

J. HITCHCOCK.
Sand-Band for Vehicle-Wheels.

No. 212,224.

Patented Feb. 11, 1879.

Fig. 1.

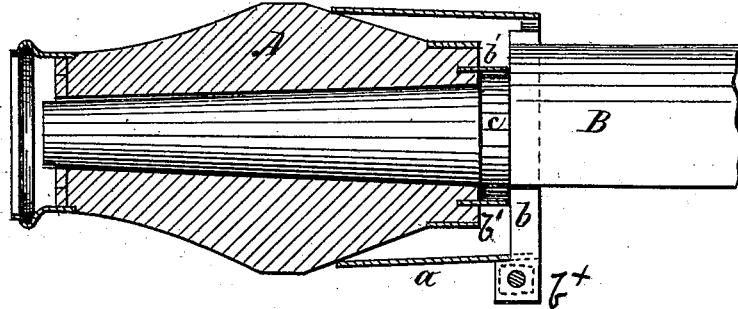


Fig. 2.

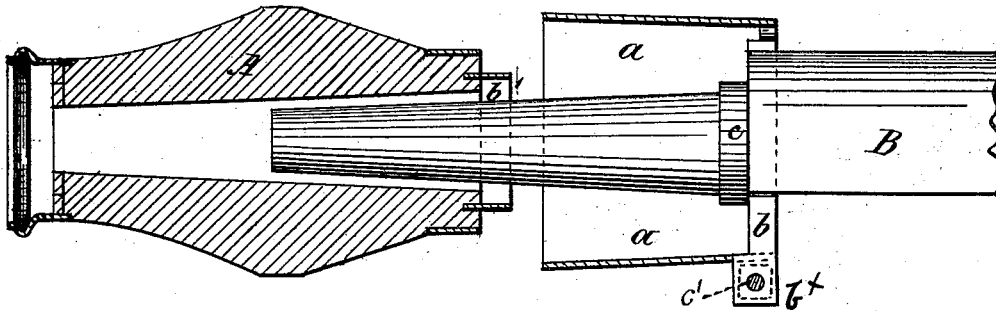


Fig. 3.

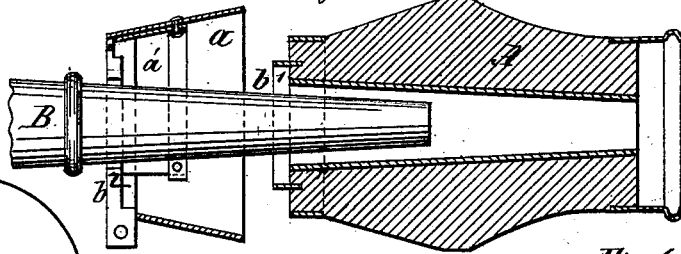


Fig. 4.

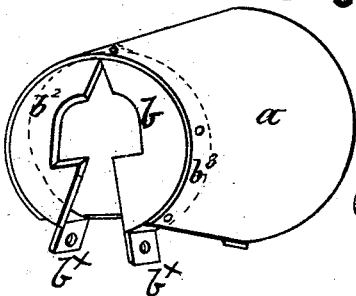


Fig. 7.

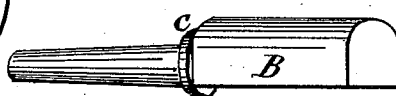


Fig. 6.

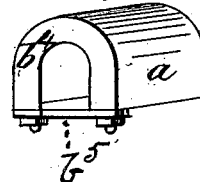
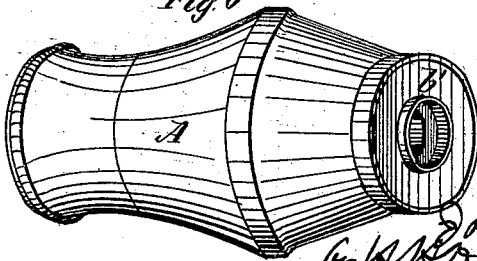


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

JONATHAN HITCHCOCK, OF ST. PAUL, MINNESOTA.

IMPROVEMENT IN SAND-BANDS FOR VEHICLE-WHEELS.

Specification forming part of Letters Patent No. **212,224**, dated February 11, 1879; application filed March 2, 1878.

To all whom it may concern:

Be it known that I, JONATHAN HITCHCOCK, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain Improvements in Attaching Sand Bands or Caps to Axles and Hubs of Vehicles, of which the following is a specification:

Figure 1 is a vertical longitudinal section of the end of a wagon-axle, a hub, and a skein having my improvement applied thereto. Fig. 2 is a similar view having the hub part way removed. Fig. 3 shows the same invention with an additional feature added. Fig. 4 is a detached view of the clip and cap. Fig. 5 is a detached view of the hub, and Figs. 6 and 7 represent a modified form of the invention.

In the drawings, A is a wagon-hub, of substantially the usual construction, provided upon its inner end with a projecting flange, b^1 , as is customary. B is an axle, which may be of any approved kind, provided, preferably, with a ring or shoulder, c , which is usually shrunk on when the axle is of iron, and which is generally cast upon the skein when the axle is made of wood.

a is a cap or hood, formed of some flexible or yielding material, such as metal, leather, or rubber, of such size as to inclose and fit closely to the inner end of the hub A. (See Figs. 1, 2, 3.) This cap is supported upon the axle as follows: b b^2 represent two parts of a flanged head, provided upon one side with a rim or flange, (see dotted lines b^3 , Fig. 4,) to which rim the inner end of the hood is secured by rivets or otherwise. This head is provided with a central opening, corresponding substantially in form and size to the form and size of axle B in cross-section taken just inside of the collar c . Each part b b^2 of the head is further provided with a projecting ear or lug, b^x , having a bolt-hole in it to receive a screw-bolt, c' .

The opening in the center of the plates b b^2 should be a little smaller in its horizontal diameter than the axle for which it is intended, in order that by tightening the screw-bolt the device may be firmly secured to the axle, as will be readily understood without further description.

In Fig. 6 I have shown a modified form of my invention, in which the U-shaped portion

b^4 of the clip is so formed as to straddle the axle, to which it is secured by means of a keeper portion, b^5 , and nuts which engage with screw-threads formed on the projecting ends of the U-shaped portion b^4 . This latter part b^4 is provided with a flange similar to that indicated at b^3 to support the hood a .

As a further precaution against sand getting between the hub and axle, a wiper, a' , of some flexible material is hung from the under side of the hood a , in such manner as to rest against the band or flange b^1 , so that as the wheel revolves the wiper will remove sand from said flange, should any get upon it, (the flange.)

It will be seen that when the lower ends of the parts b b^2 are spread apart to release the device from the axle, the upper ends of said parts are held in close contact by means of the flexible cap a , which is thus made to serve as a sort of hinge; and it will be seen that in both constructions the clip embraces the top and two sides of the axle, and is sufficiently open upon the remaining side to straddle the axle, so that the device may be applied to an axle or removed therefrom while the wheel is in running position on the axle, and that after the clip has been placed in position the remaining side of the axle is inclosed, and the axle gripped, clasped, or clamped upon two opposite sides by the clip without the screw or screw-bolt coming in contact with the axle.

It will be seen that my method of securing the hood in position on the axle by means of the flanged head b b^2 , which entirely encircles the axle, and is divided centrally and vertically, possesses a decided advantage in operation over a clip or device which consists of two segments, each representing an arc of ninety degrees, in combination with two flexible straps depending from the lower ends of the segments, and secured to each other under the axle by means of a screw-bolt.

It is evident that this latter construction, while it will probably operate satisfactorily upon an axle which is substantially round in cross-section, is not adapted for use upon an axle which is square in cross-section, (as nearly or quite all iron axles are now made,) from the fact that the flexible straps cannot be made to conform to the square lower portion of the

axle and gripe it sufficiently to hold the device in place; whereas by making the head in two parts, divided from top to bottom, and of such size as to wholly surround the axle, and then forming recesses centrally in it of such shape as to conform closely to the shape of the axle in cross-section, the two halves of the head are made (by means of the bolt *c'*) to gripe or clamp upon the opposite vertical sides of the axle, and be made to closely fit thereto without regard to the special form of said axle. What I claim is—

1. In combination with the hood *a*, the supporting-head *b b²*, recessed to receive the axle, and the clamping-screw *c'*, operating to bind the two parts of the head upon the opposite sides of the axle, substantially as set forth.

2. In a sand-band for vehicle-wheels, the combination, with the hood *a*, of the brush or wiper *a'*, substantially as set forth.

JONATHAN HITCHCOCK.

Witnesses:

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