

(No Model.)

J. H. VINTON.
BUTTON SETTING MACHINE.

No. 402,047.

Patented Apr. 23, 1889.

Fig: 1.

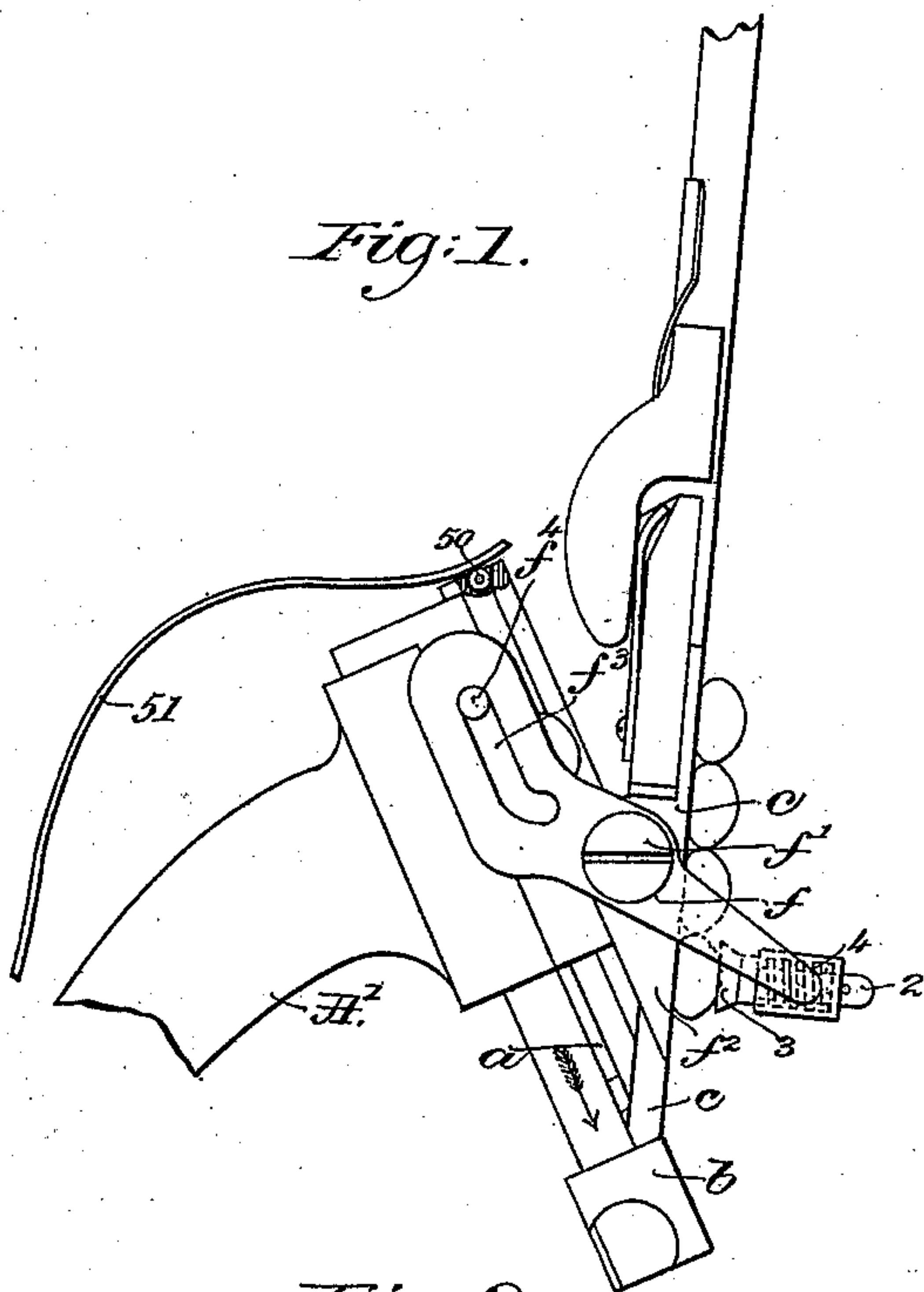
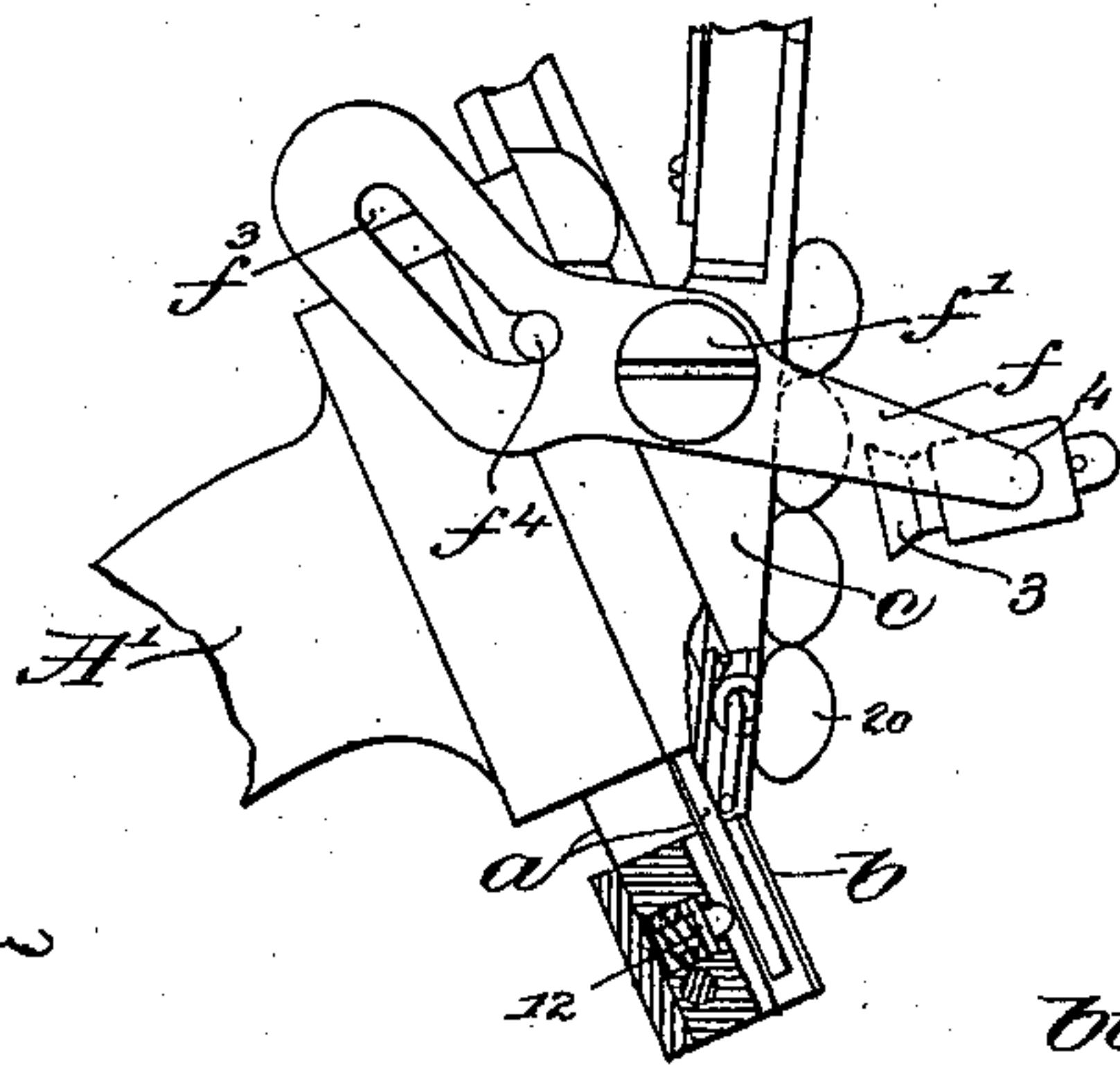


Fig: 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN H. VINTON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE PENINSULAR NOVELTY COMPANY, OF GRAND RAPIDS, MICHIGAN.

BUTTON-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 402,047, dated April 23, 1889.

Application filed August 16, 1888. Serial No. 282,900. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. VINTON, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Button-Setting Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Application Serial No. 261,041, filed by me January 17, 1888, shows a button-setting machine designed to be operated by hand, it containing a driver, a movable or yielding carrier, and raceway, the said carrier being arranged to present the fastening and attached button directly beneath the driver. The anvil was therein shown as movable in a direct line toward the driver, and to hold the fastenings and buttons suitable spring-controlled retaining devices were shown. Many of the features above described are also shown and described in an application of E. O. Ely, filed February 21, 1887, Serial No. 228,309. An application filed by me January 12, 1888, Serial No. 260,529, also shows a machine comprising many of the features above described, and in addition thereto two feed-dogs which operate as let-off devices for the buttons and fasteners.

My present invention has for its object to construct a feeding device especially applicable to the machine shown in application Serial No. 261,041, but which is also applicable to the machines shown in the other applications referred to.

In this my present invention I employ a pivoted retaining-lever, one end of which co-operates with a fixed pin or stud, by which the said lever is turned on its pivot, and the said lever having at its opposite end a spring-controlled or yielding button-holder. The retaining-lever is designed to hold the lowermost button, the fastener for which is in the raceway, while a preceding button and its connected fastening previously discharged from the raceway into the carrier are being removed from the carrier by the driver, and to thereafter release the said lowermost button and its fastening, and then engage the next to the endmost button in the raceway, and so on, thereby permitting one button and connected

fastening to pass from the raceway to the carrier at each complete movement of the retaining-lever.

Figure 1 shows in side elevation a portion of a button-setting machine having a button-retaining lever serving as a feeding device in accordance with this invention; Fig. 2, a similar view showing the button-retaining lever lifted, a portion of the raceway and carrier being broken out.

The arm A' , the driver a , attached rigidly to the said arm, the spring-controlled or yielding carrier b , the raceway c , movable simultaneously with the carrier b , are all as in my application Serial No. 261,041, and also in application of E. O. Ely, Serial No. 228,309, referred to.

The carrier b is recessed at its upper end to receive in it the journals of a friction-roll, 50, and a long slender flat spring, 51, is attached at one end to the arm A' , the opposite or free end bearing upon said friction-roll, the tendency of the spring being to depress the carrier b . The raceway c is supplied with buttons in any usual manner.

The button-retaining lever f is pivoted at f' to the frame f^2 , which connects the raceway and carrier, so that as the raceway and carrier are raised the said lever will be raised with it. The lever has at one end a cam-slot, f^3 , which receives a pin, f^4 , fixed to the arm A' , the slot being curved at its lower end toward the right. (See Fig. 1.) The opposite or outer end of the said lever f receives and carries a sliding pin or presser, 2, having, as shown, a concaved head, 3, which acts upon and holds the button, a spring, 4, (see dotted lines, Fig. 1,) encircling the said pin 2 and normally acting to press the pin into engagement with the head of the button. Fig. 1 shows the parts in their normal position or at rest. As the carrier b is raised or made to slide in the direction of the arm, Fig. 1, the raceway is also raised with it, and the driver a will enter the carrier and drive from it the staple thereon.

As the raceway and carrier ascend from the position Fig. 1 to that in Fig. 2 the pin f^4 in the slot f^3 causes the lever f to turn on its pivot into the position shown in Fig. 2, thereby

removing the spring-controlled presser from the endmost button, 20, and at such time the driver *a*, occupying a position at the lower end of the carrier, obstructs the passage from
5 the raceway into the carrier, so that the lowermost fastening in the raceway in falling strikes upon or against the driver *a*, and is thereby held.

As the carrier and raceway are in their reverse movement descending, the driver *a* ceases to obstruct the passage connecting the raceway and carrier, and hence the lowermost staple falls into the carrier, and is there held by a spring-controlled pin, 12, the lever *f* at
15 this time returning to its normal position and causing the spring-controlled pin 2 to act upon or engage the next button, as 20, to the one connected to the fastening, which has just passed from the raceway into the carrier.

20 At the next operation of the machine the staple and button contained in the carrier are removed by the driver, and the next staple and button permitted to enter, and so on.

By making the pin 2 movable or yielding,
25 as shown, it will correctly act upon or engage the heads of buttons of different thicknesses and shapes, and by so constructing the parts that the driver may at each operation of the machine obstruct the passage connecting the
30 raceway and carrier but one feed or retaining lever is necessary.

It will be seen that the button-retaining lever *f* herein shown may be readily applied to any of the machines shown in the applica-
35 tions referred to.

I claim—

1. In a button-setting machine, the simultaneously movable carrier and raceway constructed and arranged to receive and hold button-fastenings and attached buttons, and
40 a spring-controlled pin, 12, within said carrier, combined with the driver adapted to obstruct the passage connecting the raceway and carrier, and to remove from the carrier the fastening contained and held therein by
45 the said pin as the said raceway and carrier ascend, substantially as described.

2. In a button-setting machine, the staple-receiving raceway, combined with the movable feed and a retaining-lever having the
50 yielding pin or presser to act upon the button, substantially as described.

3. In a button-setting machine, the raceway to receive button-fastenings and connected buttons, combined with the movable button-
55 retaining lever *f*, formed at one end to co-operate with a fixed pin or stud, *f*⁴, and having a spring-pin at its other end, substantially as described.

4. In a button-setting machine, the arm *A'*
60 and the carrier *b*, combined with the spring 51, attached to the arm *A'*, acting on the carrier, substantially as described.

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

JOHN H. VINTON.

Witnesses:

BERNICE J. NOYES,
F. L. EMERY.