

F. X. PFLUGER.

BARREL HOOP.

APPLICATION FILED OCT. 4, 1909.

970,107.

Patented Sept. 13, 1910.

Fig. 1.

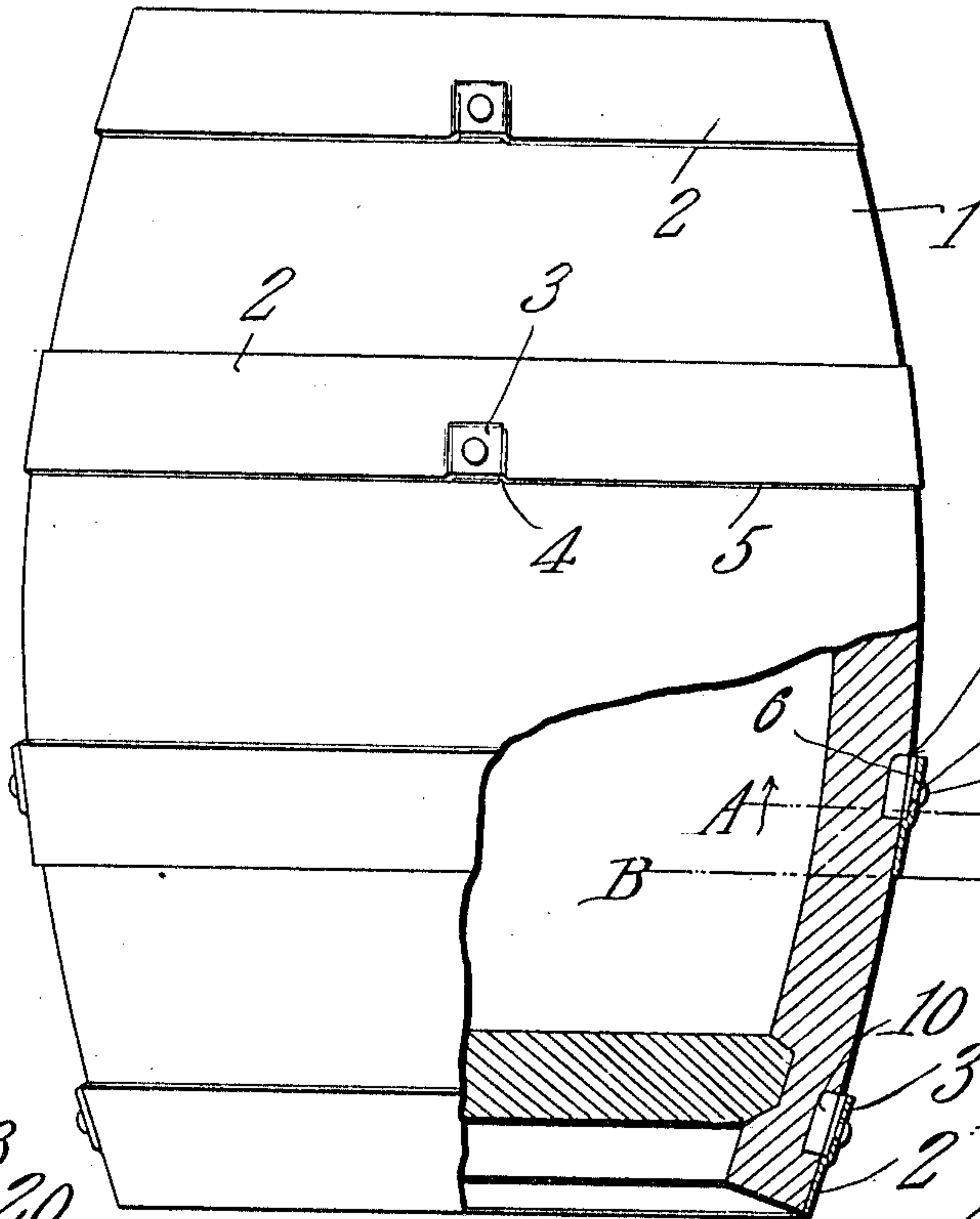


Fig. 6.

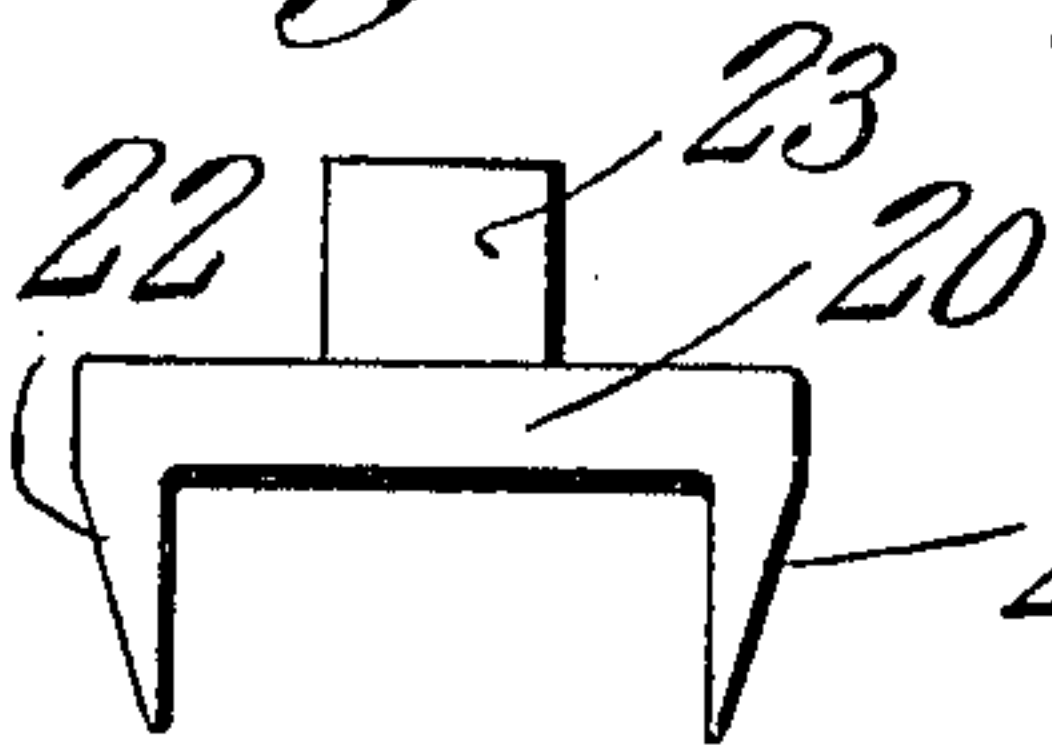


Fig. 2.

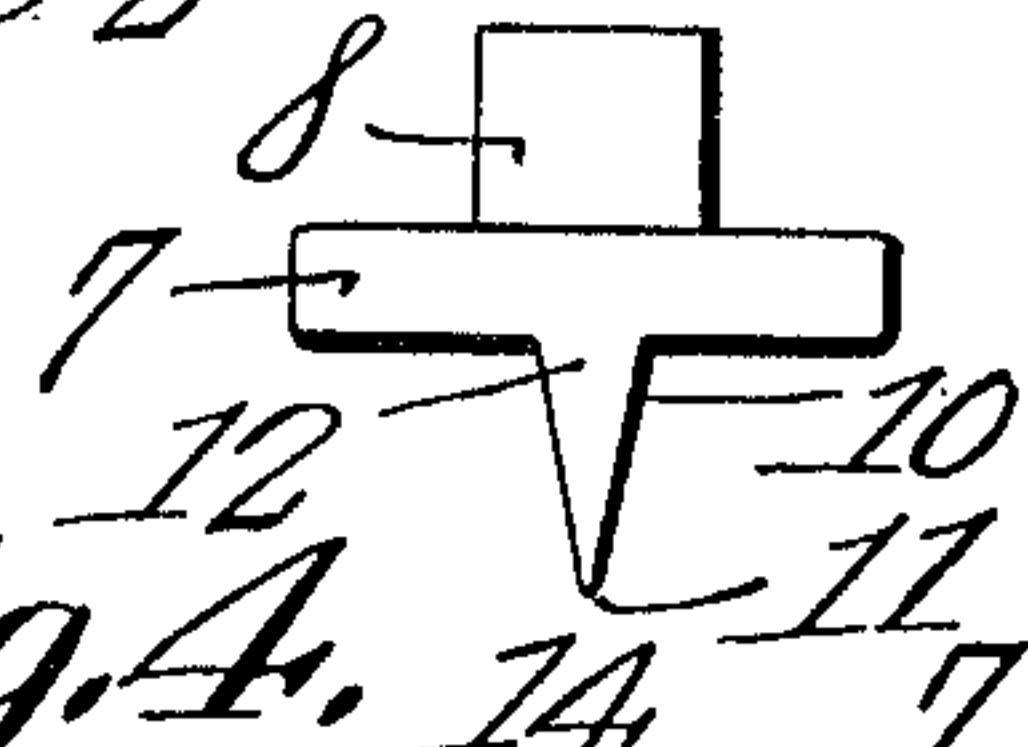


Fig. 8.

Fig. 5.

Fig. 4.

Fig. 3.

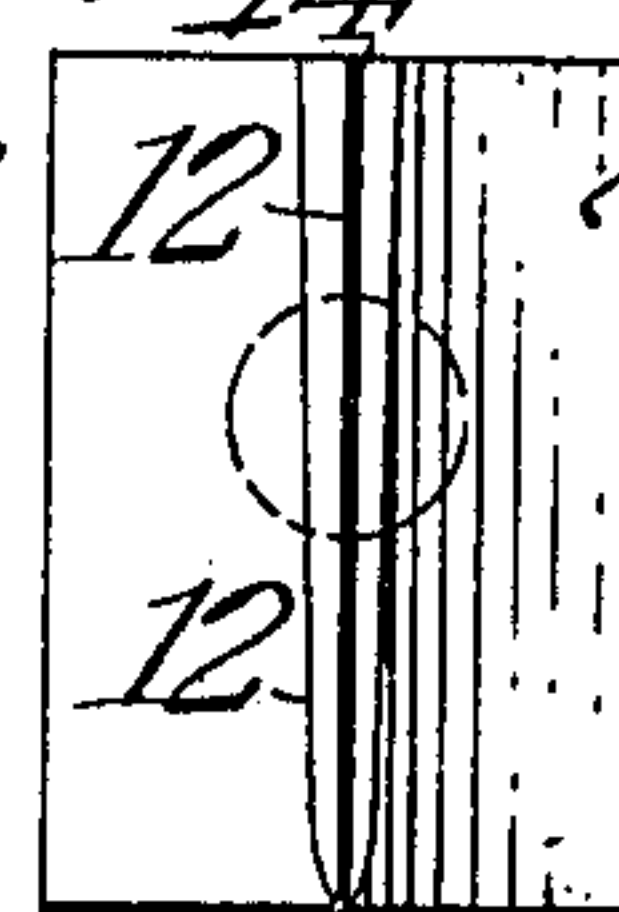
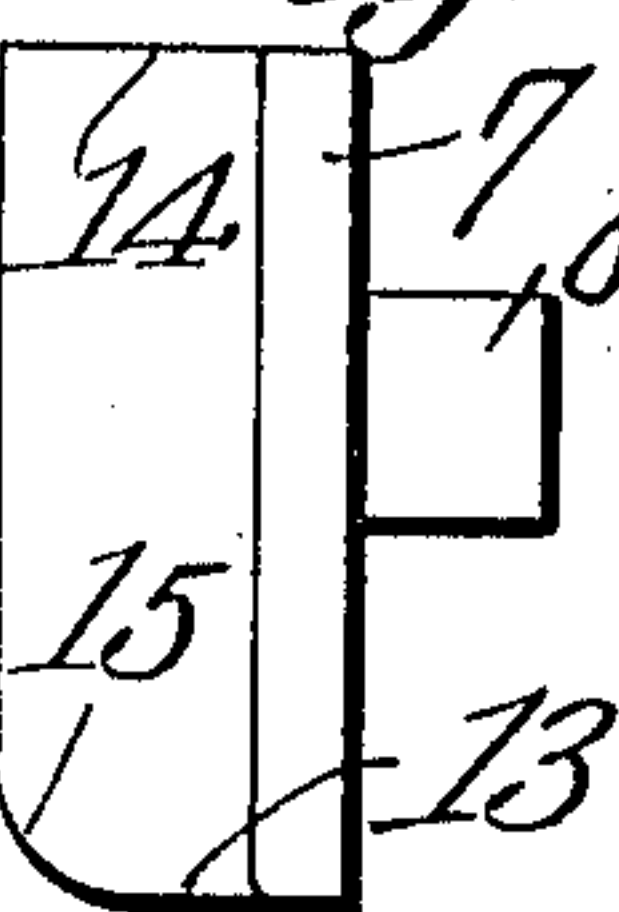
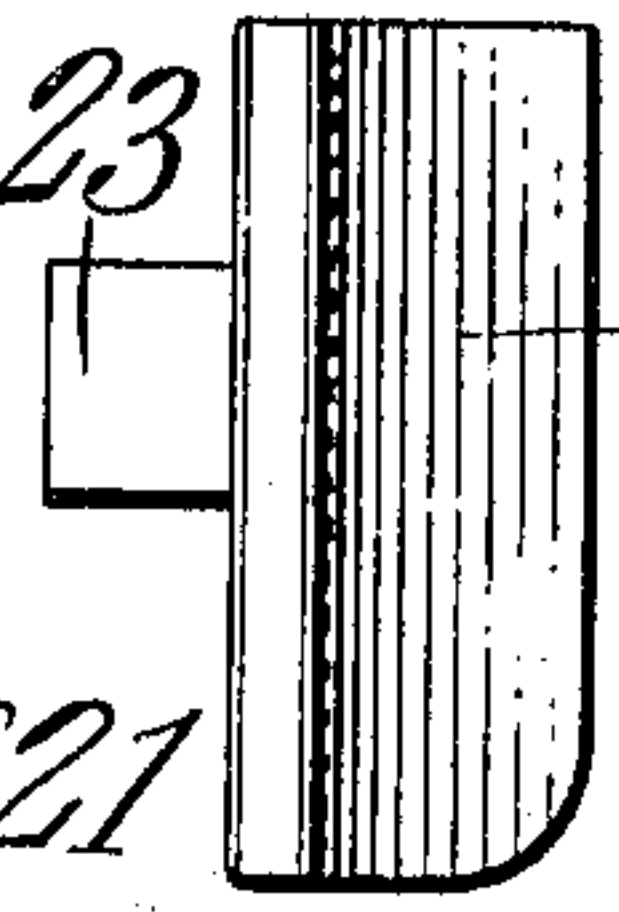
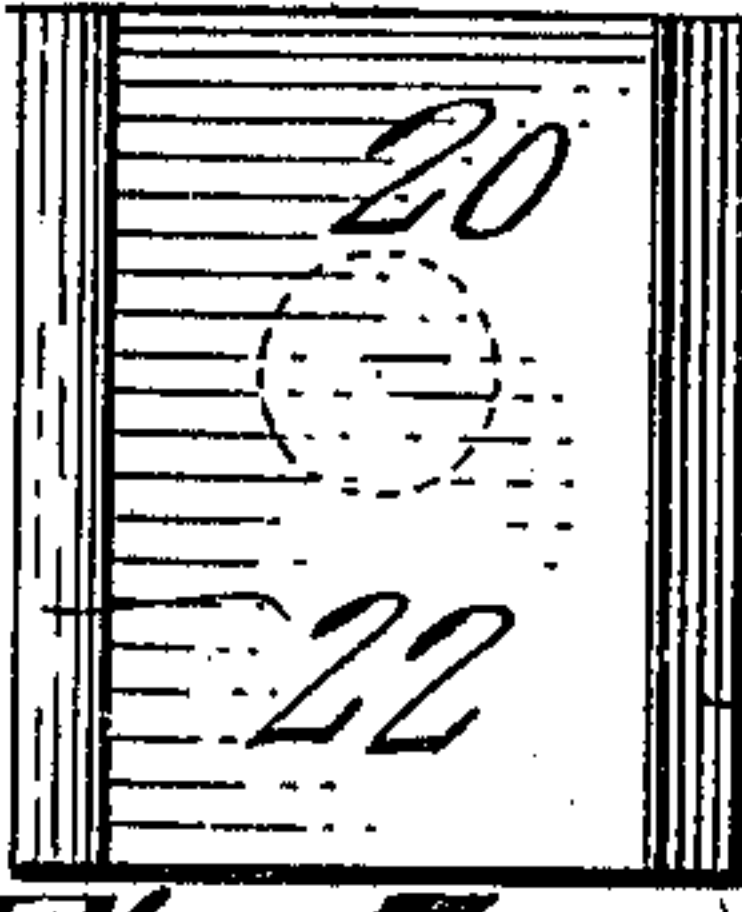


Fig. 7.

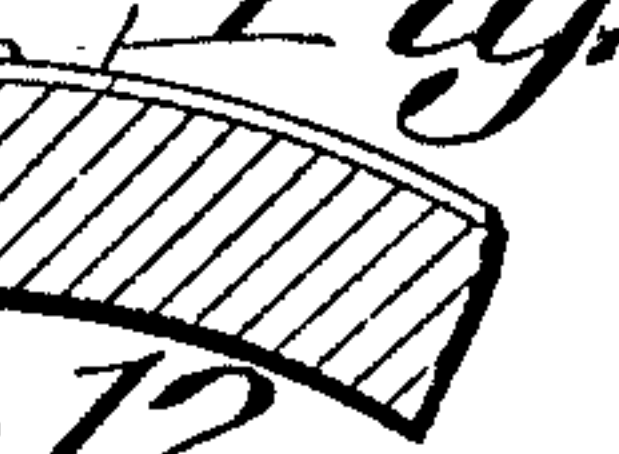
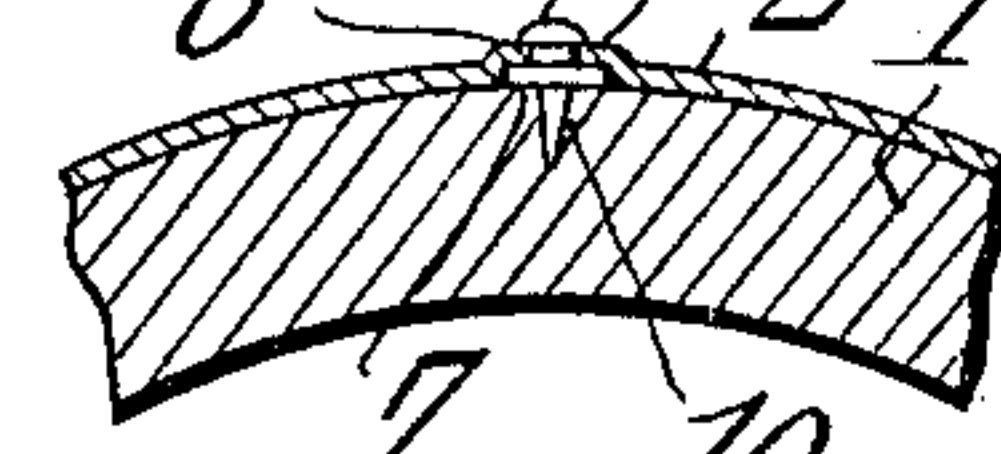
Fig. 11.

Fig. 10.

Fig. 9.

Fig. 12.

Fig. 3.



Witnesses

*E. J. Kavanagh*

Francis Boyle

Inventor

*Frank X. Pfuger*

By

*C. A. Snow & Co.*

Attorneys



# UNITED STATES PATENT OFFICE.

FRANK X. PFLUGER, OF PORTLAND, OREGON.

BARREL-HOOP.

970,107.

Specification of Letters Patent. Patented Sept. 13, 1910.

Application filed October 4, 1909. Serial No. 520,823.

*To all whom it may concern:*

Be it known that I, FRANK X. PFLUGER, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Barrel-Hoop, of which the following is a specification.

My invention relates to barrel hoops and has for an object to provide a device of this character which may be easily placed in operative position and will be positively held against accidental disengagement when so placed.

Another object is to provide a device of this character which will be held against bouncing off the barrel or keg when being applied thereto.

A still further object is to provide a device of this character which will have no projections to tear the clothing of the person handling the keg or to impede the operation of the hoop driving machine.

The usual form of hoop fastener is an L shaped tack driven after the hoop has been applied and with its laterally extending head clenched over the exposed surface of the hoop. This form of fastener or keeper can not be applied to the end hoops of a barrel as there is not sufficient support for a nail to be driven, nor is it of any consequence when the barrel shrinks and the hoops are driven farther, since the keeper must be removed and replaced with a new one to secure the hoop in its new position. Furthermore, when kegs are being shipped in dry weather a sufficient shrinkage will take place to permit the hoops to fall off over the keeper and allow the kegs to fall to pieces. To obviate these disadvantages my present invention employs a hoop provided with a plurality of bottomless sockets disposed adjacent its leading edge in each of which is secured a keeper having a knife blade, tapering from its leading edge to its following edge, which will move with the hoop as it is advanced and will wedge in the exposed surface of the staves so as to permit the hoop to be advanced as the keg shrinks yet will bind and hold the hoop stationary at its limit of advancement whereby to positively prevent the hoop from backing off regardless of how badly shrunk the keg may have become.

With the above advantages and other ob-

jects in view which will appear as the description proceeds my invention embraces certain novel details of construction and combination of parts which will be hereinafter more fully described and claimed.

In the accompanying drawing forming part of this specification;—Figure 1 is a side elevation partly in section of a keg equipped with my improved hoops. Fig. 2 is an end elevation of the improved keeper. Fig. 3 is a bottom plan view of the same. Fig. 4 is a side elevation of the keeper. Fig. 5 is a modification of the keeper showing the working edge thereof serrated or toothed. Fig. 6 is an end elevation of a further modification of my improved keeper. Fig. 7 is a bottom plan view of the same. Fig. 8 is a side elevation of the keeper. Fig. 9 is a side elevation of a modification of the keeper showing a single blade composed of a series of wedge shaped sections. Fig. 10 is a bottom plan view of the same. Fig. 11 is a fragmentary sectional view taken on the line A—B Fig. 1. Fig. 12 is a fragmentary sectional view taken on the line B—C of Fig. 1.

Like characters of reference designate similar parts in the view shown.

Referring now to the drawing, 1 designates a keg having a plurality of hoops driven on from each end in the usual manner. Each hoop is equipped with a plurality of integral sockets 3, each of which is substantially rectangular in contour and cross section and is formed with an open end 4 terminating flush with the leading edge 5 of the hoop and an open bottom, as shown. An annular opening 6 is formed centrally in the top wall of the socket through which the stem of the keeper is engaged. The keeper consists of a body portion 7 which is substantially rectangular in contour and cross section and is adapted to be carried in the socket 3 with its exposed bottom face flush with the inner surface of the hoop. The body portion conforms to the inner outline of the socket so as to be held against rotation therein and is adapted to slidably fit the exposed surface of the keg.

Formed centrally on the top surface of the body portion is a cylindrical stem 8 which is adapted to be engaged through the opening 6 in the top of the socket 3 and then hammered or otherwise worked to form a round-



ed retaining head 9 which securely holds the top face of the body portion in engagement with the bottom face of the top of the socket whereby to prevent any rattling or loosening of the connection between the parts.

Formed on the bottom surface of the body portion 7 in alinement with the stem 8 is a blade 10 which is adapted to penetrate the surface of the staves. The blade is wedge shaped in contour, that is to say it tapers from its working edge 11 to its root 12 where it is connected to the body portion. The blade further tapers from its leading end 13 to its following end 14, as best shown in Fig. 3. The object of this construction is to permit the blade to be easily advanced with the hoop to any desired position on the keg, the thickened following edge 14 causing the hoop to bind when at its limit of advancement and positively hold the hoop from being backed off except by manual exertion or like external forcing means.

The blade is preferably formed centrally on the under surface of the body portion and in a plane perpendicular to the plane of the latter so that the maximum holding power of the blade may be obtained with the minimum amount of resistance or friction when the same is being driven to its operative position. The working edge of the blade is rounded at its leading edge, as shown at 15 so that the blade will not become broken as would a corner formed at the lower extremity of the leading edge where the converging sides of the blade meet in a point.

A modification of the keeper is shown in Fig. 5 in which the stem 16, body portion 17, and blade 18 are similar to the parts above described with the exception that the working edge of the blade is provided with a series of teeth 19 which permit the blade to be readily driven into the exposed surface of the staves and operate to prevent the blade from backing out from its final position as above described.

A further modification of the device is shown in Fig. 6 in which the body portion 20 is provided with a pair of blades 21 and 22 depending from its lateral longitudinal edges. The blades are wedge shaped in contour and have their opposed faces parallel, and perpendicular to the bottom face of the body portion. A cylindrical stem 23 is formed on the top surface of the body portion for engagement with the top opening in the socket 3. The body portion is adapted to slidingly fit the exposed surface of the staves as above described, but in this instance is not as readily driven to operative position as the keeper equipped with a single blade but has the advantage over the former of still having one blade to impinge

the surface of the keg, should the other become accidentally broken during the handling of the same.

A still further modification of my invention is shown in Fig. 9 in which the body portion 24 is substantially rectangular in contour and cross section and adapted to be held within the socket, as above described and is provided on its top face with a cylindrical stem 25 adapted to engage the top opening in said socket. Formed on the bottom face of the body portion is a blade 26 composed of a series of wedge shaped sections 27 each having a smaller end 28 which merges into the larger end 29 of the adjacent section. The blade is tapered from its root 30 to its working edge 31 so as to be easily driven into the barrel stave, the larger ends 29 of the sections forming shoulders which positively prevent the backing out of the keeper except by exterior forcing means.

It will be seen by referring to Fig. 1 that the keeper is entirely inclosed within the hoop sockets, which latter have no projecting corners to catch upon the clothing of a person washing the keg or otherwise handling the same. It will be further seen that the keepers being positioned upon the leading edges of the hoop will penetrate the staves immediately on being placed in operative position so that the hoops will not be bounced off the keg by the hoop driving machine as is often the case when driving hoops as heretofore constructed.

From the foregoing description taken in connection with the accompanying drawing, it is thought that the construction and operation of my invention will be easily understood without a more extended explanation, it being understood that various changes in form, proportion and minor details of construction may be made without sacrificing any of the advantages or departing from the spirit of the invention.

What is claimed is;—

1. A cooperage hoop having an integral apertured socket, and a keeper having a body portion adapted to slidingly fit the exposed surface of cooperage staves, and having a stem formed on one of its faces for engagement with said apertured socket, and a blade formed on its opposite face adapted to penetrate said staves.

2. In a cooperage hoop, an integral socket carried by the hoop having an annular opening centrally disposed in its top face, and a keeper having a body portion adapted to conform to the inner outline of said socket and having a central stem projecting from its top face engageable with said annular opening, and a blade projecting from the opposite face, said blade being tapered from the leading end to following end from working edge to root.

3. In a cooperage hoop, an integral socket  
carried by the hoop, and a keeper carried  
within said socket, said keeper having a  
body portion adapted to conform to the  
5 inner outline of said socket and a wedge  
shaped blade disposed perpendicular to said  
body portion, said blade having its working  
edge rounded at its leading end.

In testimony that I claim the foregoing  
as my own, I have hereto affixed my signa- 10  
ture in the presence of two witnesses.

FRANK X. PFLUGER.

Witnesses:

ALBERT REHM,  
MAX ACKERMAN.