No. 742,651. PATENTED OCT. 27, 1903.

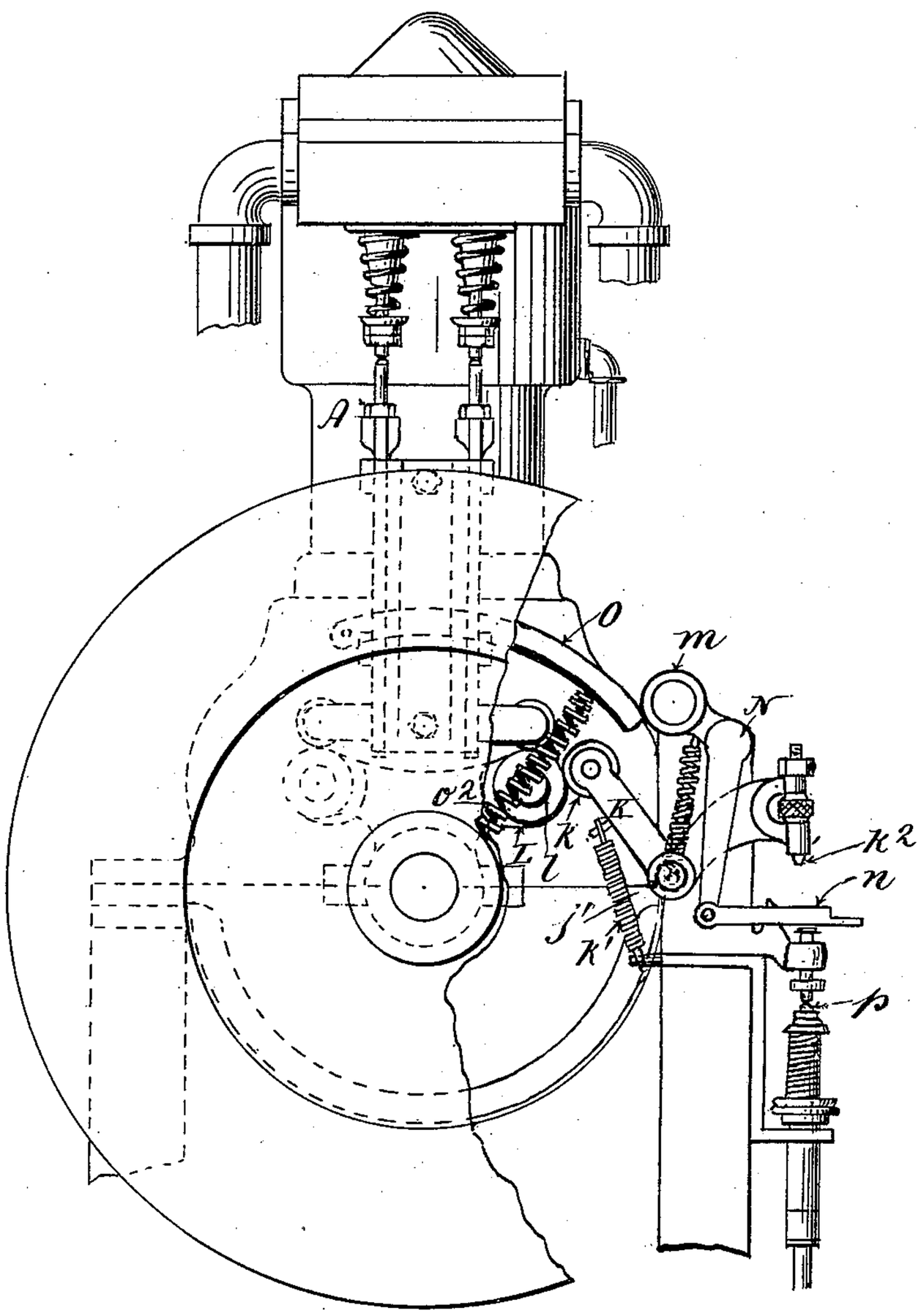
F. C. HIRSCH.

SPEED REGULATOR FOR KEROSENE OIL ENGINES.

APPLICATION FILED JULY 5, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



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NO MODEL.

2 SHEETS—SHEET 2.

Fig. 3.

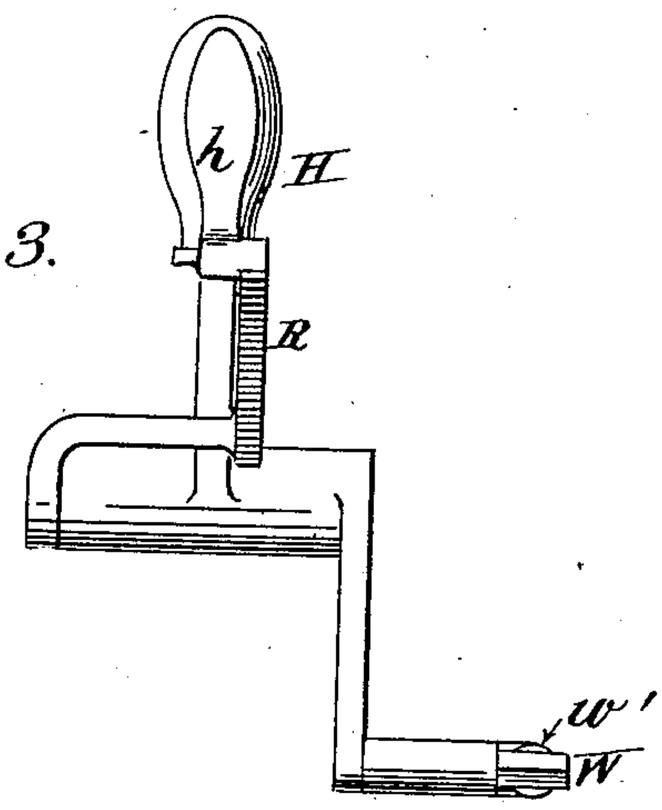


Fig. 4.

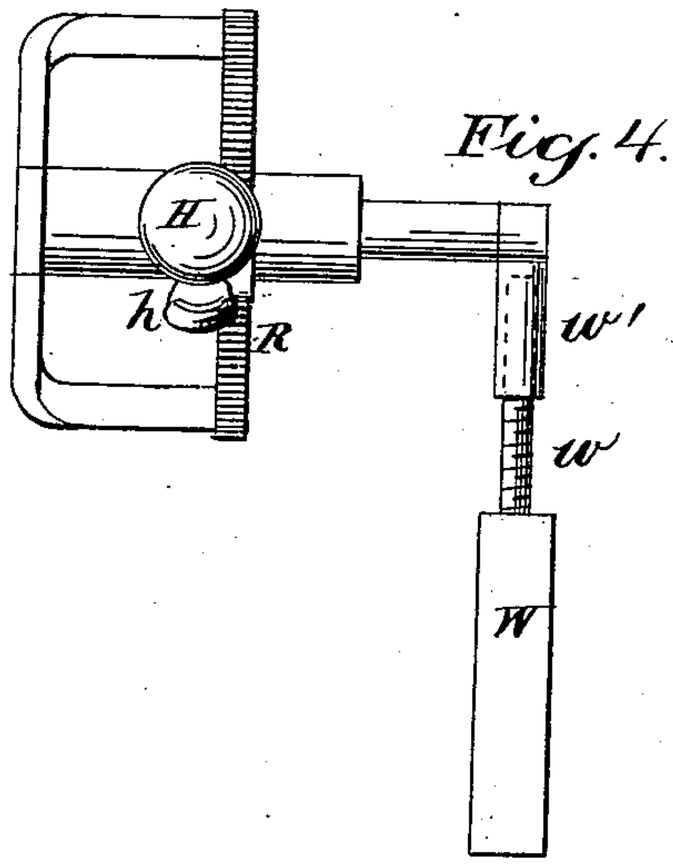
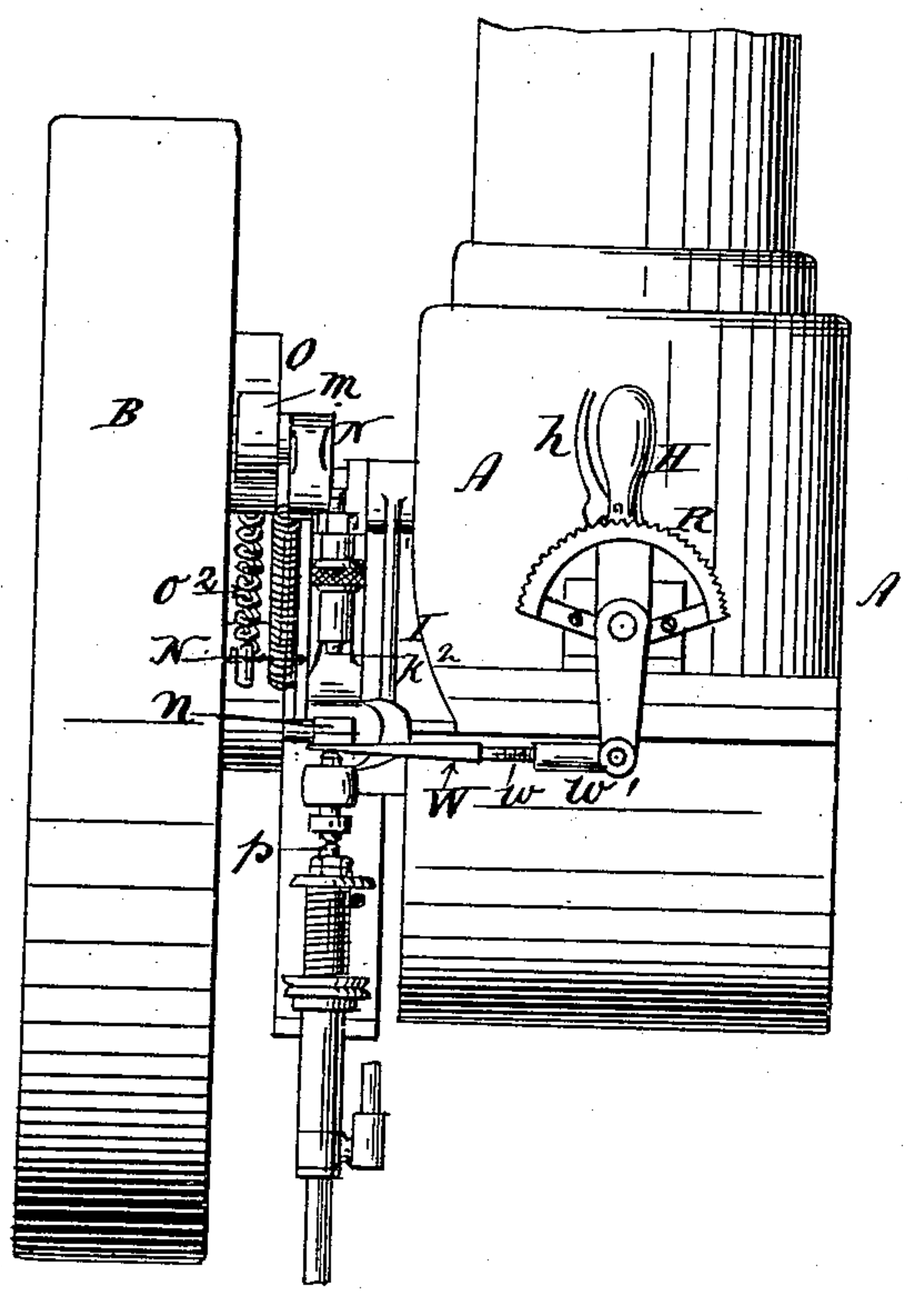


Fig. 2.



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UNITED STATES PATENT OFFICE.

FEODOR C. HIRSCH, OF NEW YORK, N. Y., ASSIGNOR TO ABBOT AUGUSTUS LOW, OF HORSESHOE, NEW YORK.

SPEED-REGULATOR FOR KEROSENE-OIL ENGINES.

SPECIFICATION forming part of Letters Patent No. 742,651, dated October 27, 1903.

Application filed July 5, 1902. Serial No. 114,349. (No model.)

To all whom it may concern:

Be it known that I, FEODOR C. HIRSCH, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Speed-Regulators for Kerosene-Oil Engines, of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

My invention relates to speed-regulators for kerosene-oil engines; and it consists in the special arrangement and construction of parts hereinafter described, and claimed specifically.

In the accompanying drawings, Figure 1 is an end view of a kerosene-oil engine to which my improvements are applied. Fig. 2 is a view taken at right angles to Fig. 1. Fig. 3 is a detail of the hand-lever; Fig. 4, a plan of the same.

A represents a kerosene-oil engine, of which B is the fly-wheel. On the pivot j' is pivotally supported a cam rock-lever K, upon the inner end of which is mounted the contact-roller k, which is thrust against the cam L on the cam-shaft l by means of a spring k'. The other end of the cam rock-lever K carries the contact-point k^2. A rock-lever N, pivotally supported upon the bracket I, carries at its lower end the controlling-slide n, and at its upper end the contact-roller m for engagement with the segmental governor O upon the fly-wheel B. This segmental governor O is held in its retracted position against centrifugal force by a spring o^2. Interposed between the controlling-slide n and the upper end of the oil-pump piston-rod p is a wedge W, controlled in position by a hand-lever H, said hand-lever being provided with a pawl h for engagement with the segmental rack R, as will be seen clearly by reference to Fig. 2. The controlling-slide n is pivotally connected at one end to the lower end of the rock-lever N, and its other end is stepped and reduced in thickness for the purpose hereinafter set forth.

The cam rock-lever K is operated by the cam L to bring the contact-point k^2 against the upper surface of the controlling-slide n when the latter is in its normal position, as shown in Fig. 1, thereby causing the depression of the pump piston-rod p. When, however, the speed of the engine is sufficient to throw the segment O on the fly-wheel outward by centrifugal force, said segment O acts on the roller m to rock the lever N, and thereby retract the controlling-slide n, so that the thinner portion thereof is brought over the wedge W and pump piston-rod p below, in which position the contact-point k^2 will under ordinary conditions fail to act, and the supply of oil will be stopped. The main object, however, of the use of the wedge W and hand-lever H is to vary and regulate the oil-feed, since it is obvious that as it is interposed more or less between the pump-rod p and the controlling-slide n when the latter is in its normal position, as shown in Fig. 1, the downward stroke of the contact-point k^2 will be more or less effective according to the thickness of the portion of the wedge so interposed.

The wedge W is formed with a threaded shank w, which engages with a female screw-thread formed in the coupling w', which is pivotally connected to the lower end of the hand-lever H. By this means the accurate adjustment of the wedge with relation to the hand-lever H and controlling-slide n may be readily and conveniently effected.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with an oil-pump of a kerosene-oil engine and its operating means, of a governor-controlled stepped slide between said means and the pump piston-rod, a movable wedge between the rod and slide, the wedge being adjustable upon the means for moving the same.

2. In a kerosene-oil engine the combination with the governor-controlled controlling-slide n, and actuating parts therefor and with the oil-pump for supplying oil to the combustion-chamber of said engine and independent operating means for said pump, of an adjustable wedge interposed between the pump-rod and said controlling-slide, a hand-lever and rack for controlling the position of said wedge and means for adjusting said wedge upon and with relation to said hand-lever said slide enabling the actuating means to operate the pump, substantially in the manner and for the purpose set forth.

FEODOR C. HIRSCH.

Witnesses:
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