

T. F. COLEMAN.
Axles for Vehicles.

No. 143,435.

Patented Oct. 7, 1873.

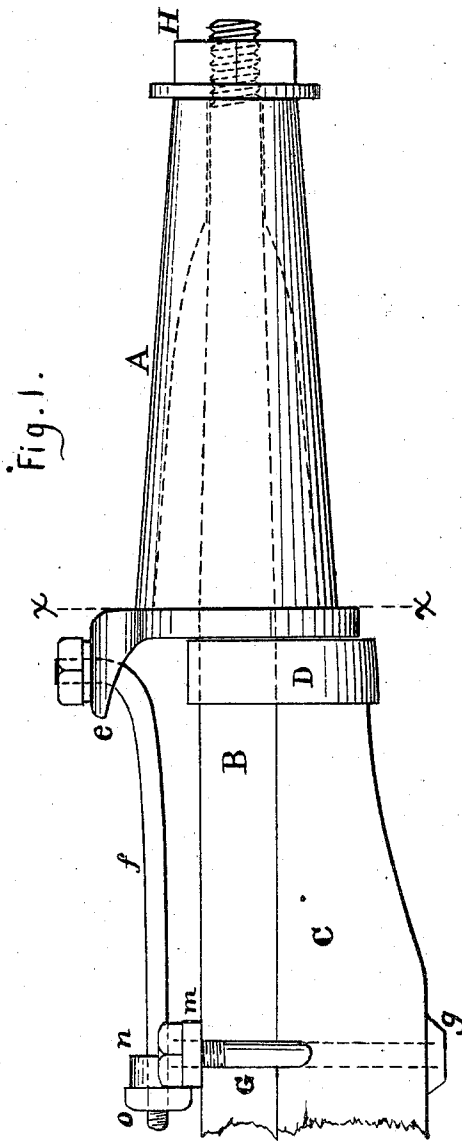
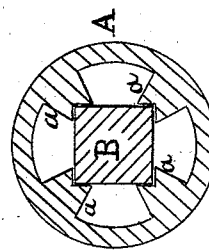


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

THEODORE F. COLEMAN, OF ALLEGHENY CITY, PENNSYLVANIA.

IMPROVEMENT IN AXLES FOR VEHICLES.

Specification forming part of Letters Patent No. **143,435**, dated October 7, 1873; application filed May 20, 1873.

To all whom it may concern:

Be it known that I, THEODORE F. COLEMAN, of Allegheny City, county of Allegheny and State of Pennsylvania, have invented certain Improvements in Axles, of which the following description, taken in connection with the accompanying plate of drawings hereinafter referred to, forms a full and exact specification, wherein are set forth the nature and principles of the invention, by which the same may be distinguished from others of a similar class, together with such parts thereof as are claimed as new and are desired to be secured by Letters Patent of the United States.

My invention relates to that part of an ordinary vehicle commonly known as the axle; and the nature thereof consists in certain improvements in the details of the construction of the same, hereinafter described and shown.

In the accompanying drawing, which illustrates my invention and forms a part of the specification thereof, Figure 1 is a side view of the outer end of an axle-tree with my improvement. Fig. 2 is a transverse vertical section in the line *x x* of Fig. 1.

The construction, arrangement of component parts, and operation of my invention are as follows: In the drawings referred to, A designates the spindle, constructed of cast-steel, or any other desirable metal, in such a manner that it may be fitted neatly and closely to the four corners of the axle B, and leave chambers or recesses between the said corners, thereby reducing the weight of the said spindle without

impairing its strength. For this purpose the spindle is provided with four longitudinal projections, *a*, in which are cut notches of such a shape and size as to fit exactly the corners of the axle B. H designates a nut, which screws onto the axle B, and which holds the spindle upon the same. The said nut also holds the wheel in position after it has been placed on the axle. The said axle is secured firmly to the wooden axle-bed C by means of iron band D and the clip-tie G, which consists of screw-bolts and nuts *g* and cross-piece *m*, provided with a flange, *n*. The said spindle is provided with a lug, *e*, in an aperture in which is secured the hooked end of the connecting-rod *f*. The other end of the said connecting-rod, upon which is cut a screw, is passed through a hole cut in the flange *n*, secured thereto by means of the nut *o*. By this construction the said connecting-rod may be shortened at pleasure, and the spindle held firmly on the axle.

Having described my invention, I claim—

The spindle A, provided with longitudinal projections *a*, in which are cut notches to fit the corners of the iron axle B, in combination with the axle B, as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

THEODORE F. COLEMAN. [L. s.]

Witnesses:

JAMES LOWRIE,
FRED. KOERNER.