

T. HANVEY.
HOOP LOCK FOR CASKS.

No. 43,494.

Patented July 12, 1864.

Fig. I.

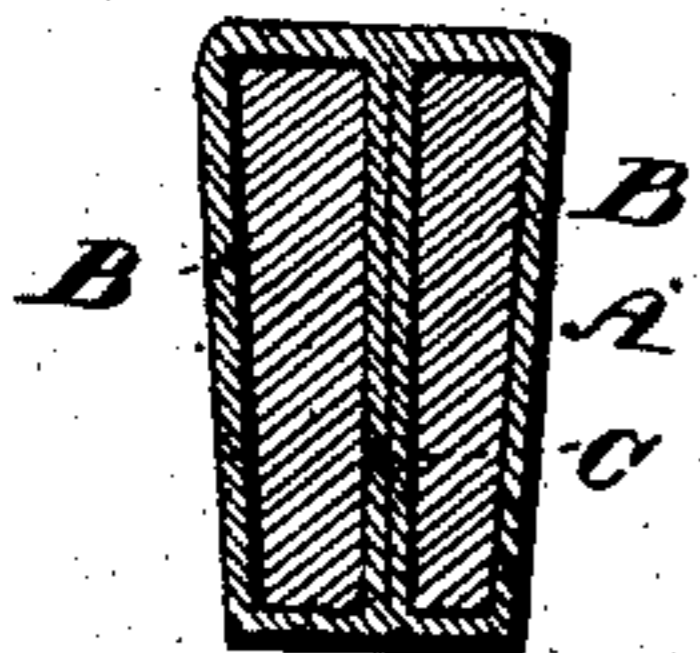


Fig. II.

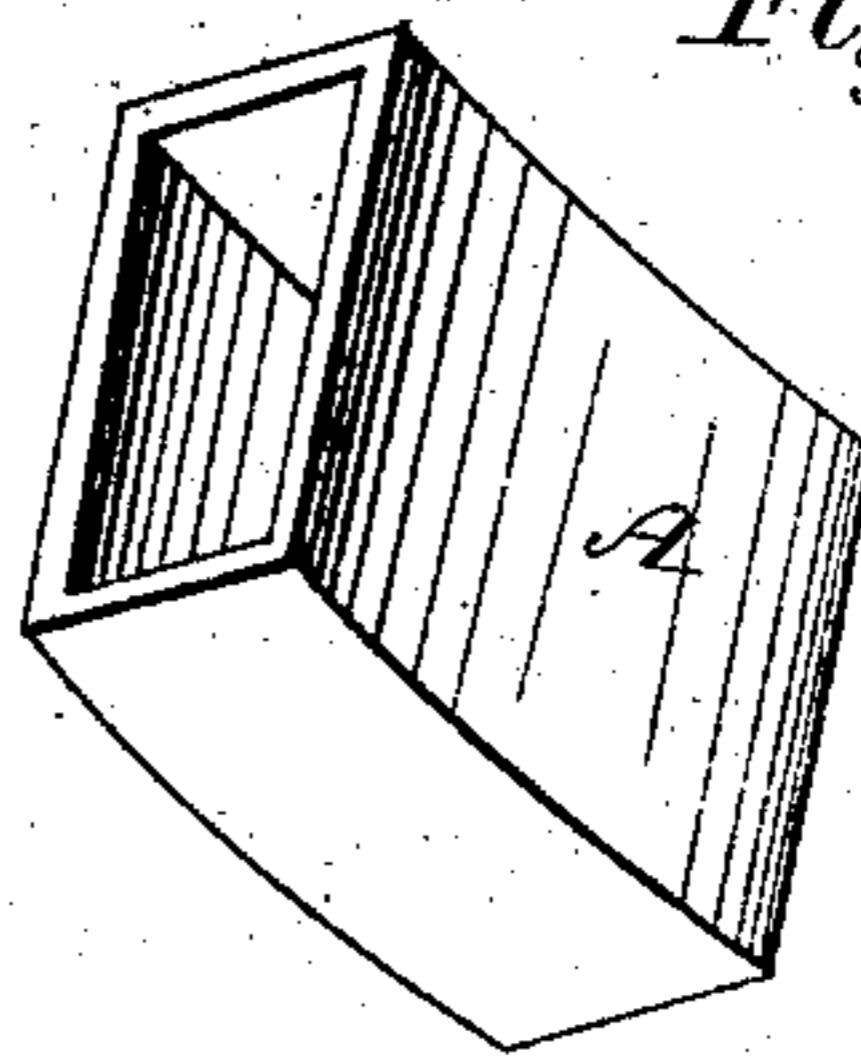
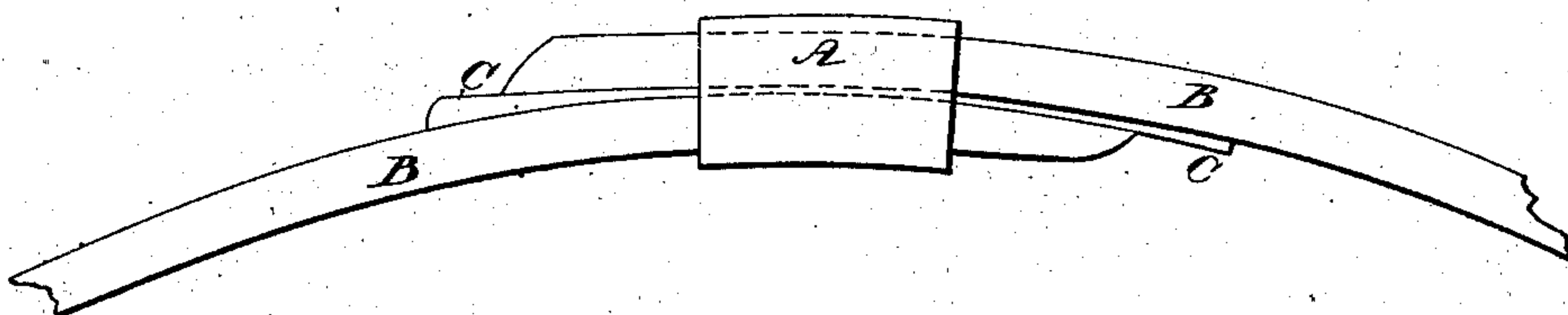


Fig. III.



Witnesses
E. B. Forbush
Geo. Wallace
M. B. Moore

T. Hanvey

UNITED STATES PATENT OFFICE.

THOMAS HANVEY, OF ELMA, NEW YORK.

IMPROVEMENT IN HOOP-LOCKS FOR CASKS.

Specification forming part of Letters Patent No. 43,494, dated July 12, 1864.

To all whom it may concern:

Be it known that I, THOMAS HANVEY, of the town of Elma, in the county of Erie and State of New York, have invented a new and Improved Malleable Iron Lock or Fastening for Wooden Hoops for Barrels and other Casks; and I do hereby declare that the following is a full and exact description thereof, reference being made to the accompanying drawings, making a part of this specification, in which—

Figure I is a cross-section, taken through the lock, hoop, and wedge as combined. Fig. II is an isometrical perspective of the lock separate from the hoop. Fig. III shows the lock, hoop, and wedges as combined in actual use.

Letters of like name and kind refer to like parts in each of the figures.

The nature of this invention relates to making a hoop-lock of cast malleable iron for wood hoops for barrels and other casks.

A represents my improved hoop-lock, which is made of cast malleable iron. For an ordinary flour-barrel hoop, the casting is nearly equal in length and breadth, being about one inch and a quarter in length and breadth, as represented in the drawings. The principle is applicable to any other required size. There is an open mortise made lengthwise through the lock-casting, through which mortise the two ends of the hoop pass, as shown in Fig. III. This mortise is made an eighth or sixteenth of an inch wider (more or less) at the top than at the bottom, so that the two ends of a cut hoop will exactly fit and fill the mortise when the wedges are driven in, as shown in Fig. I. The exterior form of the lock-casting has a curvature corresponding to the circle of the barrel or cask on which it is to be used, as shown in Figs. II and III, so that it will fit nicely thereon. The mortise also has a corresponding curvature, so that the strain upon the hoop will be a straight pull with the grain of the wood (and not a "bite" of the lock across the grain,) thereby securing the full strength of the timber. The internal dimensions of the mortise in one direction is equal to the width of the hoop, and in the other direction a little more than twice the thickness of the hoop, so as to admit a thin wedge under the end of the hoop.

The hoop is represented at B. It is what

is called a "cut-hoop"—i. e., it is cut by machinery from a suitable block or bolt of timber, instead of being split, and in this manner may be made very rapidly and very cheaply. In the process of cutting, the hoop is given a slight transverse taper, as shown in Fig. I, in order to make the lower edge of the hoop a larger circle than the upper edge, and hence will exactly fit the taper of the barrel and fill the mortise through the lock. These hoops may be cut three or four (or more or less) inches wide, and when such wide hoops are used, the lock or clasp A is correspondingly enlarged, so that one wide hoop will be as strong as three narrow hoops; and hence a lesser number of hoops in such case is required to hold the barrel, and thereby a great saving of time and expense in the manufacture of barrels is effected. These locks or clasps may be manufactured of any required size upon this principle, in order to correspond with the width of the hoop and the size of the barrel or cask on which they are to be used. This lock makes a remarkably secure fastening for the hoop. It insures the entire strength of the timber within the lock, so that the hoop will be as strong or stronger at the lock than at any other part. The hoop is not in any sense strained or weakened in the lock, and no part of it is cut away, and there is no strain upon it crosswise of the grain.

C represents a wedge or wedges, which are driven in under the ends of the hoop and enter the lock, and so expand the ends of the hoop as to render it impossible to withdraw it from the lock while the wedges remain in. The cooper will measure the length of hoop required and set the lock on the hoop accordingly and drive in the wedges. The hoop when thus made and locked may be driven upon the barrel with great ease, force, and safety.

What I claim as my invention, and desire to secure by Letters Patent, is—

The above-described hoop-lock, consisting of the lock-casting A, wooden hoop B, and wedge C, when constructed substantially as and for the purposes set forth.

THOS. HANVEY.

Witnesses:

E. B. FORBUSH,
GEO. W. WALLACE,
M. B. MOORE.