

(No Model.)

M. ROTHFUSS.  
ENGINE GOVERNOR.

No. 473,712.

Patented Apr. 26, 1892.

*Fig. 1.*

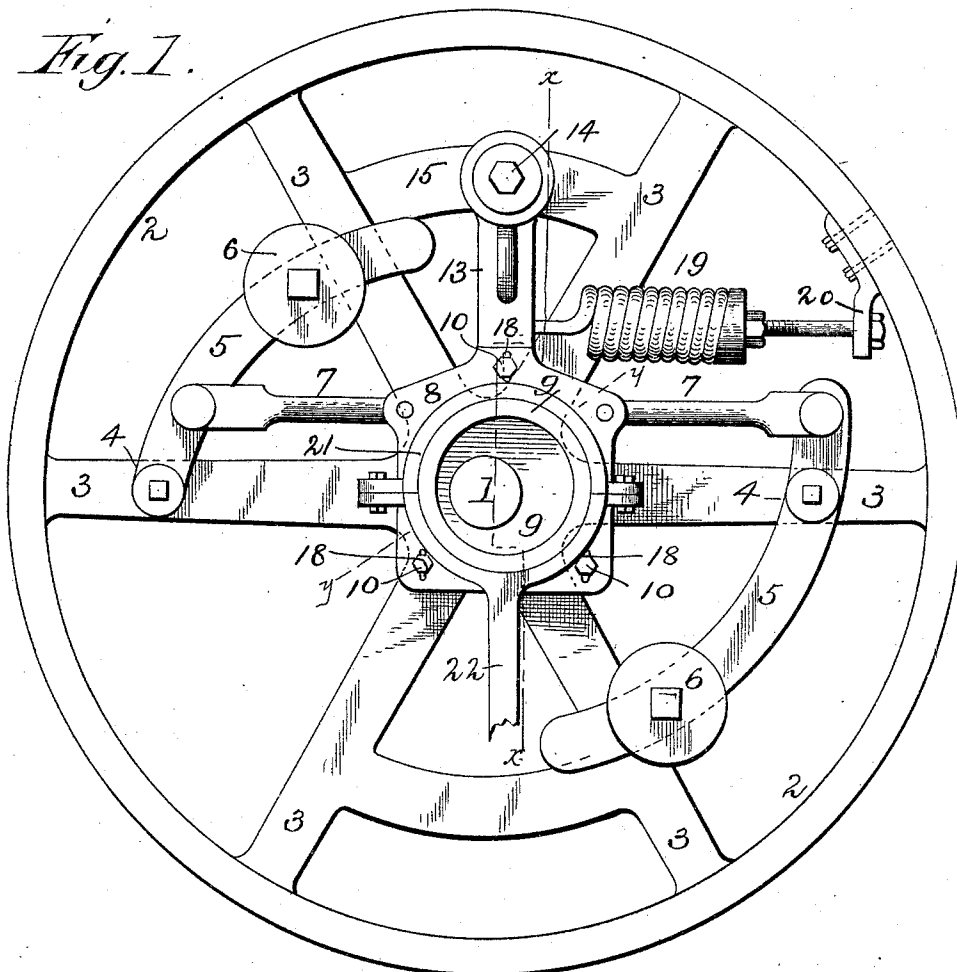
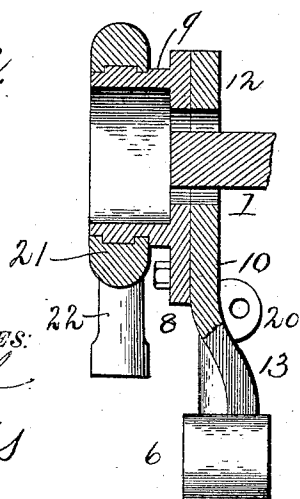
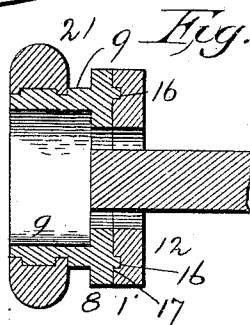


Fig. 2.



21, 9 Fig. 3.



*WITNESSES:*

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# UNITED STATES PATENT OFFICE.

MICHAEL ROTHFUSS, OF WILLIAMSPORT, PENNSYLVANIA.

## ENGINE-GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 473,712, dated April 26, 1892.

Application filed October 13, 1891. Serial No. 408,625. (No model.)

### *To all whom it may concern:*

Be it known that I, MICHAEL ROTHFUSS, a citizen of the United States, and a resident of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Engine-Governors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in governors for steam and other engines of that class in which a disk keyed to the crank-shaft is employed, having pivoted weighted levers connected with the eccentric in such manner that as the disk rotates the centrifugal force will throw the weighted levers outward, shifting the eccentric, and consequently changing the stroke of the valve.

The object of the invention is to provide an improved construction of governor of the above description, whereby the eccentric may be adjusted with respect to the weighted levers so as to give more or less lead to the valve.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a governor constructed in accordance with my invention. Fig. 2 is a section on the line *xx*, Fig. 1. Fig. 3 is a section on the line *yy*, Fig. 1.

In the said drawings the reference-numeral 1 designates the crank-shaft to which is keyed the wheel 2, having a series of radial arms 3. To two of these aligned arms are pivoted at 4 curved levers 5, provided with adjustable weights 6, and to these levers intermediate of the pivoted ends and weights are pivoted the inwardly-extending links 7, pivoted to the plate 8, provided with an eccentric 9. To this plate 8 is secured, by means of bolts 10, a plate 12, having an outwardly-extending arm 13, which is pivoted at 14 to the center of a web 15, cast or formed with the wheel and connected with two of the radial arms thereof. The plate 8 is provided with tongues 16,

which fit in grooves 17 in the plate 12, which latter plate is also provided with elongated slots 18, through which bolts 10 pass, thereby allowing plate 8 to be adjusted upon plate 12.

The numeral 19 designates a coiled spring connected at one end with the rim of the wheel and at the other end connected with a lug 20 on the arm 13.

The numeral 21 denotes the eccentric-strap and 22 the eccentric-rod connecting the same with the valve.

The operation of my invention is similar to that of the ordinary governors of this description—that is to say, the speed of the wheel determines the position of the weighted levers, which in turn determines the angular advance of the eccentric and the consequent point of cut-off, the coiled spring connected with the pivoted arm furnishing the centripetal force. By means of the adjustable plate carrying the eccentric the latter may be shifted so as to give more or less eccentricity thereto, and consequently changing the lead of the valve.

Having thus described my invention, what I claim is—

1. In a governor, the combination of the shaft, the wheel secured thereto, the levers pivoted to said wheel, having adjustable weights, the adjustable plate formed or provided with an eccentric, the links connecting said plate with the levers, the plate secured to said adjustable plate, having an arm pivoted to the wheel, and the coiled spring connected with said arm and with the wheel, said plates being secured together and working in unison, the eccentric-plate being adjustable upon the other plate, whereby the eccentric may be shifted and the lead of the valve varied, substantially as described.

2. In a governor, the combination of the shaft, the wheel having radial arms secured thereto, the levers pivoted to said arms and provided with adjustable weights, the adjustable plate carrying an eccentric and provided with projecting tongues, the links connecting said plate with the levers, the plate having grooves in which said tongues fit, and elongated slots, the arm formed with said plate and pivoted to the wheel, the bolts connect-

ing said plates, and the coiled spring connected with said arm and wheel, said plates being secured together and working in unison, the eccentric-plate being adjustable upon  
5 the other plate, whereby the eccentric may be shifted and the lead of the valve varied, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

MICHAEL ROTHFUSS.

Witnesses:

LOUIS BAGGER,  
BENNETT S. JONES.