J. IVES.

Hub Fastener.

No. 111,547. Patented Feb. 7, 1871.

Fig. 1

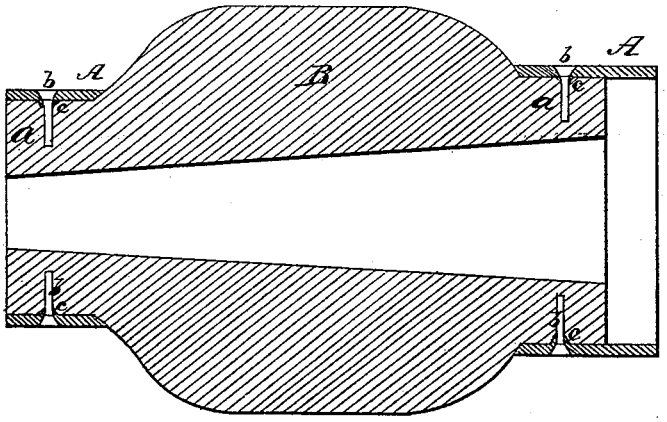


Fig. 2

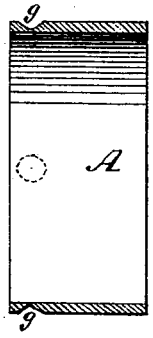
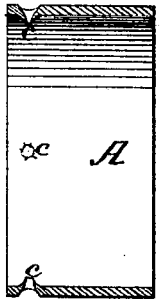


Fig. 3



Witnesses.
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JAMES IVES, OF MOUNT CARMEL, CONNECTICUT.

Letters Patent No. 111,547, dated February 7, 1871.

IMPROVEMENT IN THE MODES OF FASTENING HUB-BANDS, &c.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES IVES, of Mount Carmel, in the county of New Haven and State of Connecticut, have invented a new and improved mode of Securing Bands to Hubs and other objects; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a diametrical section through a hub, showing my improved mode of securing bands to it.

Figure 2 is a diametrical section through a band which is countersunk partly through, ready for use.

Figure 3 is a similar view of the band after it has been punched through, as it appears in fig. 1.

Similar letters of reference indicate corresponding parts in the three figures.

The object of my invention is to secure thick metal bands on the ends of hubs and other objects in a more substantial manner than hitherto, and in such manner that portions of the bands themselves are made to serve as fastenings in combination with the nails or pins used as additional security.

The following description will enable others skilled in the art to carry it into effect.

In the annexed drawing—

A A represent metal bands, which are of suitable thickness to serve as bands for the ends *a a* of carriage-hubs B. These bands may be of either cast or wrought metal.

Before applying the bands I countersink, at suitable points, a number of concave depressions, *g g*, as shown by fig. 2. These depressions leave the metal very thin at the points where it is desired to drive the nails *b*, shown in fig. 1, so that after the bands thus prepared are adjusted on a hub they can be pierced through and the nails driven into their places.

In the act of forcing a hole through the bands at the depressions *g*, the displaced metal is carried down into the wood so as to leave burrs, *c c*, which will be of greater or lesser length and strength according to the thickness of the metal and size of the hole pierced. After this has been done the nails *b* may be driven through the holes into the wood, the heads of which nails will fill the holes through the bands and leave a neat finish. The nails will also prevent the burrs *c* from retracting, while the burrs will in a great measure prevent liability of the nails working loose.

I do not confine my invention to hub-bands alone, as it is equally applicable and useful to the fastening of various metal parts to the wood parts of carriages and other things.

I am aware that ferrules are fastened upon tool-handles by indenting the metal into the wood, the metal being so thin that no preparation by drilling is needed. But an important part of my improvement consists in the concave depression which fits the metal otherwise too thick for piercing or indenting.

The depression can be pierced by drilling, forging, or casting, according to shape of metal put in use.

Having described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The mode of securing hub-bands and other metal articles by means of blank countersinking, as described, so that the remaining thin portion of metal, when punched through, will form holding-burrs, substantially as and for the purpose described.

2. The mode of fastening in place the hub-band or other metal article by means of a nail and burr combined, the burr being formed from the remaining thin portion of metal, substantially as and for the purpose set forth.

JAMES IVES.

Witnesses:

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