No. 716,456. Patented Dec. 23, 1902.

M. G. MILLER.

SPEED REGULATOR.

(Application filed Mar. 22, 1902.)

(No Model.)

Fig. 1.

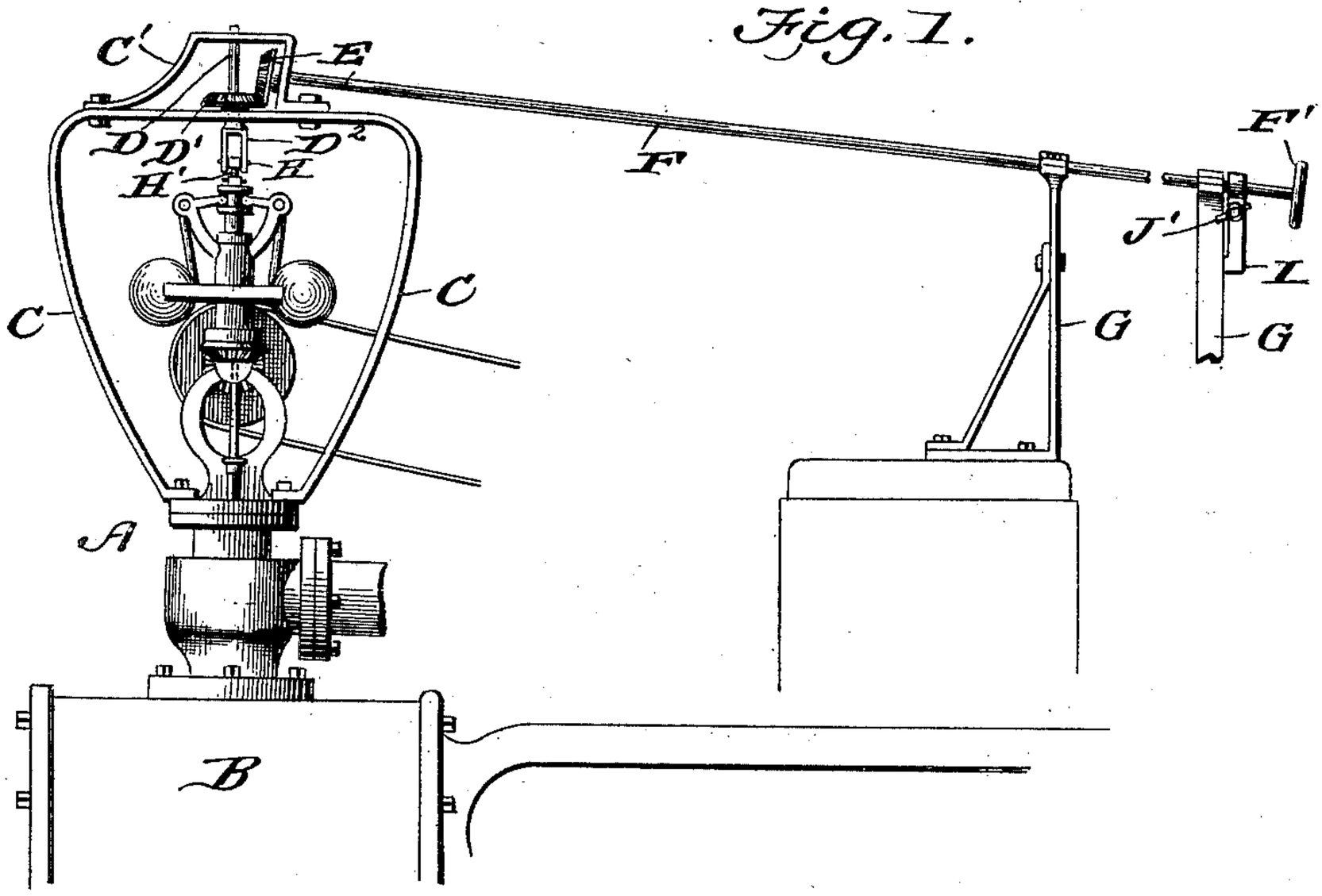

Fig. 4

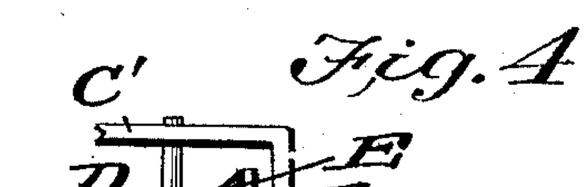

Fig. 3

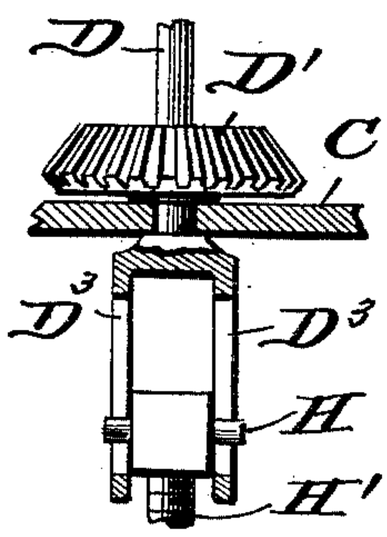

Fig. 2

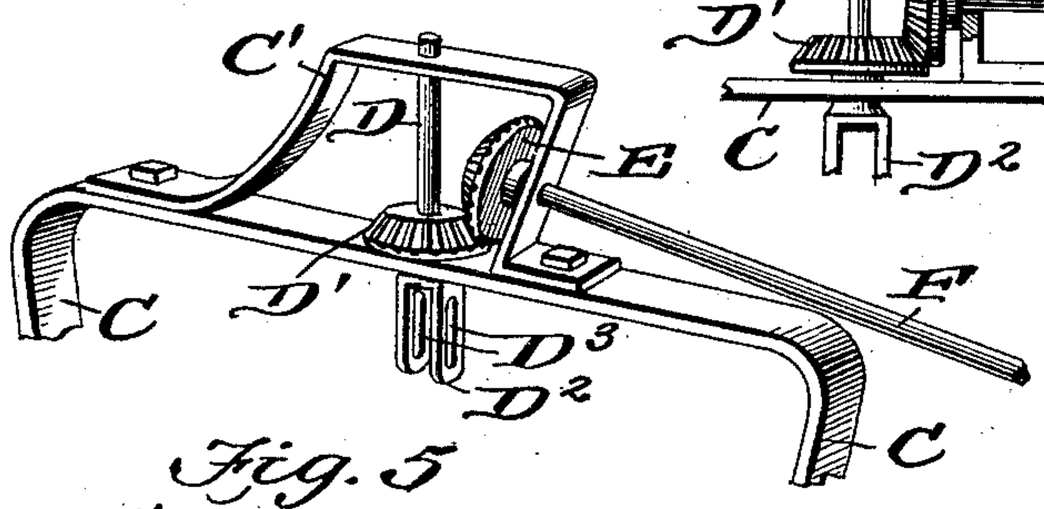

Fig. 5

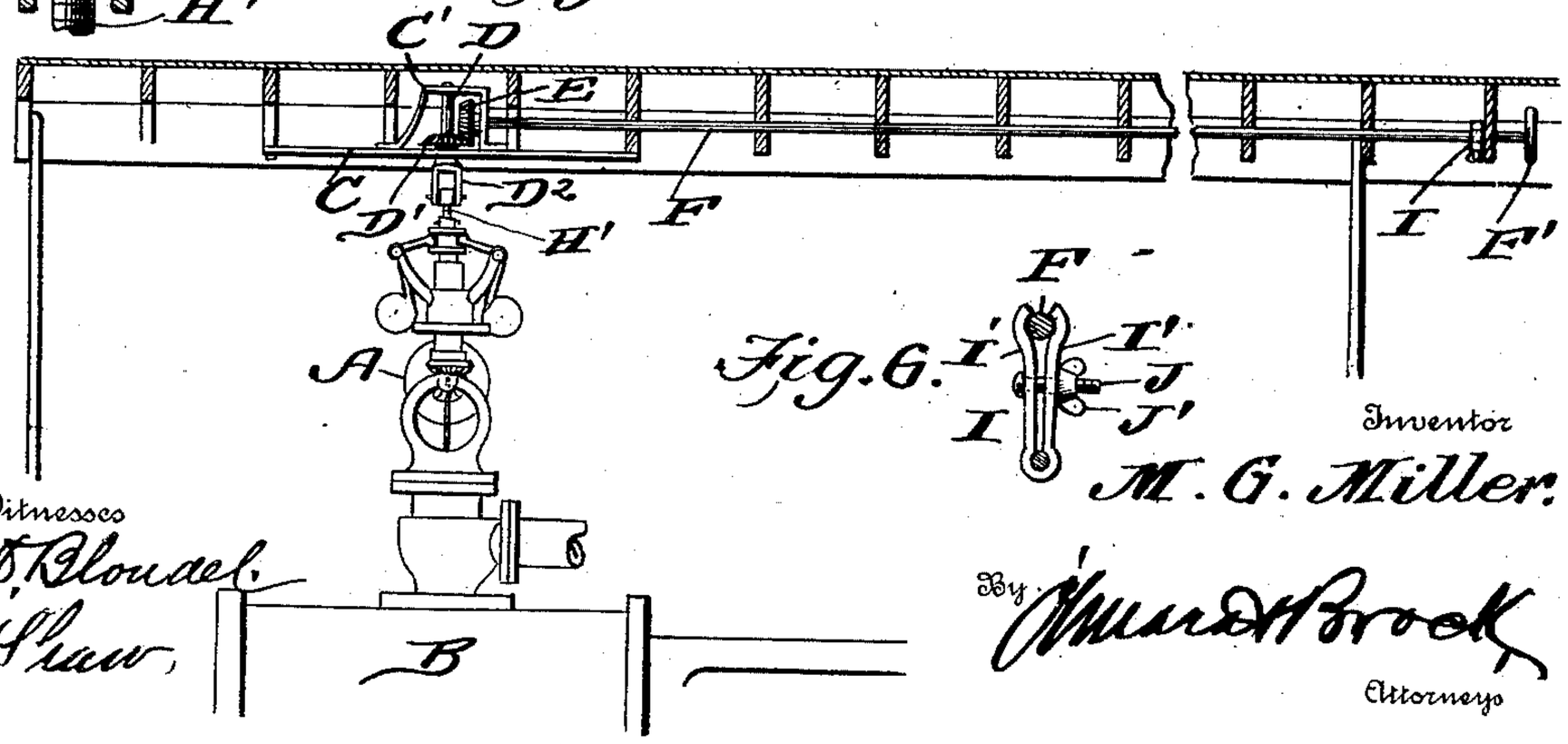

Fig. 6.

Witnesses
M. S. Blondel
C. Shaw.

Inventor
M. G. Miller.

By Munn & Brock
Attorneys

UNITED STATES PATENT OFFICE.

MORTON G. MILLER, OF SUMMIT GROVE, INDIANA.

SPEED-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 716,456, dated December 23, 1902.

Application filed March 22, 1902. Serial No. 99,489. (No model.)

To all whom it may concern:

Be it known that I, MORTON G. MILLER, a citizen of the United States, residing at Summit Grove, in the county of Vermilion and State of Indiana, have invented a new and useful Speed-Regulator, of which the following is a specification.

My invention is an improved speed-regulator for engines, designed particularly for traction-engines; and the object thereof is to provide a device to be connected to the governor, so that the said governor may be quickly and easily adjusted to increase or diminish the speed of the engine.

Another object of my invention is to provide an arrangement capable of operation from the cab of the engine, and thus permitting of a ready adjustment while the machine is in motion.

Still a further object of my invention is to provide a device by which the operating-shaft may be firmly held to its adjusted position without the necessity of a further operation other than operating the shaft.

With the above briefly-stated objects in view my invention also consists in certain details of construction and novelties of combination and arrangement of parts, as will be fully described in the following specification, and pointed out in the claims, reference being had to the drawings, in which—

Figure 1 is an elevation of a portion of a steam-cylinder having a governor mounted therein and to which my improvement is applied. Fig. 2 is a detail perspective view of a portion of the bracket, showing the position and location of the operating-gears. Fig. 3 is a detail view, partly in section, showing the adjustable connection of the screw to the valve-stem. Fig. 4 is a detail side elevation of the gears, illustrating a slightly-modified connection of the operating-shaft. Fig. 5 is a diagrammatic view showing the operating-shaft supported by the rafters of the hood of the engine, and Fig. 6 is a detail view of the device for holding the operating-shaft from turning.

My invention is designed to be connected to the ordinary centrifugally-operating governors, and in the drawings I have shown such style governor A mounted upon the piston-cylinder B, and upon the base of the cylinder I securely fasten a bail-shaped bracket C, having a supplemental bracket C′ arranged thereon, in which, together with the cross-piece of the main bracket, is mounted a shaft D, carrying a beveled gear D′, that is adapted to be engaged by a similar gear E, carried by the operating-shaft F, the latter extending rearwardly into the cab and is provided with a suitable hand-wheel F′. This shaft F is mounted at its forward end in the said supplemental bracket and at its rear end in one or more brackets G, carried by the engine and located at any suitable point.

The lower end of the shaft D is bifurcated, the members D^2 having vertically-arranged slots D^3 produced therein, in which fit the studs H, carried by the head of the screw H′, that engages the valve-stem, and by connecting the screw to the shaft D in the manner just described the vertical movement of the screw is permitted without causing a vertical movement of the gear-shaft.

Suitably mounted upon one of the brackets that supports the operating-shaft is a locking device I, whose jaws I′ are arranged to straddle the shaft and bear upon either side thereof, being held in such position by a screw J, carrying a thumb-nut J′ and by which the tension of the locking-jaws may be readily regulated. In practice the screw is adjusted so that the jaws will grip the shaft sufficiently to hold it from independent movement, but at the same time allowing the shaft to be revolved by hand.

When my improvement is applied to an engine carrying a hood, the operating-shaft and supporting-brackets are supported by the rafters, as shown in Fig. 5 of the drawings; but the general arrangement of the gears and shaft is similar in every respect to the construction shown in Fig. 1 of the drawings.

In instances where the governor is located considerably above the platform of the operator and it is necessary to run the operating-shaft to within easy reach I usually arrange a universal joint in the shaft, which permits the shaft to be located at any angle desired.

In operation when it is desired to alter the speed of the engine it is only necessary to turn the operating-shaft one way or the other, which through the medium of the gears turns

the adjusting-screw of the valve-stem, and thereby raises or lowers it to regulate the speed, as the occasion requires.

It will thus be seen that I provide an exceedingly cheap and simple device for accomplishing the result, as above specified.

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

1. A speed-regulating device for engines, the combination of the governor, a bracket carried thereon, a supplemental bracket arranged upon the first-named bracket, a shaft carried by the brackets and having one end adapted for engaging the valve-stem of the governor, a gear carried by the said shaft and an operating-shaft having a gear held for engagement with the gear of the first-named shaft, substantially as shown and described.

2. In a speed-regulating device for engines, the combination of the governor having a bracket mounted thereon, a supplemental bracket carried by the first-named bracket, a shaft carrying a gear mounted in the brackets, one end of the said shaft being bifurcated and engaging the screw of the valve-stem, an operating-shaft carrying a gear that is adapted for engagement with the gear of the first-named shaft, and means for holding the shaft in its adjusted position, substantially as shown and described.

3. In a speed-regulating device for engines the combination of the governor, having a bracket mounted thereon, a supplemental bracket carried by the first-named bracket, a shaft carried by the brackets and having a gear mounted thereon, one end of the said shaft being bifurcated and the members thereof slotted and adapted for the reception of the studs carried by the screw of the valve-stem, brackets mounted upon the engine, an operating-shaft held by the brackets, a gear carried by the operating-shaft and adapted for engagement with the gear of the first-named shaft, and a holding device arranged upon one of the brackets and adapted for engagement with the operating-shaft, substantially as described.

MORTON G. MILLER.

Witnesses:
JOHN MCCARTY,
HENRY GILMORE.