

(No Model.)

F. F. RAYMOND, 2d.
COMB STRIP OF HEEL NAILS.

No. 474,858.

Patented May 17, 1892.

Fig. 1.

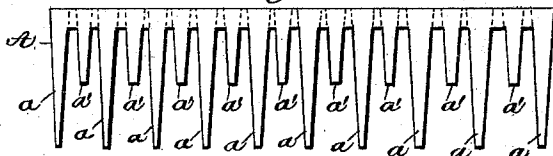
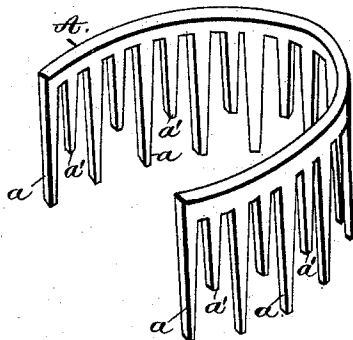


Fig. 2.



WITNESSES
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COMB-STRIP OF HEEL-NAILS.

SPECIFICATION forming part of Letters Patent No. 474,858, dated May 17, 1892.

Original application filed May 15, 1885, Serial No. 165,574. Divided and this application filed February 11, 1889. Serial No. 299,519. (No model.)

To all whom it may concern:

Be it known that I, FREEBORN F. RAYMOND, 2d, a citizen of the United States, residing at Newton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Comb-Strips of Heel-Nails, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The invention relates to a comb-strip of heel-nails, which are arranged to provide the necessary number of nails for fastening or attaching the heel or the sole, if desired, and no more, having nails of varying lengths arranged as will be more fully hereinafter set forth.

The object of the invention is to provide an expeditious way of feeding the heel-attaching nails to the heel-nailing machine, and also to arrange the nails as to their number and lengths before they are driven.

The invention is especially applicable for use in connection with heel-nailing machines, with means for separating a comb-strip of this construction or form into individual nails and for arranging them in form to be driven and for feeding the nail to the driving devices.

Referring to the drawings, wherein like letters of reference are used to designate similar parts in the several views, Figure 1 is a plan view of a complete comb-strip constructed in accordance with my improved form. Fig. 2 illustrates said strip bent into a curved form and ready for application to the heel of a boot or shoe.

A refers to the comb-strip, which is formed with short starts or projections *a'*, constructed between starts or projections *a*, of somewhat greater length. This comb-strip is constructed from a sheet of metal of suitable thickness and the starts formed by the use of suitable dies or stamping devices. Each strip will have the requisite number of nails therein as is desired for the intended purpose. For instance, if nine nails are needed for properly attaching the heel-blank, then the comb-strip has but nine nails. If fifteen are necessary, the strip is formed with fifteen, and so on. It will be understood, however, that the said strip may have any number of these starts or

projections necessary for the heel which its nails are to attach.

The nails are constructed in the manner above set forth to fit them for the especial location which they are to bear in the heel, as it is desirable that certain nails for attaching the heel be larger or longer and possess greater wearing properties than others, and also to supply a greater number of nails in a heel for resistance of wear without necessitating an increased amount of disintegration of the parts of the heel by driving a large number of long nails therein.

In use the comb-strip having the requisite number of nails constructed as set forth is placed in the machine, and by the operation thereof it is separated into its individual nails, which are fed to the driving devices and driven. It is obvious that this strip not only provides means for easy and quick feeding for a large number of nails, but that it also provides means for the feeding of nails of different lengths in a quick and expeditious way; also, for properly locating such nails, so that all the nails are fed to the place where needed whether they be long or short. It will be observed in this instance that two of the long nails formed by the starts or projections *a* will have a short nail formed by the starts *a'*, driven between the same. This arrangement provides a strong fastening without increased puncture of the material of the heel, as would be the case in the use of nails of a uniform size.

While I have described this invention as applicable to heeling-nails, I would not be understood as limiting it to this class of fastenings, as it may also be used for fastening soles or any other article or thing where it is necessary to feed the nails or fastenings expeditiously and to arrange for the driving of the given number.

This application includes subject-matter divided from my application filed May 15, 1885, Serial No. 165,574, and I make no claim herein to the subject-matter of said earlier application.

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

As an improved article of manufacture, a comb-strip of shoe nails or fastenings comprising a series of starts or projections of about the same length as an ordinary heeling-nail
5 and alternately arranged therewith, a single shorter start between each two of the longer ones, said starts being cut from said strip, as shown, to form wedge-shaped headless blunt-

pointed nails for alternate individual driving of a long and a short nail, substantially as described.

FREEBORN F. RAYMOND, 2D.

In presence of—

J. M. DOLAN,

A. F. MACDONALD.