No. 644,164. Patented Feb. 27, 1900.

P. C. FOSKETT.

AXLE.

(Application filed Dec. 15, 1899.)

(No Model.)

FIG. 1.

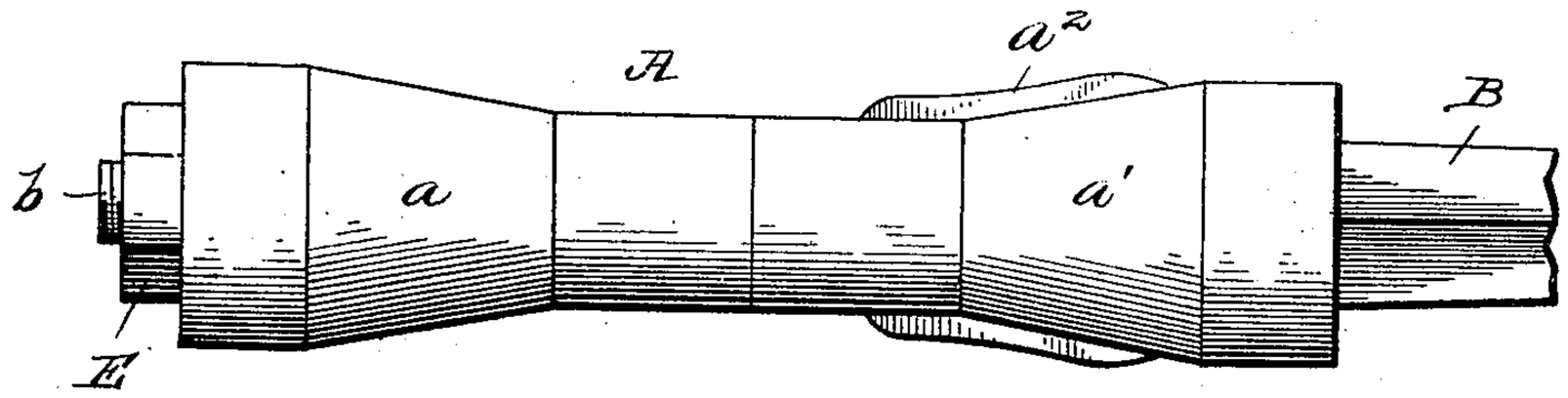


FIG. 2.

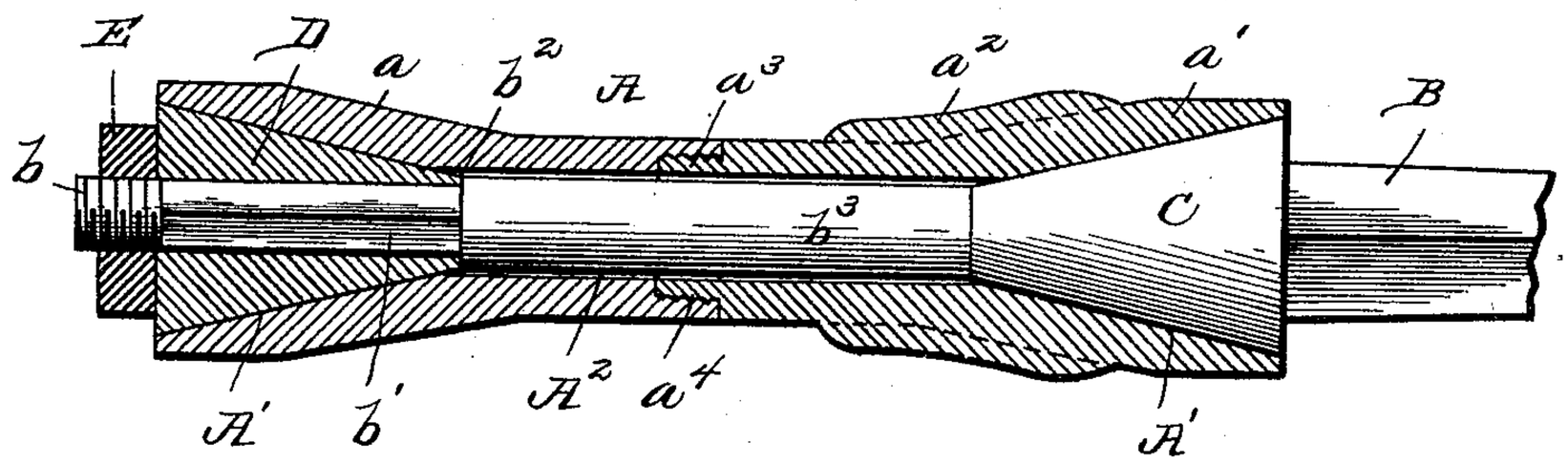


FIG. 3.

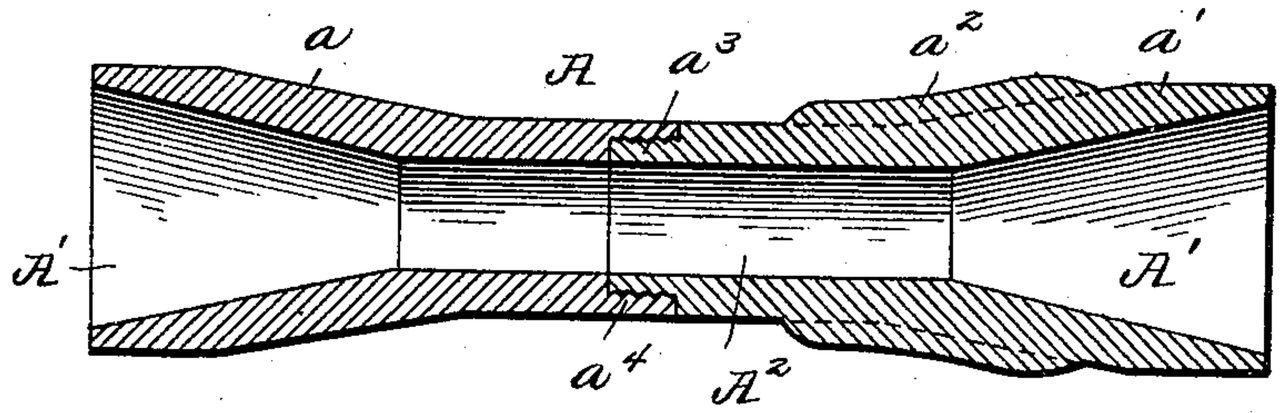
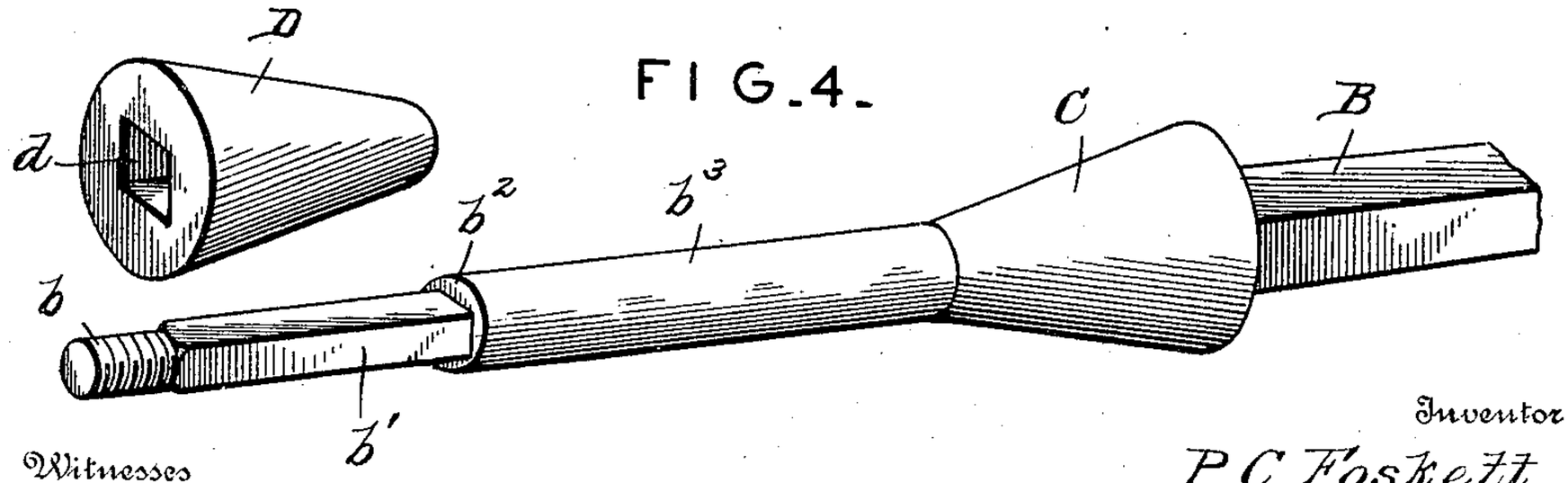


FIG. 4.



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PLEASANT C. FOSKETT, OF ARKANSAS CITY, KANSAS.

AXLE.

SPECIFICATION forming part of Letters Patent No. 644,164, dated February 27, 1900.

Application filed December 15, 1899. Serial No. 740,404. (No model.)

To all whom it may concern:

Be it known that I, PLEASANT C. FOSKETT, a citizen of the United States, residing at Arkansas City, in the county of Cowley and State of Kansas, have invented certain new and useful Improvements in Axles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in axles and axle-boxes of that class in which is provided cone-bearings, with provision for adjustment thereof.

The present invention has for its object, among others, to improve upon this class of devices, to the end that all wear and lost motion may be compensated for without the employment of springs or other extraneous means, and the life of the axle and its box is thus materially increased. I make the inner cone solid with the axle, so that it readily adapts itself as a shoulder for the hollow cones of the inner and outer ends of the axle-box. The axle at its outer end is formed with a polygonal portion to engage in a correspondingly-shaped socket or bore of the outer removable cone, and its extreme end is screw-threaded for a sufficient length to allow for the tightening of the axle-nut to take up all lost motion caused by wear from time to time, and this I find much more effective and reliable than would be accomplished by the pressure of a spring, as has been proposed, as the spring becomes weakened as friction increases and after a while loses its efficacy. The box is formed in two parts adjustably connected together by screw-threading one part into the other. This also facilitates the manufacture of the box.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an elevation showing my improvement. Fig. 2 is a central longitudinal section through the same. Fig. 3 is a central longitudinal section through the axle-box. Fig. 4 is a perspective view of the end of the axle and the outer cone, the latter being removed.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the axle-box, which is formed in two parts a and a', the inner section a' being formed with ribs or flanges a^2, as shown, to assist in holding the same in place and prevent its turning, as will be readily understood. The section a^2 is provided at its outer end with a reduced neck a^3, which is exteriorly threaded, as seen in Figs. 2 and 3, and is adapted to engage in the interiorly-threaded socket a^4 at the inner end of the outer portion a of the box, as seen in said figures, the oppositely-disposed shoulders thus formed serving as stops to limit the movements of the two parts of the box in one direction, as will be clearly understood from Figs. 2 and 3. The two parts of the box are each formed with a cone-shaped bore at the outer end, and these cone-shaped bores or sockets A′ merge into the cylindrical bore A^2, as seen best in Fig. 3. This bore is slightly greater in diameter than the portion of the axle working therein, so that it is kept from contact with the same, and thus the friction greatly reduced.

B is the axle. It may be of ordinary form except at its outer end. The construction of such end is clearly seen in Fig. 4, where it will be seen that its extreme outer end is reduced, as at b, and this reduced end is screw-threaded, and adjacent the same is the polygonal portion b', which is of a length corresponding with the length of the outer removable cone soon to be described, as seen in Figs. 2 and 4, and at the inner end of this polygonal portion is the shoulder b^2 at the outer end of the cylindrical portion b^3, which, as above described, is somewhat less in diameter than that of the central bore of the box, so that the cylindrical portion of the axle is at all times held out of contact with the wall of the bore of the axle-box in order to reduce the friction. At the inner end of the cylindrical portion of the axle is the cone C, which is integral with the axle, as shown, and which is fitted to the inner conical socket A′ of the box, as seen clearly in Fig. 2.

D is the outer cone. It is independent of the axle and adapted to be placed thereon after the axle is inserted in the box. It has a polygonal opening *d* therethrough, as seen clearly in Fig. 4, to fit the polygonal portion of the outer end of the axle, as seen in Fig. 2.

E is the axle-nut, engaging the threaded end of the axle, as seen in Figs. 1 and 2.

The parts are easily assembled, and the operation and advantages of the invention will be clearly understood and appreciated from the foregoing description, when taken in connection with the annexed drawings, and a further detailed description thereof does not seem necessary.

The construction is applicable to not only buggies and wagons, but to farm implements and analogous devices.

What I claim as new is—

The combination with an axle-box in sections screw-threaded together and each section having at one end a cone-shaped socket, and a cylindrical bore, of an axle having an integral cone fitted to the inner socket, a cylindrical portion of less diameter than the diameter of the cylindrical bore of the box, a polygonal portion beyond the cylindrical portion with shoulder at the junction therewith, and a reduced screw-threaded portion beyond the polygonal portion, a cone independent of the axle and having a polygonal passage therethrough to receive the polygonal portion of the axle, and an axle-nut on the threaded end of the axle and bearing against the outer end of the said outer cone, all substantially as herein shown and described.

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

his
PLEASANT C. × FOSKETT.
mark

Witnesses:
H. H. DRAPER,
J. M. RAMBO.