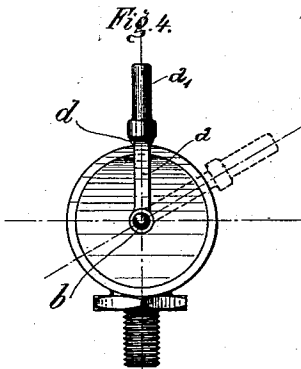
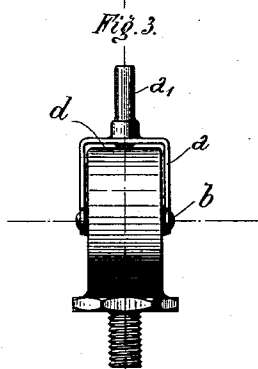
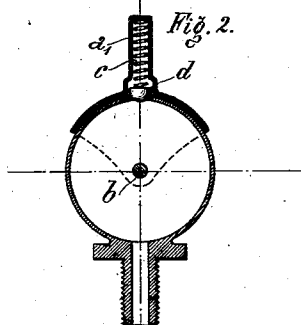
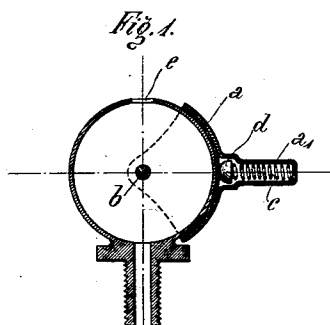


(No Model.)

F. LOOS.
LUBRICATOR.

No. 570,706.

Patented Nov. 3, 1896.



Witnesses

A. R. Kenney,
J. S. Elmer.

Inventor

Friedrich Loos.
C. P. Lodge
att.

UNITED STATES PATENT OFFICE.

FRIEDRICH LOOS, OF NUREMBERG, GERMANY.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 570,706, dated November 3, 1896.

Application filed May 21, 1895. Serial No. 550,113. (No model.) Patented in England March 9, 1895, No. 5,049.

To all whom it may concern:

Be it known that I, FRIEDRICH LOOS, manufacturer, a subject of the King of Bavaria, residing at Nuremberg, Bavaria, in the Empire of Germany, have invented certain new and useful Improvements in Lubricators, (patented in Great Britain March 9, 1895, No. 5,049,) of which the following is a specification.

10 This invention relates to small lubricators of the kind which are more particularly applicable for bicycles and the like, and its object is to provide a simple means whereby the filling-aperture on the upper side of the
15 oil-chamber may be readily opened and closed while effecting an absolutely dust-tight closing thereof. For this object a spring-valve is employed in combination with an oil-chamber having a curved surface with an oil-
20 opening, said valve being carried by a movable frame or cover over said curved surface to close or open the oil-opening as desired. When the cover is moved over the filling-aperture, said valve, under the impulse of a
25 spring, springs into the aperture and thus closes the latter, while when the holder or cover is moved away from the filling-aperture the valve is pressed out of said aperture and leaves the same open.

30 In the accompanying drawings the invention is shown applied to lubricators of various shapes, it being obvious that any form of oil-chamber may be employed, either of a cylindrical or spherical form, with the filling-aperture at its uppermost part or point.

35 Figures 1 and 2 are sectional elevations showing the improved lubricator open and closed, respectively, the oil-chamber being of spherical form; Figs. 3 and 4, side and
40 front elevations showing the invention applied to an oil-chamber of cylindrical form.

In Figs. 1 and 2, in which the oil-chamber has a spherical form, the movable plate or cover has the form of a semispherical cap or
45 hood *a*, exactly fitting on the surface of the oil-chamber, said cap or hood being revoluble on a pin *b*, passed through the center of the box or pivotally connected at said point. On the center of this cap or hood a tubular pro-
50 jection *a'* is formed, in which is arranged a valve *d*, which is pressed onto the outer surface of the oil-chamber by means of a spring

c. If the cover or cap be turned upward, the valve *d*, under the action of the spring *c*,
springs into the filling-aperture *e*, in the po- 55
sition shown in Fig. 2, and thus closes this quite tight. The cap is held fast in this position by the spring *c*.

In order to uncover the aperture *e* for the purpose of filling the lubricator oil-chamber, 60
the cover or cap is moved downward, (see Fig. 1,) for which purpose the projection *a'*, carrying the valve, may serve as a handle or thumb-piece.

In Figs. 3 and 4, in which the oil-chamber 65
has the form of a hollow cylinder, the movable plate or cover is formed as a forked strap revoluble on a pin *b*, passing through the box in the direction of its longitudinal axis or pivotally connected at said point. This cover 70
has on its center a projection *a'*, which contains the spring-valve, as before, but it does not need to press quite tightly on the periphery of the lubricator. The filling-aperture
is, as before described, placed at the top, and 75
the valve *d* springs into the same when the holder is placed in the highest position.

It will be noted that the spring-valve is carried in a frame or hood mounted on an axis and movable over or around the curved 80
surface of the oil-chamber, through which the inlet-opening extends.

The lubricating device hereinbefore described is characterized not only by its simplicity, but mainly, also, in consequence of 85
the use of a valve, by the absolutely dust-tight closing of the box, which is not obtained with most of the devices at present employed.

I declare that what I claim is—

1. The combination with a lubricator hav- 90
ing a curved upper surface and an oil-opening formed therein, a hood or frame movable freely thereover in substantially the arc of a circle, a spring-valve carried by said hood or frame and adapted to be moved therewith 95
over the curved surface of the lubricator to open or close the oil-opening, substantially as described.

2. The combination with a lubricator having a curved upper surface and an oil-opening 100
formed therein, a hood or frame movable freely thereover in the arc of a circle and substantially in a plane therewith, a spring-valve carried by and movable with said hood or

frame and adapted to spring automatically into and close said oil-opening as the hood or frame is moved thereover, substantially as described.

- 5 3. The combination with a lubricator having a curved upper surface and an oil-opening formed therein, a hood or frame movable freely thereover in substantially the arc of a circle and provided with the sheath or casing
10 adapted to receive and carry the spring-valve and to serve as a handle or thumb-piece for

moving the hood or frame, said valve adapted to spring automatically into and close the oil-opening as the hood or frame is moved thereover, substantially as described. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRIEDRICH LOOS.

Witnesses:

ANDREAS STICY,
OSCAR BOCK.