A. WALTER.

VEHICLE AXLE-BOX.

No. 194,390. Patented Aug. 21, 1877.

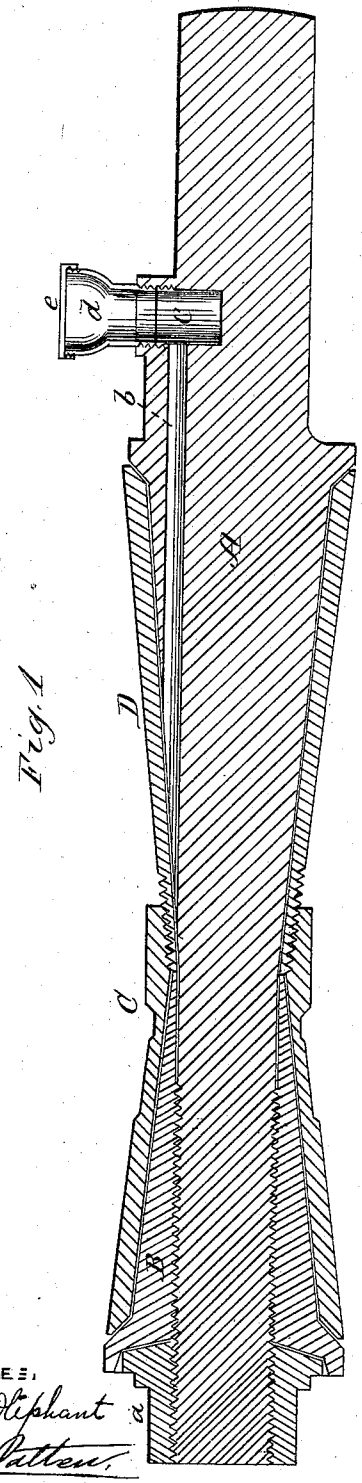

Fig. 1.

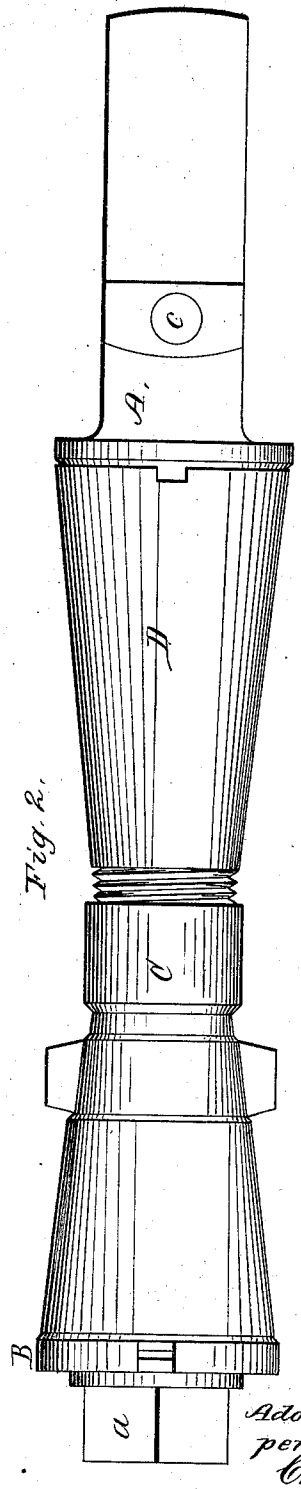

Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

ADOLF WALTER, OF FREMONT, OHIO.

IMPROVEMENT IN VEHICLE AXLE-BOXES.

Specification forming part of Letters Patent No. **194,390**, dated August 21, 1877; application filed May 7, 1877.

To all whom it may concern:

Be it known that I, ADOLF WALTER, of Fremont, in the county of Sandusky and State of Ohio, have invented a new and valuable Improvement in Vehicle-Spindles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my invention. Fig. 2 is a side elevation of the same.

This invention has relation to spindles for vehicles, and the object and purpose thereof is to furnish a device of this character, by which the play of the vehicle-wheels may be regulated, whether the play be horizontal or perpendicular, so that the wheels may at any time be made to run steadily and firmly on the spindle or axle, and is applicable to all kinds of carriage or wagon hubs; and the object of the invention is also to construct the spindle that it may be lubricated without the necessity of removing the wheel.

The invention therefore consists in the general construction and arrangement of the several parts, as will be hereinafter more fully described, and subsequently pointed out in the claims.

In the accompanying drawings, A represents the axle or spindle, provided at one end with a suitable screw-thread for the reception of a screw-threaded sleeve, B, held in position or in place in a forward motion of the wheel by a nut or burr, *a*. C D are two sections of the box, formed tapering to correspond with the tapering form of the sleeve B, and the tapering portion of the spindle A, the two sections being connected together by suitable screw-threads upon their ends.

The sleeve B by turning it in the desired direction will shorten or lengthen the spindle, as occasion may require, so that the wear of the same may be taken up and the wheel kept firmly in place.

The spindle A at its larger end has a horizontal opening, *b*, parallel to the axis of the spindle, and having its outlet under the section D of the box. The other end of the opening *b* connects with a cup, *c*, sufficient distance above the bottom to allow a sufficient amount of oil to remain below the line of the opening *b* to insure a sufficient quantity of oil being at all time supplied. The mouth of the cup *c* is screw-threaded, to which may be connected a supplemental cup, *d*, having a screw-threaded cap, *e*.

It will be seen that the spindle during its rotation will be lubricated by the oil in the cup *c* being gradually deposited upon the interior of the boxes without the necessity of removing the wheel.

I am aware that journals have been formed with conical bearings, so that by forcing the cones toward each other the wear is compensated by the enlargement of the axle; but this I do not claim broadly.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The tapering spindle A, screw-threaded sleeve B, nut *a*, in combination with the two tapering sections C D, substantially as and for the purpose set forth.

2. The tapering spindle A, having opening *b* and cup *c*, and the tapering sleeve B, tapering sections C D, and nut *a*, constructed and arranged as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ADOLF WALTER.

Witnesses:

JOHN ELWELL,

ADAM MILLER.