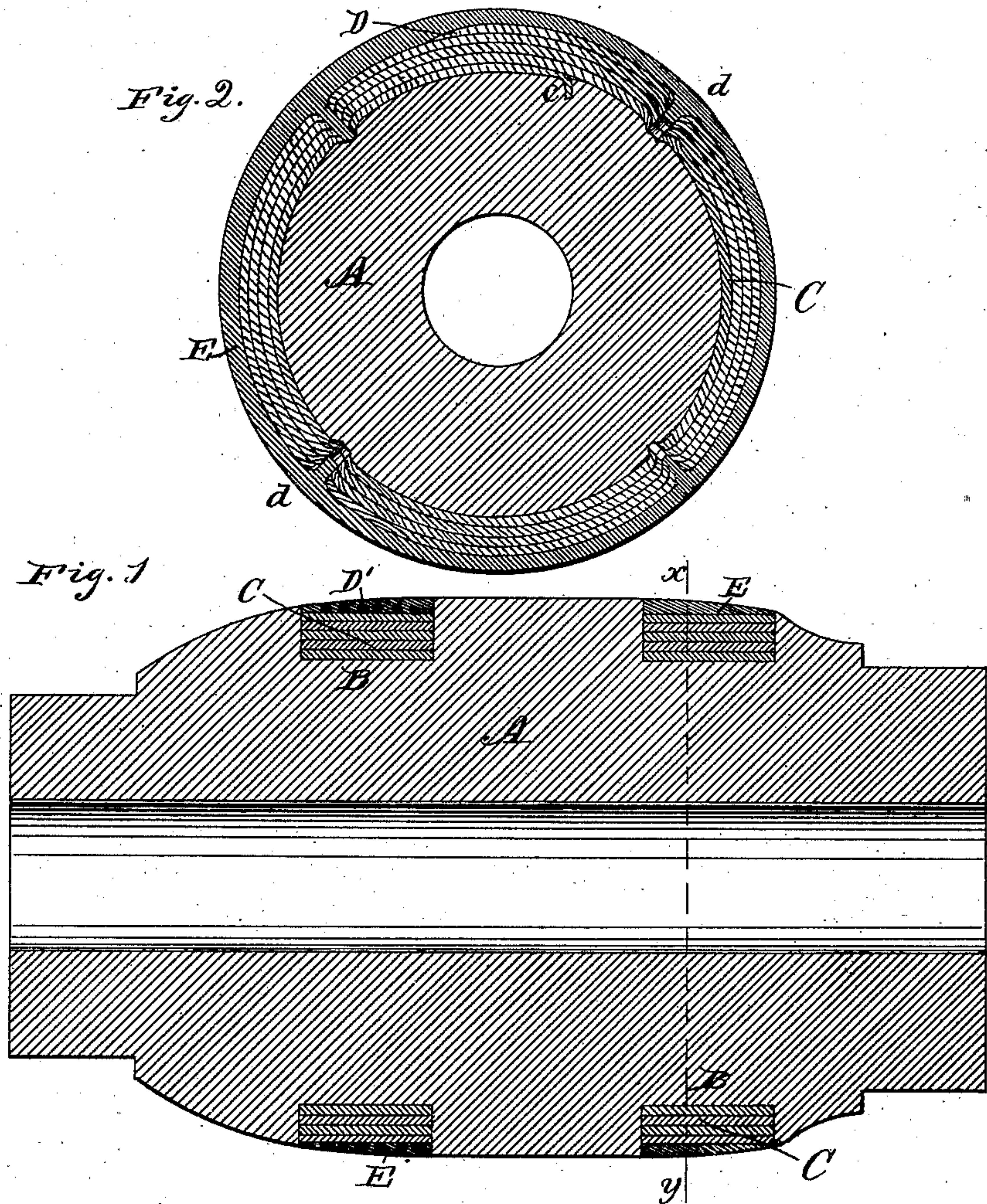


(No Model.)

G. W. MILLER.
Vehicle-Hub Band.

No. 228,097.

Patented May 25, 1880.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE W. MILLER, OF CANTON, OHIO.

VEHICLE-HUB BAND.

SPECIFICATION forming part of Letters Patent No. 228,097, dated May 25, 1880.

Application filed March 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MILLER, of Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Bands for Vehicle-Hubs; 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to an improved band for the wooden hubs of wheels of wagons and other vehicles.

It consists in forming a band for the hub of a thin strip of flat metal wound around the hub in a groove formed for its reception in overlapping convolutions, and in combining therewith soft metal placed around the band to completely fill the groove, protect the band, and provide a finish.

The purpose of my invention is to overcome the difficulties that have been met with in using bands heretofore employed constructed of wire or of continuous rings of metal placed upon the hub by shrinking or by compressing.

Figure 1 is a longitudinal section of a hub having my improved band attached. Fig. 2 is a vertical section of the same on line *x y*, Fig. 1.

In the drawings, A represents a hub, which, so far as the essential features of my invention are concerned, may be of any desired construction, shape, or size.

In the periphery of the hub are formed two or more grooves, B, there being one or more of the grooves upon each side of the spokes. Where two grooves only are employed they should be arranged as near as practicable to the mortises or sockets in which are placed the inner ends of the spokes, in order that the bands may operate to prevent splitting or otherwise injuring the hub when the spokes are being driven.

My improved band is composed of a comparatively thin strip of sheet metal, (shown at C.) The strip of metal has a uniform width, substantially the same as or a little less than that of the groove B. The band is secured in place by inserting the inner end in the wood

of the hub at the bottom of the groove, as shown at *c*, or by tacking at the said end. The strip C is then wound tightly in such manner as to form a continuous band of as many convolutions as are necessary to insure the required strength, the groove B being made sufficiently deep to leave an annular space between the periphery of the last coil of the strip and the surface of the hub. After the coil has been wound the outer end is fastened against the surface of the last coil by soldering, as shown at D, or by a wire wrapped around it, as shown at D', Fig. 1.

By means of suitable punching devices perforations *d d* are then made through the band in such manner that a portion of the metal of each convolution shall be forced into the corresponding perforation formed in the convolution below it, as shown in Fig. 2. The metal, thus crowded from one coil into or through the next, serves to lock the coils together and to form of these several convolutions a substantially solid band.

After the band has thus been formed from the coil of sheet metal a mass of soft metal is poured around the band to protect the band from breakage or other injury, to fill up the perforations *d d* in order to assist in locking the convolutions together, and to fill up the groove B in order to permit a finish even with or projecting above the surface of the hub, as shown at E.

It will be seen that the groove B is formed in the hub in such manner that its bottom shall be as near as practicable parallel to the axis of the hub—that is to say, shall describe a circumference of a cylinder—this shape of the groove being necessary when a flat band is employed in order to permit the band to be wound and fastened tightly.

I am aware that soft metal has been heretofore employed to finish bands on the hubs of wheels, and aware also that bands have been formed by winding or wrapping wire in convolutions in grooves around vehicle-hubs; and I do not claim, broadly, as my invention a band for hubs formed by wrapping a strip of metal around the same; but much difficulty has been experienced in using wire for the wrapping of hubs, owing to the fact that the convolutions of wire cannot be directly super-

posed one upon the other, so that in the case of a breakage of the wire from rust or other cause the band becomes practically useless, the inner convolutions being no longer compressed, and tending to expand and slip outwardly beyond the outer convolutions, thus removing the pressure from the hub. These difficulties I have overcome by using a strip of sheet metal of a uniform width, substantially the same as that of the groove, so that each convolution lies in the same plane with the others, the band being under ordinary circumstances without the liability of breakage which is incident to the wire. Moreover, by having a comparatively flat band, locking devices whereby the convolutions may be held tightly together can be easily formed directly through the body of the band, as has been described above.

20 What I claim is—

1. The combination, with the hub A, provided with the groove B, the bottom of which is parallel to the axis of the hub, of the band C, formed of a strip of flat sheet metal of a width substantially equal to the groove B, and

wrapped around the hub in several convolutions, all of which lie in the same planes transversely to the hub, as set forth.

2. A band for vehicle-hubs formed of a flat piece of sheet metal wrapped around the hub in several convolutions, each of which is rigidly secured to the contiguous convolution next within it, whereby uncoiling of any of the convolutions is prevented, substantially as described.

3. The combination, with the hub A, provided with the groove B, and the band C, formed of flat sheet metal and having the perforations punched through the convolutions, of the soft metal E, arranged to fill the perforations *d*, for locking the convolutions of the band together, and to fill the groove B for finish, substantially as set forth.

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

GEORGE W. MILLER.

Witnesses:

HENRY FISHER,

JACOB P. FAWCETT.