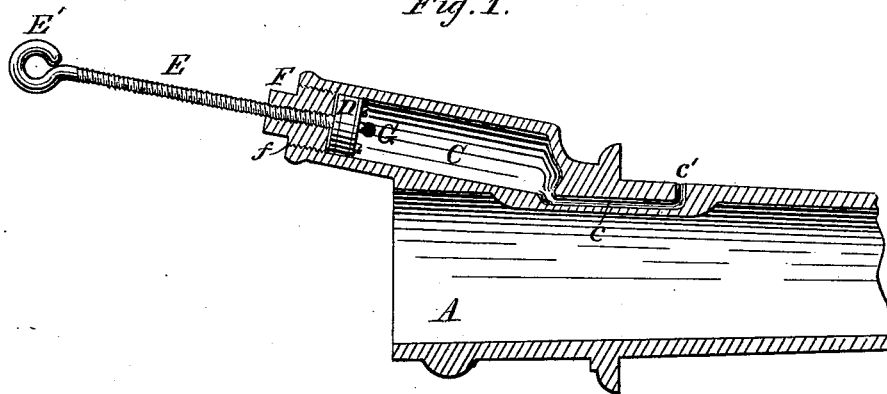


C. A. LEONARD.  
Vehicle-Axle Lubricator.

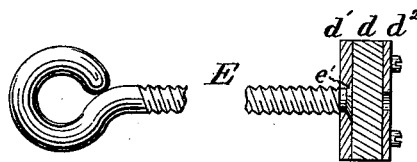
No. 217,885.

Patented July 29, 1879.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*

*J. S. Barker  
Harry N. Low*

*Inventor:*

*Charles A. Leonard  
by W. A. Doubleday  
att'y*

# UNITED STATES PATENT OFFICE.

CHARLES A. LEONARD, OF CANTON, OHIO.

## IMPROVEMENT IN VEHICLE-AXLE LUBRICATORS.

Specification forming part of Letters Patent No. **217,885**, dated July 29, 1879; application filed April 1, 1879.

*To all whom it may concern:*

Be it known that I, CHARLES A. LEONARD, of Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Axle-Lubricators; and I do hereby declare that the following is a full, clear, and exact description of the invention, 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.

This invention relates to an improved device for applying a lubricant to the axles of wagons or other vehicles.

Figure 1 is a longitudinal section of a skein having my improved lubricator cast therewith. Fig. 2 is a view of the piston detached.

The skein A is cast with a cylindrical chamber, C, upon its outer surface. This chamber is first formed by means of a core, and is afterward bored out, so as to be perfectly cylindrical and smooth on its inner surface. It serves to receive and retain the lubricating material, which is introduced and retained or expelled by the following devices.

D represents a piston-head adapted to fit tightly the inside of the oil-chamber C. It is reciprocated by means of a rod, E, which is screw-threaded and mounted in a plug, F. The plug F is tightly inserted in the chamber, at its outer end, by means of screw-threads, as shown at *f*.

The plug has a central screw-threaded aperture, through which the piston-rod E passes and therein engages with the plug, so that the head D can be reciprocated by rotating the rod. The rod is bent at the outer end to form a handle, E'.

The piston-head D is formed of one or more disks, *d d*, of leather, rubber, or other suitable material, clamped between two metal plates, *d<sup>1</sup> d<sup>2</sup>*.

The rod E is connected to the piston-head in such manner that the rod can be rotated in either direction without turning the head, preferably by inserting the rod through the outer plate, *d<sup>1</sup>*, and then forming an expanded head, *e'*, thereon, inside of the plate. By preventing the rotation of the piston-head in this

manner I am enabled to keep the packing perfectly tight.

G represents an aperture through one side of the chamber C, whereby oil may be introduced without withdrawing the plug F or the piston.

The oil is fed from the chamber to the surface of the skein, when the wheel is mounted, by means of a channel or duct, *c*, and orifice *c'*.

By placing the oil-chamber substantially parallel to the wall of the skein, as shown—that is, in a horizontal position or slightly inclined—I am readily enabled to cast the skein and chamber in one piece, owing to the positions of the respective cores, as will be readily understood.

The operation of the device will be readily understood from the drawings and foregoing description. When it is desired to fill the chamber C the piston-head is withdrawn past the filling-aperture G. After the oil has been introduced the head is pushed forward inside the aperture G, and it will then retain the oil in the chamber by atmospheric pressure. When the axle requires more oil the head is, by means of the rod F, thrust forward and the oil forced through orifice *c'*.

What I claim is—

1. In an axle-lubricator, in combination with a horizontal or inclined oil-chamber provided with a filling-orifice in its lateral wall, the plug F and the piston D, adapted to be drawn outside of the filling-orifice while the chamber is filling without opening the oil-chamber, substantially as set forth.

2. The rotating rod E, screw-threaded and reciprocated by engaging with the screw-threaded plug F, in combination with the piston-head D, attached loosely to the end of said rod, substantially as and for the purposes set forth.

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

CHARLES A. LEONARD.

Witnesses:

J. S. HUDSON,  
HENRY FISHER.