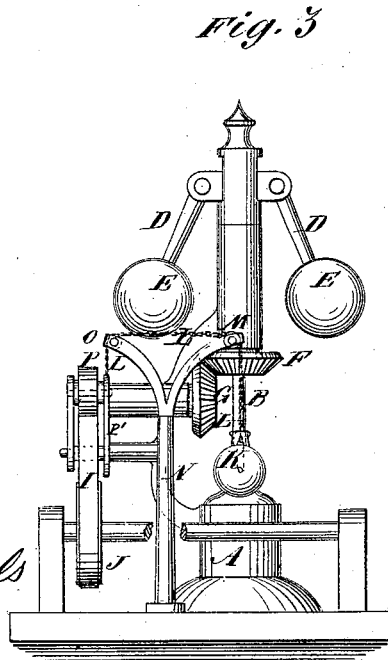
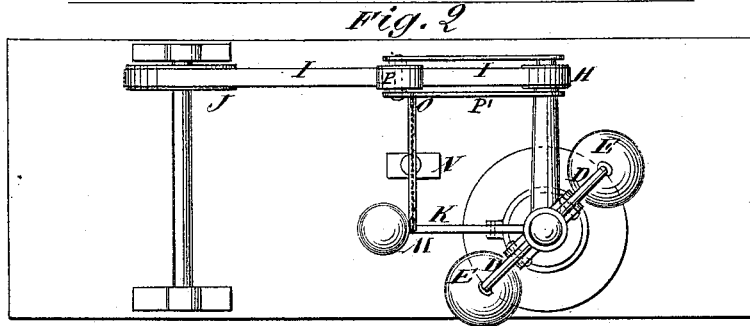
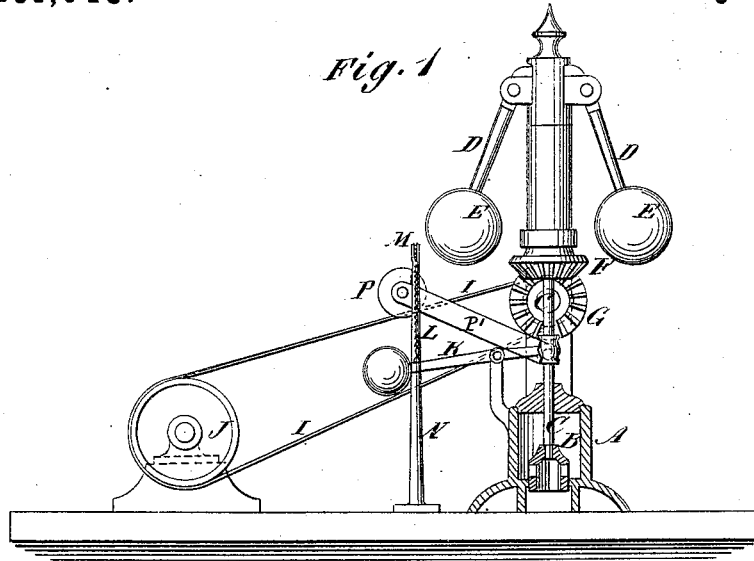


J. W. COLLET.  
STEAM GOVERNORS.

No. 181,645.

Patented Aug. 29, 1876.



WITNESSES:  
*C. Veruux*  
*John Goethals*

INVENTOR:  
*John W. Collet*  
BY *Munn & Co.*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOHN W. COLLET, OF UPPER ALTON, ILLINOIS.

## IMPROVEMENT IN STEAM-GOVERNORS.

Specification forming part of Letters Patent No. **181,645**, dated August 29, 1876; application filed May 1, 1876.

*To all whom it may concern:*

Be it known that I, JOHN W. COLLET, of Upper Alton, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Governors for Steam-Engines, of which the following is a specification:

My invention relates to that class of governors in which a weighted lever is employed to open the valve in opposition to the centrifugal action of the governor-balls.

My invention consists in the employment of an arm resting by an idle-pulley on the driving-belt of the governor, and connected with the counter-balance, so as to lift it and close the valve in the event of the governor being rendered inoperative by the breaking or disconnection of the belt.

In the accompanying drawing, Figure 1 is a side view of my improved governor, the valve-chest being shown in section. Fig. 2 is a top view of the same. Fig. 3 is an end view thereof.

The drawing may represent a governor to which my invention is applicable, in which—

A may represent the valve-chest; B, the valve; C, the valve-stem; D E, the ball-levers; F G, the miter-wheels; H, the governor-pulley; J, the driving-pulley; I, the driving-belt, and K the counterbalance-lever, adapted to open the valve in opposition to the centrifugal action of the governor-balls, all of which may be of any suitable construction. P' is an arm, resting, by means of an idler or idle-pulley, P, on the driving-belt I, and of such weight as to adapt it to lift the counter-balance K when the belt is unshipped or breaks. L is a cord or chain, passing over suitable

sheaves M O, for connecting the counterbalance-lever to the idler or idle-pulley. The sheaves may be supported by a standard, N.

The operation of the device is as follows: When the engine is running, should the belt slip out of position or break the arm P', the idler or idle-pulley, upon which it rests, will immediately descend, thus lifting the counterbalance-lever K, and moving the valve-stem down, and the valve to its seat, which movement cuts off the steam and stops the engine.

It will be observed that with my device I do not depend on the valve dropping to its seat of its own weight; but it is carried to its seat with sufficient force to overcome any ordinary obstructions.

My invention is very valuable, as it can be applied to all governors. All that is required is that there shall be room on the stem to connect the counterbalance-lever.

Having thus described my invention, the following is what I claim as new and desire to secure by Letters Patent:

The combination, with a centrifugal governor, D E, and its driving-belt I, and customary connections, of the counter-balance K, operating to open the valve in opposition to the centrifugal pressure of the governor-balls and the arm P', resting by an idle-pulley, P, on the driving-belt, and connected with the counter-balance, so as to raise the same and close the valve in event of the breakage or unshipping of the belt.

JOHN WALLACE COLLET.

Witnesses:

JOHN W. HOLT,  
O. B. GROUND.