No. 661,310. Patented Nov. 6, 1900.

G. W. GWINN.

BUTTON SETTING MACHINE.

(Application filed Feb. 14, 1900.)

(No Model.) 2 Sheets—Sheet 1.

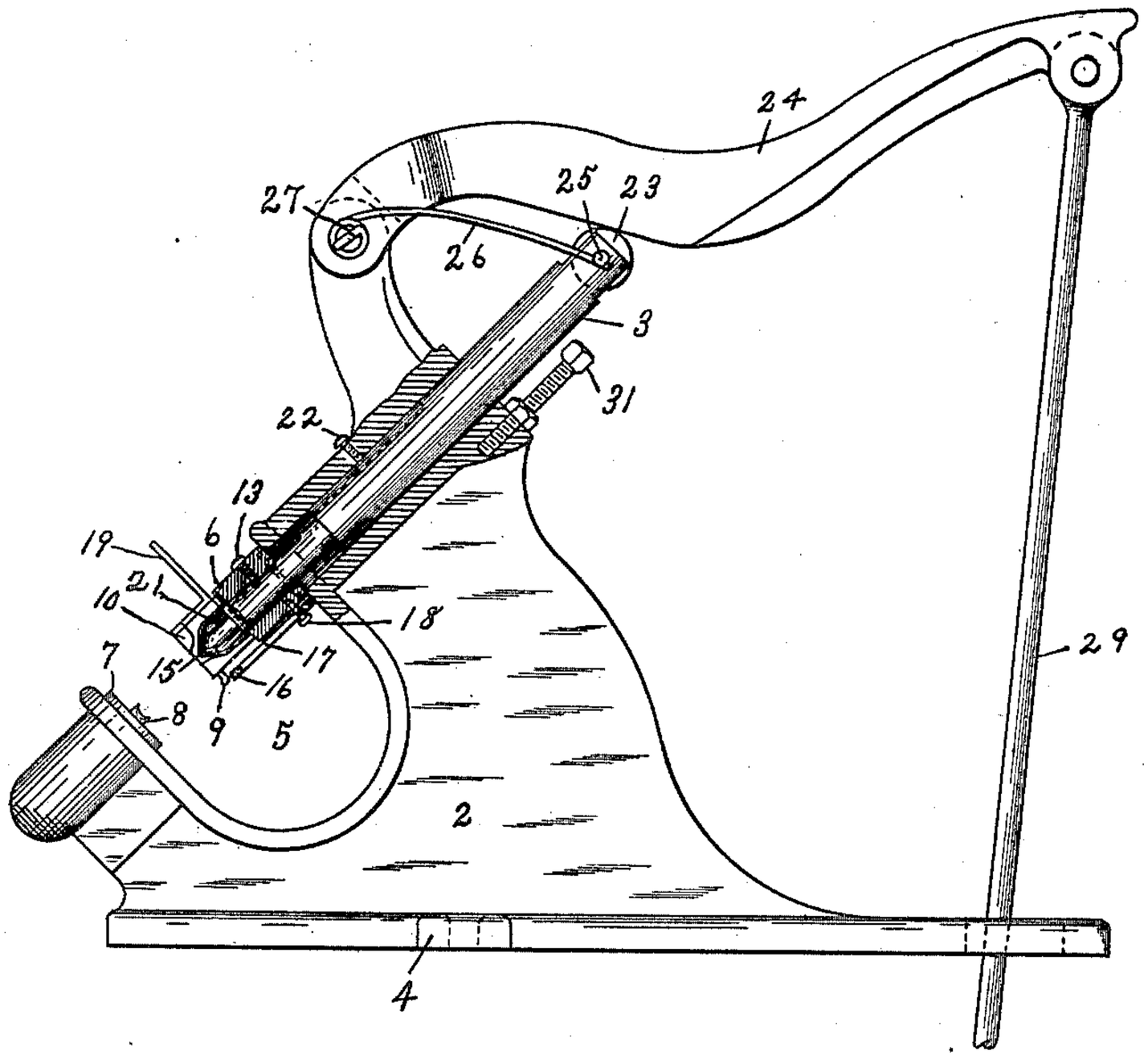

Fig. 1.

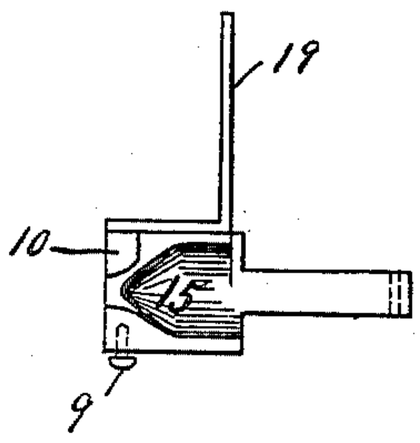

Fig. 2.

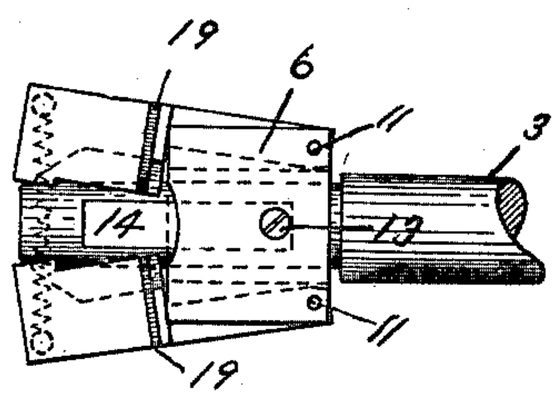

Fig. 3.

Witnesses:
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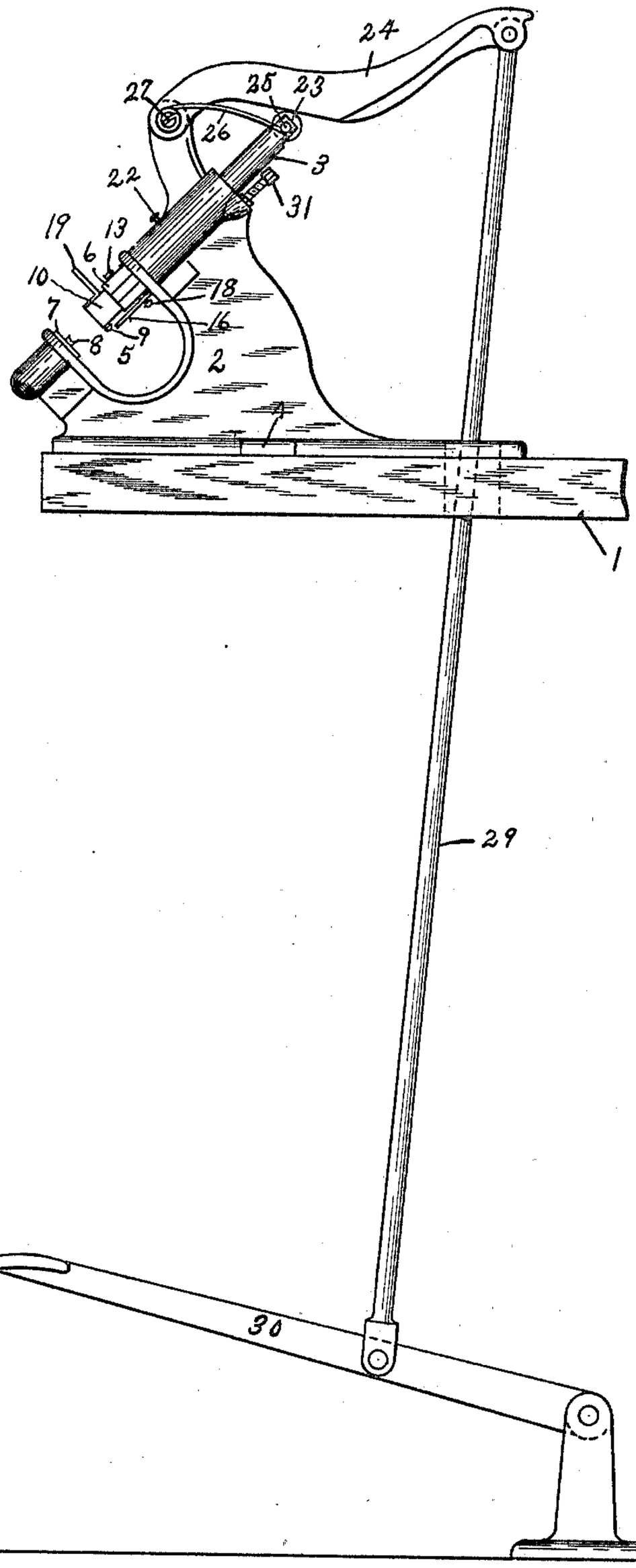

Fig. 4.

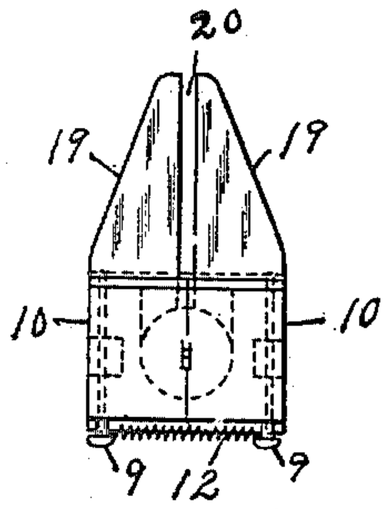

Fig. 5.

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UNITED STATES PATENT OFFICE.

GEORGE W. GWINN, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE RAYMOND BUTTON COMPANY OF BALTIMORE CITY, OF MARYLAND.

BUTTON-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 661,310, dated November 6, 1900.

Application filed February 14, 1900. Serial No. 5,133. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. GWINN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Button-Setting Machines, of which the following is a specification.

This invention relates to an improved machine for attaching buttons to garments by means of a staple or other similar fastener; and the invention consists of a machine comprising substantially the parts and combination of parts hereinafter particularly shown, described, and claimed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the machine, partly in section, and showing the plunger and chuck in their normal position. Fig. 2 is a detailed view of one of the jaws and one of the guide-plates. Fig. 3 is a view of the chuck, showing the jaws forced apart by the plunger. Fig. 4 is a side elevation of the complete machine, showing the rod and treadle for operating same. Fig. 5 is a front elevation of the chuck and guide-plates.

Similar numerals refer to like and corresponding parts throughout the several views.

Referring to the drawings, 1 designates a stand to which the machine is secured. The machine consists of a metal plate 2, in the upper part of which the plunger 3 reciprocates. The base of the plate 2 is secured to the stand 1 by means of bolts 4, arranged on opposite sides thereof. The plate 2 is provided with a recess 5, in which the chuck 6 operates. The plate 2 is also provided with a collar 7 to hold the metal button (not shown) in position over the clencher 8. The said clencher 8 is on a plane with the plunger 3 and serves to clench the staples around the bar of the buttons when being secured to the garment.

The plunger 3 on its lower end carries a chuck 6, which latter is provided with two jaws 10, pivoted thereto at 11. The said jaws are held normally closed by the spring 12, which latter is secured to the said jaws by the screws 9. The said chuck is secured to the plunger 3 by means of the screw 13, which passes down through the top of the chuck 6 and projects into the recess 14 of the plunger, thereby allowing the plunger to move the length of the said recess 14 without moving the said chuck. The jaws 10 have concaved facing surfaces 15, which taper to a point near the front of the jaws, whereby the latter are forced apart by the plunger 3 when making its forward stroke.

Secured to the plate 2 and projecting laterally therefrom is a flat metal plate 16, having an elongated slot 17 therein, through which latter the screw 18 of the chuck is free to move. This plate serves to hold the chuck while the plunger 3 is forcing the jaws apart and clenching the staple to the button, as hereinafter described.

Each of the jaws 10 is provided with a guide-plate 19, an elongated slot 20 being provided between them, through which the legs of the staple 21 project when being placed in the chuck.

The plate 2 is provided with a screw 22, which projects down into a groove in the upper part of the plunger (shown by dotted lines in Fig. 1) to prevent the plunger from turning within the plate 2.

At the upper end of the plunger 3 is a roller 23, on which the lever 24 rests. The said roller revolves on the shaft 25. The plunger is held to its normal position by the spring 26, which latter is secured at 27, and the free ends take under the shaft 25 and hold the plunger to its normal position. The lever 24 is pivoted at 27 and is operated by the rod 29 and treadle 30. A set-screw 31 is provided on the plate 2, against which the lever 24 abuts on its downward movement and regulates the forward stroke of the plunger.

The operation of the device is as follows: A staple 21 is first placed with the legs thereof projecting through the slot 20 and the head resting on the back of the guide-plates 19 and allowed to drop between the jaws 10 and resting in the concavity 15 in front of the plunger ready to be carried forward and secured to the button. A button (not shown) is placed against the collar 7, with the bar of the button extending across the clencher 8. The garment is then placed in position and the

treadle 30 is pressed down, which imparts motion, through the rod 29 and lever 24, to the plunger 3 and causes the latter to move forward. As the plunger 3 makes its forward traverse it carries the chuck 6 and jaws 10 forward, with the screw 13 impinging against the front of the recess 14, until the screw 18 has traversed the length of the slot 17, whereby the chuck will be held secure, the plunger moving forward, its ends pressing against the tapered face of the concavity 15, forcing the jaws 10 apart, allowing the plunger 3 to travel the length of the recess 14 in order to press the staple against the clencher and secure the button to the garment. When the plunger has completed its stroke forward, the screw 13 impinges against the rear end of the recess 14, as shown in Fig. 3. The button being thus secured to the garment, the treadle is released, and as the plunger 3 moves back to its normal position the jaws 10 will still remain open long enough to allow the head of the staple to be removed, owing to the tension of the spring 12, which causes the said jaws to hold tight to the end of the plunger. The jaws will remain in this position, as shown in Fig. 3, until the rear end of the chuck 6 comes in contact with the plate 2, whereby the said chuck will be held while the plunger continues back, thereby releasing the said jaws, which latter are then closed by the spring 12.

Having thus described my invention, what I claim is—

In a button-setting machine, the combination of the plate, 2; a plunger, 3, reciprocating within the said plate and having a recess, 14, in its front end; a chuck, 6, having two jaws, 10, pivoted thereto, the said jaws having their facing surfaces concaved and tapering to a point; a screw, 13, extending through the said chuck and projecting into the recess, 14, of the plunger, whereby the latter is allowed to move a limited distance without moving the said chuck; an adjustable plate, 16, secured by one end to the plate, 2, and projecting outwardly below the chuck, 6, said plate, 16, having an elongated slot, 17, therein; and a screw, 18, secured to the said chuck and projecting through the said slot, 17, in the plate, 16, whereby the chuck is carried forward when the plunger makes its preliminary traverse and is held securely when the plunger makes its final traverse.

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

GEORGE W. GWINN.

Witnesses:

CHAPIN A. FERGUSON,

ROBERT GIPSON.