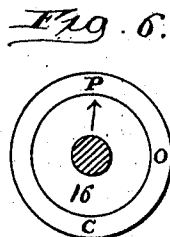
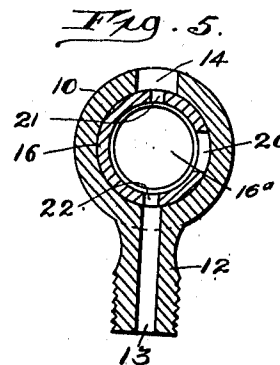
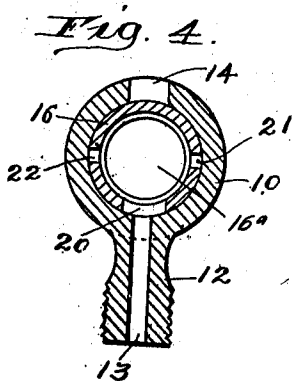
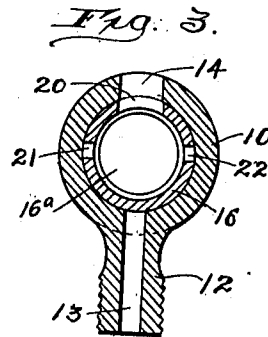
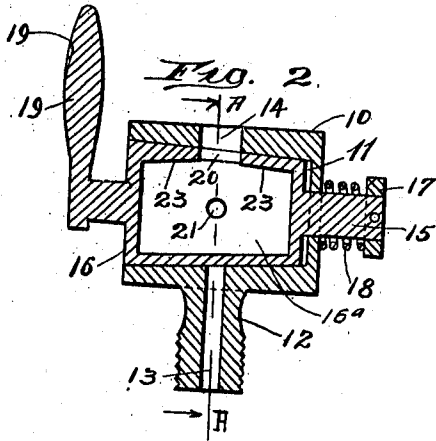


1,004,032.



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Barry Ivor:

By

Harry Ivor:
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UNITED STATES PATENT OFFICE.

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PRIMER FOR HYDROCARBON-ENGINES.

1,004,032.

Specification of Letters Patent.

Patented Sept. 26, 1911.

Application filed October 24, 1910. Serial No. 588,833.

To all whom it may concern:

Be it known that I, BARRY IVOR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Primers for Hydrocarbon-Engines, of which the following is a specification.

This invention relates to improvements in a device to be used for priming the cylinders of hydrocarbon engines, and it consists in certain peculiarities of the construction, novel arrangement, and operation of the parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a device of the above-named character which shall be simple and inexpensive in construction, strong, durable and efficient in operation, and so made as to exclude dust, grit, dirt and the like from the engine cylinder to which it is attached.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains, to make and use the same, I will now proceed to describe it, referring to the accompanying drawing, in which—

Figure 1, is a perspective view of the priming device; Fig. 2, is a central vertical sectional view of the same; Fig. 3, is a cross-sectional view taken on line —A— of Fig. 2, looking in the direction indicated by the arrow; Fig. 4, is a similar view taken on the same line, but showing the rotary plug in a different position from that illustrated in Fig. 3; Fig. 5, is a cross-sectional view showing the rotary plug in position to vent the engine cylinder; and Fig. 6, is a face view partly in section of the outer casing of the device with the nipple for connecting it to the engine cylinder removed.

Like numerals of reference, refer to corresponding parts throughout the different views of the drawing.

The reference numeral 10, designates the casing of the device which is preferably cylindrical in shape and is provided with a cavity 11, which is tapered from one end of the casing 10, to near the other end thereof, as is clearly shown in Fig. 2, of the drawings. The lower portion of the casing 10, is

provided with a screw-threaded extension or nipple 12, to engage a suitable opening in the engine cylinder, not shown. Extended through the nipple 12, is a channel 13, which communicates with the lower portion of the cavity 11, and by preference diametrically opposite an opening 14, in the upper portion of the casing through which hydrocarbon may be supplied to the device. At the smaller end of the cavity 11, the casing 10, is provided with an opening through which is extended a stub shaft or projection 15, formed or provided on one end of a cylindrical and hollow plug 16, which is tapered externally to conform to the taper of the cavity 11, and when in position within said cavity, has its outer end about flush with the adjacent end of the casing.

Mounted on the outer portion or free end of the shaft 15, is a disk 17, against the inner surface of which, one end of a spring 18, coiled around the shaft 15, rests, the other end of said spring resting against one end of the casing 10, so that the plug 16, will be securely, but rotatably held within the casing. The opposite end of the plug 16, from that on which the shaft 15, is located, is provided with a handle 19, used for turning the plug.

As shown in Figs. 2, to 5, inclusive of the drawings, the plug 16, is provided with openings 20, 21, and 22, which communicate with the cavity 16^a of the plug and are adapted to register with the opening 14, in the casing and with the channel 13, in the nipple or extension 12. By reference to Fig. 2, of the drawing, it will be seen that the inner surface of the plug 16, is inclined from the ends of the cavity of the plug toward the opening 20, therein, as at 23, while the opposite surface of the cavity of the plug is inclined forwardly or toward the handled end thereof. Thus it will be seen that when the parts are in the positions shown in Figs. 1, and 2, of the drawings, hydrocarbon may be supplied through the opening 14, in the casing and the opening 20, in the plug to the cavity of the latter, where it will flow toward the handled end of the plug and remain in such position until the plug is turned, for example, to the position shown in Fig. 4, in which position the priming charge of hydrocarbon will pass down the inclined surfaces 23, of the cavity of the

plug, through the opening 20, therein, and from thence through the opening 13, in the nipple 12, into the engine cylinder. When it is desired to give vent to the cylinder the plug 16, may be turned to the position indicated in Fig. 5, so as to cause the openings 21, and 22, therein, to register with the openings 14, and 13, in the casing and nipple, respectively.

For convenience in operating the device, that end of the casing 10, adjacent to the handle 19, may be provided with indicating marks or characters, and in the present instance I have shown it provided on its upper portion with the letter "P" and on its lower portion with the letter "C", and about midway between said letters and on one side of the end of the casing with the letter "O". By this arrangement, it is obvious that by placing the handle 19, so that its longitudinal axis will be in a line with the character "P", it will be indicated that the plug is in position to receive, through the openings 14, and 20, the priming charge of hydrocarbon, and that by turning the plug so that the longitudinal axis of the handle 19, will be in line with the character "O", that the openings 21, and 22, are in register with the openings 14, and 13, in the casing and nipple respectively, thus opening or venting the cylinder, and by turning the handle so that its said axis will lie in a line with the character "C", that the plug is in position to empty the priming charge through the openings 20, and 13, in the plug and nipple respectively, into the engine cylinder.

By employing a primer constructed ac-

ording to my invention, it is apparent that the plug 16, can be turned to such position as to exclude dust, grit, and the like, and that said plug will be maintained in any desired position by reason of the action of the spring 18, which will force the plug inwardly of the casing and firmly hold it, yet in such a manner that it can be rotated when desired.

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

1. A primer for hydrocarbon engines, consisting of a casing provided with an inlet and an outlet opening and having means to communicatively connect it to the cylinder of an engine, and a hollow plug rotatably mounted in the casing and having a series of openings arranged in a vertical plane and adapted to register with the inlet and outlet openings of the casing, two of the openings in the plug being located diametrically opposite each other.

2. A primer for hydrocarbon engines, consisting of a casing having an inlet and an outlet opening and means to communicatively connect it to the cylinder of an engine, and a hollow plug rotatably mounted within the casing and having a series of openings arranged in a vertical plane with the openings in the casing, two of which openings are located diametrically opposite each other.

BARRY IVOR.

Witnesses:

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CHAS. C. TILLMAN.