

(No Model.)

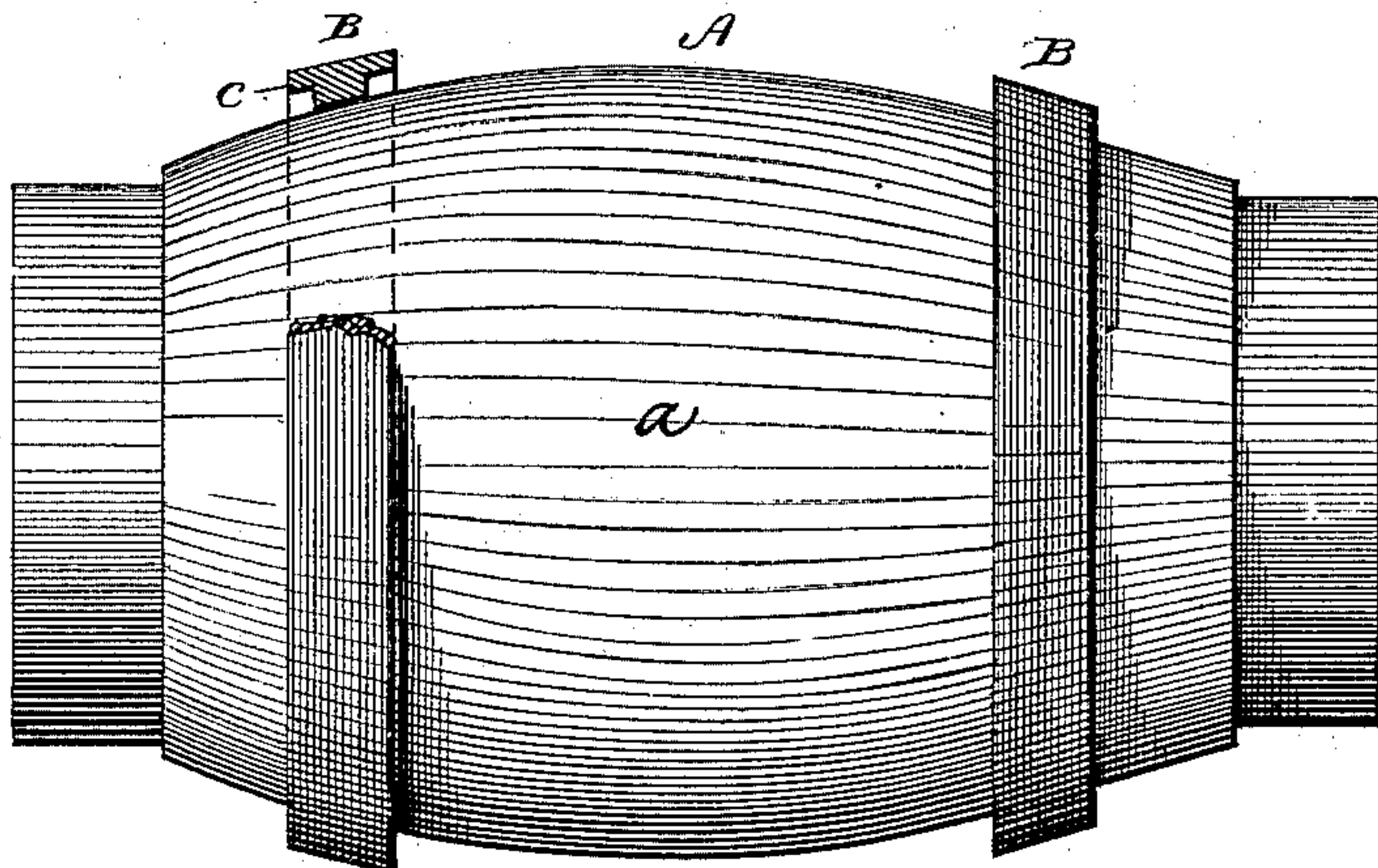
C. K. WILCOX.

CARRIAGE HUB.

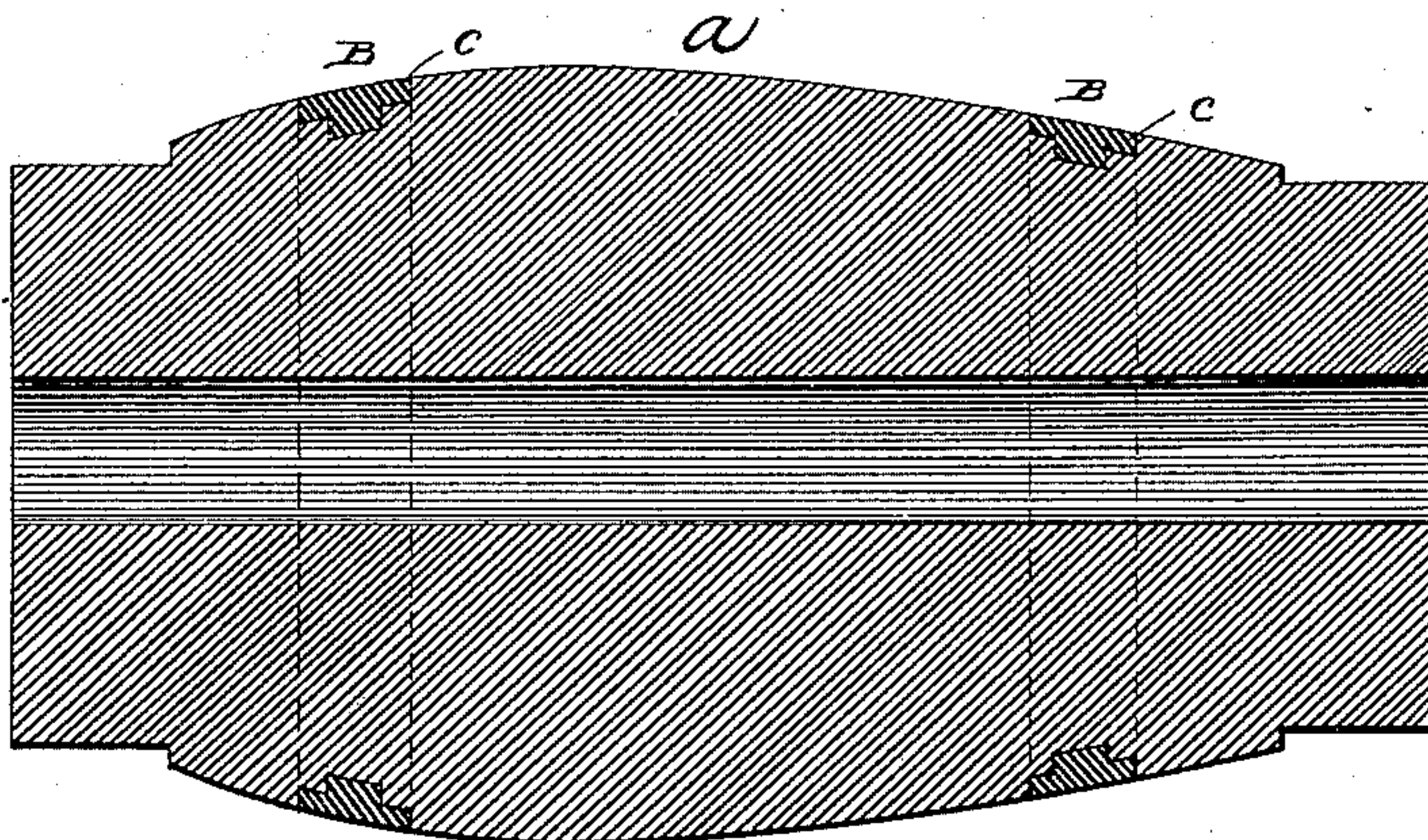
No. 290,724.

Patented Dec. 25, 1883.

*Fig. 1.*



*Fig. 2.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

CHARLES K. WILCOX, OF DAYTON, OHIO.

## CARRIAGE-HUB.

SPECIFICATION forming part of Letters Patent No. 290,724, dated December 25, 1883.

Application filed May 28, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES K. WILCOX, of Dayton, in the county of Montgomery and State of Ohio, have invented certain Improvements in Carriage-Hubs and Method for Banding the same, of which the following is a specification.

My invention relates to that class of wooden hubs which are strengthened and solidified by means of metallic bands compressed thereon or therein; and the invention consists, essentially, in compressing unbroken bands into the body of the hub flush with the surface of the wood, or substantially flush, without grooving of the hub or removal of the wood.

Hitherto it has been the practice to prepare wooden hubs to receive strengthening-bands by removing a portion of the wood, thereby forming grooves or recesses, into which bands were compressed by means of tapering dies or equivalent devices.

In practice it has been found that hubs thus constructed are open to several serious objections, some of which are that the fibers of the wood severed in the formation of the groove weaken the surface or periphery of the hub so much that expansion and contraction permit the fibers to escape from beneath the edges of the band and become raised and disintegrated, not only destroying the appearance of the hub, but breaking the paint and varnish adjacent to the band and exposing the wood to the entrance of water, thus causing the hubs to check and decay. By my method of construction, leaving the hub intact and applying the band over the exterior of the hub and seating it therein by compression, I am enabled to overcome all difficulties above mentioned, and to give the hub greater strength and solidity than can be obtained by any other method.

Referring to the accompanying drawings, Figure 1 represents a hub and band prepared in accordance with my improved method previous to their being united. Fig. 2 is a sectional view of the hub as it appears when completed, with the band seated therein.

In carrying out my method of construction I prepare an ordinary wooden hub, A, of any

suitable form, preferably with an enlarged belt or zone, *a*, at its middle. I also prepare two or more endless wrought-iron bands, B, which may be of any suitable form in cross-section; but which are preferably constructed, as shown, with overhanging lips or edges *c*, as represented in Fig. 1. These bands, which are made of suitable size to encircle the hubs at the points to be strengthened, are applied around the same, as represented in Fig. 1, and subjected to a powerful compression by means of tapering dies or other mechanical appliances, such as are known to those skilled in the art, the compression being continued until the band is upset or compressed and reduced in size, so as to sink bodily into the hub, with its upper surface flush or substantially flush with the surface of the wood. It is to be noted that the band forms its own seat in the wood by compressing or condensing the wood beneath it. When thus applied, the surface fibers are compressed and solidified within and beneath the metal band, at the same time the edges overlap and firmly retain beneath them all the adjacent surface.

In practice it is found that by this method of construction the hub is given greater strength and solidity, the band retained much more firmly in place than when the wood is removed from beneath it, and that the surface fibers of the hub are unbroken, extending beneath the band, and being retained thereunder with such security as to prevent the paint and varnish from cracking, and thereby completely exclude moisture from beneath the band, and as there is no fiber to escape or become separated or disintegrated, the hub remains perfect.

It is preferred to construct the hub with the enlarged central belt, *a*, a compression of this belt under the action of the dies serving to give the hub greater solidity at the center; but this constitutes no feature of the present invention, the invention embracing as its essential feature the sinking of a band by compression into the body of a wooden hub without grooving or recessing of the hub.

The present invention is restricted to those matters and things which are hereinafter claimed; and as to all matters which may

be described or shown, but which are not claimed, the right is reserved to make the same the subject of a separate application.

Having thus described my invention, what  
5 I claim, is—

As an improvement in the art of banding wooden hubs, the method consisting in placing about the hub an endless metal band and

sinking the same by compression into the body of the hub without grooving or recessing the latter.

CHARLES K. WILCOX.

Witnesses:

A. W. PINNEO,  
E. A. DANIELS.