G. W. Pierce,

Crozing Staves.

No. 50,625. Patented Oct. 24, 1865.

Fig. 1

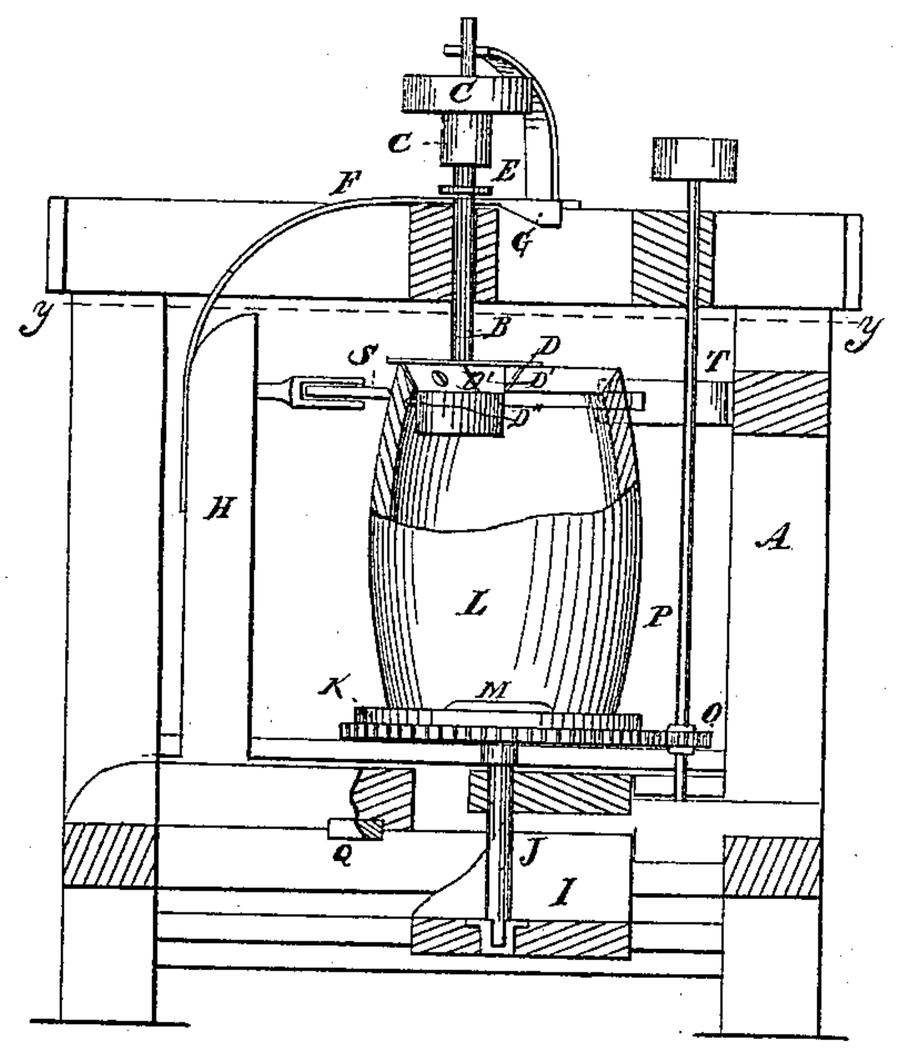
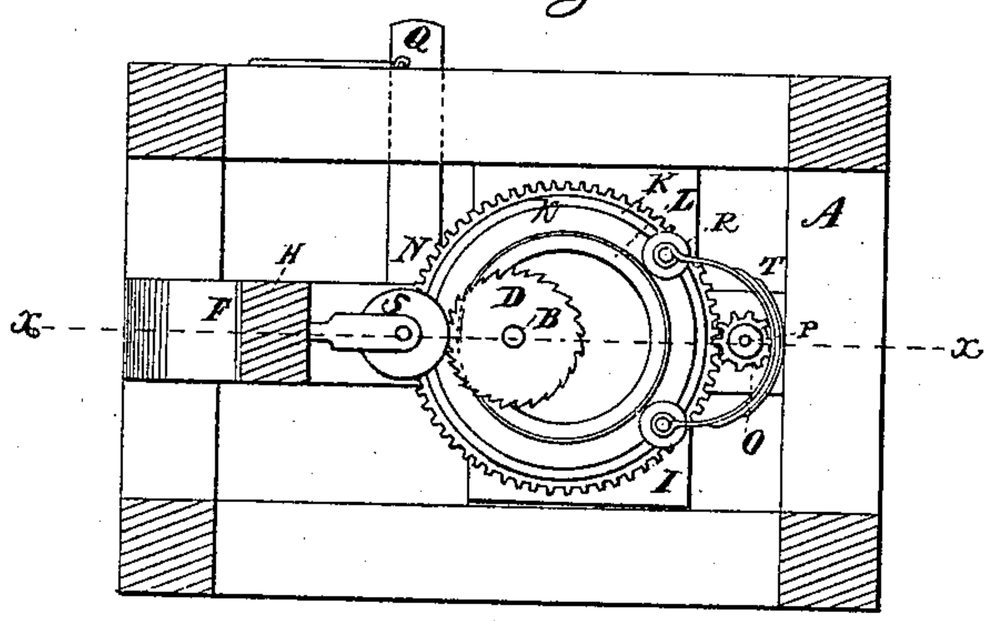


Fig. 2



Witnesses

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A.M. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

G. W. PIERCE, OF HOLLEY, NEW YORK.

IMPROVEMENT IN BARREL MACHINERY.

Specification forming part of Letters Patent No. **50,625**, dated October 24, 1865.

To all whom it may concern:

Be it known that I, G. W. PIERCE, of Holley, in the county of Orleans and State of New York, have invented a new and Improved Machine for Manufacturing Barrels or Casks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a horizontal section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a new and useful machine for cutting the staves of barrels or casks of a uniform length, forming the bevel or chine at the ends of the staves, and cutting the croze therein, all being constructed and arranged in such a manner as to perform the work very expeditiously and in a perfect manner.

A represents the framing of the machine, which may be constructed in any proper manner to support the working parts.

B is a vertical shaft placed in the upper part of the framing A, and having a pulley, C C′, on its upper end. This shaft B has a circular saw, D, upon it, and below said saw there are inclined cutters D′, and just below the cutters D′ there are small gage-shaped cutters D″, or a circular saw, all of which are shown clearly in Fig. 1. The shaft B, just below the pulley C′, has a small circular disk, E, upon it; and F is a curved elastic bar, the upper end of which has a slot made longitudinally in it to receive the shaft B, said end of the bar having an inclined or beveled projection, G, attached to its under side. The lower end of the elastic bar F is attached to an upright bar, H, which is secured to a slide, I, the latter being fitted between proper guides in the lower part of the framing A, and having a vertical shaft, J, fitted in it, on which a circular platform, K, is secured. (See Fig. 1.) On this platform the barrel or cask L to be operated upon is placed, and secured in position by clamps M, arranged in any proper way; and on the shaft J, below the platform K, there is keyed a toothed wheel, N, into which, when the machine is in operation, a pinion, O, gears. This pinion O is on the lower part of a vertical shaft, P, in the framing A, and said shaft may be driven by a belt from the pulley C′.

Q is a lever attached to the slide I, for the purpose of moving it in order to throw the wheel M in and out of gear with the pinion O.

The operation is as follows: The barrel or cask L is placed on the platform K and secured thereto. The wheel N is then thrown in gear with the pinion O and the shaft B rotated by any convenient power. The upper part of the cask or barrel is retained in position by rollers R R S, the latter being fixed and having its support attached to the upright bar H. The rollers R R are at the outer ends of a semi-elliptic spring, T, attached to the framing A. (See Fig. 2.) As the barrel or cask L is rotated the saw D cuts off the end of the staves, so that they will all be even or in the same plane at their ends. The cutters D′ form the bevel or chine *a*, and the cutters D″, or a circular saw, cut the croze *b*.

It will, of course, be seen that the shaft B is at one side of the line of the axis of the barrel, in order that the saw and cutters may act upon the barrel at the desired point. When the barrel is thus acted upon and finished at one end the slide I is moved so that the wheel N will be thrown out of gear with pinion O, and at the same time the beveled projection G at the under side of the bar F will, in consequence of bearing against a cross-piece, $a^{\times}$, of the framing, throw up the upper end of said bar, and also the shaft B, and thereby elevate the saw and cutters above the barrel, so that the same may be removed or reversed in position in order to have its opposite end operated upon.

I would remark that the saw D may have slots made in it, with sharp edges, to serve as planers to smooth the sawed ends of the staves; and I would further remark that the working parts herein described may have

horizontal instead of a vertical position, and so arranged to operate at both ends of a barrel at the same time.

Having thus described my invention, the following is what I claim as new and desire to secure by Letters Patent:

In combination with the rotating platform K, gear-wheels N O, carriage I, and lever Q, the elevating device H F G E, to raise the cutting device D D′ D″ automatically when the wheel N is thrown out of gear with the pinion O to allow the barrel to be removed.

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Witnesses:

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