

(Model.)

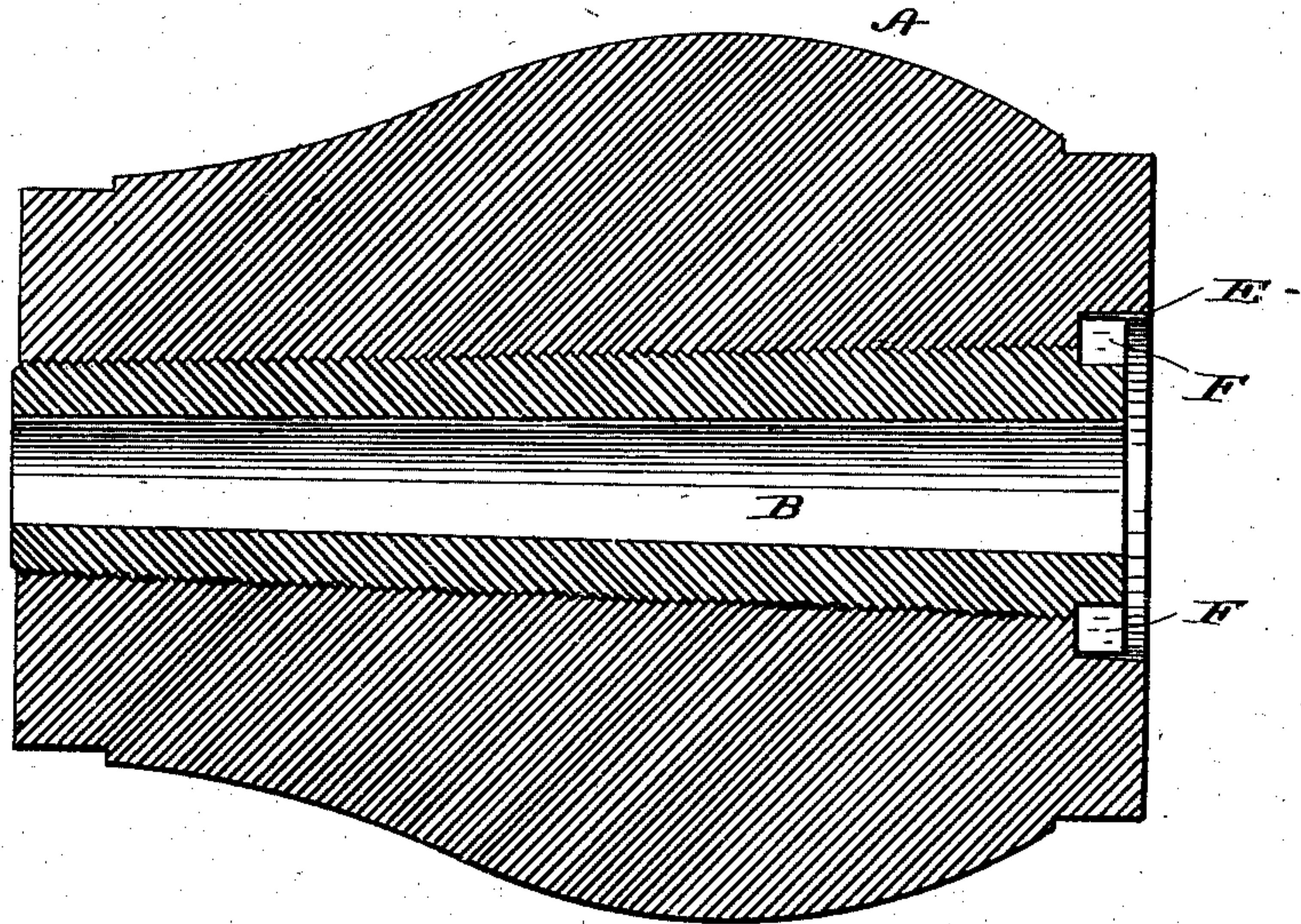
J. T. GARDNER.

AXLE BOX FOR VEHICLE WHEELS.

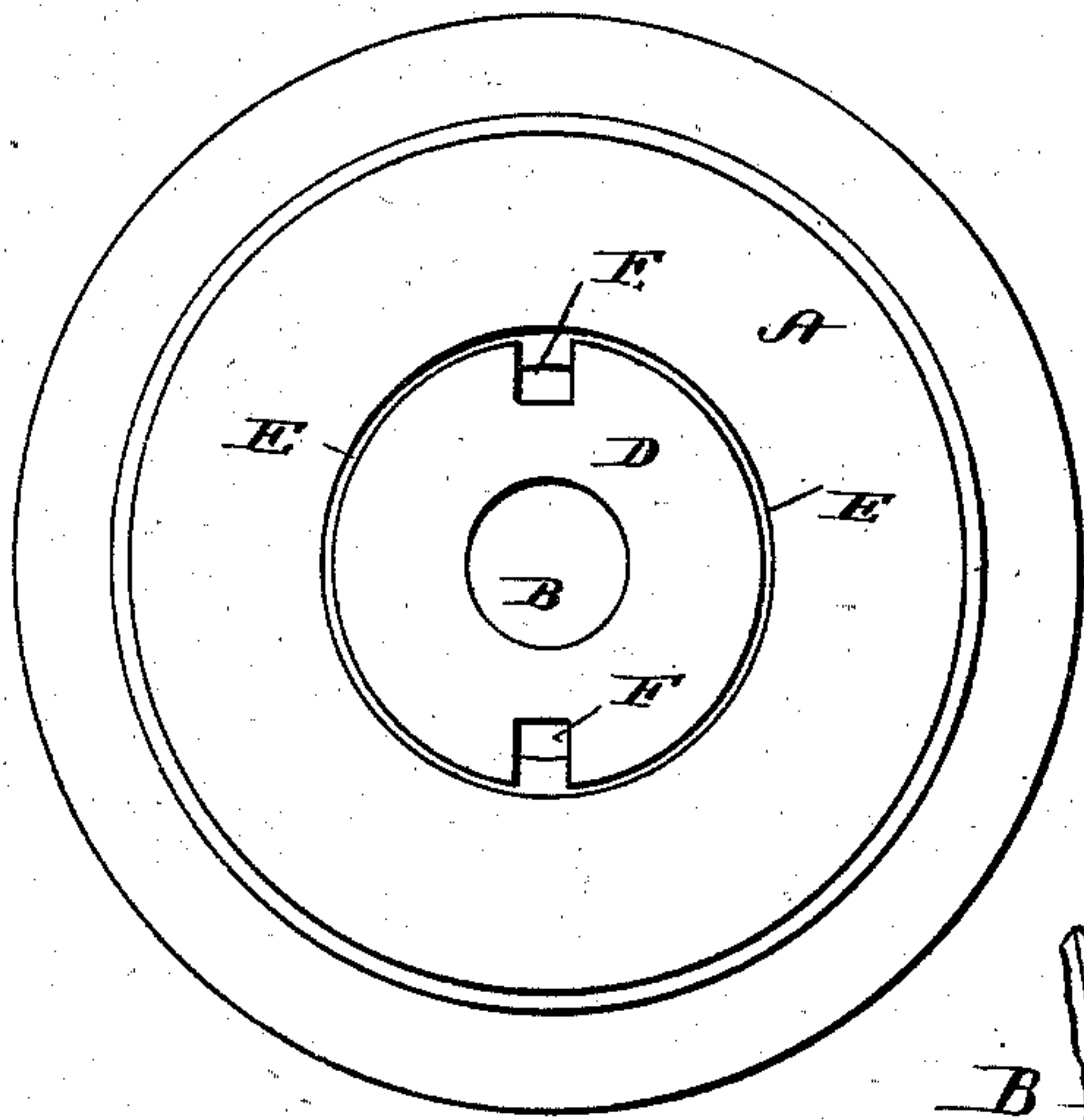
No. 255,077.

Patented Mar. 14, 1882.

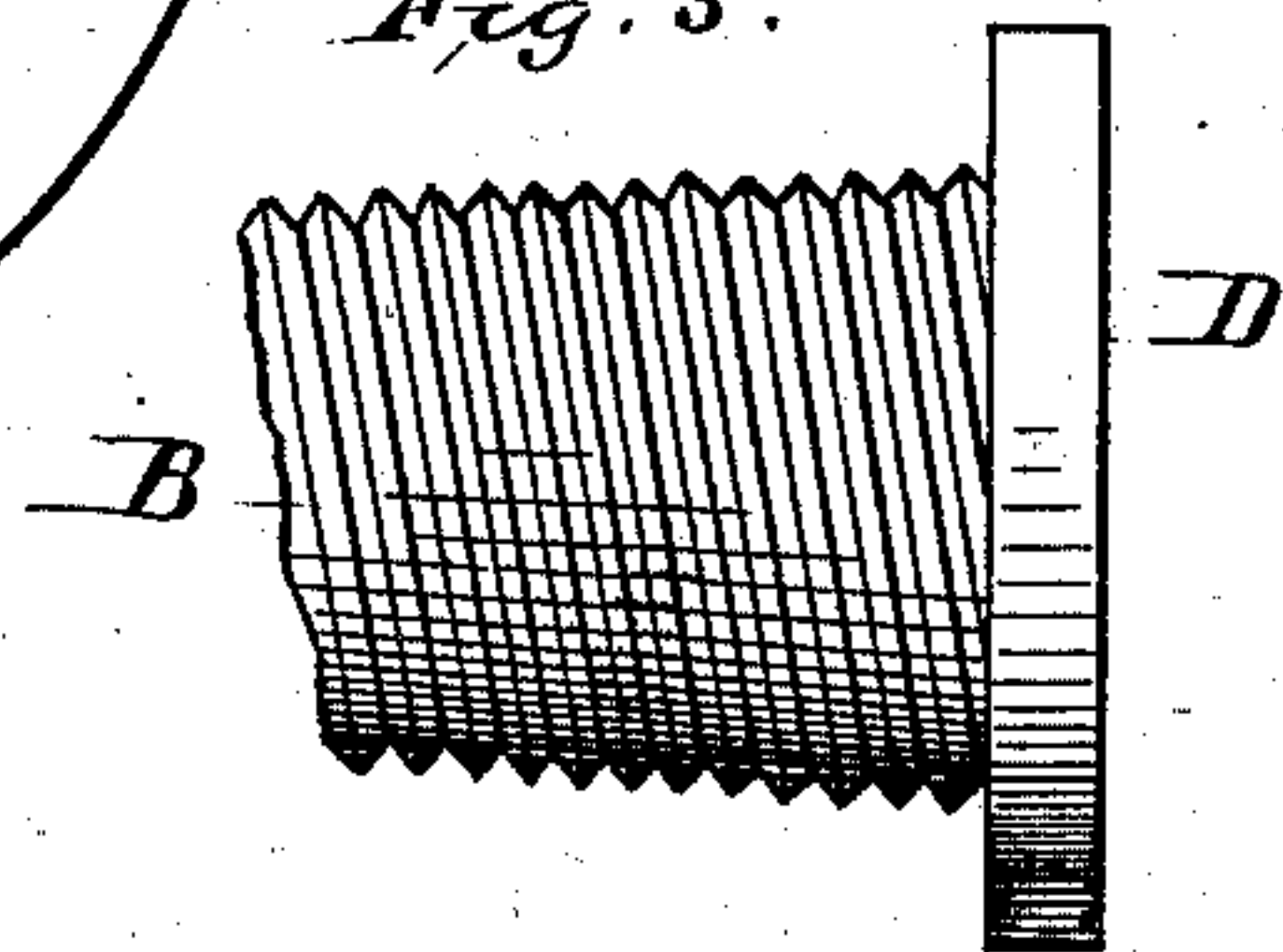
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses.*

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# UNITED STATES PATENT OFFICE.

JESSE T. GARDNER, OF VAIDEN, MISSISSIPPI, ASSIGNOR OF ONE-HALF TO  
REDDEN THOMPSON, OF SAME PLACE.

## AXLE-BOX FOR VEHICLE-WHEELS.

SPECIFICATION forming part of Letters Patent No. 255,077, dated March 14, 1882.

Application filed December 21, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, JESSE T. GARDNER, of Vaiden, in the county of Carroll, and in the State of Mississippi, have invented certain  
5 new and useful Improvements in Vehicle-Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of refer-  
10 ence marked thereon, making a part of this specification.

This invention relates to certain improvements in hub boxes or bushings; and it has for its object, first, to provide certain means  
15 whereby the box will be secured and firmly held in the hub; and, secondly, in so constructing this means that it will also act to afford additional strength to the hub.

The above-mentioned objects I accomplish  
20 by the devices illustrated in the accompanying drawings.

That this device may be more fully understood, and that it may be distinguished from other previous devices of a somewhat similar  
25 character, I desire to make the following observations, by which the public may readily ascertain the advance in this art which my invention has effected.

Hub-boxes have been made with external  
30 screw-threaded portions; but in such case the threaded portions covered only a small part of the box at each end thereof and thus left an intermediate space. When the hub becomes wet from exposure or otherwise the  
35 blank space of the box above referred to, which forms a chamber between the box and the hub, permits of the collection of the moisture, which penetrates through the latter and causes it to rot away; secondly, these boxes at their in-  
40 ner ends terminate abruptly, and have nothing against which the hub may be braced, and do not therefore fulfill the second object of my invention.

Figure 1 is a longitudinal central sectional  
45 view of a vehicle-hub, showing my improved hub box or bushing applied thereto. Fig. 2 is a rear view of the same; and Fig. 3, a side elevation of a portion of the bushing, showing

more clearly the annular flange at its inner or larger end.

The letter A indicates an ordinary wooden  
50 vehicle-hub, and B a metallic bushing or lining for the same. The said bushing consists of a metallic sleeve which is made tapering on the exterior and is screw-threaded,  
55 as shown. The said sleeve is adapted to fit in the opening through the hub, which is internally screw-threaded to engage the screw-threads on the outside of the sleeve or bush-  
60 ing. The inner end of the sleeve or bushing is provided with a flange, D, which is adapted to set in a suitable recess, E, in the hub, and the flange is diametrically recessed, as indi-  
65 cated by the letter F, for the reception of a key, by means of which the sleeve or bushing may be turned for insertion or removal. When  
the bushing is screwed home in the hub the annular flange D braces against the inner end thereof, and the continuous screw-thread of  
70 the bushing draws against the fibers of the hub throughout its entire length, and thus sustains and affords additional strength thereto, which is a feature of practical importance, and which forms the second part of my inven-  
75 tion, as above set out.

The outer end of the sleeve or bushing may be made to project from the hub, and may be provided with a screw-nut, by means of which  
it may be further secured.

As thus constructed, it will be perceived  
80 that, owing to the tapering form of the screw-threaded portions of the hub and the bushing, the sleeve or bushing can be inserted without danger of bursting the hub, as is the case  
85 when it is driven in.

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

1. A bushing consisting of a tapering metallic tube or sleeve, having a continuous ex-  
90 ternal screw-thread, and an annular flange at its inner end, the sleeve being adapted to be screwed into the hub and bind its fibers together from end to end, and the flange to brace and bear against its inner end, as shown and  
95 described, and for the purposes set forth.

2. In combination with the externally-taper-  
ing threaded bushing, flanged as described  
and recessed diametrically, the internally ta-  
pered and screw-threaded hub, having a seat  
5 for the flange on the sleeve, the two being se-  
cured together substantially in the manner  
and for the purpose specified.

In testimony whereof I affix my signature,  
in presence of two witnesses, this 8th day of  
December, 1881.

J. T. GARDNER.

Witnesses:

E. W. NORWOOD,  
R. W. NORWOOD.