(No Model.)

T. FOWLER.

NAIL DRIVING APPARATUS.

No. 345,680. Patented July 20, 1886.

Fig 1

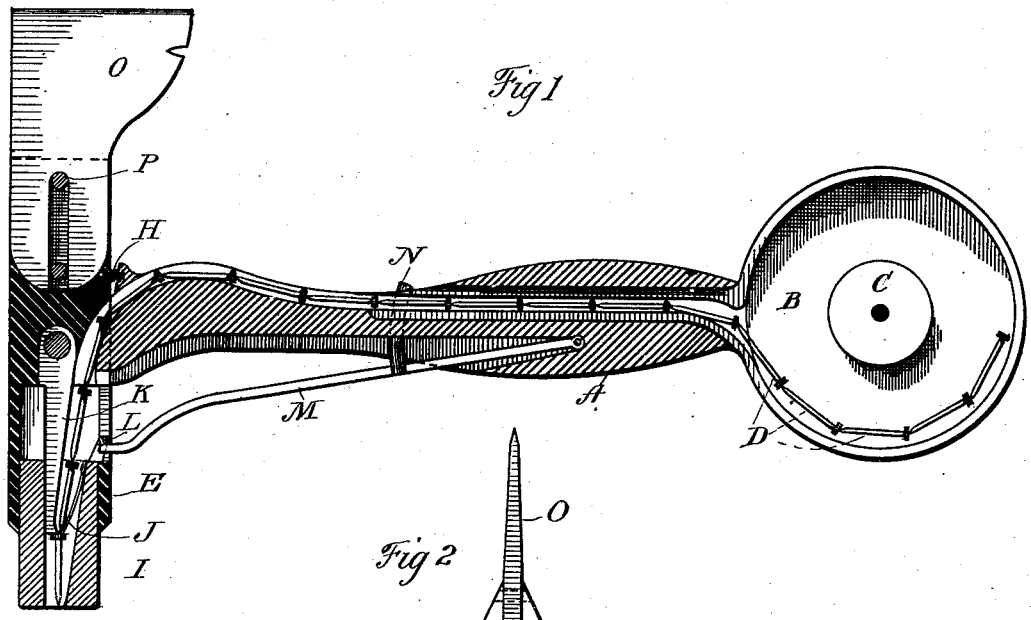


Fig 2

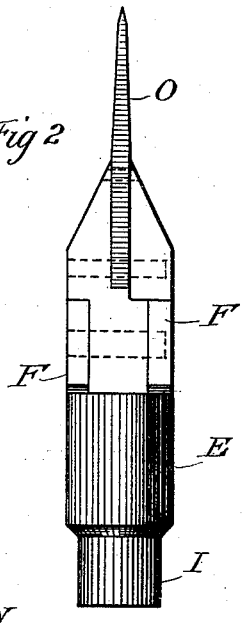
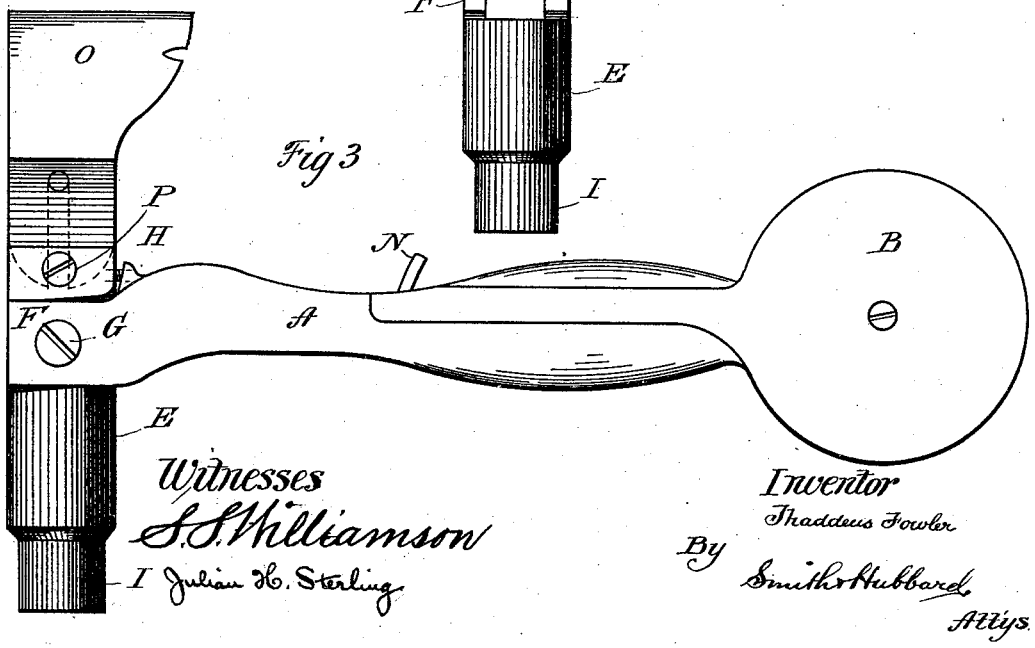


Fig 3



Witnesses
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UNITED STATES PATENT OFFICE.

THADDEUS FOWLER, OF SHELTON, ASSIGNOR OF ONE-HALF TO THOMAS B. DE FOREST, OF BIRMINGHAM, CONNECTICUT.

NAIL-DRIVING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 345,680, dated July 20, 1886.

Application filed May 8, 1886. Serial No. 201,513. (No model.)

To all whom it may concern:

Be it known that I, THADDEUS FOWLER, a citizen of the United States, residing at Shelton, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Nail-Driving Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in nail-driving machines, but is more especially intended to furnish a device for use in lathing, shingling, and the like, which may be used in the same manner as an ordinary hammer, but which shall carry and properly drive in rotation a coil of nails of the character set forth in a certain application for Letters Patent bearing Serial No. 187,982, and filed by me the 8th day of January, 1886; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter fully explained, and then recited in the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction and operation, I will describe the same in detail, referring by letter to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a central longitudinal vertical section through my improved driver; Fig. 2, a front elevation of the head thereof, and Fig. 3 a side elevation.

Similar letters denote like parts in all the figures of the drawings.

A is the handle, upon whose rear end is secured a case or magazine, B, provided with a hub, C, around which a string of nails (lettered D) is adapted to be wound. The forward extremity of the series of nails is led outward through a way formed in the handle to the feeding and driving mechanism, as will presently appear. The head E of the driver is recessed from its forward extremity backward, and is secured to the handle by plates F, which extend outward from the end of the latter and embrace the head, one upon either side thereof, and by a pin, G, passed through both plates and head. The parts last aforesaid are so secured together as to allow to the head a slight rocking movement upon the pin. A small spiral spring, H, interposed between the head and handle, keeps them in the relative position shown at Fig. 1, except as hereinafter explained.

I is a sliding tubular nose-piece, which fits within the recessed head, as shown at Fig. 1, and which is internally tapered toward its lower end. Upon its inner face is secured a feed-spring, J.

K is the driver, which is secured within the head by the passage of the pin G through its upper extremity. At its lower end it is provided with a wedge-shaped toe, which is in the same horizontal plane with the extremity of the head.

L is a loop upon the top edge of the tubular nose-piece, and M is the feed-lever pivoted at its heel within the handle, and with its forward extremity engaging with the loop. The rear side of the head is suitably slotted for the entrance and proper movement of the lever. A push-rod, N, is secured to the feed-lever and extends upward through the handle. At its upper end the head is made in two pieces, as seen at Fig. 2, and a perforated hatchet-blade, O, is secured between the pieces by bolts or screws P, passed therethrough.

The operation of my improvement is as follows: When the string of nails has been led outward through the handle and downward within the head, its position is as clearly appears at Fig. 1—that is, with the extremity of the driver, and also the end of the feed-spring resting upon the head of the bottom nail. The driver is operated by grasping the handle as an ordinary hammer and striking therewith upon the spot where it is desired to drive the nail. The impact upon the substance into which the nail is to be driven of the sliding nose-piece, forces the latter backward into the recess, and the driver, descending with the head, drives the nail. The tapered interior of the nose-piece forces the nail against the wedge-point of the driver, whereby the driven nail is severed from the one next above. The nose-piece is now completely within its recess, and if the nail be not headed down it may be driven home, as with the ordinary hammer, by such further blows from the driver as may

be found necessary. When the nose-piece is forced back within the head at the time the nail is driven, the feed-spring is carried back with it and engages with the head of the nail next above the one driven. To feed the string of nails forward preparatory to the driving of the next nail, pressure is applied by the operator to the push-bar, which, through the medium of the pivoted lever, throws the sliding nose-piece out of its recess to the position shown at Fig. 1, when the string is advanced downward one nail by the downward movement of the feed-spring, which is in engagement with the nail-head, and is carried by the nose-piece. The rocking of the head upon its pivotal point against the action of the spiral spring obviates any tendency to bending the nail in process of driving, which might occur from a blow otherwise than square with the end of the nose.

By the use of my improvement the nails contained therein may be fed and driven as rapidly as blows can be accurately struck therewith.

In addition to its rapidity of action, the machine is entirely portable and exceedingly convenient, since it is operated after the manner of an ordinary hammer.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine of the character described, the combination of a head having therein a sliding and internally-tapered nose-piece, a toe-pointed driver stationary as to the head and secured within the same, a handle pivotally secured to the head, and provided with a guideway for the nails, a case secured to the handle for containing the coil, a feed-spring attached to the nose, and a feed-lever whose forward extremity engages with the sliding nose-piece, and is adapted to throw the same out of its recess in the head, substantially as set forth.

2. The combination, with the recessed head having the sliding nose-piece arranged therein, of the driver secured within the head and extending downward within the nose-piece, the handle pivoted to the head and having the case attached thereto, and the feed-lever pivoted to the handle, and whereby the outward movement of the nose-piece is accomplished, substantially as specified.

3. The combination, with the driving and feeding elements arranged as described, of the handle pivoted to the head and provided with a case, wherein the nails are contained, all arranged as set forth, and for the purpose specified.

4. A nail-driving machine consisting, essentially, of a recessed head having a driver and a sliding nose-piece arranged therein, a feeding-lever for the actuation of the nose-piece, a handle secured at right angles to the head, whereby the device may be swung, and a case for the nails secured upon the handle, all arranged as described and for the purpose set forth.

5. The combination, with the head divided at its rear end, and provided with a nail-delivery and nail-feeding device, of the removable hatchet-blade secured therein by screws or their equivalent passed through both head and blade, substantially as set forth.

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

THADDEUS FOWLER.

Witnesses:
S. H. HUBBARD,
T. W. SMITH, Jr.