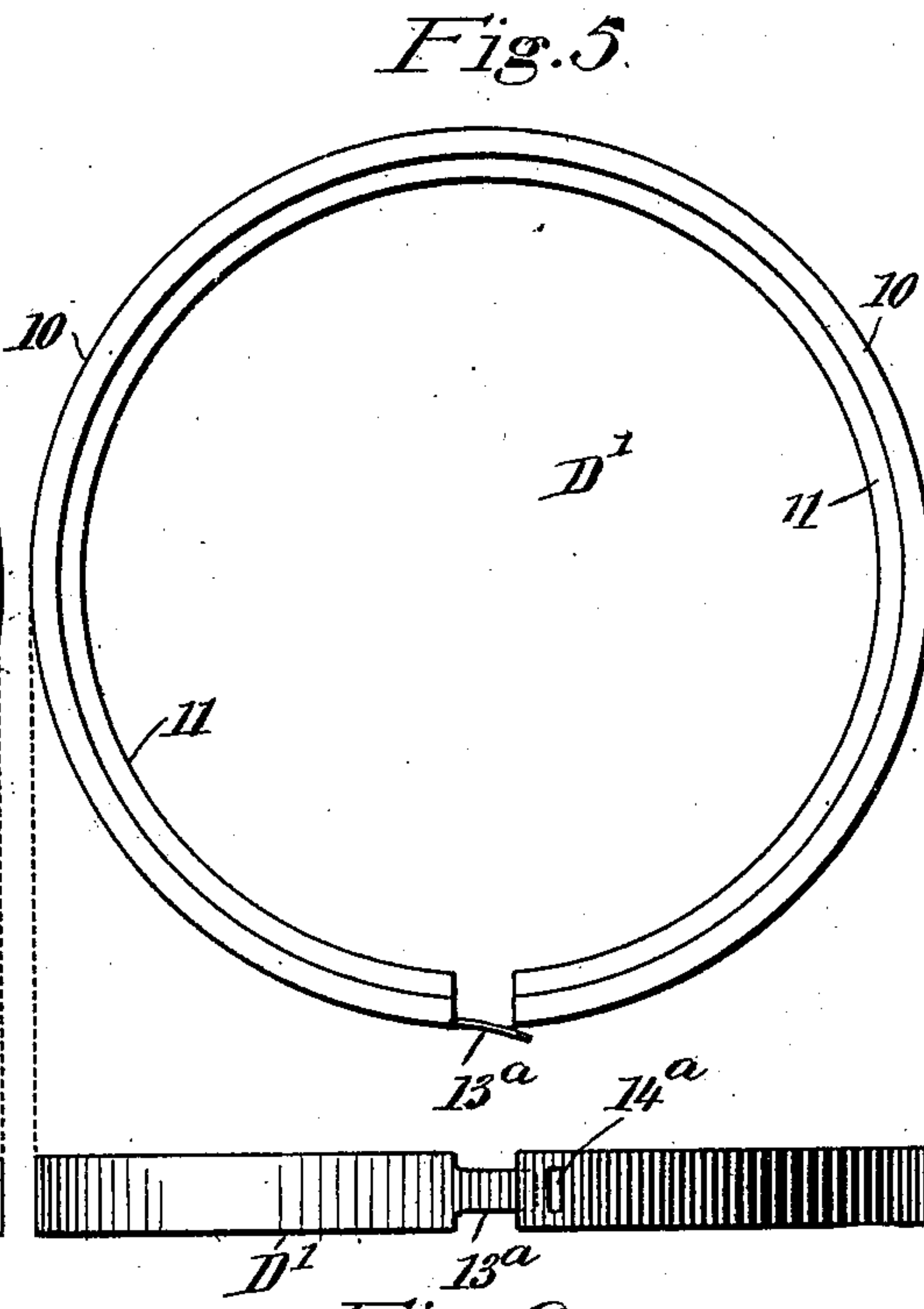
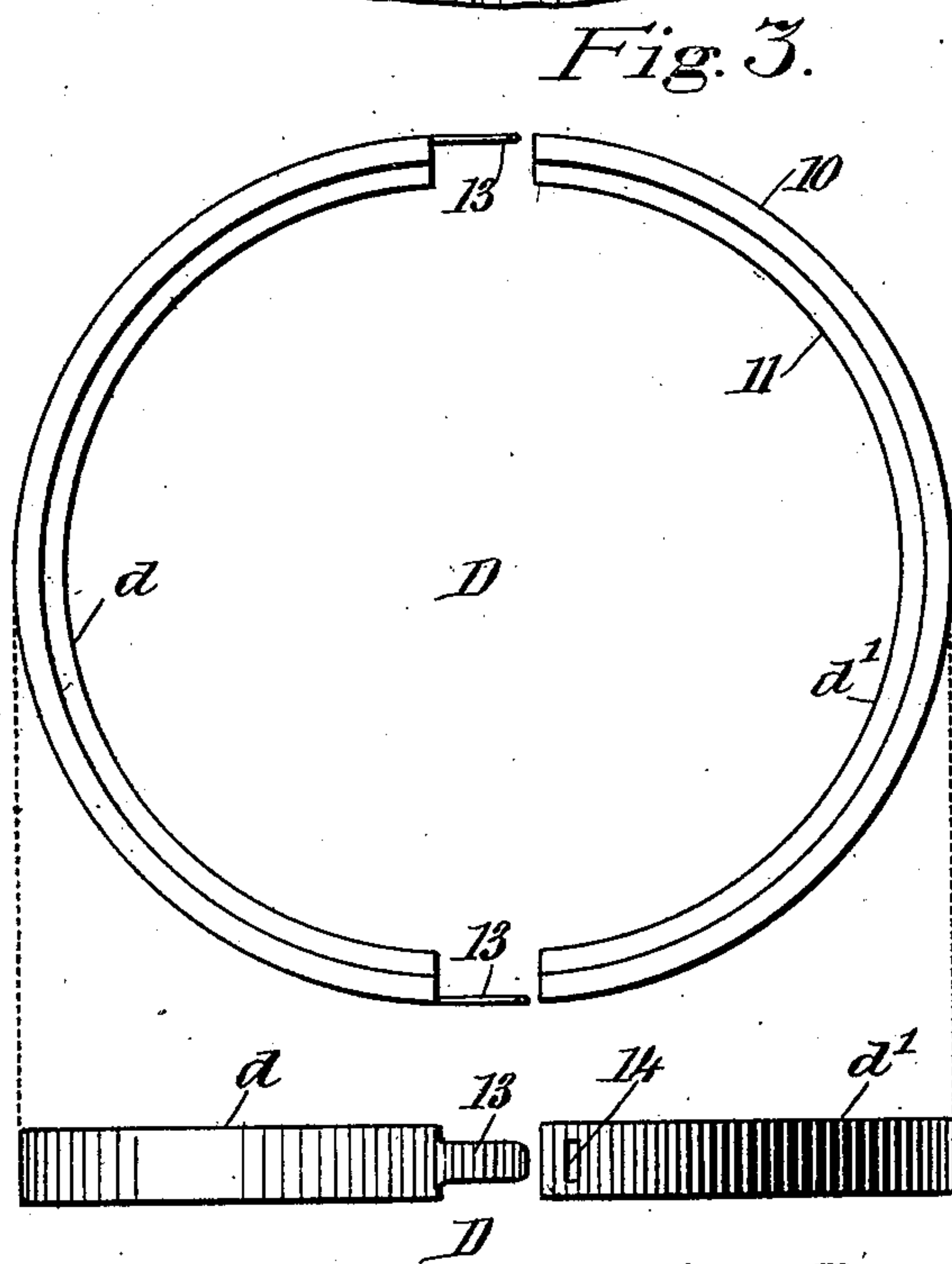
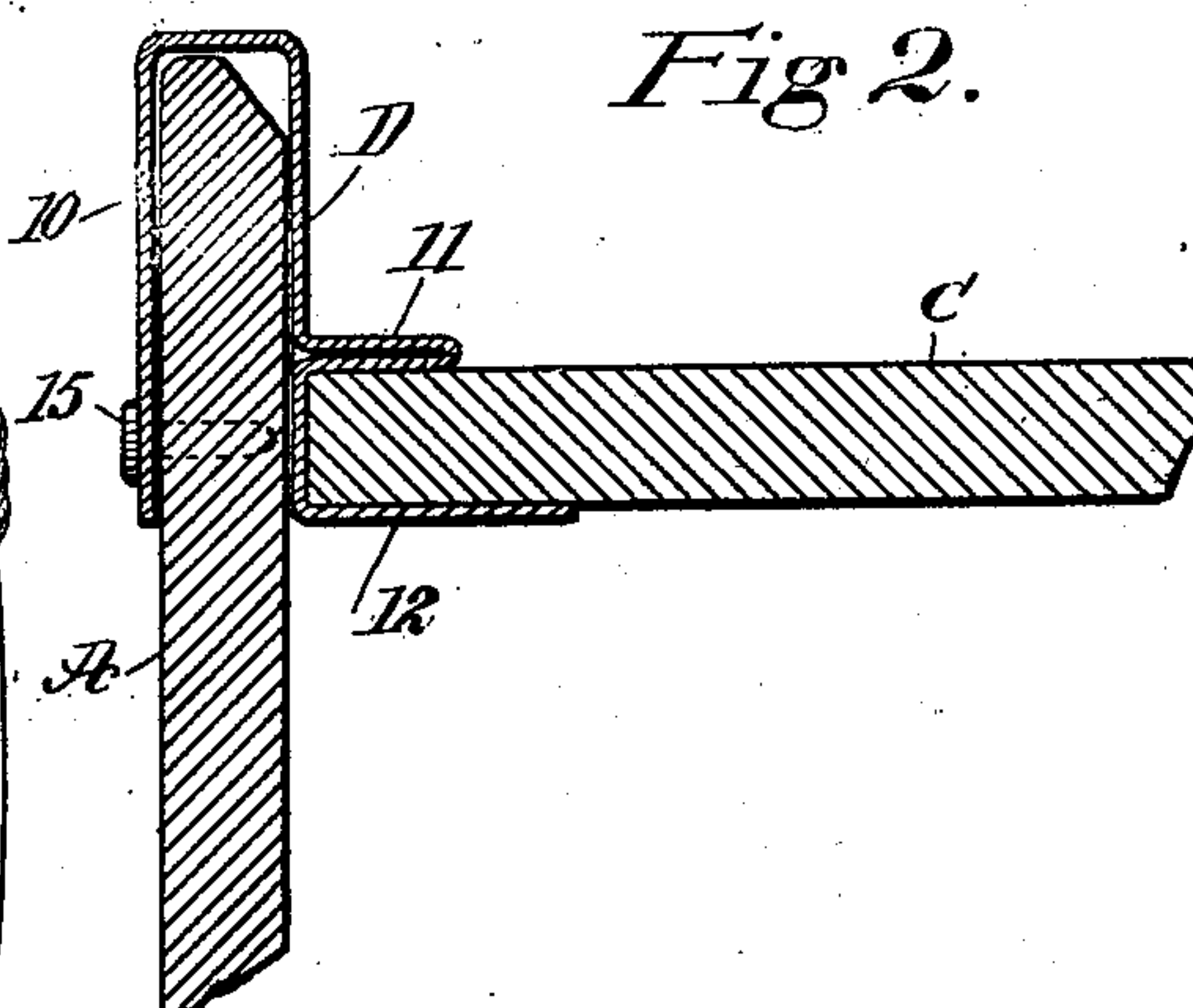
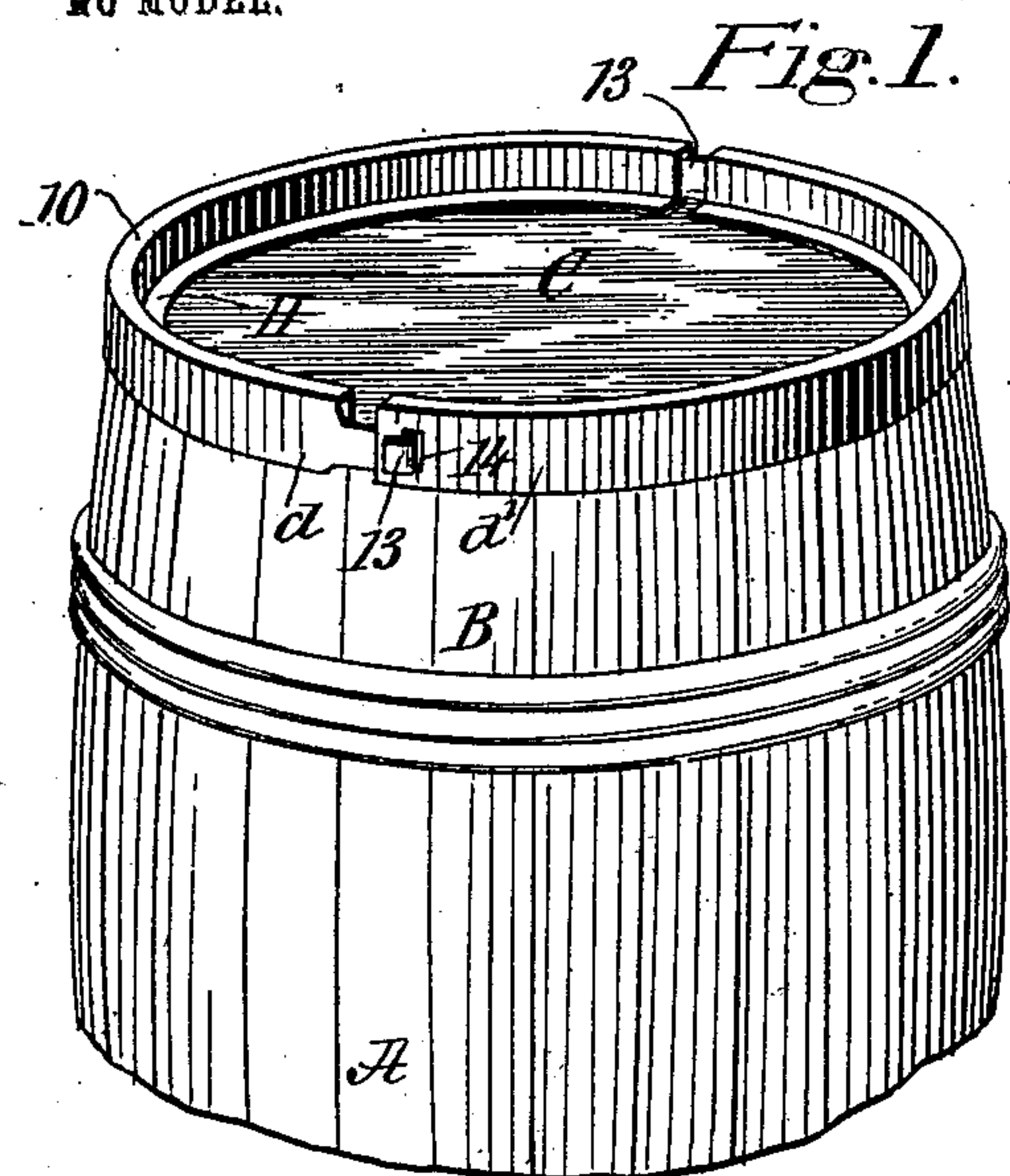


No. 730,666.

PATENTED JUNE 9, 1903.

H. H. KROMBERG.  
BARREL HEAD FASTENER.  
APPLICATION FILED OCT. 28, 1902.

NO MODEL.



*Fig. 4.*

*Fig. 6.*

WITNESSES:

*Robert Head*  
*Frederick*

INVENTOR

*Herman H. Kromberg*

BY

*Mum*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

HERMAN H. KROMBERG, OF NEW YORK, N. Y.

## BARREL-HEAD FASTENER.

SPECIFICATION forming part of Letters Patent No. 730,666, dated June 9, 1903.

Application filed October 28, 1902. Serial No. 129,115. (No model.)

*To all whom it may concern:*

Be it known that I, HERMAN H. KROMBERG, a citizen of the United States, and a resident of the city of New York, Astoria, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Barrel-Head Fastener, of which the following is a full, clear, and exact description.

My invention relates to an improved device whereby the heads of a barrel may be quickly and conveniently placed in position without the customary channel being cut in the staves at the chime, thus preserving the full strength of the staves and economizing in the manufacture of the barrel.

The purpose of the invention is to provide a device adapted to receive the chime or end sections of the staves and in which the customary head may be conveniently and expeditiously laid and fastened, and, further, to so construct the device that any person of ordinary intelligence may readily place a head in position and remove a head without injury to the contents of the barrel no matter how fragile they may be.

Another purpose of the invention is to provide a fastening device for the heads of a barrel which will permit the heads to sustain great weight without sagging and which will materially add to the strength of the barrel.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the end portion of a barrel and the improved head-fastening device applied. Fig. 2 is an enlarged horizontal section through an end portion of a barrel and a part of the head. Fig. 3 is a plan view of the improved fastening device detached from the barrel. Fig. 4 is a side elevation of the device as illustrated in Fig. 3. Fig. 5 is a plan view of the device illustrated as constructed in one piece, and Fig. 6 is a side elevation of the device as shown in Fig. 5.

A represents the staves of a barrel, which

staves differ from those ordinarily employed in that the usual inner annular channel is dispensed with, thereby adding materially to the strength of the staves. The staves are held in place in the customary manner by any desired number of hoops B, and the heads C of the barrel may be in one piece or in a number of pieces, as may be desired.

The improved fastening device D may be applied to both ends of the barrel for the purpose of holding both heads in place, or one head—the bottom head, for example—may be of the usual construction, and the upper head, or that which is to be opened when the contents of the barrel are to be inspected, may be of the improved construction.

The improved fastening device D is preferably made of sheet metal rolled, pressed, or otherwise manipulated to proper shape. In the formation of the improved fastening device D an upper inverted-U-shaped section 10 is produced, adapted to receive the upper or chime sections of the staves, as is particularly shown in Fig. 2, and the said inverted-U-shaped section 10 at its outer portion extends down practically to a level with the under face of the head or below the said level, as may be desired. The inverted-U-shaped annular section D fits closely to the staves, holding them in proper arrangement at the top, and at the lower end of the inner portion of the said inverted-U-shaped section 10 the material is carried inward at right angles to said inverted-U-shaped section and is bent upon itself to form the upper wall 11 of an annular channel 12, which channel is at right angles to the inverted-U-shaped section 10 and is completed by carrying the material outward and then downward, forming practically an inner continuation of the said inverted-U-shaped section 10, as is shown in Fig. 2, and then inward parallel with the upper or double member 11. Preferably the lower member of the said channel 12 is wider than the upper member 11, although the two members may be of equal width, if desired.

The channel 12 is adapted to receive the marginal portions of the head C whether it be in sections or in one piece, and the head C when used in connection with the improved fastening device D differs from the ordinary



head in that its marginal portion is straight, the beveling of the margin of the head being omitted, thus reducing the cost in the manufacture of the barrel.

5 The fastening device D is preferably constructed as is shown in Fig. 3—namely, in two sections  $d$  and  $d'$ , the sections being ordinarily of equal dimensions, and one section—the section  $d$ , for example—is provided with  
10 a pliable tongue 13 at each end. The said tongues are ordinarily continuations of the outer wall of the inverted-U-shaped section 10 of the device.

The tongues 13 are adapted to enter slots  
15 14, produced in the end portions of the outer wall of the inverted-U portion 10 of the section  $d'$  of the device, and after the head has been introduced into the channels 12 of the two parts or sections  $d$  and  $d'$  of the device  
20 the said parts or sections are drawn together by passing the tongues 13 through the slots 14 and then bending the tongues outward on the part  $d'$ , as is shown in Fig. 1.

The fastening device, with the head thus  
25 held in position therein, is then placed upon the body of the barrel by causing the outer or chime portions of the staves A to enter the inverted-U portions or sections 10 of the device, as is also shown best in Fig. 2, and the  
30 head, with the improved attaching device, is held in position by nails 15 or their equivalents passed through the outer wall of the U portion 10 of the device and through the return or bent outer portions of the tongues 13.

35 It is evident that a barrel-head may be placed in position on a barrel by this method even by an inexperienced person and that the head may be removed in its entirety by simply withdrawing the fastening devices, thus  
40 preventing the possibility of the contents of the barrel being broken by driving the head inward. Furthermore, it will be observed that the head is rendered strong, as is likewise the entire barrel, and that the head is  
45 enabled to sustain a great weight without sagging to such an extent as to leave its fastening device or be brought in contact with the contents of the barrel if said contents are properly packed.

50 In Fig. 5 I have illustrated the barrel-head fastener as constructed in one piece, and when so made a single tongue 13<sup>a</sup> is located at one end of the device, adapted to enter a slot 14<sup>a</sup> at the opposite end, and the fastening  
55 of the device is accomplished in the same manner as has been above described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

60 1. A barrel-head fastener comprising an inverted-U-shaped section for receiving the chime portions of the staves of a barrel, and a

channel for receiving the marginal portions of the head of the barrel, said channel being  
65 formed integral with the said U-shaped portion and having a portion of one arm thereof bent upon itself at right angles to the main body of the U-shaped portion and the remaining portion of the metal bent downward  
70 and outward to form a second U-shaped portion at right angles to the first, substantially as set forth.

2. As an improved article of manufacture, a barrel-head fastener consisting of an inverted-U-shaped section adapted to receive  
75 the chime-sections of the staves of a barrel, a channel formed of a second U-shaped portion extending inward at right angles from the inverted-U-shaped section, the walls of said channel being integral with the continua-  
80 tions of the inner wall of the inverted-U-shaped section, said channel being adapted to receive the marginal portion of the head of the barrel, and means for securing said head in the channel and the U-shaped section to the staves, substantially as set forth.

3. A fastening device for the heads of barrels, consisting of a segmental inverted-U-shaped section adapted to receive the chime  
90 portions of the staves of a barrel, a channel at right angles to the inverted-U-shaped section, adapted to receive the marginal portion of the head of a barrel, the said channel being formed continuous with the said inverted-U-shaped section, and a tongue extending  
95 from one end of the inverted-U-shaped section, the opposing end of the said U-shaped section being provided with an opening to receive the said tongue, for the purpose set forth.

4. A barrel comprising a body composed of ungrooved staves, and hoops, a fastening device consisting of a segmental, inverted-U-shaped section which receives between its  
105 members the chime portions of the staves, and a channel at right angles to the inner wall of the said inverted-U-shaped section, the walls of the said channel being continuations of the U-shaped section of the device, a tongue at one end of the U-shaped section,  
110 the opposite end of said U-shaped section being adapted to receive said tongue, means for securing the device to the staves of a barrel, and a head, the marginal portions of which are received within said channel of the device, as described.

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

HERMAN H. KROMBERG.

Witnesses:

ISAAC THOMPkins COX,  
ANDREW DRUMMOND.