

A. L. WYMAN.
GOVERNOR.

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1,000,477.

Patented Aug. 15, 1911.

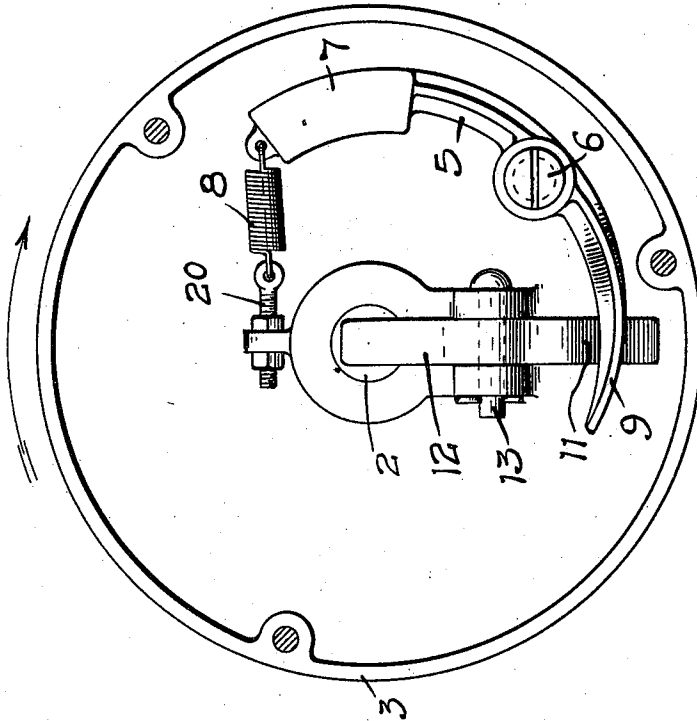


FIG. 2. x-x

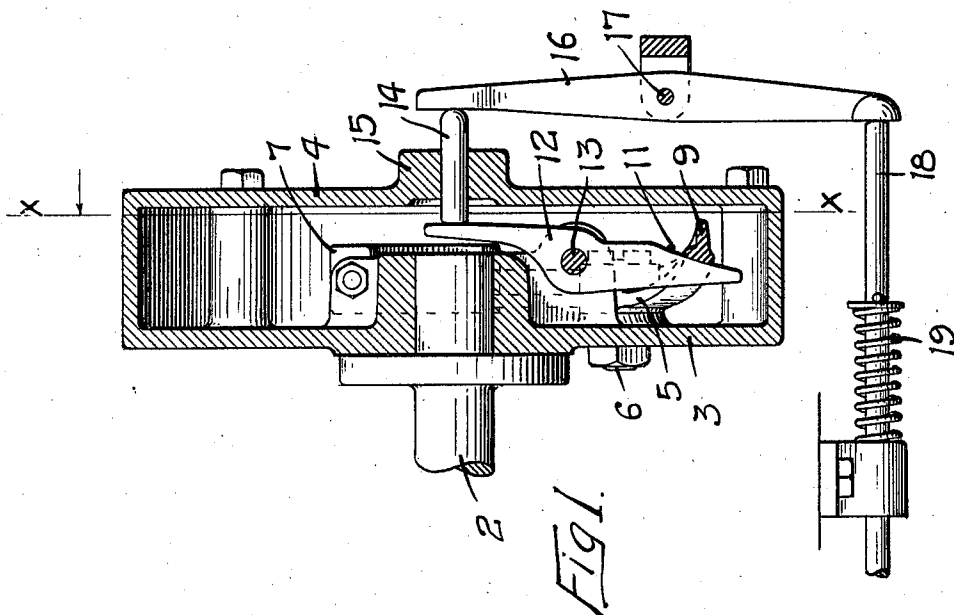


FIG. 1.

WITNESSES
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ALTON L. WYMAN, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO GAS TRACTION COMPANY, OF MINNEAPOLIS, MINNESOTA, A CORPORATION.

GOVERNOR.

1,000,477.

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To all whom it may concern:

Be it known that I, ALTON L. WYMAN, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful
5 Improvements in Governors, of which the following is a specification.

My invention relates to governors for controlling the throttle of a gas engine and the object of the invention is to provide means
10 governed by the speed of the engine for regulating the throttle valve.

A further object is to provide a mechanism which will be of simple construction and positive in its operation and very durable.

15 The invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming
20 part of this specification, Figure 1 is a sectional view of a governor embodying my invention, Fig. 2 is a sectional view on the line $x-x$ of Fig. 1.

In the drawing, 2 represents a shaft, 3 a
25 casing mounted thereon having a cover 4.

5 is a centrifugal governor arm, pivoted at 6, having a weighted end 7 yieldingly held by a spring 8 and a curved end 9 that is adapted to bear on the inclined surface 11
30 of a lever 12 pivoted at 13 in the casing 3. The end of the lever 12 projects inwardly toward the axis of the casing 3 and contacts with a sliding pin 14 that is mounted in a hub 15 in the cover 4. This pin contacts
35 with a lever 16 pivoted at 17 and bearing on a rod 18 which is yieldingly held in engagement with the lever 16 by a spring 19 and extends to the throttle valve, not shown. The spring 19 serves to return the lever 16
40 and the pin 14 to their normal position after being actuated by the movement of the lever 12. The curved end or arm of the governor rides on the surface 11 and, as the weight 7 is thrown out by centrifugal force,
45 the lever 12 will be oscillated, pressing the pin 14 outwardly and oscillating the lever 16 to actuate the rod 18 and the throttle valve to reduce the speed of the engine. When the pressure of the arm 9 upon the
50 lever 11 decreases, and the arm slides down the incline of the lever, the parts will slowly return to their normal position and the throttle will be operated to increase the speed of the engine. In this way a very sensitive
55 and delicate adjustment and regulation of

the throttle valve can be obtained, which will be entirely automatic in its action and easily controlled. Furthermore, the mechanism is extremely simple and will be positive in its action. The tension of the spring 8 will
60 regulate the oscillation of the governor and this tension can be increased or decreased by means of the adjusting screw 20.

I have designed this device particularly for use as a governor in a gas engine, but
65 it may be employed in various other ways where an automatic control is desired.

The various details of this device are unimportant and may be modified without departing from the spirit of my invention.
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I claim as my invention:

1. The combination, with a centrifugal governor arm, of a lever pivoted at a point intermediate to its ends and extending transversely of said arm and having an actuating
75 means at one end in the path of said arm, and a longitudinally movable pin actuated by the oscillation of the other end of said arm, substantially as described.

2. The combination, with a shaft and a
80 casing mounted thereon, of a centrifugal governor mounted within said casing, a lever pivoted at a point intermediate to its ends and having an inclined surface extending transversely of said governor and in the
85 path of the same and a sliding pin arranged in the path of said lever on the opposite side of its pivot from said inclined surface and actuated by the movement of said lever.

3. The combination, with a shaft, of a
90 casing mounted thereon, a centrifugal governor pivoted within said casing and provided with an arm, a lever having an inclined surface in the path of said arm and
95 extending inwardly toward the axis of said shaft, and a sliding pin concentric with said shaft and actuated by said lever.

4. The combination, with a casing, of a centrifugal governor arm mounted therein, a lever pivoted in said casing and having
100 an inclined surface in the path of said arm, a sliding pin actuated by said lever, a second lever in the path of said pin, and a spring pressed rod in engagement with said second lever on one side of its pivot, substantially
105 as described.

5. The combination, with a casing, of a centrifugal governor pivoted at a point intermediate to its ends therein, means yieldingly resisting the outward movement of
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one end of said governor, a lever device arranged transversely of the other end of said governor and having an actuating means in the path of the same, and a throttle controlling rod actuated by the rocking of said lever.

6. The combination, with a shaft, of a casing mounted thereon, a centrifugal governor pivoted within said casing and provided with an arm, a lever having an actuating surface in the path of said arm and extending inwardly toward the axis of said shaft, and a throttle controlling rod actuated by the rocking of said lever.

7. The combination, with a shaft and casing, of a centrifugal governor arm, a lever arranged to oscillate in a plane at right angles substantially to the plane of oscillation of said arm and in the path of said arm, and a throttle operating pin actuated by the movement of said lever.

In witness whereof, I have hereunto set my hand this 25th day of January, 1910.

ALTON L. WYMAN.

Witnesses:

L. C. CRONEN,
J. A. BYRNES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."