F. M. ATKINSON.
Vehicle Hub.

No. 200,241. Patented Feb. 12, 1878.

Fig. 1.

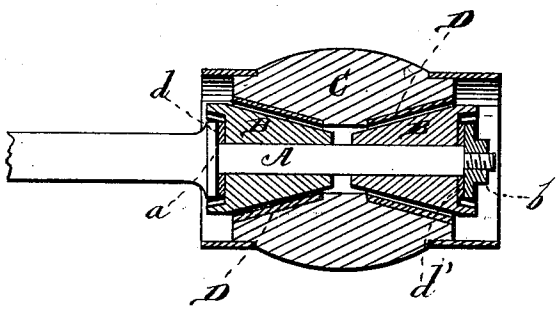


Fig. 2.

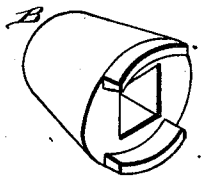


Fig. 3.

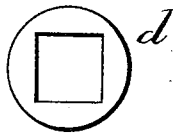
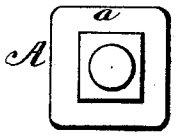


Fig. 4.



WITNESSES
Robert Everett
James Sheehy

INVENTOR.
Francis M. Atkinson.
Fitzmore. Smith & Co.
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANCIS M. ATKINSON, OF FALKLAND, NORTH CAROLINA.

IMPROVEMENT IN VEHICLE-HUBS.

Specification forming part of Letters Patent No. **200,241**, dated February 12, 1878; application filed December 22, 1877.

To all whom it may concern:

Be it known that I, FRANCIS M. ATKINSON, of Falkland, in the county of Pitt and State of North Carolina, have invented a new and valuable Improvement in Wagon-Hubs; 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 represents a longitudinal vertical section of my wagon-hub. Fig. 2 is a perspective view of the thimble, and Figs. 3 and 4 are details.

The nature of my invention consists in the construction and arrangement of a hub and axle-box for vehicle-wheels, as will be hereinafter more fully set forth.

The annexed drawing, to which reference is made, fully illustrates my invention.

A represents the axle-spindle, made of wrought-iron, in "four square" its entire length, and with a shoulder or a butting-ring, *a*, to hold the inside cone in proper place, and also with threads on the extreme end to receive the nut *b*.

On the axle-spindle A are placed two cone-shaped thimbles, B B, placed with their smaller ends toward each other, thus forming a bed for the hub C, which bed is adjustable to wear. The thimbles B, having square eyes through the center, are adjustable along the arm of the axle by means of washers *d d* behind them, together with the nut *b*.

When uniformity of gage is desirable, as in country use, to follow the track, washers of the same size must be used behind each cone or thimble B. The thimbles can be used until their inner ends meet in the center of the hub. Then they can be easily replaced at a trifling cost, as compared with the purchase of new spindles. Should they wear flat on the under side after continued use, they may be stripped from the spindle and inverted, and also all rotary motion prevented. They are made of malleable cast-iron, of a size to correspond with the axle.

The hub C has on its inner surface double bevels extending to the center, as shown, and is provided with two cast-iron boxes, D D, cone-shaped to correspond with the thimbles.

In my hubs the nuts *b* can all be made right-handed, as they are so far removed from the hub that it is impossible for them to come into contact with it, thereby obviating all derangement of either.

The washers *d* may be made of different sizes, to take up all wear.

After backing the nut, a shake of the wheel with the hand will part the conical thimbles, so as to allow the application of oil to the cones or thimbles without removing any part.

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

The combination of the axle-spindle A with shoulder *a*, the conical thimbles B B, washers *d d*, nut *b*, and hub C, having the cone-shaped boxes D D′, all substantially as and for the purposes herein set forth.

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

FRANCIS MARION ATKINSON.

Witnesses:
B. E. POPE,
B. R. KING.