

(No Model.)

E. M. SWEENY.

NAIL.

No. 413,980.

Patented Oct. 29, 1889.

Fig:1.

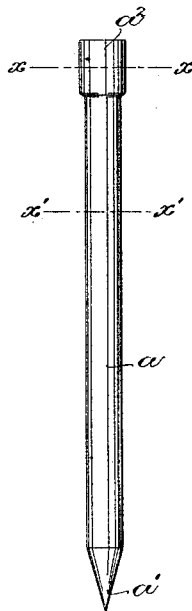


Fig:2.



Fig:3.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

EDWARD M. SWEENEY, OF SOUTH HANOVER, MASSACHUSETTS, ASSIGNOR TO  
E. PHILLIPS & SONS, OF SAME PLACE.

## NAIL.

SPECIFICATION forming part of Letters Patent No. 413,980, dated October 29, 1889.

Application filed July 15, 1889. Serial No. 317,544. (No model.)

### *To all whom it may concern:*

Be it known that I, EDWARD M. SWEENEY, of South Hanover, county of Plymouth, State of Massachusetts, have invented an Improve-  
ment in Nails, of which the following description, in connection with the accompanying  
drawings, is a specification, like letters on the drawings representing like parts.

As the use of wire nails for uniting heels of boots and shoes is becoming quite common, the trade demands that the exposed end of the nail at the end of the finished or scoured heel present a large head, No. 13 or 14 standard-gage wire being preferably employed for these nails, each nail being sharpened to constitute a point. These wire nails, of uniform diameter, are hard to drive, are clumsy, do not bend properly to clinch, and they fill the heel too much and are objectionable.

In my efforts to provide a wire nail which will present the proper or desired diameter at the end of the finished or scoured heel, and which may be readily driven and not fill the heel too full, I have devised a nail having a cylindrical head-section of the standard gage and a cylindrical body of a smaller gage. The length of the cylindrical head-section is in excess of the length of heel which is taken off or reduced by scouring, so that the heads will appear of a proper and uniform diameter, notwithstanding the amount of heel-stock removed from the end of the heel in finishing the same. In order to make the head of sufficient length and of the same diameter or presenting parallel sides, it is formed in a die; but in practice such die-formed heads can be but a little larger in diameter than the diameter of the wire of which the nail is made—say about two gages. The length of the head is greater than its diameter, as will be described.

This invention consists in a wire nail having a cylindrical body or shank pointed at one end, and a cylindrical die-formed head of greater length than diameter, concentric with,

but larger than, the shank, substantially as described.

Figure 1 shows in side elevation a nail embodying this invention; Fig. 2, a cross-section of the head, taken on the dotted line  $xx$ ; and Fig. 3, a cross-section of the body or shank, taken on the dotted line  $x'x'$ .

The nail embodying this invention, as herein shown, is supposed to be made from a wire of about No. 15 or 16 gage, the body or shank  $a$  of the nail showing the full diameter of the wire. The wire is pointed at one end, as at  $a'$ , and to make the cylindrical head  $a^2$  the wire is subjected at intervals to the action of dies, which upset the wire and leave the long cylindrical heads as represented, its length being greater than its diameter, as shown. The cylindrical head  $a^2$  is upset on the No. 15 or 16 gage wire, so as to leave a head of about two gages larger than the body.

The nail herein described, having the small body or shank  $a$ , may be more easily driven into the heel, be more readily bent, if desired, and yet not take up as much space in the heel as nails heretofore commonly employed for this purpose, and, owing to its length, will stand the requisite amount of scouring to which the finished heel is subjected.

I claim—

The herein-described wire nail, comprising the cylindrical body or shank  $a$ , pointed at one end, and the cylindrical die-formed head  $a^2$ , having a length greater than its diameter, concentric with the shank, but larger in diameter, the sides of the said die-formed head being parallel with the sides of the body or shank of the nail, substantially as described.

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

EDWARD M. SWEENEY.

Witnesses:

MERRILL A. PHILLIPS,  
CALVIN T. PHILLIPS.