

(No Model.)

2 Sheets—Sheet 1.

L. D. MORRISON.
BARREL HOOPING MACHINE.

No. 497,806.

Patented May 23, 1893.

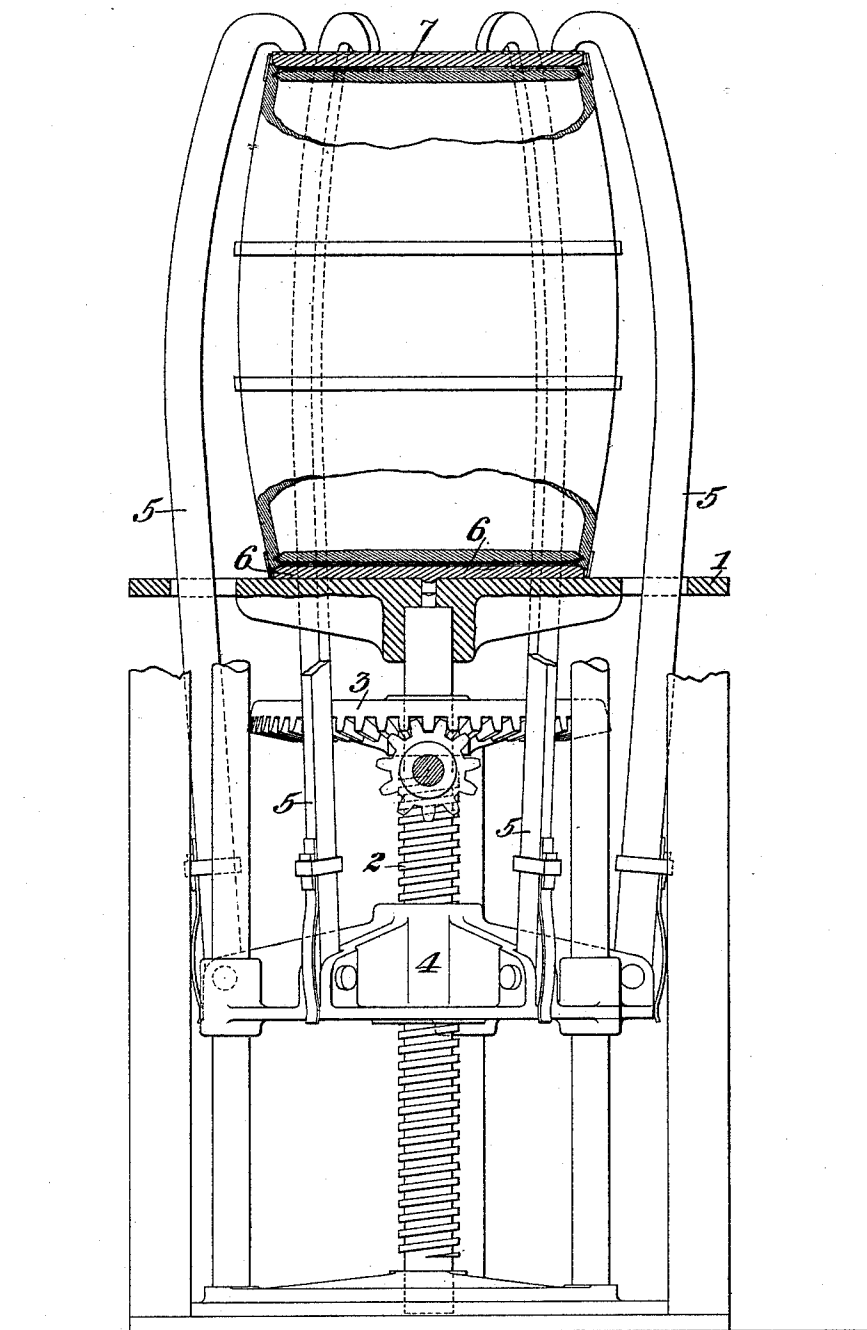


Fig. 1.

WITNESSES

N. B. Conner
H. L. Gill

INVENTOR

Leonard D. Morrison
by his attorneys
N. B. Bakewell & Sons

(No Model.)

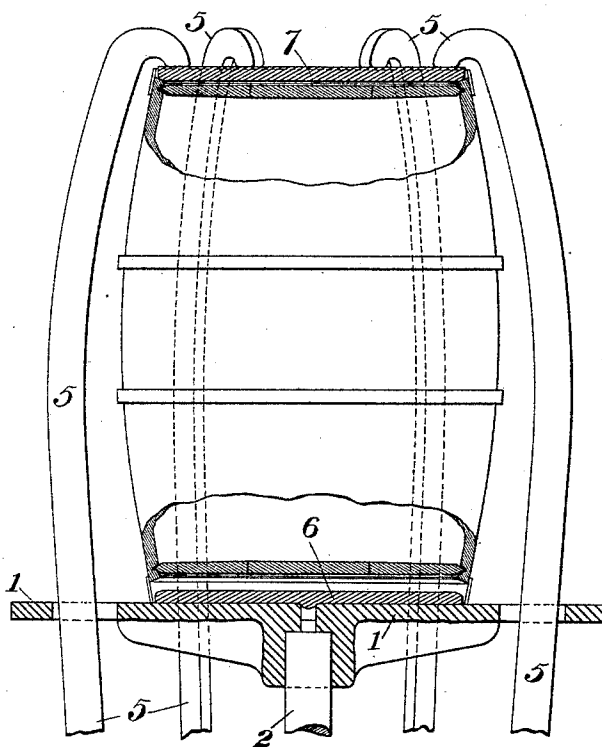
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Fig. 2.



WITNESSES

W. J. Corwin
H. L. Gill

INVENTOR

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by his attorneys
N. D. Baxwell & Sons

UNITED STATES PATENT OFFICE.

LEONARD D. MORRISON, OF NEW YORK, N. Y.

BARREL-HOOPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 497,806, dated May 23, 1893.

Application filed June 3, 1891. Serial No. 394,923. (No model.)

To all whom it may concern:

Be it known that I, LEONARD D. MORRISON, of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Barrel-Hooping Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improvement partly in section; and Fig. 2 is a view similar to Fig. 1 showing the use of the plate to force the barrel into the lower chine hoop.

My improvement consists in a device to be used in connection with the well known style of barrel hooping machines in which a number of upright arms are pivoted at their lower ends to a frame or cross-head which forms a nut on the vertical screw by which the arms are raised and lowered; each arm may be provided with suitable devices such as hand pieces or notches which engage the edge of the barrel hoop and draw it downward on the barrel as the arms are lowered.

My improvement has special reference to the driving of the chine-hoops, one at each end of a barrel. These chine-hoops are more difficult to drive than either the quarter or bilge-hoops, for the reason that being placed on the chine of the barrel they are not supported as the other hoops are, by the staves while being drawn down; and when first placed on the barrel it is preferable not to drive them all the way down (that is until the upper edge of the hoop is flush with the edge of the chine of the barrel). The reason of this is that when the barrel is being made, the staves are still warm, and after the barrel is finished they will shrink somewhat, necessitating the re-driving of the hoops; but as the chine-hoop when finished should have its upper edge coincident with the end of the barrel, the chine-hoop cannot be driven farther down without drawing it below the edge of the barrel, unless it is left above it when the barrel is made.

When the chine-hoop has been put on at one end of the barrel, with its outer edge above that of the chine, the barrel is upended on the machine and a chine-hoop is similarly placed on the other end, but in doing this by such machine as I have described, the drawing down of the chine hoop exerts

a corresponding downward pressure on the whole barrel, so that if the lower chine hoop rests on the table of the machine while the upper chine hoop is being pressed down the effect will be to drive the lower chine hoop on to the barrel as far as it will go, thus preventing the chine hoop from being left with its outer edge extending beyond the edge of the chine. My improvement is designed to obviate this difficulty and also to afford means for driving the chine hoops only part of the way on the barrel.

In the accompanying drawings, 1 represents the table on which the barrel is placed to be hooped. This table is supported by a screw 2, which is caused to revolve in either direction by bevel-wheel 3 and suitable connecting gearing, which is driven in any desired manner, and readily controlled to stop or reverse at the will of the operator. On this shaft is the cross-head 4, which is threaded so that the screw-shaft works through it, thus raising or lowering the cross-head according to the direction of motion of the screw. To the cross-head 4 are pivoted the upright arms 5, 5, &c., which are furnished at their upper ends with a suitable device for engaging and drawing down the chine-hoop. These arms 5 surround the barrel, and are of sufficient number to give a sufficiently uniform pressure at various points on the hoop. On the table 1 is placed a plate 6, the diameter of which is somewhat less than the exterior diameter of the barrel at the chine, but large enough for the beveled end of the chine of the barrel to rest upon the plate, thus preventing the lower edge of the barrel coming in contact with the surface of the table 1. The edge of this plate 6 may be beveled or rounded, or left rectangular as may be preferred.

The operation of my device is as follows:—When the chine-hoop has been placed on one end of the barrel by means of the arms 5 of the machine, or otherwise, with the hoop not fully driven down, the barrel is upended in order to drive the other chine-hoop. The ends of the staves of the barrel on which the first chine-hoop has been placed, now rest on the edge of the plate, which being preferably circular gives a firm and uniform support to the barrel; but the chine-hoop projecting beyond the end of the barrel lies entirely out-

side of the circumference of the plate, but (the plate being of sufficient thickness) the projecting edge of the chine-hoop only just touches the table 1, and cannot be pressed farther down, and therefore is not affected in any way by the pressure applied to drive on the chine-hoop at the other end of the barrel.

As it is necessary that the diameter of the plate should be such as to permit of the chine of the barrel resting upon it, within the edge or outer circumference of the chine, plates of different diameters may be kept on hand so as to change them as may be necessary. They need not be rigidly attached to the table 1, but may be set on and held in place by one or more pins or holes in the table and plate.

The plate 6 which I have described as performing the function of preventing the driving of one chine-hoop from forcing the other chine-hoop farther on the barrel, is capable of performing also the function of putting the chine-hoops on the barrel, which I will proceed to describe by reference to Fig. 2. For this purpose the plate 6 is constructed and arranged on the table 1, as I have described, but instead of first placing the chine-hoop on the upper end of the barrel to be drawn down by the arms and hand-pieces, it may be placed on the table surrounding the plate 6 but not resting on nor touching the plate, and the barrel placed on the hoop or the hoop may be placed on the end of the chine and the barrel placed on the table with the hoop resting on the table but not touching the plate 6. The hand-pieces of the arms 5, 5 then engage the upper end of the barrel if it has no chine-hoop upon it and draw the barrel down until the lower chine rests upon the edge of the plate when the chine-hoop will have been driven part way only onto the chine of the barrel. In this operation it is not necessary to use the hand-pieces on the arms 5, 5 but instead the arms may be simply hooked at their upper end sufficiently to engage the edge of the chine of the barrel. If a chine-hoop has been placed upon the other (upper) end of the barrel, then in order to drive the chine-hoop on the other end, a loose plate 7 simi-

lar to the plate 6 and of suitable diameter is so placed as to rest on the chine inside of the chine-hoop, as shown in Figs. 1 and 2, when the hand-pieces or hooks at the upper end of the arms 5, 5, resting upon the upper surface of the loose plate 7 will draw down the barrel on to the lower chine-hoop without interfering with the chine-hoop at the upper end.

I claim—

1. In a barrel-hooping machine, the combination with hoop-driving arms, and mechanism for operating the same, and a table or support for the barrel, of a stationary plate, preferably circular, of suitable diameter to receive and support the ends of the staves inside of their outer diameters at the chine, and raised above the surface of the table sufficiently to permit of the chine-hoop extending outside of the plate and below the lower end of the staves; substantially as and for the purposes described.

2. In a barrel-hooping machine, the combination with hoop-driving arms and mechanism for operating the same, of a raised supporting table carrying a preferably circular stationary plate of less diameter than the chine-hoop, and adapted to receive and support the chine of the barrel, for the purpose of partially driving the chine-hoops; substantially as described.

3. In a barrel-hooping machine, the combination with hoop-driving arms and mechanism for operating the same, of a raised supporting table having a stationary plate of such diameter as to receive and support the chine of the barrel inside of the chine-hoop, and a similar plate adapted to be placed on the other chine of the barrel and within the outer circumference and to be engaged by the driving arms; substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 20th day of May, A. D. 1891.

LEONARD D. MORRISON.

Witnesses:

L. P. DEXTER,
G. A. EASTMAN.