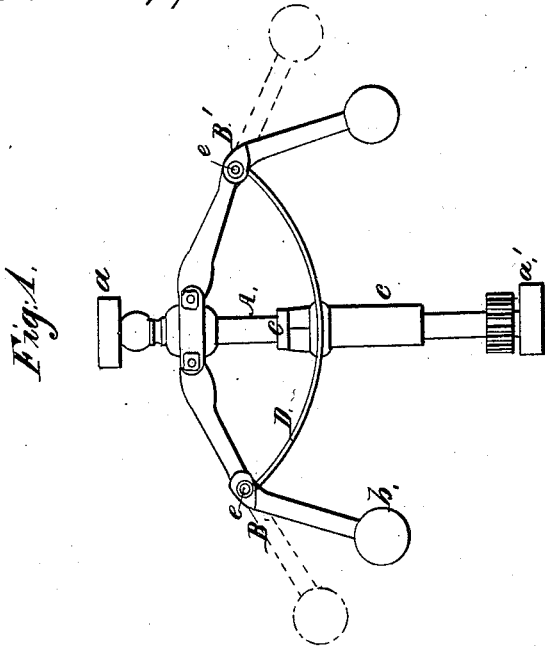


J. C. Clime,

Governor.

N^o 54,057. Patented Apr. 17, 1866.



Witnesses:

Wm Albert Steele
John Parker

Inventor:

J. C. Clime
By his Atty
H. Howson

UNITED STATES PATENT OFFICE.

JOHN C. CLINE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND E. POTTS, OF SAME PLACE.

IMPROVEMENT IN STEAM-ENGINE GOVERNORS.

Specification forming part of Letters Patent No. 54,057, dated April 17, 1866.

To all whom it may concern:

Be it known that I, J. C. CLINE, of Philadelphia, Pennsylvania, have invented certain Improvements in Governors for Steam-Engines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My improved governor consists of a spindle, sleeve, weighted arms, and springs, the whole being constructed and arranged for joint action substantially as described hereinafter.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is an exterior view of my improved governor; Fig. 2, a sectional elevation, and Fig. 3 a plan view.

Similar letters refer to similar parts throughout the several views.

In suitable bearings *a a'* turns the spindle A, and near one end of the latter are jointed two arms, B B', which are bent to the form shown in the drawings, and at the outer end of each arm is a spherical weight, *b*. On the spindle A slides a sleeve, C, the movement of which in one direction is limited by a collar, *c*.

The usual devices may be employed for connecting the sleeve to the regulating-valve of a steam-engine.

A spring, D, is secured to the sleeve by a nut, *m*, the spring presenting two elastic plates, by which alone, in place of the usual rigid rods, the sleeve is connected to the weighted arms B and B', each end of the spring projecting into a slot in one of the arms, where it is secured by a pin, *e*, the spring tending to maintain the arms in the position shown in Fig. 2.

As the arms B B' are thrown outward by centrifugal force when a rotary motion is imparted to the governor the sleeve must of necessity be moved, the spring at the same time yielding and accommodating itself to the different relative positions assumed by the arm and sleeve.

In governors of the usual form the arms B B' are connected to the sleeve by rigid rods, and one or more springs are sometimes applied to the governor, and tend to force the arms toward the spindle.

It will be apparent that by substituting the spring D for the usual connecting-rods, as in the above-described governor, the same results are attained as where both springs and connecting-rods are used, while the governor is less complicated, more compact, and less expensive.

It will also be seen that by making the arms B B' of the bent form represented ample room is afforded for a spring of appropriate length and the desired elasticity.

I wish it to be understood that I do not claim, broadly, the combination, with the governor, of springs connected directly to the balls of the same; but

I claim as my invention and desire to secure by Letters Patent—

The within-described governor, composed of a spindle, A, sleeve C, weighted arms B B', and spring D, the whole being constructed and arranged for joint action as and for the purpose herein set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN C. CLINE.

Witnesses:

CHARLES E. FOSTER,
JOHN WHITE.