

(No Model.)

F. G. JOHNSON.
Barrel Head.

No. 238,397.

Patented March 1, 1881.

Fig. 1.

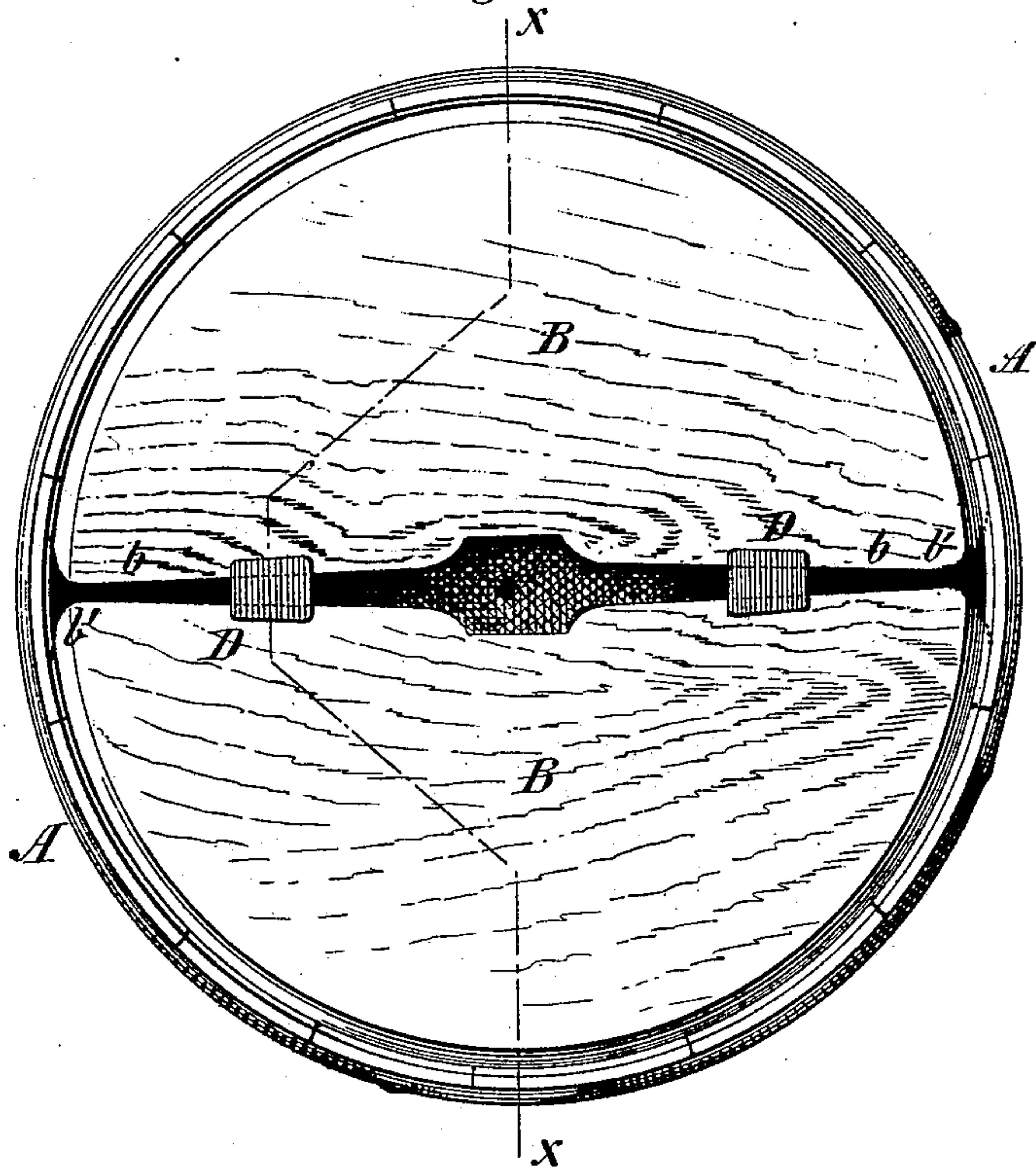
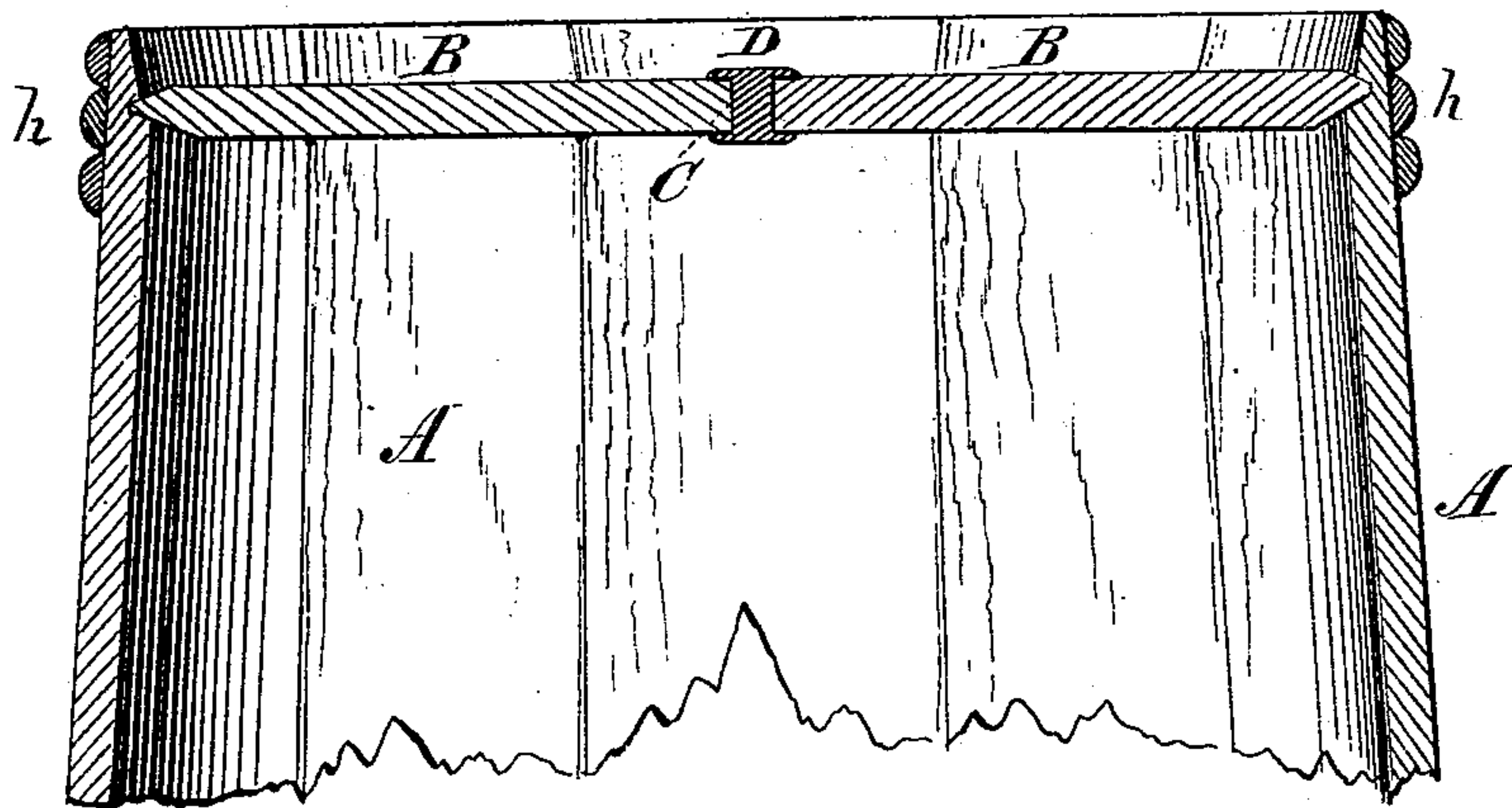


Fig. 2.



WITNESSES:

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FRANK G. JOHNSON, OF BROOKLYN, NEW YORK.

BARREL-HEAD.

SPECIFICATION forming part of Letters Patent No. 238,397, dated March 1, 1881.

Application filed July 23, 1880. (No model.)

To all whom it may concern:

Be it known that I, FRANK G. JOHNSON, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Barrel-Heads, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to provide barrel-heads constructed in such a peculiar manner that they can be readily contracted and expanded in diameter, and thereby be easily removed from or securely fastened into the chine of any barrel of suitable size without removing any of the hoops of the barrel.

Heads made by my invention are intended for barrels employed for packing and transporting eggs, fruits, vegetables, and such other articles as do not require to be packed in closely-fitted cases, but which are often better preserved by being packed in partially-open cases, for the purpose of ventilation.

The construction and operation of my invention are more particularly described as follows:

Figure 1 illustrates a horizontal or face view of one of my improved barrel-heads, and Fig. 2 a vertical section cut through the line *x x* of Fig. 1.

A A represent a transverse section of a barrel with the three end hoops, *h h*, opposite to the head.

B B are two half-heads, the curved or outer edges of which are beveled down to fit in the groove of the chine in the usual manner. The central or inner edges of these half-heads are peculiarly formed, both being formed alike. This central edge of each half-head is cut away more at the central than at the outer portion, so that when the two halves are adjacently placed together, as in Fig. 1, the space between them will be more or less tapering, the space being the widest at the central part of the head and the narrowest at the outer portion, *b b*. The combined width or diameter of these two halves or half-heads in the direction of the line *x x*, Fig. 1, is slightly less than the diameter of the barrel, so that when the inner edges come together at the outer points, *b' b'*, Fig. 1, the head becomes contracted in the direction of the line *x x* sufficiently to be placed

in the groove of the chine without removing the hoops *h h* to expand the barrel. To contract the opposite or transverse diameter of the half-heads, so as to be able to insert them into the groove without expanding the barrel, I round off or cut away a small portion of the corners of the half-heads at *b' b'*, Fig. 1. By constructing these two half-heads as above described they can be readily inserted into the groove of the chine of a barrel without removing the hoops or expanding the barrel. To force these half-heads into the groove of the chine and firmly lock and fasten the head in the barrel, I employ two wedge-shaped keys, D D, made alike, having the same bevel as the space between the half-sections of the head. To prevent these keys from dropping out of place, and to guide them, and for convenience of placing them between the half-heads, I provide a double flange at top and bottom of the body of the key, as shown at D, Fig. 2. To enable me to insert the keys D D between the half-heads and enter them into the tapering space *b b*, I cut away a small portion of the central part of the half-heads, as shown at C, Fig. 1, just sufficient to insert the key when the half-heads come into adjacent contact at the points *b' b'*, Fig. 1.

Although the corners of the half-heads are partially cut away at *b' b'*, which would seem to diminish the strength of the head, yet the head is really stronger than those usually employed, for the reason that the upper and lower flanges of the keys D D combine the two half-heads together in such a manner that any strain put upon one half of the head is sustained, in part, by the other half, and this, too, at the central part of the head, where the head of a barrel is necessarily the weakest.

The operation of my invention is described briefly, thus: Having inserted the two half-heads B B into the groove of the barrel A A, the two keys, D D, which I term "fastening-keys," are passed into the opening C and inserted into the tapering space *b b* by means of the hand, which will expand the head and secure it quite firmly in the barrel. To secure it more firmly, and, in fact, to fasten the head into the barrel more securely than is possible by the ordinary means, it is only necessary to drive these two keys D D with a hammer a

suitable distance from the central toward the outer portion of the barrel. To remove the head from the barrel it is only necessary to drive the fastening-keys D D back to the central opening, C, when the half-heads B B can be brought together and readily removed from the groove in the chine and taken out of the barrel.

With such a head as this ventilation is secured through the entire length and contents of the barrel.

The contraction of the diameter of a barrel by means of driving down the hoops to bind the head is limited by the staves, so that if the head, as ordinarily employed, be a little too small it cannot be firmly bound by the hoops; but by means of my invention the expansion of the head is not so limited but that it can be expanded to the required size for securing a firm fastening of the head. By means of my invention, in cases where such a head may be employed, all cooperage is obviated, which saves labor and destruction necessarily in-

volved in the usual manner of removing and inserting barrel-heads. 25

I am aware that expanding and contracting barrel-heads have heretofore been made, as, for instance, a patent for such a head was granted to me December 23, 1879; but

What I claim in the above-described improvement as new, and desire to secure by Letters Patent, is— 30

A ventilating adjustable barrel-head, consisting of two half-sections of a circle equal and similar in size and shape, B B, with their adjacent edges set apart from and inclined toward each other, forming tapering spaces *b b* between the said sections, and having the corners *b' b'* partially rounded and cut away, in combination with the fastening-keys D D, substantially in the manner and for the purposes described. 35 40

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Witnesses:

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