(No Model.)

M. G. VOIGT, Sr.

WIRE NAIL MACHINE.

No. 345,745. Patented July 20, 1886.

Fig. 1.

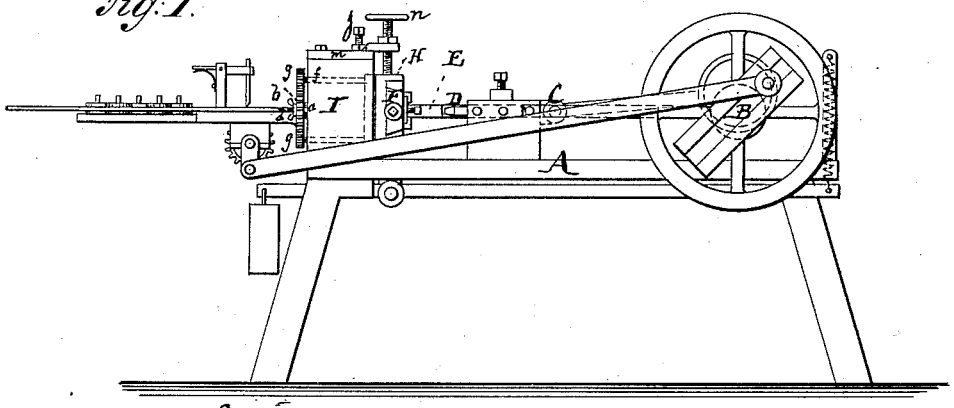


Fig. 2.

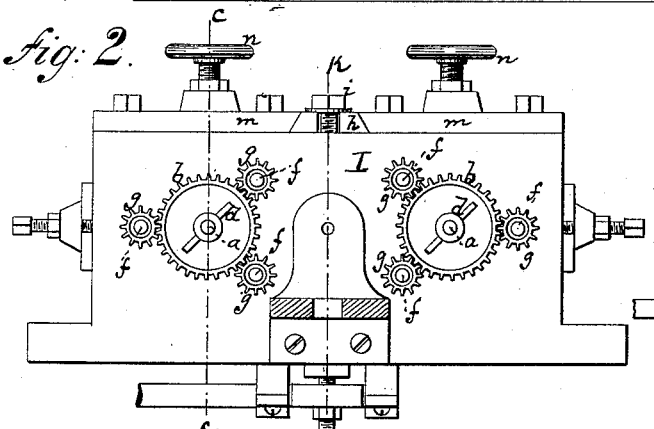


Fig. 5.

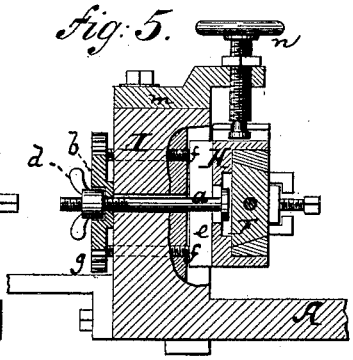


Fig. 3.

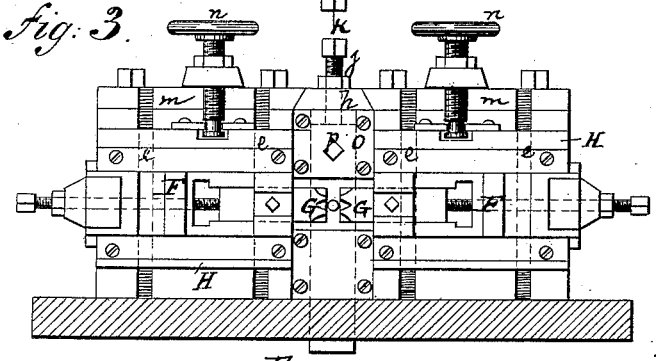


Fig. 6.

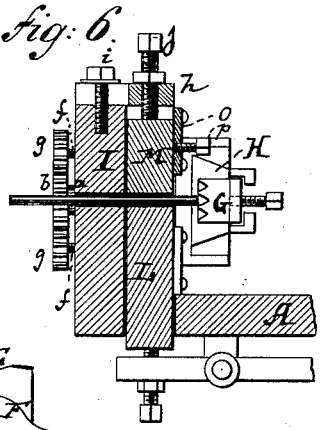
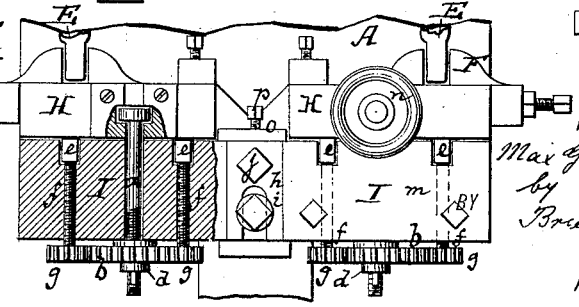


Fig. 4.



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UNITED STATES PATENT OFFICE.

MAX G. VOIGT, SR., OF NEW YORK, N. Y., ASSIGNOR TO THE METROPOLITAN WIRE NAIL MANUFACTURING COMPANY, OF SAME PLACE.

WIRE-NAIL MACHINE.

SPECIFICATION forming part of Letters Patent No. 345,745, dated July 20, 1886.

Application filed January 5, 1886. Serial No. 187,062. (No model.)

To all whom it may concern:

Be it known that I, MAX GUSTAV VOIGT, Sr., a resident of New York city, in the county and State of New York, have invented an Improved Wire-Nail Machine, of which the following is a full, clear, and exact description, reference being made to the accompanying drawings, in which—

Figure 1 represents a side view of my improved wire-nail machine. Fig. 2 is an enlarged back view of the perforated ledge through which the wire passes on its way to the headers. Fig. 3 is a face view of that ledge and its appurtenances. Fig. 4 is a top view of the same, partly in section. Fig. 5 is a cross-section of the same on the line *c c*, Fig. 2; and Fig. 6, a cross-section on the line *k k*, Fig. 2.

This invention relates to certain improvements on the wire-nail machine which is described in Letters Patent No. 319,150, that were granted to me June 2, 1885.

The invention consists in certain new means for adjusting the parts that are carried by the perforated wire-guiding ledge, as hereinafter more fully described.

In the drawings, the letter A represents the frame of the machine; B, the driving-shaft; C, the reciprocating carriage, carrying the header D, and E E the levers for moving the horizontal slides F F. All these parts heretofore named—to wit, A B C D E F—are substantially like the parts bearing the same letters of reference that are described in the above-mentioned Letters Patent.

The slides F F carry at their inner ends the cutters G G, and are dovetailed in a block, H, which is secured to the rigidly-projecting ledge I of the frame A. One part of the present invention has reference to the manner of securing this block H to the ledge I, with the object of adjusting it thereon.

In order to make a heavier head on a nail, it is necessary that a greater length of wire be exposed to the heading-tools than is necessary for producing a head of less thickness. To accomplish this adjustment, which is a backward and forward adjustment of the block H on the face of the ledge I, I connect said block H with the ledge by a screw, *a*, (see Fig. 5,) the head of the screw resting in the block H, while the body of the screw projects outwardly on the back of the ledge I, where it carries a toothed wheel, *b*, and a thumb-nut, *d*. This thumb-nut holds the toothed wheel in position, as clearly shown in Fig. 5, and also holds the block H against the front of the ledge at the requisite distance. The block H at its back—that is, at that side which is in contact with the ledge I—has two upright ribs, *e e*, which enter upright grooves in the front or face of the ledge I, and which, although permitting up and down and back and forward adjustment of the block H, prevent lateral displacement thereof.

For the purpose of steadying the block H in its proper position, so that the process of heading the nail may be carried on without disturbance of the parts, I cause three or more screws, *f f f*, all of which pass through the ledge I, to bear against the upright ribs *e*. Each of these screws at its rear end carries a toothed wheel, *g*, which gears into the toothed wheel *b* on the screw *a*, so that on turning the said wheel *b* the screws *f f f* next to it will be simultaneously adjusted to the same extent as the screw *a*, that carries such wheel *b*.

It will be seen from the foregoing description that whenever the block H is to be set nearer to or farther away from the face of the ledge I, for the purpose of giving less or more material for the head of the nail to be formed, it will only be necessary to loosen the two thumb-nuts *d*, and then turn the two wheels *b b* so as to draw the blocks H toward the ledge or move them farther off the ledge, as may be desired, the screws *f* following the receding ribs *e* of the said blocks or moving away from them, as the case may be, so as to always maintain the proper contact therewith, constituting, therefore, self-adjusting rests for said blocks, against which they will bear after the adjustment shall have been perfected.

The second feature of my invention has reference to the means of holding in place on the machine the upper jaw, M, and the lower jaw, L, both of which jaws are described by the same letters of reference in my above-mentioned patent. It becomes desirable from time to time to remove these jaws M L and have them replaced by others, according to the thickness of wire to be held by them.

The machine constructed according to the drawings annexed to my former patent required all the parts connected with the ledge I to be separated or taken asunder before the jaws M L could be removed. My present invention seeks to obviate that difficulty, and provides a guide and steadying-piece for the upper jaw, which, when taken off the ledge, permits of the ready removal of said jaw, making room, when it is taken out, for the removal also of the lower jaw, L. To accomplish this purpose I place a dovetailed plate, *h*, over the center of the ledge I, and hold this plate on the ledge by a screw, *i*. The plate *h* is dovetailed into the space formed by and between the covering-plates *m m*, that are on the end portions of the ledge I, and that carry the screws *n n*, by which the blocks H H receive their vertical adjustment. The dovetailed plate *h*, which, as stated, covers the center of the ledge I, is necessarily also directly above the jaws M L, (see Fig. 6,) and above said jaw M it carries a screw, *j*, by means of which the position vertically of the jaw M can be regulated. A face-plate, *o*, is screwed to the face of the ledge I over the recess occupied by the jaw M, and assists in holding said jaw in place, preventing it from falling forward. A set-screw, *p*, in the face-plate *o* clamps the jaw M at the proper height—that is to say, after the screw *j* has regulated the proper height for the jaw M the latter is clamped tight by the screw *p*. By loosening the screw *i* the plate *h* can be withdrawn, and thereupon, by loosening the screw *p*, the jaw M can be pulled out through the opening left above it by the removal of *h*, and after that the jaw L can also be lifted out through the same opening; hence the jaws L and M can be removed and replaced for repair or otherwise without disturbing any other parts of the mechanism.

I claim—

1. The combination of the fixed ledge I, having upright grooves in its face, with the movable blocks H, having upright ribs *e*, fitting said grooves, and with the screw *a*, toothed wheels *b g*, and screws *f*, all arranged substantially as herein shown and described.

2. The ledge I, having end covers, *m m*, and central covering-plate, *h*, in combination with the screws *i j*, face-plate *o*, having screw *p*, and with the jaws L M, substantially as described.

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