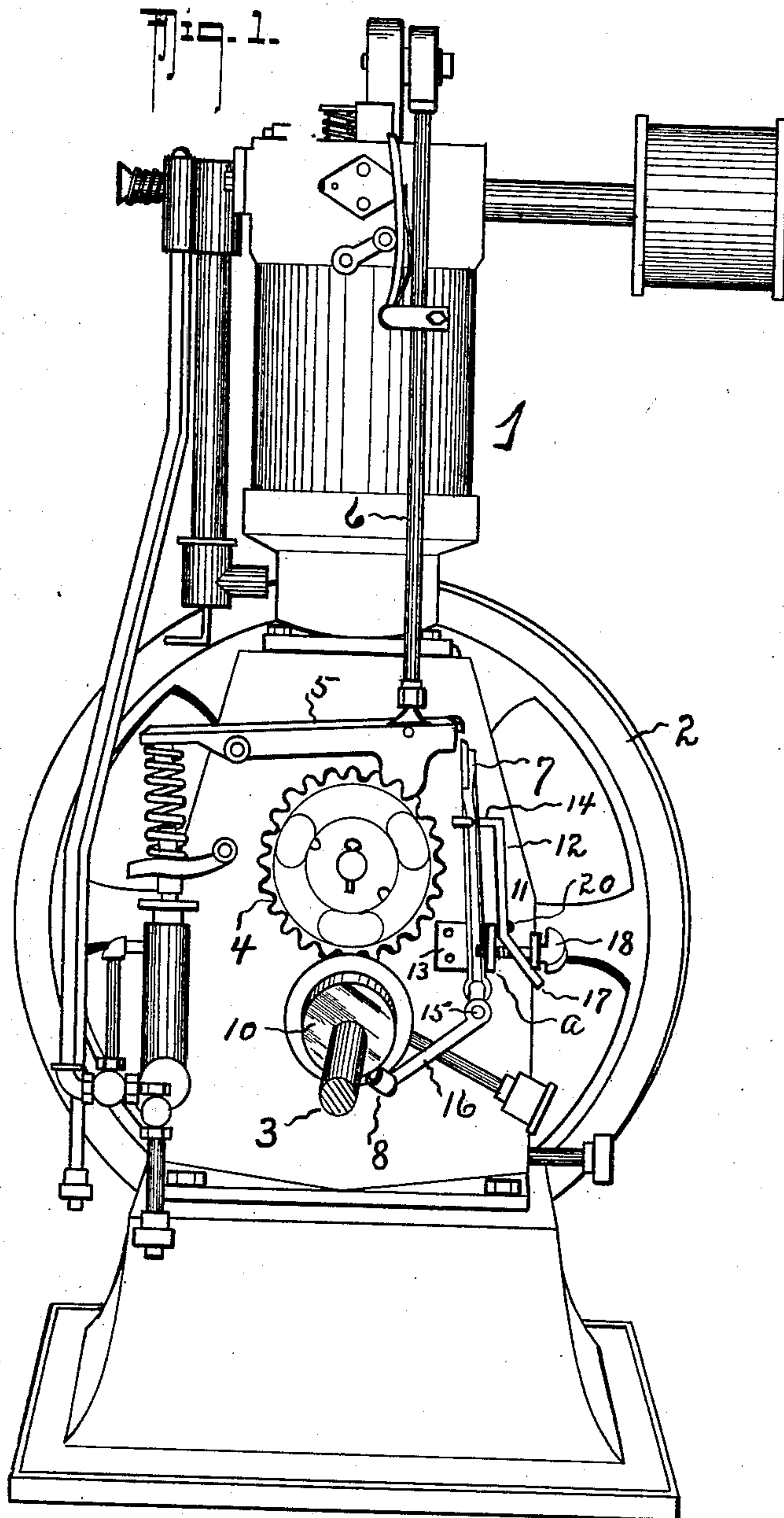


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SPEED REGULATOR FOR GAS ENGINES.  
APPLICATION FILED JAN. 24, 1908.

Patented Sept. 22, 1908.

2 SHEETS—SHEET 1.



Witnesses

Arthur Sturges

Thomas Ritchie

By

Inventor

John B. Schmidt

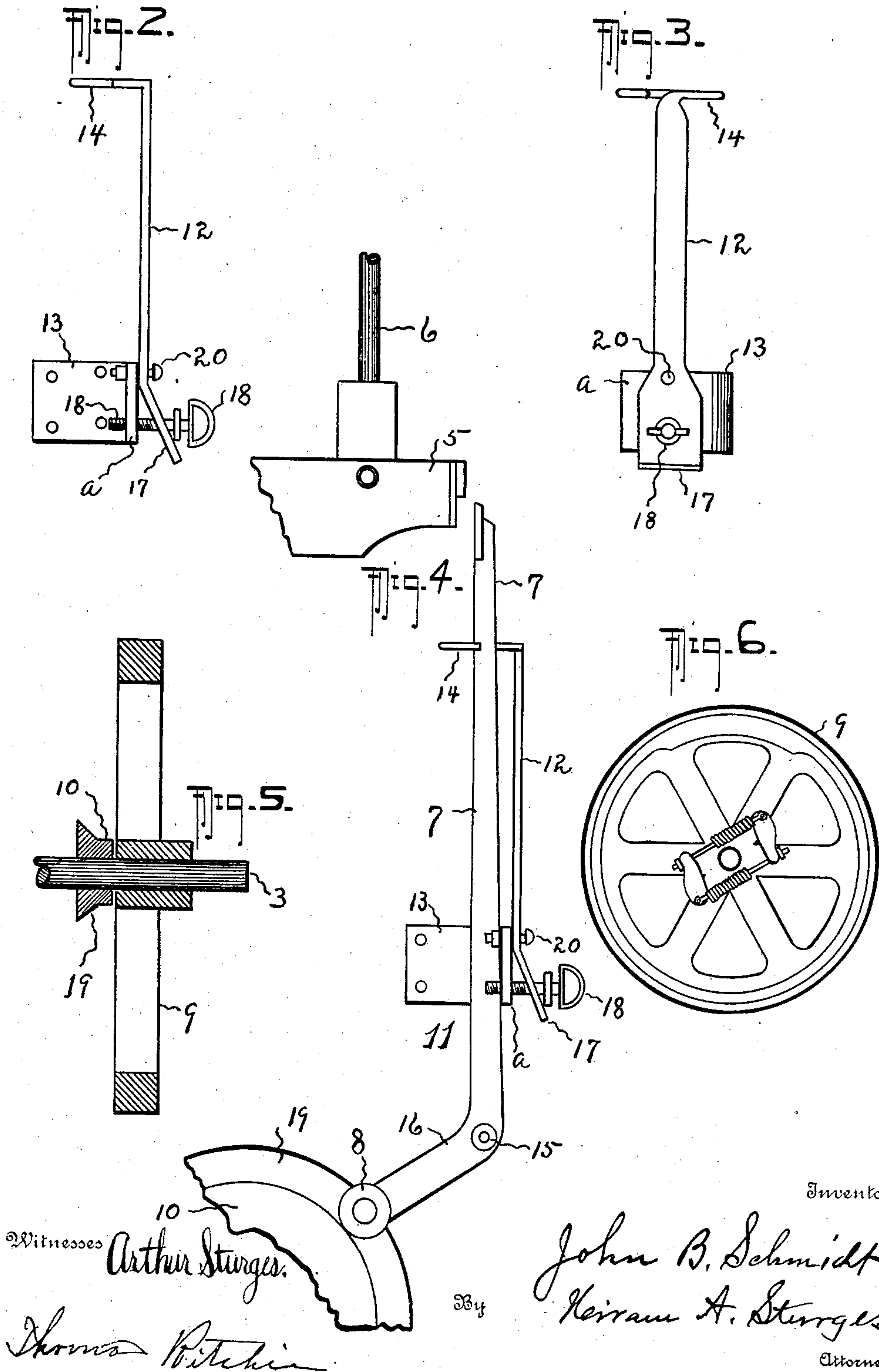
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# UNITED STATES PATENT OFFICE.

JOHN B. SCHMIDT, OF SCRIBNER, NEBRASKA, ASSIGNOR OF ONE-HALF TO WEST BROTHERS,  
OF WISNER, NEBRASKA, A FIRM.

## SPEED-REGULATOR FOR GAS-ENGINES.

No. 899,265.

Specification of Letters Patent.

Patented Sept. 22, 1908.

Application filed January 24, 1908. Serial No. 412,422.

*To all whom it may concern:*

Be it known that I, JOHN B. SCHMIDT, a citizen of the United States, residing at Scribner, in the county of Dodge and State of Nebraska, have invented certain new and useful Improvements in Speed-Regulators for Gasolene-Engines, of which the following is a specification.

The principal object of this invention is to provide a means for regulating the speed of gasolene engines which will be more readily under control than the means now in use; which will be reliable in action and simple and economical in construction.

Another object is to provide a construction, for the above purposes, which may be attached conveniently to any ordinary vertical or stationary gasolene engine.

As constructed prior to my invention, the speed of a gasolene engine has been controlled by a governor; the governor is secured on the shaft of the balance wheel and has a connection with a sleeve on the shaft; this sleeve is provided with a flaringly-formed collar, or a collar having an inclined trackway, and this collar and sleeve has a limited longitudinal movement on the shaft, from centrifugal force. A detent lever has a pivotal mounting upon the body of the engine, one end having a roller seated upon the governor-sleeve, the opposite end of the detent-lever adapted to have a control of the valve-rod by contacting with the end of the cam lever; as the cam-lever actuates the valve-rod of the engine, the governor, through its connection as described, operates to control the action of the exhaust valve rod. When the balance wheel has an increased revolution or a rotation above normal, the governor-sleeve or its collar upon the shaft engages the roller upon the lower end of the detent lever, thereby causing the upper end of the detent lever to be moved in a direction toward and to become engaged by the cam lever; since the valve rod has its longitudinal stroke directly under control of the cam lever, the governor is an effective means for controlling the speed, but the usefulness of the governor is increased by use of the present invention, as will be explained.

According to the construction heretofore employed there were many functions for a gasolene engine which could not be practically performed unless the governor was re-adjusted; a change in the kind of work to be

performed necessitated frequent readjustment of the governor, resulting in loss of time and inconvenience, operation of the engine being suspended for this purpose.

By employing the herein described speed regulator, adjustment of the governor is never required; the device operates to control the movement of the valve-rod, and thereby regulates the speed, the governor not being adjusted or changed, regardless of the character of the work to be performed. The present invention, therefore, includes the provision of means, to be used in connection with the governor-sleeve or collar found upon the shaft of the governor balance wheel of gasolene engines, for a control of the valve rod, to regulate the speed of said engines.

With the foregoing objects in view, the invention presents a new combination and arrangement of parts, as described herein, pointed out by the claims, and illustrated in the drawing, wherein,—

Figure 1 represents a perspective, side view of a gasolene engine, with one of its balance wheels removed, and showing my speed-regulator operatively mounted thereon. Figs. 2 and 3 are, respectively, side and front views of my invention. Fig. 4 is an enlarged detail relating to Figs. 1, 2, and 3 to more clearly show construction and relative position of parts, the cam lever and governor-sleeve being broken away. Fig. 5 is a view, in section, of a governor balance wheel and governor-sleeve. Fig. 6 is an end view of a governor balance wheel, showing a part of a governor thereon.

Referring now to the drawing for a more particular description, numeral 1 indicates a gasolene engine, 2 its pulley balance wheel, 3 the shaft for the governor balance wheel and pulley balance wheel, 4 indicates the cam gear, 5 the cam lever and 6 indicates the valve rod of a gasolene engine; the detent lever is indicated at 7, the detent-roller is shown at 8; the governor balance wheel is shown at 9 in Fig. 6, and is removed from shaft 3 so that the parts may be clearly shown; the governor sleeve is indicated at 10.

For the purposes of my invention I employ a controlling member 11 for detent lever 7; this consists of arm 12 secured pivotally upon the outwardly-extending leaf *a* of bracket 13 as at 20, said bracket being secured rigidly upon the adjacent wall of the engine. Arm 12 extends upwardly adjacent the detent



lever and may be provided with a transversely formed inclosing terminal or finger 14 to encircle or partly encircle the upper end of the detent lever. The detent lever has a  
5 lower shank 16, which may be constructed rigid therewith, and is pivotally mounted as at 15 upon the wall of the engine. I provide for arm 12 the outwardly extending shank 17, and employ an adjusting screw 18  
10 which traverses shank 17 and leaf *a* of the angularly formed bracket 13.

From the description it will be understood that a contact or non-contact of the detent lever with the cam-lever 5 may be under con-  
15 trol of arm 12, for, by means of the adjusting-screw 18, arm 12 may be drawn outwardly and set at any desired angle, the encircling terminal 14 carrying the detent lever out of range of the cam lever.

20 If screw 18 be depressed the upper end of arm 12 will move outwardly, forcing detent lever 7 out of engagement with cam lever 5; roller 8 will then, under increased speed of the engine, travel upward upon the inclined  
25 surface of collar 19 of sleeve 10, and this movement will cause the terminal of detent lever 7 to engage cam-lever 5, which causes

movement of valve-rod 6 to cease, thereby preventing, temporarily, any flow or ignition of gasolene. 30

Having fully described parts and operation, what I claim as new and desire to secure by Letters Patent, is,—

In a speed regulator for gasolene engines, the combination with a valve rod, a cam 35 lever connected thereto, a detent lever pivoted intermediate its ends to the engine frame, a governor sleeve an anti-friction member mounted upon the lower end of the detent lever and engaging said governor sleeve, a 40 fixed member secured to the engine frame, an arm pivoted to said fixed member the upper end of said arm being bent to form a member which extends around and engages the detent lever and a laterally movable ad- 45 justing member carried by the fixed member which engages the said arm below its pivoted point.

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

JOHN B. SCHMIDT.

Witnesses:

ANTON H. MESSE,  
ADOLPH FOLDA.