

No. 720,432.

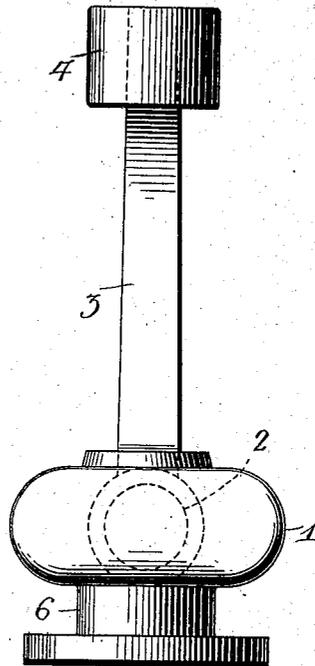
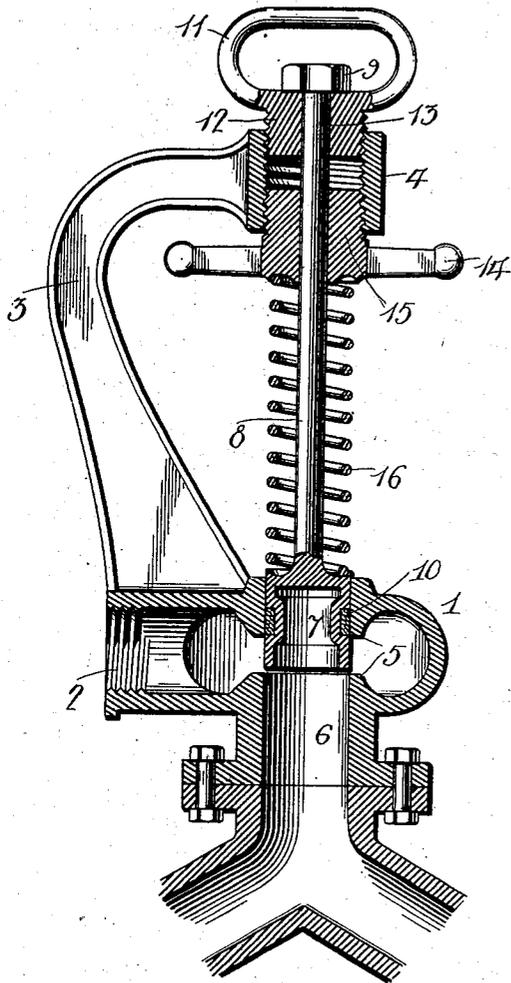
PATENTED FEB. 10, 1903.

O. HOVE.  
ENGINE GOVERNOR.  
APPLICATION FILED SEPT. 23, 1902.

NO MODEL.

FIG. 1

FIG. 2



Witnesses  
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# UNITED STATES PATENT OFFICE.

OLE HOVE, OF ELLSWORTH, WISCONSIN.

## ENGINE-GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 720,432, dated February 10, 1903.

Application filed September 23, 1902. Serial No. 124,506. (No model.)

*To all whom it may concern:*

Be it known that I, OLE HOVE, a citizen of the United States, residing at Ellsworth, in the county of Pierce and State of Wisconsin, have invented certain new and useful Improvements in Engine-Governors; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to engine-governors, and is designed more especially for use in connection with engines of the double-cylinder, rotary, or other type in which the steam is supplied to the engine continuously without cut-off, as is the case in the single-acting reciprocating engine.

The object of the invention is to provide a governor of this character which shall be simple of construction, durable in use, and comparatively inexpensive of production and which will be effective in action, the construction being such that when the engine is working under a heavy load the valve will automatically shift to allow of the passage of a greater amount of steam to the engine to keep up the speed, and when a part or the entire load has been removed from the engine the valve will shift to reduce the steam-supply to the engine.

With these and other objects in view the invention consists in certain features of construction, combination, and arrangement of parts, which will be hereinafter more fully described, and particularly defined in the appended claims.

In the drawings, Figure 1 is a vertical sectional view through my improved governor, and Fig. 2 is a front view of the equalizing-chamber and standard.

Referring to the drawings, 1 denotes an annular equalizing-chamber having a steam-inlet 2 communicating with the boiler and provided with a standard 3, having at its upper end a nut 4, which is alined with the valve-seats 5 of the equalizing-chamber, which in turn are coincident with the outlet-port 6 communicating with the engine.

7 denotes a valve in the form of a hollow plunger, from which projects vertically the valve-rod 8, which extends through the hollow nut 4 and is provided with a fixed head 9.

The valve 7 is provided with a packing-ring 10 and has a snug sliding engagement with its seat and is balanced against lateral steam thrust or pressure by reason of the fact that it is entirely surrounded, when exposed to steam, by the equalizing-chamber.

11 denotes a bail or handle having an exteriorly-screw-threaded plug 12 to engage the nut 4 and is provided with a central aperture 13, through which the valve-rod projects. By rotating the handle the valve may be raised from its seat, and after having been raised from its seat it will have a free reciprocatory movement under the varying action of steam-pressure and the load upon the engine, as the bail will limit the upward movement of the valve, while the plug 12 will limit the lower movement. It will thus be seen that the valve may be set so as to at all times allow of a certain amount of steam passing to the engine, while at the same time when the load is applied to the engine the back pressure, as it were, will force the cup-shaped valve upwardly, and thus increase the opening and allow a larger supply of steam to pass to the engine. To regulate the movement of the valve, I employ a hand-wheel 14, which has an exteriorly-screw-threaded hub 15, that engages the nut 4, and placed between the upper end of the valve 7 and the nut is a coil-spring 16, whose tension may be regulated by the hand-wheel 14, and thus exert a pressure upon the valve 7 in the usual manner.

When it is desired to entirely cut off the supply of steam through the governor, the plug 12 is screwed down to bring the valve 7 in contact with valve-seat 5, and thus cut off the supply of steam. When it is desired to start the engine, the plug 12 is turned up to raise the valve from seat, permitting of steam passing under the valve. As the steam is being used the valve will reciprocate back and forth, according to the load upon the engine, and will thus prove an effective governor. Of course it is understood that the hand-wheel 14 may be adjusted to increase or decrease the tension of the spring to render the action of the valve more or less sensitive.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages

of the invention will be readily apparent, it is thought, without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a governor, the combination with the equalizing-chamber provided with an inlet and outlet port and with a valve-seat, of a valve adapted to engage said seat, a valve-rod, means for elevating the valve-rod, said valve-rod having a sliding connection with said means whereby it has an independent movement of said means, and a spring for forcing the valve to its seat, substantially as set forth.

2. In a governor, the combination with the

equalizing-chamber having a central valve-seat and provided with inlet and outlet ports, of a hollow valve adapted to engage said seat, a standard connected to said equalizing-chamber and provided with a nut, a screw-threaded plug engaging with said nut and provided with a bail, a valve-rod connected to said valve and projecting through a central aperture formed in the plug and adapted to have a movement independent of the plug, which movement is limited by the bail, a hand-wheel provided with a screw-threaded plug engaged with said nut, and an annular spring confined between the hand-wheel and the valve, substantially as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OLE HOVE.

Witnesses:

CHAS. M. HANSEN,  
F. B. WHITE.