L. GODDU.

Nailing-Machine.

No. 216,790. Patented June 24, 1879.

Fig. 1

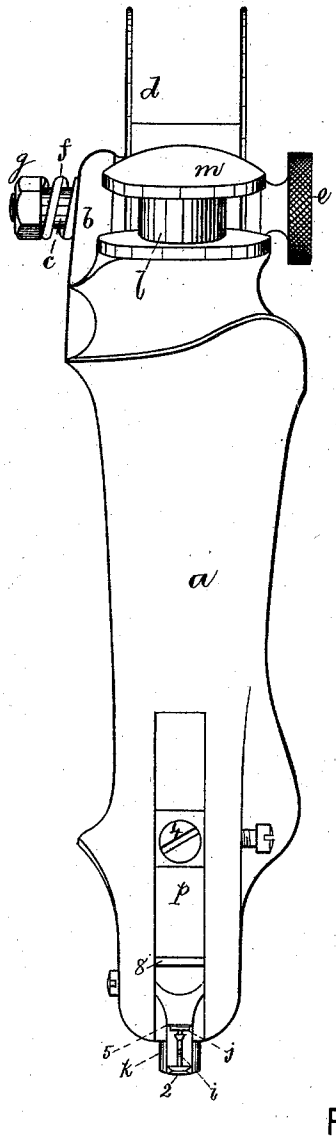


Fig. 2.

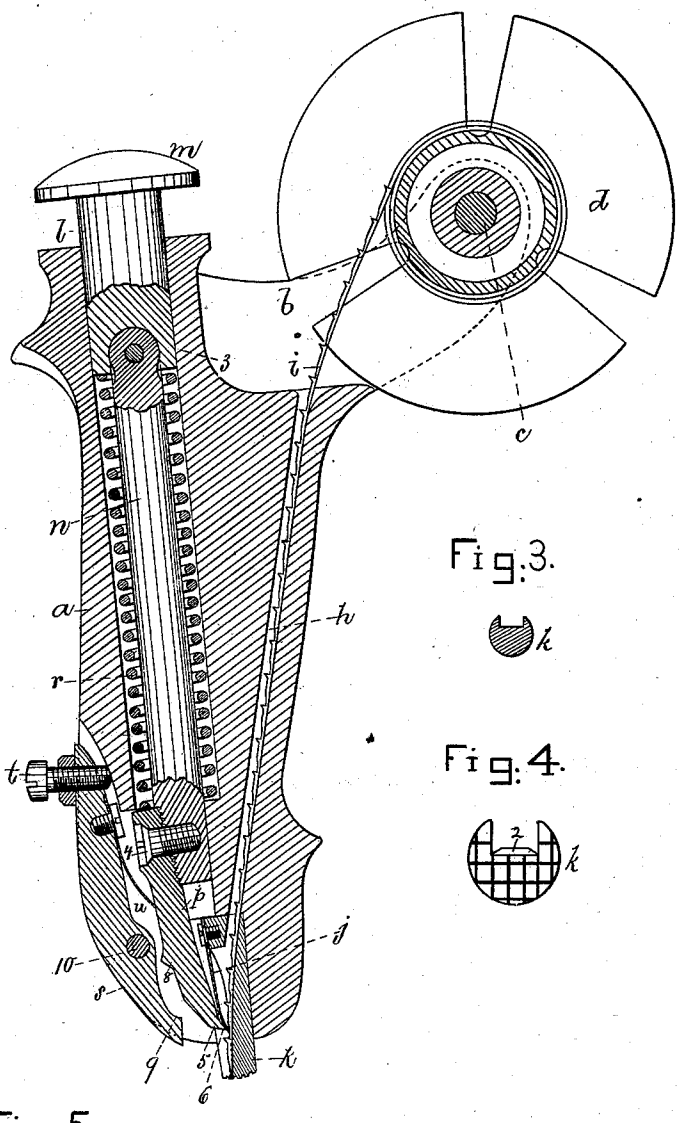
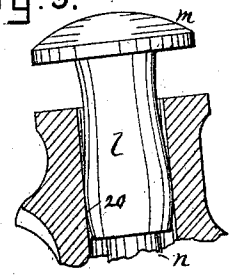


Fig. 3.

Fig. 4.

Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

LOUIS GODDU, OF WINCHESTER, MASSACHUSETTS.

IMPROVEMENT IN NAILING-MACHINES.

Specification forming part of Letters Patent No. **216,790**, dated June 24, 1879; application filed February 28, 1879.

To all whom it may concern:

Be it known that I, LOUIS GODDU, of Winchester, county of Middlesex, State of Massachusetts, have invented an Improvement in Nailing-Machines, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to improvements in nailing mechanism for boots and shoes, and is embodied in a so-called "hand-nailer," chiefly designed for use in lasting boots and shoes.

In this nailing mechanism metallic nails made from a wire and joined heads to points, and proceeding from a reel upon which the string of nails is wound, are engaged by a driver, which, besides acting upon the head of the nail to drive it, also co-operates with a suitable edge or projection to sever the nail from the string after the nail is driven.

Figure 1 represents, in front elevation, one of my improved hand-nailers, the lever *s*, hereinafter referred to, being removed. Fig. 2 is a vertical section thereof; Fig. 3, a cross-section of the nose; Fig. 4, an enlarged detail thereof, to show its cutter; and Fig. 5, a modification, to be referred to.

The frame *a* of the machine is of proper or suitable shape to be grasped by hand, and at its upper end is an ear, *b*, to hold the stud *c*, upon which is placed the reel *d*, one side plate of which is made removable, to permit a coil of string-nails to be placed on the reel. The reel is held in place on the stud by a milled nut, *e*, and a spring, *f*, on the rod, between the ear *b* and nut *g* at the end of the rod, acts as a friction device to regulate the amount of strain which shall be exerted to rotate the reel, said strain being applied through the nail-string by the action of the driver on one nail-head.

The handle has a nail-passage, *h*, for the string *i* of headed nails.

The end of the string of nails is led below a detent-spring, *j*, and thence downward along and within a groove in the nose *k*, which nose will preferably be serrated at its lower end. Near the end of this nose is a projection or cutting-edge, 2.

The handle is bored centrally to receive plunger *l*, which has a head, *m*, to be struck by hand or hammer; and at the lower end of this plunger, on a pin, 3, is pivoted the driver-rod *n*, the hole in the driver-rod being so shaped as to permit the driver *p* to turn upon the said pin and move away from and toward the string of nails, as will be hereinafter described. Instead of this pin and hole I might employ a ball-joint.

A spiral spring, *r*, surrounding the driver-bar, and supported at its lower end by the frame *a*, bears at its upper end against the lower end of the plunger, and lifts the driver-bar and driver after each descent thereof.

The driver *p*, notched or toothed at its upper end to fit corresponding serrations at the lower end of the driver-bar, is attached to the said bar by a screw, 4. The driver has at its lower end a driving-face, 5. A prolongation, 6, thereof co-operates with the projection 2 of the nose to sever the nail when it is driven; and at its side opposite the portion 6, but higher up, is a lug or incline, 8, which, as the driver-bar and driver descend, comes in contact with the incline or corner 9 of the adjustable lever *s*, pivoted at 10 to the handle *a*, and provided at its upper end with an adjusting set-screw, *t*, to thereby place the lower operative corner, 9, of the said lever in proper position to throw the driver laterally at the proper time and for the proper distance to sever the nail after it is driven. The driver is held pressed toward the string of nails by a spring, *u*, herein shown attached to lever *s*. When the driver is elevated it rides at its end over the detent-spring, which latter presses the string of nails down firmly, and prevents the nails from turning over or from moving back with the driver. The throw of the driver is in excess of the length of the longest nail to be driven, and when the driver descends it engages the head of the nail which rests against or just below the lower end of the detent-spring, and moves the entire string of nails downward as the nail below it is being driven.

One of the chief and most essential features in this my improved machine is that the driver-bar is so supported and held as to have a swinging movement toward and from the nail-string as the driver-bar is reciprocated.

Instead of pivoting the driver-bar to the plunger *l*, I may round or bulge the shank of the plunger, as at 20, Fig. 5, and connect the driver-bar *n* with it positively or rigidly.

This modified construction will, it is obvious, permit the driver-bar to move so as to both drive and sever the nail. I have found when the point of the nail is quite thin that I may dispense with the cutting-edge 2 on the nose.

To ease the strain upon the string of nails or make it less abrupt, I may pass the said string of nails over a yielding spring, which will bear gently upward upon the nail-string between the reel and the handle *a*.

I claim—

1. In a nailing-machine, a pivoted driver-bar provided with a driver, substantially as described, adapted to strike the head of and drive a nail, and then by a lateral movement in contact with the said head to sever the driven nail from an attached nail, substantially as set forth.

2. The plunger and pivoted driver-bar and attached driver, combined with the adjustable lever to control the extent of lateral movement of the driver to sever the driven nail from a connected nail, substantially as described.

3. In a nailing-machine, a loosely held or guided driver-bar and connected head or plunger and driver adapted to swing toward and from the nail-string, whereby the driver is adapted to engage the head of one of the nails of the string of nails to first drive and then sever it from a connected nail, substantially as set forth.

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

LOUIS GODDU.

Witnesses:

L. T. CONNOR,

JOS. P. LIVERMORE.