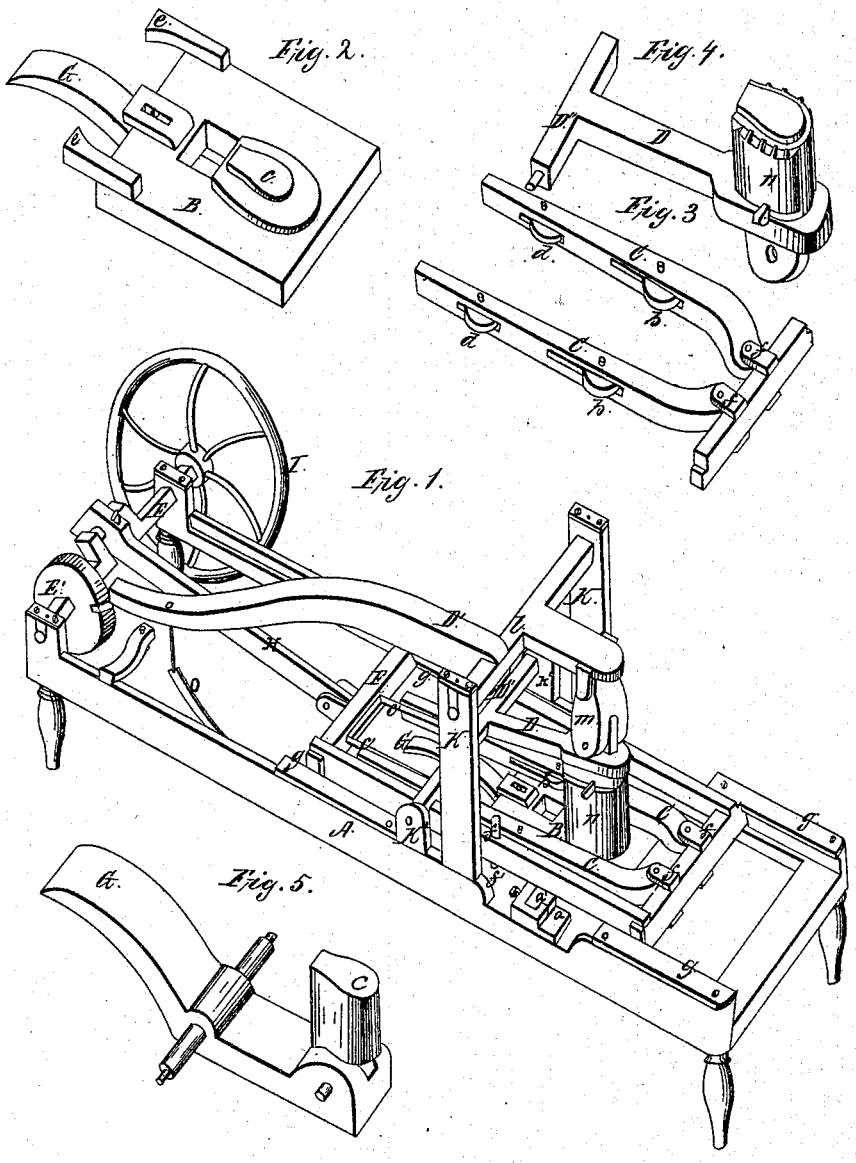
J. F. WINSLOW & T. OSGOOD.

MAKING HORSESHOES AND BENDING IRON.

No. 3,217. Patented Aug. 11, 1843.



# UNITED STATES PATENT OFFICE.

JOHN F. WINSLOW AND THOS. OSGOOD, OF TROY, NEW YORK.

## MACHINE FOR FORMING HORSESHOES, CHAIN-LINKS, &c.

Specification of Letters Patent No. 3,217, dated August 11, 1843.

*To all whom it may concern:*

Be it known that we, JOHN F. WINSLOW and THOMAS OSGOOD, both of the city of Troy, in the county of Rensselaer and State of New York, have invented a new and useful Machine for Making Horseshoes and Bending the Links for Chains; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, which forms a part of this specification, in which—

Figure 1, is a perspective view. Fig. 2, is the bed plate detached, and shows also the lever which works the under die or former (*c*) in its relative position with the bed plate. Fig. 3, side levers attached to part of the sliding frame. Fig. 4, die for creasing and punching the shoe in an inverted position with the lever D, affixed thereto. Fig. 5 the lever which is placed under the bed plate having the lower die or "former" attached.

In each of the figures like parts are designated by the same letters of reference.

The machine is constructed of cast iron, the moving parts being sustained by an oblong frame A, raised on four legs. In this frame a bed piece B, is affixed a more clear delineation of which is shown in Fig. 2; on each of the back corners of this bed piece are two guides (*e*) which have their inner faces curve inward for a purpose hereafter named at the hinder end; near the front end of the plate a U formed projection rises, in the center of which there is a similar formed hole through the plate which is filled by the former (*c*); the sides of this former being the proper shape for a horse-shoe or link of chain; to the lower end of the former a lever G (see Fig. 5) is jointed which extends back to a fulcrum about its center it then rises up a little above the bed plate, the fulcrum is attached to the bed plate underneath and is not shown in the drawing.

Near the rear end of the bed piece two posts K are attached, one on each side, to the frame; these serve for bearings to a shaft (*l*) from which a curved arm D, extends back and down to a cam E′ hereafter described in the center of the shaft (*l*) an arm projects forward which is connected with a link (*m*) that couples it with the punch (*n*) which punch is affixed to the end of a lever D, on an axle D″, which has its bearings in the short posts K′ attached to the sides of the frame just behind those marked K.

At the front end of the frame are two guides (*g*, *g*,) and behind the posts K′ are two similar guides (*g*, *g*,); in these four guides a sliding frame F moves back and forth by means of a pitman H jointed to its back cross bar which connects it with a sunk crank on a shaft E the bearings of which are at the extreme end of the frame. To the front cross bar of the sliding frame two side levers C are jointed at (*f*, *f*,) these levers lay between the sides of the sliding frame and extend a little below it being thicker than the sides; these levers are more clearly shown at Fig. 3. Each of them has two horizontal mortises in it, the forward one being the longest, and in its forward end is placed a friction roller (*b*) the hinder mortise is filled with a friction roller (*d*); when the parts of the machine are in place, the loose ends of these levers lay between the guide pieces (*e*) affixed to the bed piece, against which they are borne by the springs (*c* Fig. 1,) the rollers (*d*) only touching said guide pieces. On the frame A just forward of the posts K, there is a rest (*a*) where the bar of iron is fed in one side of this rest has a cutter (*a*′) of steel attached to it and to the sliding frame F, there is another cutter (*f*′) between which the bar is brought; the bar is then passed through the slots in the levers behind the rollers (*b*) and in front of the former (*c*) the sliding frame F is then drawn back by the revolution of the crank on the shaft E the cutter (*f*′) comes in contact with the bar and cuts it off and the two ends are bent around the former by the rollers (*b*), the levers C, at the same time being forced inward as they advance by the curves (*e*) on the bed piece, and set the bar of iron up to the former (*c*); the cam E′ on the shaft E then strikes the tail of lever D′, and forces down the punch (*n*) which completes the shoe, the punch at the same time forcing down the former (*c*) and freeing the shoe from it the former is brought back into place by lever G striking the frame F; the punch is raised by a spring (*o*) attached to the tail of lever D′ which brings it down. The shaft E has a balance wheel I on it, and is turned by any motive power.

The iron is rolled out suitable for the article to be manufactured and when it is

hot it is fed into the machine. It will be observed that it will receive a form corresponding mainly to that of the inclined guides (*e*) on the bed piece and the former (*c*) hence if a horse shoe is to be made these should be prepared to suit its particular figure. If the link of a chain is to be formed the curves must correspond to its form.

What we claim as our invention and desire to secure by Letters Patent is—

1. The combination of the levers (C, C,) constructed and arranged as herein set forth with the former (*c*) in the manner and for the purpose herein described.

2. We also claim in combination with the above the sliding frame having a cutter attached as before specified.

JNO. F. WINSLOW.
THOS. OSGOOD.

Witnesses:
HIRAM TAYLOR,
H. V. W. MARTIN.