(No Model.) 2 Sheets—Sheet 1.

E. S. THURBER.

MACHINE FOR MANIPULATING HORSESHOES.

No. 342,400. Patented May 25, 1886.

Fig. 1.

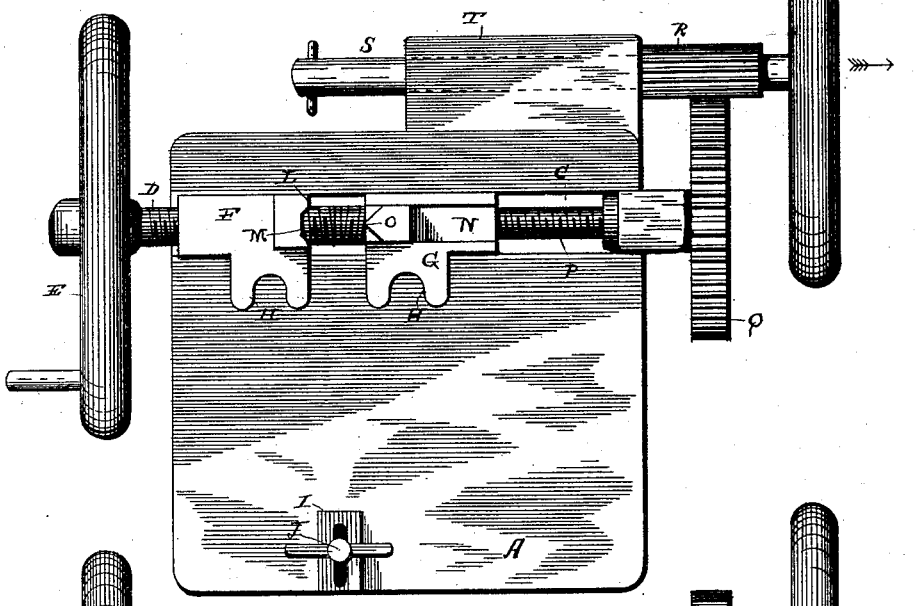
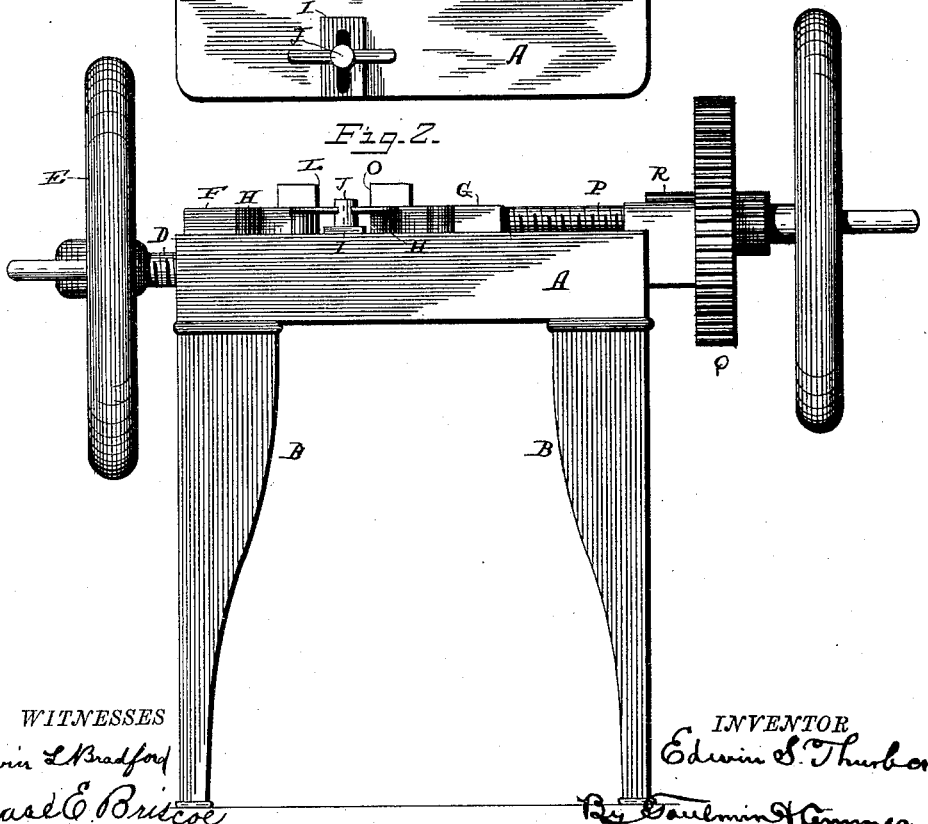


Fig. 2.



WITNESSES

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

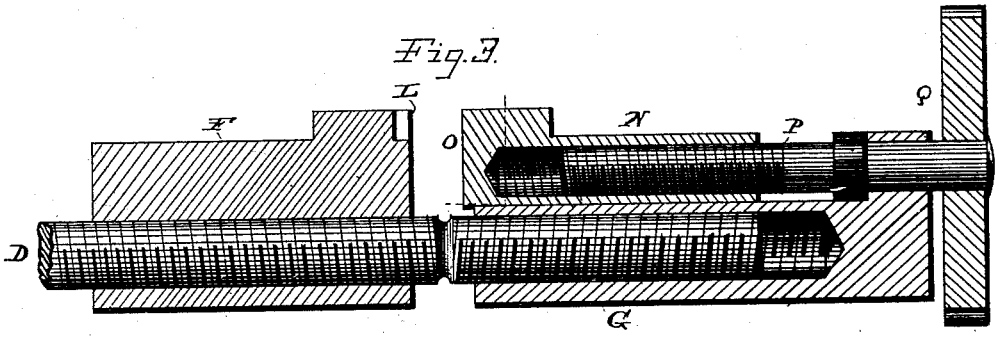


Fig. 4.

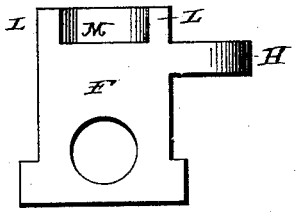
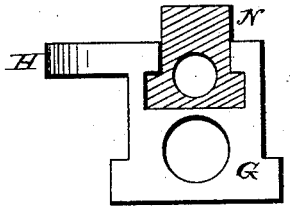


Fig. 5.



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UNITED STATES PATENT OFFICE.

EDWIN STANTON THURBER, OF NORTH PROVIDENCE, RHODE ISLAND.

MACHINE FOR MANIPULATING HORSESHOES.

SPECIFICATION forming part of Letters Patent No. 342,400, dated May 25, 1886.

Application filed July 30, 1885. Serial No. 173,026. (No model.)

To all whom it may concern:

Be it known that I, EDWIN STANTON THURBER, a citizen of the United States, residing at North Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Machines for Manipulating Horseshoes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in machines for manipulating horseshoes while cold.

In the accompanying drawings, forming a part of this specification, and on which similar letters of reference indicate the same or corresponding features, Figure 1 represents a plan view of my improved machine; Fig. 2, an end elevation of the same; Fig. 3, a section view taken axially of the jaws and the slide, showing the operating screw-shafts in side elevation; Fig. 4, an end view of one of the jaws; and Fig. 5, a like view of the other jaw, showing the secondary slide in cross-section.

The letter A designates a platform fashioned after the manner of a table-top, and preferably constructed of metal—say cast-iron—and mounted upon suitable legs or standards, B, also preferably constructed of metal. This platform is provided with a transverse slot, C, within or slightly beneath which is mounted in suitable bearings a shaft, D, provided with right and left hand screw-threads, and with a hand or operating wheel, E.

Two sliding jaws, F and G, are fitted to reciprocate smoothly upon the surface of the platform, and are provided with depending shanks having screw-threaded apertures which agree, respectively, with the right and left hand threads on the shaft D, whereby when rotary motion is applied to said shaft the jaws F and G will recede from or approach each other, according to the direction in which the shaft is turned. Each of these jaws is provided with a recess, H, or other means for engaging firmly the ends of the horseshoe. The platform is also provided with a stop, whose function is to fit against the bow or toe of the horseshoe to hold it against or within the recesses of the jaws F and G, to prevent displacement during the operation of manipulating the shoe. This stop consists, in the present instance, of a slotted plate, I, and a hand-screw, J, which enters a threaded hole in the platform A, the slot in the plate admitting of adjustment with respect to the jaws, so as to make the stop capable of holding shoes of different lengths.

The several features of my invention, so far described carry out the first object of my invention—to wit, that of bending and fitting the shoes to agree with the horses' hoofs—and which consists in separating or bringing together to a more or less extent the heel ends of the shoes, leaving, however, the general contour of the more forward part of the shoe virtually, if not entirely, undisturbed.

I shall now advert to a description of that part of my invention which performs the second object of my invention—to wit, that of varying the curvature of either member of the shoe without affecting the other member of the shoe, and also without disturbing the contour generally of the shoe.

The jaw F is provided (preferably by being made integrally therewith) with a block-like projection, K, one face of which is configurated so as to present two edges, L, and a recess, M, the function of which will shortly appear. The other jaw, G, is provided with ways on its upper surface, in which is fitted a slide, N, the end of which, opposite the block K, terminates in a point, O, which stands opposite the recess M. This slide is connected with a shaft, P, mounted in suitable journals, and having a screw-thread which actuates the slide to and from the block K, while that block is similarly operated with respect to the slide by the shaft D. The shaft P carries a gear, Q, which meshes with a pinion, R, mounted on a shaft, S, which carries a hand-wheel, and is mounted so as to rotate and slide in a broad bearing, T, secured, preferably, to the platform. The inner end of the shaft S is headed or provided with a pin to prevent its slipping out of the bearing T when drawn in the direction of the arrow, Fig. 1, the object of which movement is to disengage the pinion R and the gear Q, so as to allow of the latter being rapidly rotated to quickly adjust the slide N with respect to the block K before or after acting upon the shoe.

The devices just described carry out the second object of my invention, in doing which either member of the horseshoe is placed between the slide N and the block K, and when the slide and block are brought toward each other the point O engages one edge of the member, while the edges L engage the opposite edge, and thus a short bend is given the shoe.

It is obvious that instead of increasing the curvature of a member of a shoe it may be straightened, to do which the convex edge is placed opposite the point O, being the reverse position to that occupied by the member when undergoing the operation of increasing the curvature.

The reason for thus operating upon a shoe is to make it fit a hoof which is imperfectly formed, or to make the shoe suitable for a horse which interferes.

The reason for operating the slide N by additional shafts P and S and the intermediate gearing is to secure greater power, which is necessary in order to practically carry out the second object of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for manipulating horseshoes, the combination, with a platform, the jaws constructed to engage the heel ends of the shoe, and a shaft for actuating the jaws, of the block having edges, and the slide having a point, and the threaded shaft for actuating the slide.

2. In a machine for manipulating horseshoes, the combination, with the platform having a slotted plate, and the hand-screw constituting the stop, and provided with a transverse slot, of the jaws having recesses to engage the heel ends of the shoe and threaded shanks, and the right-and-left-hand threaded shaft having a hand-wheel, and mounted in journals secured to the said platform and engaging with said shanks.

3. In a machine for manipulating horseshoes, the combination, with a platform having a stop, the jaws constructed to engage the heel ends of the shoe, and the right-and-left-hand threaded shaft having a hand-wheel with which the jaws respectively connect, of the block having edges and secured to one jaw, the slide having a point and fitted to the other jaw, the threaded shaft engaging said slide and having a gear, and the sliding shaft having a pinion engaging said gear and a hand-wheel.

4. In a machine for manipulating horseshoes, the combination, with a block having projecting edges, of a slide having a point, a threaded shaft engaging said slide and having a gear-wheel, and a shaft carrying a pinion which engages said gear.

5. In a machine for manipulating horseshoes, a jaw constructed to engage the heel end of the shoe, and provided with a block having projecting edges and a recessed face.

6. In a machine for manipulating horseshoes, a jaw constructed to engage the heel end of a horseshoe and a slide fitted to said jaw and provided with a point.

In testimony whereof I affix my signature in presence of two witnesses.

EDWIN STANTON THURBER.

Witnesses:
GEORGE T. BROWN,
LOUIS L. ANGELL.