

(No Model.)

J. VAN CUREN.
SAND BAND.

No. 432,217.

Patented July 15, 1890.

Fig. 1.

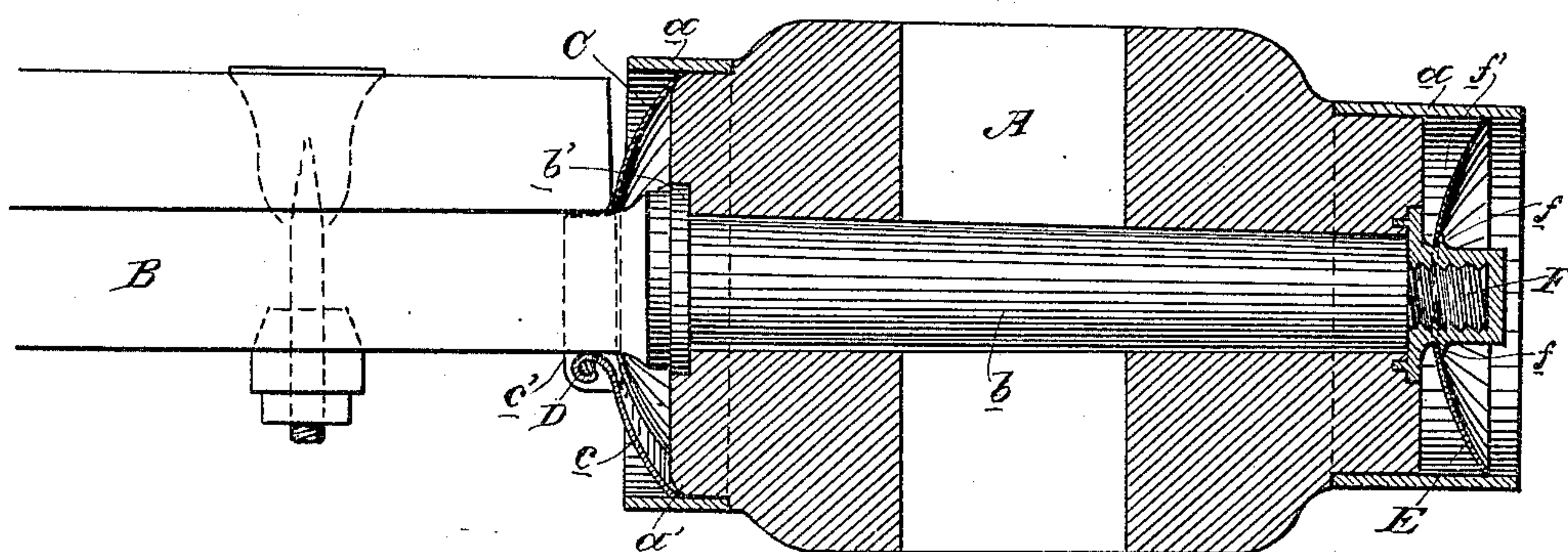


Fig. 2.

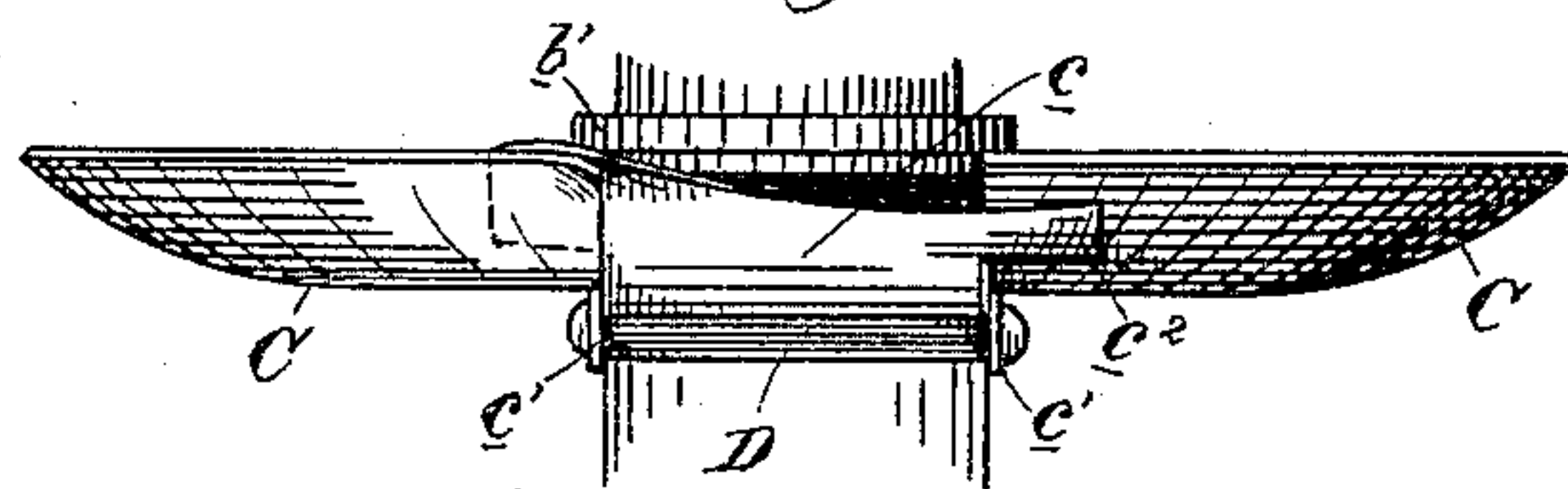
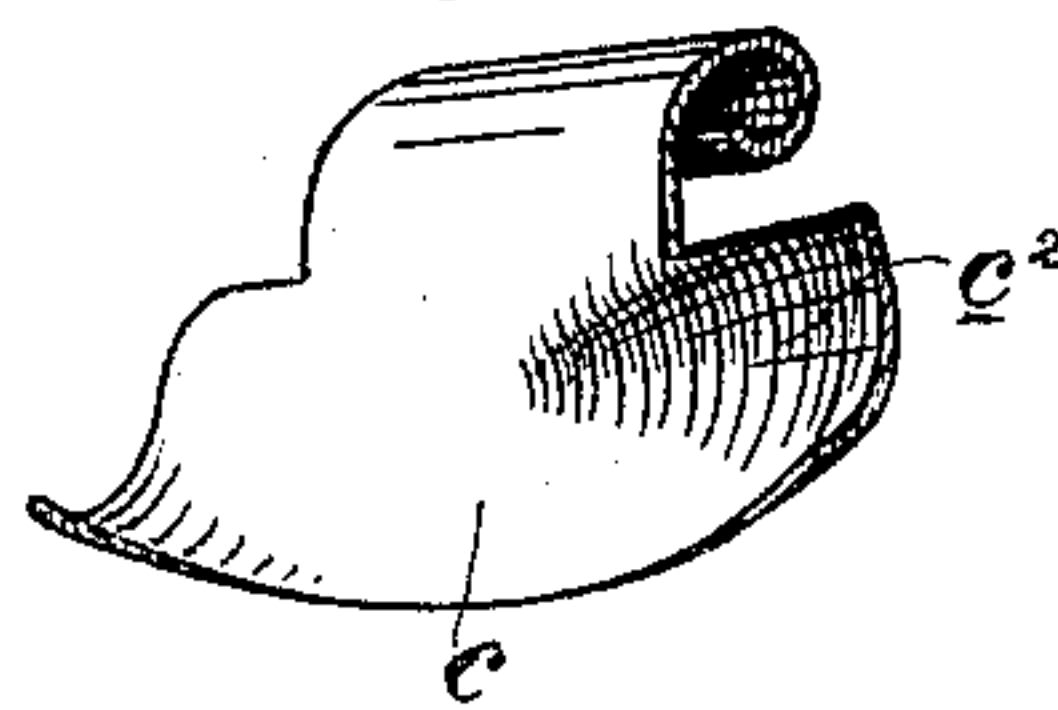


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES VAN CUREN, OF FERNDALE, CALIFORNIA.

SAND-BAND.

SPECIFICATION forming part of Letters Patent No. 432,217, dated July 15, 1890.

Application filed March 28, 1890. Serial No. 345,750. (No model.)

To all whom it may concern:

Be it known that I, JAMES VAN CUREN, a citizen of the United States, residing at Ferndale, Humboldt county, State of California, have invented an Improvement in Protecting-Caps for Wheel-Hubs and Axle-Spindles; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of devices which are applied to the ends of the wheel-hub in order to protect the bearing or journal from the entrance of dust, sand, mud, &c.

My invention consists in the novel plates or caps, their connections and arrangement, as I shall hereinafter fully describe, and specifically point out in the claims.

The object of my invention is to provide a simple, effective, and practical protector of this class—one which is adapted to be readily applied to and used in connection with any-sized hub.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a longitudinal section of a hub, showing my caps in vertical section. Fig. 2 is a view showing the two sections of the inner cap. Fig. 3 is a view of the smaller section.

A is the wheel-hub, having at each end the usual bands *a*.

B is the axle, of which *b* is the spindle on which the hub is mounted. Upon the axle, just behind the collar *b'*, which forms the base of the spindle, is fitted and secured the inner protecting plate or cap C. This is made of metal, and is formed into a concavo-convex shape. In order to secure it properly and easily in place, it is made in two parts or sections, the larger part extending throughout nearly a complete circle, leaving a radial opening, however, for the insertion of the smaller part or section *c*, which is preferably made T-shaped, so that its ends will overlap the ends of the main piece, one passing under and one above. The main piece or section has flanges *c'*, which extend backwardly along the axle a short distance, and through the lower portions of these flanges passes a securing-bolt D, around which the stem of the smaller section *c* is turned. This bolt not only serves to hold the entire plate or cap to its place on the axle, but also serves as the fastening for

the secondary or smaller section *c*, which completes the plate. The plate, as a whole, has a diameter a very little smaller than that of the inside ring *a* of the hub, and is adapted to fit snugly within said ring, though without touching it, so that the hub plays freely. The inner end of the wood of the hub may be slightly beveled out, as shown at *a'*, to receive the inturned flange or rim of the protecting plate or cap, thereby serving the more perfectly to prevent the entrance of any extraneous substances. The outer end of section *c* is concaved or curved laterally, as shown at *c²*, which forms a passage for the escape of waste oil, grease, &c. Its inner end is also slightly curved to fit the inner end of the hub better. The outer plate or cap E has also a concavo-convex shape, and is firmly soldered or otherwise secured on the wrench-hold portion of the nut F. This plate has a diameter a little smaller than the outer band *a* of the hub, and is adapted to fit snugly in it, though without touching it. The convex side is turned inwardly, so that said plate forms a cup and the better excludes extraneous substances. I prefer to secure the cap E by means of small spurs *f* cut on the corners of the wrench-hold portion of the nut. On account of the beveled or oval shape of the base of the wrench-hold portion, a space *f'* is left between the inner surface of the cap and the flange of the nut to permit the escape of sand, dirt, and other substances.

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

1. A protector for vehicle-wheel hubs and axle-spindles, consisting of plates or caps, one fitted upon the axle at the inner end of the spindle and the other secured to the nut on the outer end of the spindle, said plates having a diameter sufficiently large to fit snugly within, but without touching the bands of the hub, substantially as herein described.

2. A protector for vehicle-wheel hubs and axle-spindles, consisting of the concavo-convex plates, one fitted upon the axle at the inner end of the spindle and the other secured to the nut on the outer end of the spindle, said plates fitting closely in but without touching the bands of the hub, substantially as herein described.

3. A protecting plate or cap for vehicle-wheel hubs and axle-spindles, consisting of the sectional plate C, comprising a main section with a radial opening, and a T-shaped smaller section fitting in the opening of the main section and overlapping it and provided with a depression to form an escape-passage for the oil, substantially as herein described.

4. A protecting plate or cap for vehicle-wheel hubs and axle-spindles, consisting of the sectional plate C, comprising a main section having a radial opening and flanges, a smaller T-shaped section fitting in said opening and overlapping its edges, and the bolt passing through the main section-flanges and receiving the bent inner end of the smaller section, substantially as herein described.

5. A protecting plate or cap for vehicle-wheel hubs and axle-spindles, comprising the sectional plate C, formed of a main section with a radial opening, and a T-shaped smaller section fitting in the opening of the main section and overlapping it, the inner end of said smaller section fitting the inner end of the hub and its outer end projecting and concaved laterally to form an escape-passage for oil, &c., substantially as herein described.

6. The nut for the outer end of the axle-spindle, having secured to it the plate E, fitting within the outer end of the hub and forming a protecting-cap therefor, substantially as herein described.

7. The nut for the outer end of the axle-spindle, having spurs cut on the corners of its wrench-hold portion, and the plate E secured on said portion by said spurs and separated from its base to form an escape-space for sand, dirt, &c., substantially as herein described.

8. In combination with the axle having the spindle and the wheel-hub journaled on said spindle, the inner end of said hub having a beveled rim and a surrounding band, the concavo-convex protecting plate or cap secured upon the axle and fitting within the hub-band, its rim projecting into the beveled rim of said hub, but without touching the band of the hub, substantially as herein described.

In witness whereof I have hereunto set my hand.

JAMES VAN CUREN.

Witnesses:

L. H. MINER,

JAMES ROGERS.