

C. H. PERKINS.
Horseshoe-Machines.

No. 143,782.

Patented Oct. 21, 1873.

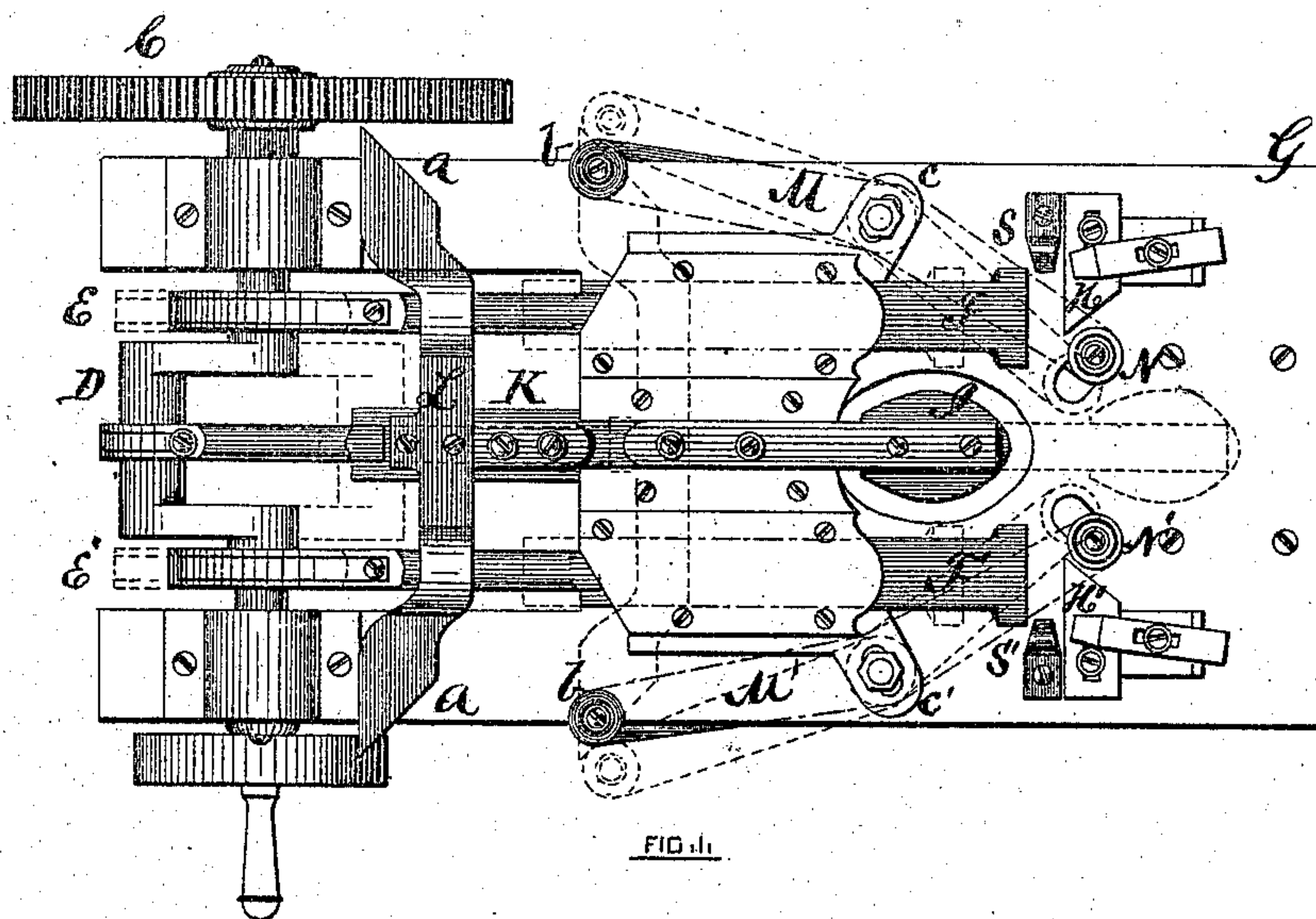


FIG. 1.

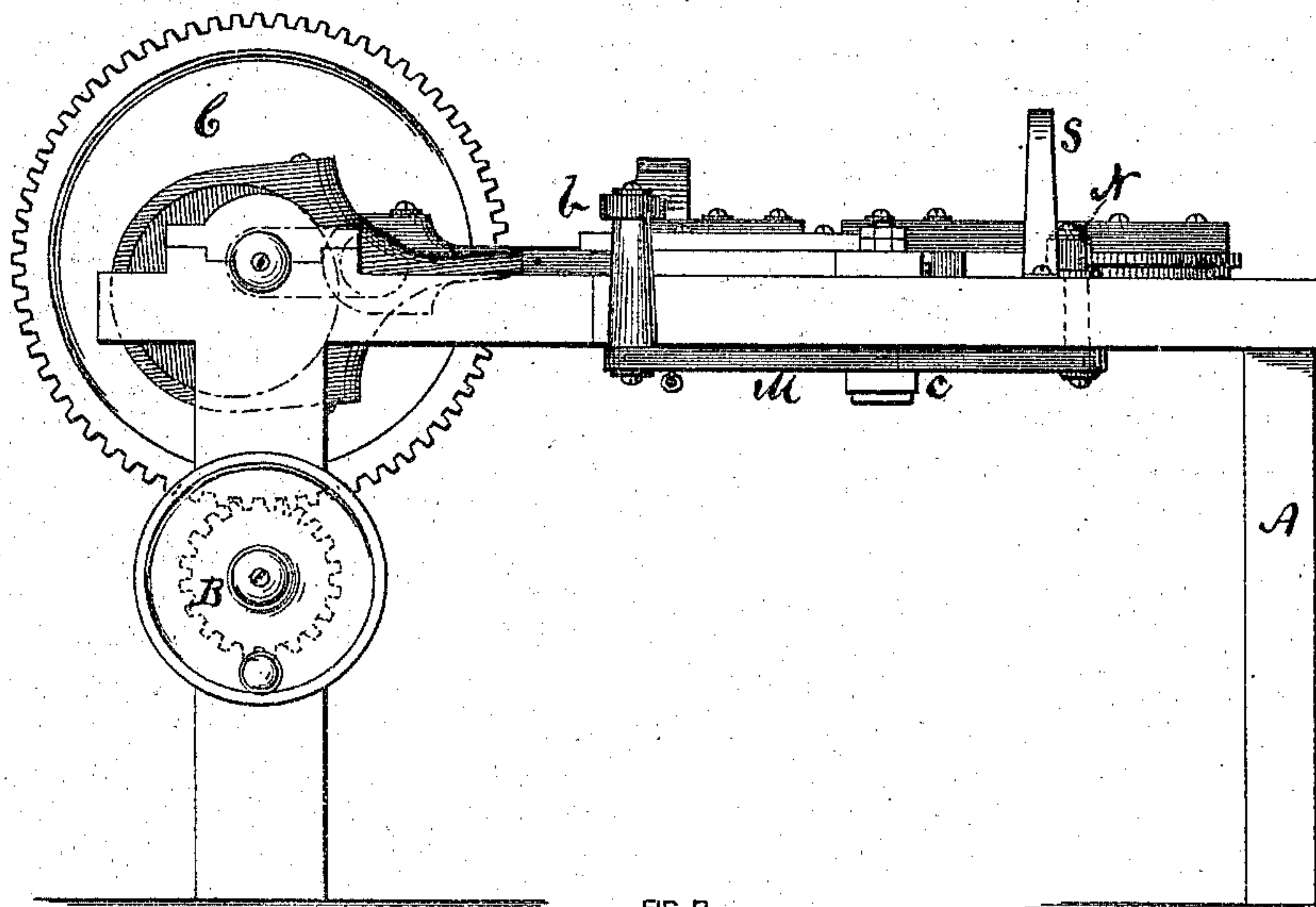


FIG. 2.

WITNESSES.

INVENTOR.

O. L. Bosworth.
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UNITED STATES PATENT OFFICE.

CHARLES H. PERKINS, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE
RHODE ISLAND HORSESHOE COMPANY, OF SAME PLACE.

IMPROVEMENT IN HORSESHOE-MACHINES.

Specification forming part of Letters Patent No: **143,782**, dated October 21, 1873; application filed
September 5, 1873.

To all whom it may concern:

Be it known that I, CHARLES H. PERKINS, of the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Horseshoe-Machines; and I do hereby declare that the following specification, taken in connection with the drawings making a part of the same, is a full, clear, and exact description thereof.

This invention is an improvement upon the machine described in the Letters Patent granted to myself and Richard W. Comstock, dated May 21, 1867, and numbered 64,903.

Figure 1 is a top view. Fig. 2 is a side elevation.

In preparing a blank to be "plated out" into the proper form for a horseshoe, it is necessary to swage the bar-blank so as to thicken the metal at the heels, and then bend the bar into the horseshoe form.

The present improvement consists in such an arrangement and combination of the swaging and bending devices that the operations of swaging the bar at the heels and then bending it into the form of a shoe are performed by consecutive operations without removing the blank from the machine.

A is the frame of the machine. Motion is given to the machinery by power applied to a shaft upon which is the gear-wheel B, the teeth of which engage with the teeth of the larger wheel C, and which latter gives a rotary movement to the crank D and the eccentrics E E', as seen at Fig. 1. F-F' are two swages arranged in suitable guides to have a reciprocating sliding movement over the surface of the platform G of the machine. They are operated, respectively, by the eccentrics E and E', to which they are linked, and act in combination with the fixed but adjustable blocks H H', clamped to the platform, to swage the bar-blank for the shoe, which has been previously cut to the right length, creased, and placed in position on the machine, in readiness to be operated upon. The eccentrics are set a very little out of coincidence in action, so that one will commence to act just as the other has completed its work. So soon as the swages F F' have done their work they commence to retreat, and the sliding pattern-block and bender I advance, the same being attached to a bar, K, which is fitted to suit-

able guides, and has a reciprocating sliding movement over the surface of the platform G, which is obtained from the crank D, to which such bar is linked. This sliding bar also carries a transverse bar, L, furnished with inclined faces *a a*, which latter, during the forward movement of such bar, impinge against friction-rollers *b b* in the ends of the levers M M', and cause such levers to move outward, whereby their opposite ends, which are furnished with rollers N N', are made to approach each other, and act to complete the bending of the bar at the heels, close to the pattern-block I, in a manner heretofore practiced and well understood. The said levers M M' are located underneath the platform of the table, and are pivoted thereto at *c c'*, and the bending-rollers N N' are set on studs, which project above the top surface of the table through curved slots cut therein.

To enable bar-blanks of different lengths to be accurately placed in position, so that the horseshoe-bend shall be exactly midway between the ends, I place on the platform of the machine a yielding gage, just in front of the stationary blocks H H'. This gage consists, in this instance, of two posts, S S', bent over, so that the inner leg, formed by the portion bent over, shall be a spring. As the distance between these spring-bars is less than the length of the bar-blanks which are to be placed between them on the platform, it follows that whenever a blank is placed in position both springs will be compressed somewhat, but equally, (being of the same stiffness,) and the bar will be centralized with respect to the sliding bender I.

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

The combination and arrangement of the swages F F', sliding pattern-block I, stationary blocks H H', and laterally-moving bending-rollers N N', substantially as described, whereby the operations of swaging the ends of a bar-blank for a horseshoe and bending the same can be consecutively performed, as set forth.

CHARLES HENRY PERKINS.

Witnesses:

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THOMAS F. COSGROVE.