

No. 677,131.

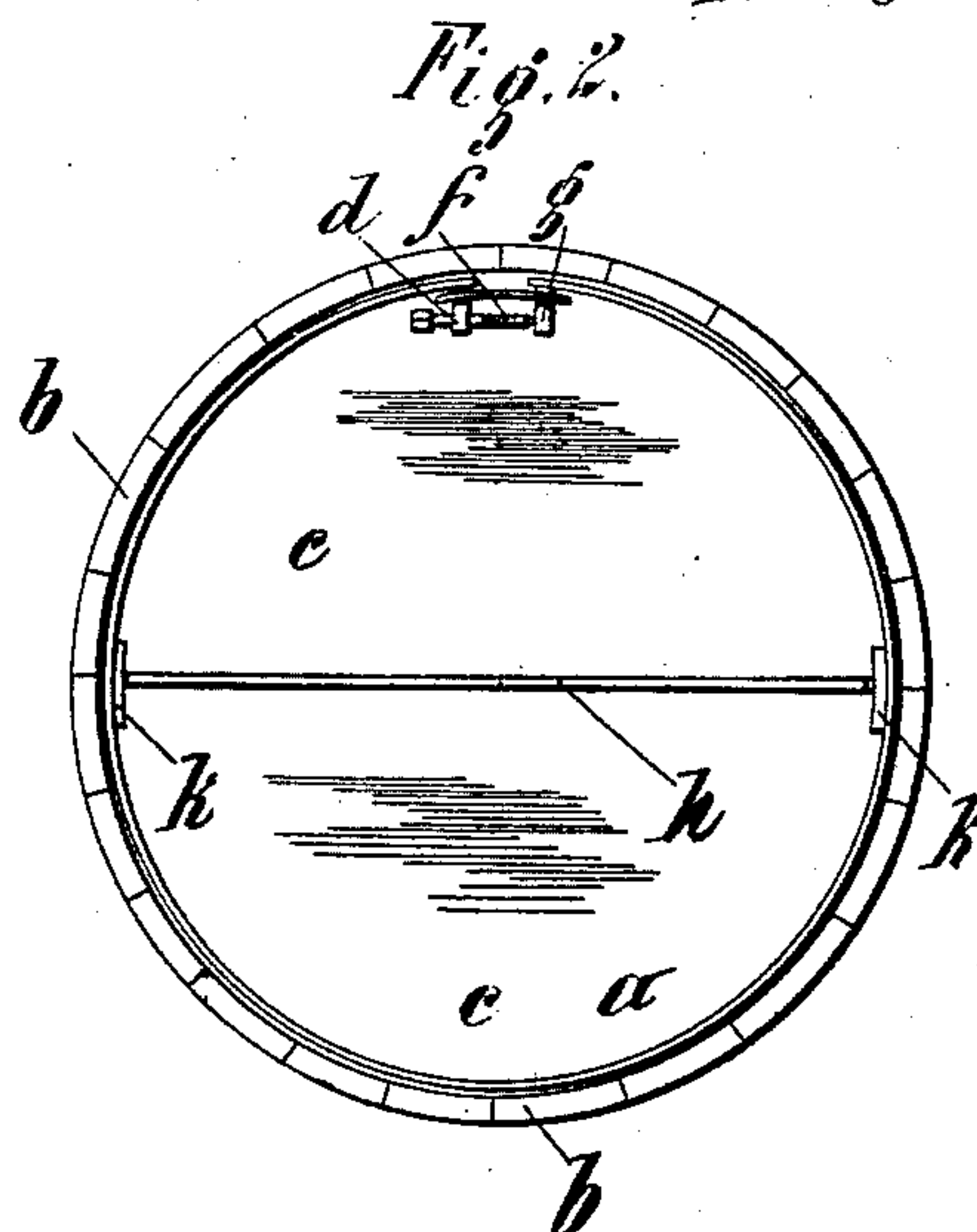
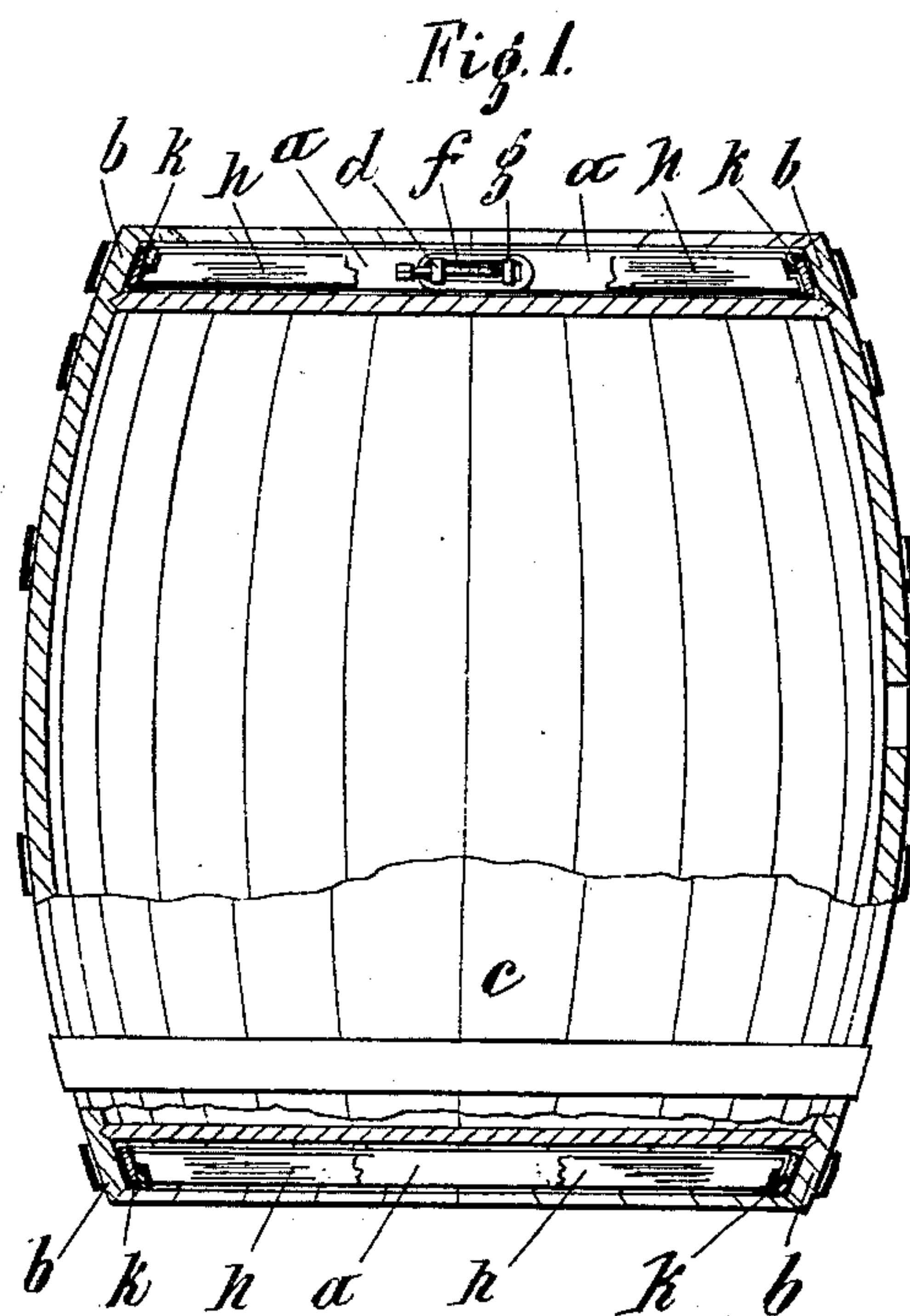
Patented June 25, 1901.

J. HEIDLBERGER.

CONSTRUCTION OF CASKS OR BARRELS.

(Application filed Nov. 3, 1900.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

JOSEF HEIDLBERGER, OF BUDWEIS, AUSTRIA-HUNGARY.

CONSTRUCTION OF CASKS OR BARRELS.

SPECIFICATION forming part of Letters Patent No. 677,131, dated June 25, 1901.

Application filed November 3, 1900. Serial No. 35,396. (No model.)

To all whom it may concern:

Be it known that I, JOSEF HEIDLBERGER, manufacturer of barrels, a citizen of the Empire of Austria-Hungary, residing at Budweis, in the Kingdom of Bohemia, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in the Construction of Casks or Barrels; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon; which form a part of this specification.

My invention relates to improvements in the construction of casks or barrels, the object being to prevent the breaking off of the ends of the staves which project beyond the bottom of the cask or barrel.

The invention consists, essentially, in strengthening and protecting these extremities by means of a conically-shaped hoop fitted against their inner periphery.

My invention further consists in providing a stiffening-bar for this hoop, fitted diametrically within it and serving at the same time for strengthening the head or bottom of the cask.

In the annexed drawings, Figure 1 shows, partly in side view and partly in section, a barrel fitted according to my invention; and Fig. 2 is a plan view of the same.

In both figures similar letters indicate corresponding parts.

As already stated, I provide according to my invention a hoop *a*, having a form to correspond with and fit into the inner end of a barrel, which, as a rule, is of conical shape. This hoop *a* is either closed—that is to say, continuous—or open, according as the invention is to be applied to casks or barrels during their manufacture or subsequent thereto. The barrel, Fig. 1, shows at its lower end a closed hoop and at its top end an open one. In this latter case the one end of the hoop is provided with a lug *d*, which is perforated and screw-threaded for the reception of a screw *f*, while the other end of the hoop is provided with a lug

g, against which the end of the screw *f* works for expanding the hoop.

When the invention is applied to barrels during their manufacture, the completely-closed and suitably-dimensioned hoop is placed in position before the staves are drawn together, the inner side of the stave ends being pressed against this hoop when the outer hoop is drawn on.

In the drawings, *b* represents the staves, and *c* represents the heads of the barrel.

When the invention is adapted to barrels already finished, open hoops are used, the diameter thereof being diminished by relaxing the screw *f* until the hoop may be laid upon the bottom of the barrel, whereupon the ends of the hoop are pressed apart by tightening up said screw until the outer surface of the hoop is tightly pressed against the inner circumference of the stave ends. In either of these cases the hoops *a* may receive an additional stiffening by the insertion of a bar *h*, which engages in suitably-shaped projections *k*, provided upon the inner surface of the hoop. In Fig. 1 (where the bar *h* is broken in its middle part) the mode of engagement of the bar *h* with the hoop *a* by means of the projections *k* is shown.

As is well known, the breaking of the stave ends is usually the first injury which a barrel receives, and with this in view the staves are generally made far thicker than is necessitated by the other strains to which they are liable, so that this invention, which provides for protecting the extremities of the staves, permits of a considerable reduction in the cross-section of the staves and a consequent large economy in the wood employed, which results in a great reduction of weight, compared with which the slight additional weight of the protecting-hoop is of no importance. The described stiffening-bar, moreover, greatly adds to the strength of the barrel-bottom and serves for protecting the same.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In casks or barrels, a device for preventing the breaking of the ends of the staves

projecting beyond the head, consisting of an open hoop adapted to be fitted within the projecting ends of the staves and provided with an inwardly-projecting lug near each end one
5 of which has a screw-threaded perforation, and a screw, threaded through said perforation and adapted to bear against the other lug, substantially as and for the purpose set forth.

10 2. In casks or barrels the combination with a metal hoop of the kind described of a stiff-

ening-bar *h* adapted to be inserted in the hoop and held in place by projections *k* on the inside of the hoop; substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOSEF HEIDLBERGER.

Witnesses:

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