No. 692,381. Patented Feb. 4, 1902.

C. T. SWAFFIELD.

CLAMP.

(Application filed May 6, 1901.)

(No Model.)

Fig. 1.

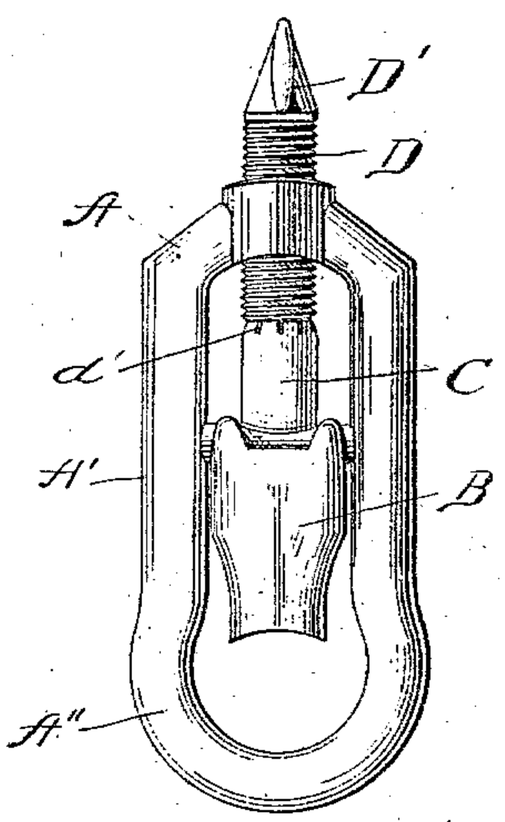


Fig. 3.

Fig. 2.

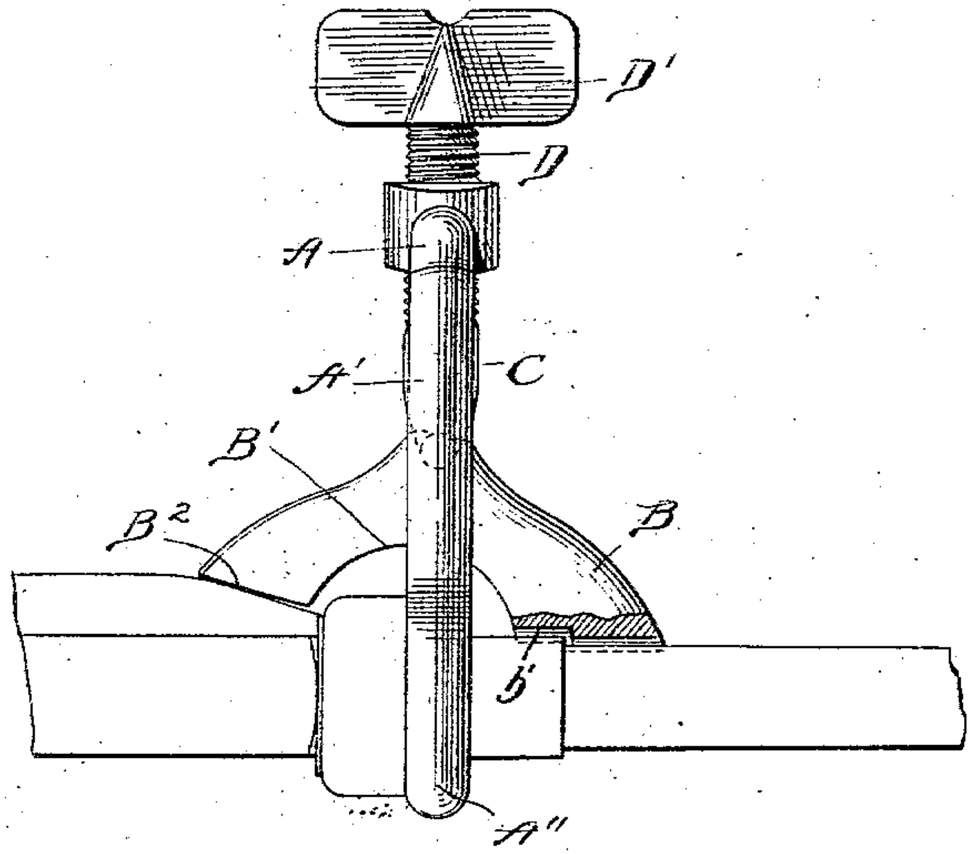


Fig. 3a.

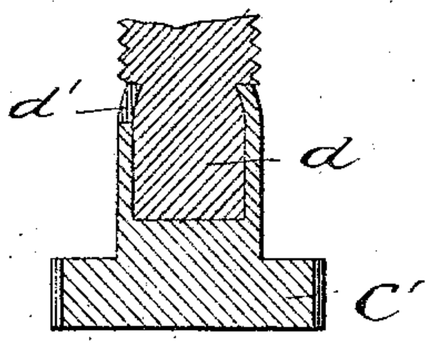


Fig. 4.

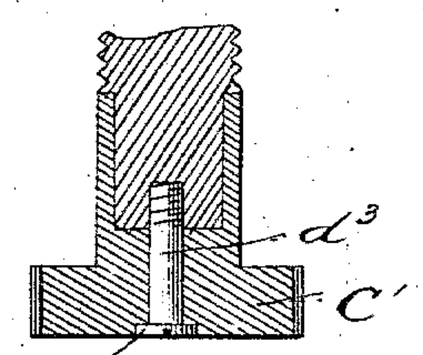
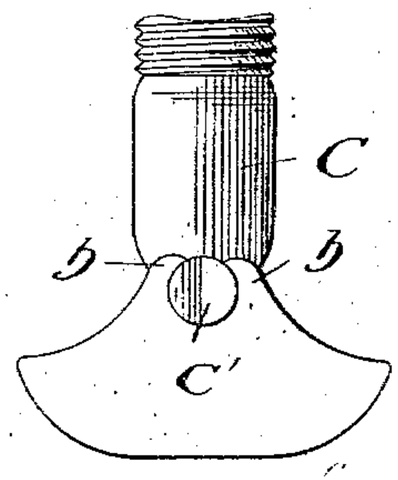
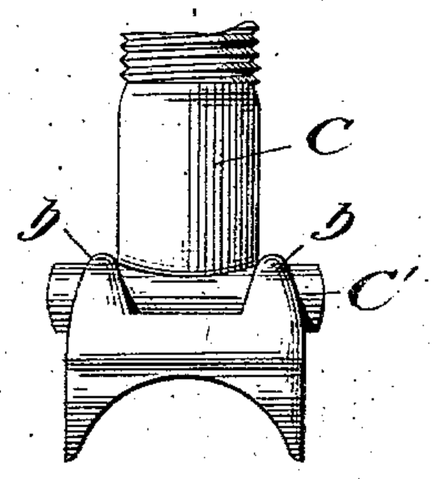


Fig. 5.





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UNITED STATES PATENT OFFICE.

CHARLES TAYLOR SWAFFIELD, OF ELKHART, INDIANA.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 692,381, dated February 4, 1902.

Application filed May 6, 1901. Serial No. 58,986. (No model.)

To all whom it may concern:

Be it known that I, CHARLES TAYLOR SWAFFIELD, a citizen of the United States, residing at Elkhart, Indiana, have invented certain new and useful Improvements in Clamps, of which the following is a specification.

My said invention relates to improvements in clamps designed more especially for clamping the axles of vehicles to the axle-bed while the glue is hardening; and the object of the invention is to provide an extremely simple form of clamp capable of being produced at a low cost and one that is strong, durable, and effective. I have also aimed to prov.'e a frame of such shape that it will readily pass over the collar on the end of the axle and a shoe or foot so constructed as to enable it to be used at any point along the axle or at the end of the axle-bed. I have further aimed to provide an improved connection between the compressing-screw and the foot or shoe.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the improved clamp. Fig. 2 is a view at right angles to Fig. 1, showing the clamp applied to the axle and axle-bed. Fig. 3 is a detail showing the preferred manner of connecting the member C and compressing-screw. Fig. 3^a is a similar view of a modification, and Figs. 4 and 5 are detail views showing a modified form of shoe.

In the drawings, A indicates the frame of the clamp, having for the major portion of its length the parallel portions A'. At its lower end it is widened out into circular form, as shown at A'', forming a rounded seat for the axle and also providing an enlarged portion capable of slipping over the collar on the axle.

B represents the foot, having a pivoted connection with a member C, which in its turn is connected with the compression-screw D, threaded through the upper end of the loop or frame and provided with an operating-handle D', preferably formed integral with the screw. The connecting member C has a tubular socket in its upper end to receive the plain cylindrical lower end *d* of the screw, and I prefer to hold the connecting member to the screw by slitting the upper edge of the member, as indicated at *d'*, to facilitate its being forced into a corresponding annular groove, as clearly shown in Fig. 3. In lieu of connecting the member C to the screw in this manner I may provide a set-screw d^2, having a plain portion d^3 passing axially through the lower portion of the member and having a threaded portion engaging a threaded opening in the end of the screw.

The connecting member is provided with cylindrical ears C', which engage bearings in the foot or shoe. These are formed by ears *b b* on the upper side of the shoe, which are swaged or bent over around the ears C', thus forming a simple and effective connection and one which permits rocking of the shoe or foot.

The central portion of the under face of the shoe is curved, as at B', to permit it to straddle the collar on the axle when used at this point, and one end B^2 is preferably plain for bearing on the portion of the axle which extends beyond the collar. The other end has an under face curved at right angles to the curve B' to fit the upper face of the axle-bed and a rabbet *b'* may be provided.

Instead of the form of shoe just described I may provide a plain shoe, as shown in Figs. 4 and 5, having a face curved throughout its entire extent, this form being really better adapted for use at points other than at the end of the axle-bed.

Having thus described my invention, what I claim is—

1. A clamp for axles and the like comprising a frame having an enlarged lower end of loop shape, a narrow upper portion with parallel sides, a compressing-screw passing through the upper end of the frame, a cross-bar secured to said compressing-screw, a rocking foot or shoe connected to the cross-bar, said cross-bar being guided between the parallel sides of the narrow upper portion of the frame, substantially as described.

2. A clamp for axles and the like comprising an elongated frame, composed of a single piece of metal, the lower end of which is enlarged and of loop shape, a compressing-screw threaded through the upper end of the frame, a rocking foot or shoe connected thereto having the central portion of its under face curved and one end of said shoe having its under face curved at right angles to the curve on

the under face of the shoe, substantially as described.

3. In a clamp for axles and the like, a frame having an enlarged rounded end, a compressing-screw passing through the other end, a connecting member secured thereon, projections on opposite sides of said connecting member, a rocking shoe or foot having ears on each side thereof adapted to be swaged upon said projections on opposite sides of the connecting member, substantially as described.

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

CHARLES TAYLOR SWAFFIELD.

Witnesses:
ALONZO C. CHANDLER,
JOHN WILLIAM STUCK.