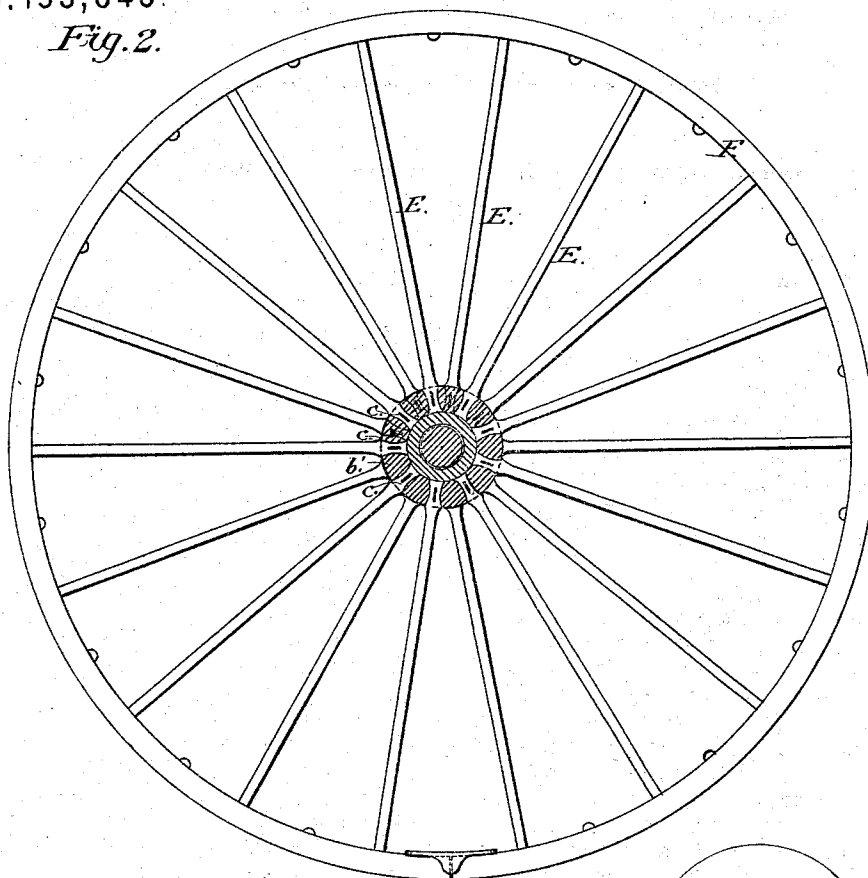


A. N. PRICE.  
Vehicle Wheels.

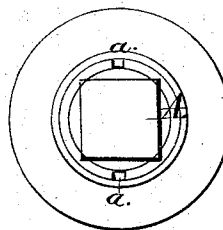
No. 153,843.

Patented Aug. 4, 1874.

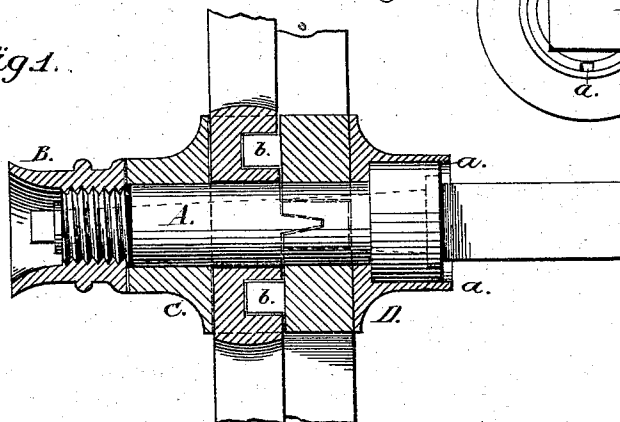
*Fig. 2.*



*Fig. 3.*



*Fig. 1.*



Witnesses:  
Edw. W. Donn  
William Reading

Inventor:  
A. N. Price

# UNITED STATES PATENT OFFICE

ADAM N. PRICE, OF WARREN, PENNSYLVANIA.

## IMPROVEMENT IN VEHICLE-WHEELS.

Specification forming part of Letters Patent No. 153,843, dated August 4, 1874; application filed February 20, 1874.

*To all whom it may concern :*

Be it known that I, ADAM N. PRICE, of Warren, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Carriage-Wheels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to an improvement in that class of carriage-wheels having the hub formed wholly of metal, the spokes and fellys being of wood; and it consists in the construction and arrangement of the different parts, as will be hereinafter fully set forth.

In the accompanying drawings similar letters of reference indicate corresponding parts in the different figures.

Figure 1 is a longitudinal section, showing the arrangement of the different parts of the hub. Fig. 2 presents a transverse section of the hub, showing the method of arranging the spokes therein. Fig. 3 is an end view of the hub, exhibiting the method of preventing the box from turning.

A represents the pipe-box, formed in the ordinary manner, except that one end is enlarged, so as to fit in a recess made for its reception in the end of the hub, and in which it is prevented from turning by keys *a a*, which enter a corresponding groove in the enlarged portion of the box. Upon its opposite end is cut a screw-thread for the reception of the nut B, which secures upon the box the two halves of the hub C and D. These are cast with dovetailed recesses *c*, the sides of which are of a circular form, and which have projecting between them a spur, *b*. It will be seen that this form of recess holds the spokes securely in place, but leaves no shoulders at any point to become the starting place of a fracture. The end of the spokes E which enters the hub is cut to the same circle as the outside of the box, and when they are inserted in their places bear against it, nearly completing the circle. This gives to each spoke a firm basis upon which

to rest, and enables it to bear the jars and blows to which it is subject in passing over rough roads without brooming or displacement.

It will be seen that each half of the hub carries its own set of spokes, which alternate with those in the other half, thus giving them double the length of bearing within the hub, and enabling the number of spokes in the wheel to be largely increased over what is possible with a hub having its spokes inserted in a single line around it.

The felly F consists of one piece of timber bent to the proper shape, and the two ends secured to each other by a metal clip.

In setting up this wheel, the hubs are placed in position upon the box, the two halves being sufficiently separated to allow the spoke to enter the recess in which it is to remain, and lie upon the point of the spur *b*.

After all the spokes have been inserted in this manner, a clamp is placed in such position upon the hub as to force the two halves together, causing the spurs to enter the spokes, and not only assist in holding them in position, but by spreading them side-wise they are made to fill the cavity in the hub perfectly. After the parts are all in place, the nut B is screwed on and the clamp removed.

It will be obvious that, to repair a wheel by inserting new spokes to take the place of such as may be broken or otherwise disabled, the nut B will be removed, and the two halves of the hub separated sufficiently to admit of the removal of the disabled spokes, and the insertion of new ones when the nut is again screwed on, forcing the new spokes into place, and rendering the wheel as good as ever.

This feature will be found of great advantage upon long routes where carriage-makers or other skilled artisans are not to be found, as by carrying a few extra spokes ready fitted, the wagoner may at any time replace broken spokes with new ones.

I am aware of the patent to W. A. Lewis, December 10, 1872, No. 133,867, and do not claim anything therein shown.

Having thus described my invention, I claim

as new, and desire to secure by Letters Patent, the following:

The box *A*, provided with the enlarged end and grooves, in combination with the spokes *E* having scalloped tenons, metallic section *D* having double dovetailed recesses *c*, and convex spurs *b*, and keys *a a*, substantially as specified.

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

A. N. PRICE.

Witnesses:

M. K. CHANDLER,

M. P. HARWOOD.