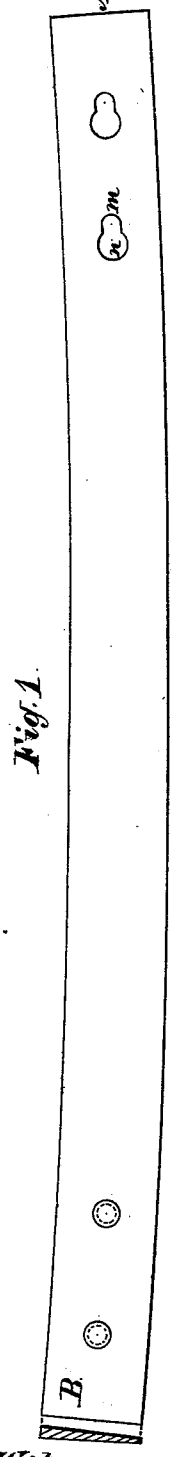
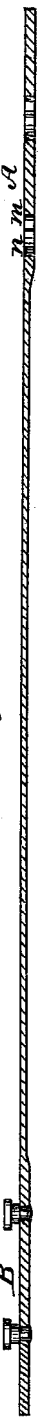
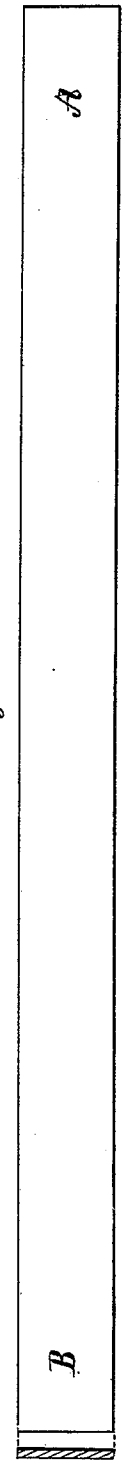
E. HALE.

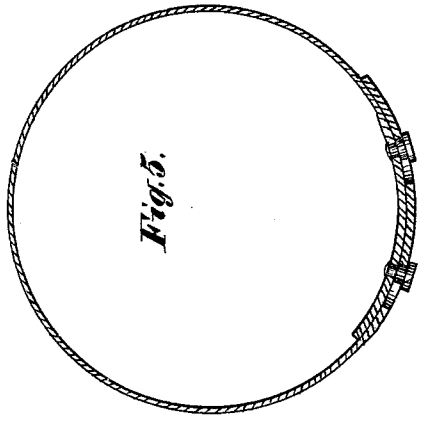
Barrel Hoop.

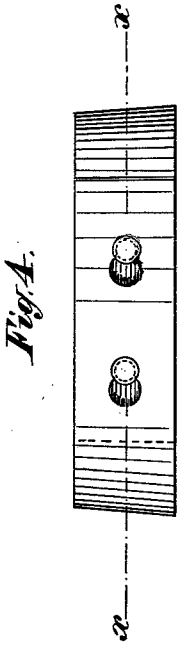
No. 229,699. Patented July 6, 1880.











Witnesses:
Henry Eichlings
Robt H. Duncan

Inventor:
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by Saml A. Duncan
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UNITED STATES PATENT OFFICE.

EDWARD HALE, OF WIGAN, ENGLAND, ASSIGNOR TO JAMES J. McCOMB, OF NEW YORK, N. Y.

BARREL-HOOP.

SPECIFICATION forming part of Letters Patent No. 229,699, dated July 6, 1880.

Application filed June 8, 1880. (No model.)

To all whom it may concern:

Be it known that I, EDWARD HALE, of Wigan, in the county of Lancashire, England, have invented a new and useful Improvement in Barrel-Hoops, of which the following is a specification.

By the existing modes of making iron or steel hoops for casks, barrels, and similar vessels the ends of the hoops are fastened by riveting. This riveting, ordinarily, is not done by the manufacturer of the hoops, but at the time and place of applying the hoop to the barrel or cask. The hoops as sold in the market are simply plain bands of iron or steel, or bands with rivet-holes punched in the ends. For the manufacturer to complete the hoop by riveting the ends together would render it cumbersome for transportation and storage, and thus add greatly to the cost of the article to the consumer. On the other hand, it is, for various reasons, a recognized inconvenience to the consumer to be obliged to rivet the hoop at the time of use.

The present invention seeks to obviate these difficulties, inherent in the existing modes of manufacture, and to provide a hoop which, practically, will be complete as it leaves the hands of the manufacturer, without, however, having its ends actually joined, and which will be ready for immediate use as it comes into the hands of the consumer without the necessity, on his part, of splaying it or of riveting the ends together.

The invention is illustrated in the accompanying drawings, in which Figure 1 is a plan of the improved hoop as prepared ready for the market, Fig. 2 being a central longitudinal section of the same, the studs being shown in elevation, and Fig. 3 representing in plan the blank from which it is made. Fig. 4 is an elevation of the hoop with the two ends joined ready for use, and Fig. 5 is a sectional view of the same on the dotted line *x x* of Fig. 4.

One edge of the blank, originally straight, as shown in Fig. 3, is to be spread or splayed, which brings it into a curved form, as shown in Fig. 1, the object being so to shape the metal that when the hoop is bent up one edge will have a larger diameter than the other, to accommodate it to the swell of the barrel. One end, A, of the blank is then punched with one or more (preferably two) holes or slots, which it is preferred should be of the form shown in the drawings. In the other end, B, studs, buttons, or cleats are to be secured by riveting. These devices are of proper shape to permit them readily to enter the aforesaid apertures, and they are otherwise so constructed that when they have entered the apertures and been drawn up into place some part will overhang the metal immediately adjacent to the apertures, and thus hold the two ends of the hoop against springing apart. A convenient form of stud for this purpose, and one specially adapted to the apertures shown in the drawings, is that illustrated in Figs. 1 and 2, which consists of a shank or neck sufficiently small to be drawn into the narrow part *m* of the apertures, and of a head which, while small enough to pass through the larger part *n* of the apertures, will project over the walls of the narrower part. The space between the overhang of the head of the stud and the face of the hoop should be just equal to the thickness of the other end of the hoop, as this will bring the two ends into the closest contact.

When a hoop is to be provided with slots and riveted studs, as above described, the desirability of splaying it before the attachment of the studs or the punching of the slots will be manifest. If this were to be done afterward there would be danger of displacing or distorting the studs, or of changing the form of the slots. Moreover, by splaying the hoop before the punching of the slots or the attachment of the studs the work can be done by machinery, and thus the maximum economy, as well as exactness and uniformity of construction, be secured.

If desired, the hoops can be prepared and sold in sets, the several hoops of each set being accurately made so as to have a different spread from the others of the set, according to their respective positions, as designated by the well-known terms "chine-hoop," "bulge-hoop," and "intermediate hoop."

Manifestly the forms of the apertures and of the studs or cleats may be changed from those shown in the drawings, the essential feature

being the capacity of the two to lock the two ends of the hoop so as to prevent their springing apart.

With a hoop constructed as above shown and described, all that is required of the cooper in applying it to use is simply to lock the two ends together with the studs pointing outward, and place it over the staves to be secured and drive it home.

Preferably the ends of the hoop at the points where the studs and the apertures are located should be thickened as compared with the body of the hoop, after the manner fully set forth in Letters Patent of the United States No. 226,065, dated March 30, 1880, and as shown in the present drawings, as this construction will secure the maximum of strength with the least weight.

What is claimed as new is—

As a new article of manufacture, the hereinbefore described hoop, splayed as indicated, and provided with apertures or slots and with studs or cleats, all substantially as set forth.

EDWARD HALE.

Witnesses:
JOHN MACKEY,
JOHN FITZSIMONS.