(No Model.)

# G. T. CHESTER.

## HOOP.

No. 464,554. Patented Dec. 8, 1891.

Fig. 1.

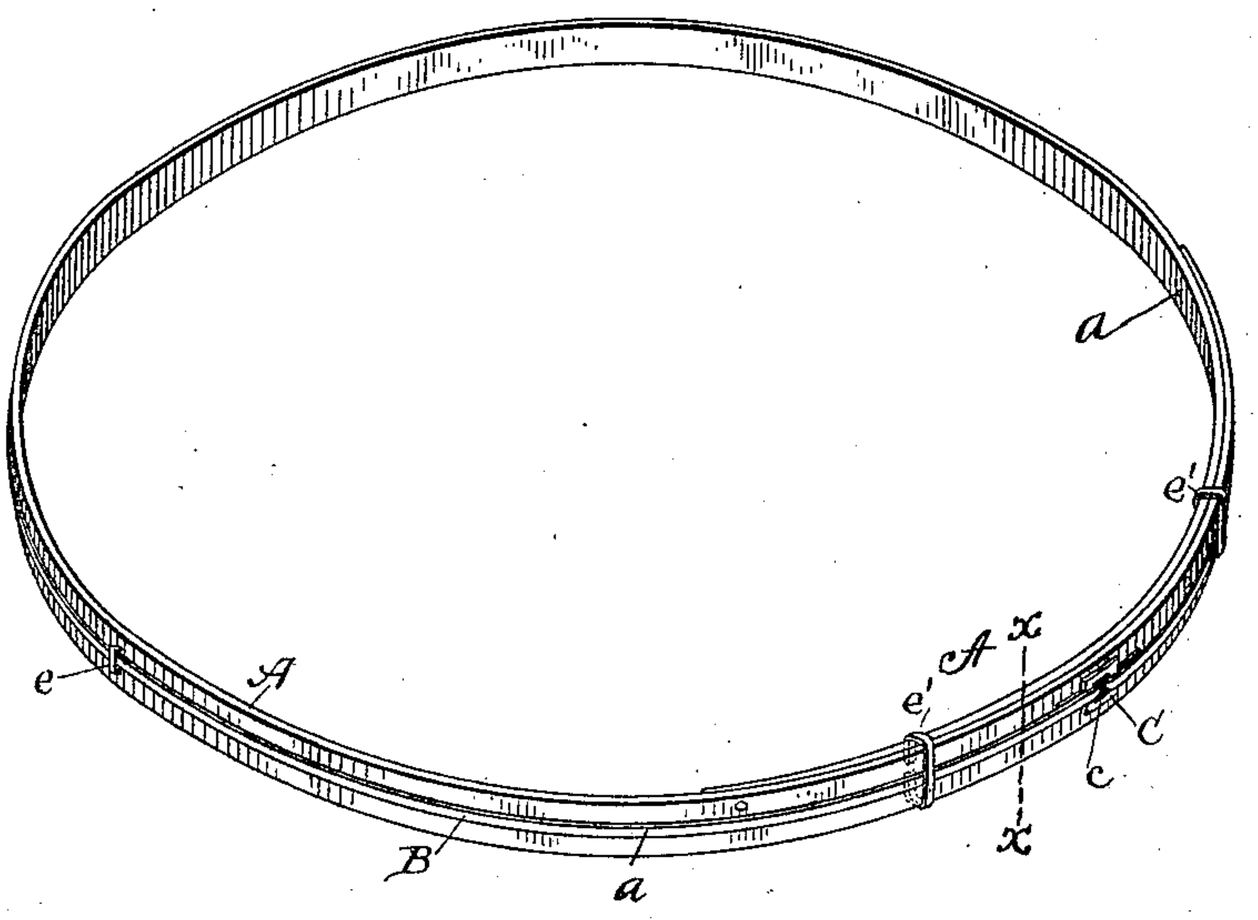



Fig. 2.

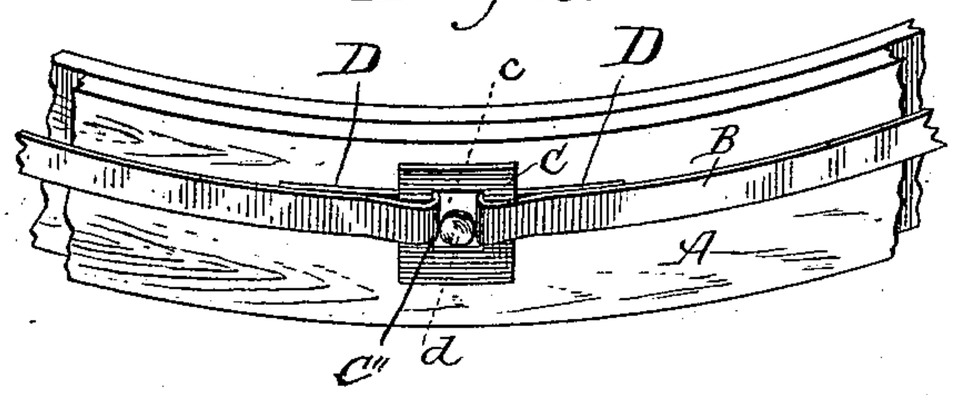



Fig. 3

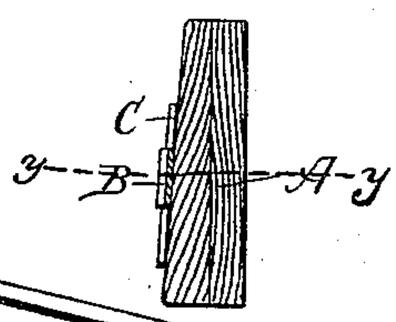



Fig. 4.

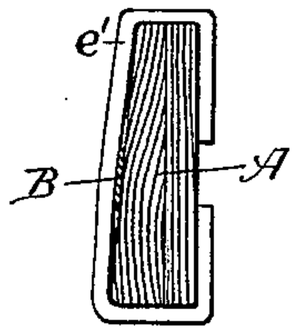
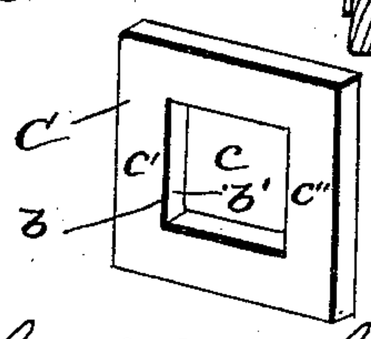



Fig. 5.

Fig. 6.



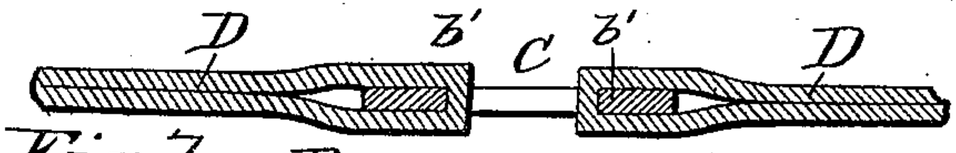




Fig. 7. B.

Witnesses
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# UNITED STATES PATENT OFFICE.

GEORGE T. CHESTER, OF LOCKPORT, NEW YORK.

## HOOP.

SPECIFICATION forming part of Letters Patent No. 464,554, dated December 8, 1891.

Application filed March 28, 1889. Serial No. 305,090. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE T. CHESTER, a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented a new and useful Improvement in Barrel-Hoops, of which the following is a specification.

This invention has general reference to improvements in compound barrel-hoops—that is to say, a wooden barrel-hoop surrounded by a metallic re-enforcing band, whereby the wooden hoop in virtue of its elastic qualities enables the retention of the same upon a barrel, while the metallic band resists the strain upon the hoop when forced upon said barrel.

It is a well-known fact that wooden barrel-hoops are too weak to stand the strain and wear upon barrels, especially so when the latter are subject to considerable strain, rough usage, or lengthy shipments, while metallic hoops are objectionable owing to their becoming loose from various causes, such as changes in temperature, their smoothness, which prevents them from being retained by frictional contact, and other obvious causes. To overcome these objections I construct my compound wooden and metallic hoop substantially as shown in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved hoop. Fig. 2 is a fragmentary perspective view thereof, on an enlarged scale, showing the fastening whereby the ends of the strengthening-band are united. Fig. 3 is a cross-section of the hoop, taken in line *x x* of Fig. 1. Fig. 4 is a cross-section of the hoop, showing the staples or clasps whereby the strengthening-band is held on the hoop. Fig. 5 is a cross-section of an ordinary grooved barrel-hoop having a round wire band. Fig. 6 is a perspective view of the clasp or buckle which unites the ends of the strengthening-band. Fig. 7 is a transverse section in line *y y* of Fig. 3.

Like parts are designated by corresponding letters of reference in all the figures.

A designates the usual flat wooden hoop, the ends of which are slightly tapered, as shown at A′ in Fig. 1, so that when the hoop is driven upon a barrel (not shown) it will bear with its inner surface as perfectly as possible upon the outer surface of said barrel. This hoop has its ends A′ temporarily secured together by a nail *a*, Fig. 1, so as to prevent it from collapsing before being placed in position. Upon the outer surface of this hoop A is placed a metallic re-enforcing band B, made preferably from band-iron of less width than the hoop A, and having its two ends passed through a buckle C and doubled upon themselves, as shown at D, with the free ends bearing upon the wooden hoop A, whereby no other fastening—such as rivets, nails, &c.—is required to hold the metallic band to the buckle, and whereby at any time the metallic band may be lengthened and shortened without drawing such rivet. This construction has the further advantage that the metallic band is not weakened by any holes, thereby enabling me to use a narrower band than would be required, for the reason that the band is naturally not stronger than at its weakest point.

The buckle C consists of a rectangular plate having an oblong opening *c*, thereby producing two bars C′ C″, around which the ends of the metallic band are passed. These bars being flat with their inner edges *b b′* sharp and well defined and the band ends being sharply bent around these bars, the fastening will so securely lock the two ends of the band that no slipping can take place. To retain the band upon the hoop I may use either staples *e′*, as shown in Fig. 1, embracing the band and hoop, or simply staples *e*, embracing the band only and clinched in the hoop, as shown at the left of Fig. 1, while to prevent displacement of the buckle C a nail *d* or other suitable fastening may be driven through the central opening *c* in the buckle C, as illustrated in Fig. 2. By thus constructing my compound barrel-hoop and re-enforcing band I have overcome all the objections heretofore existing in wooden and metallic bands.

I have heretofore mentioned that the ends of the hoop A are temporarily secured by a nail *a*, which may be pulled before the hoop is driven upon the barrel, though its retention thereon does not prevent the said ends A′ from sliding upon each other when driven upon the barrel and to expand readily when thus manipulated. It will thus be seen that while the wooden hoop is elastic and capable of ex-

panding when forced upon the barrel the metallic band is non-yielding and will take the strain of the compound hoop, thus distinguishing my invention from others where a simple metallic band is used as a hoop, or where a wooden non-adjustable and non-expansible band surrounds a metallic cask, and where a metallic re-enforcing but also non-adjustable band encircles the wooden hoop, as shown in the German patent No. 2,519, or a wooden hoop having a wire re-enforcing ring, as illustrated in Fig. 5. In this latter case the tendency of the wire is to force itself into the wooden hoop, and thereby to split the same, thus defeating its object of re-enforcing the hoop, and to destroy the same.

Having thus fully described my invention, I claim as new and desire to secure to me by Letters Patent of the United States—

As an improved article of manufacture, a compound barrel-hoop consisting of a wooden hoop having both its ends tapered and overlapping one another, as described, and a metallic re-enforcing band of less width than the wooden hoop and surrounding the latter, said metallic band having its ends passed through an opening in a buckle-plate and doubled upon themselves, whereby said band is rendered adjustable and held in position by a fastening driven through the opening in said buckle, as described.

Witness my hand this 9th day of March, 1889.

GEORGE T. CHESTER.

Witnesses:
JNO. J. BONNER,
FRED. C. GEYER.