2 Sheets—Sheet 1.

W. WALLICK.

Horseshoe Machine.

No. 54,452. Patented May 1, 1866.

Fig. 1

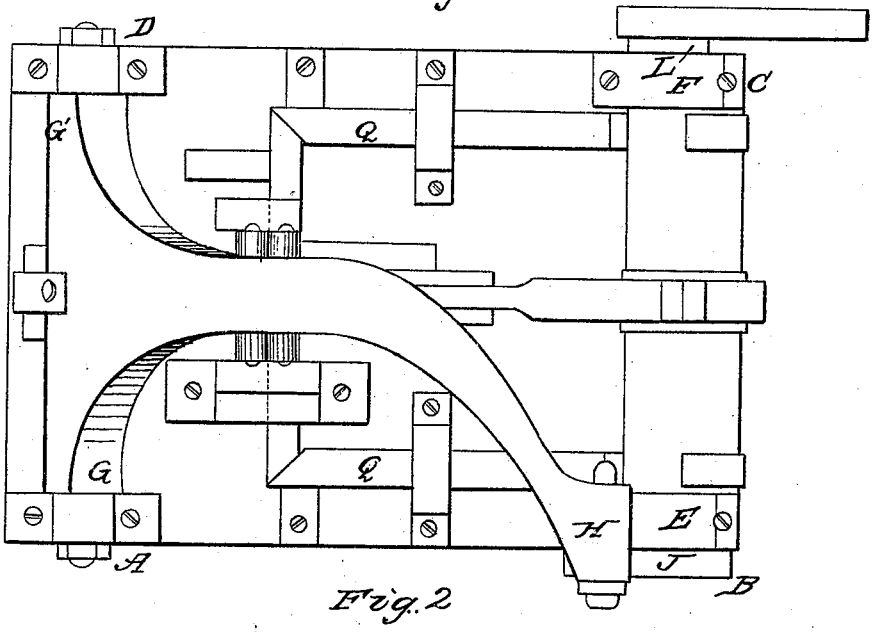
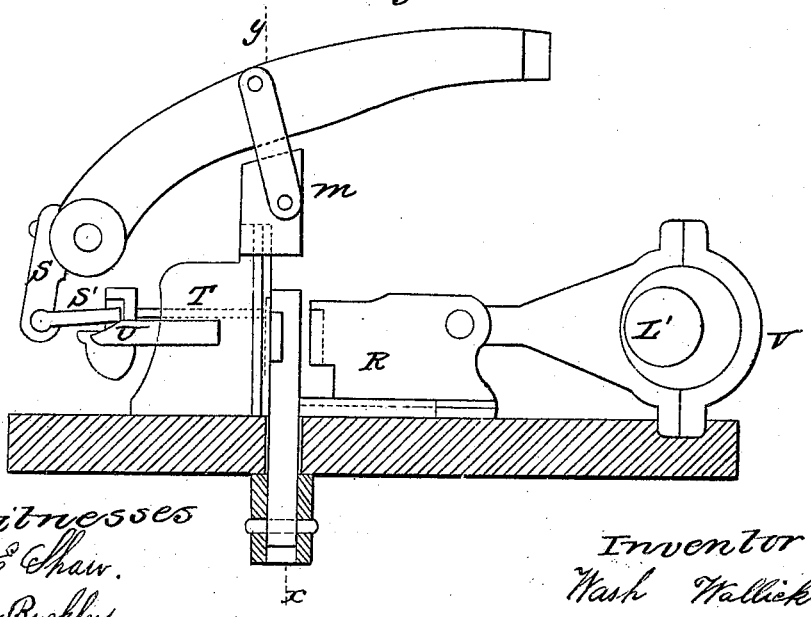


Fig. 2



Witnesses
Jc Shaw.
Geo Buckley

Inventor
Wash Wallick.

2 Sheets—Sheet 2.

W. WALLICK.

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Fig. 3

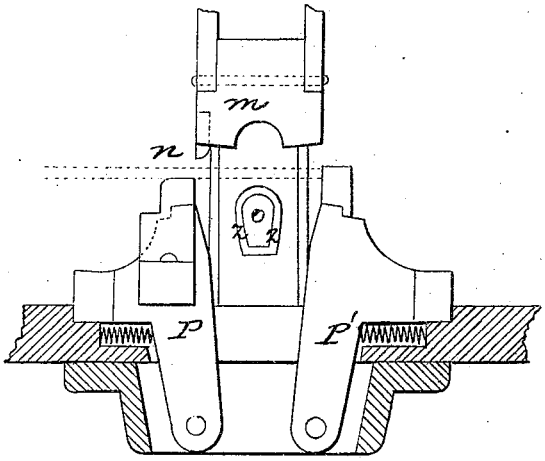
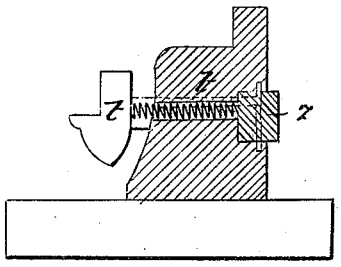


Fig. 4



Witnesses
J. E. Shaw
Geo Buckley.

Inventor
Wash. Wallick.

UNITED STATES PATENT OFFICE.

WASHINGTON WALLICK, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED MACHINE FOR MAKING HORSESHOES.

Specification forming part of Letters Patent No. **54,452**, dated May 1, 1866.

To all whom it may concern:

Be it known that I, WASHINGTON WALLICK, of the city of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Machinery for Making Horseshoes; and I do hereby declare the following to be a full and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a top view of my improved machine; Fig. 2, an elevation; Fig. 3, a transverse section on the line X Y of Fig. 2; Fig. 4, a detached view of the parts hereinafter described.

A B C D, Fig. 1, is a strong iron bed-plate, say, one and one-half inch thick.

E F are two powerful uprights, having two bearings on top which support the journals or fulcra on which the main lever G G′ H vibrates. This lever is made very stout, and curved, as shown in the drawings, and should be about thirty inches long. To the outer extremity of this lever H an arm, *g*, is attached, which connects with a crank on the main shaft L L′. To this lever is attached the cutting and bending die M. This die, in its lower or inner fall, is curved to correspond with the shape of the horseshoe desired to be formed, as is shown at *m*, Fig. 3. At one side a cutter, N, is attached.

O is a former, shaped like a horseshoe, against which the curved die M presses the iron.

P and P′ are two vibrating jaws, which approach and compress the heated iron against the sides of the former O. They are made to operate by two sliding pieces, Q Q′, acted on by cams on the main shaft. These sliding pieces Q Q′ terminate in wedges at their outer extremity, and then being slid forward, drive the two jaws P and P′ together. When these wedge-pieces Q Q′ recede a reacting spring forces the two jaws P and P′ apart.

A sliding creaser, R, Fig. 2, is slid backward and forward by an eccentric, V, on the main shaft. When it is pushed forward it creases and marks the shoe and then recedes.

After the shoe has been formed it is projected from the die or former in the following manner: To the rear end of the lever G G′ H a short vibrating arm, S, and connecting-piece S′ are attached. S′ rests against a rod, *t*, which rod *t* presses against the shoe-shaped bed-plate Z Z, against which the shoe is pressed by R. As the lever G G′ H ascends in front after forming the shoe, the arm S descends, and S′ presses the rod *t* forward, which presses the shoe free from the former O and then it drops. When S′ has reached the end of its stroke and liberated the shoe a small incline, U, forces it to rise and detach itself from the rod, when a concealed spring forces back the rod *t* to its first place, restoring the bed Z Z around and behind the former O to its original position also.

The operation of the machine is as follows: The heated iron, in bars, is fed in below the die M, the die M cuts and forms the shoe around the former O, and the vibrating jaws P P′ approach and compress the sides of the shoe to the former O. The creaser R then slides forward and presses it against Z Z′ and creases the shoe, and punches it also, if desired. The lever G G′ H then ascends, the jaws P P′ separate, the creaser R recedes, the piece S descends, forces S′ against *t*, and this pushes the shoe just formed free from the former O, and by the action of the spring the shoe-shaped bed-plate Z Z returns to its original place for the next operation.

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

1. The combination of the lever G G′ H and the bending and cutting die M, constructed and operating as described.

2. The jaws P and P′ and the former O, for compressing the sides of the shoe, constructed and operated as described.

3. The creaser and presser R, in combination with the die M, the jaws P and P′, and the former O.

4. The mechanism for discharging the shoe, consisting of the lever G G′ H, the pieces S, S′ and *t*, and the reacting spring, arranged and operating as described.

WASH. WALLICK.

Witnesses:

J. E. SHAW,

GEO. BUCKLEY.