

(No Model.)

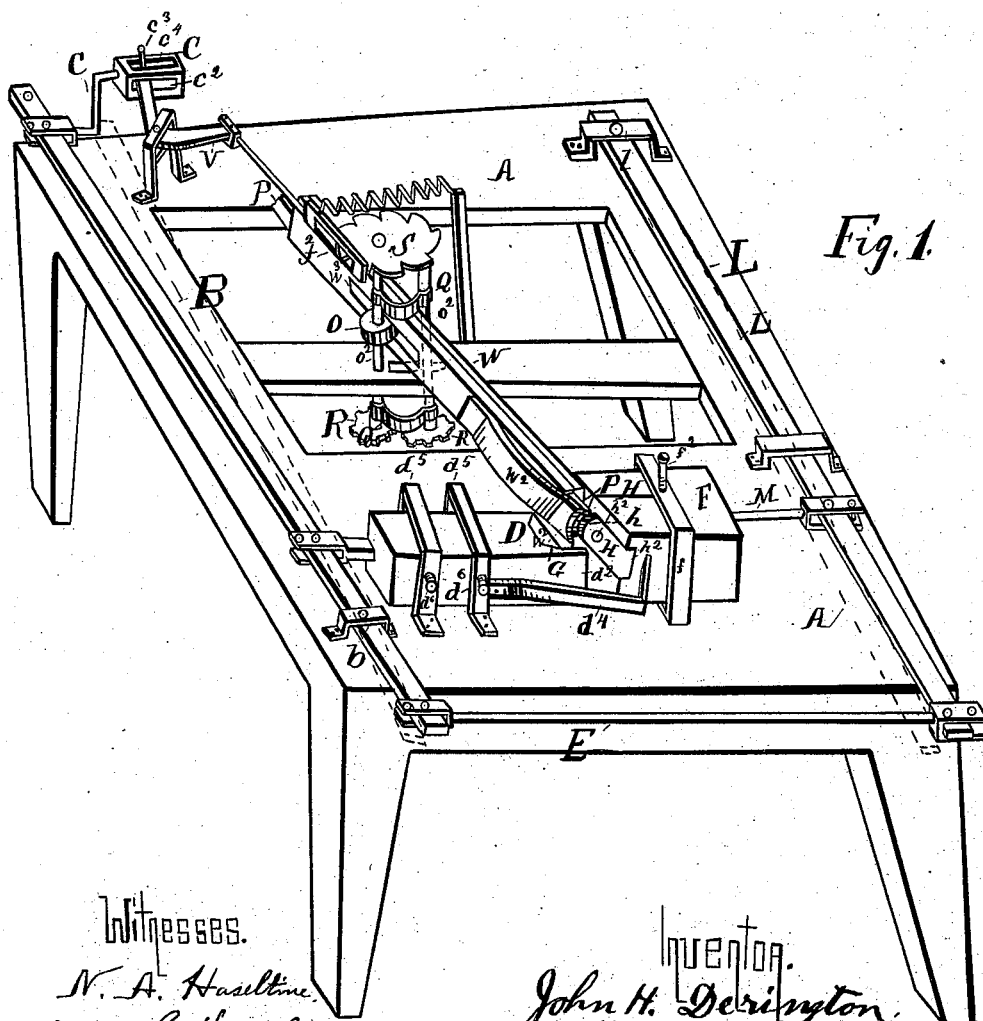
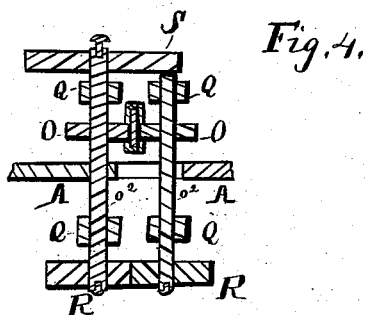
2 Sheets—Sheet 1.

J. H. DERINGTON & H. J. PARKER.

MACHINE FOR MAKING BARBS FOR HOG NOSE RINGS.

No. 382,693.

Patented May 15, 1888.



Witnesses.  
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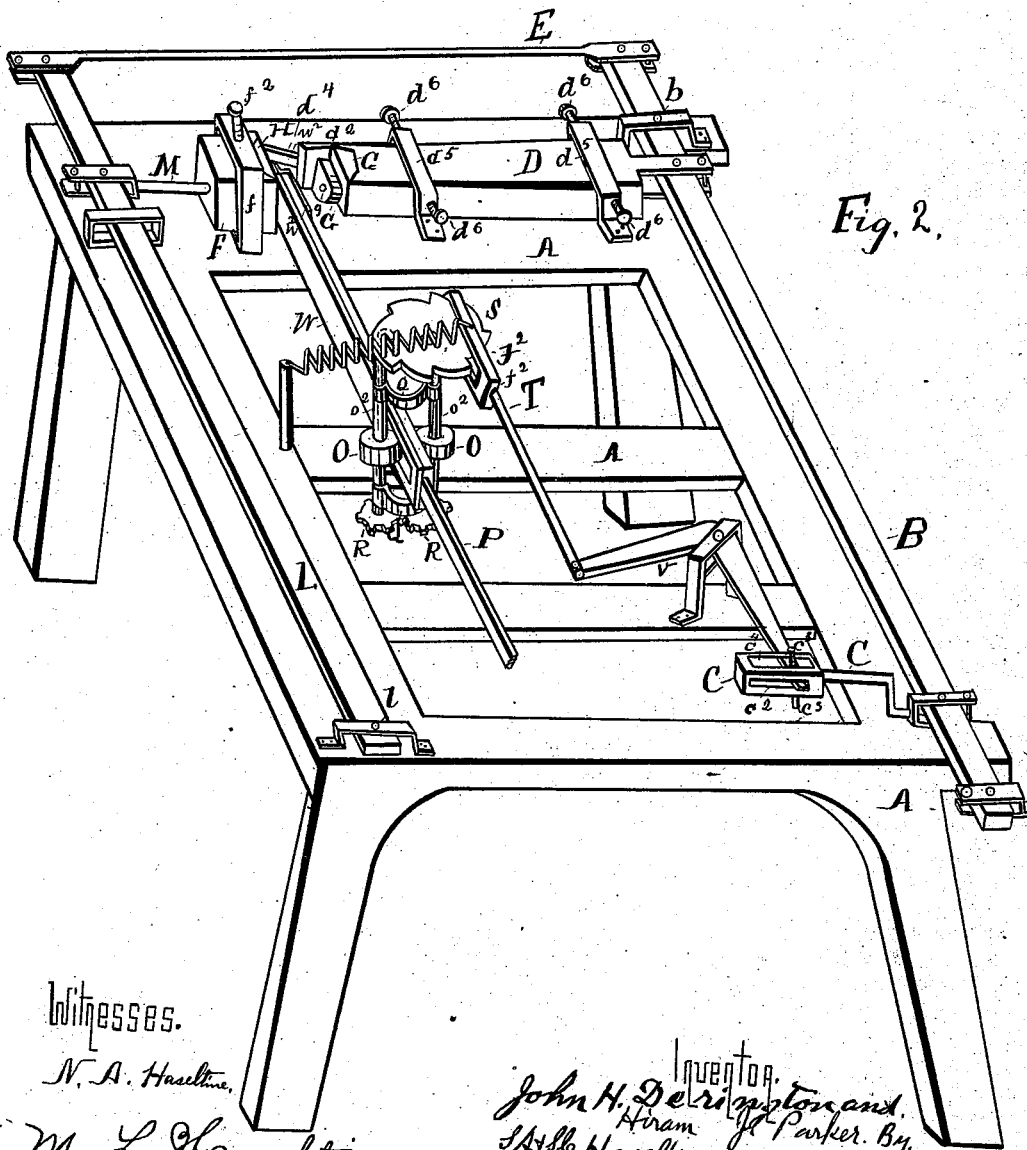
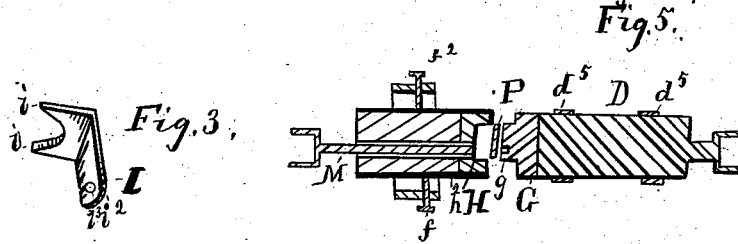
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# UNITED STATES PATENT OFFICE.

JOHN H. DERINGTON AND HIRAM J. PARKER, OF SPRINGFIELD, MISSOURI;  
SAID DERINGTON ASSIGNOR TO SAID PARKER.

## MACHINE FOR MAKING BARBS FOR HOG-NOSE RINGS.

SPECIFICATION forming part of Letters Patent No. 382,693, dated May 15, 1888.

Application filed September 2, 1887. Serial No. 248,648. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN H. DERINGTON and HIRAM J. PARKER, citizens of the United States, residing at Springfield, in the county of Greene and State of Missouri, have invented certain new and useful Improvements in Machines for Making Barbs for Hog-Nose Rings; and we 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 appertains to make and use the same.

Our invention relates to improvements in machines for making barbs for hog-nose rings, the object of which is to provide a cheap, simple, and durable device for quickly cutting, punching, and forming barbs for hanging in the ring which is secured to hogs' noses to prevent their rooting. These objects we attain by means of the mechanism illustrated in the accompanying drawings forming a part of this specification, in which—

Figure 1 is a view in elevation of the entire machine from one of the back corners of the machine. Fig. 2 is a similar view from the opposite corner of the machine. Fig. 3 is a view of one of the barbs. Fig. 4 is a detail view in section of the feeding mechanism. Fig. 5 is a sectional view of the cutting and punching mechanism.

Similar letters of reference indicate corresponding parts in the several figures.

A is an ordinary frame for supporting the machinery, which may be of any desired size and shape.

B is a main lever having a fulcrum, *b*. Said lever operates the feed by an attached rod, C, and drives the follower or plunger D for cutting and forming the barbs. Beyond the fulcrum of said lever is secured by a suitable hinge-joint a connecting-rod, E, for operating the lever L, which drives the punch M. At one end of the said lever B the power is secured for driving the entire mechanism by workingsaid lever back and forth, as indicated by the dotted lines.

D is a follower or plunger operated by the lever B, and having a die, G, secured to its front end by any suitable means. Said die is made to fit a female die, H, which is made

rounding at the front edge, *h*, and has a square face at the back end, *h'*, so that the projection *d'* will strike the strip and bend the points *i i* of the barb I to be cut off and turn them at or nearly at right angles with the strip. The strip P is fed past the die H, the said die being made wider than said strip, so that as the die G cuts the strip it forms the heel *i'* of one barb while it forms the points *i i* of the next barb. Plunger D is provided with guides *d'*, which have set-screws *d'* for adjusting the same, so that the dies will be properly adjusted to each other.

L is a lever having a fulcrum, *l*, and a hinged connecting-rod, E, connecting it with the lever B. The attachment to lever B may be at any desired distance from the fulcrum to regulate the stroke of the punch M. Said punch is secured to lever L, and works through the dies G H to punch the hole or eye *i'* in the barb I while the points *i i* are being bent and the heel of the barb being cut from the strip. Said dies have holes *g* and *h'* for admitting the punch.

O O are feed-rollers for feeding the strip P past the dies for being cut into barbs. Said rollers are placed upon shafts *o o*, which have suitable bearings in springs Q Q for creating a tension upon the strip to force it forward into the machine. Said shafts are provided with cog-wheels R R, which engage each other, one of the said shafts being provided with a ratchet-wheel, S, which is operated by means of a ratchet-rod, T, which has a slot, *t*, for engaging and driving the ratchet-wheel, said ratchet-rod having a suitable spring for holding it in place. One end of said ratchet-rod is hinged to one arm of a V-shaped motion-shifter, V. The other end of the said motion-shifter V is secured in the rod C for attaching the same to lever B. For the purpose of regulating the length of the barb and to feed the strip at the proper time, the rod C is slotted, so as to give a loss of motion while lever B is operating the plunger and punch against the strip and to feed the strip while the plunger and punch are being drawn back. This is accomplished by slotting the rod C to receive one arm of the V-shaped motion-shifter, said arm being provided with a pin, *c'*, which works in a slot, *c'*,

which is in the rod C at right angles to the slot  $c^2$ , which receives the said arm. Thus the strip P is fed while the punch and dies are out of the way. Strip P passes through a suitable shield or tube, W, which is provided with slots  $w^3$  to admit the rollers O O, and has a spring,  $w^2$ , at the end near the dies to hold the strip P firmly against die H to be cut.  $d^4$  is a scraper formed of a spring bent in any desired shape and secured to the plunger D for removing the barbs from the female die by pulling up on the points in case they should stick and cause them to drop.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. A frame, A, combined with levers B L, having a connecting-rod, E, and a punch and dies, substantially as shown and described.
2. A plunger, D, composed of a block hinged to lever B, placed in guides  $d^3$   $d^3$ , provided with set-screws, said plunger having a projec-

tion,  $d^2$ , spring-scraper  $d^4$ , and a die, G, substantially as shown and described.

3. The combination of levers B and L, having a connecting-rod, E, with plunger D, dies G H, and a punch, M, all substantially as and for the purpose specified.

4. The combination, with a frame, A, and levers B L, having a connecting-rod, E, of dies G H, plunger D, punch M, operating simultaneously with and through said dies, feed-rollers O O, operated by cog-wheels R R, ratchet-wheel S, ratchet-rod T, V-shaped motion-shifter V, and rod C, connected with lever B, substantially as shown and described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN H. DERINGTON.  
HIRAM J. PARKER.

Witnesses:

JOHN BECKERHORD,  
S. A. HASELTINE.