

No. 685,970.

Patented Nov. 5, 1901.

W. B. CANNON.
COUPLING DEVICE.

(Application filed May 27, 1901.)

(No Model.)

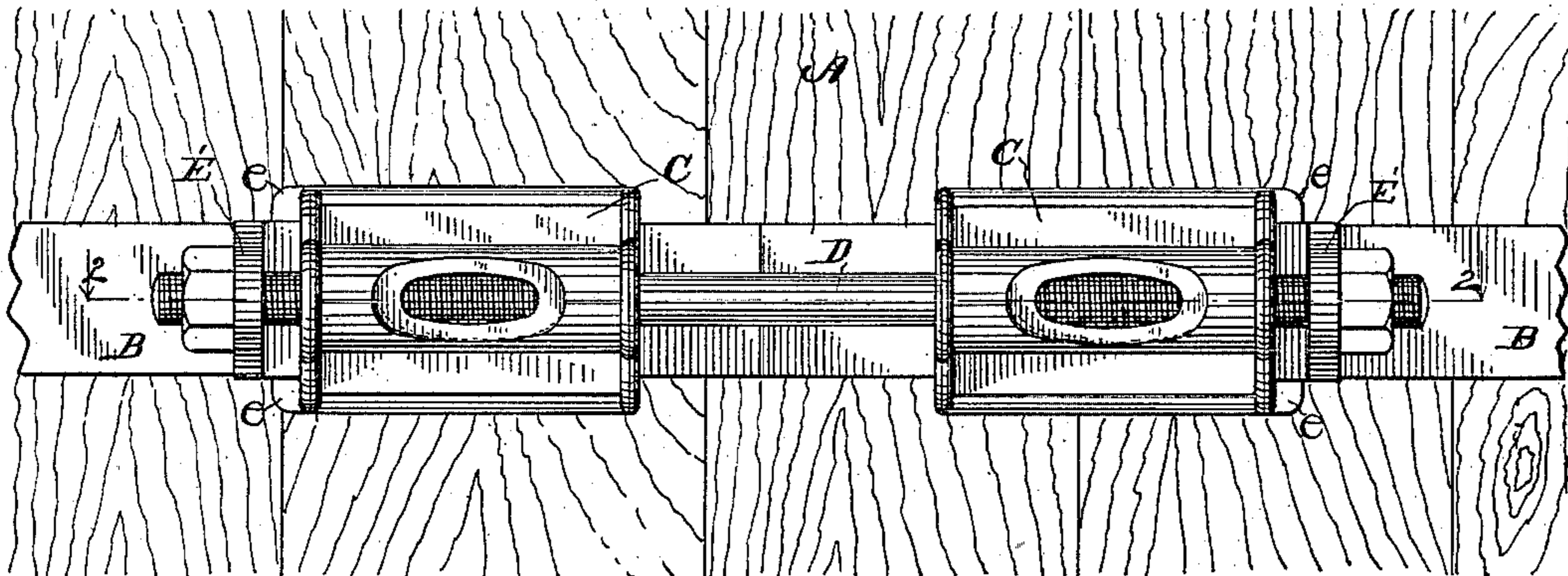


Fig. 1.

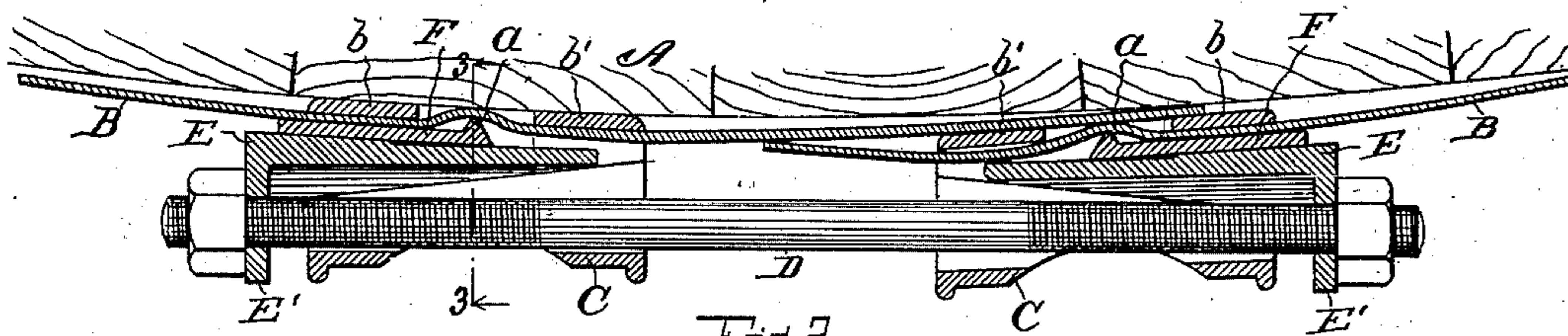


Fig. 2.

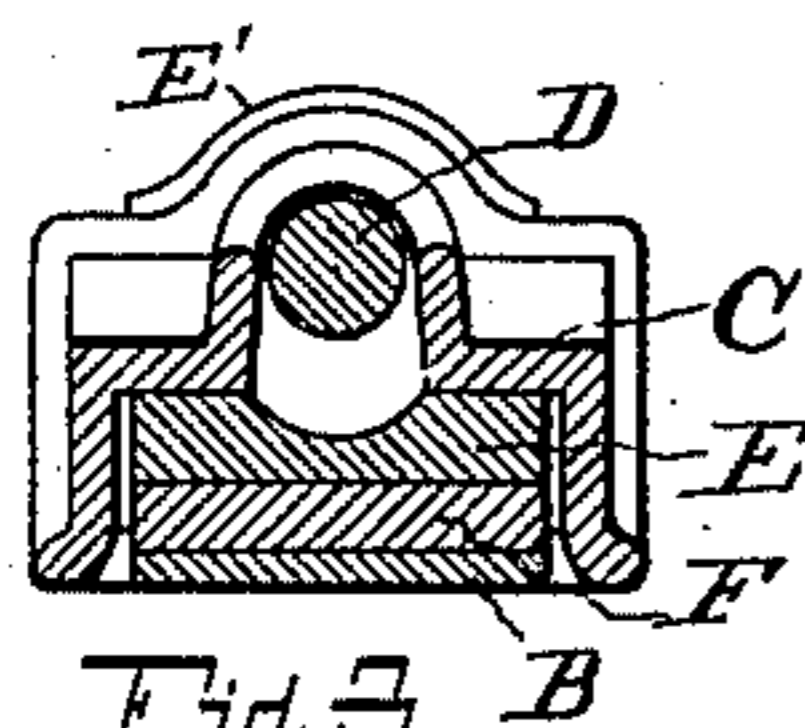


Fig. 3.

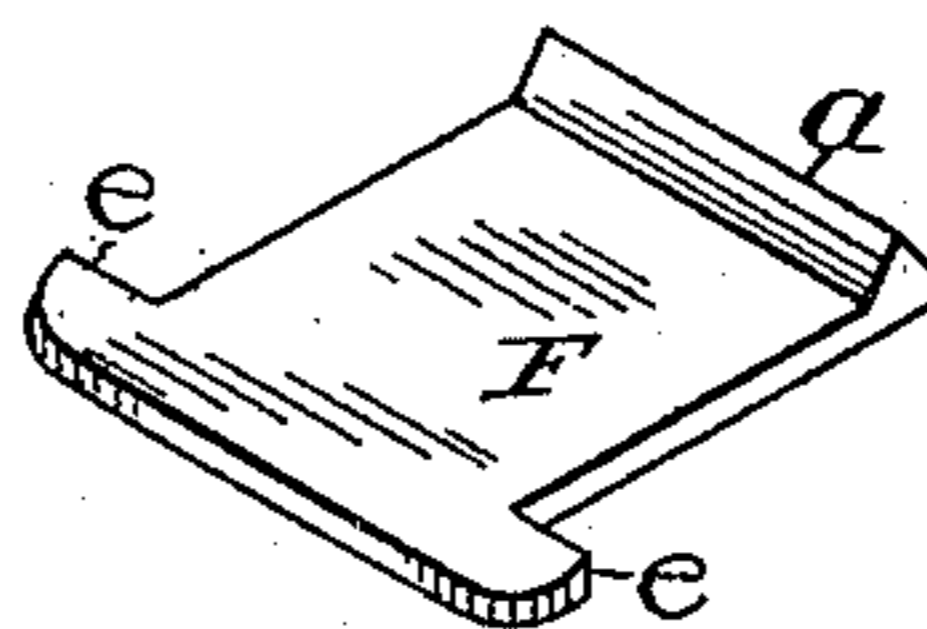


Fig. 4.

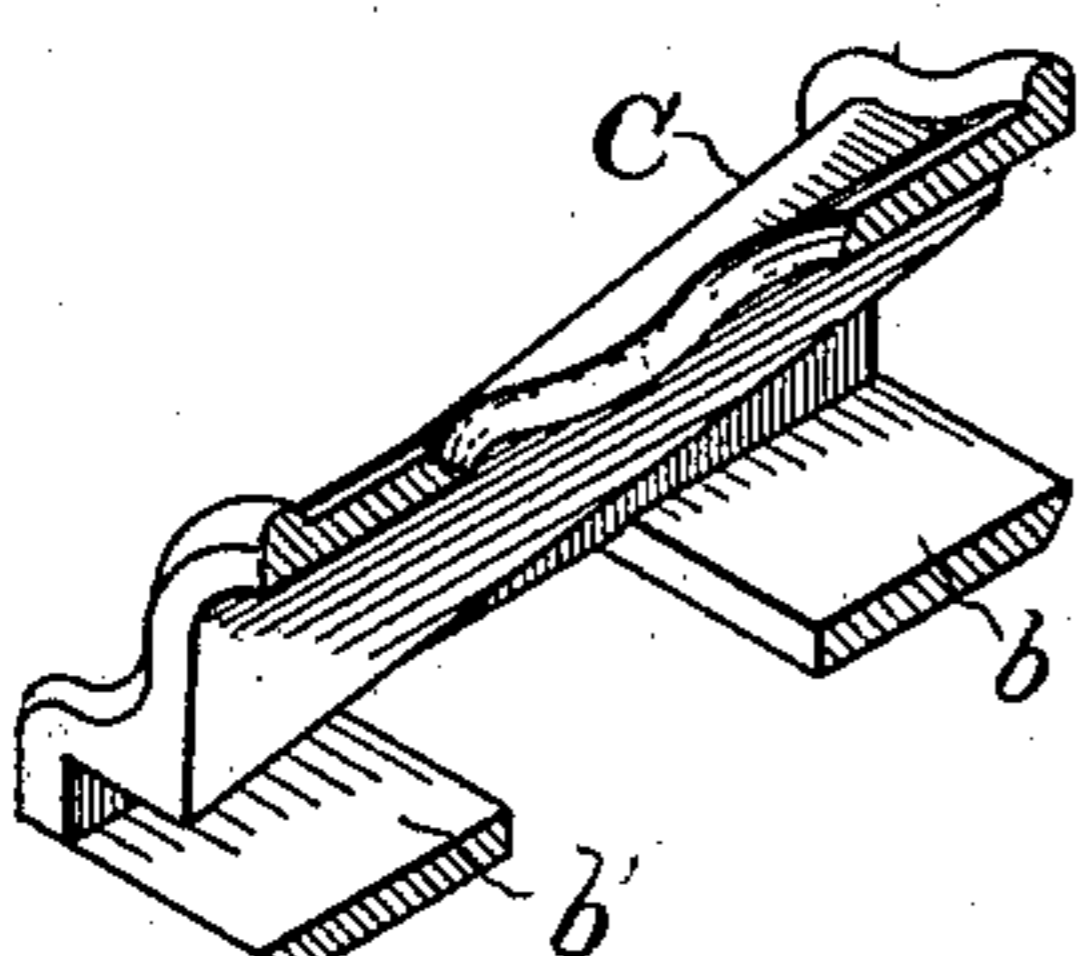


Fig. 5.

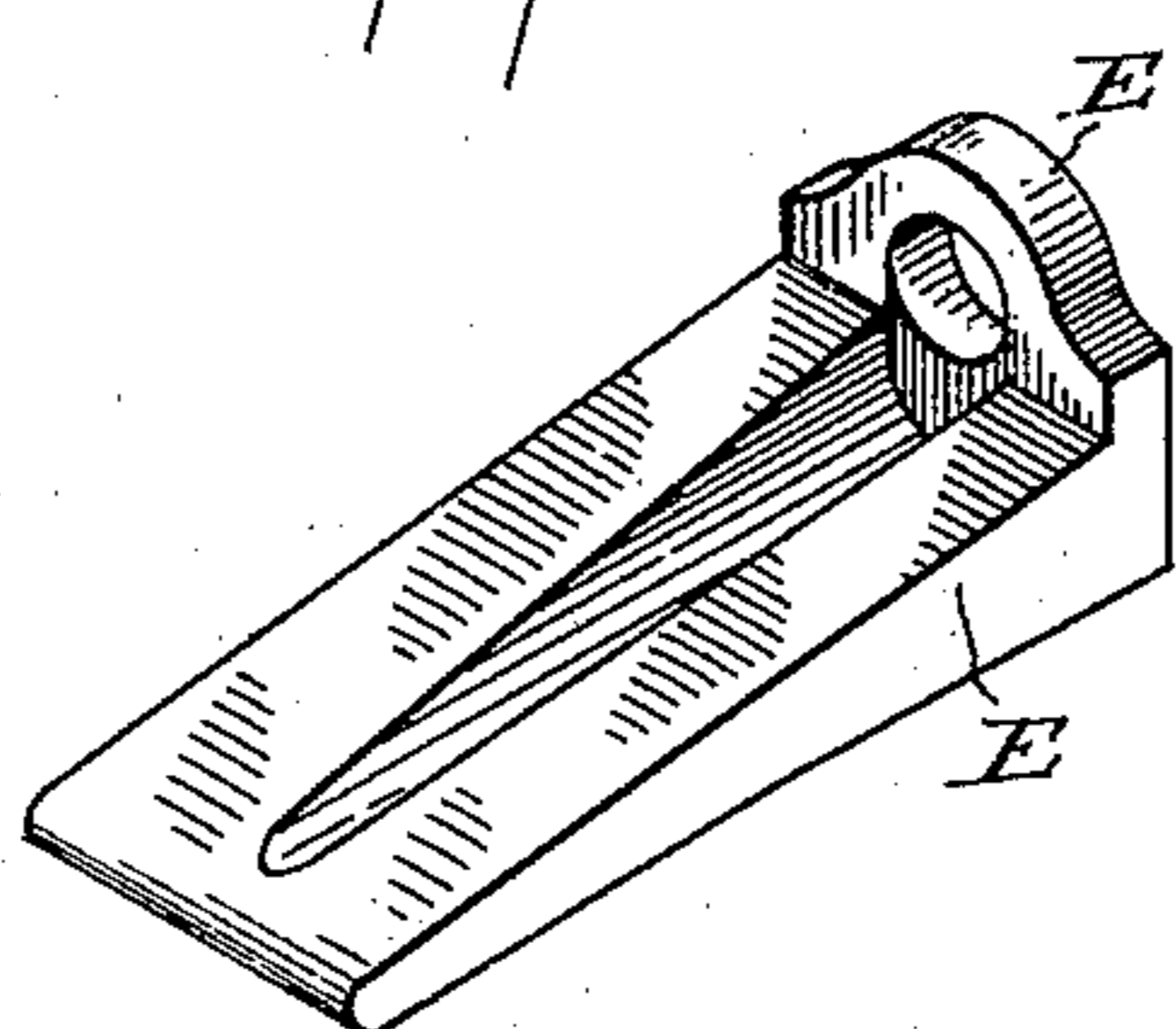


Fig. 6.

Witnesses:

Anna Sandy
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UNITED STATES PATENT OFFICE.

WARREN B. CANNON, OF KALAMAZOO, MICHIGAN.

COUPLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 685,970, dated November 5, 1901.

Application filed May 27, 1901. Serial No. 62,084. (No model.)

To all whom it may concern:

Be it known that I, WARREN B. CANNON, a citizen of the United States, residing at the city of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Coupling Devices, of which the following is a specification.

This invention relates to coupling devices for hoops or bands for large tanks and similar structures, the said coupling devices being commonly known and referred to in the trade at the present time as "lugs."

The objects of this invention are to provide a simple means for coupling the meeting ends of a hoop together in such manner that the coupling can be readily adjusted in the event that there is shrinkage of the tank or stretching of the band.

A further object is to provide such a structure which can be cast complete, except the coupling-bolt, whereby great economy in the manufacture is secured.

A further object is to provide an improved holding means which will engage the hoop in such manner that the ends may lap under fasteners, making a complete band, and which at the same time does not put unnecessary folds or kinks into the metal.

Further objects will definitely appear in the detailed description to follow.

I accomplish the objects of this invention by the devices and means described in this specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail elevation view of one of the coupling devices in position on the side of a tank or tub. Fig. 2 is a longitudinal horizontal sectional view on line 2 2 of Fig. 1 looking down. Fig. 3 is a detail cross-sectional view on a line corresponding to line 3 3 of Fig. 2 looking toward the left. Fig. 4 is a detail perspective view of one of the engaging jaws of the fastening. Fig. 5 is a detail perspective view of the wedge E, which forces the engaging jaw F into position. Fig. 6 is an enlarged perspective longitudinal view of one

of the main members C on a line corresponding to line 2 2 of Fig. 1.

In the drawings similar letters of reference refer to similar parts throughout the several views.

A is a detail of the side of a tank or tub.

B B are the meeting ends of the hoop or band, which is preferably made of steel.

My improved coupling consists of main members C C, opposite each other, which are hollow, having cross-bars *b b'*, with a transverse open space and a wedge-shaped aperture longitudinally therethrough above. Into this wedge-shaped part fits a wedge-shaped piece E, having an upturned portion at the butt-end of the wedge suitably perforated for the passage of the tie-bolt. Beneath the wedge E is a jaw-piece F, having a transverse rib *a* at its inner end and laterally-projecting ears *e e* at its outer end to engage the sides of the member C. The jaw-piece F is of such length that when inserted in the member C the transverse rib *a* is about centrally located in the space between the cross-pieces *b b'*. A bolt D, screw-threaded at each end with suitably screw-threaded nuts thereon, extends through the members C C and through the upturned portions E' E' of the wedges E.

In use the coupling members C C are slipped onto the ends B B of the band. The jaw-pieces F, positioned so that the rib *a* comes between the opening of the transverse bars *b b'* and the wedge E, is then driven into place. The action of it is to kink the bands or hoops B and force them into position against the inner side of the member C. The bolt D is then inserted and the ends turned up to draw the band tight. One end B extends under the next adjacent coupling, so that the same slides over very easily, thus enabling a strong tension to be put on the band owing to the slight resistance to the lug. Also the drawing of the bolt tends to force the wedge tighter, so that the band is firmly gripped without the necessity of especially kinking or preparing the same. When the band becomes stretched, the coupling can be loosened and the lug moved along to a new position and again fastened, or if the band is but slightly loosened it can be driven tighter on the tank or tub and tightened just as an ordinary hoop is tightened, the structure enabling this to be

readily and easily done. The transverse piece *a* on the jaw-piece *F* insures the proper contact of the hoop between the parts, so that it will be securely held.

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

1. In a coupling device for hoops, the combination of the members *C, C*, with transverse bars *b, b'*, and a wedge-shaped seat within the same; jaw-pieces *F* with transverse ribs *a* adapted to be located between the said bars *b, b'*; wedges *E* with outturned perforated flanges *E'* seated within said members; and
15 a bolt extending through the said wedges and the said members *C*, as specified.

2. The member for a coupling *C*, provided with transverse bars *b, b'*; a jaw-piece *F* with transverse rib *a* positioned between the transverse bars, *b, b'*; a wedge-shaped piece *E* with a suitable outturned perforated end, *E'* fitted in a suitable seat in the said member to clamp the jaw *F* in place and a bolt extending through the said wedge and member to draw
25 the same together, for the purpose specified.

3. In a coupling device for hoops, the combination of the members *C, C*, with transverse bars *b, b'*, and a wedge-shaped seat within the same; jaw-pieces *F* adapted to be located between the said bars *b, b'*; wedges *E* with outturned perforated flanges *E'* seated within
30 said members; and a bolt extending through

the said wedges and the said members *C*, as specified.

4. The member for a coupling *C*, provided with transverse bars *b, b'*; a jaw-piece *F* positioned between the transverse bars *b, b'*; a wedge-shaped piece *E* with a suitable outturned perforated end *E'* fitted in a suitable seat in the said member to clamp the jaw *F* in place and a bolt extending through the said wedge and member to draw the same together, for the purpose specified. 40

5. In a coupling device, the combination of opposite members *C*; independent jaw-pieces supported within the same; wedge-pieces fitting in suitable seats in said members *C* and positioned to act on the said jaw-pieces; and a bolt extending through perforations in said wedge-pieces to draw the same together, for
50 the purpose specified.

6. In a coupling device, a member *C*; an independent jaw-piece supported within the same; a wedge-piece fitting in a suitable seat in said member *C* and positioned to act on the said jaw-piece; and a bolt extending through a perforation in said wedge to put stress on the same, for the purpose specified. 55

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses. 60

WARREN B. CANNON. [L. S.]

Witnesses:

S. ALICE EARL,
OTIS A. EARL.