No. 770,146. PATENTED SEPT. 13, 1904.

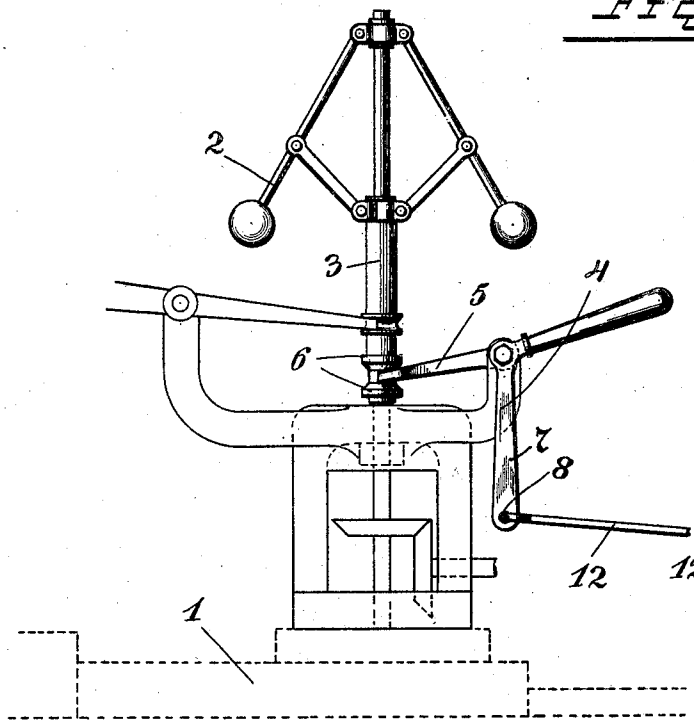
I. ARRASMITH.

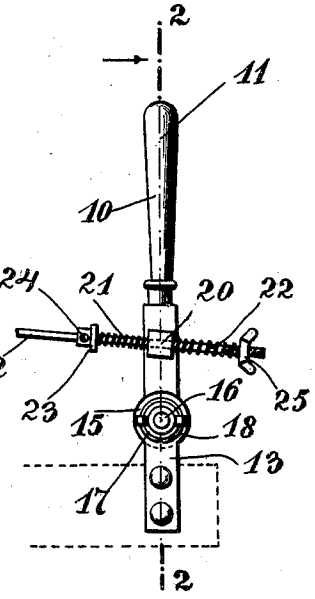
GOVERNOR ATTACHMENT.

APPLICATION FILED JUNE 6, 1904.

NO MODEL.

Fig. 1.





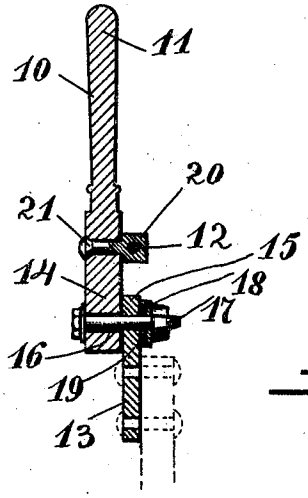


Fig. 3.

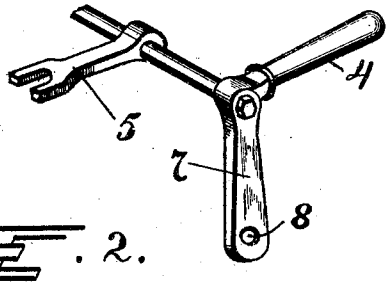


Fig. 2.

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No. 770,146. Patented September 13, 1904.

UNITED STATES PATENT OFFICE.

IRA ARRASMITH, OF SUMMIT GROVE, INDIANA.

GOVERNOR ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 770,146, dated September 13, 1904.

Application filed June 6, 1904. Serial No. 211,397. (No model.)

To all whom it may concern:

Be it known that I, IRA ARRASMITH, a citizen of the United States, residing at Summit Grove, in the county of Vermilion and State of Indiana, have invented certain new and useful Improvements in Governor Attachments; 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.

My invention relates to improvements in attachments for steam-engine governors and is in the nature of a speed-regulator for manually controlling the speed of the engine.

The object of my invention is to improve and simplify the construction and operation of devices of this character, and thereby render them more efficient and durable in use and less expensive to manufacture.

With this and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a view in side elevation of my improved speed-regulator attachment applied to an engine and its governor, the body of the engine being indicated by dotted lines. Fig. 2 is a vertical sectional view taken on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of the usual governor valve-stem operating-lever.

Referring to the drawings by numeral, 1 denotes a portion of the body of an engine, preferably a traction or stationary engine, and 2 denotes its governor of the ordinary centrifugal type, the valve-stem 3 of which is provided with the usual form of hand-lever 4, whereby the speed of the engine may be changed or regulated manually. Said lever 4 as seen in Fig. 3 is of the bell-crank type and has its forked arm 5 loosely engaging the valve-stem between fixed steps 6 and its other arm 7 formed with an aperture 8 at one of its ends.

Upon most engines, and particularly traction-engines, the governor is located upon the top of the engine adjacent to its front end. Hence the lever 4 is not within convenient reach of the operator or engineer, who is at the rear end of the engine in the cab or on the usual platform. My improved device or attachment 10 consists in the means for operating the said lever from any suitable point, and it comprises an operating hand-lever 11, connected to the arm 7 of the governor valve-stem lever 4 by a link or rod 12. The said lever 11 may be disposed at the rear of the body of the engine, in the engine-cab, on the foot-platform of the engine, or at any other suitable point that is within convenient reach of the engineer and has its lower end pivoted or fulcrumed to a bracket 13, secured by bolts or other suitable fastening means at the desired point on the engine. The lever 11 is held in any adjusted position by its frictional engagement with the bracket at the fulcrum or pivot point. This connection is preferably effected by forming heads or circular enlargements 14 and 15 on the upper end of the bracket and the lower end of the lever, respectively, and passing a pivot-bolt 16 through centrally-disposed alining openings. A wing-nut 17 upon the screw-threaded end of said bolt provides means for varying the frictional engagement of said heads 14 and 15. Upon the bolt between one of said heads and said nut are one or more washers 18, one of which, 19, is a yielding or spring washer and is preferably of rubber. If desired, the contacting faces of said friction heads 14 and 15 may be roughened or serrated to increase their frictional engagement to hold them at any angular adjustment.

The connection 12 is a rigid rod or link having one end loosely engaged with the opening 8 in the arm 7 of lever 4 and its opposite end projecting through and slidable in the aperture of a block or eye 20, swiveled, as at 21, to the lever adjacent to its lower pivoted end. Upon said rod or link 12, on opposite sides of the swiveled eye, are coil-springs 21 and 22. The spring 21 is confined between said eye and a sliding collar 23, which may be adjusted upon said rod to vary the tension of said spring and which is held in its adjusted position by a set-screw 24. The other spring, 22, is confined between the said eye and a wing-nut 25 upon the screw-threaded end of the rod or link. This yielding connection be-

tween said rod or link and the operating hand-lever permits the governor to operate in its usual manner.

The operation and advantages of my invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings. It will be seen that when the hand-lever 11 is moved in one direction the valve-stem of the governor will be raised to let more steam into the engine-cylinder, and thus increase the speed of the engine, while the movement of the lever in the opposite direction will depress the valve-stem and reduce the speed of the engine. The lever 11 will be held in its adjusted position owing to its frictional and pivotal connection, while at the same time the springs 14 and 15 will permit the rod or link 12 to move independently of the lever when the valve-stem is actuated automatically by the governor in its usual operation.

While I have shown and described my invention in the form best known to me at the present time, I wish it understood that 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 this invention.

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

1. In a device of the character described the combination with a governor having a valve-stem operating-lever, of a bracket, an operating element pivotally mounted upon said bracket and adapted to be held in an adjusted position by its frictional engagement therewith, and a yielding connection between said lever and said element, substantially as described.

2. In a device of the character described the combination with a governor having a valve-stem operating-lever, of a bracket having an apertured friction-head, a lever having a similar head at one end adapted to coact with said head upon said bracket, a pivot adapted to pass through the apertures in said heads to fulcrum said lever upon said bracket, and a yielding connection between the lever upon the governor and the latter-mentioned lever, substantially as described.

3. In a device of the character described the combination with a governor having a valve-stem operating-lever, of a bracket having an apertured friction-head, a lever having a similar head at one end adapted to coact with said head upon said bracket, a bolt adapted to pass through said apertured friction-heads to fulcrum said lever upon said bracket, a yielding washer upon said bolt, an adjusting-nut upon said bolt to vary the tension on said friction-heads, and a yielding connection between the lever upon the governor and the latter-mentioned lever, substantially as described.

4. In a device of the character described the combination with a governor having a valve-stem operating-lever, of an operating-lever, a swiveled eye upon the same, a connecting rod or link having one end loosely connected with said lever on the governor, and its opposite end projecting through said swiveled eye, and springs upon said rod or link and engaging said eye to provide a yielding connection between said rod or link and the latter-mentioned lever, substantially as described.

5. In a device of the character described the combination with a governor having a valve-stem operating-lever, of an operating-lever, a swiveled eye upon the same, a connecting rod or link having one end loosely connected with said lever on the governor, and its opposite end projecting through said swiveled eye, springs upon said rod or link upon each side of said eye, and means for adjusting the tension of said springs, substantially as described.

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

IRA ARRASMITH.

Witnesses:
FRED MANN,
NICHOLAS T. LEITON.