F. P. RATHBUN.

Hub Attaching Device.

No. 221,701. Patented Nov. 18, 1879.

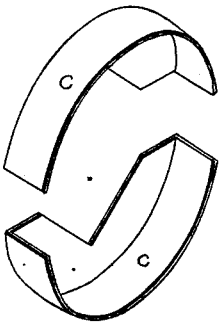


FIG. 5




FIG. 1

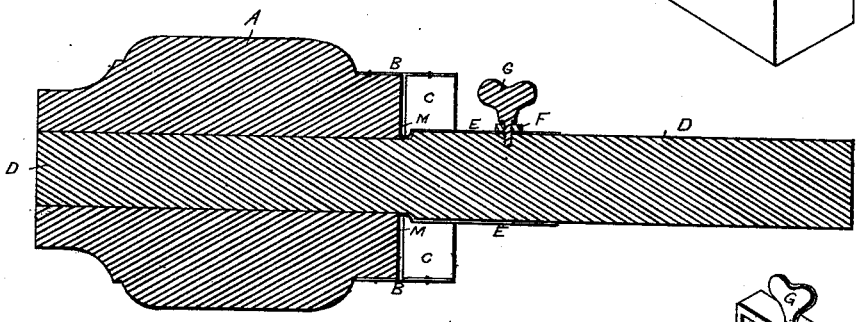


FIG. 2

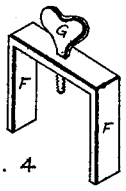


FIG. 4

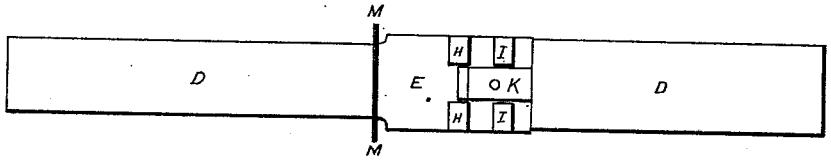


FIG. 3

Witnesses:

James D. Adams

John Griffin

Inventor:

Fay P. Rathbun

# UNITED STATES PATENT OFFICE.

FAY P. RATHBUN, OF HORNELLSVILLE, NEW YORK.

## IMPROVEMENT IN HUB-ATTACHING DEVICES.

Specification forming part of Letters Patent No. **221,701**, dated November 18, 1879; application filed July 12, 1879.

*To all whom it may concern:*

Be it known that I, FAY P. RATHBUN, of Hornellsville, in the county of Steuben and State of New York, have invented a new and useful Improvement for Fastening the Wheels of Wagons and other Vehicles onto the Axle-Trees; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My invention is an improvement in securing vehicle-wheels to their axles.

It consists of a rectangular case or tube, provided with an annular flange at its end, adapted to fit onto an axle and be secured in a manner hereinafter to be described, in combination with a flanged band adapted to fit within and be secured to the sand-band of a vehicle-wheel, said tube or socket, when in place, with its flange, serving, together with said flanged band, to hold the wheel onto its axle without the use of the screws, screw-threads, and nuts in ordinary use.

It consists, also, of a device for keying the said socket to its axle, composed of a U-shaped angle-plate, adapted to slide into a dovetail groove formed on either side of said socket, and against a notched key secured to the axle, whereby the wheel is readily adjusted to its place or detached from its axle.

In my drawings, Figure 1 is a perspective view, showing the whole device as applied. Fig. 2 is a vertical longitudinal section. Fig. 3 is a side elevation. Fig. 4 is a perspective view of the U-shaped plate. Fig. 5 is a perspective view of the inner flanged band.

Similar reference-letters denote like parts in all of the figures.

Referring to drawings, A is the hub of a wheel, provided with the sand-band B. Attached to it, and extending beyond its inner face, D, is the axle, fashioned from wood or other suitable material, with its journal having a conical or cylindrical form, with a shoulder separating said journal from the rectangular portion of said axle.

E is a socket or tube, adapted to fit over the square part of the axle, and provided with an annular plate at its end.

The axle D has fixed or secured on one of its sides a key, K, with an offset or projection at one end, for a purpose hereinafter to be mentioned.

A flanged band, C, made, preferably, in two pieces, as shown, is so formed as to fit within the projecting sand-band B, with its flange parallel to the inner end of the hub A, and when in position said flanged band is secured by rivets or other suitable means to said sand-band B.

The hub A may have its bore extending entirely through its length or only part way, and its outer end may be ornamented in any suitable manner.

In applying my device to the hub of a wheel, I first place the flanged tube or socket E within the sand-band B, with said flange resting fair against the inner face of the hub. I now place the band C within the said sand-band and over the axle-socket E until its flange nearly touches the flange M of the socket. Rivets or screw-bolts are now applied to hold the two bands together and secure the socket in place with reference to the hub.

A very narrow space is allowed for lubricator between the flange of the band C and the flange M of the socket.

In applying the hub with its aforesaid attachments to the axle, I place the socket or tube E over the journal or spindle and square part of the axle until its shoulder abuts against the shoulder separating the axle's two parts.

It will now be observed that the projections H H of the socket, which, together with corresponding projections I I, form the dovetail groove, come in line with the projection on the key K. The U-shaped piece is now slid into place, with its arms F on two sides of the socket, and the screw G driven home through the socket's plate and into the axle.

A detachment of the wheel is effected by loosening the screw G and withdrawing the U-shaped piece, simply.

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

1. In combination with the axle D, provided with key K, the socket or tube E, provided with projections H H I I, and U-shaped plate, provided with the thumb-screw G, as and for the purpose set forth.

2. The combination, with the hub A and axle D, of the flanged band C, the flanged socket E, and securing device of said socket or wheel, composed of the key K, projections H H I I, and U-shaped piece, provided with thumb-screw G, as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 31st day of May, 1879.

FAY P. RATHBUN. [L. S.]

Witnesses:
JAMES D. ADAMS,
JOHN GRIFFIN.