

Jan. 20, 1925.

1,523,708

E. NOLAN

OIL CUP

Original Filed June 15, 1922

FIG. 1.

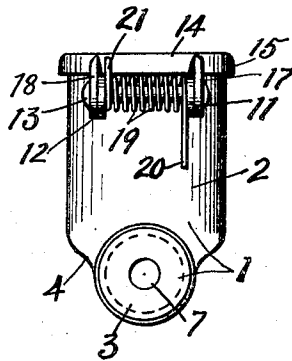


FIG. 2.

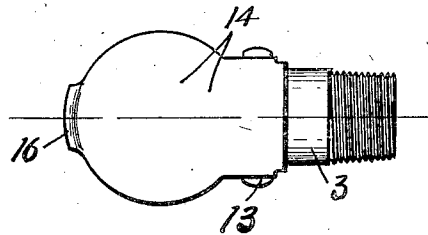


FIG. 3.

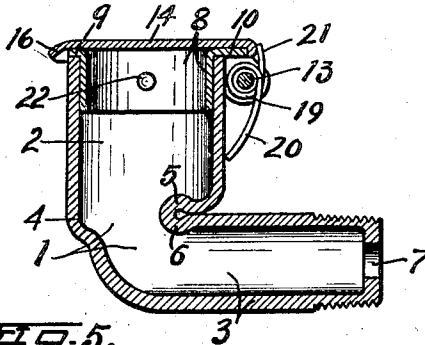


FIG. 4.

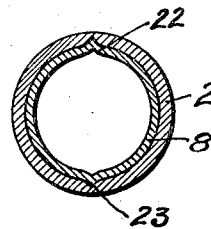


FIG. 5.

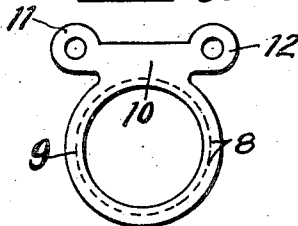


FIG. 6.

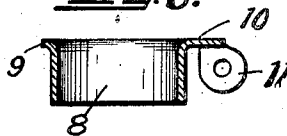


FIG. 7.

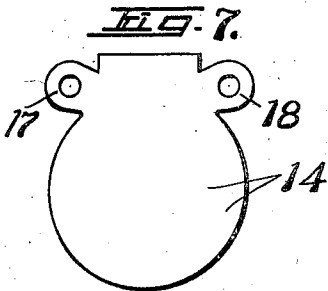


FIG. 8.

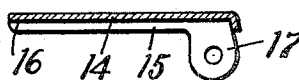
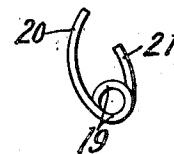


FIG. 9.



INVENTOR

BY *Edmund Nolan*
Dawson Simpson
ATTORNEYS

Patented Jan. 20, 1925.

1,523,708

UNITED STATES PATENT OFFICE.

EDMUND NOLAN, OF DETROIT, MICHIGAN, ASSIGNOR TO BOWEN PRODUCTS CORPORATION, OF AUBURN, NEW YORK, A CORPORATION OF NEW YORK.

OIL CUP.

Original application filed June 15, 1922, Serial No. 568,418. Divided and this application filed October 9, 1923. Serial No. 667,489.

To all whom it may concern:

Be it known that I, EDMUND NOLAN, a citizen of the United States of America, of Detroit, in the county of Wayne, in the State of Michigan, have invented new and useful Improvements in Oil Cups, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to a new and improved oil cup and is a division of my co-pending application Serial No. 568,418 which contains the claims to the structure of cup body here described, the claims of this application relating particularly to the closure structure.

In a more detailed way, my invention relates specifically to a hinge lid elbow oil cup.

An object of the invention is to improve and simplify the method of manufacture of an article of the character described and at the same time to produce a novel, comparatively rigid structure efficient for the purpose described.

Another object relates to the production of an article of the class described, the body of which is formed of a single piece of drawn metal such as sheet steel.

Other objects and advantages relate to the details of construction, form and arrangement of the parts, and the method of forming the same, all as will more fully appear from the following description, taken in connection with the accompanying drawings, in which:—

Figure 1 is an elevation of an oil cup of my invention.

Figure 2 is a top plan view of the same.

Figure 3 is a vertical sectional view of the same.

Figure 4 is a horizontal sectional view through the hinge band or ring.

Figure 5 is a plan view of the band.

Figure 6 is a vertical sectional view of the same.

Figure 7 is a plan view of the blank from which the cover is formed.

Figure 8 is a vertical sectional view through the cover.

Figure 9 is an elevation of the lid or cover spring.

The oil cup shown is generally of elbow form, and comprises a body portion —1— consisting of two tubular parts —2— and

—3— respectively of different diameters, and angularly disposed with respect to each other.

The body —1— is preferably drawn from a single piece of metal, such as sheet steel, of suitable thickness. As drawn, the two parts —2— and —3— of the body —1— are substantially coaxial, the one forming a practically straight continuation of the other, the lower part —3— being of considerably less diameter than the upper part —2— and the two parts merging into each other along an inclined shoulder —4— which forms a partial bottom for the upper portion —2—. After the metal sheet has been drawn to the shape described, the lower part —3— is bent laterally so as to lie at an angle with respect to the upper part —2— and in the particular form illustrated, the two parts are disposed at substantially right angles to each other, altho such disposition is not essential.

The bend on the outer side of the elbow body begins at substantially the base of the shoulder —4— and the lower portion of the wall of the part —2— at the inner side is turned at —5— so as to lie in substantial contact with the outer surface of the upper portion —6— of the said lower part —3— so that the wall of the cup at that place is formed in a fold of two thicknesses of the metal constituting the said body —1—.

At some suitable period during the operation, either before or after, the lateral bending of the part —3—, the lower end of the said part is perforated or pierced to form an opening or discharge outlet —7— adapted to permit the passage of lubricant from the cup to a bearing or other part with which the cup is associated, and for the purpose of removably associating the cup with any desired part to be lubricated, the lower portion of the part —3— may be externally threaded, as illustrated in the figures.

Within the upper part of the portion —2—, a hinge band or lid ring —8— is fitted, the external diameter of the band being approximately the same as the internal diameter of the portion —2— and preferably this ring or band is formed with a laterally extending circumferential flange —9— adapted to rest upon the upper edge of the portion —2—, said flange formed with a projecting part —10—, including integral

lugs —11— and —12— perforated to form bearings for a rivet or hinge pin —13— adapted to extend thru the perforations in said lugs when the lugs are bent into substantial parallelism at right angles to the plane of the flange —9— to bring the perforations into registration or alignment.

The lid or cover —14— may be formed from a blank, as illustrated in Figure 7, which has its edge portion bent to form a flange —15— adapted to fit around the flange —9— and the projection —10— upon the lid ring —8—, except at the front portion where the flange —15— is omitted, and the projecting part —16— is utilized to produce a finger piece. The cover or lid —14— is in much the same manner as the lid ring —8— formed with a pair of lugs —17— and —18—, perforated to permit their mounting upon the hinge pin —13—, preferably outside the respective perforated lugs —11— and —12—. Thus the hinge band or lid ring —8— constitutes a pivotal support for the cover —14— and for the purpose of normally holding the cover in closed position and to prevent its rattling. A tightly coiled spring —19— is provided mounted upon the hinge pin —13— between the supporting lugs —11— and —12— and having its ends —20— and —21— of different lengths and curved in opposite directions, the longer curved projecting end portion —20— contacting with the wall of the oil cup and the shorter curved portion —21— being in contact with the flange —15— upon the cover —14— so that the spring tensions to hold the cover in closed position.

Any suitable means for securing the hinge band within the body —1— may be provided, and for that purpose the band and the wall of the body —2— may be simultaneously indented so that a projection from the outer surface of the band —8— lies in a recess in the wall of the body —1— and for the purpose of illustration, the band —8— is shown as having two of these indentations —22— and —23— oppositely disposed with respect to each other, and forming projections from the outer surface of the band —8— interlocked in recesses or indentations in the inner surface of the body —1—.

This band serves to strengthen the outer

more exposed portion of the cup and acts to carry the pivotal rivet for the cover and indirectly the cover-actuating spring so that a comparatively rigid, efficient structure can be produced from sheet metal; and altho I have shown and described a specific embodiment of my invention, together with details of form and construction of the same, I do not desire to limit myself to the specific method of production, or to the details of form, construction and arrangement of the parts, as various changes may be made, all within the scope of the appended claims:

I claim:

1. An oil cup comprising a body portion, a substantially circular hinge band telescoped with one end of the body portion and provided with a circumferential flange resting upon the upper edge of the body portion and formed with a pair of depending perforated lugs, a hinge pin mounted in said lugs, a cover mounted on said hinge pin, and a spring coiled about the hinge pin and having one end in contact with said body and its other end in contact with said cover.

2. An oil cup including a body portion; a hinge band secured within an open end of the body portion and having a laterally projecting flange extending over the edge of said body portion, vertically disposed perforated lugs integrally connected to said flange, a hinge pin carried by said lugs, a cap having a depending rim flange, and a finger piece, said cap having perforated lugs mounted on said hinge pin, and spring means for normally holding said cap in closed position.

3. An oil cup comprising a body portion, a circular hinge band mounted within the upper end of said body portion and provided with a flange resting upon the upper edge of the body portion and formed with a pair of projecting perforated lugs, a hinge pin mounted in said lugs, and a cover mounted on said hinge pin.

In witness whereof I have hereunto set my hand this 27th day of September 1923.

EDMUND NOLAN.

Witnesses:

J. C. KRAL,
H. HAQUE.