(No Model.)

A. VAN WAGENEN.

SOLE FASTENER.

No. 331,925. Patented Dec. 8, 1885.

Fig. 1.

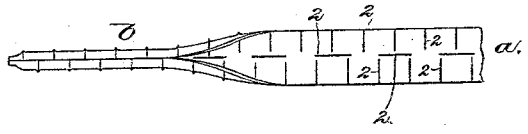


Fig. 2.

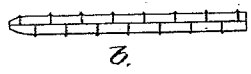


Fig. 3.

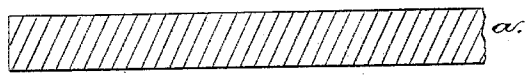
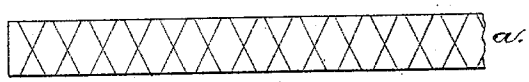


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

ALBERT VAN WAGENEN, OF BOSTON, MASSACHUSETTS.

SOLE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 331,925, dated December 8, 1885.

Application filed April 3, 1885. Serial No. 161,138. (No model.)

To all whom it may concern:

Be it known that I, ALBERT VAN WAGENEN, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Sole-Fasteners, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention has for its object to produce a strong but light-weight sole-fastening from metal, the surface of the same being indented, serrated, or corrugated, to thereby enable the surface of the fastening to engage the material and remain in place.

In accordance with my invention, a strip of thin sheet metal is corrugated, serrated, or indented and then made into a tube, the tube being cut into fastenings of the desired length.

My invention consists in a folded sheet-metal metallic tubular sole-fastener or nail having its surface indented or corrugated.

Figure 1 represents part of a strip of metal, with one end thereof made tubular, to be cut up for the production of fasteners embodying my invention. Fig. 2 shows one of my improved fasteners, and Figs. 3 and 4 modified forms of strips.

For the manufacture of my improved sole-fastener or nail, a narrow strip, *a*, of thin sheet metal, is first indented or corrugated, (more or less,) as shown at 2 2, by passing the same between rollers properly cut for such purpose, or in other usual way, and then the said strip is bent or folded into cylindrical or tubular form, as shown at *b*, either by drawing the strip through a tapering die or in other usual manner. The strip of sheet metal, folded or made tubular, as described, and having its surface indented or corrugated, is then cut into suitable lengths for sole-fasteners, the cutting being done after forming the tube; or it may be cut into fasteners on a nailing-machine in which the fastening material is fed to the driver as needed.

In Figs. 3 and 4 I have shown short pieces of strips of metal indented or corrugated in different patterns, as I do not intend to limit my invention to any particular shape of indentation or corrugation. The corrugations or indentations made in the strip materially stiffen the fastener, thus enabling it to be driven with more accuracy, and at the same time greatly increase its holding power. The indentations will preferably be made on but one side of the material. The hole or central passage of the fastener immediately becomes filled with dirt; but this passage may be almost, if not entirely, closed by close drawing through the die. It may be wound in any usual manner upon reels to be used in the machine.

In another application filed concurrently herewith, Serial No. 161,139, I have shown the serrated, corrugated, or indented strip combined with a wire core.

If desired, the cylindrical body representing the wire-like material to be cut into short lengths for the production of fasteners may be subjected to a galvanizing process, to fill any spaces left as the result of bringing the strip of sheet metal into cylindrical form.

I am aware that nails for sole-fastenings are commonly indented or serrated. I am also aware that shoe-sole fastenings have been made of smooth or plain strips of metal folded about a fibrous core, and also that a tubular or tube-like fastener with open center and side has also been used, the fastening separating as it is driven into the leather.

In accordance with my invention, the strip from which the fastener is made is first corrugated or indented, and being done before the metal is put into nail shape, the cost of manufacture is decreased, and there is actually no waste of stock, and the indentations, added to the sheet-metal nail, make that class of nail or fastening operative and valuable.

I claim—

As an improved article of manufacture, the herein-described sole-fastener, consisting, essentially, of a sheet-metal strip corrugated or indented and folded into tubular form, the corrugations or indentations appearing on the periphery of the fastener, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT VAN WAGENEN.

Witnesses:

B. J. NOYES,

F. CUTTER.