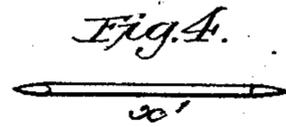
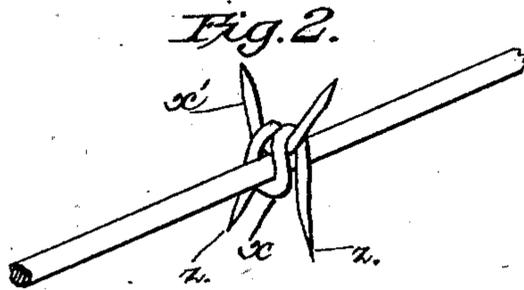
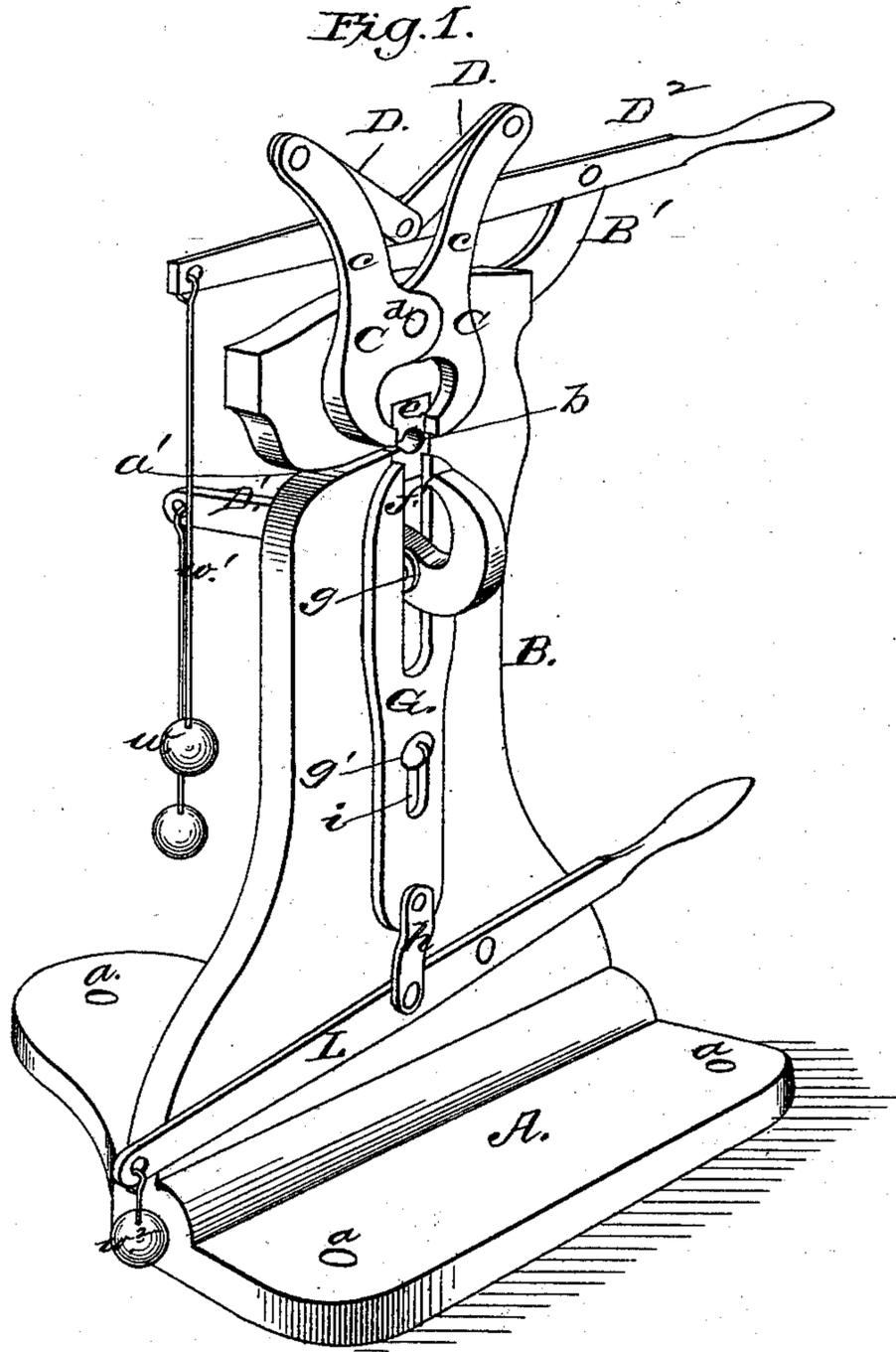


J. S. HAYNE.  
Wire-Barbing Machine.

No. 222,699.

Patented Dec. 16, 1879.



WITNESSES  
John A. Ellis.  
A. J. Massi.

INVENTOR  
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by E. W. Anderson  
his ATTORNEY

# UNITED STATES PATENT OFFICE.

JOHN S. HAYNE, OF MARSHALLTOWN, IOWA, ASSIGNOR OF THREE-FOURTHS OF HIS RIGHT TO ALEXANDER L. KENNEDY, OF SAME PLACE.

## IMPROVEMENT IN WIRE-BARBING MACHINES.

Specification forming part of Letters Patent No. 222,699, dated December 16, 1879; application filed November 1, 1879.

*To all whom it may concern:*

Be it known that I, JOHN S. HAYNE, of Marshalltown, in the county of Marshall and State of Iowa, have invented a new and valuable Improvement in Machines for Barbing Fence-Wires; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my improved machine for barbing fence-wire. Fig. 2 is a perspective view of the barb, and Figs. 3 and 4 are detached parts thereof.

This invention has relation to improvements in machines for attaching wire barbs to fence-wires.

The object of the invention is to provide a machine that will quickly and securely apply to a wire the barb for which Letters Patent of the United States No. 200,783 were granted to me on the 9th day of July, A. D. 1877.

The nature of the invention will be fully set forth hereinafter.

In the annexed drawings, the letter A designates a base or platform, having suitable holes *a*, by means of which it is secured to the ground or to a support by means of suitable spikes, screws, or other equivalent means. Upon this base and supported thereby is an upright, B, which, as well as the base, may be made, if desired, of cast metal. Near the upper end of the upright is a horizontal slot, *a'*, ending in a perforation, *b*, the main wire being introduced into said perforation through the slot *a'* aforesaid. Above this slot, and pivoted to the upright B, are the griping-jaws C, composed of the lever-arms *c*, vibrating upon a pivot, *d*, and having their power ends connected by the toggle-jointed rods D. These rods are pivoted to the ends of the upper ends of the lever-arms *c* of the jaws C, and their remaining ends are pivoted to a lever, D<sup>2</sup>, having its fulcrum upon the upright B or upon an offset arm, B', and balanced, or, if desired overweighted, by means of a weight, *w*, suspended by a rod, *w'*, or its equivalent, from

the weight end of the said lever. Usually the perforation is made in a hard metallic block, *e*, set into the upright B, and communicating with the slot *a* aforesaid.

D' indicates a hooked lever extending through a slot, *f*, at right angles to the griping-jaws C, and having its bearings in a metallic plate, *g*, spanning said slot. This lever may, if deemed necessary, be counterbalanced or overweighted by a weight suspended from its end.

G indicates a bifurcated endwise-movable presser-foot, arranged vertically in guides upon the upright B. This device is usually guided by means of a bolt, *g'*, extending through a vertical slot, *i*, therein and extending into the upright; but I do not design to use any special form of guide, as many modifications of this construction are readily substituted for that above mentioned with equally good results. This presser-foot is connected by a link, *h*, to a vertically-vibrating lever, L, having its fulcrum on upright B, and balanced by a suspended weight, *w*<sup>2</sup>.

The operation of this device is as follows, it being premised that the wire is wound up and paid off from a reel and passed through slot *a'* into the perforation *b* at the end thereof: The double-hook-form and barb piece *x* is then passed on the fence-wire from below, and the straight piece *x'* is then passed above the wire through the loops of part *x*. The hooked lever is then forced downward, causing its hooked end to rise, and by clamping the loop *y* of part *x* against the upright B to secure the said part *x* of the barb immovably in place. The griping-jaws are then brought together by depressing the lever D<sup>2</sup>, thereby clamping the loop *y* on the wire in the notch formed for the purpose therein from a lateral direction, and leaving the points *z* separated. The presser-foot G is then raised by depressing lever L, which presses the points of the part *x'* upward, causing the completed barb to present the appearance shown in Fig. 2.

What I claim as new, and desire to secure by Letters Patent, is—

1. The wire-barbing machine consisting of the upright B, having the slot *a'* the clamping-jaws C, the toggle-jointed rods D, their

operating-lever D<sup>2</sup>, the hooked lever D', the forked presser-foot G, arranged in guides on the upright, and a lever mechanism operating said presser-foot, substantially as specified.

2. The combination, in a device for barbing fence-wire, of a forked clamping-lever, D', the gripping-jaws C, and the forked presser-foot G, all working in connection with a horizontal slot, *a*, in an upright designed to receive the wire, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN S. HAYNE.

Witnesses:

GEO. A. MCINTYRE,  
GEO. NEIL.