2 Sheets--Sheet 1.

J. A. CHARNLEY & H. S. CUSHMAN.

Machines for Making Wire Shoe-Pegs.

No. 157,714. Patented Dec. 15, 1874.

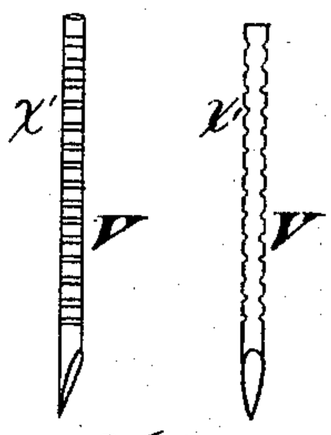

Fig. 2.

Fig. 1.

Fig. 3.

WITNESSES;

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2 Sheets--Sheet 2.

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Fig. 4.

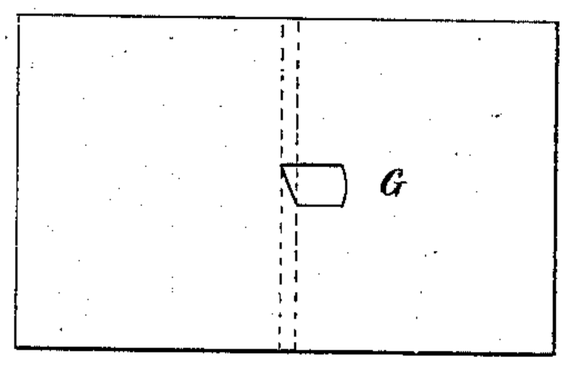

Fig. 5.

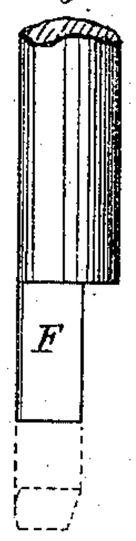

Fig. 7.

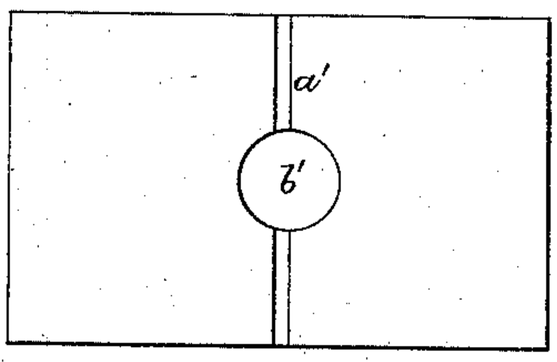

Fig. 6.

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UNITED STATES PATENT OFFICE.

JAMES A. CHARNLEY, OF PROVIDENCE, R. I., AND HENRY S. CUSHMAN, OF MILFORD, MASS.; SAID CHARNLEY ASSIGNOR TO SAID CUSHMAN.

IMPROVEMENT IN MACHINES FOR MAKING WIRE SHOE-PEGS.

Specification forming part of Letters Patent No. **157,714**, dated December 15, 1874; application filed September 29, 1874.

To all whom it may concern:

Be it known that we, JAMES A. CHARNLEY, of Providence, county of Providence, State of Rhode Island, and HENRY S. CUSHMAN, of Milford, in the county of Worcester, State of Massachusetts, have invented a certain new and useful Improvement in Machines for the Manufacture of Metallic Shoe-Pegs, of which the following is a description, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is an isometrical perspective view of our improved machine; Fig. 2, a view of the finished pegs of its manufacture; Fig. 3, a sectional view, showing the feeding and cutting apparatus. Fig. 4 is a top view of the die-plate, showing its opening or die G, for reception of the cutter F, as hereinafter described. Fig. 5 is a side elevation, and Fig. 6 a lower-end view, of said cutter. Fig. 7 is an under-side view of the die-plate cap, with its groove *a'* and hole *b'*, for reception of the cutter.

Like letters of reference indicate corresponding parts in the different figures of the drawing.

Our invention relates more especially to machines which are designed for making indented pegs or nails; and consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed.

In Fig. 1, A is the bed-piece, having two standards or uprights, in which the main or driving pulley B is journaled, and upon the same shaft upon which the wheel B is mounted there is a crank-disk, C, provided with a pitman, which is jointed at D to the vertically-sliding cutter-bar E, carrying the cutter F. Attached to the bed A, immediately beneath the bar E, there is a die-plate, Z, provided with a vertical opening, G, and screwed firmly upon this plate there is a cap, U, Fig. 3, having a slightly larger opening, *b'*, and also a horizontal opening or groove, through which the wire W passes, the groove being so arranged in respect to the die-plate as to cause the wire, during the operation of the machine, to be kept near one edge of the opening, as shown in Fig. 1, in which a portion of the cap is represented as broken away.

In Fig. 4 the course of the wire across the die-plate and its orifice or die are shown by dotted lines, the part of the opening of the die which is immediately beneath the wire being right-angled triangular in horizontal section, the part of the cutter to operate with such part of the die-opening being correspondingly shaped.

A pair of corrugated rollers, R' R, are mounted upon the sliding carriage M, the rollers being connected at one end by the gears P P. A rocker-shaft, J, provided with the cranks I K, is mounted on the bed A, the crank K being connected, by the pitman or rod *a*, to a crank-pin on the disk L, which is mounted upon the same shaft with the wheel B. The crank I is connected, by the rod H, with an ordinary ratchet mechanism for actuating the fixed ratchet-wheel S, which is disposed upon the shaft of the lower corrugated roller R. A guide, T, through which the wire passes, is attached to the carriage M in front of the rollers.

From the foregoing, the nature and operation of our invention will be readily obvious to all conversant with such matters.

In starting up the machine the wire W, from which the pegs are to be made, is taken from a coil on a reel in the usual manner, one end being passed through the guide T, then between the rollers R' R, and directed into the groove or hole in the cap U. Power is then applied to the wheel B, causing the rollers to feed the wire to the die, and the cutter F to descend at regular intervals and cut off the peg, the cap U acting as a stripper to keep the wire in place as the cutter is withdrawn, in a manner which will be readily apparent without a more explicit description.

It will be understood that the cutter F is of the proper form and size to fit the opening G, the cutter being also so shaped and arranged that in cutting or bisecting the wire it forms the slanting or chisel-point of the succeeding peg at the same time that it makes the square head for the finished peg, the form of the pegs being shown at *v v*, Fig. 2.

The rollers R′ R are made of hardened steel, and, in addition to feeding the wire to the die, are designed to serrate or indent the body of the peg, as shown at *x x*, the necessary pressure for this purpose being obtained by the set-screws and caps Y Y.

The length of the pegs cut by the machine may be determined by changing the feed, which is accomplished by varying the point of connection between the rod H and crank I, or between the crank K and rod *a*.

The rollers are mounted on the carriage M, for the purpose of enabling them to be moved longitudinally, and thus bring new surfaces into use as they become worn at any particular point.

The cutter on descending through the wire cuts entirely across it, and removes from it a piece whose horizontal section is a right-angled triangle, or a close approximation thereto, the same causing not only the head of the nail cut off to be made, but the point of the next one, also, to be formed at the same time.

Having thus described our invention, what we claim is—

1. The combination of the guide-plate U (provided with guide-passages, arranged as described, for the wire and cutter) with the die or perforated support-plate Z, and with the cutter F, provided with mechanism for operating it, as explained, and constructed to cut the wire so as to form the head of the nail cut from it, and also the point of the next one to be cut.

2. The combination of the feeding and notching rollers P P′ with the plate Z, guide-plate U, and cutter F, all being constructed and arranged as specified, and said rollers and cutter being provided with mechanism for revolving them, as explained.

3. The adjustable frame M, in combination with the bed-plate A, and the feeding-rollers P P′, the plate Z, guide-plate U, and cutter F, all as set forth.

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