

(No Model.)

C. R. McGAHEY.
CENTRIFUGAL SPEED GOVERNOR.

No. 527,443.

Patented Oct. 16, 1894.

Fig. 1.

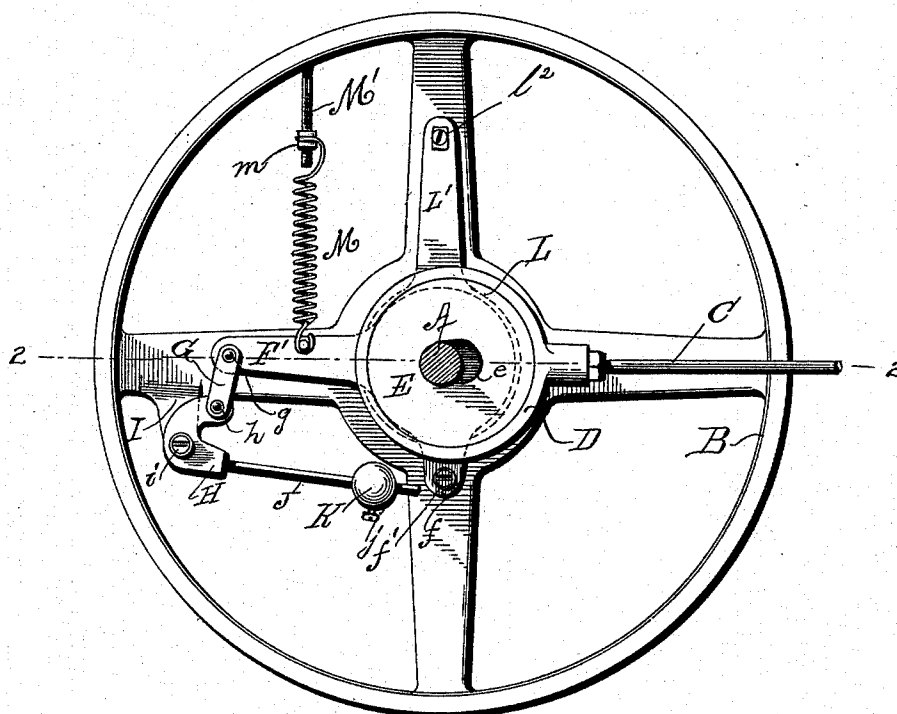
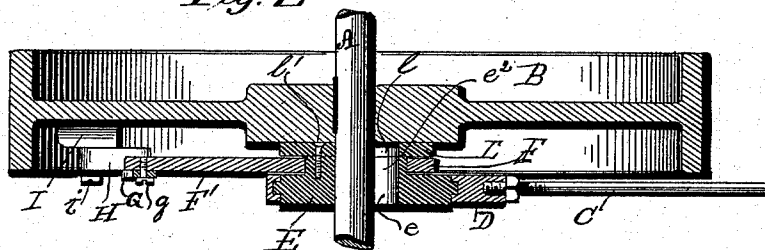


Fig. 2



Witnesses:

L. C. Hills.
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UNITED STATES PATENT OFFICE.

CALVERT R. MCGAHEY, OF ELKTON, VIRGINIA.

CENTRIFUGAL SPEED-GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 527,443, dated October 16, 1894.

Application filed January 9, 1894. Serial No. 496,289. (No model.)

To all whom it may concern:

Be it known that I, CALVERT R. MCGAHEY, a citizen of the United States, residing at Elkton, in the county of Rockingham, State of Virginia, have invented certain new and useful Improvements in Centrifugal Speed-Governors, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in speed governors for steam engines, and it has for its object among others to provide a simple and cheap governor which shall be positive and reliable as well
15 as efficient in its operation, and so constructed that any of the parts may be readily replaced by new ones when necessary or detached for the purpose of repairs.

20 Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claims.

25 The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

30 Figure 1 is a side elevation of my improvement, with the shaft shown in cross section. Fig. 2 is a cross section of the same on the line 2—2 of Fig. 1.

Like letters of reference indicate like parts in both of the views.

35 Referring now to the details of the drawings by letter, A designates the shaft to which is keyed the wheel B.

40 C is the rod designed for connection with the cut-off valve. (Not shown.) This rod is detachably and adjustably connected with the strap D which is held around the eccentric E as seen in Fig. 2, preferably by means of a tongue and groove connection as shown in Fig. 2. This eccentric has an oblong slot *e* as seen in both views in which the shaft A works, and the said eccentric has further an extension *e'* of
45 its hub which is also provided with a coincident oblong slot *e''* as is clearly shown in Fig. 2. F is a bell-crank lever which is mounted to embrace this extension *e'* as seen in Fig. 2, and this bell-crank lever F has an arm or extension *f* which is pivoted at *f'* to the wheel B
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as shown in Fig. 1, and this bell-crank lever is further provided with a longer arm F' at substantially a right angle to the arm *f*, as shown in Fig. 1 and to the outer end of this long arm is pivotally connected as at *g*, one end of the link G the other end of which is pivotally connected as at *h* with the bell-crank lever H which is pivotally mounted as at *i* on a lug I on the wheel B and the other arm of this lever is provided with a rod J upon which is adjustably mounted a weight K which may be held in its adjusted position in any suitable manner, as by a set screw *j*, as shown in Fig. 1.

65 L is a plate which encircles the shaft A and has an oblong slot *l* coinciding with the slots *e* and *e''* as seen in Fig. 2 and is secured to the hub of the eccentric E in any suitable manner as by screws *l'* as seen in Fig. 2, and serving to hold the bell-crank lever F against displacement. This plate L has an extension or arm L' arranged substantially at a right angle to the arm F' as seen in Fig. 1 and the outer end of this arm or extension is pivotally and adjustably held to the wheel B as
75 seen at *l''*.

80 M is a spring connected at one end with the arm F' between its ends and at the other end adjustably connected with the wheel B in any suitable manner, such for instance as shown in Fig. 1 wherein it is shown as connected with a nut *m* adjustably mounted on the screw rod M' projecting inward from the rim of the wheel.

85 With the parts constructed and arranged substantially as above set forth the operation will be readily understood, especially when taken in connection with the annexed drawings. As the speed of the engine increases the weight K is thrown out which draws upon the lever H, link G and arm F' to actuate the rod C and shut off the steam. The oblong slots permit of the necessary movements of the parts.

90 The weight K can be easily adjusted as occasion may require. The spring M normally holds the parts in their proper position and returns them to such position after the rod C has been moved to shut off the steam when abnormal speed has been attained.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim as new is—

- 5 1. The combination with the wheel and its shaft, of the bell-crank lever having an arm pivoted on the wheel and an arm at right angles thereto, a weighted lever connected with the last-mentioned arm, and an eccentric connected with the cut-off valve and about which
10 the bell-crank lever works, as set forth.
2. The combination with the wheel and its shaft, of a bell-crank lever having two arms one of which is pivoted on the wheel, a pivoted lever connected with the other arm and
15 carrying a weighted rod, and an eccentric having a hub about which the bell-crank lever works and carrying a rod for connection with the cut-off valve, as set forth.
- 20 3. The combination with the wheel and its shaft, of the bell-crank lever having two arms at right angles to each other, the lever carrying a weighted rod and pivotally connected with one of said arms, and an eccentric carrying a rod for connection with the cut-off valve
25 and having an eccentric hub, substantially as and for the purpose specified.
4. The combination with the eccentric having an eccentric hub and oblong slot, of the
30 wheel and its shaft passed through said slot, the bell-crank lever mounted on the eccentric hub, a pivoted lever connected with an arm of said bell-crank lever, and a weighted rod carried by said lever, as set forth.

5. The combination with an eccentric having an eccentric hub with coincident oblong slots in the eccentric and hub, of a bell-crank lever on the said hub, a pivoted lever connected with an arm on said bell crank-lever, and a weighted rod on the pivoted lever, as
40 set forth.

6. The combination with the eccentric with its eccentric hub and strap connected with the cut-off valve-rod, of the bell-crank lever on the said hub and having two arms one of which
45 is pivotally connected with the wheel, and the plate connected with the said hub and having an arm connected with the wheel, as set forth.

7. The combination with the wheel and its shaft, of the eccentric with eccentric hub and oblong slot, the bell-crank lever on said hub and having two arms one of which is pivotally mounted on the wheel, the lever pivotally connected with the longer arm and carrying
50 a weighted rod, and the spring connecting the rim of the wheel with the longer arm, and the plate secured to said hub and having an oblong slot and an arm pivotally and adjustably connected with the wheel, all substantially as specified.
60

In testimony whereof I affix my signature in presence of two witnesses.

CALVERT R. MCGAHEY.

Witnesses:

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