No. 659,243.

Patented Oct. 9, 1900.

H. F. LOOS.

LUBRICATOR.

(Application filed Dec. 3, 1898.)

(No Model.)

Fig. I

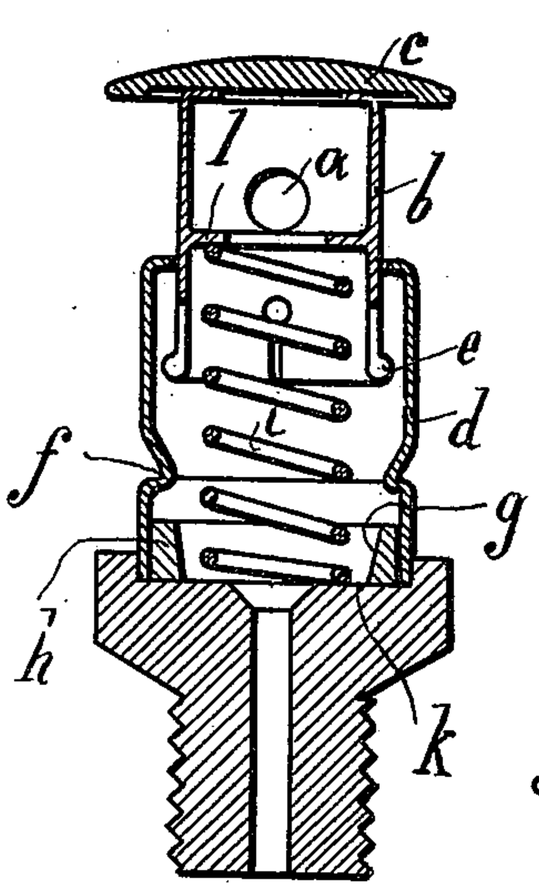


Fig. II

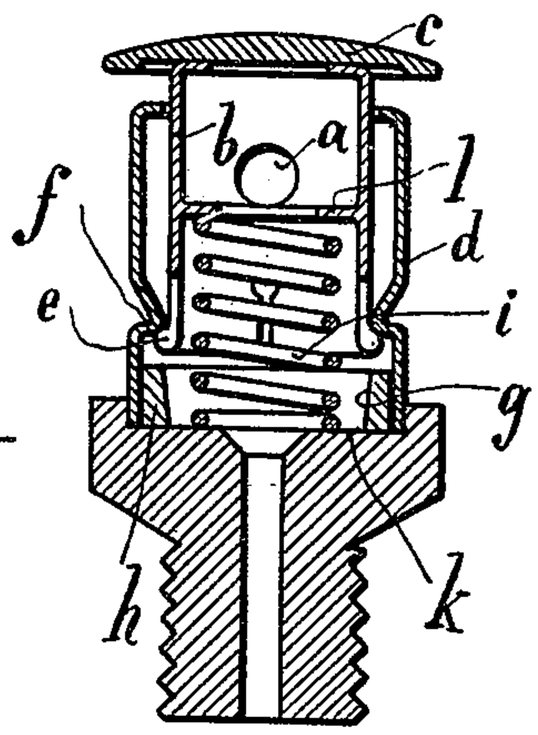


Fig. III

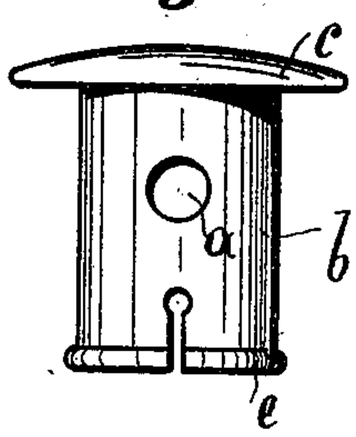


Fig. IV

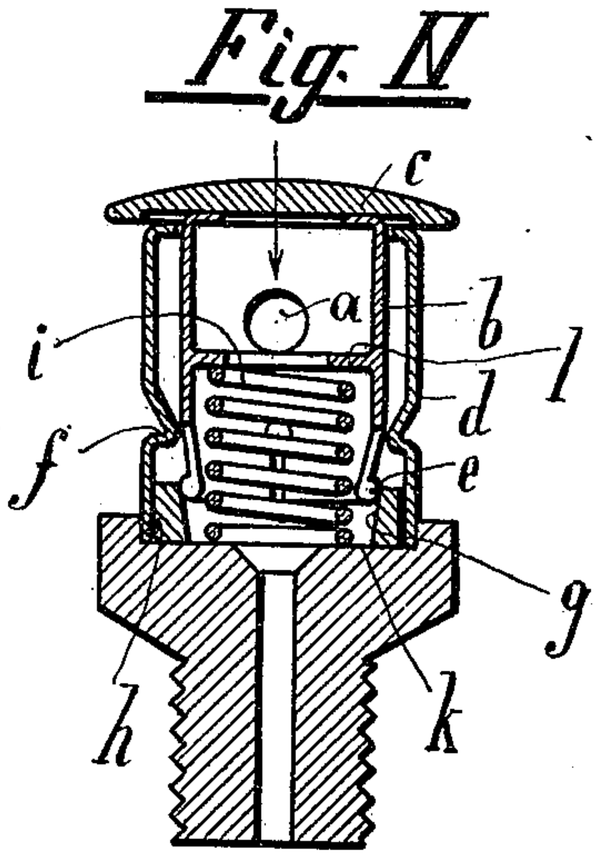
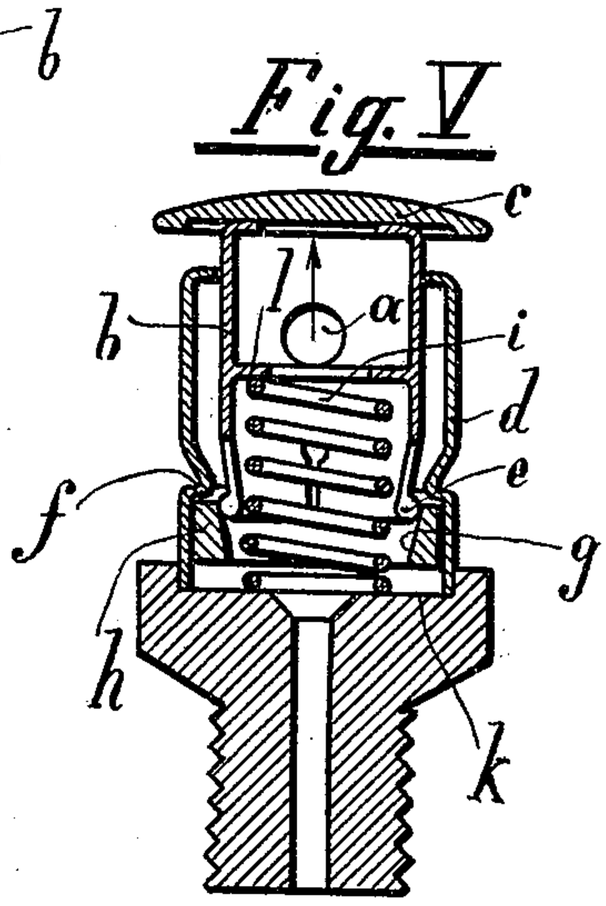


Fig. V



WITNESSES:
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UNITED STATES PATENT OFFICE.

HEINRICH FRIEDRICH LOOS, OF NUREMBERG, GERMANY.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 659,243, dated October 9, 1900.

Application filed December 3, 1898. Serial No. 698,183. (No model.)

To all whom it may concern:

Be it known that I, HEINRICH FRIEDRICH LOOS, a subject of the King of Bavaria, residing at Nuremberg, Bavaria, Germany, have invented certain new and useful Improvements in Lubricators, of which the following is a specification.

The present invention concerns a new lubricator intended to serve principally for bicycles or similar vehicles in which the lubricator must participate in the revolution. In this grease-box, which is entirely dust and oil proof when closed, a lid-cap adjustable in telescopic manner in the lubricator-box and provided with a lateral filling-aperture is applied.

The essential point of the present invention is that after strong pressure on the lid-cap the latter jumps up automatically, and thus exposes the filling-hole, which action will not take place if a gentle pressure is applied. This action of the new lubricating-box is obtained by the arrangement illustrated in Figures I to V of the accompanying drawings.

In the drawings, Fig. I is a sectional view of the invention with the parts in position to permit filling of the lubricator. Fig. II is a view similar to Fig. I, but with the parts in closed position. Fig. III is a view of the cap detached. Fig. IV is a view of the invention similar to Fig. I with the parts under the pressure necessary to cause the outward movement of the cap. Fig. V is a view similar to Fig. IV with the cap in the act of moving outward.

The lid-cap *b c*, provided with a lateral filling-mouth *a*, is arranged telescopically in the reservoir of lubricator *d* proper and rendered elastic by several longitudinal slots arranged at the lower rim. A spring *i* within the reservoir *d*, between the bottom K and the inner wall *l* of the lid-cap, always tends to press the cap upward.

In Fig. I the lid-cap *b c* is at its highest position, in which the inlet or filling aperture *a* is free. In order to close the lubricating-box, the cap is gently pressed downward. In this operation, Fig. II, the reinforcement or swelling *e* of the rim arranged at the lower end of the cap slides over and past the contracted part *f* of the lubricating-reservoir *d*, in which action it contracts springily, and after the displacement it expands again, owing to its own elasticity, so that the edge *e* locks below the edge *f*. In this locking position the inlet or filling aperture *a* is covered by the wall of the lubricating-reservoir *d*. The release of the cap and exposure of the inlet take place by means of stronger pressure on the cap, Fig. IV, when the latter is pressed into the conical opening *g* of a ring *h*, loosely arranged in the lubricator *d*. Thereby the rim or edge *e* is once more contracted and temporarily connected with the ring *h* by the elasticity of this reinforcement and the friction at the points of contact. After the pressure exerted by the operator on the lid *e* is removed the spring *i* begins to act. This spring throws up the cap, Fig. V, and the ring *h*, remaining in engagement with the lower part *e* of the cap, holds the same contracted, as shown in Fig. V, so that this will pass by the edge *f* in the quick upward movement of the lid-cap without catching on the said edge, and the ring *h* is finally slipped off from the portion *e* by coming in contact with the edge *f*, which action is about to take place in Fig. V. From this it will be seen that the cap is brought into a position in which the inlet or filling aperture *a* is once more accessible, as in Fig. I.

I claim—

In combination with the reservoir *d*, contracted at *f*, the ring *h* seated therein and having an interior conical bearing-surface, a cap fitting in the reservoir and having a spring-wall and a lower edge *e* adapted to enter the said conical bearing-surface, said cap having also a lateral filling-opening and a spring *i* for pressing the cap upwardly, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

HEINRICH FRIEDRICH LOOS.

Witnesses:

ANDREAS STICH,

OSCAR BOCK.