

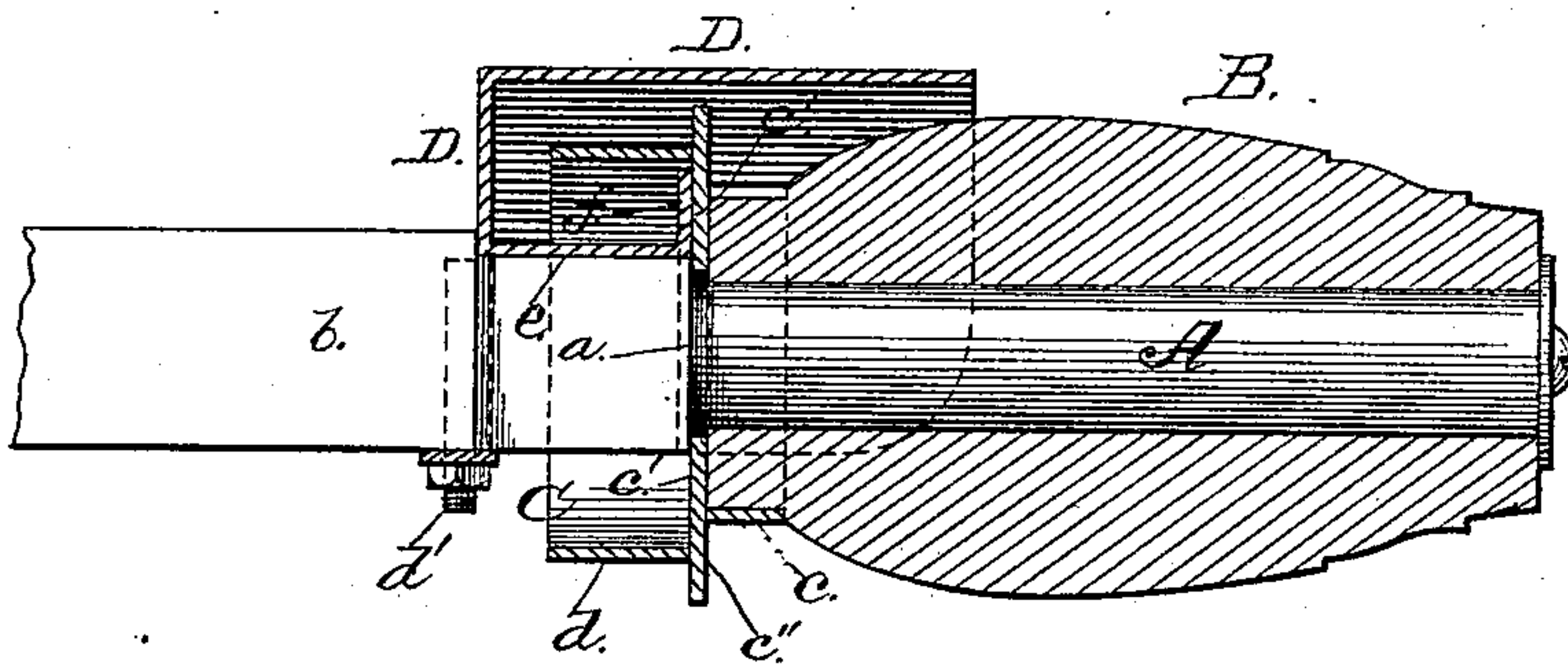
(No Model.)

G. E. PURPLE.  
Sand-Band.

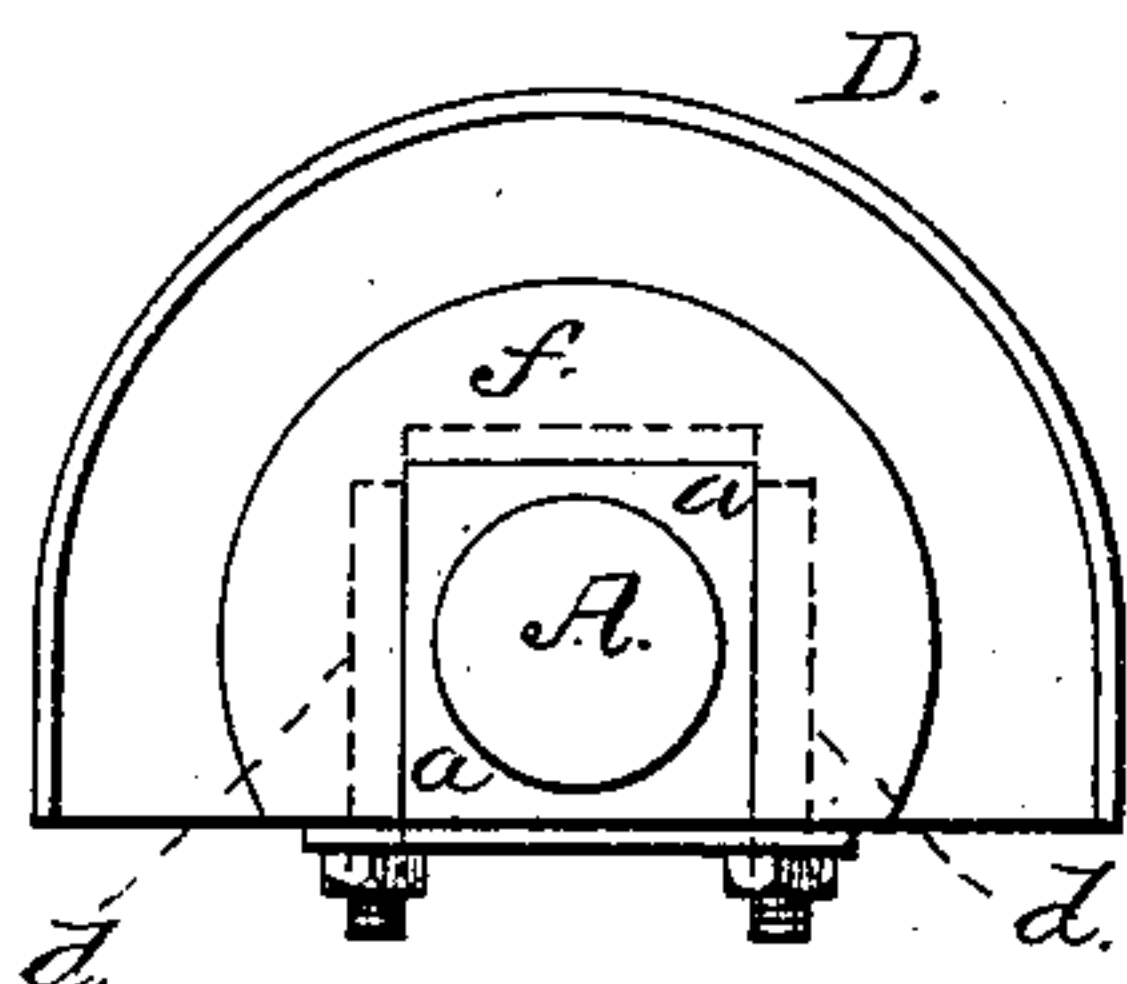
No. 226,787.

Patented April 20, 1880.

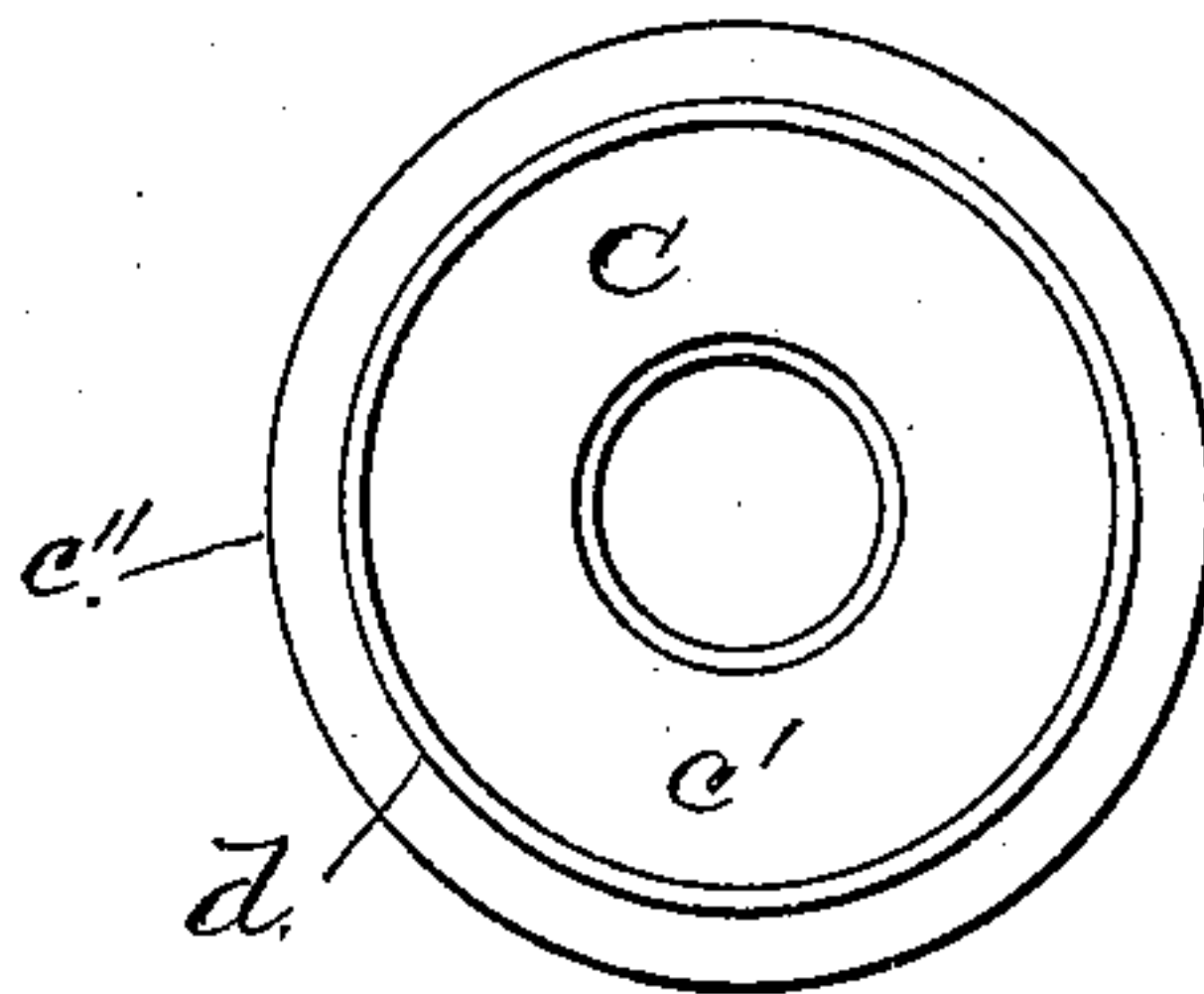
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

*John A. Ellis,*  
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INVENTOR:

*George E. Purple.*  
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# UNITED STATES PATENT OFFICE.

GEORGE E. PURPLE, OF HOWARD CITY, MICHIGAN.

## SAND-BAND.

SPECIFICATION forming part of Letters Patent No. 226,787, dated April 20, 1880.

Application filed March 10, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE E. PURPLE, of Howard City, in the county of Montcalm and State of Michigan, have invented a new and valuable Improvement in Sand-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal section of my improved sand-box applied to a hub. Fig. 2 is a front view of the hood, showing its interior construction; and Fig. 3 is a like view of the hub end.

This invention has relation to improvements in sand-boxes for vehicle-wheels; and it consists in certain novel arrangement and construction of the parts of the box, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates the axle-arm, having a shoulder, *a*, at its union with the squared body *b* of the axle; and B is the wheel-hub, constructed in the usual way and passed on and secured to the arm in any suitable way.

The hub is provided with a band, *c*, at its inner end, having a bearing, *c'*, and a flange, *c''*, at right angles to the length of the hub, the bearing resting against the end thereof and the flange projecting out beyond the perimeter of the hub, as shown in Fig. 1.

Exterior to the bearing and concentric with the band *c* is a projecting annular flange, *d*, that forms a chamber, C, around the squared part *b* of the axle.

The band *c*, with its bearing *c'* and flanges *c''* *d*, may, if desired, be made in one piece of malleable cast-iron, brass, or other metal.

D indicates a metallic hood on the axle and covering rather more than half of the inner end of the hub, and of sufficient interior width to receive the flange *c''* of band *c*. This hood projects over the hub somewhat beyond the hub-band *c*, and is open below, and is attached

to the axle by means of a clip, *d'*. It is provided with an inwardly-projecting U-shaped sleeve, *e*, fitting snugly on the axle at that part adjoining the shoulder *a* and terminating thereat, which sleeve is provided at its free end with a flange, *f*, of a size to be received in chamber C, and working against the bearing *c'*. The curvature of this flange is concentric with that of the hood.

The hood, with its sleeve, flange, and clip, may be cast, if desired, in one piece, and serves to prevent the direct access of mud or sand or of other foreign matter to the axle-arm.

The flange *c''* prevents semi-liquid mud running down under the hub, and causes it to drop from the open bottom of the hood.

The function of the flange *c''* is important in that it prevents mud from accumulating under the hood or getting in any quantity under it, and in that it forms, with the hood, the flange *f*, and the sleeve *e*, a labyrinth which effectually excludes dry dust. Should dust accidentally be blown into the passage thus formed, the flange *f* shuts it off from the bearing *c'* and axle-box, and at the next revolution of the wheel discharges it out of the hood through its open bottom.

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

In a sand-guard for vehicle-wheels, the hub-band *c*, having the flange *c''* at right angles to the length of the hub, and the annular flange *d*, concentric with band *c*, in combination with the hood D, covering the upper part of the hub and open at bottom, the sleeve *e*, fitting on the axle projecting from the hood and provided with the flange *f*, working against the bearing *c'*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE E. PURPLE.

Witnesses:

NORMAN W. MATHER,  
JOSEPH T. JONES.