(No Model.)

W. C. HOLDER & C. E. REED.

BUTTON SETTING MACHINE.

No. 557,810. Patented Apr. 7, 1896.

Fig. 1.

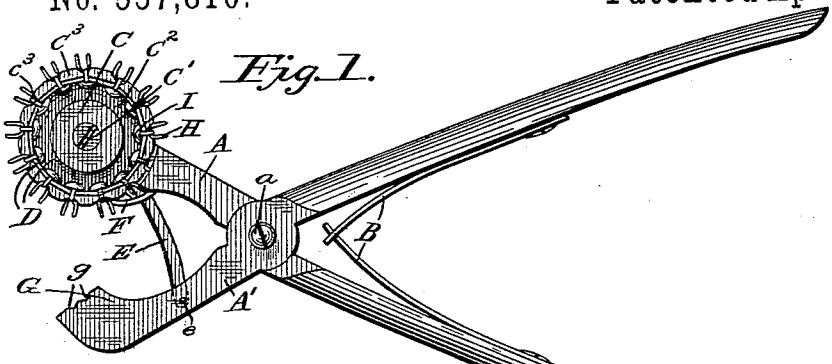


Fig. 2.

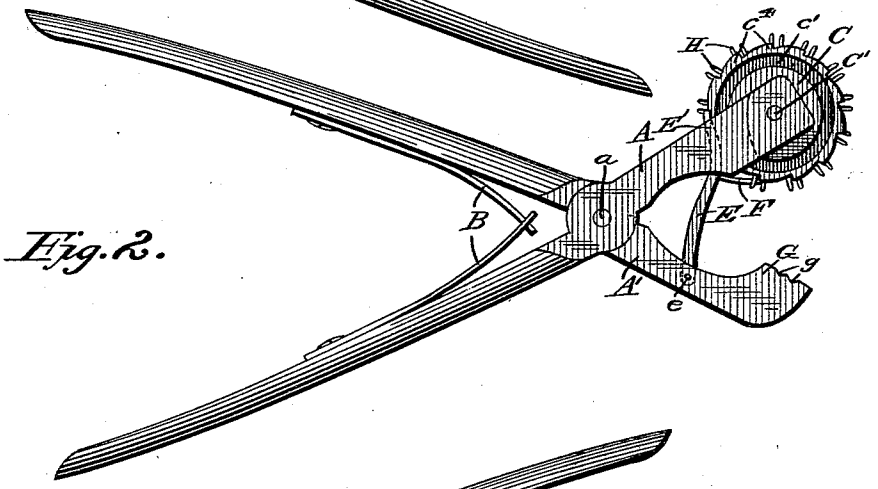


Fig. 3.

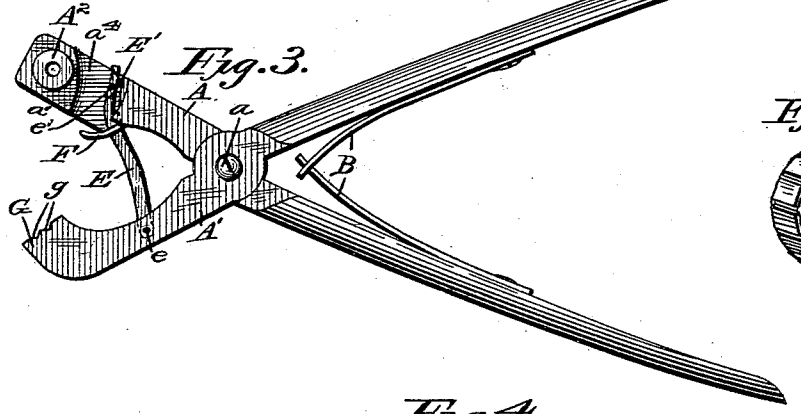


Fig. 5.

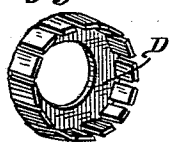
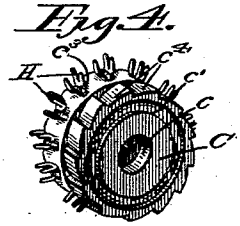


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM C. HOLDER AND CLARENCE E. REED, OF ARKADELPHIA, ARKANSAS.

BUTTON-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 557,810, dated April 7, 1896.

Application filed July 15, 1895. Serial No. 556,037. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM C. HOLDER and CLARENCE E. REED, citizens of the United States, residing at Arkadelphia, in the county of Clark and State of Arkansas, have invented certain new and useful Improvements in Button-Setting Machines; and we 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.

This invention relates to certain new and useful improvements in button-setting machines of that class which are designed to be operated by hand; and it has for its objects, among others, to provide a simple, cheap, yet durable and efficient device of this character which can be easily operated by unskilled persons and by which the buttons can be applied with greater rapidity and with more accuracy. The wheel carrying the buttons and fasteners is mounted for rotation upon one of the jaws, the anvil being carried by the other jaw. The wheel is provided with spring holding devices for the button-shanks, which permit of their ready removal after the prongs of the fastener have been inserted in the material and clenched. Novel means are provided for actuating the said wheel.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation of my improved button-setting machine. Fig. 2 is a view from the opposite side. Fig. 3 is a view with the wheel removed. Fig. 4 is a rear view of the wheel removed. Fig. 5 is a perspective view of the disk removed.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates one of the jaws and A′ the other, the two being pivotally united in any suitable manner, as at *a*, being halved together in the ordinary way, and between the handles of the jaws is the spring B for normally holding the jaws apart.

The jaw A is cut away, as seen at *a′*, to provide room for the wheel C, which is pivotally mounted on a removable pivot C′, held in the remaining portion of the jaw, this pivot being made removable, so that the wheel may be easily removed and another substituted therefor, when desired. The rear face of the wheel is provided with a socket *c* to receive the boss A^2 on the thin portion of the jaw A and through which the pivot passes. It is also provided upon this same face with an annular channel or groove *c′* for a purpose which will soon be made apparent.

The wheel is provided upon its opposite face with the annular channel C^2, adapted to receive the heads of the buttons, and the annular flange C^3 thus formed is provided with the open-ended slits c^3, through which the shanks of the buttons project. In this groove or channel C^2 is fitted a disk D, of spring material, with its outer edge bent at a right angle and bearing against the inner face of the said flange, being slitted at points opposite the slits in the flange. Thus are formed spring-retainers for holding the buttons against accidental displacement. The outer periphery of the wheel is provided with the notches c^4, one opposite each slit in the flange thereof, as shown.

Pivotally mounted, as at *e*, upon the jaw A′ is an arm E, the other end of which is bent at right angles to its length to form a pawl E′. This arm or lever works in a recess a^4 in the thin portion of the jaw A, and its bent end extends outward and is adapted to engage the notches c^4 of the wheel to revolve the same. Near its free end this arm is provided with the pin or projection *e′*, which works in the annular groove or channel *c′* of the outer face of the wheel.

Mounted on the jaw A, in the inner end of the recess therein, is the arm or pawl F, the free end of which is curved and adapted to engage the notches of the periphery of the wheel to prevent retrograde movement thereof.

The jaw A′ carries the anvil G, having the grooves or slots *g* for the prongs *h* of the fasteners H, which are engaged in the shanks of the buttons I and extend outward through the slits in the flange of the wheel.

The operation is simple and apparent. The wheel is loaded with the buttons and fasteners, and each time the handles are pressed together a fastener is forced through the material, which is placed between the anvil or clenching device and the wheel, and as pressure is removed from the handles of the jaws the spring forces them apart, and this movement revolves the wheel one notch by reason of the engagement of the pawl with a notch of the said wheel. A slight and sudden lateral or side movement of the device will disengage it from the button which has just been engaged in the material, the spring-retainers yielding sufficiently to allow of the passage of the shank of the button from between them. The amount of movement is such as to just bring the wheel into position to be actuated by the pawl just the distance between two notches of the wheel.

The device is simple, durable, easily operated, and is accurate and efficient in its work. Buttons can be applied as rapidly as the two jaws can be brought together.

What is claimed as new is—

1. The combination with the pivoted jaws and their spring, of the wheel mounted for rotation on one of the jaws and having notches, a slitted flange and an annular groove, the spring-retainers and an arm pivoted on the other jaw and having a pawl to engage said notches and a projection working in said groove, substantially as specified.

2. A wheel for a button-setting device having a notched and slitted flange and an annular channel upon its outer face, and a spring-disk seated in said channel and having a slitted flange coincident with the slitted flange of the wheel, substantially as and for the purpose specified.

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

WILLIAM C. HOLDER.
CLARENCE E. REED.

Witnesses:
C. C. TOBEY,
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