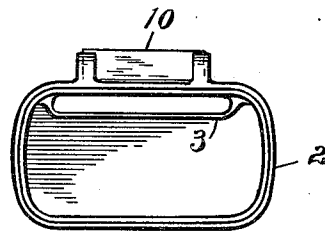
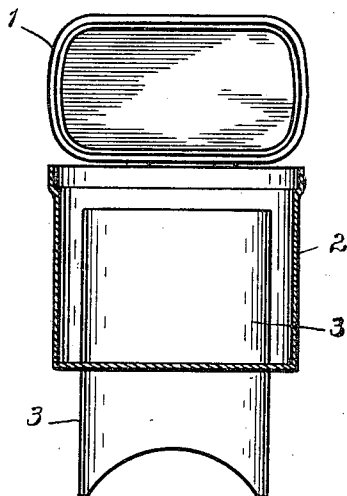
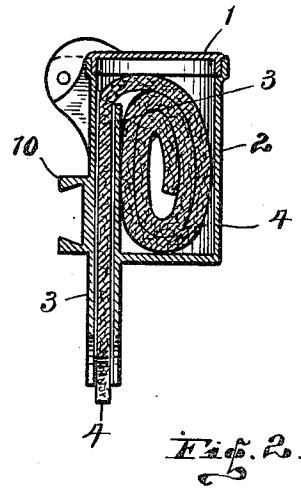
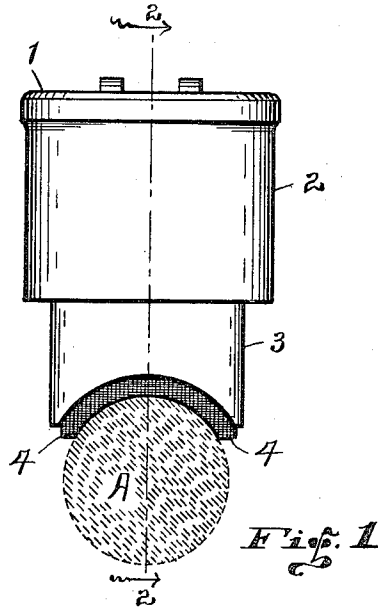


C. KNOPF & W. N. JOHNSON.
AUTOMATIC PISTON ROD OILER.
APPLICATION FILED MAY 9, 1910.

1,017,057.

Patented Feb. 13, 1912.

2 SHEETS—SHEET 1.



Witnesses:

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Fig. 3.

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2 SHEETS—SHEET 2.

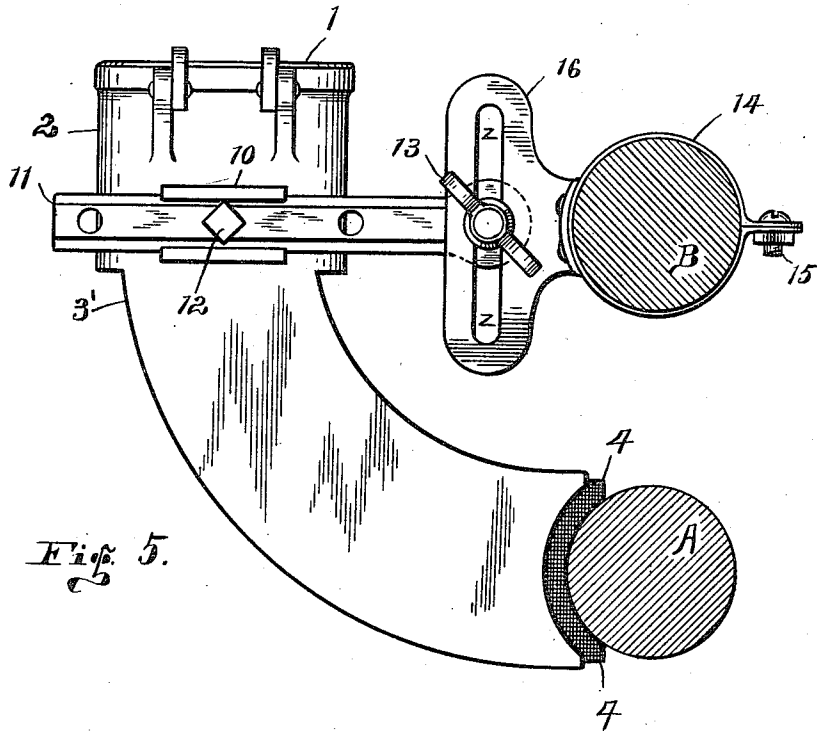


Fig. 5.

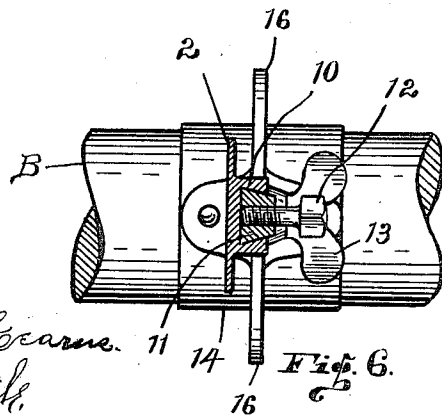


Fig. 6.

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UNITED STATES PATENT OFFICE.

CHARLES KNOFF AND WILLIAM N. JOHNSON, OF RICHMOND, INDIANA.

AUTOMATIC PISTON-ROD OILER.

1,017,057.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed May 9, 1910. Serial No. 560,152.

To all whom it may concern:

Be it known that we, CHARLES KNOFF and WILLIAM N. JOHNSON, both citizens of the United States, and both residing in Richmond, in the county of Wayne and in the State of Indiana, have invented an Automatic Piston-Rod Oiler, of which the following is a full and comprehensive exposition and specification, being such as will enable others to make and use the same with absolute exactitude.

Broadly speaking our object is to provide improved means for automatically oiling piston-rods or the like when the piston-rod is in motion, which means will be simple and practical in construction, positive in action, strong and durable in construction, and which can be manufactured and sold at a comparatively low price, and at the same time providing such a construction which may be employed in connection with various kinds of machinery, and machines for various purposes, the several details being suitably modified to meet the various conditions to which the invention is applicable.

More particularly our object is to provide an automatic oiler for piston-rods or the like which is adapted to constantly supply oil to the periphery of the piston-rod at all times when the piston-rod is in motion; to provide means whereby the oil is supplied by capillary attraction; and to provide means whereby the device may be secured in operative position under various conditions.

Other particular advantages and objects of our invention will be brought out and made apparent in the course of the following specification, and that which is new and useful will be correlated in the appended claim.

One manner for the carrying out of the objects of this invention, and that which we have determined to be the most practical, is exemplified in the accompanying drawings, in which—

Figure 1 is a front outside elevation of our invention, showing same applied to a piston-rod shown in cross section. Fig. 2 is a central vertical section taken through the invention on line 2—2 of Fig. 1, showing the wick in normal position. Fig. 3 is a central vertical section taken through the invention at right-angles to that of Fig. 2, the wick being removed. Fig. 4 is a top plan view of the invention, the wick and

the lid being removed, and showing the interior of the device. Fig. 5 shows a rear elevation of a modified form of the invention connected up in operative position. And Fig. 6 is a detail view, partly in section, of a modification of the means for attaching the invention shown in Fig. 5.

Similar indices denote like parts throughout the several views of the two sheets of drawings.

In order that our invention may be fully understood and its several advantages fully appreciated we will now take up a detail description thereof and will refer to and describe the construction and operation of the parts as briefly and as comprehensively as we may.

In order to show the application of our invention we have shown a piston-rod A, and also a stationary stay-rod denominated B, which parts may be of any ordinary form of construction or relative positions.

The invention comprises a cup 2, having the lid or cap 1 hinged thereto and adapted to cover the top thereof. Preferably the cup 2 is rectangular in cross section, having vertical sides and truncated or rounded corners, substantially as indicated. A wick-tube 3 is located in the back of the cup, same being of a flat-like shape being almost as wide as the longer diameter of the cup but of comparatively small thickness. Said tube terminates a short distance below the upper end of the cup 2 and extends down through the bottom thereof, and also extends therebelow. The lower end of said tube is formed concave in the direction of its greater diameter, the curvature of the lower end of said tube being such as to correspond with the periphery of the piston-rod A, as indicated in Fig. 1. Numeral 4 denotes a wick, which is adapted to fit in said tube 3, with the surplus wick coiled over inside the cup 2, as shown in Fig. 2, it being essential that the wick be long enough to at least extend to the bottom of the cup, with the other end of the wick in contact with the piston-rod A as in Fig. 1. Said wick extends down through the tube 3 with its lower end made to conform with the curvature of the lower end of the tube, and therefore of the periphery of the piston-rod A also.

Usually the stay-rod B is located directly above the piston-rod A, as in Fig. 5, thereby making it impossible to locate the oiler directly above the piston-rod, as in Fig. 1.

Therefore, in order to utilize our invention the device may be arranged as in Fig. 5, in which the cup 2 is located to one side of the stay-rod B and it is detachably and adjustably connected thereto as follows: Secured horizontally on the back of the cap 2 is the bifurcated lug 10. The bar 11 is fitted to slide in said lug, and to be rigidly secured thereto by means of the set screw 12. One end of said bar 11 is somewhat enlarged, with a set-screw aperture formed therethrough in which may operate the thumb-screw 13. Numeral 14 denotes a band adapted to encircle the stay-rod B, as in Fig. 5, and in Fig. 6, and to be secured thereto by means of the bolt 15. Integrally connected to the band 14 but at right angles to the stay rod is the slotted plate 16 which is adapted to contact with the enlarged portion of the bar 11, with the screw portion of the thumb-screw 11 adapted to be inserted in the slot *z* of said plate. Now under these conditions the tube 3' may be extended downward and to one side, as in Fig. 5, in arcuate form, bringing the end of the tube to near one side of the piston-rod, and with the end of the wick in contact with the piston-rod, it being understood that this adjustment may be made by reason of the construction just described which allows the cup to be raised and lowered or to be moved laterally as desired. It is evident that other devices and means may be employed for carrying the oiler in proper position, the main conditions being that the oiler should, preferably, be attached to some relatively stationary object; that it should be adjustable; and that it be located at a higher elevation than the piston-rod to be oiled.

In practice the device may be located as in Figs. 1 or 5, with relation to the piston-rod, the wick being in contact with the piston-rod and also extending up through the upper end of the wick-tube and then down to the bottom of the cup, the surplus wick being coiled within the cup, as in Fig. 2. The cup is then filled with oil, or nearly so, first having saturated the wick with oil. Now as the piston-rod moves back and forth it is

evident that the end of the wick will at all times be in contact therewith, which will result in keeping the piston-rod oiled at all times when it is in motion, as the oil will be drawn from the cup by capillary attraction and will pass down the wick to the piston-rod by capillary attraction.

From the above description, taken in connection with the accompanying drawings, it will be seen that we have produced an improved construction in oilers which embodies the objects hereinbefore stated; and while we have shown and described the best means now known to us for carrying out our invention in a practical manner we desire that it be understood that we do not restrict ourselves to the exact details of construction shown and described, but hold that any changes or variations therein as would suggest themselves to the ordinary mechanic would clearly fall within the limits and scope of our invention.

Having now fully shown and described our invention, what we claim and desire to secure by Letters Patent of the United States, is—

An automatic piston rod oiler comprising a metallic cup, a lid hinged thereto, a flat wick tube formed with the cup at one side thereof and extending from a point near the top of the cup interiorly thereof and depending therefrom, the lower end of the tube being concaved to fit the contour of the rod, a wick coiled in the cup to attract oil therefrom and extending through the tube to fit the rod and supply oil thereto, said cup being provided with a bifurcated lug and a bar slidably engaging in the lug for adjustment therein, said bar being vertically adjustable.

In testimony whereof we have hereunto subscribed our names to this specification in the presence of two subscribing witnesses, May 7, 1910.

CHARLES KNOFF.
WILLIAM N. JOHNSON.

Witnesses:

ROBERT W. RANDLE,
R. E. RANDLE.