

(No Model.)

W. B. BEAGLE & W. C. CLARK.
AXLE BOX EXTENSION FOR VEHICLES.

No. 452,539.

Patented May 19, 1891.

Fig. 1.

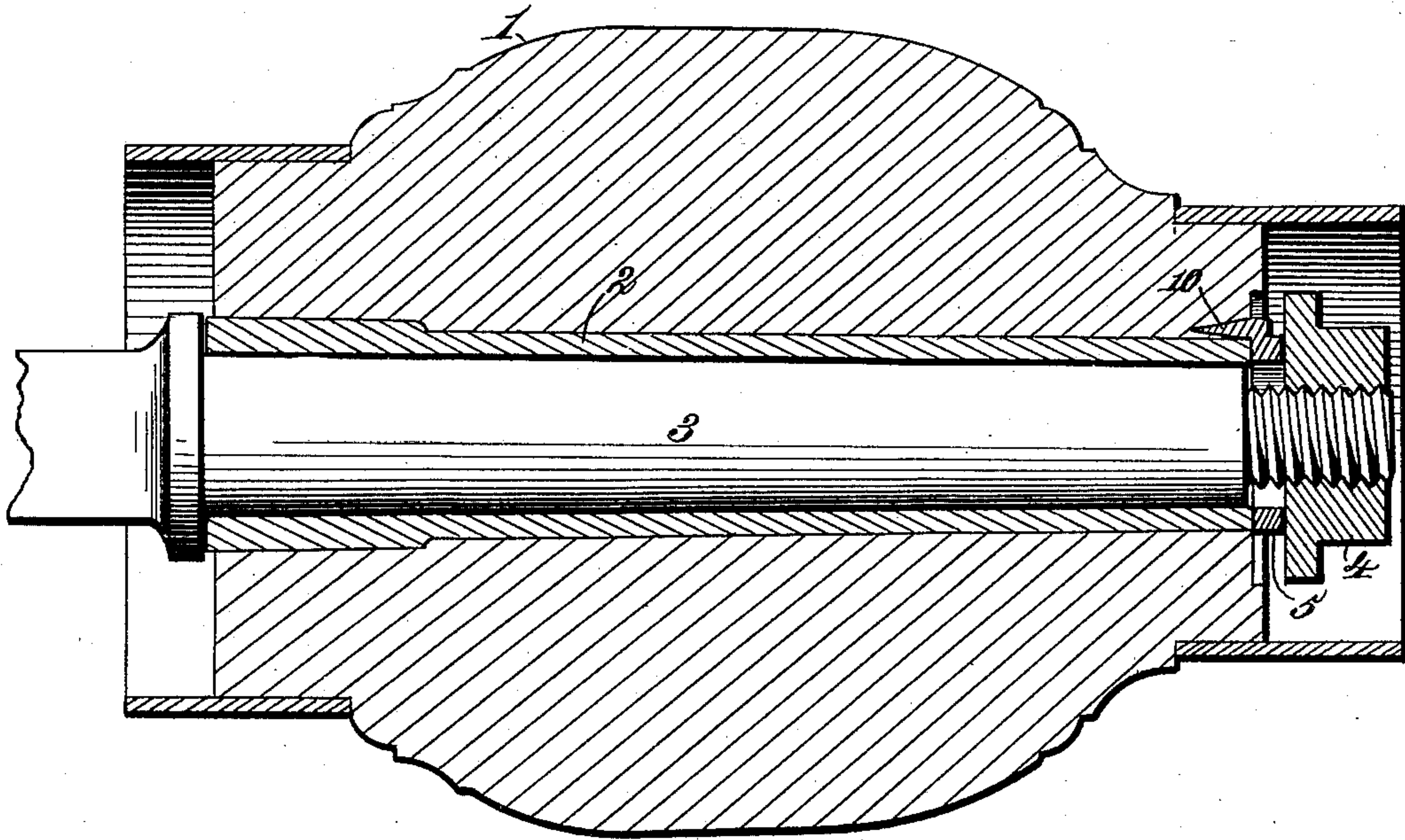


Fig. 2.

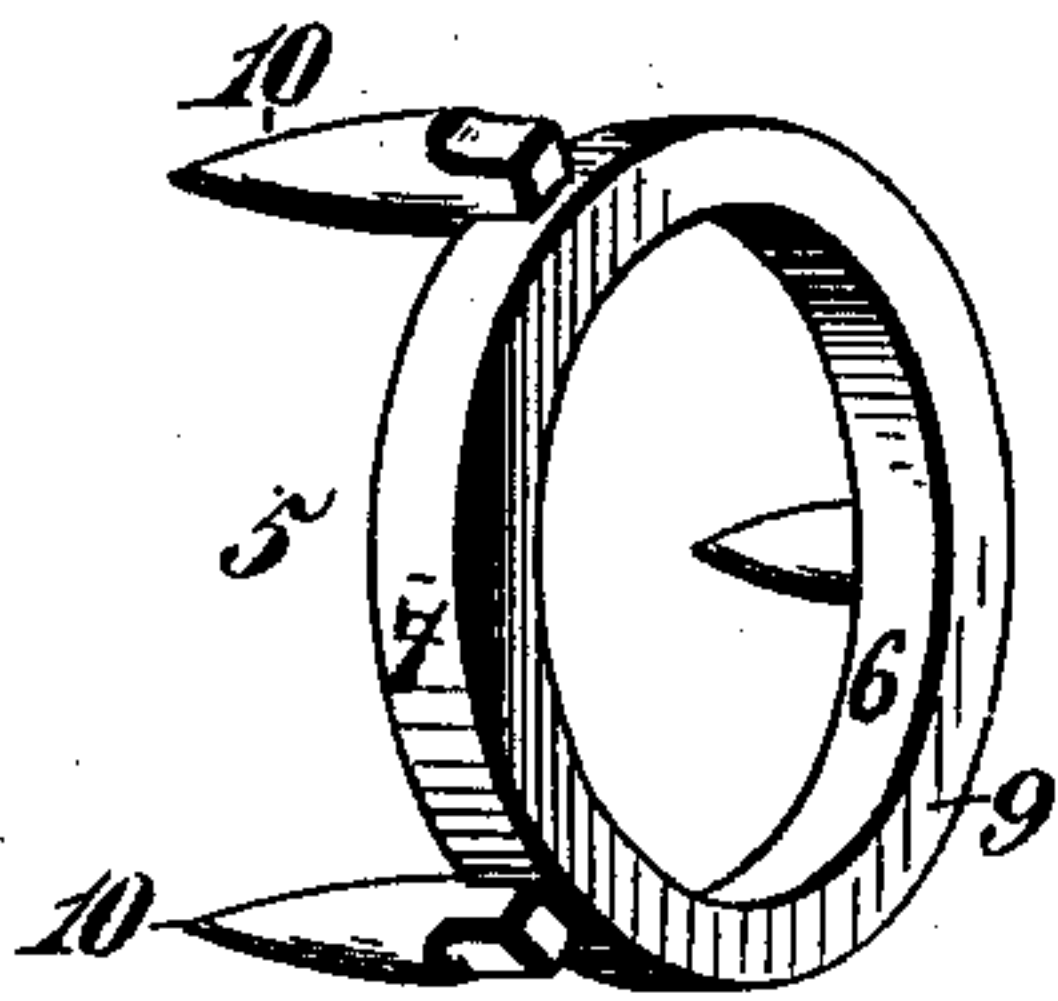


Fig. 3.

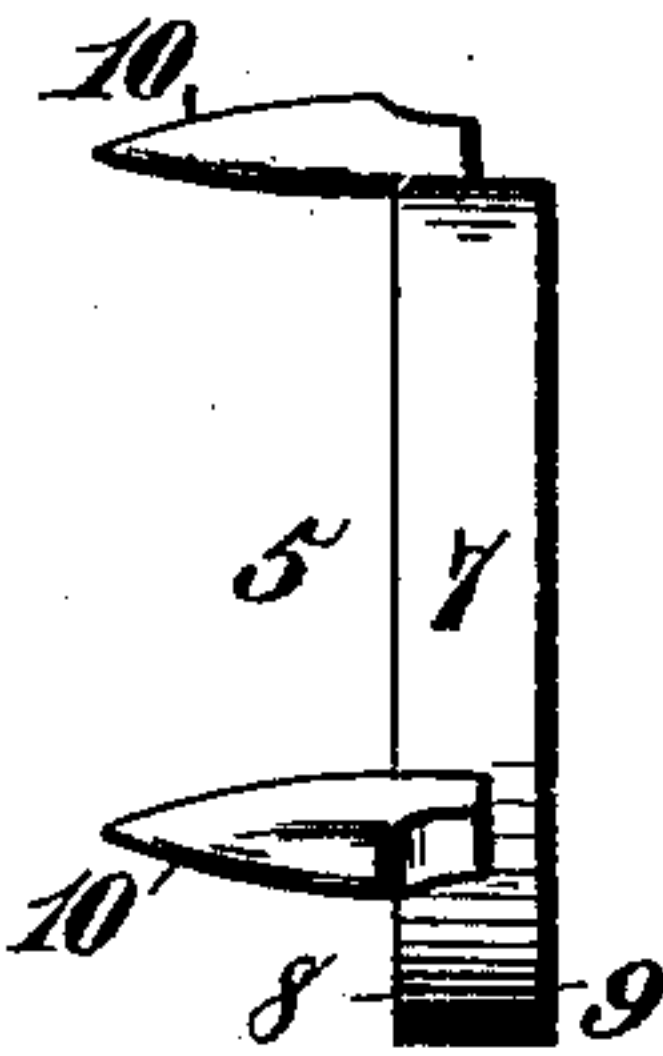
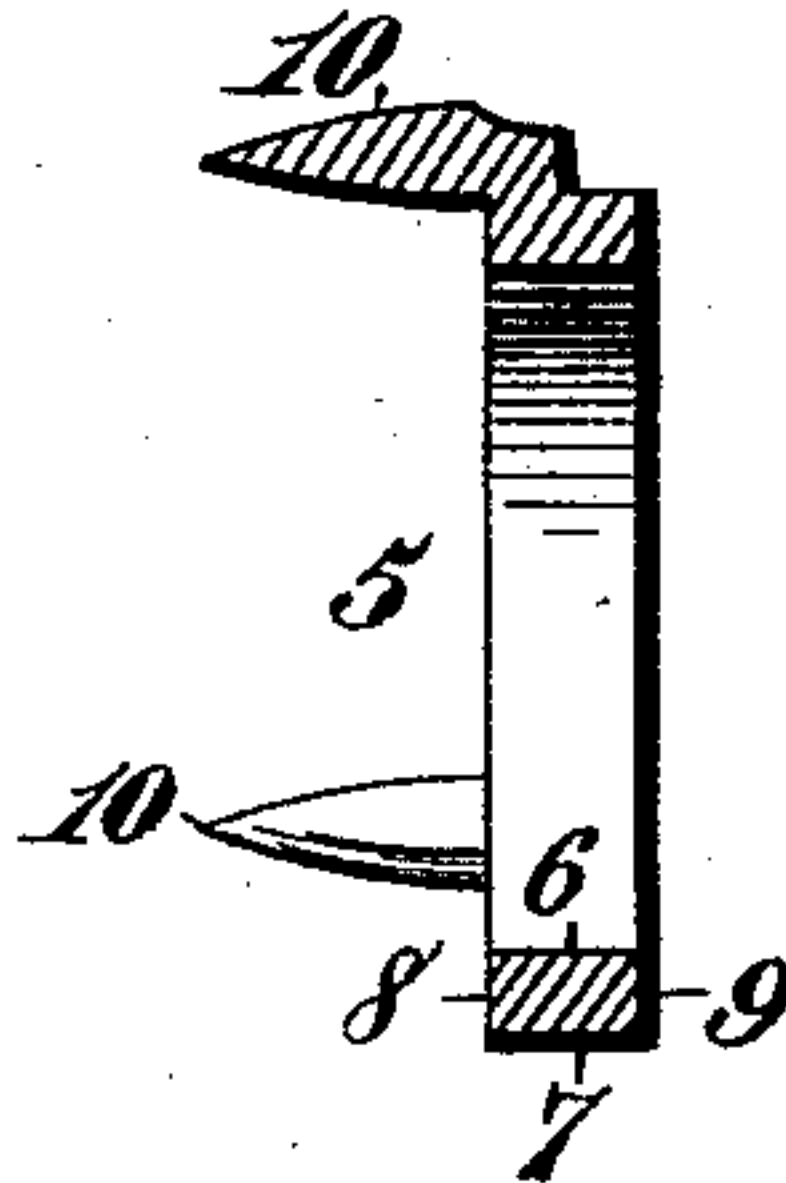


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM B. BEAGLE AND WILLIAM C. CLARK, OF SHELBY, MISSOURI.

AXLE-BOX EXTENSION FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 452,539, dated May 19, 1891.

Application filed December 18, 1890. Serial No. 375,131. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM B. BEAGLE and WILLIAM C. CLARK, citizens of the United States, residing at Shelby, in the county of Shelby and State of Missouri, have invented new and useful Improvements in Axle-Box Extensions for Vehicles, of which the following is a specification.

In vehicles having wheels with wooden hubs the ends of the axle boxes or bushings wear, and to set the nuts up it is usual to cut the threads and shoulders of the axle-spindles farther back and sometimes to cut off portions of the spindles, which necessitates the employment of axle-cutters. The cutting of the axle-spindles is expensive and troublesome and therefore objectionable.

The object of our invention is to provide novel, simple, efficient, and economical means for renewing the end of an axle box or bush when unduly worn, whereby the cutting of the axle-spindle and the expense incident thereto are avoided.

The invention also has for its object to provide a novel device which is complete in itself and susceptible of being applied at will to a wooden hub for forming an extension to the worn end of an axle box or bush, which extension accurately fits and turns upon the axle-spindle, as though an integral part of the box or bush.

To accomplish all these objects our invention involves the features of construction hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a detail sectional view of a wheel-hub and axle-spindle, showing our invention applied thereto. Fig. 2 is a detail perspective view of the improved device for renewing or extending a worn box or bush. Fig. 3 is a side view. Fig. 4 is a sectional view of the same.

In order to enable those skilled in the art to make and use our invention, we will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates a wooden wheel-hub; 2, its metallic axle box or bush; 3, the axle-spindle, and 4 the axle-nut for retaining the wheel on the spindle. The constant ro-

tation of the axle box or bush against a stationary part wears the ends of the box or bush, and the wheel-hub soon becomes loose on the spindle. To compensate for wear and tighten the hub on the spindle, loose washers are used; but these fall to the ground every time the wheel is removed for lubricating the spindle or other purposes.

The continued wear of the box or bush has heretofore rendered it necessary to cut the threads and the shoulder of the axle farther back to permit the nut to be set up, and sometimes it is essential to cut off or remove a part of the spindle, all of which is objectionable, in that axle-cutters are required and the work is expensive and troublesome. To avoid the objections stated, we provide an annulus or ring 5, having concentric inner and outer surfaces 6 and 7 and parallel opposite edges 8 and 9. This ring is provided with a series of pointed spurs or prongs 10, which extend from the exterior surface 7 in such manner as to permit the edge 8 of the ring to rest squarely against the worn end of the axle box or bush 2, while the spurs or prongs 10 enter the wood part of the hub at a point outside of the box or bush. The ring and spurs or prongs are preferably cast integral, of malleable iron; but obviously they can be cast of any other metal suitable for the conditions required. The ring is substantially square in cross-section, and whether the spurs or prongs be cast integral with or are attached to the ring they must be so arranged relatively to the periphery of the ring that the inner edge 8 thereof can rest against the worn end of the axle box or bush, while the spurs or prongs can penetrate the hub at points outside the box or bush in such manner that the ring constitutes an extension to the box or bush, which is flush with the internal surface of the latter and bears upon the axle-spindle, the same as though the ring were an integral part of the box or brush.

In applying the ring to form an extension of the box or bush such ring is placed upon the end of the spindle and is then driven into place, so that its spurs or prongs penetrate the wooden part of the hub outside the box or bush, whereby the ring is permanently attached, and therefore remains as a fixed part

of the hub, which prevents its falling off when the wheel is removed for lubricating or other purposes.

5 We purpose manufacturing these box-extension rings of different sizes to correspond with standard gages of axle-spindles and axle boxes or bushes, and while the rings are preferably cast of malleable iron we do not confine ourselves thereto.

10 We have exhibited the ring as provided with three spurs or prongs; but obviously a greater or less number can be employed. These spurs or prongs are tapering and sharp-pointed to easily penetrate the wooden part of the hub, 15 and the rings are in diameter and thickness coequal with the diameter and thickness of the boxes or bushes to which they are to be applied.

The box-extension rings, constructed and

secured in position as explained, serve to re- 20 new worn boxes or bushes at small expense, and are therefore very desirable.

Having thus described our invention, what we claim is—

An axle-box-extension ring having spurs or 25 prongs projecting from its outer surface to penetrate the wooden part of a wheel-hub outside the box, while the inner edge of the ring rests against the end of the box, substantially as described. 30

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WILLIAM B. BEAGLE.
WILLIAM C. CLARK.

Witnesses:

JOHN A. KRUMMEL,
EMMETT D. SWINNEY.