(No Model.)

F. F. RAYMOND, 2d.

PROCESS OF MAKING HEADED NAILS.

No. 355,839. Patented Jan. 11, 1887.

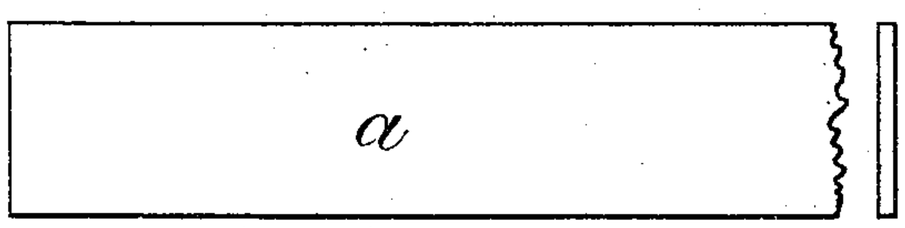

Fig. 1.

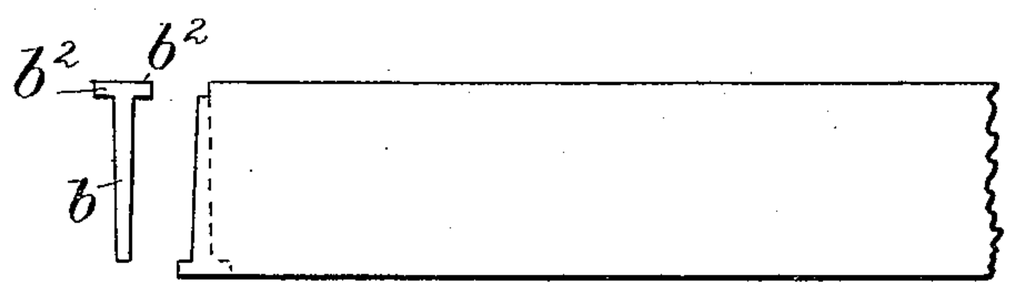

Fig. 2.

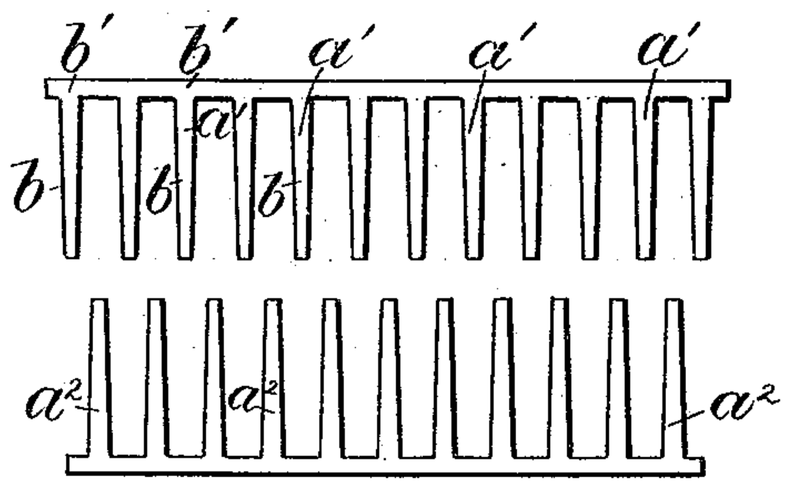

Fig. 3.

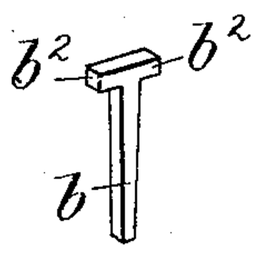

Fig. 4.

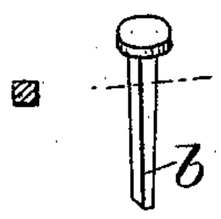

Fig. 5.

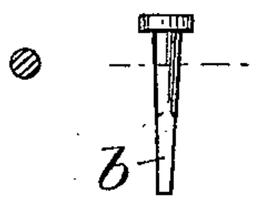

Fig. 6.

WITNESSES

J. M. Dolan.

Fred. B. Dolan.

INVENTOR

F. F. Raymond 2d

UNITED STATES PATENT OFFICE.

FREEBORN F. RAYMOND, 2D, OF NEWTON, MASSACHUSETTS.

PROCESS OF MAKING HEADED NAILS.

SPECIFICATION forming part of Letters Patent No. 355,839, dated January 11, 1887.

Application filed October 8, 1886. Serial No. 215,656. (No model.)

To all whom it may concern:

Be it known that I, FREEBORN F. RAYMOND, 2d, of Newton, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Headed Nails and Process of Making the Same, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention comprises a headed nail made from a flat nail plate or strip and having a head projecting upon all sides thereof, a shank the upper part of which may be square, rectangular, or round in section, and the lower part of which is square or rectangular in section. The nail is made from the flat plate or strip of metal by first forming or cutting from said strip a nail-blank having a shank and head forming extensions projecting from each edge at the end thereof of the same thickness as the shank; second, in submitting the blank thus shaped to the operation of dies, whereby the head-forming extensions are shortened and thickened and a head extending upon all sides of the shank produced, and, if desired, the shape of the upper part of the shank changed from a rectangular to an oval or round form.

In the drawings, Figure 1 is a plan view of the nail-plate. Fig. 2 is a plan view of a nail-plate and one nail-blank cut therefrom. Fig. 3 is a view of two blank strips cut or formed from a nail-plate. Fig. 4 is a perspective view of a nail-blank. Figs. 5 and 6 are views of complete or finished nails.

In producing the tack-blank it may be formed either by cutting blanks singly from the plate or by first forming a strip of blanks having the head-forming portions of the blanks connected, and I have represented both ways in the drawings.

In Fig. 1 *a* represents a flat plate of metal, which is separated by punching or cutting into two blank strips, a' a^2. The complete strip will have a series of shanks, *b*, which are rectangular in cross-section, extending from an uncut edge or section, b', the shanks being separated from each other by spaces sufficiently large to provide a blank cut from the strip with a head-forming extension, b^2, upon each side of the shank, as represented in Fig. 4. This blank is of one thickness throughout. It is then submitted to the operation of dies, whereby pressure is brought to bear upon the edges of the head-forming sections b^2, to upset them and form them into a head that shall be oval, round, or square, and shall extend uniformly or substantially uniformly from all sides of the shank. The shank or upper part of the shank of the blank may be at the same time submitted to the same forming operation of dies in extension of the head-forming dies, whereby its form shall be changed from a thin rectangular shape to a round, square, or oval shape, and I have represented in Fig. 5 a blank which has had its head only submitted to this forming operation, and in Fig. 6 a blank whose head and shank have been thus treated.

I would say that for the purpose of obtaining the flat thin blank it is not necessary to first form a connected strip of shanks, although it is perhaps desirable so to do. Still the thin blanks can be punched directly from a plate or sheet of metal one by one as they are required. (See Fig. 2.)

Nails made as above described will have a thin or flat-sided clinchable point rectangular in cross-section, a round or square shank, and a head extending upon all sides thereof.

The dies employed must exert their principal pressure against the edges of the head-forming extensions of the blank in upsetting them to form the head, and against the edges of the shank in thickening it or reducing it to a curved shape.

The same process can be used in making other pointed fastenings.

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

The process of making headed nails or similar fastenings, consisting in forming from a flat thin nail-plate a blank having a long shank of uniform thickness throughout and tapering edges, and also extensions from said edges at the head of uniform thickness with the shank, and, second, in completing the nail by subjecting the blank to the action of dies adapted to act against the ends of the head-forming sections of the blank, whereby the end of the nail is thickened and upset by lateral pressure to form a head extending upon all sides of the shank, substantially as described.

FREEBORN F. RAYMOND, 2D.

Witnesses:
J. M. DOLAN,
FRED. B. DOLAN.