July 14, 1931. W. E. BURKHARDT 1,814,075

OIL INDICATOR WIPER

Filed June 16, 1930

Fig. 1.

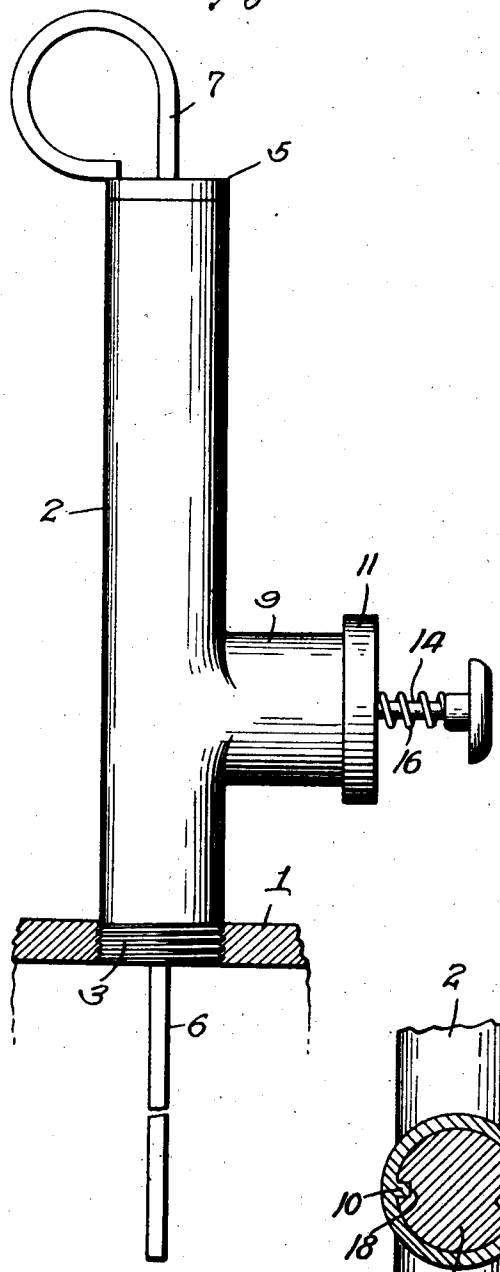
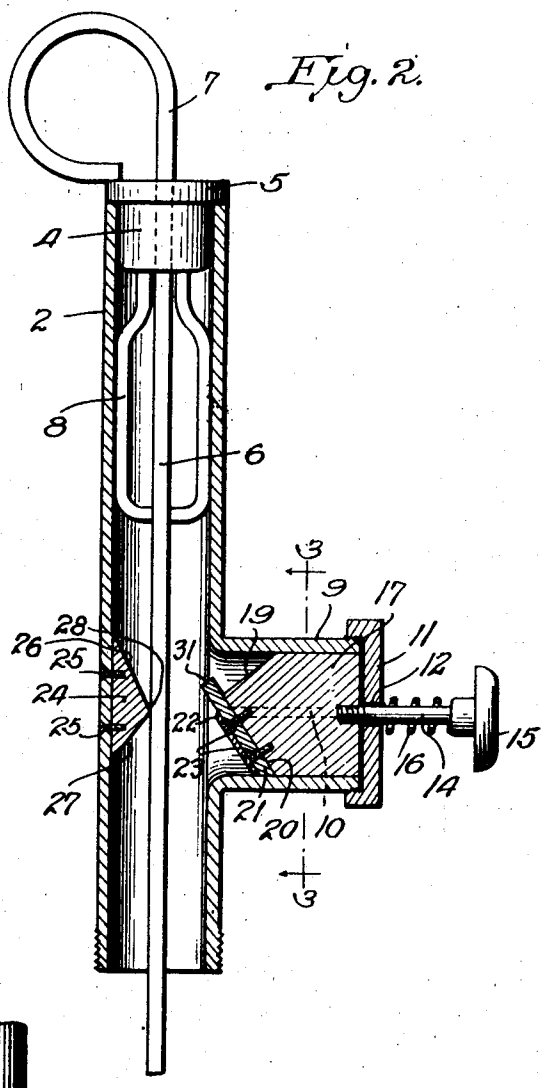


Fig. 2.



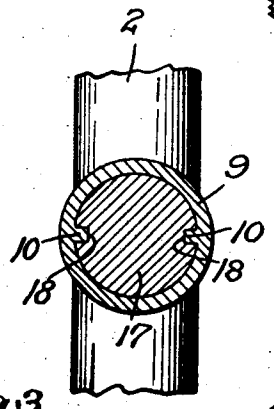


Fig. 3.

Inventor
Wendell E. Burkhardt

By Cachow & Co.
Attorneys.

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UNITED STATES PATENT OFFICE

WENDELL E. BURKHARDT, OF CRAWFORDSVILLE, INDIANA

OIL INDICATOR WIPER

Application filed June 16, 1930. Serial No. 461,469.

This invention aims to provide a novel and efficient means for wiping surplus oil off gage rods of the kind used in ascertaining the level of oil in a crank case and for other purposes.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction, hereinafter described and claimed, it being understood that changes may be made in the precise embodiment of the invention herein disclosed, within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 is an elevation, Figure 2 a longitudinal section, and Figure 3 a section on the line 3—3 of Figure 2.

The numeral 1 marks a reservoir, such as the crank case of an internal combustion engine of the kind used on an automobile. A tube 2 is threaded at 3, or secured otherwise, in the reservoir 1. A closure plug 4 fits removably in the upper end of the tube 2 and has a flange 5 which engages the upper end of the tube, to limit the downward movement of the plug. A gage rod 6 is secured intermediate its ends in the plug 4. At its upper end, the gage rod 6 has a handle 7. The gage rod 6 extends down into the reservoir 1. A friction spring 8 is mounted on the plug 4 and aids in holding the plug securely but releasably in the upper end of the tube 2. The invention may be used in connection with closure plugs different from the one shown in the drawings.

The tube 2 has a lateral branch 9 disposed at right angles to the body of the tube. The branch 9 has oppositely disposed internal longitudinal guide ribs 10. A cap 11 is mounted on the outer end of the branch 9, by threading or otherwise. The cap 11 has an opening 12.

In the opening 12 of the cap 11, a stem 14 is mounted to slide. The stem 14 carries a push button 15 on its outer end. A weak compression spring 16 surrounds the stem 14. One end of the spring 16 abuts against the button 15, and the other end of the spring abuts against the cap 11. A slide 17 is threaded on the inner end of the stem 14. The slide 17 has external longitudinal grooves 18 receiving the guide ribs 10 of the branch 9. The slide 17 has an upper inclined surface 19, and an inclined lower surface 20.

A flexible wiper 21 is secured by a plate 22 and attaching elements 23 to the inclined part 20 of the slide 17. The upper portion of the flexible wiper 21 is spaced from the inclined surface 19 to form a free tongue 31.

A guide 24 is attached by securing elements 25 in the tube 2 and is disposed opposite to the slide 17. The guide 24 has an inclined upper surface 26 and a lower inclined surface 27 defining a scraping edge 28.

When the slide 17 is shoved inwardly by means of the button 15, the spring 16 is compressed, and the tongue 31 at the upper end of the wiper 21 engages the rod 6 and wipes the oil off the rod as the rod is removed from the tube 2, it being a matter of common knowledge that the rod must be wiped off, before an observation is made as to the amount of oil in the crank case or reservoir 1. The device, obviously, renders unnecessary, the spattering of oil when the rod 6 is removed, and it is unnecessary to use rags and the like for wiping off the rod 6 before the rod is reinserted to ascertain the level of the oil in the reservoir or crank case 1.

The rod 6 slids in contact with the scraping edge 28 of the guide 24. The guide 24 prevents the rod from being flexed when the slide 17 is pushed inwardly to bring the tongue 31 of the wiper 21 against the rod. The inclined surface 26 of the guide 24 directs the rod 6 toward the center of the tube 2 when the rod is inserted into the tube. The oil is removed primarily by the tongue 31 of the wiper 21, but the scraping edge 28 of the guide 24 aids, also, in removing the oil. Owing to the fact that the slide 7 has the inclined surface 19, the tongue 31 is left free and flexible. Because the wiper 21 is secured to the inclined surface 20 of the slide 17, the wiper is given such an inclination that it

tends to direct the oil back into the reservoir 1 when the rod 6 is withdrawn from contact with the tongue 31 of the wiper 21. The wiper 21 may be made of any desired material, such as reasonably stiff leather, the leather, however, having sufficient flexibility so that the tongue portion 31 of it will conform to a considerable extent to the cross sectional contour of the rod 6 and clear the rod from oil when the rod is withdrawn.

The guide ribs 10 and the grooves 18 of Figure 3 cause the slide 17 to move inwardly and outwardly in a straight line, without turning on an axis, and, consequently, the tongue 31 of the flexible wiper 21 is always presented properly with respect to the gage rod 6.

One of the outstanding features of the device forming the subject matter of this application is that it is constructed in such a way that it is constructed in such a way that it keeps the crank case as free from dust and dirt as do present car constructions. In wipers, as at present constructed, parts are exposed to dust and grit in the air, and when the rod is used, it is certain to become covered more or less with dirt, which is carried into the oiling system of the car.

Having thus described the invention, what is claimed is:

1. In a device of the class described, a tube, a gage removably mounted in the tube, and a wiper slidable in the tube into and out of engagement with the gage.

2. In a device of the class described, a tube, a gage removably mounted in the tube, a wiper slidable in the tube into and out of engagement with the gage, and spring means for retracting the wiper.

3. In a device of the class described, a tube, a guide in the tube, a gage removably mounted in the tube and engaged with the guide, and a wiper slidable in the tube into and out of engagement with the gage.

4. In a device of the class described, a tube, a guide in the tube and having a scraping edge, a gage insertable into the tube and bearing against the guide, and a wiper slidable in the tube into and out of engagement with the gage.

5. In a device of the class described, a tube, a gage removably mounted in the tube, a slide mounted for reciprocation in the tube, means for guiding the slide for straight line reciprocation, and a wiper on the slide and provided with a tongue adapted to engage the gage when the slide is moved inwardly.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

WENDELL E. BURKHARDT.