W. R. GARNER.

OIL CUP.

APPLICATION FILED APR. 19, 1912.

1,044,224. Patented Nov. 12, 1912.

FIG. 1.

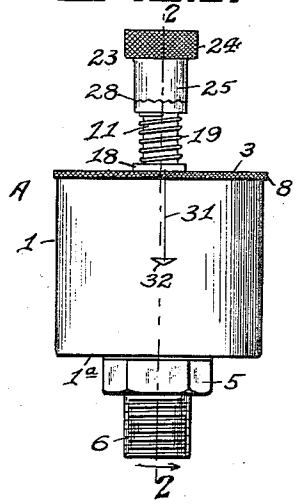


FIG. 2.

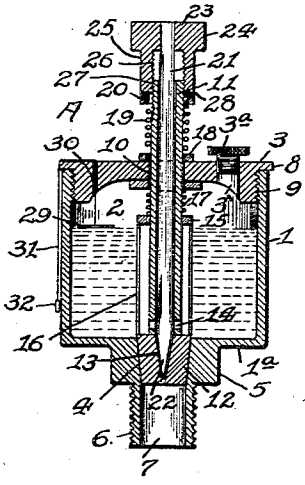


FIG. 3.

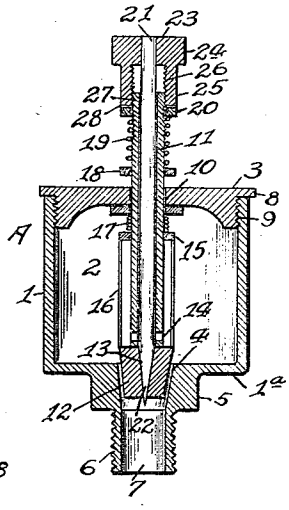


FIG. 5.

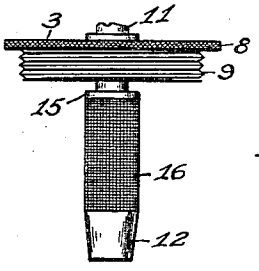


FIG. 4.

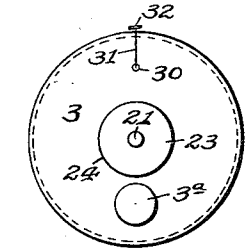
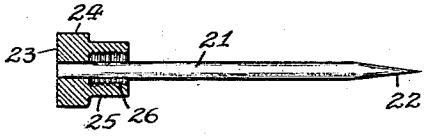


FIG. 6.



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UNITED STATES PATENT OFFICE.

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OIL-CUP.

1,044,224. Specification of Letters Patent. Patented Nov. 12, 1912.

Application filed April 19, 1912. Serial No. 691,920.

To all whom it may concern:

Be it known that I, WILLIAM ROBERT GARNER, a resident of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Oil-Cups; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to oil-cups, and has special reference to such a class of oil cups as is used on automobiles, wagons, motor trucks, carriages, stationary machinery, engines and the like.

The object of my invention is to provide a cheap, simple and efficient form of oil cup which will overcome difficulties existing in the present form of cup and will allow the oil to flow therefrom at the desired rate, while at the same time such oil will be strained before passing from said cup in order to prevent all particles of dirt and foreign substances from flowing out with the oil and thus deliver the same to the desired parts free from any substances likely to scratch or otherwise injure the working parts of the machinery.

My invention consists, generally stated, in the novel arrangement, construction, and combination of parts as hereinafter more specifically set forth and described and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved oil cup I will describe the same more fully referring to the accompanying drawing in which—

Figure 1 is a side view of my improved oil cup. Fig. 2 is a cross sectional view of the same on the line 2—2— of Fig. 1 looking in the direction of the arrow. Fig. 3 is a cross sectional view of the same taken at right angles to Fig. 2 and showing the working parts in another position. Fig. 4 is a top view of the cup. Fig. 5 is a side view of the cover and partial connections showing the straining device. Fig. 6 is a side view of the rod and operating member.

Like symbols of reference herein indicate like parts in each of the figures of the drawing.

As indicated in the drawing my improved oil cup A has a casing 1 which is of any suitable metal such as brass, and such casing has a hollow interior 2 over which is fitted a cover 3 for inclosing the same. The end wall or base 1^a of the casing 1 is provided with an opening 4 which is tapered inwardly toward the outer end of the same and such casing is provided at the bottom of the same with a nut portion and a connecting end 6 below said nut portion. The connecting end 6 is threaded in order to allow the same to be screwed into the machinery as desired, and such end has the passageway 7 therein connecting with the tapered opening 4 in the base of the casing 1.

The cover 3 of the casing 1 is provided with a shoulder 8 which is knurled on the outer edge in order to turn the screw portion and cause it to engage with the casing 1. The cover 3 is provided with a hole 3' for filling the interior 2 of the cup A with oil and such hole has a thumb screw 3^a adapted to be screwed therein for closing said hole.

The cover 3 is provided with an opening 10 in the center of the same and a tube 11 extends through said opening and is slidable therein. The bottom of the tube 11 is connected to a lug 12 by sweating and such lug is tapered in form and adapted to conform to the opening 4 in the base of the casing 1. The tapered lug 12 has a tapered passageway 13 within and through the center of the same and connecting with the interior of the tube 11, while said tube is provided with holes 14 in the same and near to the point where it connects with the lug 12 for the purpose to be hereinafter explained.

A short distance below the point where the tube 11 passes through the cover 3 is a collar 15 which is connected rigidly to said tube by sweating and is of the same outside diameter as the upper end of the lug 12, while a screen or sieve 16 is adapted to extend between such points and entirely around the lower part of the tube 11 so that the oil in passing from the interior 2 of the cup A must pass through said sieve before entering the holes 14 in said tube.

Between the collar 15 and cover 3 is a spiral spring 17 while directly above said cover and resting thereon is a collar 18 which is secured to the tube 11 by sweating and has a spiral spring 19 connected thereto, said spring surrounding said tube and being provided at its upper end with a loose collar 20 to which it is firmly secured by sweating.

A rod 21 is adapted to fit into the interior of the tube 11 and extends downward therethrough and such rod is provided with a tapered needle end 22 for fitting into the passageway 13 within the lug 12. The top of the rod 21 is provided with an operating member 23 which has a knurled shoulder 24 upon the same and a reduced portion 25 which is adapted to rest on the loose collar 20, while such portion is hollow and is provided with an internal thread 26, for engaging with a thread 27 on the upper end of the tube 11. The end of the reduced portion 25 is provided with notches 28 as is the upper side of the collar 20 in order to prevent the operating member 23 from becoming loosened by the vibration of the machinery to which the oil cup A is attached.

The interior 2 of the cup A is also provided with a small float 29 which is adapted to rest on the surface of the oil and such float has connected thereto and extending out through a hole 30 in the cover 3 a string or light flexible wire 31, to the outer end of which an indicator 32 is attached and such float is of sufficient weight to draw the spring and indicator downward as the oil in the cup lowers so that when the oil has all been drained from the same such indicator will have been drawn upward to the top of the casing 1.

The operation of my improved oil cup is as follows: The oil is admitted to the interior 2 of the casing 1 through the hole 3′ and the float 29 will ride on the surface of the oil and the indicator will then drop to the bottom of the casing thus indicating that the cup is full of oil. The operating member 23 is then adjusted by rotating the same until the desired relation between the needle end 22 of rod 21 and the tapered passageway 13 is obtained. The oil then soaks through the sieve or screen 16 and around the tube 11, whence it passes through the holes 14 and into said tube and down the passageway 13.

If it is desired to flush the cup to allow the oil to run out it is only necessary to draw the operating member upward whereupon the spiral spring 17 will be compressed and the tube 11, rod 21, screen 16 and lug 12 will all be raised so that said lug will be withdrawn from the tapered opening 4 and the oil will thus be allowed to pass outward through said opening and through the passageway 7 in the connecting end 6. This flushing method is of particular advantage where the machinery is being started in that the operating member may be raised to allow the cup to be flushed and the plug will then spring back into place and the regulation of the dropping will not be affected in any way. This is impossible in any of the present styles of cups as the regulation must be changed to accomplish the same results.

When the machinery is not being operated the needle point 22 may be dropped down in the passageway 13 by turning the operating member 23 so that said passageway will be entirely closed and no oil will pass through the same. It will readily be seen that with this method of controlling the dropping of the oil and the spring regulation of the flusher and needle point the oil can be regulated as desired and the ratchet on the bottom of the operating member will prevent the parts from changing from their set positions by means of vibration. The sieve will catch all dirt, hard oil sediments and other foreign substances and will prevent the same from passing through the passageway and thereby clogging up the same where the needle is adapted to operate, and will also keep such substances from coming in contact with the bearing or wearing surfaces and thus tending to scratch or otherwise injure the same.

The sieve can easily be cleaned of all sediments collected thereon by simply unscrewing the cover and washing said sieve in the proper liquid or by scraping the same.

Another advantage arises in the fact that when disconnected the oil cup will consist only of two assembled parts and the parts will thus not be likely to become separated or lost.

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

1. An oil cup comprising a casing for the oil having a cover and an opening in the base of the casing, movable means mounted in said cover and adapted to engage with said opening and permit the oil to flow from said casing upon the raising of said means, and means in said movable means adapted to regulate the dropping of the oil from the casing through said opening.

2. An oil cup comprising a casing for the oil having a cover and a tapered opening in the base of said casing, movable means mounted in said cover and adapted to fit within said opening and permit the oil to flow from said casing upon the raising of said means, and means in said movable means adapted to regulate the dropping of the oil from the casing through said opening.

3. An oil cup comprising a casing for the oil having a cover and an opening in the base of the casing, spring controlled movable means mounted in said cover and adapted to engage with said opening and permit the oil to flow from said casing upon the raising of said means, and means in said movable means adapted to regulate the dropping of the oil from the casing through said opening.

4. An oil cup comprising a casing for the oil having a cover and a tapered opening in the base of said casing, spring controlled movable means mounted in said cover and adapted to fit within said opening and per-

mit the oil to flow from said casing upon the raising of said means, and means in said movable means adapted to regulate the dropping of the oil from the casing through said opening.

5. An oil cup comprising a casing for the oil having a cover and an opening in the base of the casing, movable means mounted in said cover and adapted to engage with said casing and permit the oil to flow from said casing upon the raising of said means, and a needle valve in said movable means adapted to regulate the dropping of the oil from the casing through said opening.

6. An oil cup comprising a casing for the oil having a cover and a tapered opening in the base of said casing, movable means mounted in said cover and adapted to fit within said opening and permit the oil to flow from said casing upon the raising of said means, and a needle valve in said movable means adapted to regulate the dropping of the oil from the casing through said opening.

7. An oil cup comprising a casing for the oil having a cover and an opening in base of the casing, spring controlled movable means mounted in said cover and adapted to engage with said opening and permit the oil to flow from said casing upon the raising of said means, and a needle valve in said movable means adapted to regulate the dropping of oil from the casing through said opening.

8. An oil cup comprising a casing for the oil having a cover and a tapered opening in the base of said casing, spring controlled movable means mounted in said cover and adapted to fit within said opening and permit oil to flow from said casing upon the raising of said means, and a needle valve in said movable means adapted to regulate the dropping of oil from the casing through said opening.

9. An oil cup comprising a casing for the oil having a cover and an opening in the base of the casing, movable means mounted in said cover and adapted to engage with said opening and permit the oil to flow from said casing upon the raising of said means, means in said movable means adapted to regulate the dropping of the oil from the casing through said opening, and means within said casing for straining the oil before passing the same through said opening by said regulating means.

10. An oil cup comprising a casing for the oil having a cover and a tapered opening in the base of said casing, movable means mounted in said cover and adapted to fit within said opening and permit the oil to flow from said casing upon the raising of said means, means in said movable means adapted to regulate the dropping of the oil from the casing through said opening, and means within said casing for straining the oil before passing the same through said opening by said regulating means.

11. An oil cup comprising a casing for the oil having a cover and an opening in base of the casing, spring controlled movable means mounted in said cover and adapted to engage with said opening and permit the oil to flow from said casing upon the raising of said means, means in said movable means adapted to regulate the dropping of the oil from the casing through said opening, and means within said casing for straining the oil before passing the same through said opening by said regulating means.

12. An oil cup comprising a casing for the oil having a cover and a tapered opening in the base of said casing, spring controlled movable means mounted in said cover and adapted to fit within said opening and permit oil to flow from said casing upon the raising of said means, means in said movable means adapted to regulate the dropping of the oil from the casing through said opening, and means within said casing for straining the oil before passing the same through said opening by said regulating means.

13. An oil cup comprising a casing for the oil having a cover and an opening in the base of the casing, movable means mounted in said cover and adapted to engage with said opening and permit the oil to flow from said casing upon the raising of said means, means in said movable means adapted to regulate the dropping of the oil from the casing through said opening, and a wire gauze within said casing for straining the oil before passing the same through said opening by said regulating means.

14. An oil cup comprising a casing for the oil having a cover and a tapered opening in the base of said casing, movable means mounted in said cover and adapted to fit within said opening and permit the oil to flow from said casing upon the raising of said means, means in said movable means adapted to regulate the dropping of the oil from the casing through said opening, and a wire gauze within said casing for straining the oil before passing the same through said opening by said regulating means.

15. An oil cup comprising a casing for the oil having a cover and an opening in the base of the casing, spring controlled movable means mounted in said cover and adapted to engage with said opening and permit the oil to flow from said casing upon the raising of said means, means in said movable means adapted to regulate the dropping of the oil from the casing through said opening, and a wire gauze within said casing for straining the oil before passing the same through said opening by said regulating means.

16. An oil cup comprising a casing for the oil having a cover and a tapered opening in the base of said casing, spring controlled movable means mounted in said cover and adapted to fit within said opening and permit oil to flow from said casing upon the raising of said means, means in said movable means adapted to regulate the dropping of the oil from the casing through said opening, and a wire gauze within said casing for straining the oil before passing the same through said opening by said regulating means.

In testimony whereof, I the said WILLIAM ROBERT GARNER have hereunto set my hand.

WILLIAM ROBERT GARNER.

Witnesses:
T. B. HUMPHRIES,
R. G. BROOKE.