

(No Model.)

J. LEACH.
BARREL HOOP FASTENER.

No. 534,270.

Patented Feb. 19, 1895.

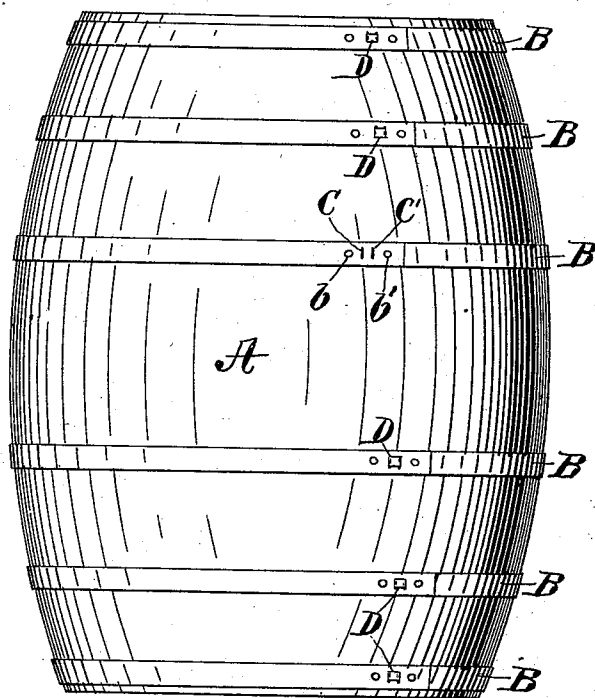


Fig. 1.

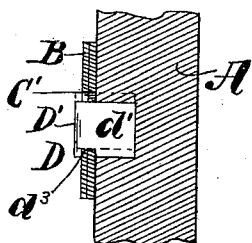


Fig. 2.

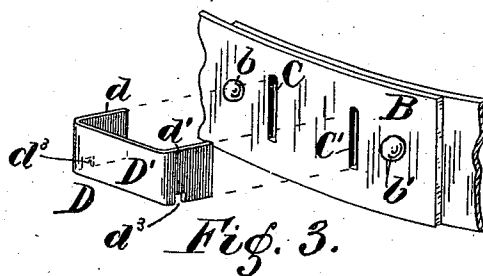


Fig. 3.

Witnesses,
T. F. Many
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Inventor,
Joseph Leach
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UNITED STATES PATENT OFFICE.

JOSEPH LEACH, OF INDIANAPOLIS, INDIANA.

BARREL-HOOP FASTENER.

SPECIFICATION forming part of Letters Patent No. 534,270, dated February 19, 1895.

Application filed July 25, 1894. Serial No. 518,514. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LEACH, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Barrel-Hoop Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide means whereby the hoops of tubs, barrels, and similar articles may be secured so they will not drop off when loosened by the shrinking of the staves, and to provide a fastening that will permit the hoops to be tightened by driving them on farther when they become loose, without the necessity of removing the fastening.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which--

Figure 1 is a view in side elevation of a barrel of common form provided with my improved hoop fastener upon all of the hoops except one of the upper hoops in which the fastener is omitted to show the slots through which the fastener will be projected into contact with the staves; Fig. 2, a detail in side elevation of a portion of a stave showing a hoop and my fastener applied thereto, the stave and hoop being shown in vertical section; Fig. 3, a detail in perspective of that portion of a hoop where the ends are lapped and riveted together, and shows the transverse slots through the hoop and the spur which will be projected through the slots, but in the drawings said spur is shown removed from the hoop and in position preparatory to insertion in the direction indicated by the dotted lines leading from the spur to the slots in the hoop.

Similar letters refer to like parts throughout the several views of the drawings.

A represents a barrel of common form and made of wood with staves to form the sides in the usual way.

B represents the hoops which will be of common form and material and will be made

into a circle by overlapping the ends and joining them together by means of the rivets *b* and *b'*, in the usual manner.

C and C' are transverse slots extending through both thicknesses of the hoop and will be made only at the point where the overlapping of the ends has doubled the strength of the hoop.

D, is a fastener made of a strip of metal having both of the ends bent parallel with each other and at right angles to the body of the fastener. These two ends *d* and *d'* form spurs and are a distance apart equal to the distance between the transverse slots C and C' of the hoop.

The hoops in the construction of the barrel or other vessel, will be driven down into the place they are designed to occupy on the vessel, and then the spurs of the fastener, will be introduced through the slots C and C' and will be driven into the wooden stave within, until the body portion D' is in contact with the hoop.

When the hoop becomes loosened by the shrinking of the staves the fastener will hold the hoop up in position and the widest dimensions of the spurs being in the direction of the grain of the wood in the stave will enable the hoop to be driven more tightly onto the barrel without removing the fastener because the spurs will be able to separate the grain of the stave sufficiently to allow the passage of the spurs, after which, on the swelling of the wood, the unoccupied part of the old channel will come together so as to prevent the spurs from dropping back or becoming loose; but for still greater security in the maintaining of the fastener in position I have provided the notches *d³* in one edge of each of the spurs next to the body portion into which the hoop will enter after the fastener is in place and will effectually prevent the accidental removal of the fastener. This notched construction while affording more security, is not essential and therefore I do not wish to limit my construction to the use of same.

By making the transverse slots at the overlapping ends of the hoop and between the rivets I am able to avoid any weakening of

the strength of the hoop such as would follow if the slots were made at any other point through the single thickness of same.

I am aware that hoops have been perforated for different purposes, but not in the manner and at the point indicated, nor for the purposes I have here set forth.

In practice I will prefer to punch the transverse slots at the same time the holes for the rivets are made, which can readily be done and at practically no additional labor or expense by using a suitably constructed die.

I am aware that wire staples with barbed points, nails, and fasteners made with prongs have been used to fasten the ends of hoops together and also to secure hoops to the vessels, and such constructions I do not claim as my invention, but

What I do claim as new, and wish to secure by Letters Patent of the United States, is—

1. The combination, with a vessel having sides constructed of wooden staves, of metal hoops having their ends overlapped and secured by two horizontally aligned rivets, transverse slots through the hoop through the double portion between said rivets, and a fastener having as many spurs as there are slots

in the hoop, said spurs being thin and wide like a knife blade and flat, and having the greatest width in the direction of the grain of the staves and adapted to be inserted through the slots into the staves, in the manner substantially as described and for the purposes specified.

2. The combination, with a wooden vessel, of hoops having one or more transverse slots, and a fastener having a body portion and a plurality of spurs integral therewith, said spurs being adapted to be inserted through the slots into the stave and being broad and thin like the blade of a knife and widest in the direction of the grain of the stave for the purposes specified, and said spurs each having a notch to engage the hoop when the fastener is in place upon the barrel, all substantially as described and for the purposes set forth.

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

JOSEPH LEACH.

Witnesses:

JOSEPH A. MINTURN,
L. J. COLLINS.