

(No Model.)

W. M. FARR.

SAND BAND.

No. 282,066.

Patented July 31, 1883.

Fig. 1.

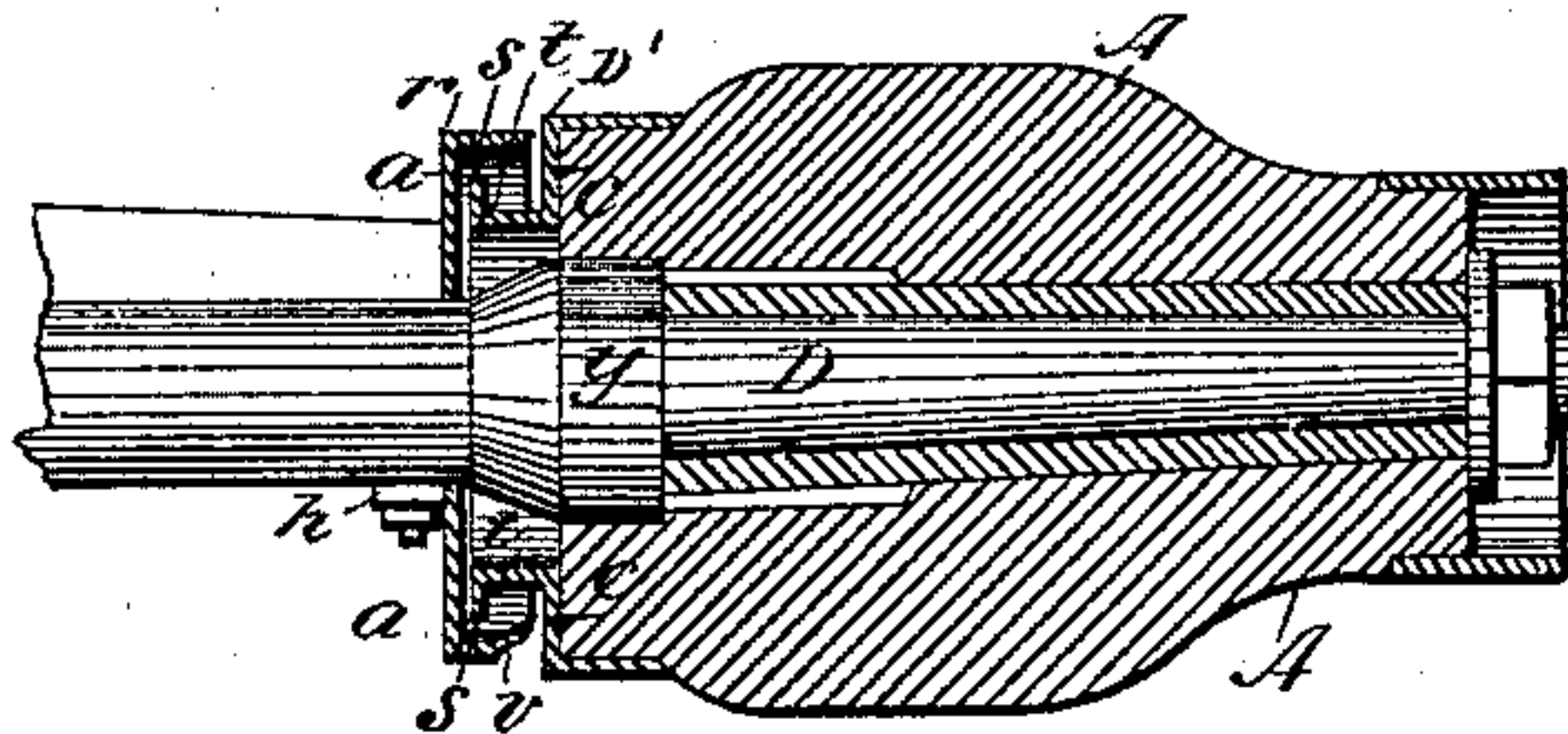


Fig. 2.

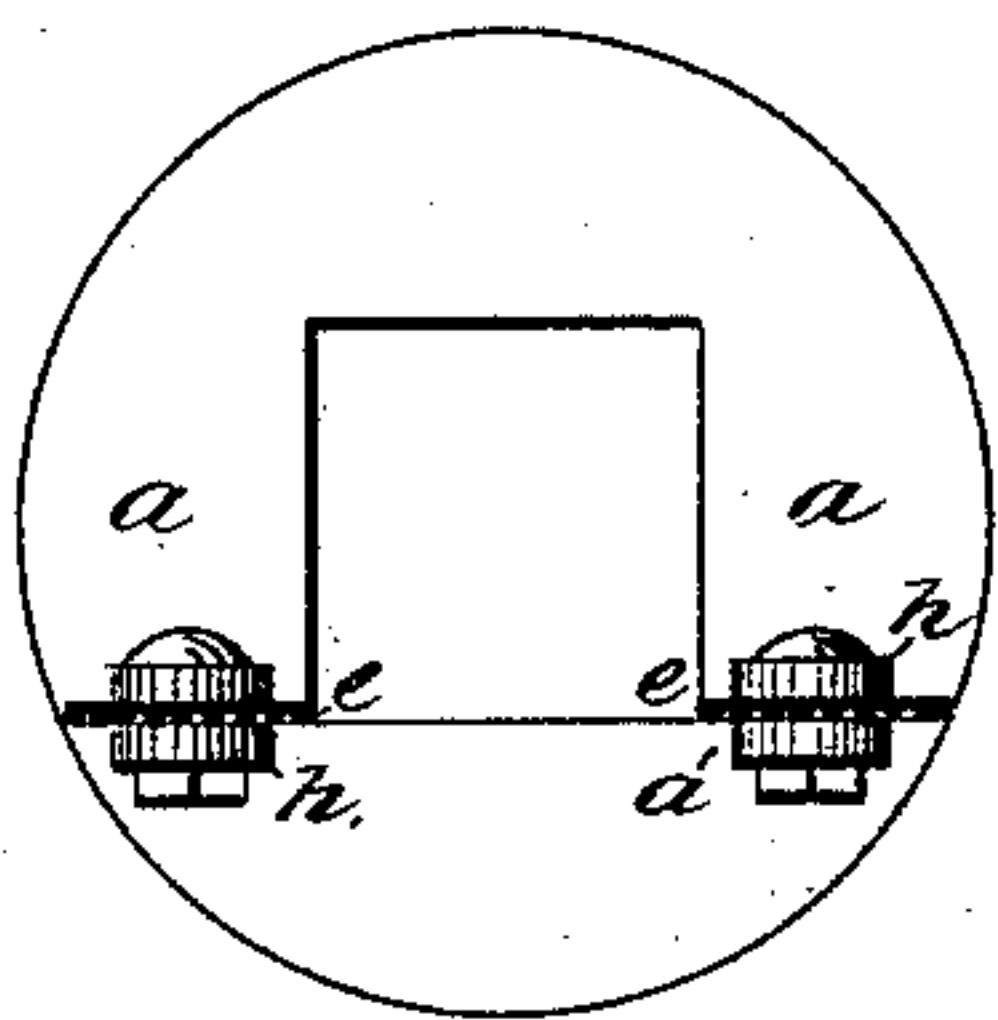


Fig. 3.

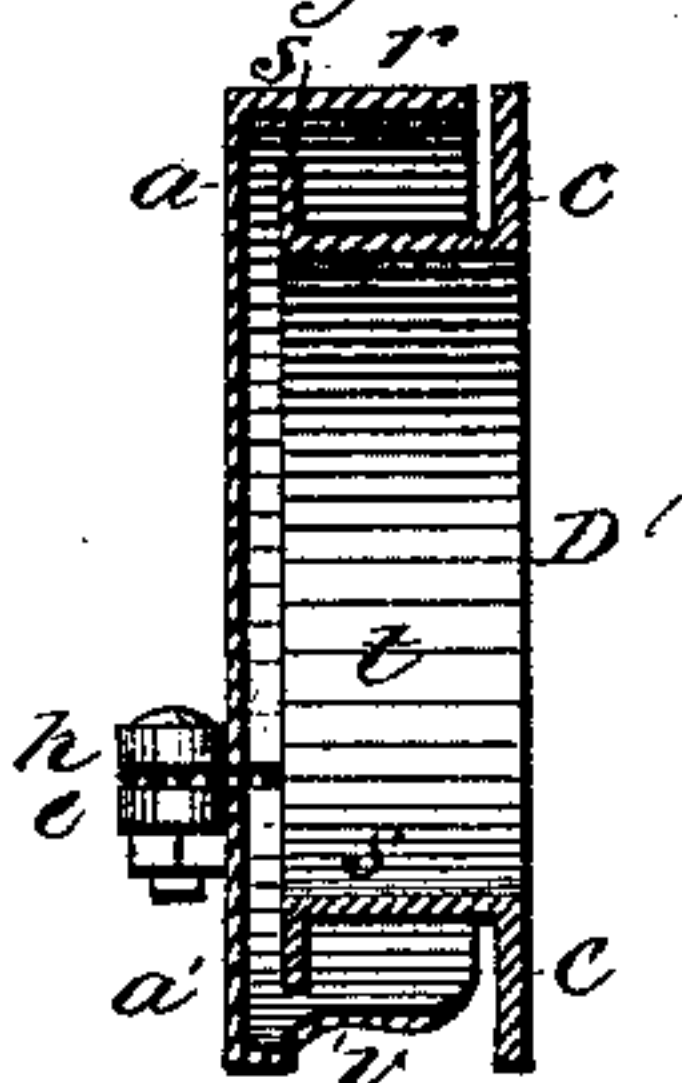


Fig. 4.

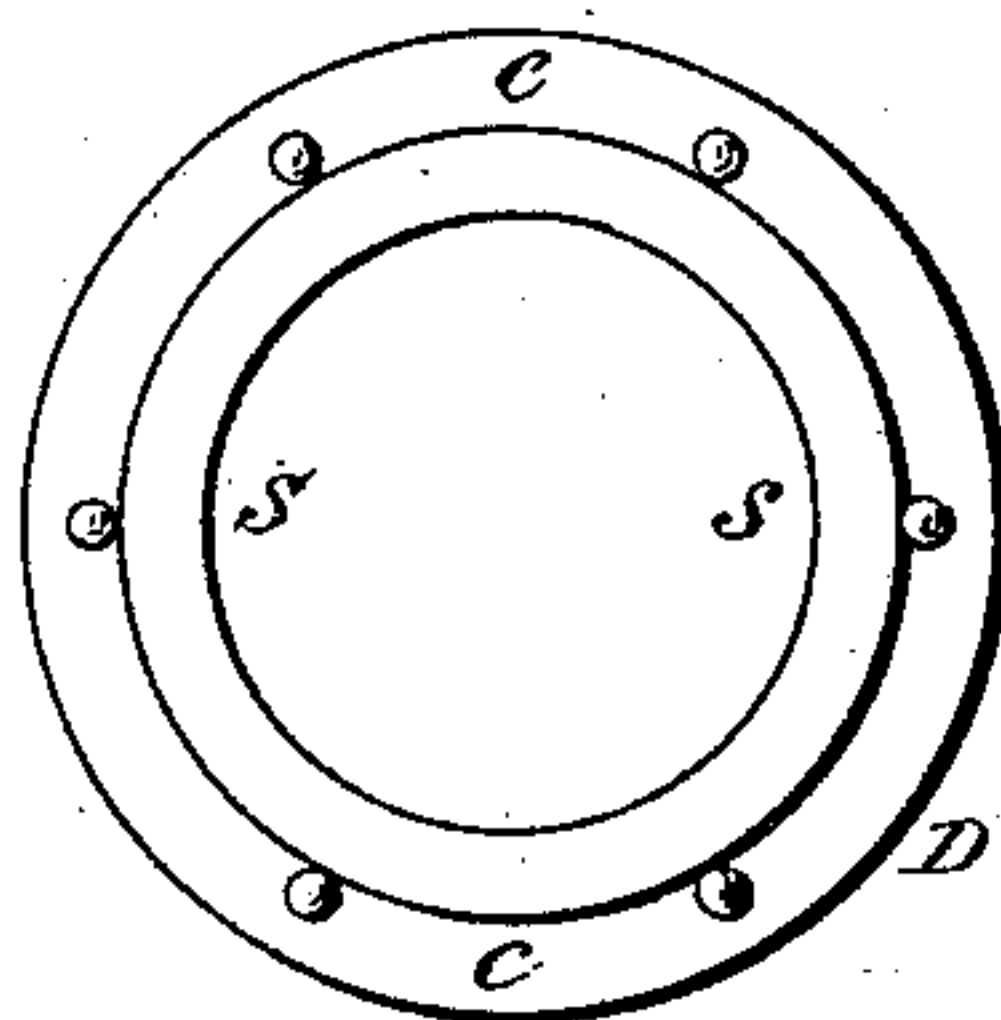


Fig. 5.

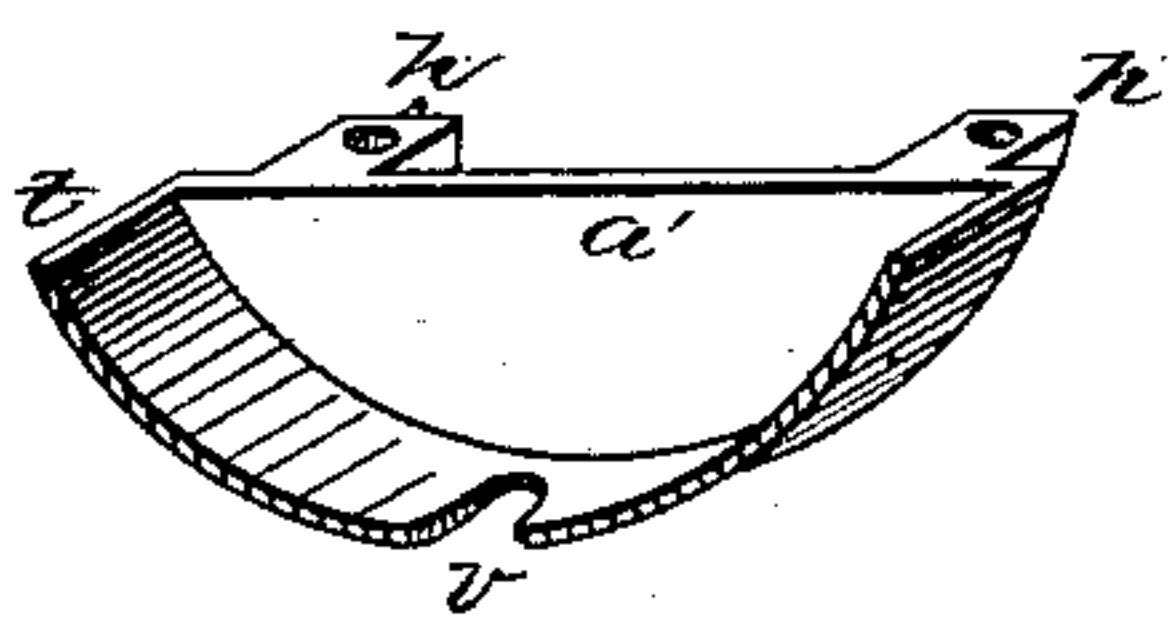
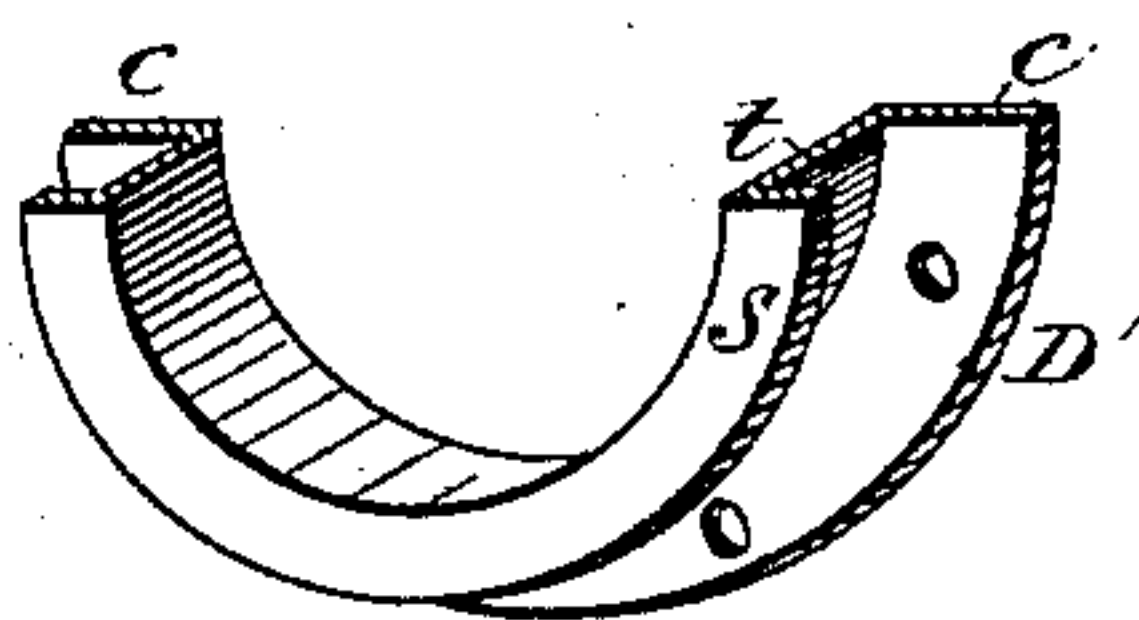


Fig. 6.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIS M. FARR, OF DOWAGIAC, MICHIGAN.

## SAND-BAND.

SPECIFICATION forming part of Letters Patent No. 282,066, dated July 31, 1883.

Application filed November 16, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIS M. FARR, of Dowagiac, in the county of Cass and State of Michigan, have invented a certain Improvement in Sand-Protectors for Vehicles, of which the following is a specification.

The object of my invention is to protect the wearing parts of hubs and axles from grit and dirty substances.

My improvement consists in the manner of attaching the parts together, consisting of the shell or cup, and in providing the under portion or supplemental part with an opening in the projecting flange, to allow sand, dust, and foul matter to readily drop out, and also in using a strip of flexible material between the joining parts of the shell, all of which will be hereinafter described.

I will describe its construction and operation with reference to the letters on drawings forming a part of this specification, in which—

Figure 1 is a longitudinal sectional view of the wheel-hub A, and cross-sectional view of the parts constituting my invention attached to the axle D. Fig. 2 is a back plan view of the shell *a a'*. Fig. 3 is a cross-sectional view of my invention detached from the axle. Fig. 4 is an inside plan view of the thimble *D'* detached from the wheel-hub A. Fig. 5 is a perspective view of the supplemental part *a'* of the shell, having an oblique opening, *v*, in the flange *r* of the same. Fig. 6 is a cross-sectional view of the spool shown in Fig. 4.

In my present invention I attach the parts of the shell *a a'* together by casting onto the perpendicular part of the shell, at right angle to the same, the ears *h h*, having holes through them, so that a common bolt or screw may be inserted to secure the parts together and to the axle. This arrangement of parts dispenses with the long pintles, as heretofore used on the part *a*, requiring a thread to be cut on them in order to secure them to the axle by a clip-tie and nuts. The cutting of the threads is quite expensive, and should the threads give out the part *a* of the shell cannot be used, whereas in the present arrangement any suitable bolt may be used.

The supplemental part *a'* has a flange, *r*, around its periphery, which meets a similar flange on the part *a* of the shell, thus forming

a cup. In the bottom of the flange *r* on the supplemental part is an oblique opening, *v*, which will be hereinafter described. Attached to the inner end of the hub is a spool, *D'*. (See Figs. 1, 4, and 5.) The spool is secured to the hub by means of nails or the like passing through the series of holes, as shown in the flange *c* of Fig. 4. Projecting from the flange, at right angle to the same, is a part, *r*, extending outward about half an inch, and is provided with a flange, *s*, being smaller in circumference than the flange *c*, and is parallel with it. The flanges form a recess around the spool for the following purpose:

The spool being attached to the hub, as shown in Fig. 1, the shell consisting of the parts *a a'* is attached to the square portion of the axle. The projecting rim *r* of the shell is sufficiently large to allow the inner portion of the spool, with its flange *s*, to pass within the shell, as shown in Figs. 1 and 3. Should any substance fall between the rim *r* and the flange *c*, it will fall upon the part *t* of the spool, and is prevented from working over the end of said part by the projecting flanges, as clearly shown in Figs. 1 and 3. The spool, being attached to the wheel-hub, turns around the axle with the hub, and all matter that falls upon the part *t* of the spool is carried down and falls upon the sloping sides of the flange *r* on the part *a'* of the shell and drops out of the oblique opening *v*. (Shown in Figs. 3 and 5.)

Between the joining faces of the parts *a a'* of the shell is a strip of leather, *e*; or any suitable flexible material may be used that will allow the parts *a a'* to grip the axle when bolted together, and close the space between the joining faces, to prevent dust and the like from passing between the parts and collecting upon the axle. The opening *v* is sufficiently long to allow all sand and dust carried in the channel *t* of the spool to readily work out of said opening in the periphery or flange *r* of the supplemental part *a'*. It is obvious this arrangement of parts makes a tight and complete protector for hubs and axles of vehicles.

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

1. In a sand-protector for vehicles, the combination of the sand-shell consisting of the

part *a*, having ears *h h* cast onto the perpendicular part, at right angle to the same, and the part *a'*, having corresponding ears and being provided with a concavo-convex flange, *r*, said flange having an oblique opening, *v*, at the bottom, the parts *a a'*, with intervening flexible strip *e*, secured together and to the axle by bolts, as specified.

2. In a sand-protector for vehicles, the combination of the part *a*, having horizontal ears *h h*, the part *a'*, having corresponding ears and

concavo-convex flange *r*, with an oblique opening, *v*, the flexible strip *e*, and spool *D'*, having the perpendicular flanges *c* and *s*, with intervening horizontal part *t*, with hub and axle, 15 when arranged and combined substantially as shown and described.

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Witnesses:

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