

No. 644,419.

Patented Feb. 27, 1900.

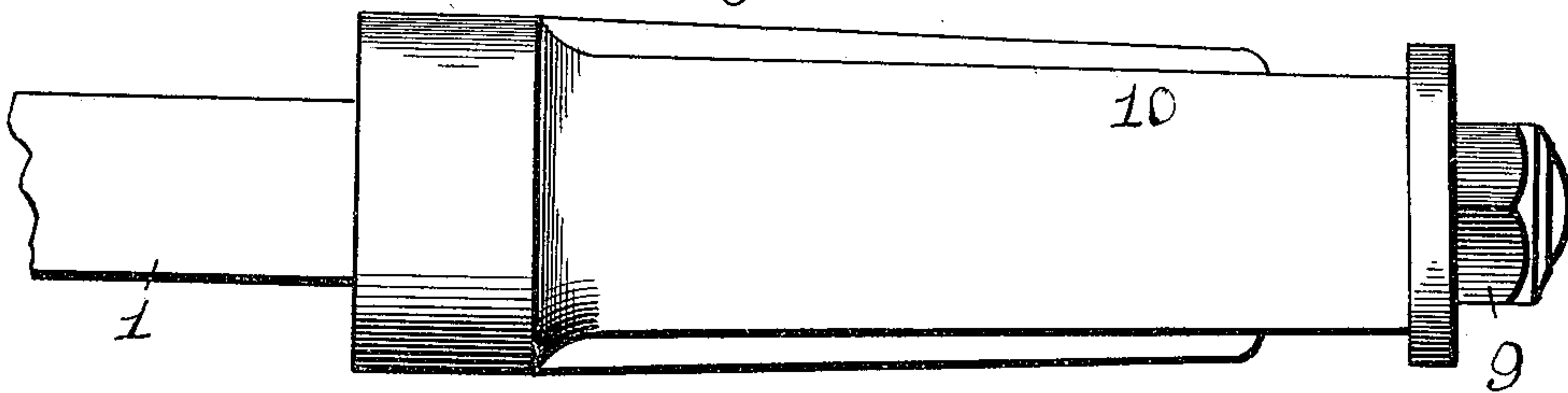
A. O. GLORE.

AXLE.

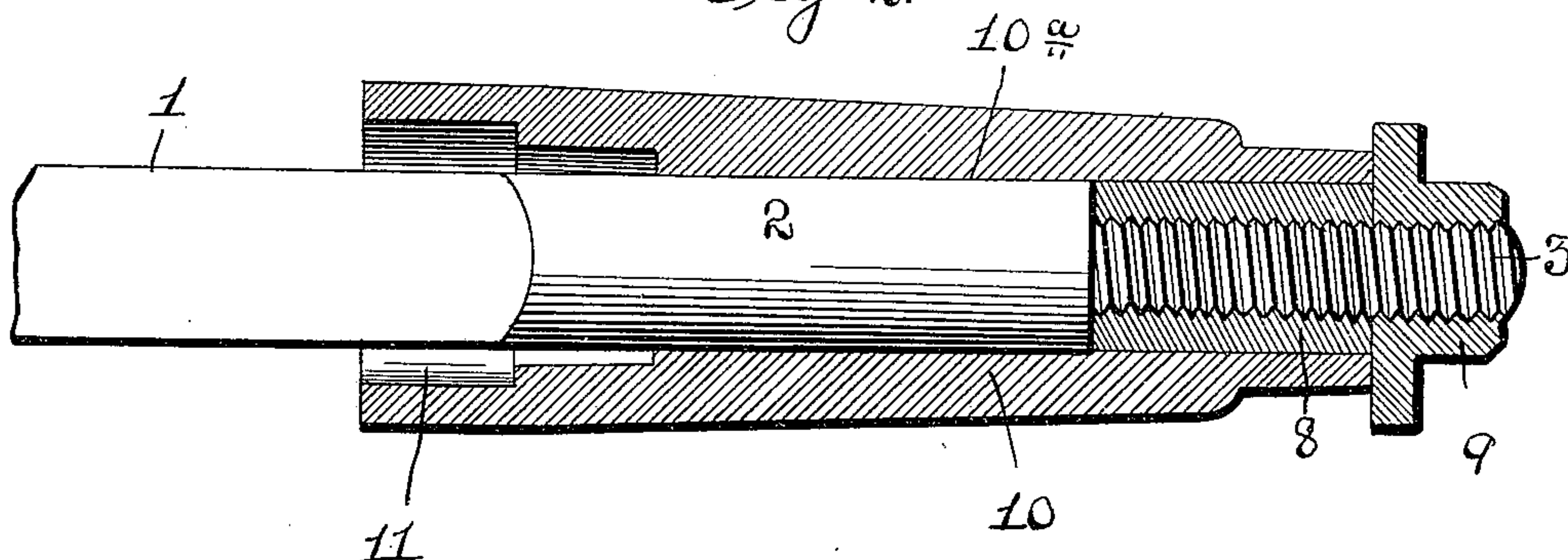
(Application filed May 1, 1899.)

(No Model.)

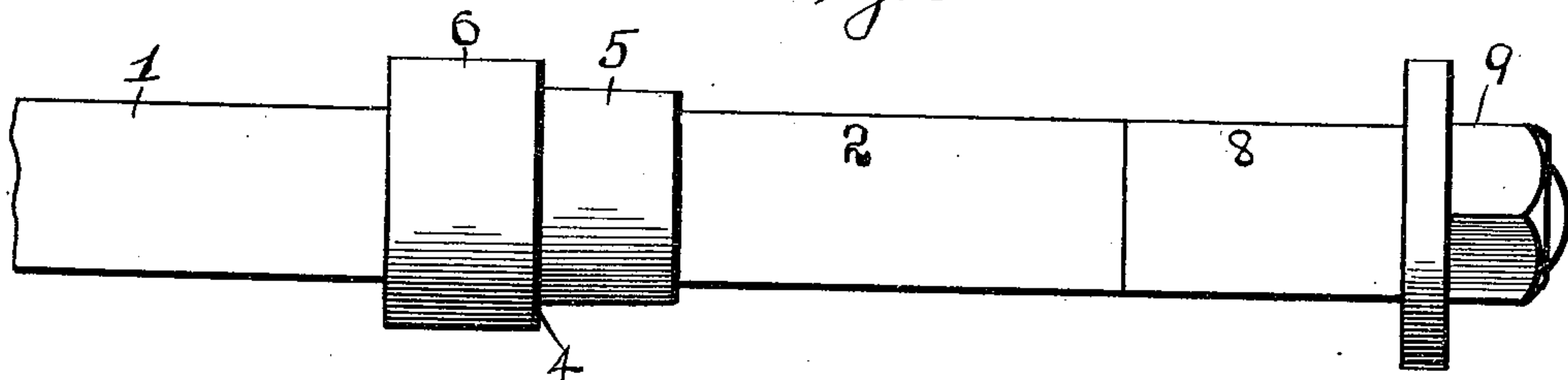
*Fig. 1.*



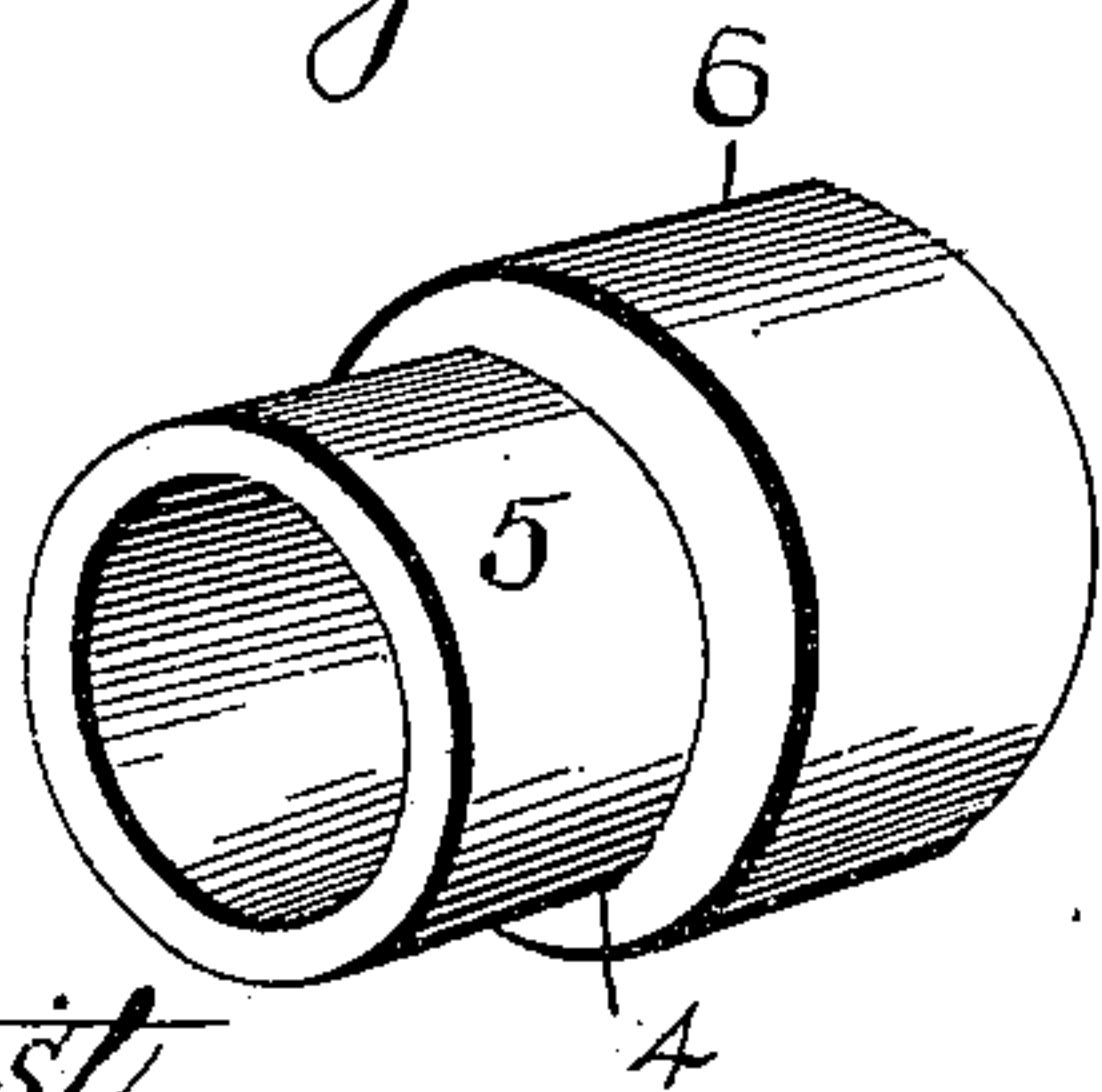
*Fig. 2.*



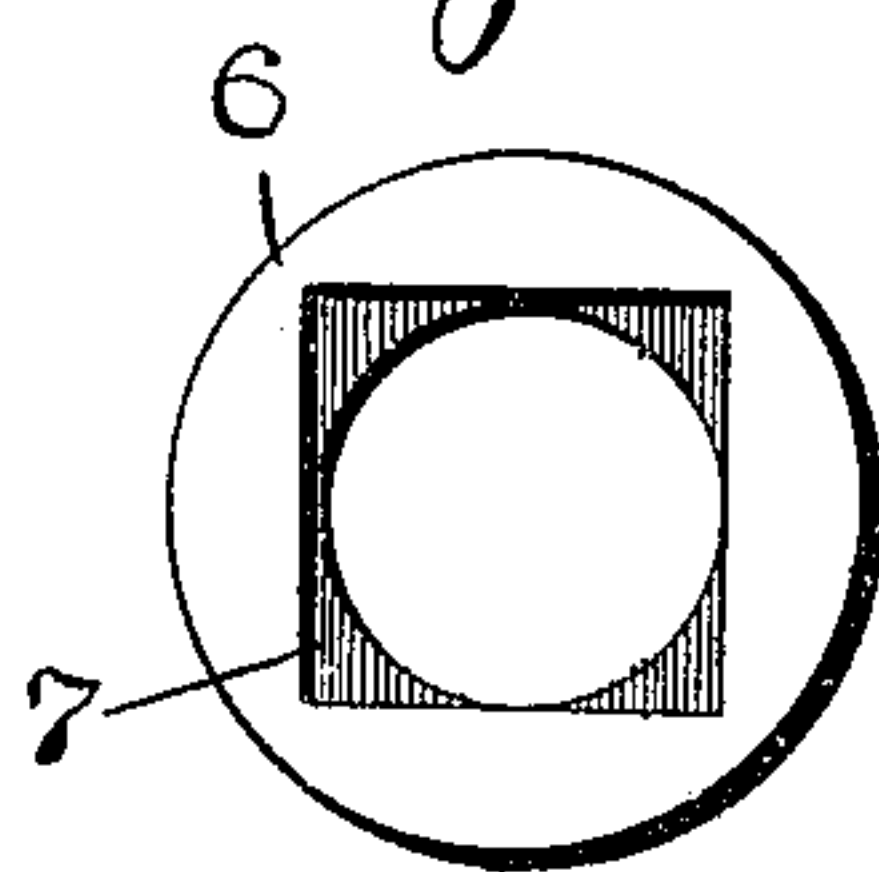
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Attest*  
*A. J. McCauley.*  
*W. L. Smith*

*Inventor:*  
*Albert O. Glore,*  
*By Higdon Longan Attys.*

# UNITED STATES PATENT OFFICE.

ALBERT O. GLORE, OF POTOSI, MISSOURI.

## AXLE.

SPECIFICATION forming part of Letters Patent No. 644,419, dated February 27, 1900.

Application filed May 1, 1899. Serial No. 715,118. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT O. GLORE, of the city of Potosi, Washington county, State of Missouri, have invented certain new and useful Improvements in Axles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to axles; and it consists of the novel construction, combination, and arrangement of parts hereinafter described and claimed.

Figure 1 is a side elevation of the end of my improved axle, the same being inclosed in a thimble or box that is carried by the hub of the wheel. Fig. 2 is a vertical sectional view through the center of this thimble or box and also showing a removable sleeve in section, which sleeve is carried by the end of the axle. Fig. 3 is a side elevation of the end of the axle and showing the removable sleeve and a removable shoulder thereon. Fig. 4 is view in perspective of a removable shoulder. Fig. 5 is an end elevation thereof.

Referring by numerals to the accompanying drawings, 1 indicates the axle, which is of the usual form and construction, and upon the end of said axle is formed integral a spindle 2, and extending outwardly from said spindle 2 is a screw-threaded portion 3.

4 indicates a double removable shoulder which has the usual exterior form, so as to fit within common wheel-boxes now in use, and which is located upon that portion of the spindle that joins with the axle 1, said shoulder comprising a small collar 5, adapted to fit upon and extend over the spindle 2, and integral with one end of said collar 5 is a larger collar 6, which is provided with a square opening 7, which fits directly over the squared end of the axle 1 that joins with the spindle 2.

8 indicates an interiorly-screw-threaded sleeve which is positioned on the threaded portion 3 of the spindle 2, which sleeve 8 is equal in diameter to said spindle 2, and said

sleeve 8 is held in position by a nut 9, that is removably located upon the outer end of the screw-threaded portion 3. The thimble or box 10, that is carried by the hub of the wheel, is provided with a longitudinal bore 10<sup>a</sup>, in which fits the spindle 2 and the sleeve 8, and in the inner end of said thimble or box is formed a shouldered recess 11, which receives the shouldered collars 5 and 6.

It is a well-known fact that the inner and outer portions of an axle-spindle receive the greatest amount of wear, and in sandy districts small particles of sand will work their way into the bearing between the hub-box or thimble and the spindle and the inner and outer ends of said spindle are rapidly cut away, thereby rendering the axle useless, and to obviate this trouble I have devised the removable sleeve 8 and the removable shouldered collars 5 and 6. These removable sections are, as heretofore stated, positioned on the outer and inner ends of the spindle of the axle and receive all of the wear from the thimble or hub-box, and if the surfaces of either the sleeve or shouldered collars wear away they can be readily replaced with very little trouble and at a slight expense.

I claim—

The improved vehicle-axle, comprising the double removable shoulder 4 having a small collar 5 adapted to fit upon and extend over the spindle, and tapered outside to fit within the common wheel-box, and a larger collar 6 integral with one end of said collar 5 and provided with a square opening 7 adapted to fit upon the square end of the axle and also tapered outside to fit within the common wheel-box, in combination with a square axle and a spindle, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT O. GLORE.

Witnesses:

CHAS. W. LOOMIS,

JAMES A. SHIELDS, Jr.