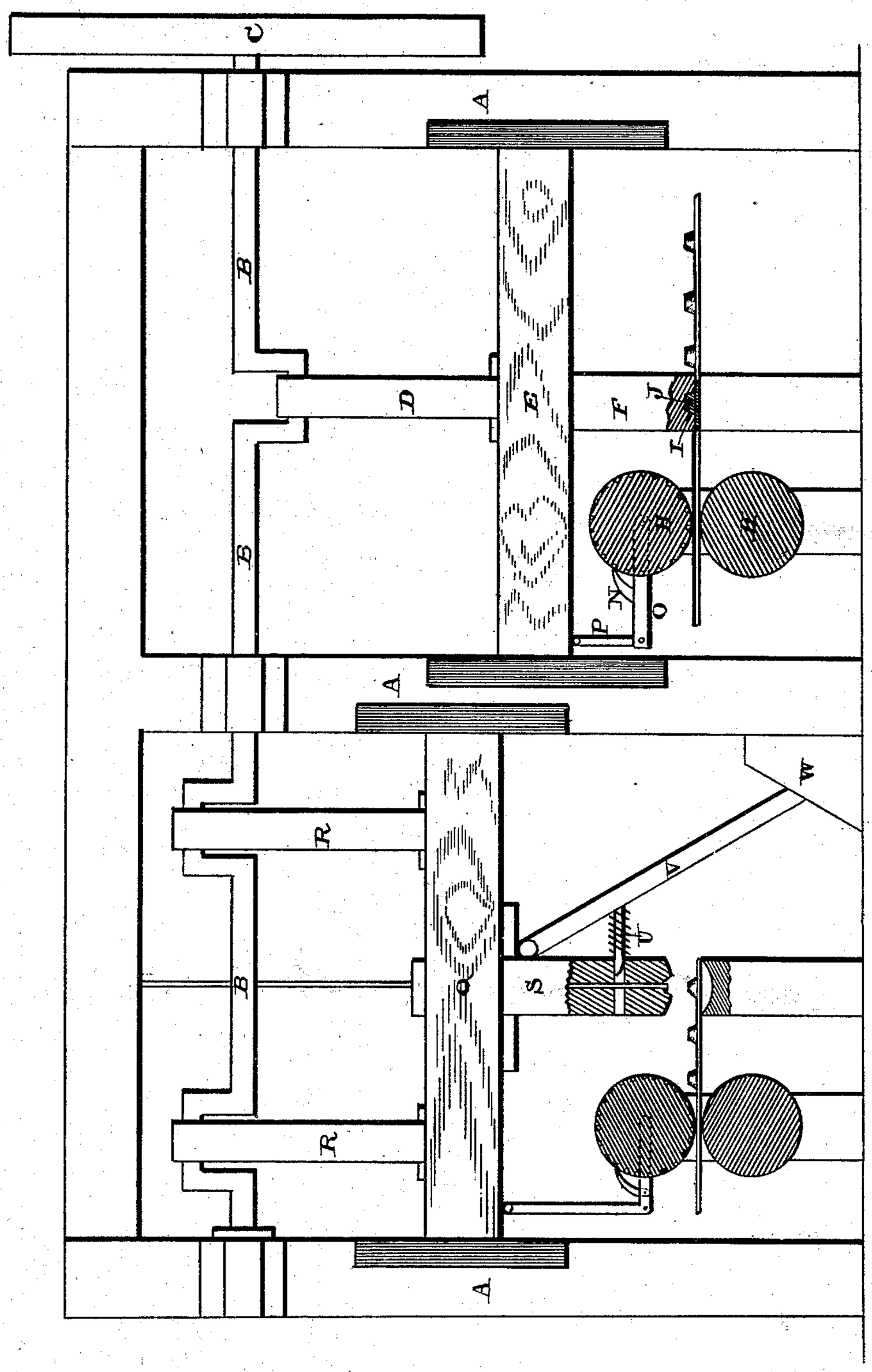
(No Model.)

C. H. YARINGTON.

MAKING BRASS HEADED NAILS.

No. 272,010. Patented Feb. 6, 1883.



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UNITED STATES PATENT OFFICE.

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MAKING BRASS-HEADED NAILS.

SPECIFICATION forming part of Letters Patent No. 272,010, dated February 6, 1883.

Application filed July 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHAS. H. YARINGTON, of Torrington, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in the Manufacture of Brass-Headed Nails; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

My invention relates to an improvement in the manufacture of brass-headed nails; and it consists in, first, a die having a recess in its lower end for forming a recessed bulge upon the metal out of which the head is to be formed, and a corresponding anvil, in connection with a second die, through which the wire is passed to be forced into the bulge, and a corresponding anvil, a mechanism for cutting off the wire, and an operating mechanism for both of the dies; second, in the combination of the hollow die and its corresponding anvil, the cutter, its operating-rod, and incline, the cutter being made to hold the wire against back-pressure, as will be more fully described hereinafter.

The object of my invention is to produce a machine by which heads made out of sheet-brass and other metals can be applied to the nails as fast as they are cut from the wire.

The accompanying drawing represents a side elevation of a machine which embodies my invention.

A represents a suitable frame-work, in which is journaled the crank-shaft B, which has a fly-wheel, C, upon one end. To this cranked shaft is attached, near one end, the connecting-rod D, which has its lower end attached to the cross-head E, which plays vertically between suitable guides in the frame. To the under side of this cross-head is secured a suitable die or plunger, F, which has a suitable recess, I, made in the center, and projecting down from the center of this recess is the teat J. Journaled in suitable bearings at one side of this plunger are the two feed-rollers H, which are operated by the lever O, which is provided with the pawl N and the connecting-rod P, which is connected at its upper end to the cross-head. The two feed-rollers are provided with suitable teeth or other means for causing them to revolve together, and a suitable means for the pawl to catch in, so as to cause them to turn at each upward stroke of the cross-head, and thus feed the strip of brass out of which the heads are to be formed in between the plunger or die and the anvil. This feed will be regulated so that the metallic strip will be fed forward just far enough at each upward movement of the cross-head to form a head. The die in descending upon the strip compresses it at every point except at the center, where the recess I is formed, and the metal in being carried into this recess has a depression formed in the center of the raised-up portion for the purpose of receiving the wire out of which the nail or tack is formed. The amount of metal which is to be forced up at the center will of course depend upon the size of nail or tack which is to be made; but under all circumstances there must be a sufficient rim or flange formed to enable the nail to be firmly secured to the head. To the other end of the cranked shaft is secured a second cross-head, Q, by means of the two connecting-rods R. To this cross-head is secured the die S, which has a vertical opening through its center for the wire out of which the nail or tack is to be formed to pass through. There is also secured to the under side of this cross-head a similar feeding mechanism, which serves to feed forward the metallic strips which have been prepared by the other die. The die S or its anvil will be provided with a suitable cutter, so that when the die descends upon the strip it will cut from it just sufficient metal to form a head for one nail. The wire of which the nails or tacks are to be formed passes down through a suitable clamping device of any kind placed upon the top of the frame, which prevents the wire from moving backward as the cross-head rises upward, and then down through the die. This die may, if so desired, be provided with jaws on its lower end, which will be made to clamp the wire as it descends, either by the concave shape of the anvil or by any other suitable means that may be preferred, and thus prevent the wire from slipping backward.

Pivoted either to the under side of the cross-

head or to the side of the die is the arm or lever V, which has connected to it a cutter, U, which cuts off the wire at each downward stroke of the cross-head. The lower end of this lever is beveled away, and is made to strike against an angle-block, W, and thus force the lever inward, so that the cutter will cut the wire off at the proper time. This cutter, in cutting the wire, forms a flange or rough edge upon one side of the lower end of the main piece of wire, and this rough end or flange serves as a means for the metal in the head to catch over, and thus more securely fasten the two parts together. This cutter also serves to prevent any backward movement of the wire which is being attached to a head. As the metallic strip out of which the heads are to be formed is fed forward the raised or bulged portion comes just under the center of the die S, which has a suitable recess formed in it, so as to catch over the top of the bulged portion and compress it tightly against the sides of the wire. As the die descends, carrying the wire with it, the lower end of the wire is guided into the recess made in the center of the bulged part of the head, and as the die descends the head is detached from the metallic strip, is given any suitable shape to correspond with the recess in the top of the anvil, and the bulged portion is compressed tightly around the end of the wire, so as to secure the two parts firmly together. At the next upward movement of the cross-head the strip of metal out of which the heads are to be formed will force the nail or tack out of position; or, if so preferred, it may be removed by any other suitable mechanism for this purpose.

The great advantage in this method or system of making brass-headed nails consists in the small number of operations which are required, and the great rapidity with which they can be carried out.

Having thus described my invention, I claim—

1. In a machine for the manufacture of capped nails, the die F, having the recess I and point J, and its corresponding anvil, jointly with the hollow die S and its corresponding anvil, a mechanism for cutting off the wire, and a mechanism for operating both of the dies, substantially as shown.

2. The combination of the hollow die S and its corresponding anvil, the cutter U, operating-rod V, and incline W, the cutter being made to hold the wire against back-pressure, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. YARINGTON.

Witnesses:

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