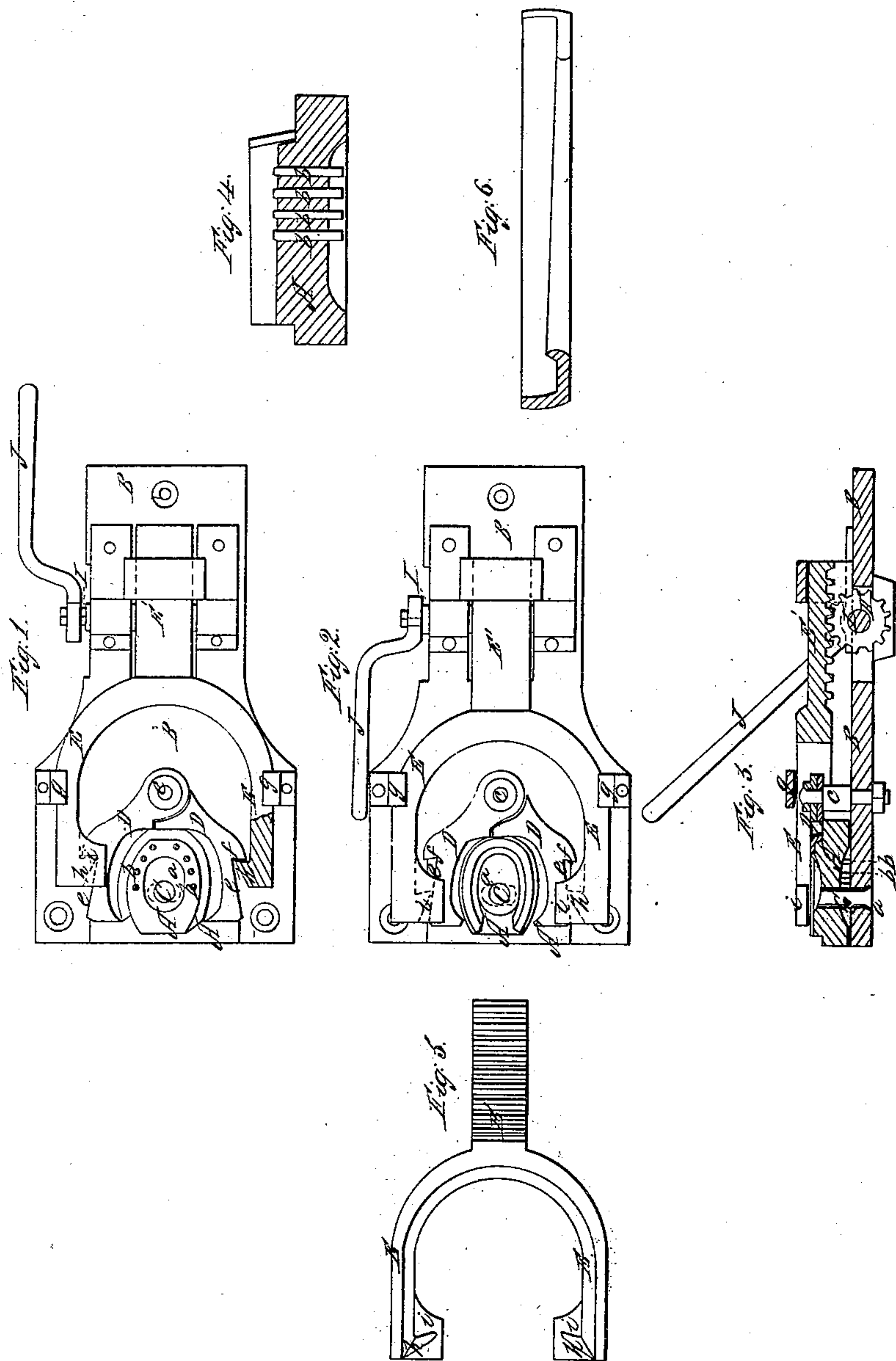


I. Peacock,

Horseshoe Machine,

N^o 37,458.

Patented Jan. 20, 1863.



Witnesses:

*Anton Dietrich
John A. Clarke*

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UNITED STATES PATENT OFFICE.

ISAAC PEACOCK, OF SHORTSVILLE, NEW YORK, ASSIGNOR TO HIMSELF
AND S. S. SAWYER, OF SAME PLACE.

IMPROVEMENT IN MAKING STEEL HORSESHOES.

Specification forming part of Letters Patent No. 37,458, dated January 20, 1863.

To all whom it may concern:

Be it known that I, ISAAC PEACOCK, of Shortsville, in the county of Ontario and State of New York, have invented a new and useful Improvement in Machines for Aiding in the Manufacture of Steel-Plate Horseshoes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan of the machine with one of the wedges of the yoke in section as it appears before the metal plate for the horseshoe to be formed out of is placed in it. Fig. 2 is a plan view of the machine as it appears after the shoe is finished and ready to be discharged. Fig. 3 is a longitudinal section of the same. Fig. 4 is a detached view of the foundation or shaping die, the steel plate or bar being simply bent round it. Fig. 5 is a detached view of the rack and yoke with hook-wedges. In this view it is inverted.

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

The object of my invention is to render practicable the manufacture by machinery and manipulation of steel-plate double-concave or flat creased horseshoes, with the rim or crease underneath, such shoes answering admirably for cavalry-horses, as they are very durable and strong and yet exceedingly light, and also are capable of yielding to a heavy weight and then regaining their original or proper form and position.

In Fig. 6 of the drawings a section of one of my improved shoes is shown. It will be seen that its cross-section resembles a piece of angle-iron, which form is well understood to possess the greatest amount of strength and the least height. To manufacture this style of shoe out of steel bar or plate metal, I arrange a die, A, on the forward portion of a strong solid foundation, B, which may be mounted upon an anvil-stock or other convenient support in a blacksmith's shop or other place. This die has the form of the desired shoe circumferentially, and is shaped on top with a disk or concave, so that the shoe may be formed to fit the frog of the horse's foot. The die terminates at its base in a broad thick plate, A', which rests directly upon the foundation, B,

being pivoted to the same by a pin, C, which is fast in the plate A', but loose in the foundation B. The hole *a*, in which the pin C plays, is elliptical or in form of a segment of a circle, and large enough to allow a small amount of lateral play to the pin C and die and plate A'. On the under side of the plate A' of the die A a concave is formed, so that the punches *b b*, which form the nail-holes in the shoe, may be inserted and their lower ends raised above the top of the foundation B. The punches just mentioned are detachable, so that they may be repaired or substituted by new ones when from wear they become inoperative. The upper ends of the punches *b b* extend beyond the top of the die A a sufficient distance to form the holes for nails nearly through the steel plate or bar, or so that the holes may be punched through without reheating by a hand tool and hammer. Outside the circumference of the die A', on the plate A', two (lever) forming-jaws, D D, are arranged. These jaws internally conform to the outline of the die A, and from their inner upper edge outward they are beveled off, so as to give room to the hammer, which is manipulated in finishing the shoe. The jaws are pivoted together and to the foundation B by a pin, *c*, at their rear ends, and they open from around the die like calipers when it is desired to place a bent plate around the die or to remove the finished shoe from the die. The outer edges of these jaws are formed with an incline plane, *e*, and a square shoulder, *f*, as represented. Outside of the jaws a yoke-shaped compressor and expander, E E E', is arranged. It is supported upon the foundation B, and guided by means of angle-irons *g g*, as shown. This compress has a bevel or wedge hook, *h*, on the inner forward portion of each of the parts E E. It also has an overhanging flange or ledge, *i*, on the same parts, just above the bevel-hook, as shown in Fig. 5, for holding down the jaws. The bevel of the hooks *h h* moves in contact with the incline planes *e e*, and the hooks themselves take hold of the shoulders *f f* of the jaws D. The first of these results occurs when the yoke is moved forward, and the last when it is drawn back. The first closes the jaws; the last opens them. The part E' of the compressor and expander has rack-teeth on its

under side, and these teeth match a pinion, H, of a shaft, I, which is arranged on the foundation B and operated by a hand-lever, J, as will be evident from the drawings.

The lever, shaft, pinion, and rack constitute a means for operating the yoke with a gradual motion.

The operation is as follows: I take steel plate or thin steel bars and cut the same to the proper length and width by shears. These are "het" in a furnace and bent into the form of a half-circle, and then placed around the die and brought to the desired form of the horseshoe circumferentially by moving the yoke-compressor forward and closing (thereby) the jaws upon the metal plate or bar. This done, I take a hammer, and, commencing at the toe of the shoe, hammer down the metal to the angular form shown in Fig. 3, and otherwise shape the shoe as shown in Fig. 6. The hammering down of the metal causes the punches to make impressions for the nails nearly through the horizontal portion, and then by drawing back the compressor the jaws are opened so that the shoe can be readily removed and another plate

placed around the die. The further puncturing of the shoe is accomplished by a tool and hammer without reheating. In case the metal plates are of different thicknesses, the oblong axial pin-hole allows the axis with the male die to accommodate itself thereto. The enlarging of this hole also allows the said die to adjust itself better to the jaws as they approximate to its circumference.

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

1. The combination of the forming-die A A', having detachable punches and a shifting axis, and the pivoted jaws D D, having inclined planes and shoulders on their outer edges, and the compressor and expander E E, having the wedge-hooks h h, and holding-down flanges or ledges on the front portions, substantially as described, or the equivalent thereof, for the purpose set forth.

2. Making steel horseshoes of the construction represented by a combination of machine and hand work, substantially as described.

Witnesses: ISAAC PEACOCK.

E. YEAMANS,
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