

(No Model.)

2 Sheets—Sheet 1.

I. G. PLATT.
BUTTON SETTING MACHINE.

No. 480,031.

Patented Aug. 2, 1892.

Fig. 1

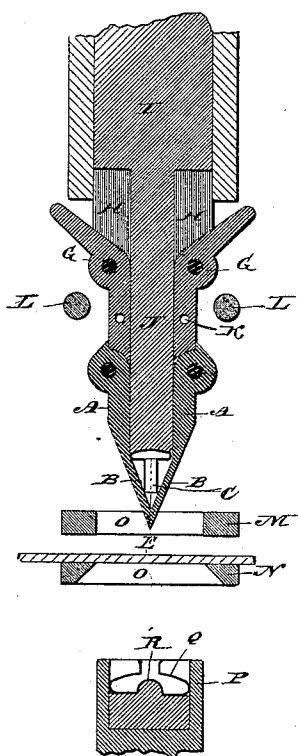


Fig. 2

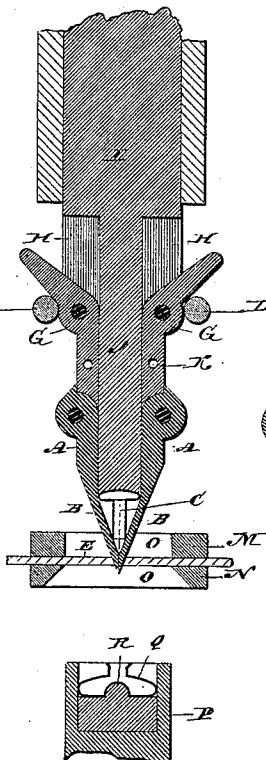


Fig. 3

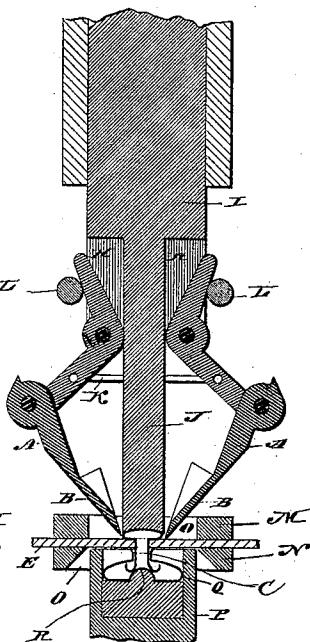
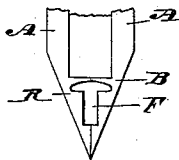


Fig. 4



Witnesses:

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Myde Mauriac

Inventor

Ivving G. Platt

By Lloyd S. Moore.

Att'y.

(No Model.)

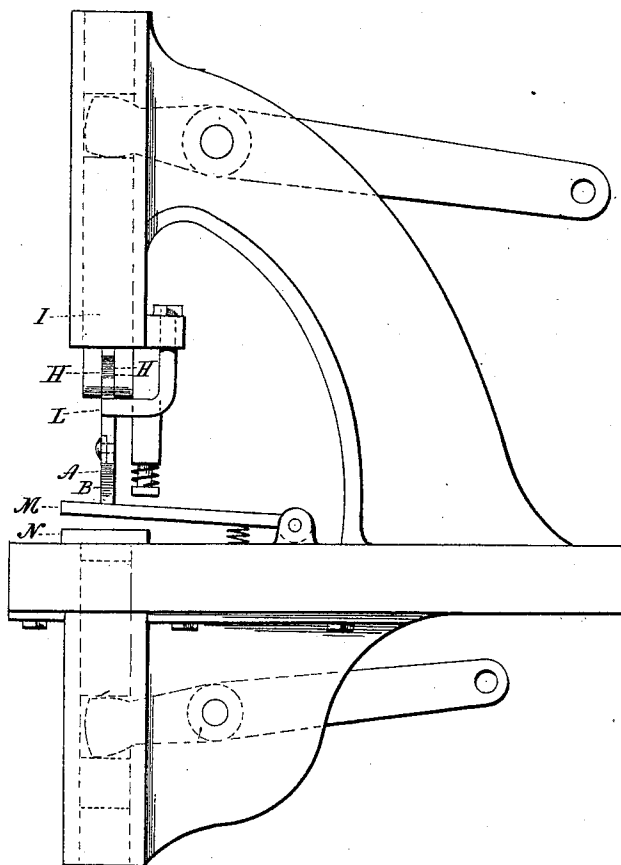
2 Sheets—Sheet 2.

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Fig. 5



Witnesses.

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UNITED STATES PATENT OFFICE.

IRVING G. PLATT, OF WATERBURY, CONNECTICUT.

BUTTON-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 480,031, dated August 2, 1892.

Application filed March 1, 1889. Serial No. 301,639. (No model.)

To all whom it may concern:

Be it known that I, IRVING G. PLATT, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Machines for Attaching Hollow-Shanked Buttons to Cloth; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in machines for attaching hollow-shanked buttons to cloth, the object being to provide a cheap, simple, durable, and efficient automatic tool for this purpose.

With these ends in view my invention consists in a shank-carrier adapted to make an opening in the cloth to receive the shank, and in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in vertical section of the essential parts of a machine embodying my invention and shown in position for making an opening in the cloth. Fig. 2 is a similar view showing the puncturing of the cloth. Fig. 3 is a similar view showing the introduction of the shank into the puncture and its assemblance with the button-head. Fig. 4 is a detached broken view in front elevation, showing the aperture in the shank-carrier for the introduction of the shank; and Fig. 5 is a view in side elevation of such a press as my improvement may be used in.

As the press shown by Fig. 5 of the drawings is of well-known construction, I shall not enter into a detailed description of it. It may be replaced by any other approved form of press.

As herein shown, the shank-carrier is composed of two arms A A, provided at their lower ends with pointed concavo-convex or hollow semi-conical fingers B B, coacting to receive and carry the shank C and to puncture the cloth E, and each cut away laterally to form an opening F, (see Fig. 4,) through which the shanks C are fed. The upper ends of the said arms are pivoted to the lower ends of two bell-crank levers G G, which in turn are pivoted in slots H H, formed in the re-

ciprocating head I on opposite sides of the plunger J, which is made integral with the said head. A spring K, hooked into the said levers G G, operates to normally hold them and the arms A A against the plunger and to restore them to their normal positions after they have been deflected therefrom by the engagement of their upper ends with the stationary pins L L, which are located so as to be engaged by the said ends of the levers after the puncturing of the cloth. A cloth-clamp composed of two parts M and N, each having an opening O, is located below the said head and its attachments, one of such parts being movable toward and from the other in order to permit the cloth to be shifted and to be clamped in place. On the opposite side of the cloth from the parts described and in alignment with them is located a button-head carrier P, arranged to be reciprocated toward and away from the cloth and to carry the button-head Q, which is provided with an interior crown R, upon which the end of the shank is upset, with the effect of clinching the shank and head together with the cloth between them.

Having fully described my improved machine, I will now set forth the mode of operating it.

Let it be assumed that the parts are in the positions in which they are shown in the drawings, and that the shank-carrier has been provided with a shank and the button-head carrier with a button-head. Now in the proper timing of the machine the cloth-clamp clamps the cloth firmly and the reciprocating head is depressed to force the pointed fingers of the shank-carrier down upon and through the cloth. By this time the upper ends of the bell-crank levers will have engaged with the stationary tripping-pins. The head continuing in its descent, the said levers are turned on their pivots, with the effect of carrying the shank-carrying arms away from the plunger and of removing their pointed ends from the cloth, through which the plunger now pushes the shank, the lower end whereof is upset on the crown in the button-head now presented to the under side of the cloth by the button-head carrier.

I would have it understood that I do not limit myself to the exact construction and arrangement of parts herein shown and de-

scribed, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In a machine for attaching hollow-shanked buttons to cloth, the combination, with a reciprocal shank-carrier pointed at its lower end to puncture the cloth, constructed to contain a button-shank, and comprising one or more movable members, of a plunger arranged to move in line with the said shank-carrier when the same is in its normal position to push the contained button-shank out of it, a button-head carrier, means for actuating the same, and a cloth-holder located between the said shank-carrier and plunger and the said button-head carrier, substantially as set forth.

2. In a machine for attaching hollow-shanked buttons to cloth, the combination, with a reciprocal shank-carrier having its lower end pointed to puncture the cloth, constructed to receive a button-shank, and comprising one or more pivotal arms, of a plunger arranged to move in line with the said shank-carrier when the same is in its normal position to push the contained button-shank out of it, a button-head carrier, means for actuating the same, and a cloth-holder located between the shank-carrier and plunger and the button-head carrier, substantially as set forth.

3. In a machine for attaching hollow-shanked buttons to cloth, the combination, with a reciprocal shank-carrier pointed at its lower end to puncture the cloth, constructed to contain a button-shank and with a lateral opening to admit the same, and comprising one or more pivotal arms, of a plunger arranged to move in line with the said shank-carrier when the same is in its normal position to push the contained button-shank out of it, a button-head carrier, means for actuating the same, and a cloth-holder located between the shank-carrier and the plunger and the button-head carrier, substantially as set forth.

4. In a machine for attaching hollow-shanked buttons to cloth, the combination,

with a reciprocal shank-carrier pointed at its lower end to puncture the cloth, constructed to contain a button-shank, and comprising one or more pivotal arms, of a reciprocal head constructed at its lower end with a plunger and having the said arm or arms pivoted to it, stationary means independent of the head for co-operating with the shank-carrier to withdraw the pointed end thereof from the cloth, a button-head carrier, means for actuating the same, and a cloth-holder located between the said button-head carrier and the said reciprocating head, substantially as set forth.

5. In a machine for attaching hollow-shanked buttons to cloth, a reciprocating head carrying a plunger, two bell-crank levers pivoted to such head on opposite sides of the said plunger, two shank-carrying arms having their lower ends pointed and pivoted to the lower ends of the said levers, and means for rocking the levers to separate the shank-carrying arms and so withdraw them from the cloth, substantially as set forth.

6. In a machine for attaching hollow-shanked buttons to cloth, the combination, with a reciprocal head constructed at its lower end with a plunger, of two bell-crank levers pivoted to the said head on opposite sides of the said plunger, two shank-carrying arms pivoted to the lower ends of the said levers and having their lower ends pointed and constructed to contain a button-shank which they normally support below the lower end of the said plunger, stationary pins for engagement by the upper ends of the bell-crank levers as the said head descends, a spring for holding the levers and arms in their normally-closed positions, a button-head carrier, means for actuating the same, and a cloth-holder located between the lower ends of the said arms and the button-head carrier, substantially as set forth.

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

IRVING G. PLATT.

Witnesses:

CHAS. B. SHUMWAY,
WM. Y. DE MAURIAC.