T. M. CORBETT & H. CAMPBELL.

Governor for Steam-Engines.

No. 167,225. Patented Aug. 31, 1875.

Fig. 1.

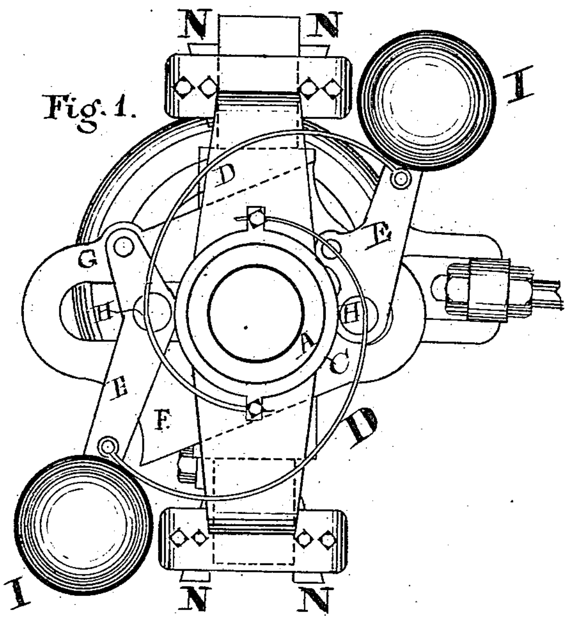


Fig. 3.

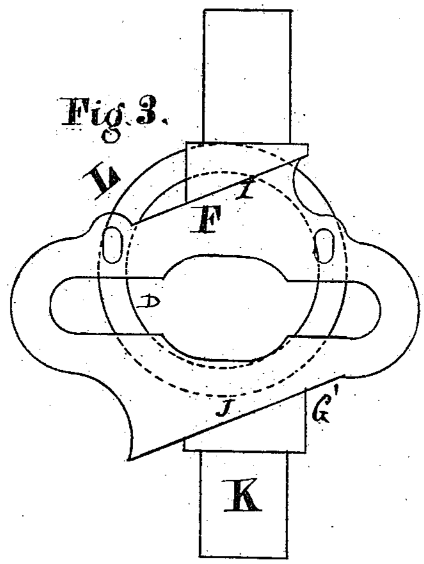


Fig. 2.

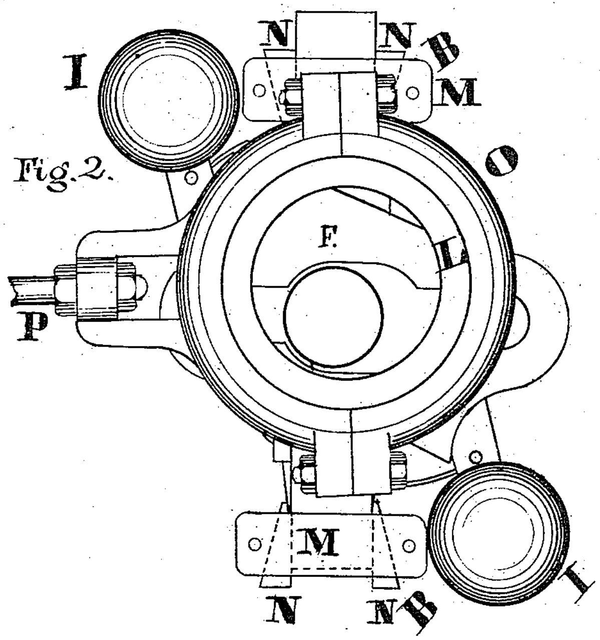
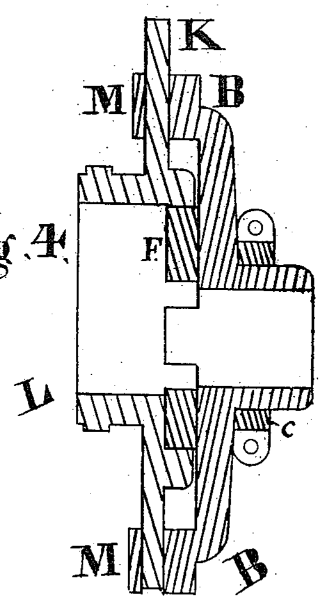


Fig. 4.



WITNESSES

J. D. Smith

J. G. Wilber

INVENTORS

Thos. M. Corbett.

Henry Campbell

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS M. CORBETT AND HENRY CAMPBELL, OF MILWAUKEE, WISCONSIN; SAID CAMPBELL ASSIGNOR TO SAID CORBETT.

IMPROVEMENT IN GOVERNORS FOR STEAM-ENGINES.

Specification forming part of Letters Patent No. **167,225**, dated August 31, 1875; application filed March 16, 1875.

To all whom it may concern:

Be it known that we, THOMAS M. CORBETT and HENRY CAMPBELL, of Milwaukee, in the county of Milwaukee, in the State of Wisconsin, have invented certain Improvements in Governors and Variable Cut-Offs, of which the following is a specification:

The object of our invention is to govern the motion of a steam-engine; and it consists in a governor keyed onto the driving-shaft, having an eccentric attached thereto with weights and springs, which operate a plate in a groove in the cross-bar, pieces of metal fitting into slots in the plate to hold it from moving sidewise. The ends of the cross-bar slide in grooves in projections of the hub, which is keyed onto the engine-shaft. Over the ends of the cross-bar keepers hold the ends of the cross-bar so that it can slide in the grooves, and carry with it the eccentric, so that, as the shaft revolves, the weights, when it revolves too fast, expand, and the outer ends of the levers move out, and the inner ends of one being secured to the plate which slides in the groove in the cross-bar, and the other to the piece of metal which fits in the slot in the plate, the fulcrum of one being attached to one of the pieces of metal which fits in the slot in the plate, and the fulcrum of the other to the plate, the plate, which is moved diagonally in the cross-bar, moves the cross-bar and eccentric so as to lessen the throw of the valves, and give less steam to the engine, and thus slackens the speed. When the motion is too slow the weights recede, and the eccentric is moved in a contrary direction, and more throw is given the valves, and a greater amount of steam is supplied.

Figure 1 is a view of our invention from the hub side, which is keyed onto the engine-shaft; Fig. 2, a view of same from the eccentric side; Fig. 3, a view of the sliding plate and cross-bar; and Fig. 4, a sectional view of the eccentric, cross-bar, plate, and hub.

A is the hub, which is designed to be keyed onto the shaft of a steam-engine; B, a projection extending out on two sides of the hub for the cross-bar to slide on in grooves in same; C, a collar secured to the hub; D D, springs, their inner ends secured to opposite sides of collar C, and their outer ends to the levers; E E, levers attached at their inner ends to the plate F, and to the metal pieces fitting into the slot in plate F; F, plate, which slides in a groove in cross-bar K, with a slot in it, through which passes the engine-shaft, and on each side of the shaft metal pieces project from the hub to hold the plate from moving sidewise; G G, pins, which secure the levers E E to the projections on hub A; H H, pins, which secure the levers E E to plate F; I I, adjustable weights on the outer ends of levers E E; K, cross-bar, to which is attached eccentric L, which is placed a little on one side of the cross-bar, for the purpose of accommodating itself to the top of the valve; M M, keepers, which hold the ends of cross-bar K; N N N N, key, by which the cross-bar may be moved sidewise, so as to accommodate the eccentric L to the top of the valve, which can be done by loosening them on either side and driving up the other side; O, the eccentric strap; P, a section of the eccentric rod.

We claim as our invention—

1. Hub A, projection B, eccentric L, cross-bar K, and plate F, all in combination, substantially as set forth.

2. Collar C, springs D D, levers E E, and adjustable weights I I, in combination with plate F and cross-bar K, substantially as described.

3. Hub A, projection B, cross-bar K, and eccentric L, all in combination, substantially as set forth.

4. Cross-bar K, with eccentric L placed a little on one side of it, in combination with plate L, substantially as set forth.

THOMAS M. CORBETT.
HENRY CAMPBELL.

Witnesses:
J. B. SMITH,
J. G. WILBER.