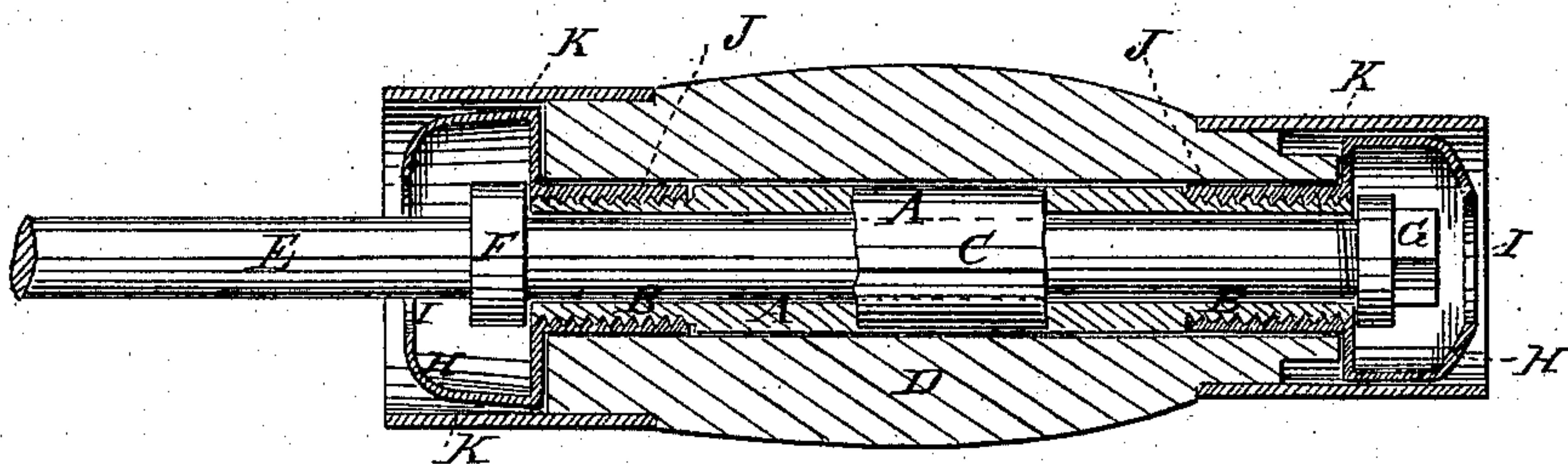


I. F. BURDICK.  
Vehicle Sand-Band.

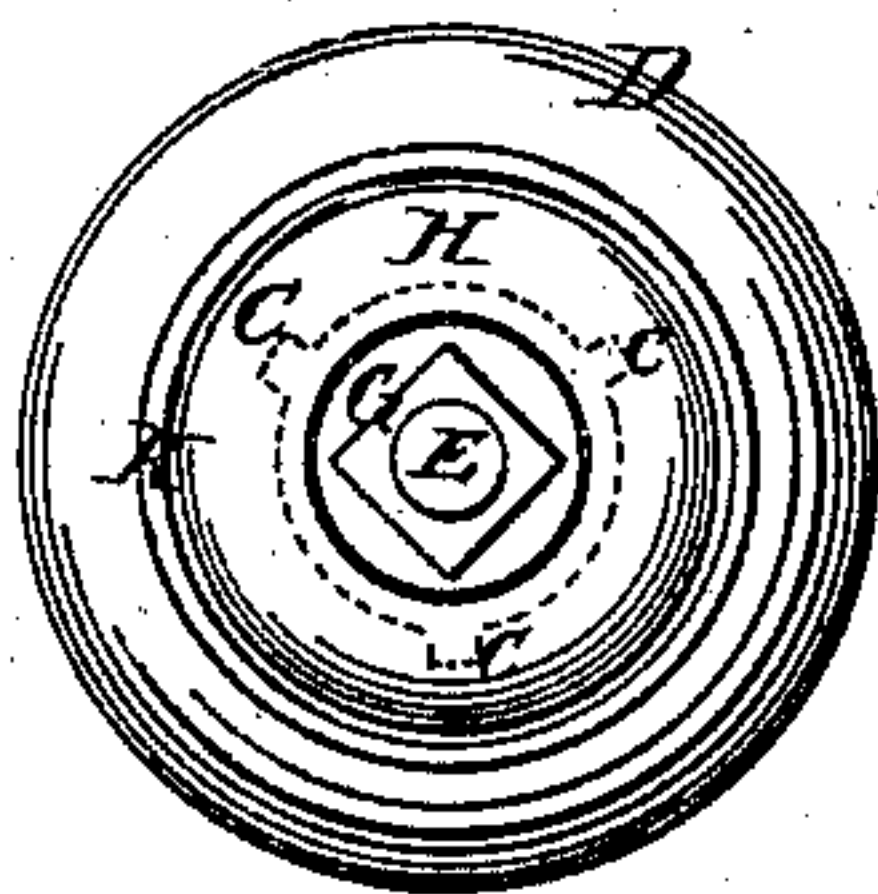
No. 224,641.

Patented Feb. 17, 1880.

*Fig: 1.*



*Fig: 2.*



WITNESSES:

*Chas. Nida.*  
*C. Sedgwick*

INVENTOR:

*I. F. Burdick*  
BY *Munn & Co*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

IRVING F. BURDICK, OF NORTH STONINGTON, CONNECTICUT.

## VEHICLE SAND-BAND.

SPECIFICATION forming part of Letters Patent No. 224,641, dated February 17, 1880.

Application filed December 18, 1879.

*To all whom it may concern:*

Be it known that I, IRVING FRANCIS BURDICK, of North Stonington, in the county of New London and State of Connecticut, have  
5 invented a new and useful Improvement in Axle-Boxes, of which the following is a specification.

The object of my invention is to provide an improvement in axle-boxes which will prevent  
10 the oil or grease from flowing out of the box, will prevent sand from entering the same, and will keep the hub and wheel neat and clean.

In the accompanying drawings, Figure 1 is a longitudinal sectional elevation of a hub and  
15 axle-box provided with my improvement. Fig. 2 is an end elevation of the same.

Similar letters of reference indicate corresponding parts.

The axle-box A, provided with the outside  
20 threads, B B, at the ends, and the feathers C C, is passed into the bore of the hub D of a wagon or carriage wheel. The feathers C C prevent the axle-box A from slipping in the hub.

25 An axle, E, threaded at the forward end and provided with a collar, F, passes into the axle-box A, and is secured by means of a screw-nut, G, which fits onto the forward end of the axle E.

30 A circular metal cup, H, provided with an aperture, I, of sufficient size to admit the axlenut G, and with a sleeve, J, threaded on the inner side, is screwed onto each end B B of the axle-box A, so that these sleeves J J rest  
35 between the hub D and the axle-box A, as is shown in Fig. 1. That side of the cup H that rests against the ends of the hub is flat, so as to fit up closely against these ends. To protect the cups H H from injury, the protecting-  
40 bands K K are passed over each end of the hub in such a manner that they rest in a slight recess in the hub and project beyond the cups H H.

The operation is as follows: The cups H H are screwed into the hub, and the protecting-  
45 bands are placed over the same before the wheel is placed onto the axle. The axle E is then greased, the wheel is placed onto the same, and the threaded end of the same will project into the outside cup H. The axlenut  
50 G is then placed into a socket-wrench, passed through the aperture I, and screwed to the end of the axle, and drawn up until the other end of the hub rests properly against the collar F. If any grease or oil flows out of the  
55 axle-box A, it will all collect in the cups H, and likewise all dirt or dust that is thrown at or splashed against the face of the hub will collect in these cups H.

The cups can be removed very readily and  
60 cleaned, and can collect very much grease and dirt. If my improvement is used, the grease or oil cannot flow down the hub and spokes of the wheel, whereby the paint or varnish of the same  
65 is soiled or destroyed. It cannot soil the clothes of passers-by or persons entering or leaving the vehicle, and sand and dirt cannot get into the axle-box.

The above-described improvement can be  
70 applied to any kind of hubs.

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

A circular cup forming a sand-band for a  
75 vehicle-wheel, having an opening at one end, whereby it can be slipped off the collar of the axle, and at the other end an internally-threaded flange engaging with the screw-threaded end of axle-box, as shown and described.

IRVING FRANCIS BURDICK.

Witnesses:

SOLOMON BARBER,  
FRANCIS BURDICK.