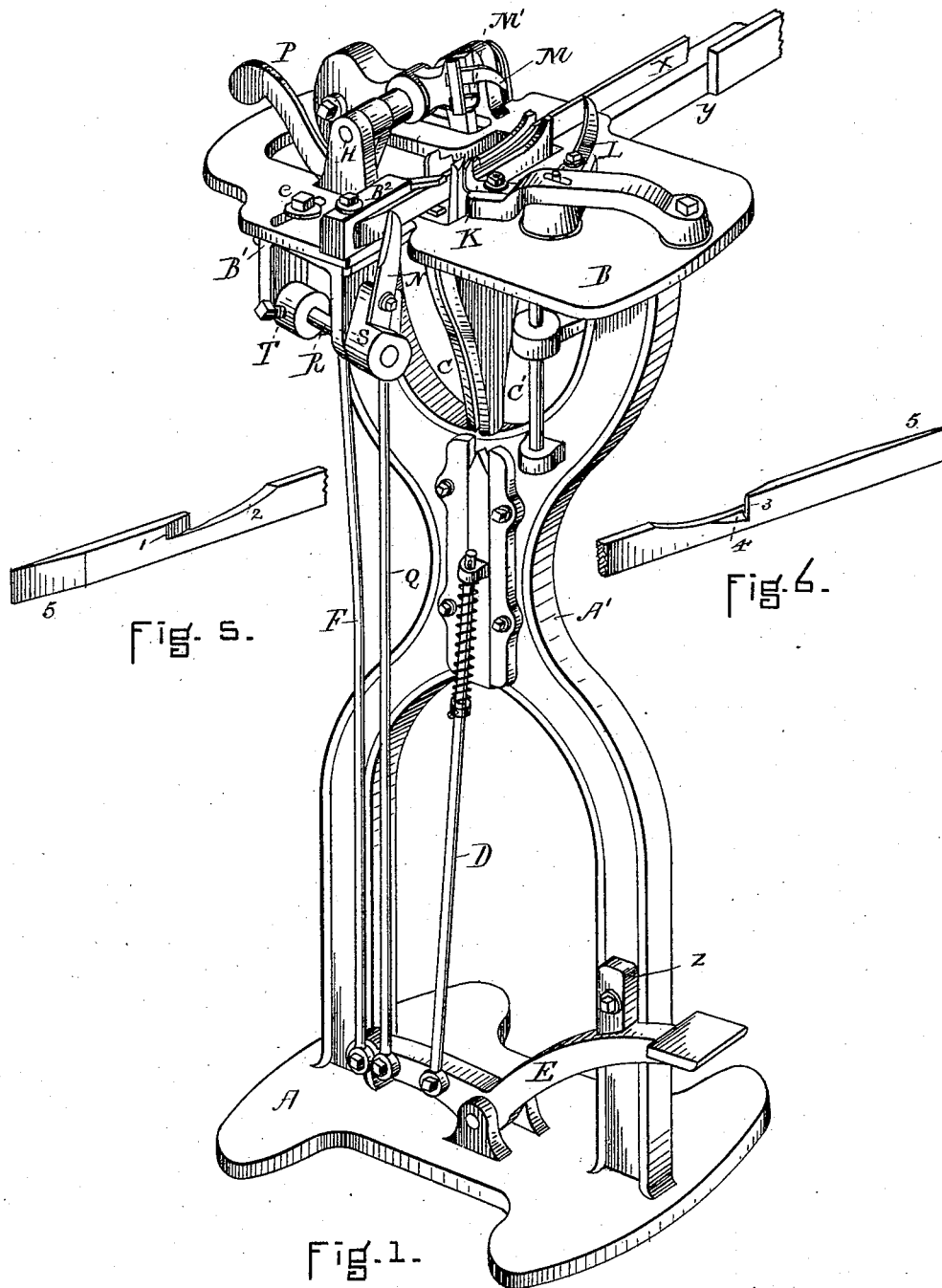


P. D. PIKE.

MACHINE FOR CUTTING LOCKS IN HOOPS.

No. 343,197.

Patented June 8, 1886.



WITNESSES
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Geo A P Goodhue

INVENTOR
Paphus D. Pike
by
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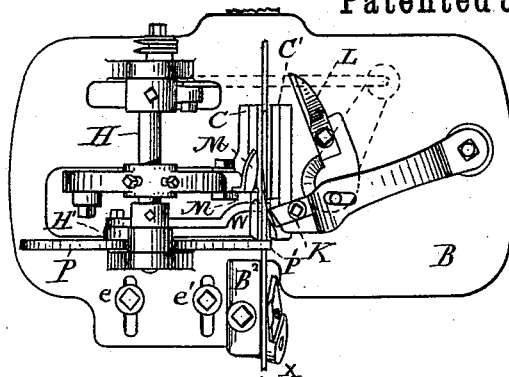


FIG. 2.

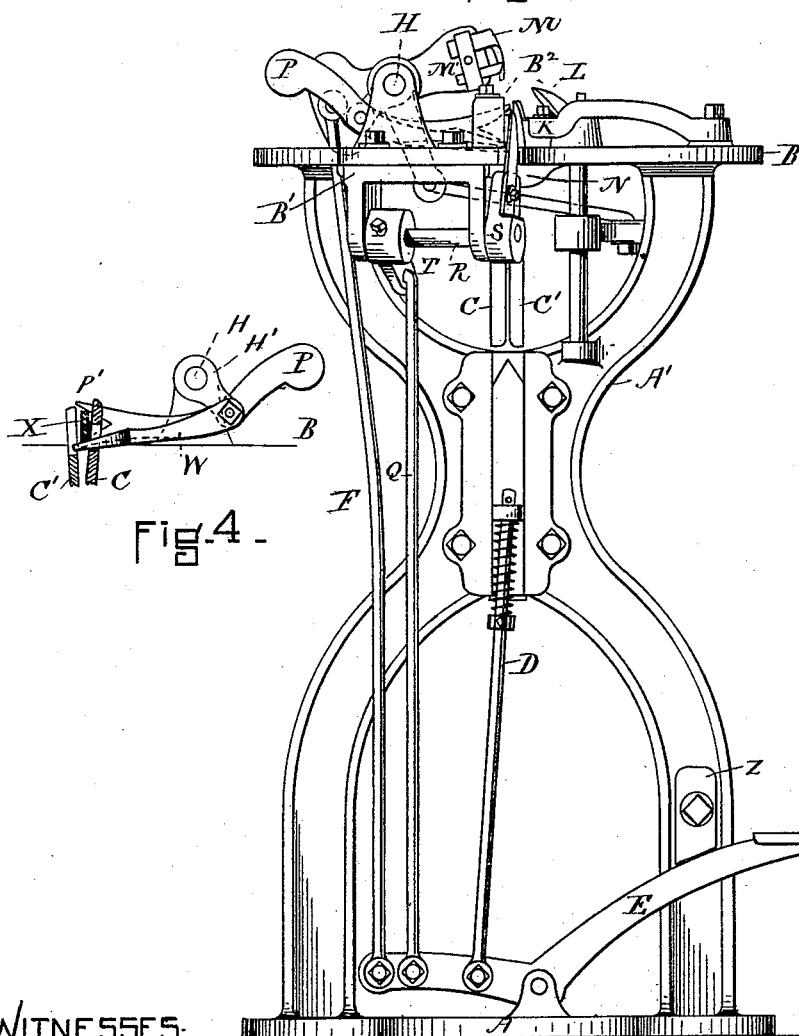


FIG. 4.

FIG. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

PAPHRO D. PIKE, OF STOWE, ASSIGNOR TO GEORGE J. PRINCE, TRUSTEE,
OF WEST RANDOLPH, VERMONT.

MACHINE FOR CUTTING LOCKS IN HOOPS.

SPECIFICATION forming part of Letters Patent No. 343,197, dated June 8, 1886.

Application filed September 16, 1885. Serial No. 177,235. (No model.)

To all whom it may concern:

Be it known that I, PAPHRO D. PIKE, of Stowe, in the county of Lamoille and State of Vermont, have invented certain new and useful Improvements in Machines for Cutting Locks in Hoops, of which the following is a specification.

This invention relates to that class of machines used for cutting the locks in hoops for barrels and other articles of coopers' ware—such as is shown and described in United States Letters Patent No. 222,945, granted to me December 28, 1879, and on which my present invention is an improvement.

In the accompanying drawings, Figure 1 is a perspective view of my improved lock-cutting machine. Fig. 2 is a top or plan view of the same. Fig. 3 is a side elevation of the same. Fig. 4 is a side elevation, partly in section, of the device I use for centering the hoop in its proper position while the locks are being cut therein. Figs. 5 and 6 are perspective views of the ends of a hoop as finished with locks and shaved ends ready for use by my improved machine.

The frame of my improved machine consists of the bed-plate A, from which rises the supports A' for the table B. I employ in my present machine the hoop-clamps C C' and the four cutters K L M M' described in my said former patent, where their operation is set forth.

My present improvement consists in adding to this machine a cutter, N, for shaving the end of the hoop to the required thickness at the same time the lock is being cut, and also in combining with the cutters a device for centering the hoop in its proper position vertically for the action of the knives.

To the table B, by means of bolts and nuts e e', I attach the plate B', having lugs, which act as bearings for the rock-shaft R. The knife N is attached to the free end of the rock-shaft arm S, and is operated from the foot-lever E by means of the connecting-rod Q, the lower end of which is pivoted near the end of the foot-lever, while its upper end is attached to the arm T on the rock-shaft R.

B² is a block, preferably of wood, which is attached by any suitable means to the table

B. Upon this block the knife cuts or shaves the hoop, which presses or rests against it.

In Figs. 5 and 6 I have shown a hoop with its lock and end cut on this machine. The action of the four knives spoken of in my former patent is shown therein at 1, 2, 3, and 4, while the work accomplished by the knife N is shown at 5.

The clamping-jaws shown in my former patent enabled me to use hoops of varying thickness, the hoop being thereby automatically adjusted horizontally. With the centering device shown in Fig. 4 the hoop is also automatically adjusted vertically, no matter what its width, so that the knives cutting the lock act in just the proper ratio to the width of the hoop. This centering device consists of the lever P, forked at one end, P', and pivoted to the arm H' of the rock-shaft H, and also of the idle-arm W, shaped to conform to the lower fork of the lever P, pivoted to the arm H' on the same bolt as the lever P, and resting in a slot in the clamp C. The action of this centering device is as follows: A hoop-blank is placed in the machine between the forks of the lever P, resting therein on the idle-arm W. As the lever P is free to move backward and forward, but is so pivoted that its gravity always presses it toward the clamps C C', the hoop-blank is centered vertically at the same instant that the clamps grasp it.

By shaping the arm on the rock-shaft H, to which the rod F is attached, as shown in Fig. 3, I am not obliged to make the slotted connection mentioned in my said former patent. I have also added a stop to the supports A', to regulate the upward motion of the foot-lever E.

By one motion of the foot-lever I am enabled, with the mechanism herein shown, to finish the hoop-blank ready for use.

Y is a rest for the hoop-blank while it is being cut, and may also be used for a measuring-rod to determine the distance between the locks at opposite ends of the hoops.

What I claim is—

1. In a hoop-lock-cutting machine, the combination of the block B², attached to the frame of the machine, the knife N, fixed on the free end of the arm S, which is rigidly attached to the rock-shaft R, and the rock-shaft arm op: 100

erated by an arm, rod, and lever, substantially as described.

2. In a hoop-lock-cutting machine, the combination of a supporting-frame formed as shown and described, the hoop-holding jaws operated by a vertical moving wedge, the scarf-cutters and lock-cutters with their operating mechanism, with the hoop-bracing block B², and the knife N, which acts against such block, with its operating mechanism, all connected and arranged for joint operation substantially as described.

3. In a hoop-lock-cutting machine, a vertical centering device consisting of the lever P, pivoted to the arm H' of the rock-shaft H, and having one end, P', forked, and the idle-arm W, pivoted to the arm H', and resting in a slot in the clamp C, substantially as described.

In witness whereof I have hereunto set my hand.

PAPHRO D. PIKE.

Witnesses:

ALICE M. THOMPSON,

L. S. THOMPSON.