

G. W. McARTHUR,
Barrel Hoop Machines.

No. 232,198.

Patented Sept. 14, 1880.

Fig. 1

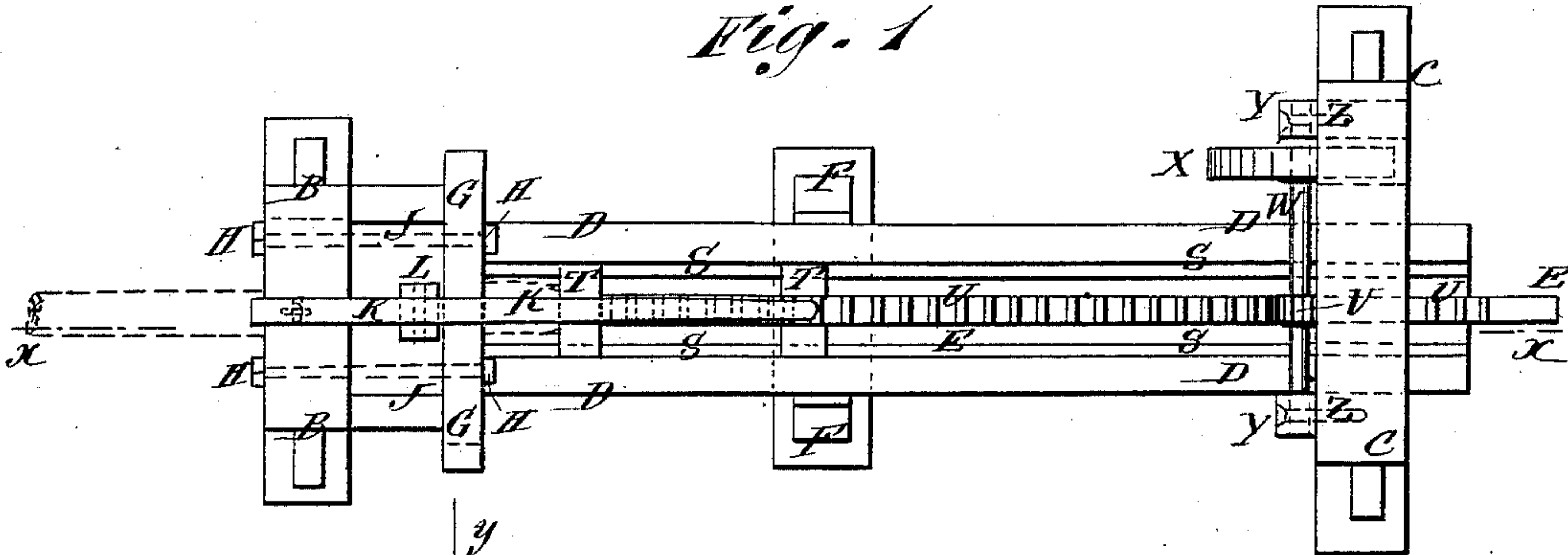


Fig. 2

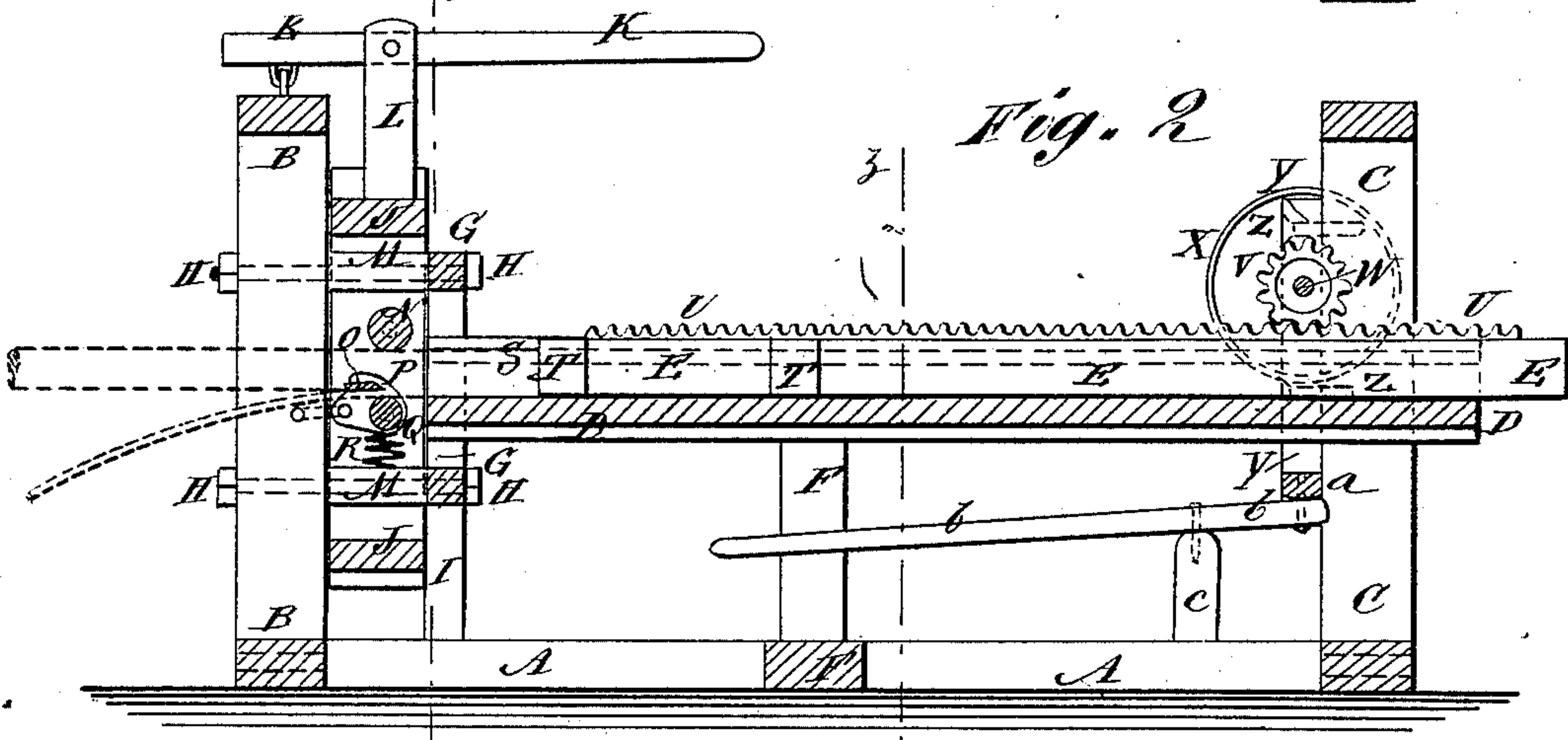


Fig. 3

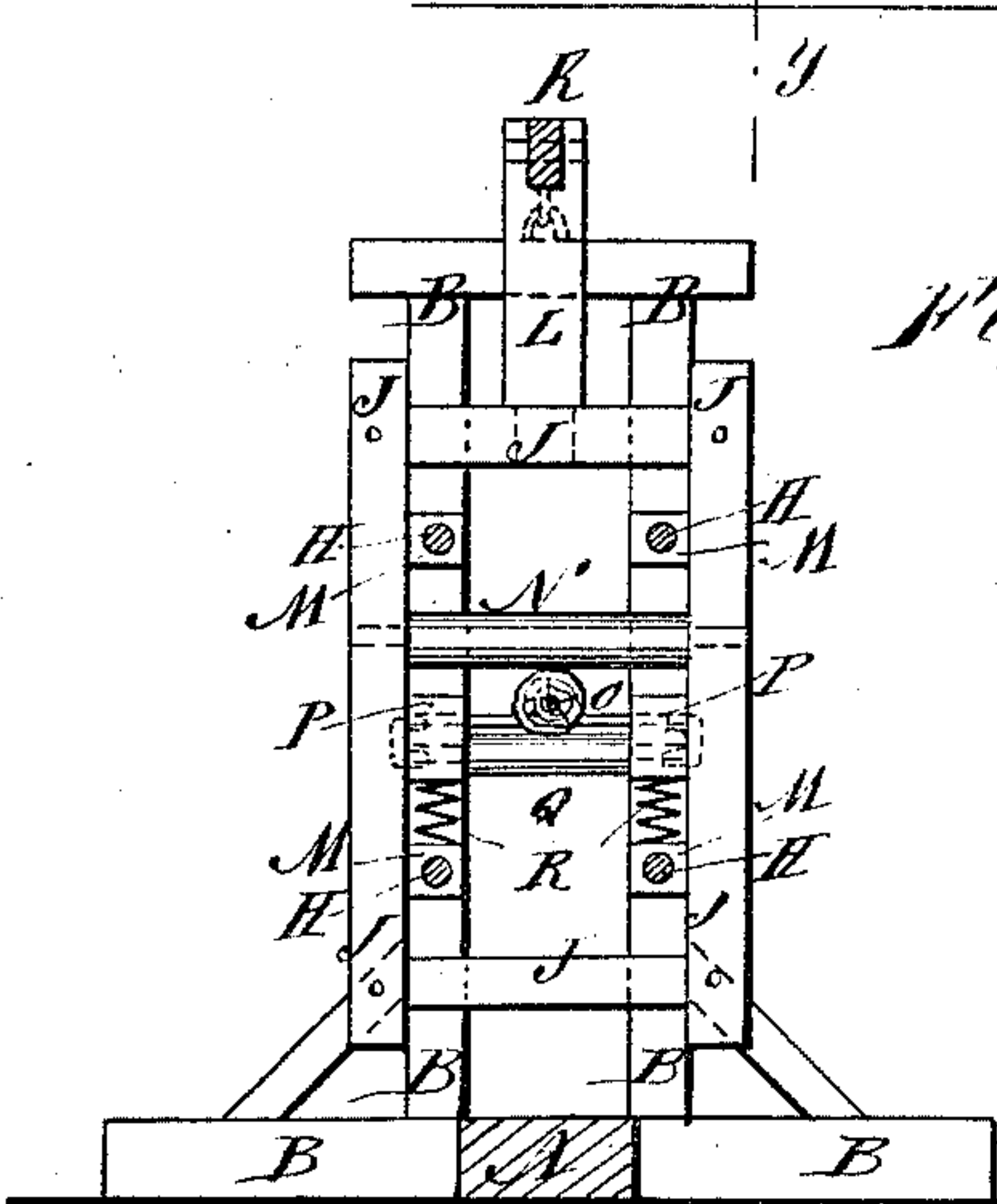
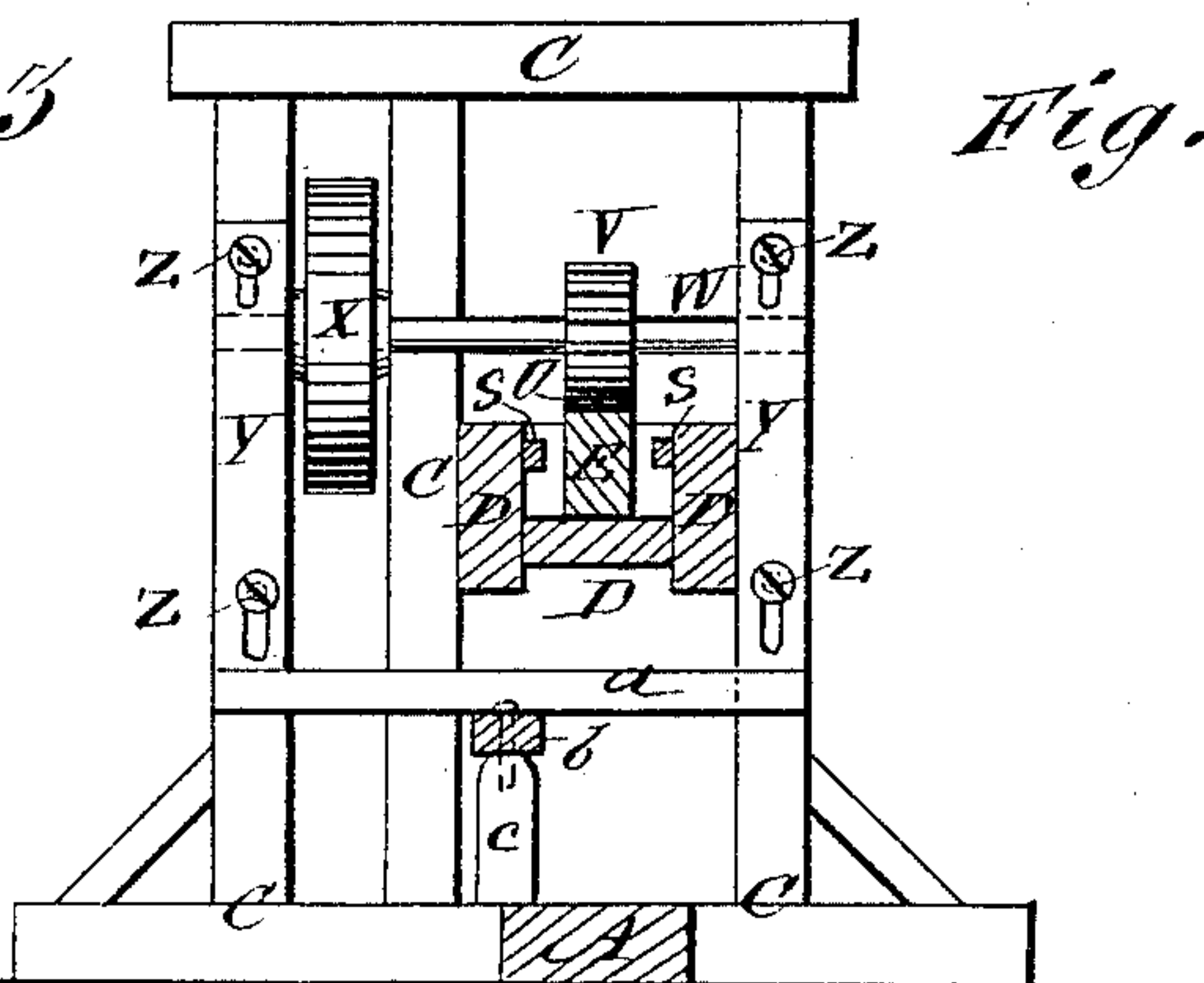


Fig. 4



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE W. MCARTHUR, OF LAINGSBURG, MICHIGAN.

BARREL-HOOP MACHINE.

SPECIFICATION forming part of Letters Patent No. 232,198, dated September 14, 1880.

Application filed February 5, 1880.

To all whom it may concern:

Be it known that I, GEORGE WILLIAM MCARTHUR, of Laingsburg, in the county of Shiawassee and State of Michigan, have invented a new Improvement in Barrel-Hoop Machines, of which the following is a specification.

Figure 1 is a plan view of the improvement. Fig. 2 is a sectional side elevation taken through the line *x x*, Fig. 1. Fig. 3 is a sectional end elevation taken through the line *y y* of Fig. 2. Fig. 4 is a sectional end elevation taken through the line *z z*, Fig. 2.

The object of this invention is to furnish machines for cutting hoops from poles, which shall be so constructed as to adjust the knife automatically to the bends of the pole and cut the hoops of uniform thickness.

The invention consists in constructing the cutting mechanism of a knife and roller attached to hinged blocks held up by springs, whereby the knife is made to adjust itself to bends in the pole; also, in the combination therewith of a movable sash and roller for holding the pole down upon the knife.

A is the bed or base of the machine, to the ends of which are attached the vertical frames B C. To the frame C is attached the rear part of a trough, D, which serves as a way or slide for the pole and the follower or ram E. The middle part of the slide D is supported by a frame, F, attached to the bed A. To the forward end of the slide D is attached a square frame, G, the four corners of which are connected with the frame B by long bolts, H. The forward end of the slide D is further supported by a standard, I, interposed between the bottom bar of the frame G and the bed A.

The bolts H are made of such a length as to leave space between the frame B and the end of the slide D for the sash J, which is raised and lowered by the lever K. The lever K is pivoted to the top bar of the frame B, and to the upper end of a standard, L, attached to the top bar of the sash J.

The frames B G are held at the proper distance apart by blocks M, interposed between them, and kept in place by the bolts H.

To the side bars of the sash J is pivoted a roller, N, to rest upon the pole and hold it

down upon the knife O, the ends of which are attached to the blocks P. The blocks P are hinged to the side bars of the frame B at the inner sides of the side bars of the sash J, so that they will not interfere with the movements of the said sash.

To and between the free ends of the blocks P is pivoted a roller, Q, with its upper side at a distance below the knife O equal to the required thickness of the hoops. The blocks P are held up by spiral springs R, placed beneath them and resting upon the lower blocks, M. With this construction the knife O will have a rocking motion, so that it will follow the bends of the pole and cut the hoops of a uniform thickness.

To the sides of the slide D are attached, or upon them are formed, tongues S, to enter grooves in the sides of the follower E, or in the sides of the guide-blocks T, attached to the said follower E.

The forward or head block T has spikes attached to it to prevent it from slipping upon the end of the pole.

Upon the upper side of the follower E is formed, or to it is attached, a rack, U, with the teeth of which engage the teeth of the gear-wheel V, attached to the shaft W. To the shaft W is also attached a pulley, X, to receive a driving-belt from any convenient power. The shaft W revolves in bearings Y, which are secured to the side bars of the frame C by bolts Z. The bearings Y are slotted to receive the bolts Z, so that the said bearings may be slid up and down to throw the gear-wheel V out of and into gear with the rack U.

To the lower ends of the bearings Y is attached a cross-bar, *a*, to the center of which is pivoted the end of a lever, *b*. The lever *b* is pivoted to a standard or other support, *c*, and its free end projects into such a position that it may be conveniently reached and operated by the operator with his foot to throw the machine out of gear. The gear-wheel V is lowered when the operator's foot is removed from the lever *b* to throw it into gear by its own weight.

The follower E is designed to be drawn back, when the machine is thrown out of gear, by a weight, which is not shown in the drawings.

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

5 1. In a hoop-machine, the cutting mechanism constructed substantially as herein shown and described, consisting of a knife, O, and roller Q, attached to spring-pressed hinged blocks P P, whereby the knife is made to adjust itself to the bends of the pole, as set
10 forth.

2. The combination, with the follower E, of the sash having roller N, the knife O, having its ends attached to the hinged spring-supported blocks I, and the roller Q, fastened to and between said blocks, as set forth.

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Witnesses:

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