

(No Model.)

E. WOODWARD.

MACHINE FOR ATTACHING BUTTONS.

No. 311,456.

Patented Jan. 27, 1885.

Fig:1.

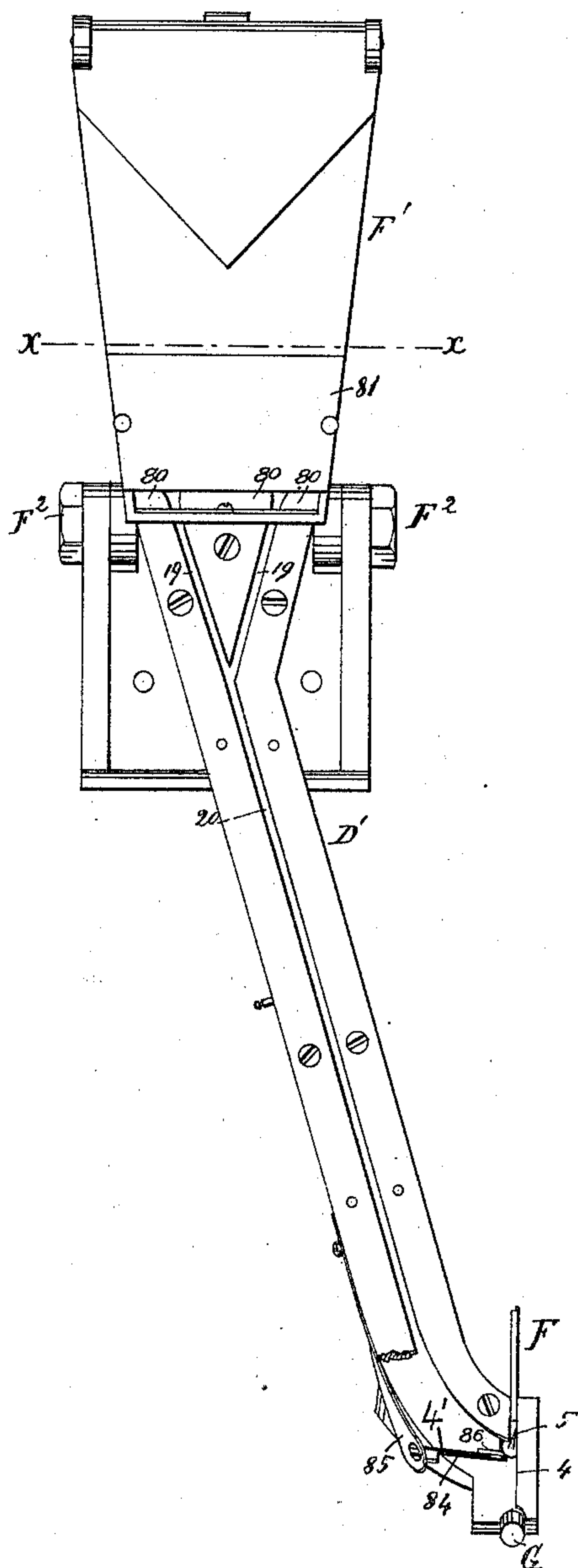


Fig:2.

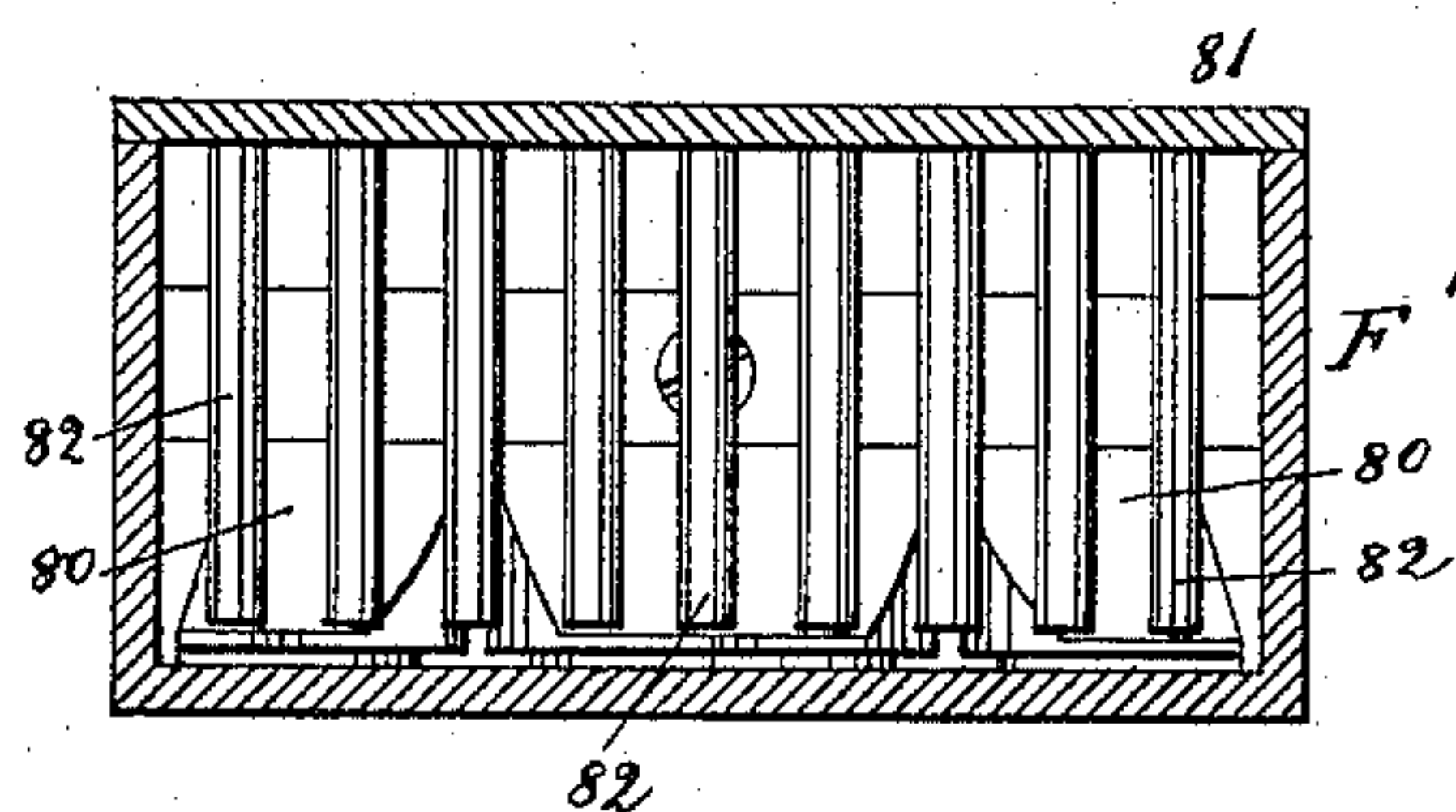
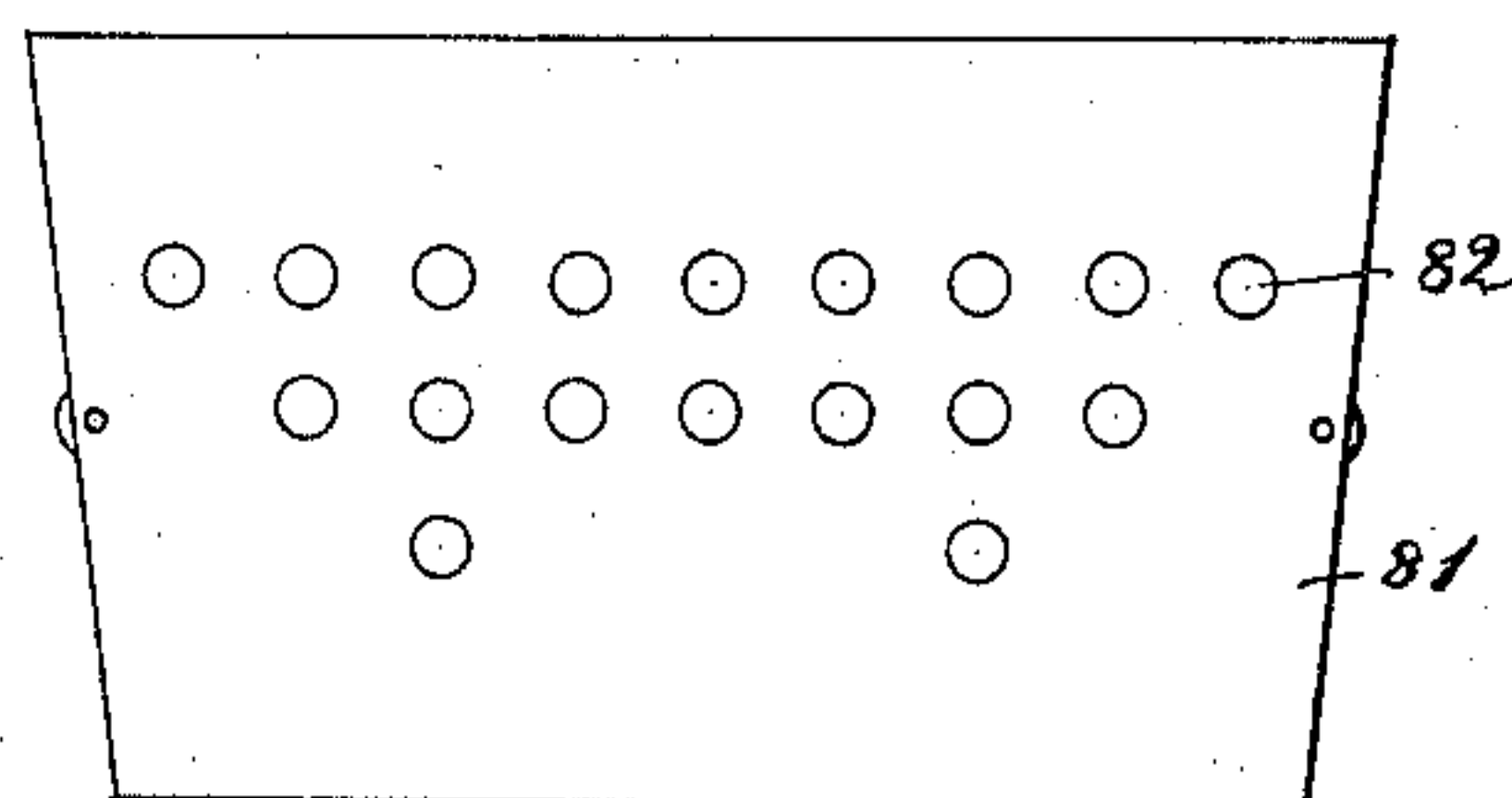


Fig:3.



UNITED STATES PATENT OFFICE.

ERASTUS WOODWARD, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR, BY
MESNE ASSIGNMENTS, TO GEORGE W. PRENTICE, OF PROVIDENCE, RHODE
ISLAND, AND WILLIAM A. BOLAND, OF LYNN, MASSACHUSETTS.

MACHINE FOR ATTACHING BUTTONS.

SPECIFICATION forming part of Letters Patent No. 311,456, dated January 27, 1885.

Application filed August 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, ERASTUS WOODWARD, of Somerville, county of Middlesex, State of Massachusetts, have invented an Improve-
5 ment in Apparatus for Attaching Buttons to Boots and Shoes and other Articles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like
10 parts.

This invention is an improvement on the button-setting machine shown and described in application No. 94,977, to which reference may be had, and has for its object to insure a
15 more even and uniform delivery of the tacks or nails from the tack-receiver into the roadway of the tack-conductor. In the machine described in the said application the lower end of the tack-receiver, or that end nearest
20 the tack-conductor, had but two openings or outlets to permit the tacks to pass from the mass of tacks into the roadway of the conductor. To produce a greater number of openings at the lower end of the receiver, to permit
25 a greater number of tacks to pass singly from the mass of tacks toward and into the roadway, I have provided the said receiver with an auxiliary mouth-piece, composed of a plate having attached to it a series of pins or studs,
30 which terminate near but not in contact with the bottom of the receiver, so that the heads of the tacks, their shanks standing upright, may pass between the said pins. I have also provided this receiver at its lower end with a
35 directing or funnel plate, to act upon and direct the tacks which pass through two or more spaces between the said pins, the tacks entering the spaces between the points of the directing or funnel plate being made to enter the
40 usual slots at the lower end of the receiver, which communicate with the roadway, as in the said application, the aim of my invention in this particular being to give the tacks greater facility to escape singly from the mass into and
45 to more rapidly fill the roadway of the chute.

Another feature of my invention consists in a detent located at the junction of the roadway, with the passage in which the transfer-
50 rer works to place the tack or nail in position to be driven.

Figure 1 is a top view of a tack or nail receiver and conductor embodying my invention, the conductor being broken away near its lower end to show the detent; Fig. 2, a section of Fig. 1 on the dotted line *x x*, looking
55 downward toward the lower or pivoted end of the receiver. Fig. 3 is an under side view of the auxiliary mouth-piece and its attached pins or studs. Fig. 4 is a detail showing the lower end of the receiver and the directing or
60 funnel plate, and Fig. 5 is a detail of the detent.

In this specification parts common to the application referred to will be designated by like letters.

The tack or nail receiver *F'*, pivoted at *F*², and provided with a suitable hinged cover, and the tack-conductor *D'*, having a roadway,
20, which leads the tacks or nails 5 into the passage 4, in which the transferrer *F* slides
70 to place a tack or nail in position to be driven, are all substantially as in the said application, and in practice the said receiver will be vibrated or shaken, as in the said application, and the end of the tack or nail conductor will
75 be placed in position to co-operate with other parts, substantially as in the said application. My addition to the parts shown in the said application consists of the directing or funnel
80 plate 80, provided with arms having inclined edges, (see Fig. 4,) thus making a funnel-like passage, which is gradually contracted to direct the loose tacks or nails into the upper
85 ends of the two branches 19 19 of the roadway 20.

To readily provide the receiver with numerous openings, next to and against which the mass of tacks may rest, so that the tacks may enter the said openings readily, thus permitting several tacks to start singly from the receiver toward the roadway of the tack-conductor, I have provided the plate 81, which has
90 attached to it a series of pins or studs, 82, separated sufficiently one from the other to permit the passage singly of tacks between them, and
95 the lower ends of the said pins terminate sufficiently above the bottom of the receiver to enable the heads of the tacks, the latter standing upright, to pass under the pins. The plate 81, with its attached pins or studs, may be
100

lifted from time to time to enable the operator to clear out the tack-receiver.

At the lower end of the roadway 20 I have made a groove, 4', which intersects the groove 5 4, and in the former groove I have placed a detent, 84, and have provided a spring, 85, to keep the said detent pressed forward, as shown in Fig. 1, so that the tacks next to be driven will be detained there until acted 10 upon by the usual transferrer, F, located in the said passage 4, when the detent 84 (the head of the tack acting against the shoulder 86 thereof) is pushed backward against the spring 85, and the tack or nail so acted upon by 15 the transferrer is moved along in the channel or way 4 to the place where it will be acted upon by the driver G. This detent prevents the possibility of two tacks getting directly in front of the transferrer F, for the head of the 20 endmost tack of the series of tacks rests against the shoulder 86, and cannot pass the said shoulder until acted upon by the transferrer.

I claim—

1. The combination and arrangement, substantially as shown and described, with the 25 receiver F', provided with a mouth, and the tack-conductor, of the auxiliary mouth-piece,

consisting of the plate 81, and the pins or wires 82, extending from the same into the mouth of the receiver, for the purpose set forth. 30

2. The combination and arrangement, substantially as shown and described, of the tack-receiver provided with a mouth, the tack-conductor connected to said receiver, the auxiliary mouth-piece of the receiver, composed 35 of the plate 81, arranged in the mouth of said receiver, the pins or wires 82, depending from said plate, and the funnel or directing plate 80, for the purpose set forth.

3. The combination and arrangement, substantially as shown and described, with the 40 tack-receiver and its attached conductor, of the detent 84, having the shoulders 86, and held by a spring, 85, crosswise of the roadway of the conductor in the groove 41 therein, for 45 the purpose set forth.

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

ERASTUS WOODWARD.

Witnesses:

G. W. GREGORY,
B. J. NOYES.