E. WOODWARD.

TACK-STRIPS AND MACHINES FOR THE SAME.

No. 183,616. Patented Oct. 24, 1876.

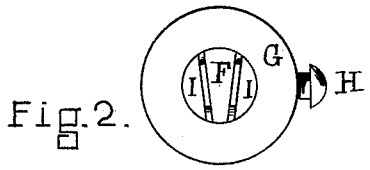

Fig. 2.

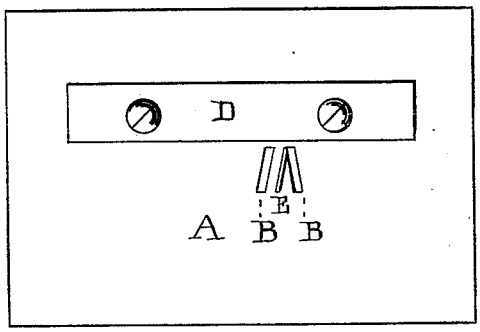

Fig. 1.

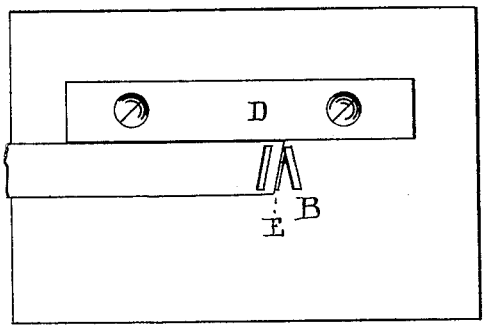

Fig. 3.

Fig. 8

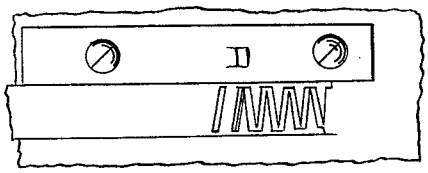

Fig. 4.

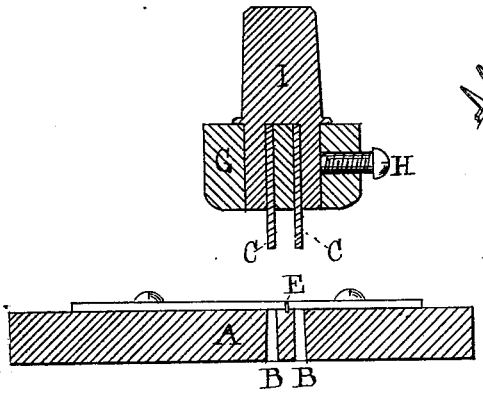

Fig. 5.

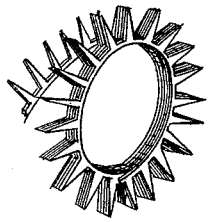

Fig. 7.

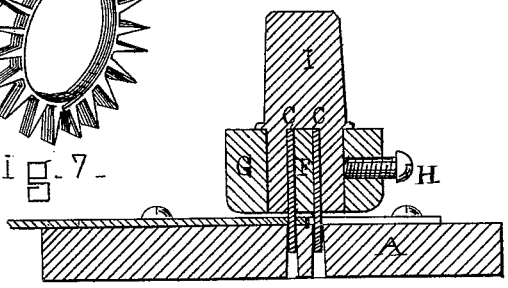

Fig. 6

WITNESSES

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ERASTUS WOODWARD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN TACK-STRIPS AND MACHINES FOR THE SAME.

Specification forming part of Letters Patent No. **183,616**, dated October 24, 1876; application filed September 2, 1876.

To all whom it may concern:

Be it known that I, ERASTUS WOODWARD, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Tack-Strip and Means of Making the Same, of which the following is a specification:

This invention relates to tack-strips and method of making the same, as hereinafter explained.

Reference is made to the accompanying drawing, forming a part of my specification, in explaining the same, in which—

Figure 1 is a plan of the bed-plate, showing the diverging slots, guide, and gaging-lock. Fig. 2 is a cross-section of the head holding the punching-dies. Fig. 3 is a plan of the bed-plate, showing the tack-plate after the first blow of the punching-dies. Fig. 4 is a plan of the bed-plate, showing the tack-plate cut into two continuous strips of tacks. Figs. 5 and 6 show, respectively, the position of the punching-dies when lifted from, and when closed into, the diverging slots. Fig. 7 shows a coil of tacks, and Fig. 8 an elevation of a continuous strip and separate tacks.

The bed A of the machine for cutting the plate into continuous tack-strips is provided with the diverging slots B, arranged in relation to each other as shown in Fig. 1, and enlarged at their base. They serve as dies in connection with the diverging punching-dies C, which have a vertical reciprocating motion into and from the same. A bar, D, on the bed A serves as a guide in feeding the tack-plate to the dies, and, with the gaging-lock E, similar in dimensions to one of said dies, and placed parallel thereto and between the said dies, serves to securely hold the tack-plate while the dies are operating. The punching-dies C are removable from the bar I, holding the same, being fastened thereto by wedge-shaped blocks F, clamping-wing G, and set-screw H. The tacks are cut in continuous strips from a thin plate of metal.

In operation, the plate is fed to the dies by any suitable feeding mechanism, and two strips of tacks are formed by punching out the alternate blanks, (which form the waste and correspond in shape to the slots or dies B.) It will be observed that the first die cuts diagonal slots across the tack-plate, parallel to each other, each slot forming one side and a part of the head of two tacks, and that the second die cuts diagonal slots, the reverse of those first cut, and completes the sides, points, and heads of the tack. It will also be observed that the tacks are connected, in a continuous strip, by the margin that remains uncut, and that the shanks are separated from each other by a space equal to twice the width of one punching-die. It will also be seen that while the first blow of the punching-dies does not form a tack, each succeeding blow forms the sides and points of two tacks, and leaves a margin along each side of the strip, that form the heads and connecting-strip.

The strips of tacks thus completed may be coiled, preferably, spirally upon a roll, in any suitable way, and fed to a tacker, that shall sever a tack either midway between two tacks, leaving a longitudinal projection on either side to form the head, or close to one tack, leaving the longitudinal connecting-strip that forms the head project only from one side, as shown in Fig. 8.

These tacks may be of varying sizes, and used for a variety of purposes. The smaller kind may be employed for lasting-tacks, and the larger as brads or sole-fastenings.

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

1. In a machine for cutting tack-strips, the combination of a bed-plate, A, provided with the diverging dies B, with punching-dies C, substantially as shown and described.

2. The combination of the bed-plate A, guide D, and gaging-lock E with punching-dies C, substantially as and for the purpose described.

3. The combination of the removable punching-dies C, wedge-shaped block F, clamping-ring G, set-screw H, and bar I, substantially as and for the purpose set forth.

4. In a machine for cutting tack-strips, the combination of the bed-plate, having the two diverging slots B, with the intermediate gaging-lock E, similar in dimension to one of said dies, and placed parallel thereto and between the said diverging dies, for the purpose of gaging the tacks as they are formed from

the plate and punching-dies, substantially as described.

5. The above-described tack-blank, consisting of pointed shanks, separated from each other by the interposed head-forming uncut margin, substantially as shown and described.

6. The following-described process of cutting two tack-blanks from a flat strip of metal, consisting in punching diagonal slits across the strip, alternately converse to each other, and opening or nearly opening into each other, substantially as shown and described.

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Witnesses:

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