

A.H. Crozier,
Making Hoops.

N^o 27,206.

Patented Feb. 21, 1860.

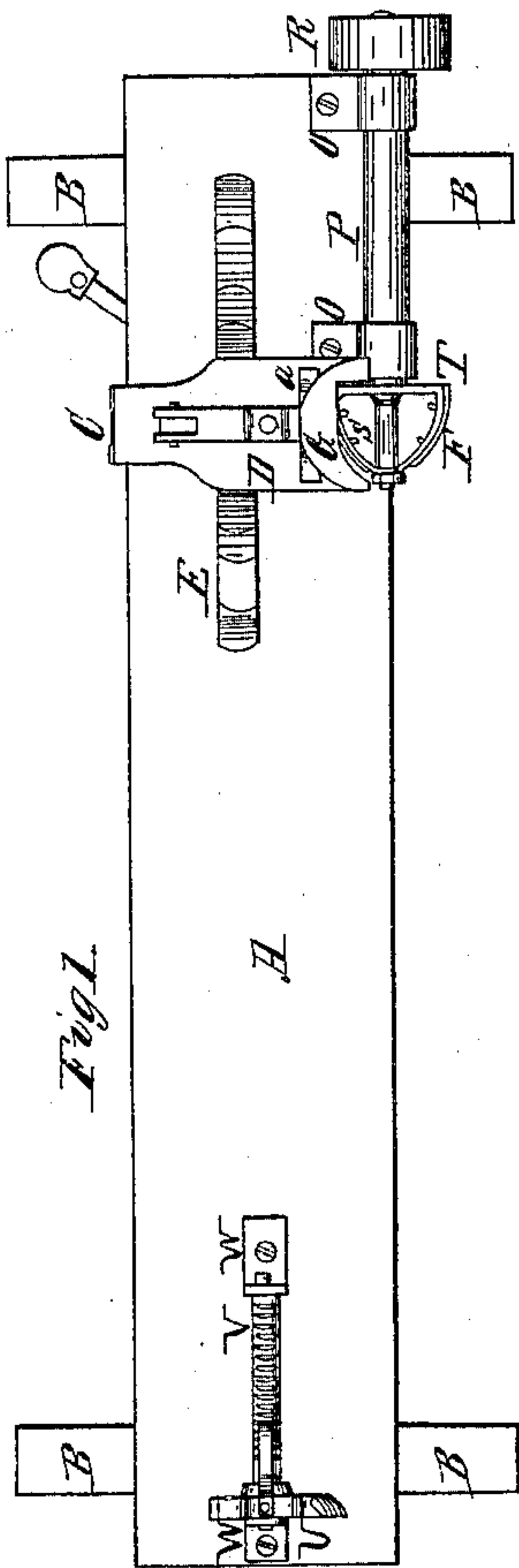


Fig. 1.

Witnesses.
J. Deming
Edw. S. Brown

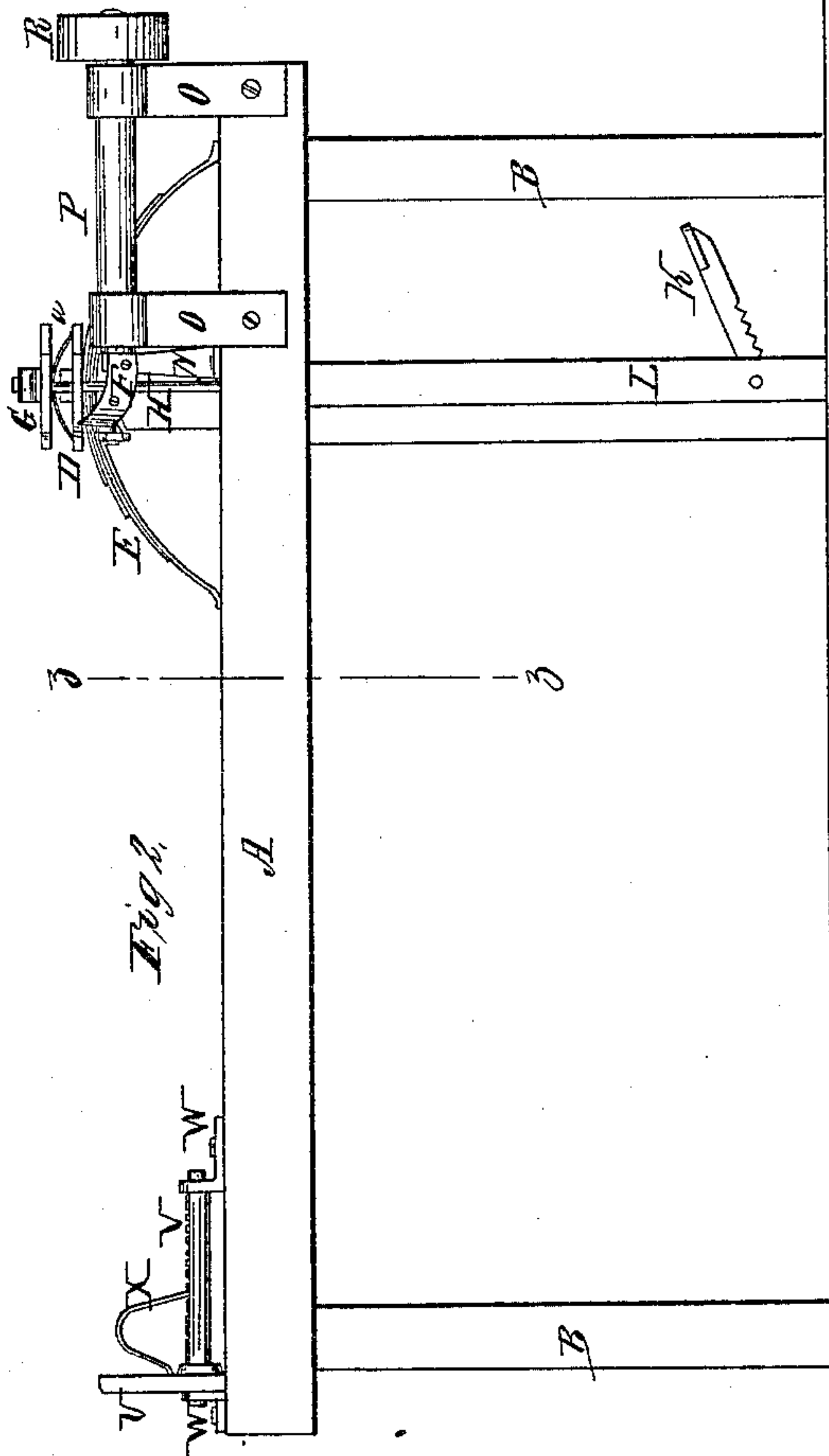


Fig. 2.

Inventor.
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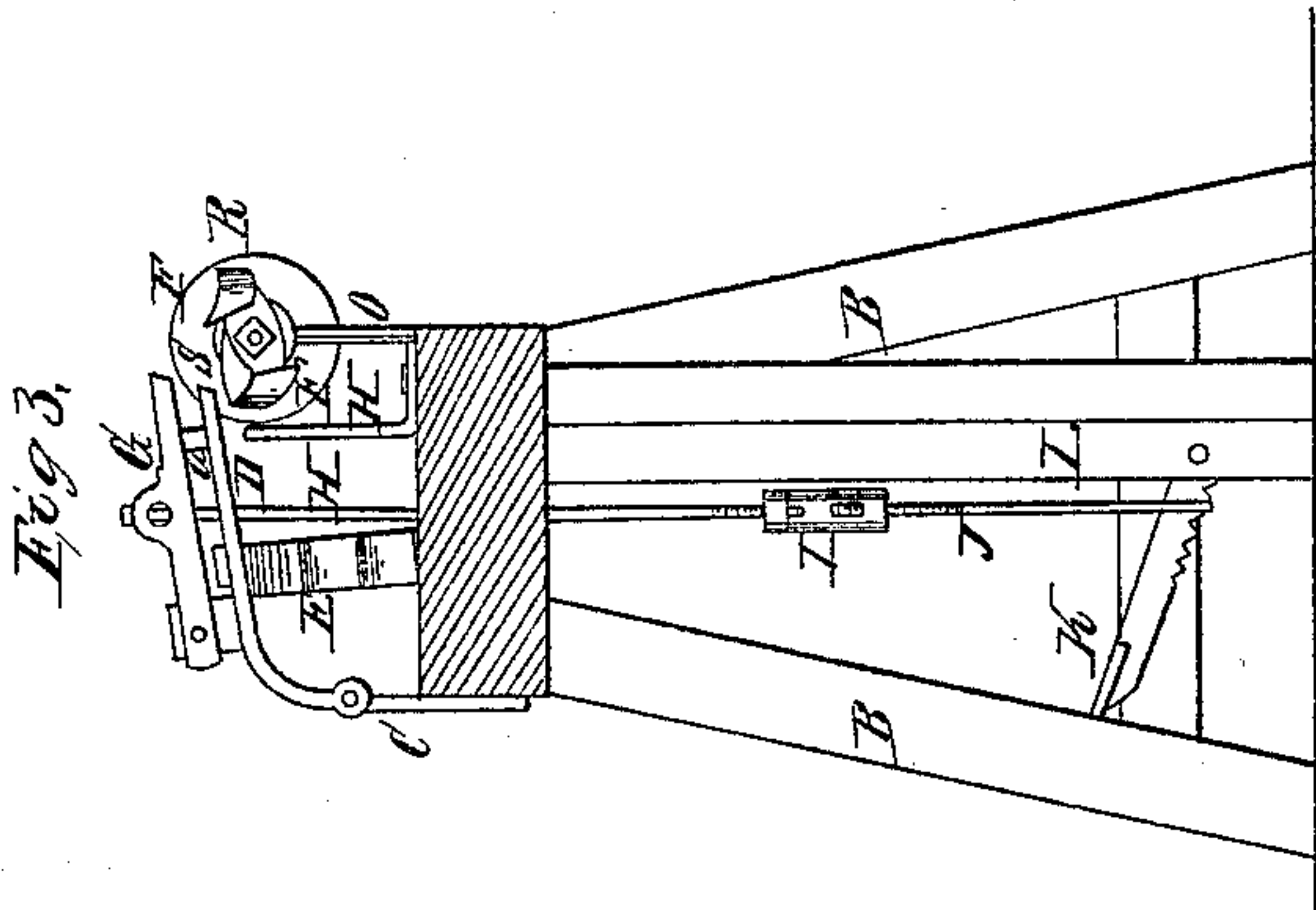


Fig. 3.

UNITED STATES PATENT OFFICE.

ARCHIBALD H. CROZIER, OF OSWEGO, NEW YORK.

MACHINE FOR CUTTING AND DISTANCING THE LOCKS ON HOOPS.

Specification of Letters Patent No. 27,206, dated February 21, 1860.

To all whom it may concern:

Be it known that I, ARCHIBALD H. CROZIER, of the city and county of Oswego and State of New York, have invented a new,
5 useful, and Improved Machine for Preparing Hoops for Casks by Cutting the Locks and Measuring the Length of the Hoops at the Same Time; and I do hereby declare that the same is described and represented
10 in the following specifications and drawings.

To enable others skilled in the art to make and use my improved machine I will proceed to describe its construction and operation referring to the drawings in which the
15 same letters indicate like parts in each of the figures.

Figure 1, is a plan or top view. Fig. 2, is an elevation of one side. Fig. 3, is a section to the right of the line *z, z*.

20 The nature of my invention and improvements in machines for cutting the locks and measuring the length of hoops for casks, consists in a clamp or jaws for holding the hoops while the lock is being cut. And in
25 hinging said jaws or arranging them to traverse and mounting them on a spring so that they may be moved to carry or feed the hoop to the cutter that cuts the lock; also in a cutter arranged and adapted to cut
30 the lock or score in the hoop. And in a yielding gage or stop to measure the length of the hoop, so constructed as to allow the operator to vary the length of the hoops, somewhat, in proportion to the thickness of,
35 or crooks in the hoop in which he is cutting the locks or scores.

In the accompanying drawings A, is a bed or top which may be made of wood about one foot wide, and four inches thick,
40 and about two feet longer than the longest hoops that are to be cut. This bed A, is supported by four legs B, B, at a convenient height for a man to tend it, and supply the hoops or poles in which the locks are to
45 be cut.

C, is a stand fastened to the side of the bed A, to which stand the jaw D, is hinged so as to vibrate freely and has the spring E, fastened to it to hold it up so that a hoop
50 may be placed upon it without being caught by the rotating knives F, F.

G, is an upper jaw made to correspond with the jaw D, to which it is hinged as shown in Fig. 3. These jaws are held open
55 ready to receive the hoop by the spring *a*, and the shanks of both jaws are perforated

for the rod H, which passes down through them and is connected by the link nut I, to the rod J, which hooks under the treadle K, which has its fulcrum in the post L, and is
60 so arranged that when the operator places a hoop between the jaws and applies his foot to the treadle and presses it down, the rod H, draws the jaw G, down so as to clamp the hoop between the jaws firmly; the spring
65 *a*, being slender, allows the jaws to close firmly on the hoop as they are drawn down, and the spring E, is made so stiff that it does not yield, so as to allow the hoop to be brought in contact with the cutter until
70 it is firmly clamped by the jaws. But after it is so clamped the operator draws down the jaws, and carries or feeds the hoop to the cutter so as to cut the lock or score, until the lower jaw stops on the standard N, when
75 by releasing the treadle the springs E, and *a*, throw up the jaws and release the hoop, so that it may be removed and the other end of the hoop put in the jaws and a score or lock cut in it.
80

The standard N, is fastened to the top of the bed A.

O, O, are two stands fastened to the bed A, for the shaft P, to turn in, which shaft is provided with a pulley R, for a band to
85 turn the shaft and carry the cutter head S, fastened to the opposite end of the shaft from the pulley, as shown in the drawing. The cutter head S, is a D-shaped frame as shown in Fig. 1, which has the two spiral
90 knives F, F, fastened to it; the edges of which knives are curved forward spirally, as shown in Figs. 2 and 3, of the drawings, so as to begin to cut at the scarf end of the lock, and cut with the grain, or partially
95 with the grain of the wood, to the square end of the lock, which is scored down by the spurs at the ends of the knives one of which is shown at T, Fig. 1.

In order to cut the locks or scores a proper
100 distance apart to make the hoops the size required, I make an adjustable yielding gage or stop U, and arrange it to traverse on the rod V, which rod is supported by the stands W, W, fastened to the bed A, for that
105 purpose. The top of the rod V, has a series of notches in it as shown in the drawing, in to which the end of the spring X, may be placed, so as to hold the gage U, a proper distance from the cutter to make the hoops
110 the length required. The top of the bed opposite the rod V may be marked and the

marks numbered, so that the gage may be set opposite to the proper mark and number to make the hoop of the length required, if the hoop pole is of a medium size, so that
5 when the operator has cut one lock or score in the hoop, he can hitch it on the gage U, and then place the other end in the jaws and cut the lock; and if the hoop pole is very crooked he may pull it so as to make
10 the gage yield a little as he places it in the jaws. Or if the hoop pole is larger and thicker than a medium size he can hold it slack or a little loose as he puts it in the jaws and in this way vary the length of the
15 hoops, somewhat in proportion to the size of the poles, or crooks in the hoops worked.

The ends of the jaws G, and D, have a score in them corresponding to the curves of the knives F, F, which cut the lock or
20 score in the hoop.

I believe I have described and represented my improvements in machines for cutting the locks and measuring the lengths of the

hoops for casks at the same time, so as to enable any person skilled in the art to make 25 and use it, I will now state what I desire to secure by Letters Patent to wit.

1. I claim the clamps or jaws for holding the hoop while the lock is being cut.

2. I claim hinging the jaws which hold 30 the hoop, so as to allow them to vibrate, or arranging them to traverse, and mounting them on a spring substantially as described, so that they may be moved to carry or feed the hoop to the cutter that cuts the lock or 35 score. And in combination with the jaws for holding the hoop, I claim the cutter for cutting the lock.

3. I claim a yielding gage so constructed as to allow the operator to vary the length 40 of the hoops somewhat in proportion to the thickness or crooks in the hoop marked.

ARCHIBALD H. CROZIER.

Witnesses:

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