

No. 711,175.

Patented Oct. 14, 1902.

R. J. POWELL & W. H. VAUGHAN.
BUTTONHOLE AND BUTTON LOCATION MARKING MACHINE.

(Application filed Jan. 20, 1902.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1

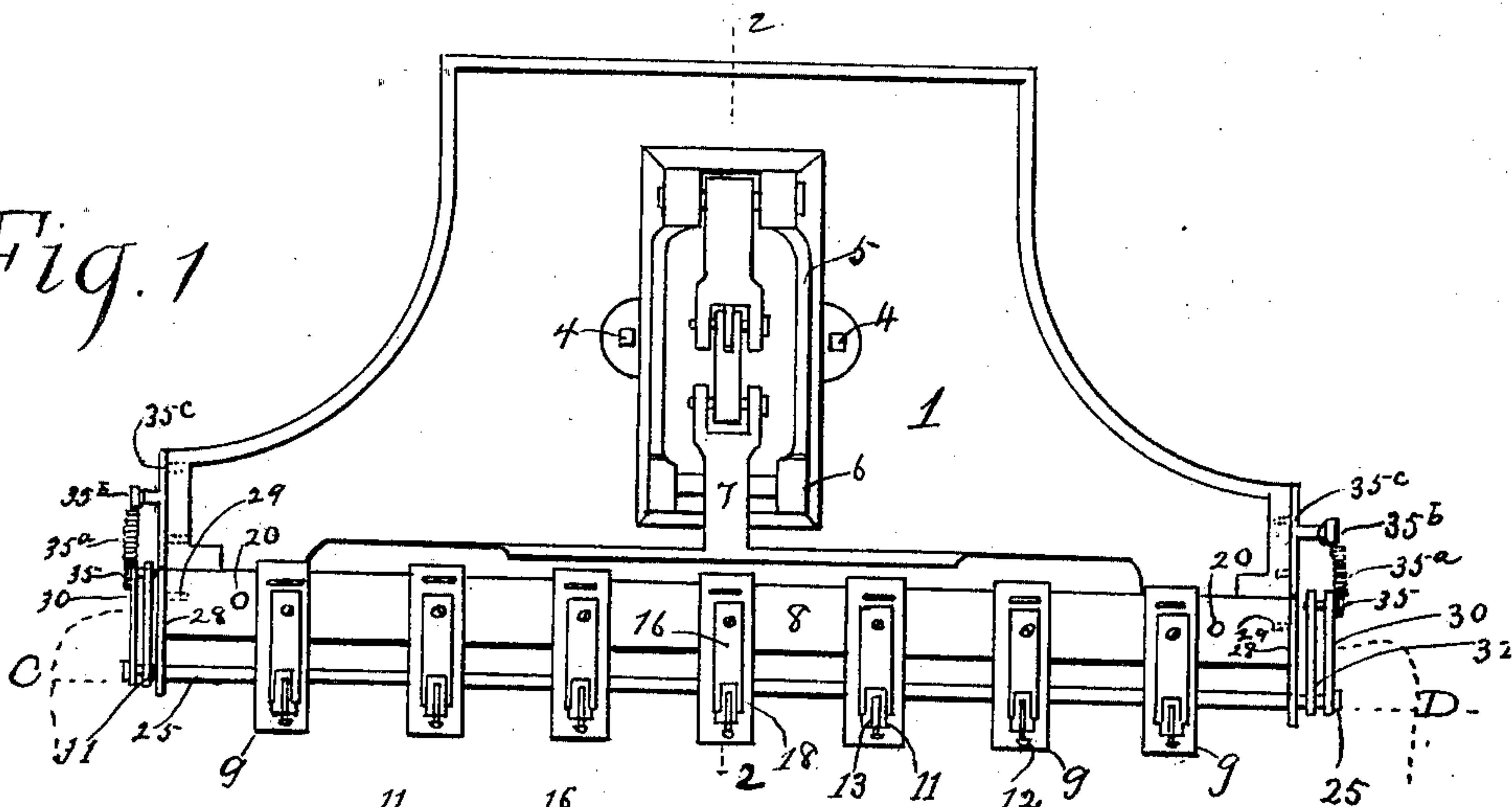
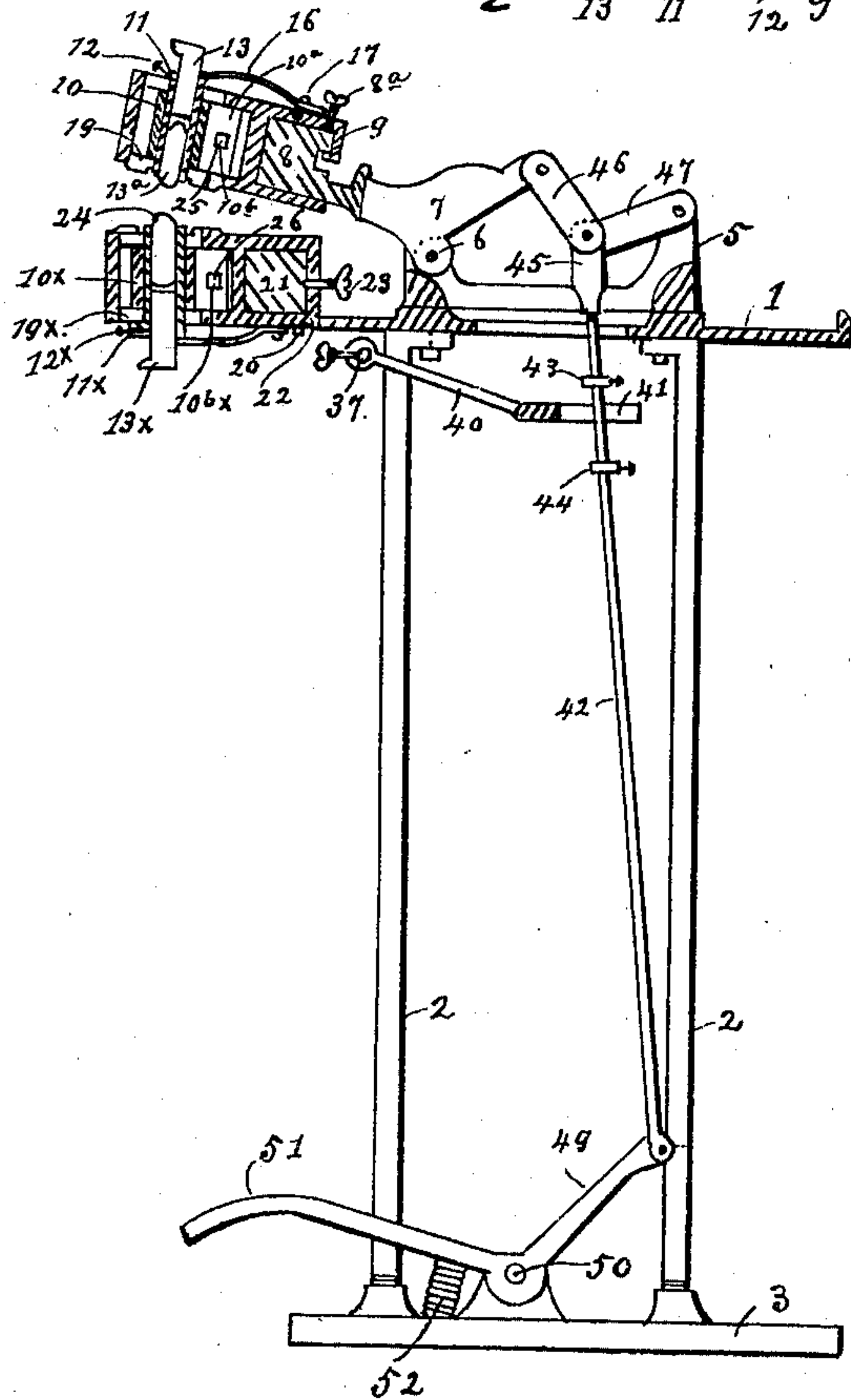


Fig. 2



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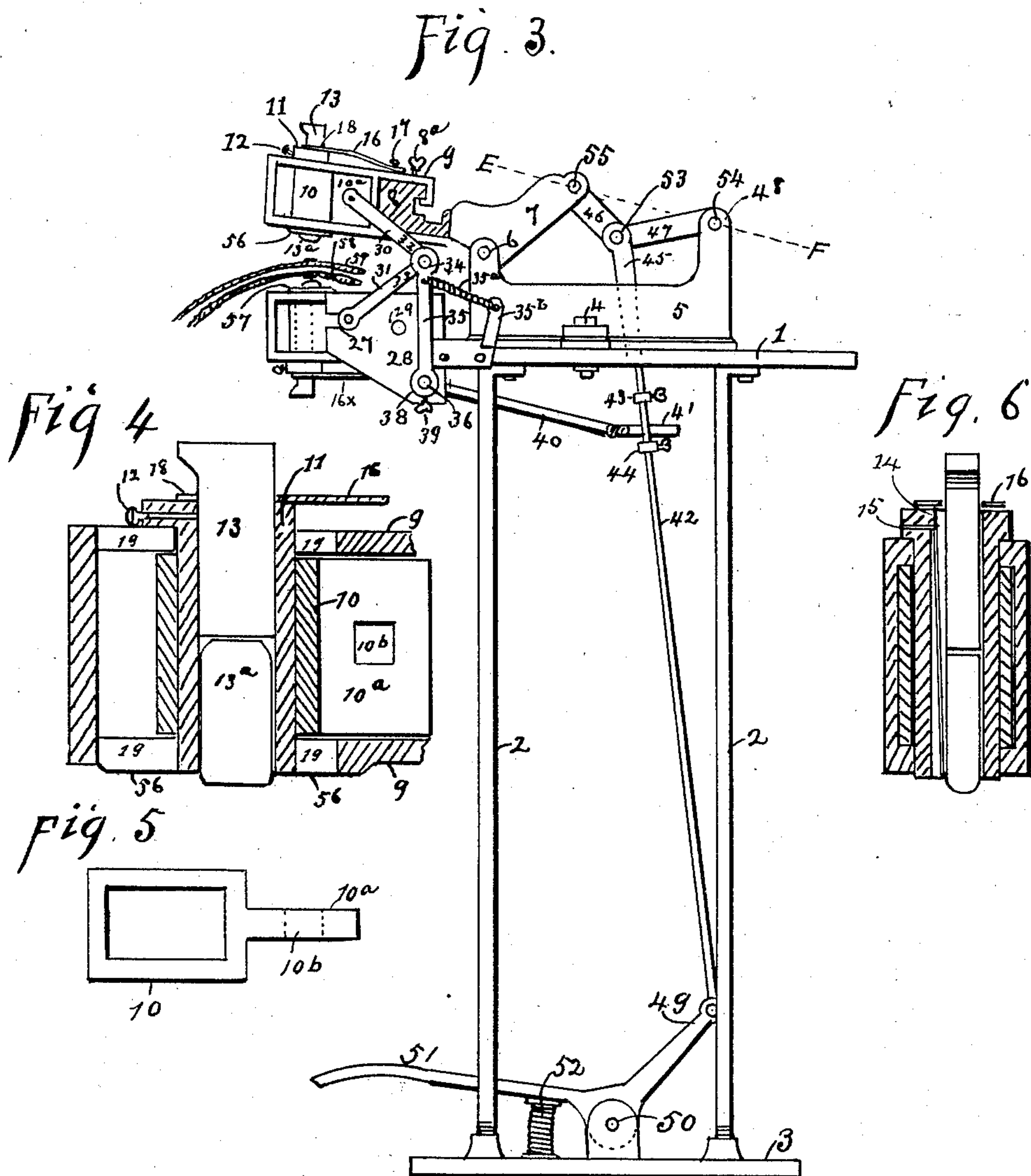
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UNITED STATES PATENT OFFICE.

RICHARD J. POWELL AND WILLIAM H. VAUGHAN, OF DALLAS, TEXAS,
ASSIGNORS OF ONE-THIRD TO ISAAC E. ROSE, OF DALLAS, TEXAS.

BUTTONHOLE AND BUTTON LOCATION MARKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 711,175, dated October 14, 1902.

Application filed January 20, 1902. Serial No. 90,448. (No model.)

To all whom it may concern:

Be it known that we, RICHARD J. POWELL and WILLIAM H. VAUGHAN, citizens of the United States of America, residing at Dallas, in the county of Dallas and State of Texas, have invented a new and useful Improvement in Buttonhole and Button Location Marking Machines, of which the following is a specification.

Our invention relates to improvements in buttonhole and button location marking machines, in which two series of frames (for the lower and the upper series) are so arranged as to carry sticks of chalk. The bar for the lower series is rigidly attached to the table of the device; but the bar for the upper series is hinged to the table and provided with suitable mechanism for raising and lowering; and the object of our improvements is to provide facilities for the independent adjustment of these sliding frames upon the two horizontally-disposed bars for the purpose hereinafter explained. We attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the entire machine. Fig. 2 is a vertical section through Fig. 1 approximately on the line 2-2, but slightly to the right of lever 7, hereinafter described. Fig. 3 is a side elevation of the entire machine. Fig. 4 is a longitudinal section through a part of one of the sliding frames, showing arranged therein a section of a sliding box and a section of a chalk-carrier. Fig. 5 is a plan view of the sliding box; and Fig. 6 is a transverse section through one of the sliding frames, also through a sliding-box and a chalk-carrier, showing the adjustment of the chalk-spring in the chalk-carrier.

Similar characters of references refer to similar parts throughout the several views.

The table 1, the legs 2, and the base 3 constitute the frames of the device. Above the table, secured thereto by bolts 4, is a frame 5, provided with a bearing 6 for the lever 7, having rigidly secured thereto the frame-bar 8. This bar carries a series of laterally-adjustable frames 9, which are held to it by set-screws 8^a. Each of these frames in turn car-

ries a sliding box 10, provided with a wing 10^a, having a hole 10^b through it, said box supporting a tubular rectangular chalk-carrier 11, a set-screw 12, which clamps in place a chalk-follower 13 in the upper part of said carrier, this follower resting on a stick of chalk 13^a. A chalk-spring 14 within said carrier is fastened at its upper end by rivets 15 to the inner face of the latter, this spring pressing gently against the side of the chalk to hold it in place. On the upper side of each adjustable frame is a spring 16, one end of which is secured thereto by a screw 17, while the other end 18 engages the upper end of the chalk-carrier. Each of the adjustable frames is provided at top and bottom with a slot 19, permitting the chalk-carrier, which extends up and down through said slot, to be moved back and forward, the box moving with it. The lower frame-bar 21 is supported by the front part of table 1 and fastened thereto by bolts or rivets 20, Fig. 1, or any equivalent fastening. Each frame 22 of the lower series corresponding to upper frames 9 is secured to the said frame-bar 21 by a set-screw 23 and slotted, as above described. Each frame H has a sliding box mounted thereon, the latter being provided with a chalk-carrier containing a chalk-follower, chalk-spring, and stick of chalk, all arranged as described with reference to the upper series of frames and boxes, except that the chalk-sticks of the lower series point upward and the accompanying parts are inverted. These parts are numbered like those of the upper series with the letter "x" affixed to each lower numeral. The chalk-follower 13^x of each lower carrier will be held in place by its set-screw 12^x and may be adjusted by the latter to raise the stick of chalk as the latter wears away, besides preventing said stick from falling out of the carrier. The said wings of the sliding boxes, both in the upper and lower series, have horizontal bars 25 and 26 passed through them, bar 25 being for the upper series and bar 26 for the lower series. Each of these bars has its bearings in two slotted plates, one of which, for the lower bar 26 with its bearing-slot 27, is shown in side elevation in Fig. 3, while the plates

for the upper bar are shown in Fig. 1. These plates are secured to the frame-bars 8 and 21, at the ends of the latter, by screws 29, both of the screws for the upper bar appearing in dotted lines, while one of those for the lower bar is indicated in Fig. 3. The ends of the bar 25 are provided with links 30 and the ends of bar 26 with links 31, connecting them to levers 35, each of which has a replacing-spring 35^a attached to it, this spring being connected to a plate 35^b, fastened by screws 35^c to the table 1. The lower end 36 of this is rigidly secured to a horizontally-disposed bar 37, which has a bearing 38 in the lower edge of the plates 28. To this bar 37 is rigidly secured (by set-screw 39) a rod 40, which is provided with a fork 41, which engages a rod 42, provided with adjustable blocks or collars 43 and 44. The upper end 45 of this rod is connected by toggle-links 46 and 47 to the fixed frame 5 to 48. The lower end of the lever 42 is pivoted to the end of the pedal-lever 49, which has a bearing 50 on the base of the device and a pedal 51 rigidly secured thereto. Underneath the pedal, with one end secured to the base of the device and the other end secured to the bottom of the pedal, is a spring 52, the purpose of which will be hereinafter described.

As to the operation of our device the tension of the spring 52 (under the pedal) keeps the rod 42 drawn downwardly. This actuates the toggle 46 and 4ⁿ and the lever 7, which when the machine is at rest keeps the upper sliding-frame bar and sliding frames of the upper series raised, so that there will be an opening between the lower and the upper series of sliding frames, which can be adjusted any required distance apart for the marking of buttonholes and buttons. When it is required that buttons and buttonholes shall be marked on a garment, the fabric is doubled and placed in between the upper and lower series of adjustable frames, as indicated by dotted lines in Fig. 1 from C to D and also shown in section in Fig. 3. The operator's foot is then placed on pedal 51, which is pressed downwardly. The lever 49 carries the rod 42 upwardly until the pivots 53, 54, and 55 are nearly in a line with the dotted line drawn from E to F. The frames 9 are then so low that the serrations 56 on their lower faces and the corresponding lower frames will clamp between them the two edges 58 and 59 of the fabric so it cannot be moved. Then with further pressure of the foot on the pedal 51 the pivot 53 is carried upward until the adjustable block 44 comes in contact with the lower surface of the fork 41. The pressure of the block under the fork causes the rod 40 to move upwardly, which turns the rod 37 toward the front of the machine, in the act of which the lever 35 is turned in the same direction, which actuates the links 30 and 31, thereby moving forward the bars 25 and 26,

which carry with them the two series of sliding boxes and chalk-carriers, rubbing the points of the sticks of chalk of both the upper and lower series over the surface of the fabric, one series making marks for the buttonholes and the other for the buttons. When the pressure of the foot is removed from the pedal, the spring 52 throws the lever 49 downwardly, when the upper series of sliding frames will automatically move upwardly, ready for another insertion of the fabric.

Having fully explained our invention, what we claim, and what we desire to secure by Letters Patent of the United States, is—

1. In a button and buttonhole marking machine, the combination of a series of frames adjustable on a stationary support and a corresponding series of frames adjustable on a movable support with mechanism for moving the latter support toward the former, chalk-carrying devices slidable in each of the said frames and connections between the said devices and the mechanism aforesaid, whereby the chalk is rubbed on the fabric while the frames hold the fabric clamped between them substantially as set forth.

2. In combination with a series of frames adjustable on a stationary support and a corresponding series of frames adjustable on a movable support, mechanism for moving the latter support toward the former to hold the fabric between them, boxes slidable in slots of the said frames, chalk-carriers arranged in and moving with the said boxes, bars passed through wings of the said boxes and connections from said bars to the mechanism aforesaid, whereby the said mechanism actuates the said boxes, and carriers to rub the chalk on the fabric while the latter is held by the said frames substantially as set forth.

3. In combination with a series of frames adjustable on a stationary support and a corresponding series of frames adjustable on a movable support, a lever carrying the support of the latter series, a pedal-lever rod and toggles actuating the said lever to move the said support and the frames carried thereby toward the other support and series of frames for holding the fabric, a pair of blocks or collars arranged on the said pedal-rod with an interval between them, a forked rod having its free end arranged to be lifted or lowered by one or the other of these collars as they move up or down with their rod, a bar and lever rocked by the said forked rod, a pair of links extending from said lever to a pair of horizontal bars, two series of slidable boxes arranged respectively in the two series of frames aforesaid and engaging the said bars to move therewith and chalk-carriers arranged in and moving with the said boxes, in order that the operation of the same pedal may cause the frames to hold the fabric and the chalk to mark the places for the buttons and buttonholes, substantially as set forth.

4. A pair of fabric-holding devices, one of which is stationary and the other movable with relation to each other, in combination with a pair of fabric-marking devices arranged in the said fabric-holding devices, mechanism for moving one of the said devices toward the other and means for actuating the said marking devices, such means being
5 arranged with respect to the mechanism aforesaid, to be operated by the continued action of the latter, substantially as set forth.

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