No. 695,460. Patented Mar. 18, 1902.

B. G. JAYNE.

HOOP FOR BARRELS, &c.

(Application filed Mar. 13, 1901.)

(No Model.)

Fig 1.

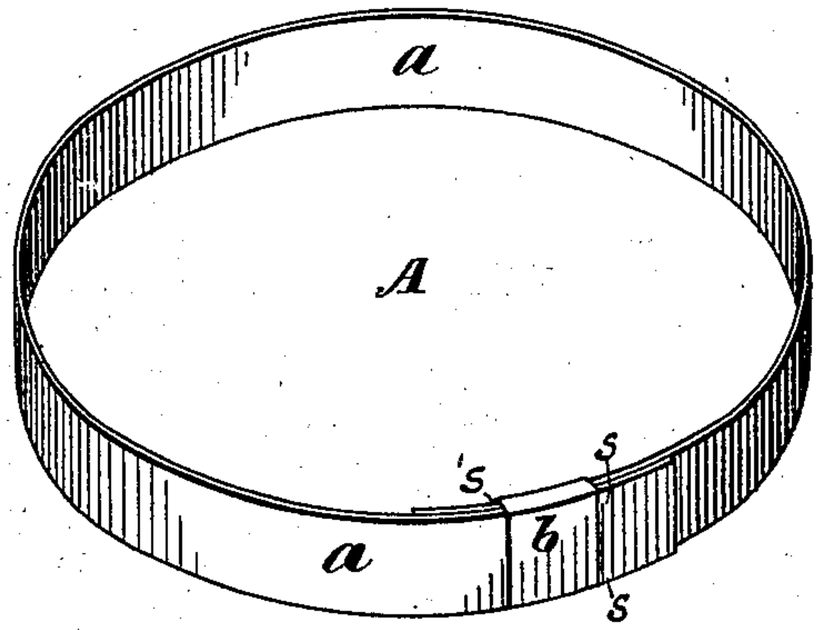


Fig 2.

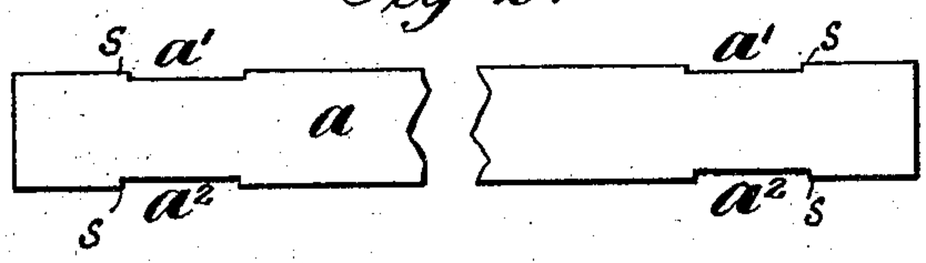


Fig 2a

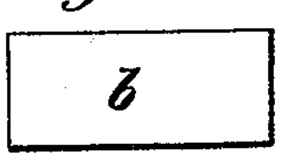


Fig 3.

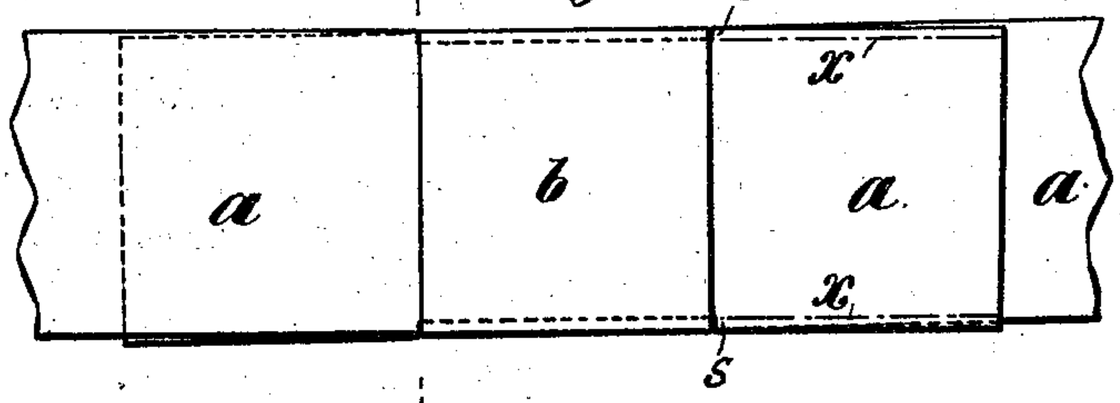
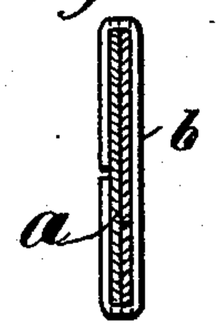


Fig 4.



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UNITED STATES PATENT OFFICE.

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HOOP FOR BARRELS, &c.

SPECIFICATION forming part of Letters Patent No. 695,460, dated March 18, 1902.

Application filed March 13, 1901. Serial No. 50,934. (No model.)

To all whom it may concern:

Be it known that I, BENAIAH G. JAYNE, a citizen of the United States, and a resident of New York city, county and State of New York, have invented an Improved Hoop for Barrels or the Like, of which the following is a specification.

My invention relates to metal hoops for barrels and the like, and has for its object to provide a joint for the ends of a band forming the hoop that shall be as strong as any other part of the hoop in resisting the pressure from within or strain from the hoop-driving machine.

My improved hoop is formed complete from two blanks, both preferably cut from the same strip or band of metal of uniform thickness without riveting or other like method of fastening that so materially weakens a finished hoop.

In the accompanying drawings, Figure 1 represents in perspective a finished hoop made according to my invention. Figs. 2 and 2^a represent the blanks from which this hoop is made. Fig. 3 is a side view of the hoop at the joint of the overlapping ends drawn to a larger scale, and Fig. 4 is a section on line 4 4 of Fig. 3.

The complete hoop A, Fig. 1, consists of a band *a*, provided with shoulders *s* near each end at each edge, and a strap *b*, the band having its ends overlapped to such an extent that when the strap is clamped around the ends the edges of the strap abut against the said shoulders *s* and prevent the ends of the band from being pulled apart. While the said band may be shouldered in any suitable way, the preferred construction is shown in Fig. 2. The blank *a*, forming the hoop proper, is provided with shallow rectangular recesses or rabbets a' a^2 near each end, the two recesses a' on one edge of the band being slightly nearer together than the two recesses a^2 on the other edge, whereby when the band *a* is bent round and its ends overlapped, so that the recesses a' a^2 at one end coincide with the recesses a' a^2, respectively, at the other end, one edge of the hoop is smaller around than the other edge, so that the finished hoop may conform to the bilge of a barrel or the like.

As shown in Figs. 1, 3, and 4, the strap *b* is bent around the overlapped ends of the band *a* at the recessed portions. These recesses are cut to a length equal to the width of the strap *b*, which strap is thus housed, and the abutting of the edges of the strap against the shoulders at each end of each recess prevents any lateral movement of the ends of the hoop-band either way. Preferably the recesses are of a depth equal to the thickness of the metal used, so that the strap *b* is flush with the hoop at the top and bottom edges thereof, as shown in Fig. 3.

In bending the straps around the hoop ends the metal is clamped tightly, which helps to bind together the two ends of the hoop. The strap *b* is preferably cut to such a length that its ends meet, or nearly so, and the meeting-point is placed on the inside of the hoop, so that when the hoop is in position on the barrel the strap cannot become loosened by accident.

Referring to Fig. 3, an internal strain necessary to pull the ends of the band apart after the strap *b* is clamped on would have to be great enough to shear off the metal of the band *a* at the shoulders *s*, as indicated by the broken dotted lines *x*, or to cut the band *b* completely across its width at the top and bottom edges of the hoop.

Although the band *a* is slightly narrowed at its ends by the recessing, the strap *b* reinforces these narrowed portions and, as shown by severe tests made, the joint is in reality the strongest part of the hoop.

I am aware that barrel-hoops have been made of wooden strips joined by metal bands bound tightly enough to sink into the wood; but such binding has not constituted the entire joint, as rivets must also be used. In wooden hoops the quality that allows the metal binding to sink into the material of the hoop would permit the binding to cut through to the end of the hoop unless prevented from being moved by rivets or similar devices. Moreover, wooden hoops must be made wedge-shaped in cross-section or beveled on the inner side to conform to the bilge of the barrel.

With my invention a strong hoop is made in a very simple manner entirely from a sin-

gle strip of material of uniform thickness, the joint depending upon the resistance to shearing strains of the material used and the necessity for beveling avoided by the peculiar situation of the recesses.

I claim as my invention—

1. A hoop for barrels, casks or the like, consisting of two metal bands, one having its ends overlapped to form the hoop proper, and the other being clamped around the overlapping ends, the hoop-band being provided with shoulders near each end and on each edge thereof, the shoulders on one edge being nearer together than the shoulders on the other edge, whereby when the clamping-band is housed between the shoulders on the opposite ends of the band the hoop is larger around at one edge than at the other.

2. A hoop for barrels, casks or the like, comprising two metal bands, one having its ends overlapped to form the hoop proper, and the other being clamped around the overlapping ends, the hoop-band being provided with shallow recesses near each end and on each edge thereof, the recesses on one edge being situated nearer together than the recesses on the other edge, substantially as described.

3. A hoop for barrels, casks or the like, formed entirely from a strip of metal of uniform thickness, cut into two blanks, one provided with recesses equal to the width and thickness of the strip of metal, near each end and at each edge of the band, the recesses on one edge being situated nearer together than the recesses on the other edge, the said blank being bent round and the ends overlapped until the recesses coincide, and the other blank being clamped around and housed in the said recesses, whereby the ends of the first blank are tightly joined, the joint is flush with the hoop-band at the top and bottom edges, and the said hoop-band is larger around at one edge than at the other.

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

BENAIAH G. JAYNE.

Witnesses:

EDITH SARLES,

EDITH J. GRISWOLD.