Feb. 19, 1924. 1,484,145

F. L. MASSEY

GOVERNOR

Filed Feb. 4, 1921 2 Sheets-sheet 1

Fig. 1.

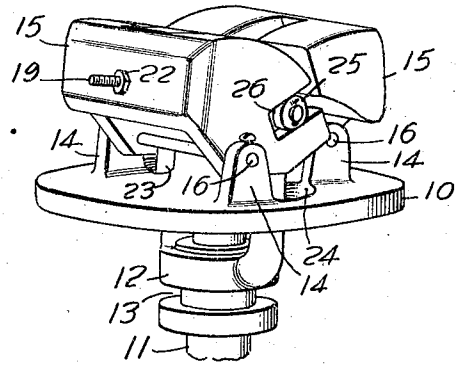
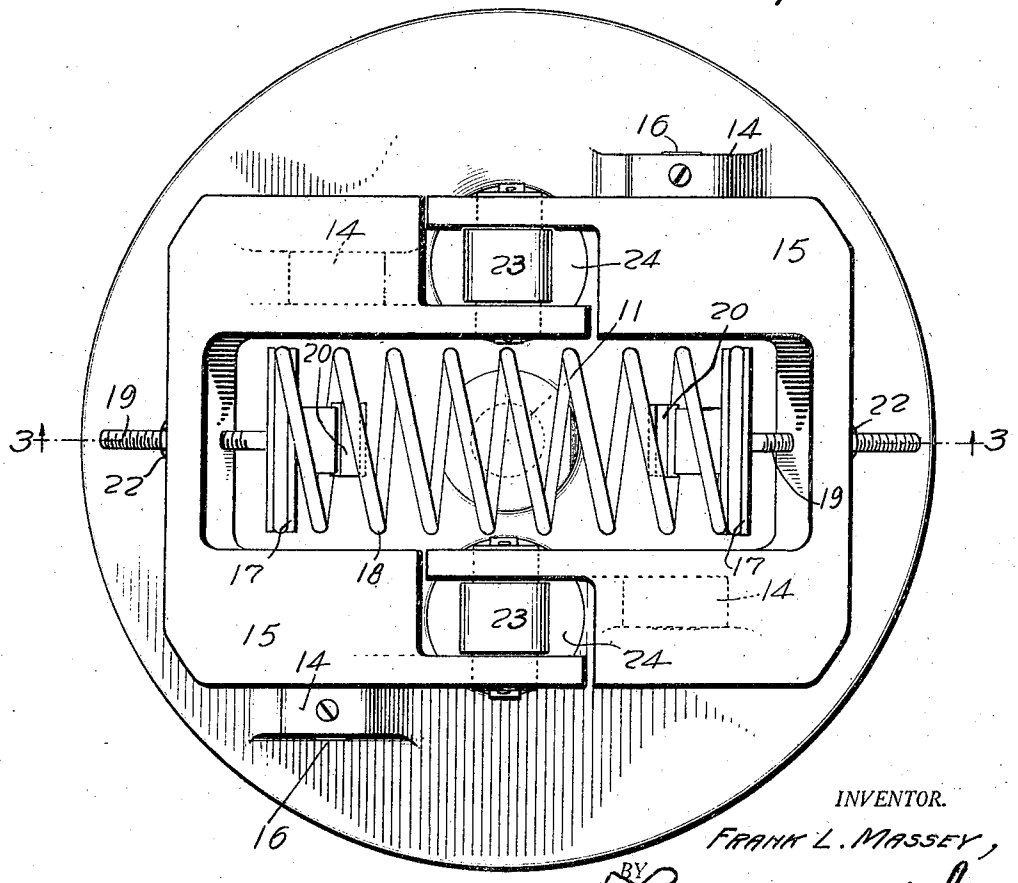


Fig. 2.



INVENTOR.

FRANK L. MASSEY,

BY Franklin H. Hough

ATTORNEY.

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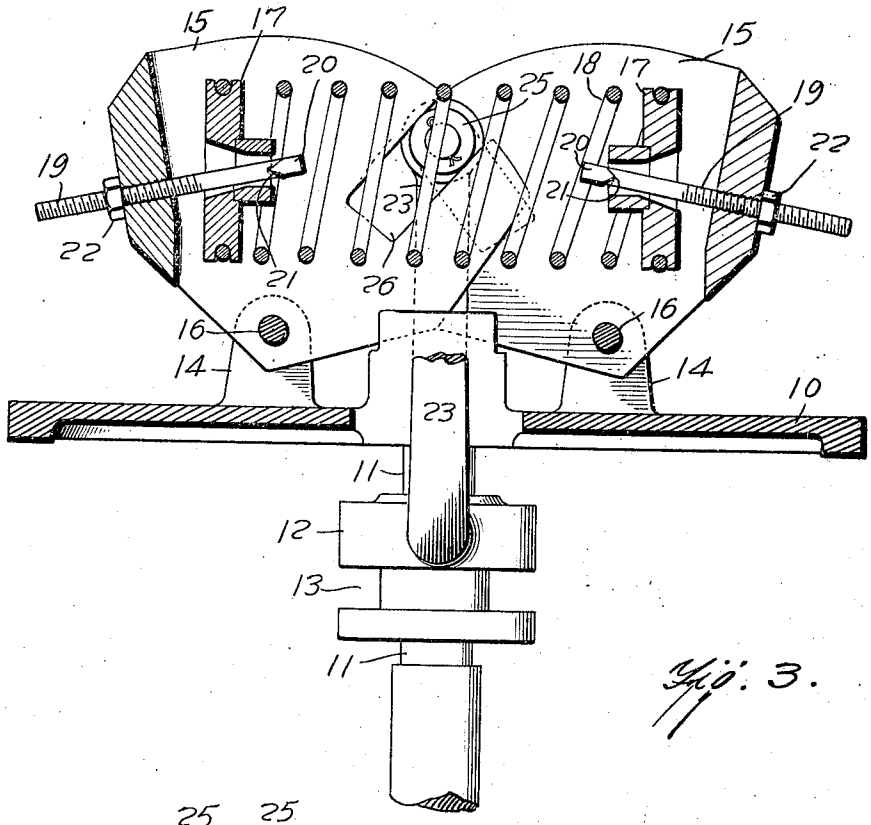


Fig. 3.

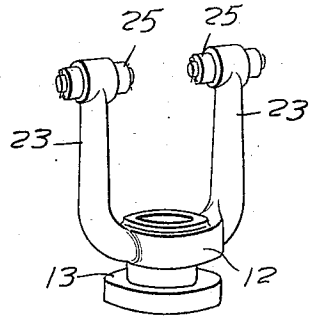


Fig. 4.

INVENTOR.

FRANK L. MASSEY,

BY Franklin H. Hough

ATTORNEY.

Patented Feb. 19, 1924. 1,484,145

UNITED STATES PATENT OFFICE.

FRANK L. MASSEY, OF WATERTOWN, NEW YORK.

GOVERNOR.

Application filed February 4, 1921. Serial No. 442,412.

To all whom it may concern:

Be it known that I, FRANK L. MASSEY, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Governors, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to governors and has for an object to provide a governor having improved means for controlling the governed mechanism and for mounting the centrifugal weights relative to each other and to the rotary mechanisms.

A further object of the invention is to provide a governor mounted upon a turntable through which extend the arms of a channeled collar and with improved means for engagement between the weights, the arms and the collar.

With these and other objects in view the device comprises certain novel elements, units, parts, combinations and arrangements as will be hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a perspective view of the completed organized governor;

Figure 2 is a top plan view of the governor on an enlarged scale;

Figure 3 is a sectional view of the governor taken on line 3—3 of Figure 2, and

Figure 4 is a perspective view of the sliding collar and yoke.

Like characters of reference indicate corresponding parts throughout the several views.

The improved governor which forms the subject matter of this application comprises a turntable 10 mounted rigidly upon the upper end of a shaft 11 and rotating therewith. The shaft 11 is the shaft driven from the part to be governed and has slidable thereon a sleeve 12 having a channel 13 adapted to engage the usual and ordinary members movable to form the governor control.

Upon the turntable two pairs of ears 14 are erected, preferably, though not necessarily, integral with the turn-table 10.

Between each pair of ears 14 a weight 15 is secured, pivoted by the pintles 16 through the lower corners of the weights and through the ears 14. The position and construction of the weights 15 is such that they tend to move away from each other under centrifugal force. Within the weights apertures are provided for the reception of cross-heads 17 making proper engagement with the opposite ends of a tension spring 18 and with tension screws 19 engaging the said cross heads. The exact manner of engagement between the spring and the cross-heads, and the manner of engaging the tension screws in the cross-heads are not essential to the present invention, but the latter is shown as having the tension screws provided with T-heads 20 having knife edge bearings 21 against the cross-heads 17. Adjusting nuts 22 are provided for varying the tension of the spring 18. The sliding sleeve 12 has spaced arms 23 which extend upwardly through openings 24 in the turntable and are provided upon their upper ends with offsets carrying rollers 25 engaging in slots 26 in the weights. The arms 23 with their rollers 25 engaged in the slots 26 are the means for maintaining the sleeve 12 against rotation relative to the shaft 11 and also by reason of the positions of the slots 26, it is obvious that the expanding of the weights 15 will raise the rollers 25 and therewith the arms 23 and sleeve 12, this expanding taking place against the tension of the spring 18. The adjustment of the spring 18 provides for the use of this governor upon parts rotating at different rates of speed and requiring different adjustments of governing mechanisms.

It is believed that the operation of the device will be clearly understood from the foregoing description and the drawings, and that a further statement of such operation will not add to the understanding of the invention.

What I claim to be new is:

1. In a governor, the combination with a driven shaft of a turntable mounted upon the shaft and provided with spaced openings upon opposite sides of the shaft, weights pivoted upon the turntable adapted to expand under centrifugal force and provided with angularly disposed slots, a sleeve mounted to slide upon the shaft, arms rigid with said sleeve carried and extending upwardly through the openings in the turntable, offsets carried by the arms engaging in the slots of the weights, said arms and offsets forming direct connection between the weights and sleeve and holding said sleeve against rotation relative to the shaft

and a spring tending to resist expansion of the weights.

2. In a governor, the combination with a shaft of a turn table mounted rigidly thereon and provided with openings spaced upon opposite sides of the shaft, weights pivoted upon the turn table adapted to expand under centrifugal force and provided with transecting slots, a spring tending to resist expansion of the weights, sleeve slidable upon the shaft, arms rigid with said sleeve extending upwardly through the openings in the turn table, and rollers carried thereby engaging the slots at their transections and forming direct connection between the weights and sleeve.

In testimony whereof I hereunto affix my signature.

FRANK L. MASSEY.