

(No Model.)

W. S. WILSON.
OIL CUP.

No. 598,044.

Patented Jan. 25, 1898.

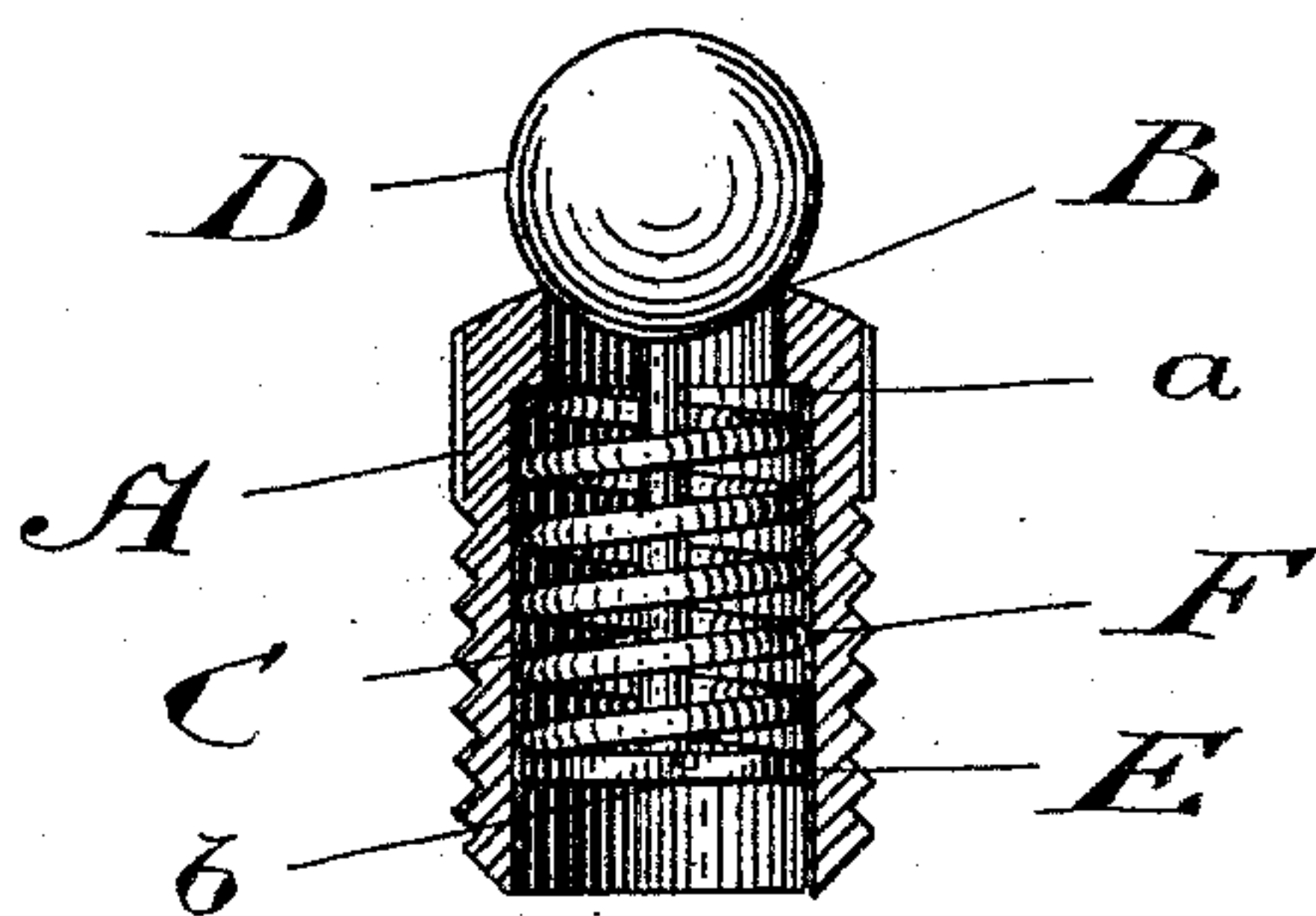


Fig. 1.

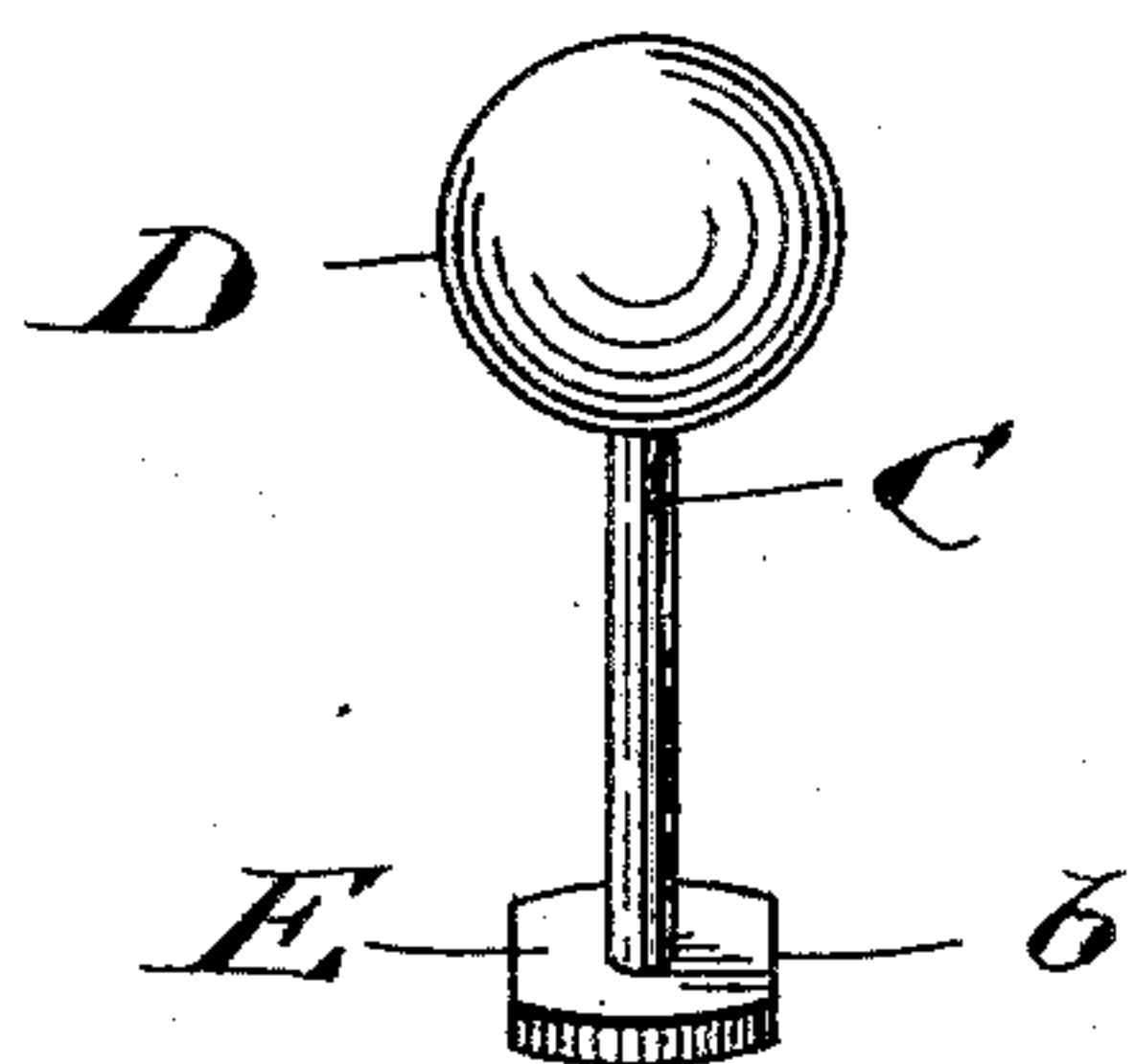


Fig. 3.

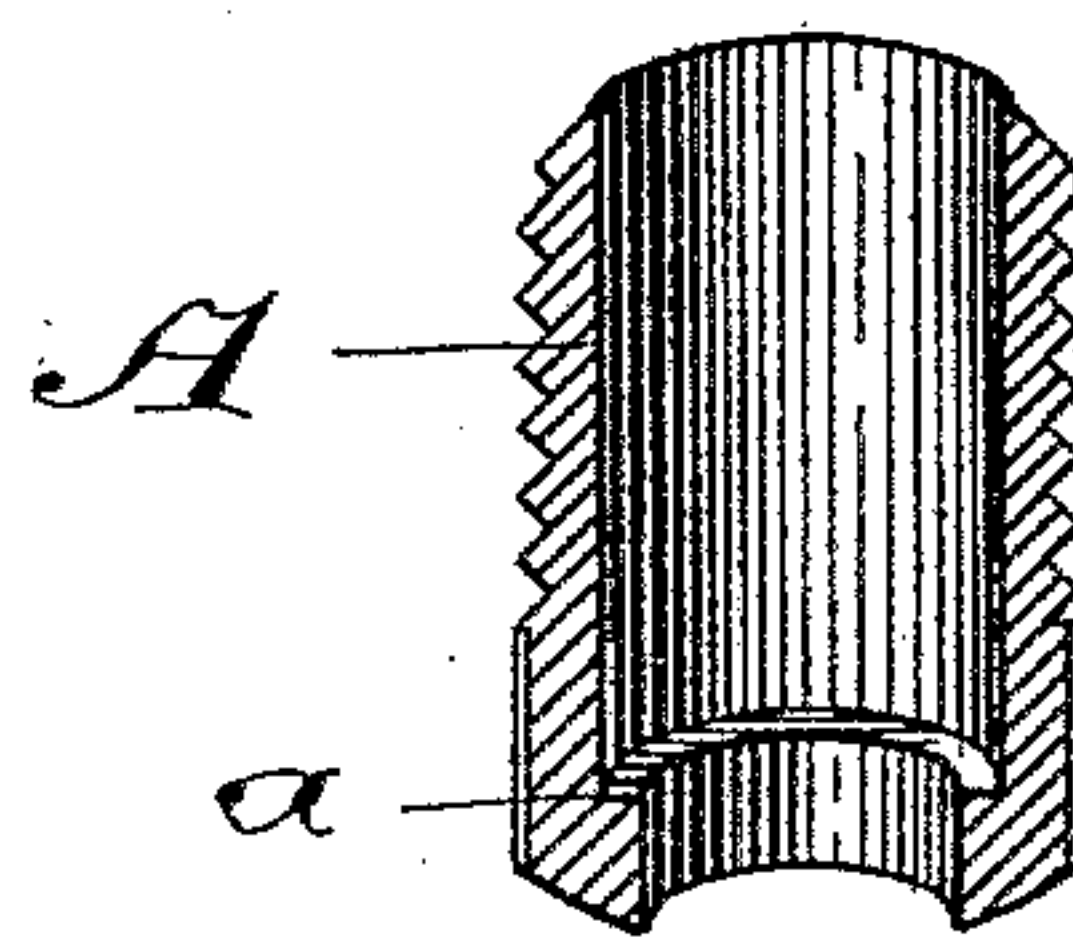


Fig. 4.

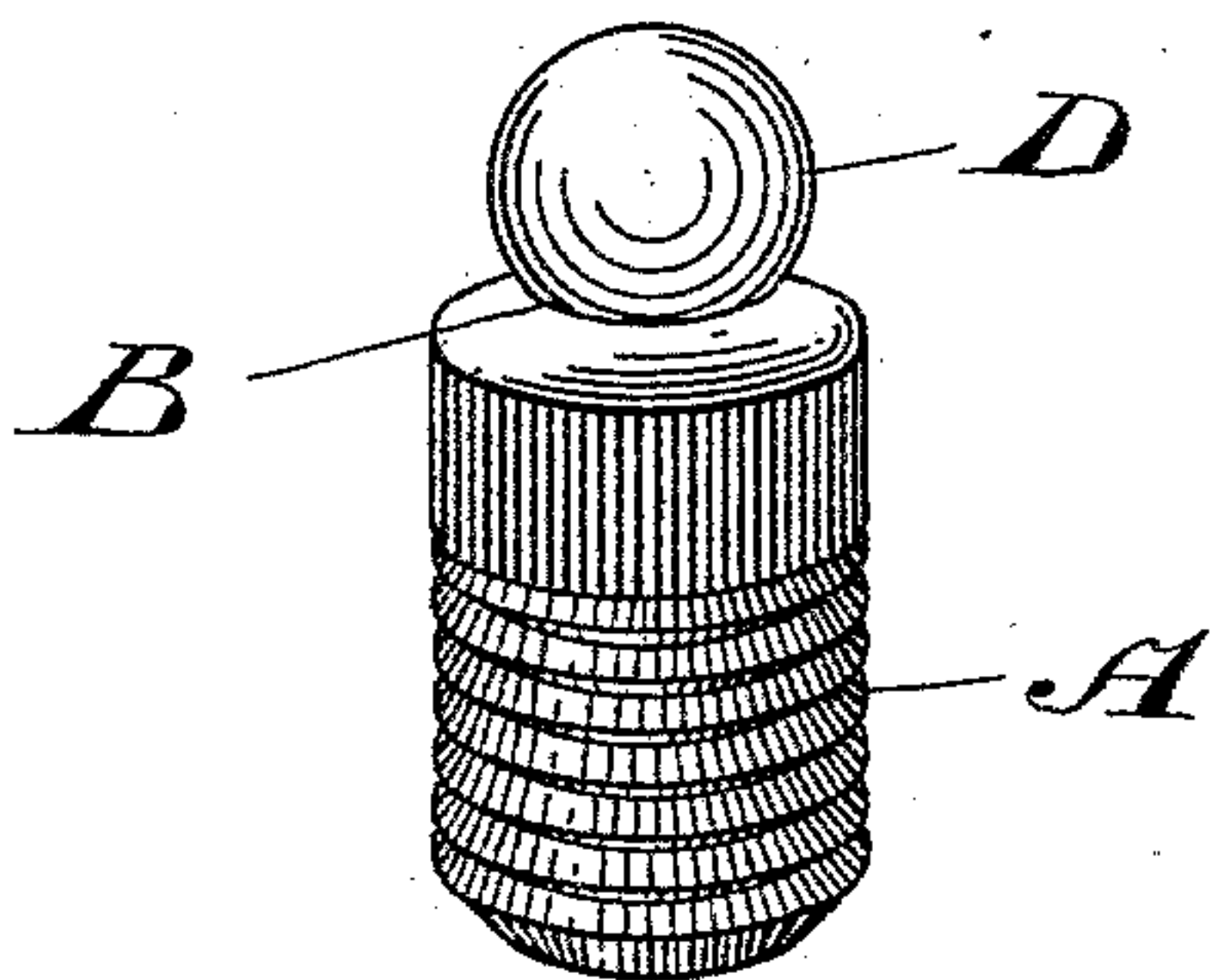


Fig. 2.

Witnesses

G. M. Neff.
Fred Clarke

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UNITED STATES PATENT OFFICE.

WILLIAM SANFIELD WILSON, OF BRANTFORD, CANADA, ASSIGNOR TO THE
GOOLD BICYCLE COMPANY, LIMITED, OF SAME PLACE.

OIL-CUP.

SPECIFICATION forming part of Letters Patent No. 598,044, dated January 25, 1898.

Application filed December 4, 1896. Serial No. 614,513. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SANFIELD WILSON, machinist, of the city of Brantford, in the county of Brant and Province of Ontario, Canada, have invented certain new and useful Improvements in Oil-Cups for Bicycle and other Bearings, of which the following is a specification.

The object of my invention is to devise a simple, easily-operated, and easily-cleared oil-cup; and it consists, essentially, of a short cylinder having an external seat for a ball-valve, which is fixed on one end of a plunger provided at its other end with a head, between which head and a shoulder within the cylinder is placed a spring adapted to draw the ball-valve into its seat, substantially as hereinafter more particularly described and then definitely claimed.

Figure 1 is a cross-section of my improved oil-cup enlarged to three times its proper dimensions. Fig. 2 is a perspective view of the oil-cup similarly enlarged. Fig. 3 is a similar view of the plunger, ball-valve, and head. Fig. 4 is an enlarged perspective section of the cylinder of the oil-cup reversed.

In the drawings like letters of reference indicate corresponding parts in the different figures.

A is a hollow cylinder, preferably screw-threaded at its lower end for attachment to the bearing and milled near its upper end to provide a grip when screwing it into place. The interior of the cylinder is counterbored, so as to form a shoulder *a*, for the purpose hereinafter described. The exterior of the upper end of the cylinder A is preferably made convex, as shown, and is shaped centrally to form an external valve-seat B.

C is a plunger, of less diameter than the valve-seat, to one end of which is suitably connected the ball-valve D, which is adapted to fit the external valve-seat B. On the other end of the plunger is formed the head E, which loosely fits the interior of the cylinder A. The head E may fit the interior of the cylinder closely for part of its perimeter and be cut away, as at *b* in Fig. 3, to permit of the passage of oil, or the whole head may be formed

of slightly less diameter than that of the interior of the cylinder, thus answering the same purpose.

F is a spring bearing at one end against the head E and at the other against the shoulder *a*, formed by counterboring the cylinder. From the construction shown it follows that the spring will always tend to hold the ball-valve D against the external valve-seat B, as shown in Figs. 1 and 2.

In constructing the cup the spring and the plunger are first placed in position and the end of the plunger protruded through the upper end of the cylinder. The ball-valve is then connected to the end of the plunger by any suitable method, such as a screw-thread; but instead the ball may first be formed on or connected to the plunger and the head afterward screwed on. The ball-valve being situated on the exterior of the cylinder is easily pushed on one side and a few drops of oil poured into the bearing from the oil-can, and after the oil is introduced the valve is automatically drawn back to its normal position. The surfaces of the ball and the end of the cylinder being convex, no dust or dirt will lodge, and the cup is perfectly dust-proof. The rounding surfaces also render it easy to push the valve aside and insert the spout of the oil-can into the cup. The head E on the plunger, in addition to acting as a bearing for the spring F, also serves to clear the oil-cup if the latter becomes clogged with congealed oil. If it were not for this, a simple hole in the end of the plunger, through which the end of the spring might be passed, would answer to enable the spring to retain the ball-valve in its seat.

Although I show and describe a ball-valve as the preferable form, yet any form of valve capable of fitting the external seat and leaving a portion projecting, by means of which it may be pushed to one side, will serve the purpose of my invention.

I am aware that it is old to provide an oil-cup with a ball-valve therein arranged to be pressed upwardly by means of a coiled spring—such, for instance, as that shown in United States Patent No. 249,194; but I re-

gard my invention as essentially different therefrom, and hence make no claim thereto.

From the above description it will be seen that I have invented a very simple, easily-
5 operated, and easily-cleared oil-cup, which is thus a great improvement on any other now in the market.

What I claim as my invention is—

1. The combination in an oil-cup, of a cyl-
10 inder bored to form an internal shoulder and having an external valve-seat formed on its end, a plunger provided with a valve to fit the said external valve-seat, a spring passing around said plunger and bearing at one end
15 against the said internal shoulder and having its other end bearing against said plunger, the said spring normally keeping said external valve on its seat, and the said valve being located outside of said cylinder and
20 being practically free from the same on all

but its under side, substantially as and for the purpose specified.

2. The combination in an oil-cup, of a cylinder bored to form an internal shoulder and having an external valve-seat formed on its
25 end, a plunger located in said cylinder and having one of its ends projecting through the aperture of said cylinder, a spherical valve on said plunger, located on the outside of said cylinder and being free therefrom on all
30 but its under side, a spring passing around said plunger and having one of its ends co-acting with said internal shoulder and its other end passing through a perforation in said plunger, substantially as described.

Brantford, November 27, 1896.

WILLIAM SANFIELD WILSON.

In presence of—

ROBERT J. GANT,

GEO. WHELEN.