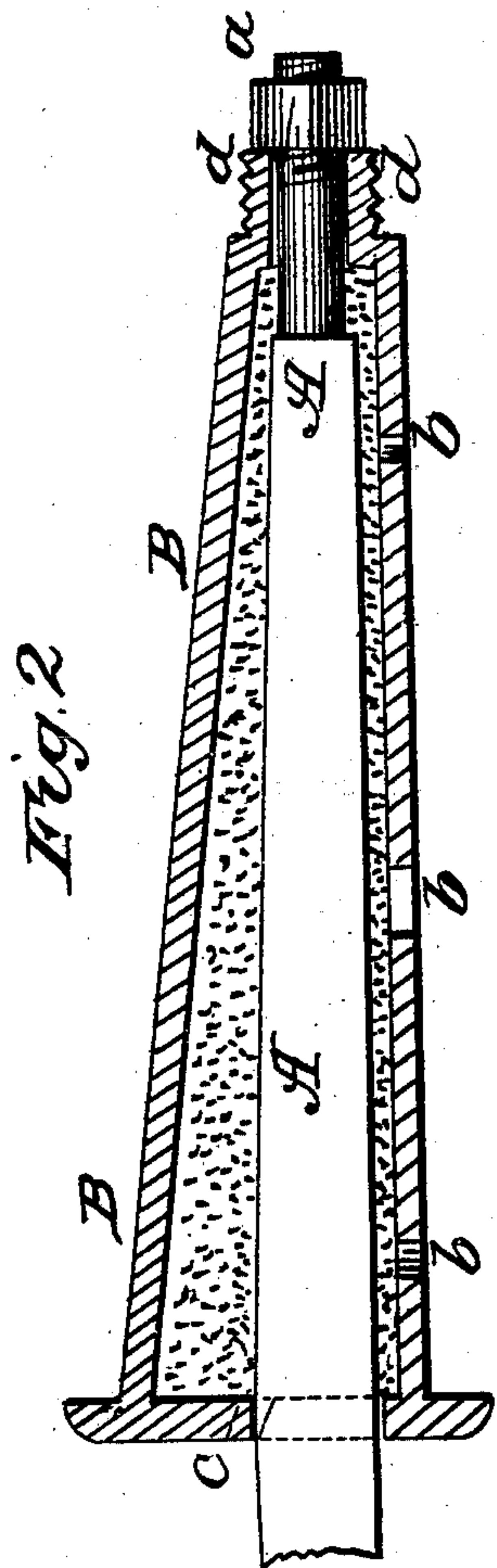


W. KNOCH.

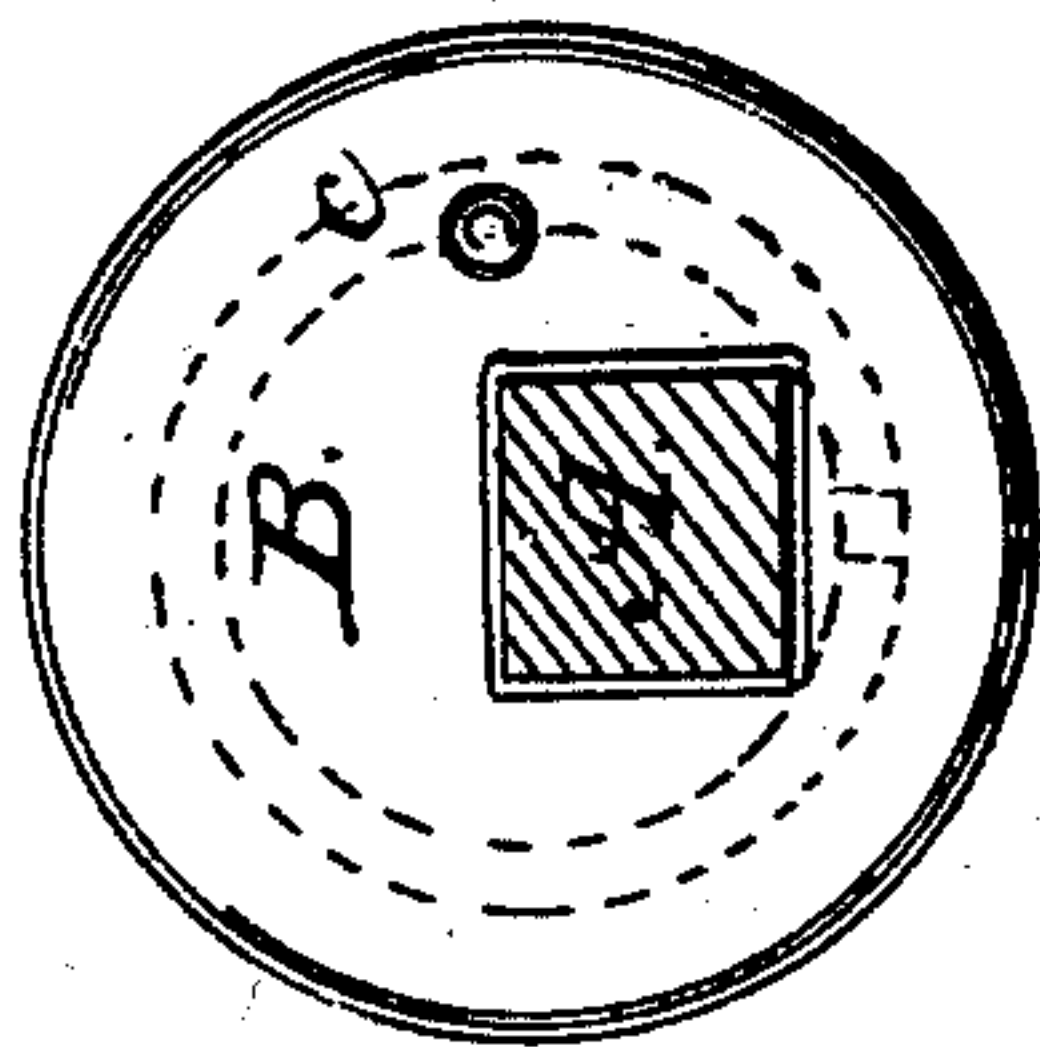
Axle for Vehicles.

No. 74,382.

Patented Feb. 11, 1868.



*Fig. 1.*



Witnesses  
Theo. Trusche  
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# United States Patent Office.

WILLIAM KNOCH, OF ALLEGHENY CITY, PENNSYLVANIA.

*Letters Patent No. 74,382, dated February 11, 1868.*

## IMPROVEMENT IN AXLES FOR VEHICLES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM KNOCH, of Allegheny City, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Axles for Vehicles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents an end view of my invention.

Figure 2 is a vertical longitudinal sectional view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new manner of arranging the spindles around wagon-axles so that the hub can be easily oiled, and that the spindle can be easily replaced when desired.

The invention consists in fitting the spindle eccentric around the axle so as to form a chamber above the axle, in which packing or grease is to be placed, which will, as the wheel revolves, flow through small holes provided in the under side of the spindle.

A represents the squared end of the axle; B is the metal spindle, round, and tapering toward the front. The hole in the front end of the spindle is in the centre of the same, while in its inner end the hole is as far down as possible. Thus, the under side of the spindle is parallel with and close to the under side of the axle. By a nut, *a*, the spindle is fastened to the axle, as is clearly shown in fig. 2. The room above the axle, between the same and the spindle, is to be filled with grease or other lubricating-matter. *b b* are holes formed in the under side of the spindle for the oil to ooze out, and *c* is a hole arranged in the inner head of the spindle for the oil to be poured in. The hub is fitted around the spindle, and is held in place by a nut, which is fitted over a screw-thread, *d*, that is provided on the front end of the spindle, as shown in fig. 2. When the wagon stands still, its weight will rest upon the under side of the hub, and the holes *b b* will be completely closed. As soon as the wheels are turned there will be enough chances, during the jerks and shocks of the wagon for the oil to flow out of the spindle and lubricate the hub. When a spindle is used up, it can be easily replaced.

I claim as new, and desire to secure by Letters Patent—

The tapering spindle B, constructed as described, fitting eccentrically upon the square shank of the axle, the hole in the front end of said spindle being in its centre, and the hole in the inner end placed near the lower edge, in such a manner that the under side of the axle lies parallel with the lower perforated side of the spindle, and an inclined lubricating-chamber formed above the axle, as herein described for the purpose specified.

WILLIAM KNOCH.

Witnesses:

G. PH. LANG,  
GEORGE C. LANG.