

T. ALEXANDER.
WIRE FEEDING DEVICE.
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1,235,277.

Patented July 31, 1917.

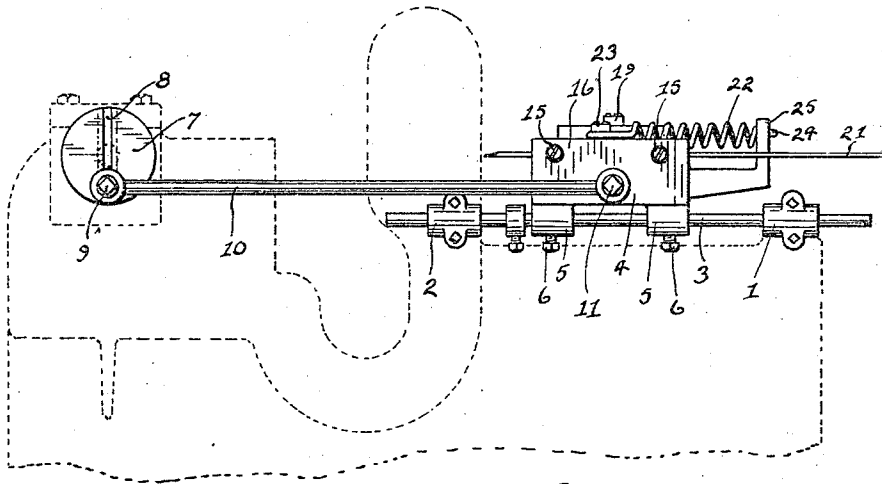


Fig. 1

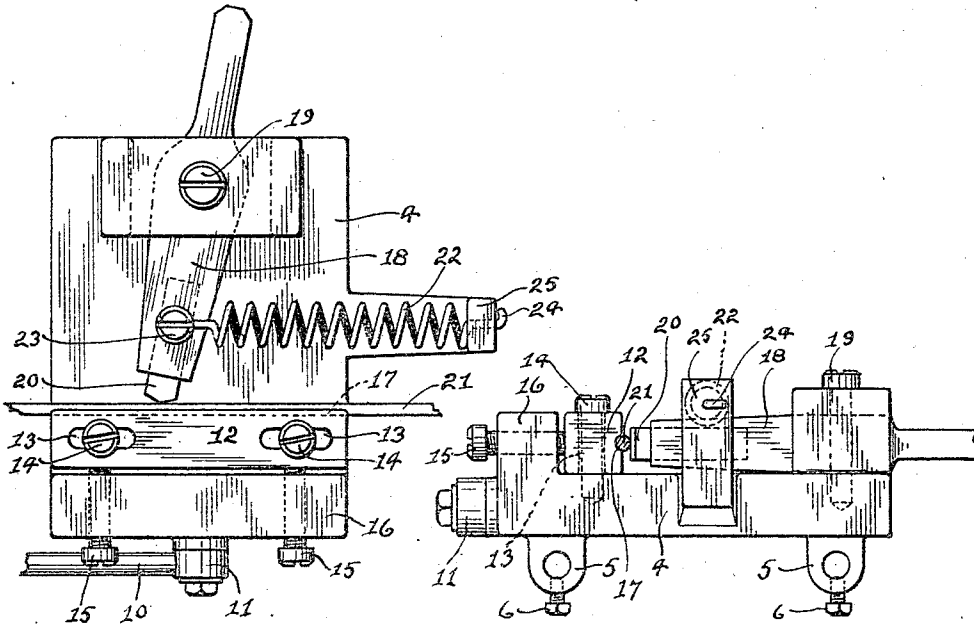


Fig. 2

Fig. 3

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WIRE-FEEDING DEVICE.

1,235,277.

Specification of Letters Patent.

Patented July 31, 1917.

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To all whom it may concern:

Be it known that I, TRUMAN ALEXANDER, a citizen of the United States, residing at Ashland, in the county of Boyd and State of Kentucky, have invented certain new and useful Improvements in Wire-Feeding Devices, of which the following is a specification.

This invention relates to wire feeding devices to be used in connection with wire nail making machines to feed the wire into the machine in predetermined lengths.

The main object of this invention resides in the combination with a nail making machine of a feeding device, embodying a gripping finger and a gripping block, the finger forming the means of forcing or wedging the wire into engagement with the block and holding it in such position as the block is forced in one direction, but permitting the wire to slide over the block when the same is moving in the opposite direction.

A further object of this invention resides in a structure for mounting the block upon the feed table, which permits of a longitudinal movement of the block in the direction of its reciprocation, to assist in more firmly gripping the wire and effecting a rapid release when the block is caused to move in a reverse direction.

Other objects of this invention will become more apparent after a further detailed description of the accompanying sheet of drawings, in which similar characters of reference designate corresponding parts, and in which:

Figure 1 is a view in side elevation of my feeding device shown in connection with a nail making machine, the latter shown diagrammatically in dotted outline,

Fig. 2 is a top plan view of the feeding device shown in Fig. 1, and

Fig. 3 is a view of the structure shown in Fig. 2 looking from the right.

The nail making machine is provided with a set of bearings designated 1 and 2, in which the slide rods 3 are designed to reciprocate. To these slide rods there is attached the feed table 4, the underside of the table being provided with a set of pierced lugs 5 designed to fit the rods 3 and held rigidly in connection therewith by means of the set-screws shown at 6. This table is given a reciprocatory movement by means of the disk 7 forming a portion of the nail machine

proper and which disk is provided with a diametral slot 8 into which one end 9 of the driving rod 10 is connected. The driving rod 10 is pivotally connected at its opposite end, as shown at 11, to the feed table 60 and the throw of this table is governed by the location of the connection 9 within the slot 8. The upper surface of the feed table is provided with a gripping block 12, which latter is provided with a pair of longitudinally extending slots 13. These slots 13 form the means of connection to the table 4 by means of the bolts or screws shown at 14. These slots are slightly wider than the diameter of the screws 14 in order to permit a slight lateral shifting as well as a longitudinal shifting. The lateral shifting is provided to effect an adjustment to accommodate the device to various sizes of wire, and is effected by the adjustment of the set-screws shown at 15 which are secured to the upstanding rib 16 disposed along one edge of the feed table and whose ends bear against the side face of the block 12. The opposite face of this block is provided with a longitudinally extending groove 17 designed to form a seat for the nail wire as it is fed through the machine. The side of the table opposite from that on which the block 12 is secured is provided with a gripping finger 18 which is pivoted to the table as is shown at 19. The length of this finger from the pivot point 19 to its engaging point 20 is slightly greater than the shortest distance between the pivot point 19 and the gripping block, and when the nail wire 21 is fed to assume the relative positions shown, movement of the feed table toward the right permits the finger to slidably pass over the wire, but movement in the opposite direction, causes this finger to wedge against the wire, which in turn wedges it against the block 12 and thereby causes its positive feed forward. The gripping end 20 is preferably of a separate tool suitably hardened and made removable for well-known reasons. A spring 22 is secured to this gripping finger as shown at 23 and is secured at its opposite end 24 to an upstanding ear 25 forming a portion of the table. By means of this spring the gripping finger is at all times urged to assume a position in contact with the nail wire.

As the feed table is moved to the right, the gripping point 20 is in contact with the nail

wire, but because of the inclination of the gripping finger, it slides over the same. However, upon movement of the feed table toward the left, the gripping finger is wedged into engagement with the nail wire 21, thereby carrying this wire with it. The gripping block 12 is provided with the slots 13 to permit a slight shifting of this block, both at the time that the gripping finger engages the nail wire and at the time it releases it upon its return movement. This slight shifting insures a positive grip of the wire as the table moves toward the left and effects a very rapid and certain release when the table starts to move toward the right. Also, by means of the screws 15, the gripping block 12 may be adjusted slightly to adapt the machine to various sizes of wires.

What I claim, is:

1. In a nail machine, a horizontally disposed feed table, means for reciprocating said table, a gripping block slidably mounted in the top of said table to move in the direction of reciprocation of the table, and a gripping finger pivotally carried by said table to one side of said block and arranged to clamp the nail wire against one upstanding face of said block.

2. In a nail machine, a horizontally dis-

posed feed table, means for reciprocating said table, a gripping block slidably mounted in the top of said table to move in the direction of reciprocation of the table, a gripping finger pivotally carried by said table to one side of said block and arranged to clamp the nail wire against one upstanding face of said block, and means for adjusting said block toward or away from said finger.

3. In a nail machine, a feed table, means for reciprocating said table, a gripping block, a bolt and slot connection between said block and said table to permit movement of the block in the direction of reciprocation of said table, said block having a wire receiving groove, a gripping finger pivotally carried by said table and arranged to clamp the nail wire against said block when the table moves in one direction and to slide over the wire when the table moves in the other direction, and means for adjusting said block toward or away from said finger.

In testimony whereof I affix my signature in presence of two witnesses.

TRUMAN ALEXANDER.

Witnesses:

H. J. SCHMAUCH,
CLAY CALLIHAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."