A. VAN GEEL.

VEHICLE HUB.

No. 176,903. Patented May 2, 1876.

Fig: 1.

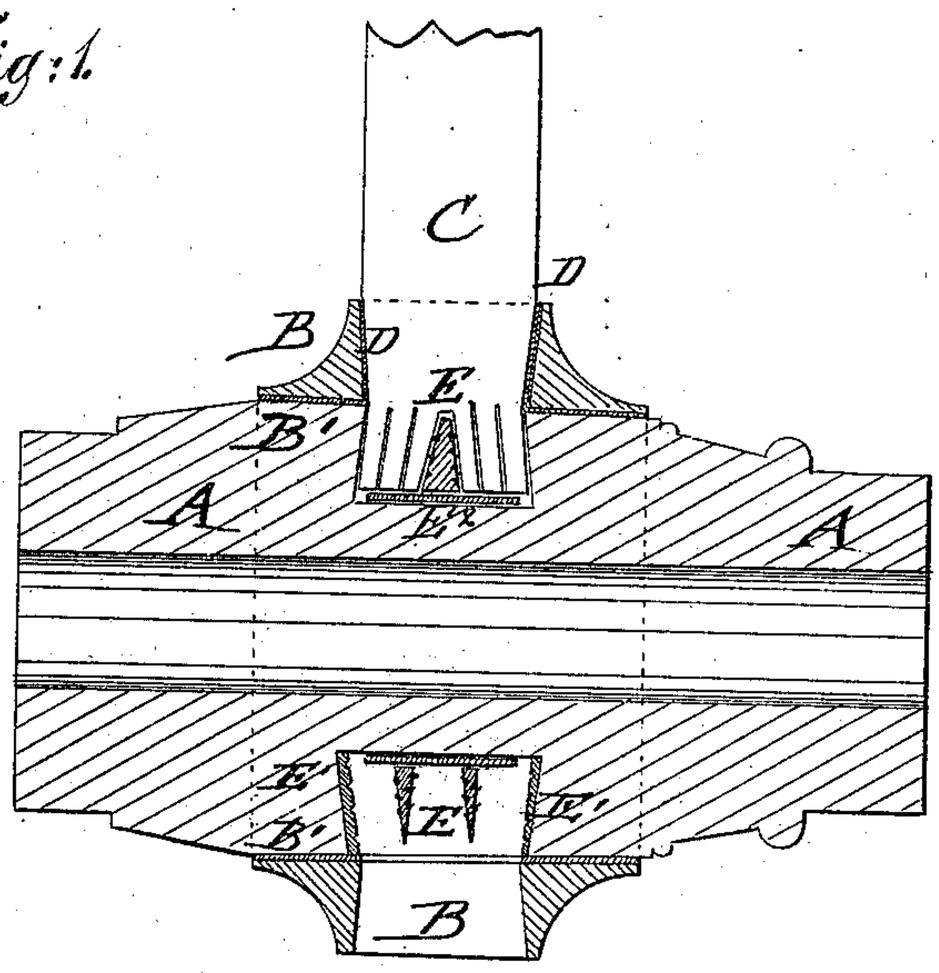
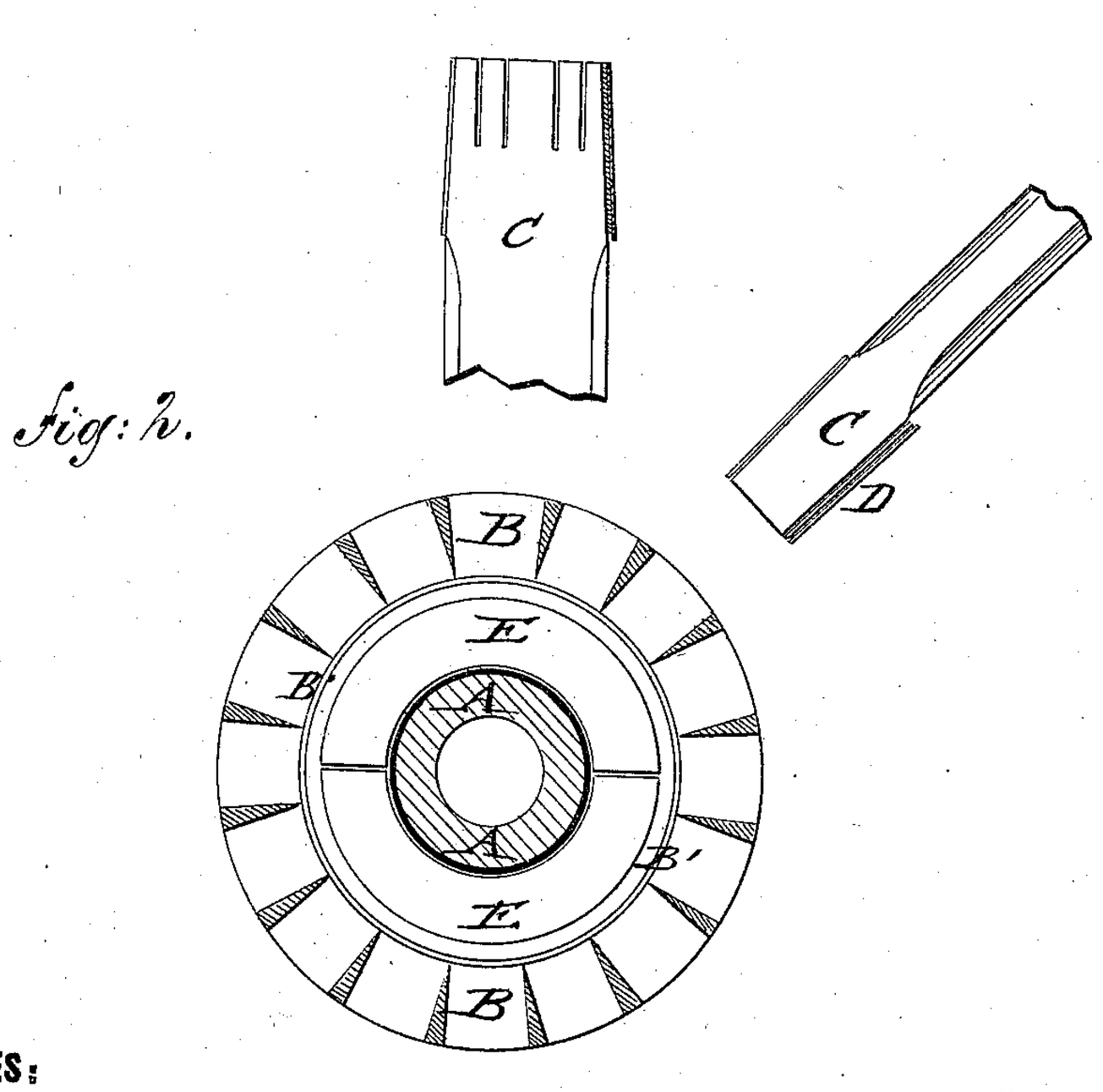


Fig: 2.



WITNESSES:

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ANTONIUS VAN GEEL, OF RAHWAY, NEW JERSEY.

IMPROVEMENT IN VEHICLE-HUBS.

Specification forming part of Letters Patent No. **176,903**, dated May 2, 1876; application filed March 21, 1876.

To all whom it may concern:

Be it known that I, ANTONIUS VAN GEEL, of Rahway, in the county of Union and State of New Jersey, have invented a new and Improved Hub, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical central section of my improved hub, and Fig. 2 a vertical transverse section of the same.

Similar letters of reference indicate corresponding parts.

My invention relates to such improvements in wheel-hubs that the spokes are perfectly, yet elastically, socketed; and the invention consists in the tight seating of the socket-ring on the hub and the spokes in the socket-ring.

In the drawing, A represents a hub of the usual construction, on which the ring-shaped socket-band B is driven, in the usual manner. To secure the tight sea ing of the socket-ring on the hub, a sheet-metal sleeve, B′, is interposed intermediately between the rear part of the hub and the hind section of the socket-ring B. The intermediate sleeve prevents the cutting of the wood of the hub, and serves to compress the fibers of the same, which secures the socket-band more firmly by the tendency of the fibers to expand, producing thereby a most intimate joint at the point most exposed to strain. The spokes C are driven into the socket-holes or tenons of the band or ring B, and compressed in analogous manner to the hub by the wedge action of the same, in connection with thin pieces, D, of sheet metal, and interposed layers of leather or rubber, as shown in the drawing. This produces not only the solid tenoning of the spokes, but imparts also a certain degree of elasticity, which is a point of considerable importance in wheels. The spoke ends are slitted by means of a saw, and driven into the socket-ring. The hub-recess, below the socket-ring B, is provided either with one or more wedge-shaped metal rings, E, that are either sprung on the hub or made of two or more sections that are jointed in suitable manner. The wedge-ring E is notched or rasp-cut at the sides, to produce the biting of the cut surface on the ends of the spokes. The sides of the spoke-recess may also be provided with notched rings E^1, that bite on the outer sides of the spoke ends.

The wedge-rings may be seated on a base-band, E^2, to prevent their being driven into the wood, or they may be cast in one piece with the same, as found most convenient.

When the spokes are driven into the socket-ring, the wedge ring or rings spread the spoke ends, and produce the rigid socketing of the same, the spokes being firmly held against side motion by the metallic binding pieces or strips. The slits in the spoke ends admit the ready spreading of the same, and their elastic or cushioned seating in the hub. The tenoning of the spokes and the seating of the socket-ring on the hub is thus made in a stronger, more durable and reliable manner than with the common hubs.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the spoke ends and socket-ring, of sheet-metal pieces and layers of elastic material, to firmly yet elastically retain spoke ends, substantially as set forth.

2. The combination, with the slitted spoke ends and the hub having annular spoke-recess, of one or more notched central and side wedge-rings, substantially as and for the purpose described.

ANTONIUS VAN GEEL.

Witnesses:
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