J. ADT.

Machine for Pointing Staples.

No. 162,991. Patented May 11, 1875.

Fig. 1.

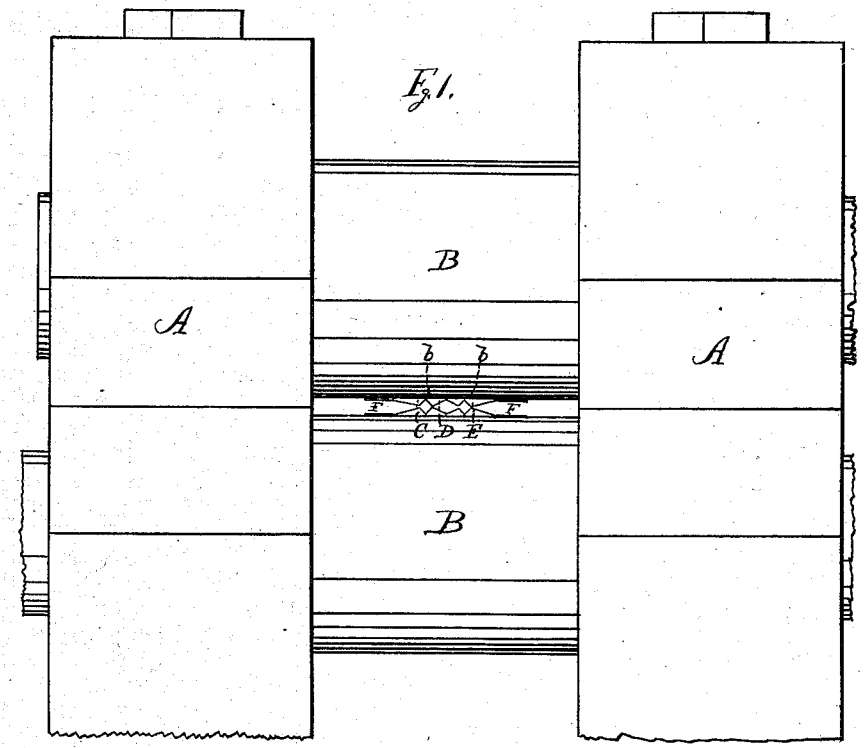

Fig. 2.

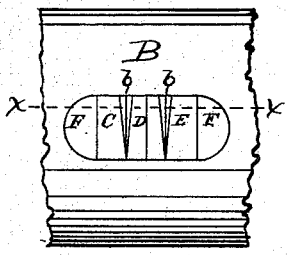

Fig. 3.

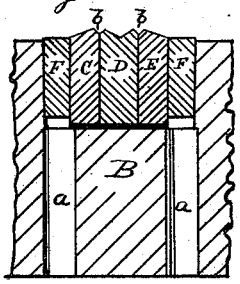

Fig. 4.

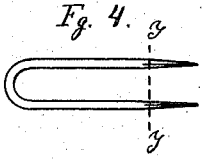

Fig. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN ADT, OF NEW HAVEN, ASSIGNOR TO THE STANLEY WORKS, OF NEW BRITAIN, CONNECTICUT.

IMPROVEMENT IN MACHINES FOR POINTING STAPLES.

Specification forming part of Letters Patent No. **162,991**, dated May 11, 1875; application filed January 4, 1875.

To all whom it may concern:

Be it known that I, JOHN ADT, of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Machine for Pointing Staples, of which the following is a specification:

My invention consists in the peculiar construction of the dies, as hereinafter described.

In the accompanying drawings, Figure 1 is a front elevation of a machine for rolling staple-legs, which embodies my invention. Fig. 2 is a plan view of one-half of the dies and one roll belonging to said machine. Fig. 3 is a section of the same on line *x x* of Fig. 2. Fig. 4 is a side elevation of a staple formed by said dies, and Fig. 5 is a transverse section thereof on line *y y* of Fig. 4.

Heretofore the legs of machine-made staples, so far as I am informed, have been made of three forms—viz., flattened or chisel points, fleam points, and sheared points.

The form of legs shown in Figs. 4 and 5 is generally conceded to be the most desirable form; but, owing to the difficulty of making the dies for forging this form, other less desirable forms have been adopted, merely because they were more easily produced.

Of a machine in which my invention is embodied, A A designate the frame, and B B the rolls, connected by suitable gearing. A mortise or recess is formed in each roll, within which are the dies C D E, held in place by suitable keys F F. The bottom of the mortise forms a seat for the dies, while immediately opposite the keys F F the rolls are provided with an opening, *a a*, through which a rod or other tool may be driven, for the purpose of knocking out the keys.

The dies are formed in three parts, C D E, of which C and E meet D at the bottom of the V-shaped recesses *b b*, (see Fig. 3,) the corner of each part being properly beveled off to form the two tapering sides of the V-shaped recesses *b b*.

The dies must be so arranged in the rolls that those of one roll will nearly meet those of the other as they pass each other; but they should not come in contact, as they would be liable to break. They are adjusted so as to project more or less by means of packing placed in the bottom of the mortise in the rolls B B.

The rolls being properly adjusted, and the wire for the staple cut and bent, the legs thereof are placed over the dies, and the rolls rotated by suitable power, when the wire is rolled or swaged into the form shown in Figs. 4 and 5.

The portions of the dies outside of the V-shaped recesses *b b* are cut away, so as to bring the dies at the edge of said recesses nearly to a ridge, whereby room is made for all surplus metal that may be outside of the dies.

It is essential to the practical operation of these dies C D E that they shall be made in parts divided at the bottom of the V's, as described, for solid dies would be liable to crack in hardening, and would in any event be hardened uneven, being softer at the bottom of the V's, and hardest at the corners, and to repair them they must be annealed and rehardened, thereby increasing the liability to break.

When made in parts the dies can be sharpened by machinery, which grinds one side of the V at one time, and without annealing, whereby they are sharpened much more accurately than they could possibly be by hand.

By hardening them in parts the bottom of the V is, when the parts are detached, an outside corner, and is hardened as hard as the other corners.

In case one part becomes broken it can be replaced without throwing away the other parts. In addition to this, the dies being divided at the bottom of the V's, they will always form a sharp and prominent corner on the legs of the staple, whereas in a solid block, made with a file, this sharp corner could not be obtained.

I claim as my invention—

In a machine for swaging or pointing staple-legs, the rollers B B, provided with dies C D E, having tapering V-shaped recesses *b b*, formed at the junction of the parts C D E, distant from one another equal to the distance from one another of the two limbs of the staple, all substantially as described.

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Witnesses:
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