

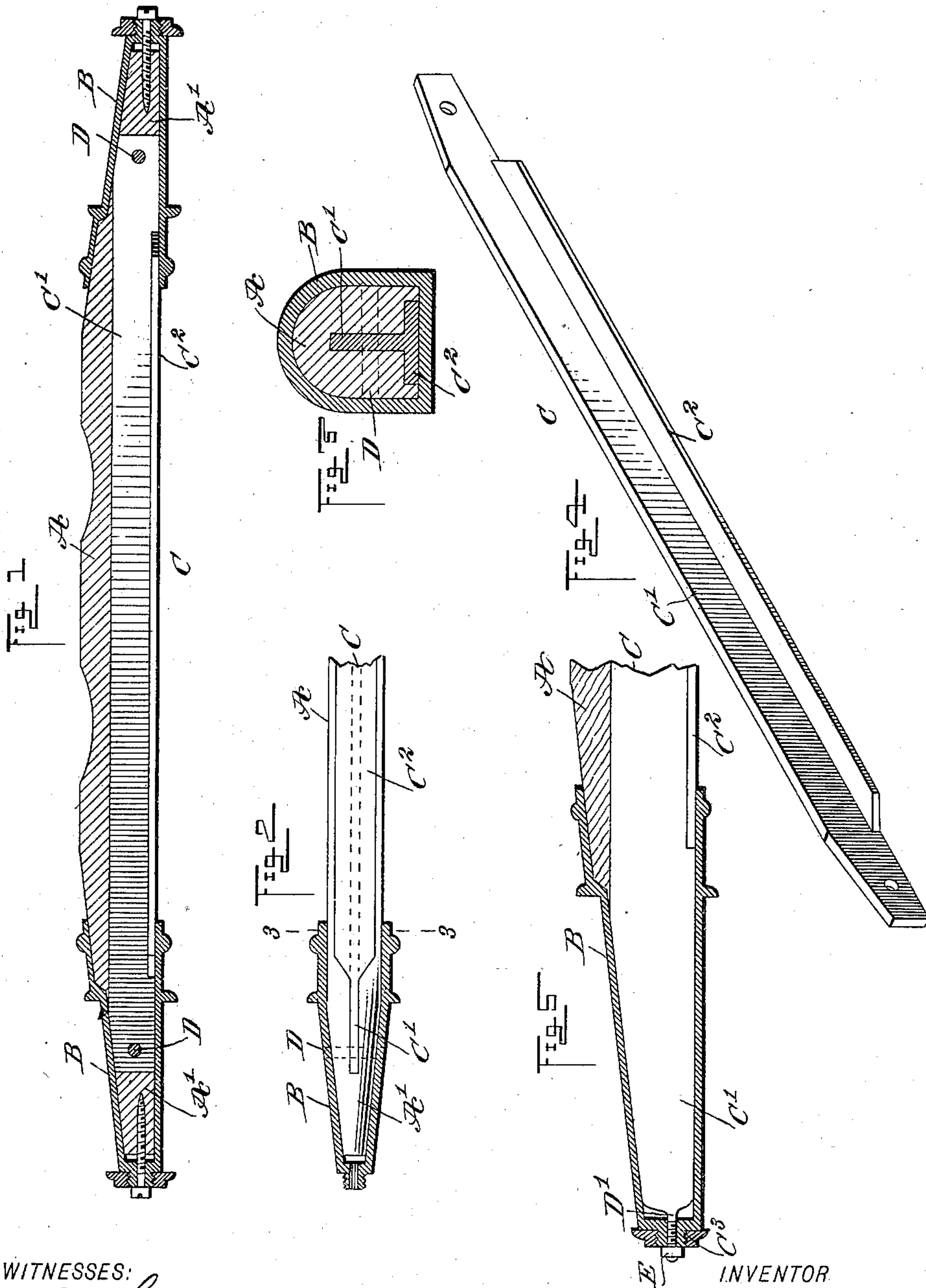
No. 731,306.

PATENTED JUNE 16, 1903.

E. A. JUDD.
AXLE.

APPLICATION FILED JUNE 2, 1902.

NO MODEL.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ETHAN A. JUDD, OF OLEAN, NEW YORK.

AXLE.

SPECIFICATION forming part of Letters Patent No. 731,306, dated June 16, 1903.

Application filed June 2, 1902. Serial No. 109,920. (No model.)

To all whom it may concern:

Be it known that I, ETHAN ALLEN JUDD, a citizen of the United States, and a resident of Olean, in the county of Cattaraugus and State of New York, have invented a new and Improved Axle, of which the following is a full, clear, and exact description.

The invention relates to thimble-skein axles used on farm and lumber wagons and other vehicles; and its object is to provide a new and improved axle which is simple and durable in construction, exceedingly strong, and arranged to resist the tendency to spring under a heavy load.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal sectional elevation of the improvement. Fig. 2 is an inverted sectional plan view of one of the skeins and part of the wooden axletree and its reinforcing-bar. Fig. 3 is an enlarged cross-section of the same on the line 3 3 of Fig. 2. Fig. 4 is a perspective view of the reinforcing-bar, and Fig. 5 is a longitudinal sectional elevation of a modified form of the improvement.

The improved axle consists, essentially, of a wooden axletree A, having tapering ends A', on which fit metallic skeins B, and in the under side of the said axletree A is fitted a reinforce-bar C, made of metal and preferably in an inverted-T shape, as plainly indicated in Figs. 3 and 4. The vertical member C' of the reinforce-bar C extends beyond the ends of the horizontal member C², as plainly indicated in the drawings, and the said vertical member C' is engaged near its terminals by transverse pins D, extending to the sides of the ends A', so as to securely hold the reinforce-bar C in position on the axletree A. The ends of the horizontal member C² extend a short distance beyond the inner ends of the skeins B, and the terminals of the vertical member C' extend in the tapering ends A' a distance about half-way of the journaled portion of the skeins B, as will be readily under-

stood by reference to Figs. 1 and 2. The under surfaces of the axletree A and the horizontal member C² are flush, and the inner faces of the bottoms of the skeins B are flat, as illustrated in Fig. 3, to properly fit the under surfaces of the said axletree A and the horizontal member C² to prevent the skeins from turning and at the same time insure a tight fit between the skeins, the ends A', and the reinforce-bar C. Now, by extending the ends of the horizontal member C² into the skeins B, as described, the axletree is greatly reinforced, as the breaking-point is usually at or near the inner ends of the skeins, and by projecting the ends of the vertical member C' into the journaled portion of the skeins the desired strength is given to the tapering ends A'. The vertical member, however, may be extended to the terminals of the ends A' and formed with reduced bolt portions D', passing through apertures in the terminals, and on the outer ends of the bolt portions screw nuts E to hold the reinforce-bar in position. (See Fig. 5.) This construction is used on heavy wagons, while the fastening device in the shape of the pin D is employed on light wagons.

From the foregoing it is evident that the axle is greatly reinforced by the employment of the reinforcing-bar C, made T shape in cross-section and arranged as described relative to the ends A' and the skeins B.

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

1. A thimble-skein axle, comprising an axletree having tapered ends, having a recess or slot extending longitudinally through a portion of said axletree, a reinforcing-bar substantially T-shaped in cross-section, adapted to be inserted in said slot, the outer face of said bar being substantially in the same plane as the outer under face of the axletree, the upper edges of the vertical member being tapered or beveled, said vertical member also having apertures in the tapered portion thereof near its extremities, axle thimbles or skeins fitting over the ends of the axletree and extending inward beyond the reinforcing-bar, the pivoted ends of the reinforcing-bar being adapted to bear upon the interior of the axle-skein at approximately the central portion

thereof, bolts or screws extending through the ends of the axle-skeins into the ends of the axletree, and studs or bolts extending transversely through the aforesaid axle-skein, the
5 axletree, and through the apertures in the ends of the reinforcing-bar, substantially as set forth.

2. A thimble-skein axle, provided with an axletree having tapered ends, and a flattened
10 under surface, said flat surface being provided with a longitudinally-extending recess, terminating some distance from the reduced end portions of the axletree, a reinforcing-bar substantially T-shaped in cross-section, the
15 vertical member of said reinforcing-bar being relatively longer than the horizontal mem-

ber thereof, the end of said vertical member being apertured near the end portion thereof, skeins or thimbles for said tree fitting over the reduced end portions thereof, and bearing
20 upon the ends of the relatively long vertical member of the reinforcing-bar, and bolts passing transversely through the axle-skein, the axletree, and the apertures in the reinforcing-bar, substantially as set forth. 25

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ETHAN A. JUDD.

Witnesses:

L. W. STOWELL,
F. L. GLEASON.