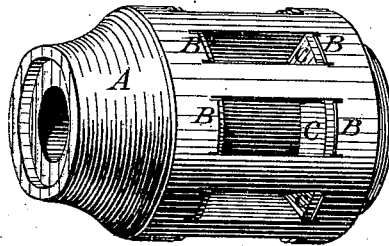


W. F. BODINE.  
VEHICLE HUB.

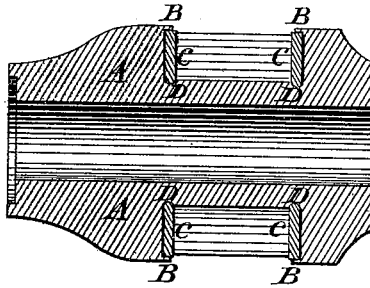
No. 180,453.

Patented Aug. 1, 1876.

*Fig. 1.*



*Fig. 2.*



*Attest:*  
*Wm. Bagger*  
*C. Snow*

*Inventor:*  
*William F. Bodine*  
*by Louis Bagger*  
*his Atty.*

# UNITED STATES PATENT OFFICE.

WILLIAM F. BODINE, OF KNOXVILLE, VIRGINIA.

## IMPROVEMENT IN VEHICLE-HUBS.

Specification forming part of Letters Patent No. **180,453**, dated August 1, 1876; application filed February 28, 1876.

*To all whom it may concern:*

Be it known that I, WILLIAM F. BODINE, of Knoxville, in the county of Prince William, and State of Virginia, have invented certain new and useful Improvements in Hubs for Vehicles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a perspective view, and Fig. 2 is a sectional view, of the-hub.

Similar letters of reference indicate corresponding parts.

This invention relates to that class of hubs for vehicles that are cast in one piece; and it consists in providing the mortises of such hubs with projections for holding in place wooden keys that, when the spoken is driven in, will prevent the tenon from being shaved by the edge of the mortise, thus holding it in place more securely, as hereinafter described.

In the drawing, A is the hub. The upper edges of the sides of the mortises have projections B, the object of which is to hold in place the wooden keys C, which are inserted into the mortise on each side, as shown. In order to hold these still more securely in position, the bottom of the mortise may be recessed on each side, as shown at D, when the keys C will be absolutely prevented from dropping out. The keys C should project slight-

ly—say, one-sixteenth of an inch—beyond the projections or keepers B for the purpose hereinafter set forth.

The object of my invention, and its advantages, will be easily understood from the foregoing description.

A great draw-back to the general use of cast hubs has been that in driving the spoke the edge of the tenons is invariably shaved off, thus causing the spokes, after the wood of which they are made has shrunk, to become loose. This is obviated by my invention, by which the tenons of the spokes when driven, instead of being shaved off, as is usually the case, will be squeezed between the wooden keys, which will hold them in place the same as is the case in ordinary wooden hubs.

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

1. As a new article of manufacture, a hub for vehicles cast in one piece, and having on each side of the mortises projections for holding in place wooden keys, substantially as and for the purpose specified.

2. In combination with a cast metallic hub, the edges of the sides of the mortises of which have projections B, the wooden keys C, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM F. BODINE.

Witnesses:

WM. BAGGER,  
S. F. AUSTIN.