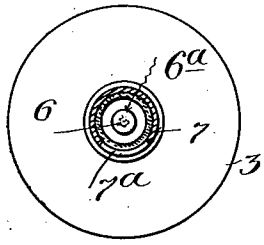
H. N. SPEER.

OIL INDICATOR FOR INTERNAL COMBUSTION ENGINES.

APPLICATION FILED NOV. 29, 1913.

1,140,080. Patented May 18, 1915.

Fig. 4.



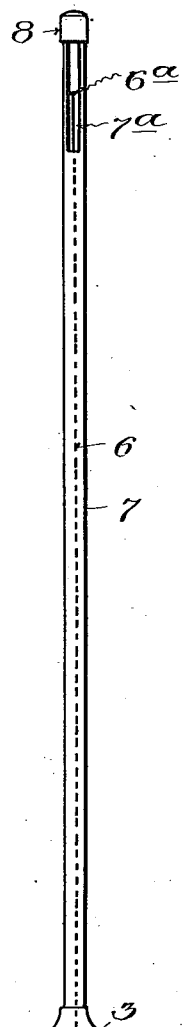
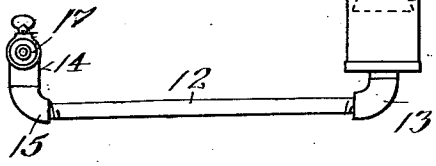


Fig. 1.



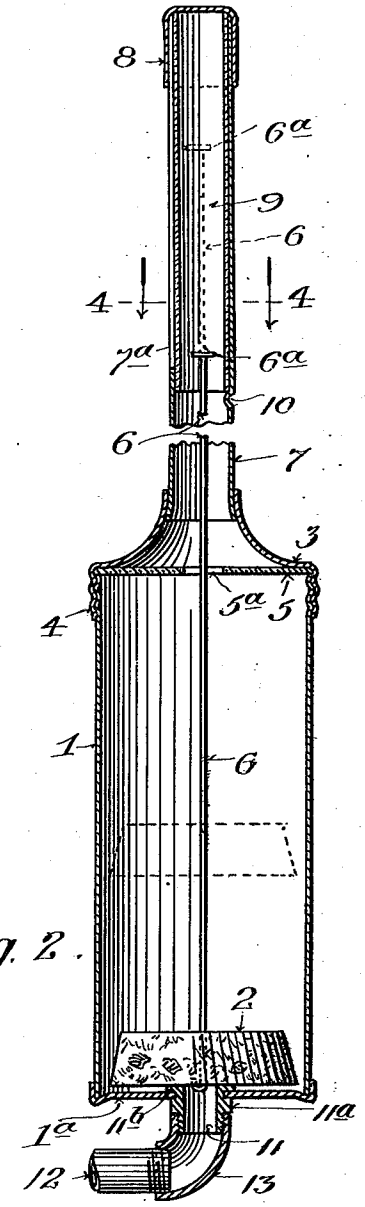


Fig. 2.

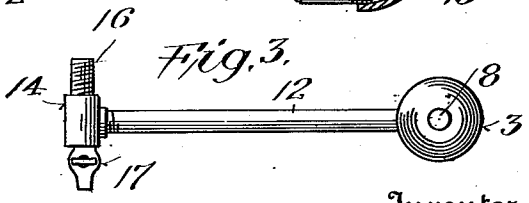


Fig. 3.

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By his Attorney
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UNITED STATES PATENT OFFICE.

HORACE N. SPEER, OF NEW YORK, N. Y.

OIL-INDICATOR FOR INTERNAL-COMBUSTION ENGINES.

1,140,080. Specification of Letters Patent. Patented May 18, 1915.

Application filed November 29, 1913. Serial No. 803,652.

To all whom it may concern:

Be it known that I, HORACE N. SPEER, a citizen of the United States, and resident of New York city, borough of the Bronx, in the county of the Bronx and State of New York, have invented certain new and useful Improvements in Oil-Indicators for Internal-Combustion Engines, of which the following is a specification.

In internal combustion engines having lubricating oil maintained in a chamber in the base of the engine frame or casing, it is desirable to indicate visually the height of the oil in said chamber to enable a proper level of oil to be maintained therein.

The object of my invention is to provide simple, cheap and efficient means, communicating with such oil chamber, to visually indicate the height or level of the oil in such chamber at all times, which means may be readily applied to gas engines whether or not they have originally been provided with oil indicating means.

My invention comprises novel details of improvement and combinations of parts that will be more fully hereinafter set forth and then pointed out in the claim.

Reference is to be had to the accompanying drawings forming part hereof, wherein, Figure 1 is a side elevation of an oil indicator embodying my invention; Fig. 2 is a central section of part of Fig. 1, on an enlarged scale; Fig. 3 is a plan view of Fig. 1, and Fig. 4 is a section on the line 4, 4, in Fig. 2.

In the drawings the numeral 1 indicates a suitable casing providing a chamber to receive oil from the lubricating-oil chamber of an internal combustion engine, which casing is adapted to contain a suitable float 2. Casing 1 is shown provided with a removable cover or top 3, which may be connected with casing 1 by any suitable means, such as by screw threads 4, or the like.

At 5 is an apertured washer or diaphragm fitted between the parts 3 and 4 to prevent leakage, and shown provided with an opening 5^a through which a rod 6 may freely play, which rod, at its lower end, is connected with float 2. To cover 3 is secured a tube 7 into which the rod 6 passes, and said rod, at its upper end, is shown provided with an indicator 6^a. One side of tube 7 is cut away or slotted at 7^a to permit the upper part of rod 6 and its indicator 6^a to be seen, and upon the upper end of tube 7 is a cap 8 fitted snugly on said tube to close its upper end. Cap 8 may be held frictionally in place and slot 7^a may extend through the upper end of tube 7, whereby the cap 8 may be forced on the tube with sufficient tightness to cause the cap 8 to remain on the tube to close the latter and a portion of slot 7^a, while at the same time air is admitted into tube 7 between cap 8 and protector 9, permitting free play of float 2, since air will flow out of tube 7 as the float rises. Within tube 7 is a transparent protector 9, such as a glass tube, located opposite to slot 7^a and shown extending upwardly within tube 7 to be covered by cap 8. Rod 6 and its indicator 6^a are adapted to play freely up and down within tube protector 9. The latter and cap 8 prevent the entrance of dirt into tube 7. Protector 9 is held in place in tube 7 by means of a projection 10, of or on tube 7 located adjacent to the lower edge of protector 9. The projection 10 may be made by denting tube 7 inwardly, as shown in Fig. 2, whereby when protector 9 is inserted in tube 7 the protector may rest upon projection 10.

At the lower part of casing 1 I provide means for connection with suitable fittings for attaching the casing to the engine frame or casing. To this end I have shown a nipple 11 secured in an opening in the bottom 1^a of casing 1, which nipple is shown provided with a flange 11^a beneath bottom 1^a, the upper end of nipple 11 being shown bent over and forced against bottom 1^a, at 11^b, to make a tight joint. It is obvious, of course, that nipple 11 may be soldered to bottom 1^a, if desired. A pipe 12 is shown connected at one end by elbow 13 with nipple 11, and at its opposite end said pipe is shown connected with a coupling 14, by means of the elbow 15, which nipple has a threaded extension or nipple 16 for connection with the lubricating chamber of the engine in a well known manner. Coupling 14 is shown provided with a drip cock 17, for draining the engine lubricating chamber, as well as casing 1.

When the parts are assembled, as shown in Fig. 1, with the coupling 14 connected with the lubricating oil chamber of the engine casing, oil from said chamber will flow into casing 1, and will raise float 2 to a level substantially corresponding to the level of the lubricating oil in the engine chamber, whereupon rod 6 will be correspondingly raised and its upper end or indicator 6^a may

be seen within tube 7 through the opening 7^a and the transparent protector 9. As the depth of the lubricating oil in the engine chamber varies its level will be indicated by the position of the upper end of rod 6 or its indicator 6^a with respect to slot 7^a of tube 7, as for instance, the parts may be so proportioned that when the oil is at the proper or desired height in the engine oil chamber the upper end of rod 6 may be near the upper part of slot 7^a.

My improvements are simple and cheap to manufacture, and may be readily applied to the lubricating oil chambers of internal combustion engines, and by making the pipe 12 and tube 7 of proper dimensions said tube may be caused to project in front of the dash of an automobile in position to be readily seen by the driver.

Having now described my invention what I claim is:—

An oil indicator comprising a casing, a tube extending upwardly above the casing and having a slot, a transparent protector carried by and within the tube and opposed to said slot, said tube having a portion dented beneath said protector to support the latter upon the tube, a float within the casing, and a rod connected with the float and passing through the casing into such tube in position to be seen through said slot.

Signed at New York city, in the county of New York and State of New York this 28th day of November, A. D. 1913.

HORACE N. SPEER.

Witnesses:

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MARIE F. WAINRIGHT.