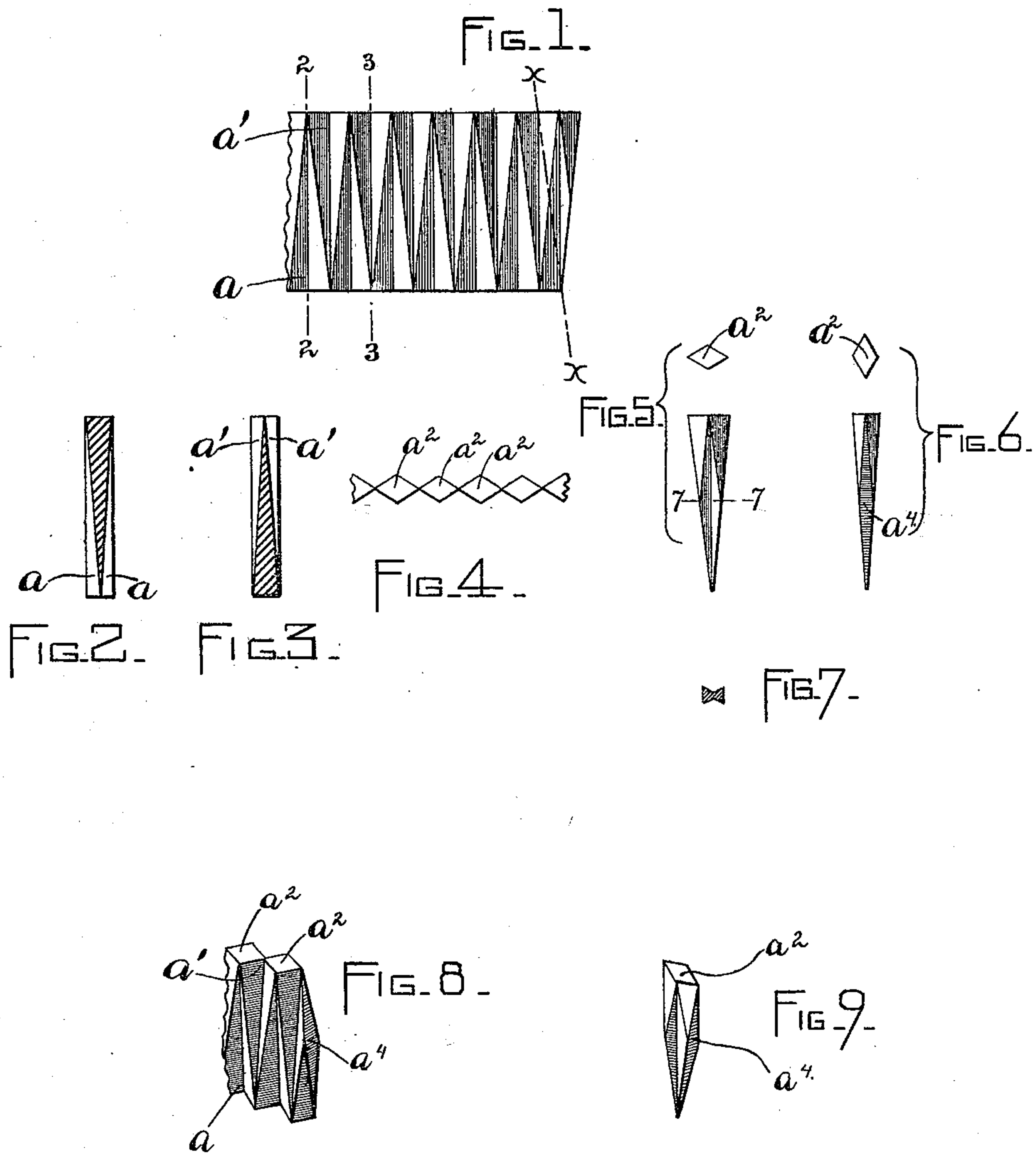


(No Model.)

H. H. BUFFUM.  
SLUG OR NAIL STRIP.

No. 560,968.

Patented May 26, 1896.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

HERBERT H. BUFFUM, OF ABINGTON, MASSACHUSETTS.

## SLUG OR NAIL STRIP.

SPECIFICATION forming part of Letters Patent No. 560,968, dated May 26, 1896.

Application filed January 9, 1896. Serial No. 574,887. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT H. BUFFUM, of Abington, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Slug or Nail Strips, of which the following is a specification.

This invention relates to the manufacture of heel nails or slugs, which are used principally for securing top lifts to boot and shoe heels and for producing an ornamental finish along the tread-surfaces of such heels, the heads of the slugs or nails being closely arranged upon the surface of the heel.

The invention relates particularly to slugs or nails which are made by cutting a strip of metal transversely into sections, each section constituting a slug or nail the length of which is equal to the width of the strip.

The invention has for its object to enable a slug or nail strip to be made into slugs or nails the outer ends of which shall have an ornamental form differing from that which would be produced by severing a strip the edges of which are of uniform width; and the invention consists in a slug or nail strip having two series of grooves or indentations in each of its sides arranged to form alternating thicker and thinner portions, which constitute practically complete nail-heads on the edges of the strip, the central portion of the strip being thicker throughout all parts of its length than the thinner portions of the edges, so that it constitutes a blank adapted to be manipulated without liability to breakage and to be cut transversely into slug or nail bodies.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side view of a portion of a slug or nail strip constructed in accordance with my invention. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 represents a section on line 3 3 of Fig. 1. Fig. 4 represents a view of one edge of the strip. Fig. 5 represents a side and an end view of a slug or nail made from the strip shown in Fig. 1. Fig. 6 represents an edge and an end view of said nail. Fig. 7 represents a section on line 7 7 of Fig. 5. Fig. 8 represents a perspective view of the strip. Fig. 9 represents a perspective view of the slug or nail shown in Figs. 5 and 6.

The same letters of reference indicate the same parts in all the figures.

In carrying out my invention I take a strip of any suitable metal or alloy, the width of the strip being suitable for the length of the slugs or nails to be cut therefrom, and groove or indent the sides of said strip in such manner as to convert its edges into a series of slug or nail heads, which are practically complete and may be of any desired shape, the object being to produce a slug or nail strip having its edges formed as two series of practically complete heads having alternating thicker and thinner portions and differing in shape from the intermediate portion or body of the strip, the latter being of greater thickness than the thinner portions of the edges, so that it may be manipulated without liability of breakage, and constituting a blank from which the bodies of the slugs or nails may be formed by cutting the strip transversely into sections, each constituting a nail or slug, the length of which is determined by the width of the strip. It is also my object to so form the strip that it may be cut up into tapering or wedge-shaped nails or slugs by subjecting it to cutters which sever the strip obliquely and giving the strip a half-rotation after each cut, so that the heads are cut alternately from the two edges of the strip. I therefore form in each side of the strip two series of tapering grooves  $a$  and  $a'$ , Figs. 2 and 3.

The grooves  $a$  form indentations in one edge of the strip, while the grooves  $a'$  form indentations in the opposite edge of the strip, each groove decreasing in depth and vanishing at or near the edge opposite the edge which it indents. The depth of said indentations is such that the edges of the strip are converted into a series of nearly-severed nail or slug heads  $a^2$ , the form of which is determined by the form of the grooves, said heads being connected only by thin necks of metal, which furnish material for points alternating with the heads. The edges of the strip are therefore converted into two practically complete series of heads having alternating thicker and thinner portions, while the intermediate portion is left thicker than the thinner portions of the edges and constitutes a blank having sufficient thickness and strength at all parts to



maintain its continuity without liability of accidental breakage and to present material from which slug or nail bodies may be cut. In the present case the grooves are angular or V-shaped, the angle of their sides being such as to form rhomboidal or diamond-shaped heads. The centers of the heads on one edge are in line with the thin necks between the heads on the other edge, so that a line drawn across the strip at right angles with its length will intersect a head on one edge and a neck on the other edge. It will be seen, therefore, that by severing the strip on the oblique line  $xx$ , Fig. 1, the cut will extend through a neck on one edge to a neck on the opposite edge and will form an inclined surface  $a^4$ , (see Fig. 8,) which is widest at the center of the strip and is pointed at the edges of the strip, said surface constituting one side of a tapering nail or slug. It will also be seen that by giving the strip a half-rotation, feeding it forward a distance equal to the length of one of the heads, and then making another diagonal cut on the line  $xx$  a nail or slug will be produced having a head  $a^2$  at one end and a point at its other end, as shown in Fig. 9.

The form of the grooves  $a a'$  may be variously modified, it being feasible in this way to make several different shapes of head  $a^2$ .

The improved strip is intended for use in a machine having provisions for feeding and partially rotating the strip and cutters arranged to sever the strip obliquely. The

grooved sides of the strip are particularly adapted to engage correspondingly grooved or serrated feed-rolls which positively engage the strip and insure its proper presentation to the cutters.

I claim—

1. A slug or nail strip having two series of grooves or indentations in each of its sides arranged to form alternating thicker and thinner portions which constitute practically complete nail-heads on the edges of the strip, the central portion of the strip being thicker throughout all parts of its length than the thinner portions of the edges, so that it constitutes a blank adapted to be manipulated without liability to breakage, and to be cut transversely into slug or nail bodies.

2. A slug or nail strip having two series of tapering transverse grooves or indentations in each of its sides, the grooves of one series decreasing in depth from one edge, while the grooves of the other series decrease in depth from the opposite edge, the deeper ends of said indentations forming alternating slug or nail heads and points on the edges of the strip.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of January, A. D. 1896.

HERBERT H. BUFFUM.

Witnesses:

C. F. BROWN,

A. D. HARRISON.