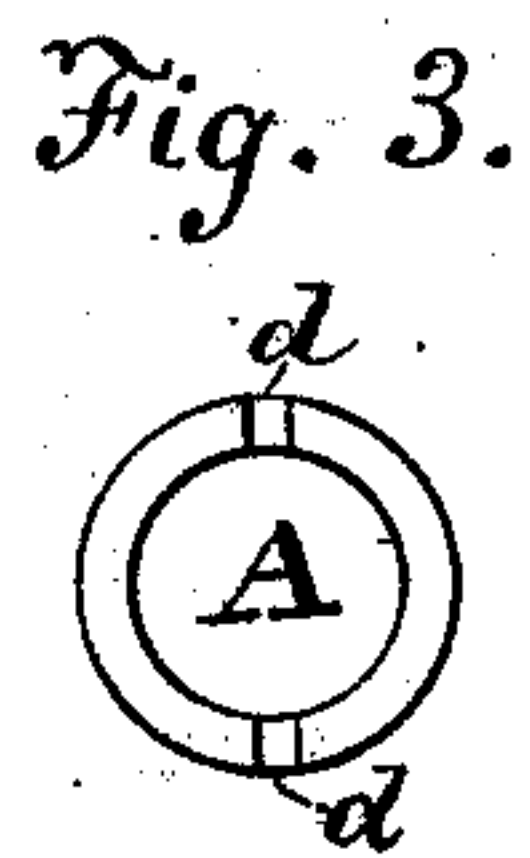
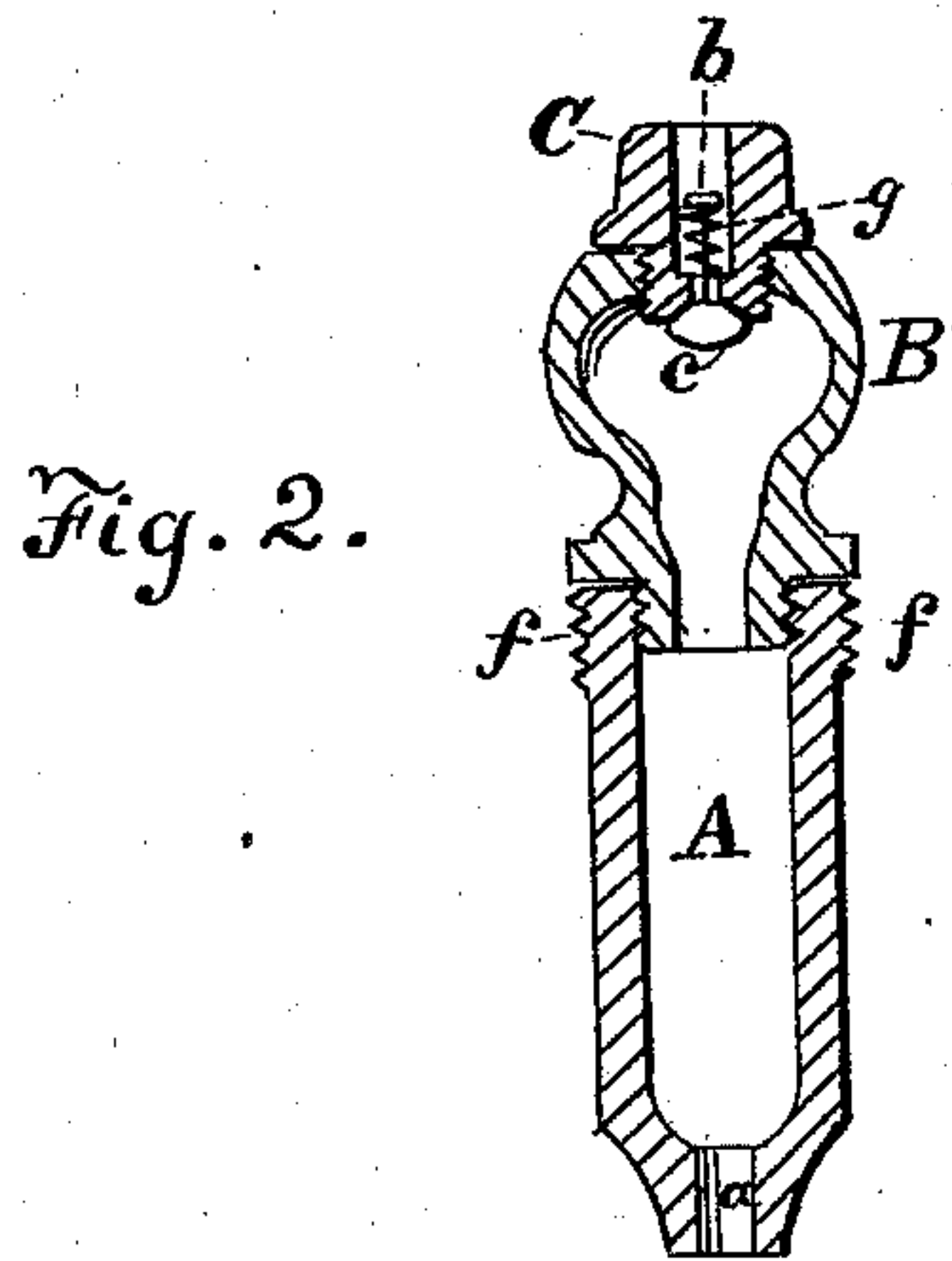
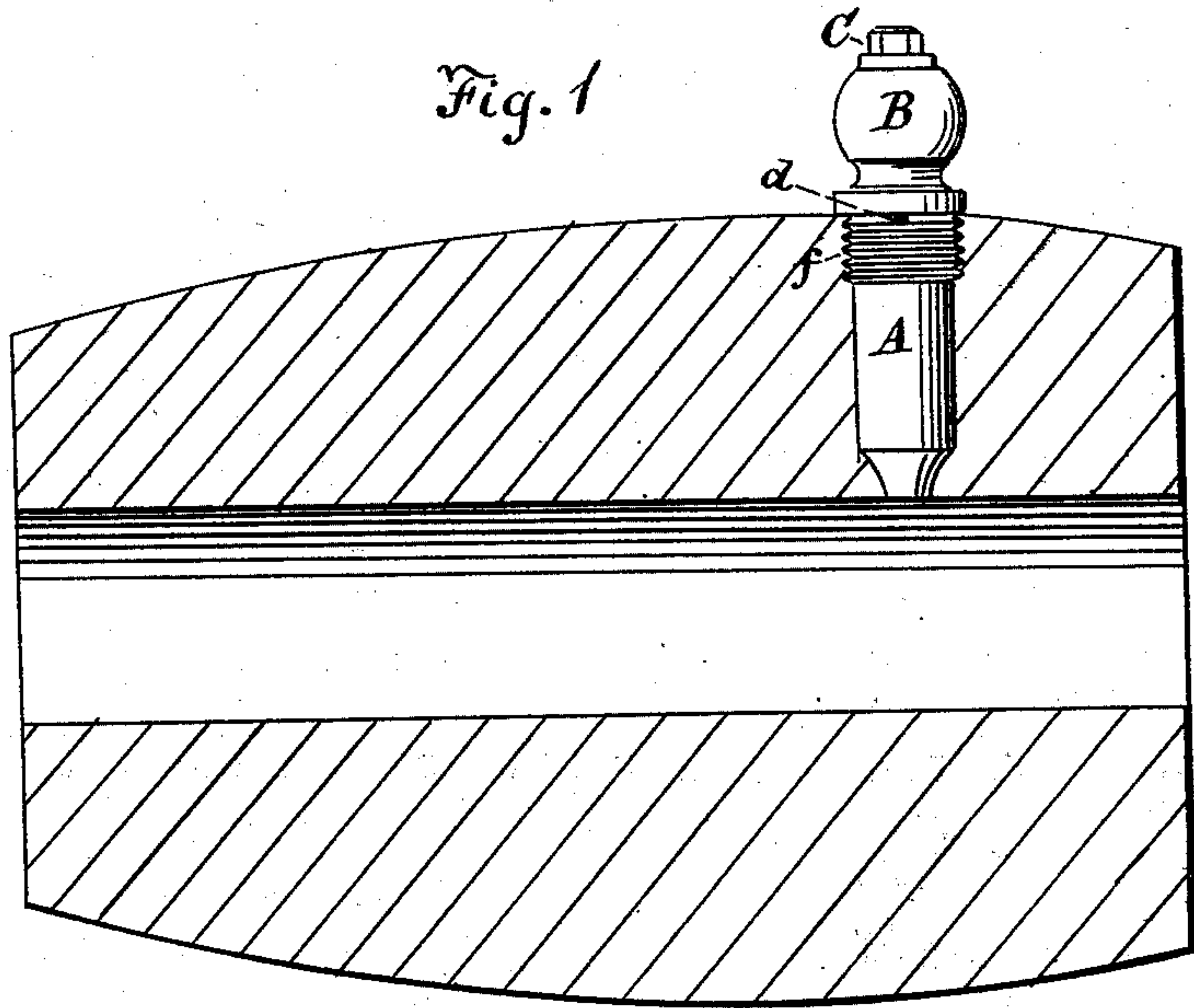


L. LLEWELLYN.
Lubricator for Vehicle-Axles.

No. 207,361.

Patented Aug. 27, 1878.



Witnesses:
E. H. Bradford.
John O'Donnoghue

Inventor:
L. Llewellyn
By H. J. Ennis,
his atty.

UNITED STATES PATENT OFFICE

LEWIS LLEWELLYN, OF MILLWOOD, VIRGINIA.

IMPROVEMENT IN LUBRICATORS FOR VEHICLE-AXLES.

Specification forming part of Letters Patent No. **207,361**, dated August 27, 1878; application filed March 15, 1878.

To all whom it may concern:

Be it known that I, LEWIS LLEWELLYN, of Millwood, in the county of Clarke and State of Virginia, have invented certain new and useful Improvements in Self-Oiling Axles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a sectional view of an ordinary wagon or carriage hub, showing the lubricator in place. Fig. 2 is a vertical section of the lubricator, and Fig. 3 is a top-plan view of the tube A.

This invention relates to improvements in devices for lubricating wagon and carriage axles; and consists in the improved construction of the same, hereinafter more fully described, and particularly pointed out in the claim.

In the drawings accompanying this specification, similar letters of reference marked thereon indicate like parts of the invention.

A is a tube, being narrowed at its lower end at *a*, and provided at its upper end with a screw-thread, *f*, the diameter of which is larger than the outside diameter of the body of the tube itself. A is also provided at its upper inside end with a thread, into which screws the supply-chamber B. The supply-chamber B has a cap, C, fastened to it by a thread in the usual manner. Said cap C has a longitudinal hole through it, narrowed at its lower end and then flared out or countersunk, so as to form the seat of the valve *c*. *b* is the stem of the valve. *g* is a spiral spring, the lower end of which rests on a shoulder in the lower end of the hole in the cap C, and the upper end presses against the head of the valve-stem *b*, thus keeping the valve *c* closely to its seat.

The operation of the invention is as follows:

A hole, the size of the diameter of the tube A, is bored in the hub, and the tube A is then inserted up to the thread *f*. A screw-driver is then used in connection with the slots *d d* (shown in Fig. 3) to drive the tube A into the wood until its top comes flush or level with the surface of the wood. The supply-chamber B is then screwed on and the cap C removed, and the tube A and supply-chamber B filled with oil. The cap C is then replaced. As the axle revolves it draws down the oil from the chamber and tube, and were it not for the valve *c* a vacuum would be produced, and consequently stop the flow of the oil; but as the suction of the oil progresses the atmospheric pressure forces open the valve *c* and admits air to the chamber B. It will thus be seen that the action of the device is automatic, allowing a regular and steady supply of oil to the axle without the attention of any person except to occasionally fill the supply-chamber B. The chamber B and cap C may be readily removed at any time for cleaning without any trouble and without removing the tube A.

Having thus described my invention and the manner of operating the same, what I claim as new and useful, and desire to secure by Letters Patent, is—

The combination, with a revolving hub and the tube A, screw-threaded exteriorly and interiorly at its upper end and narrowed at its lower end at *a*, of the supply-chamber B, screw-threaded at its upper and lower ends, removable screw-cap C, having a central orifice, valve *c*, and spring *g*, substantially as described, and for the purpose set forth.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

LEWIS LLEWELLYN.

Witnesses:

JOHN O'DONNOGHUE,
E. H. BRADFORD.