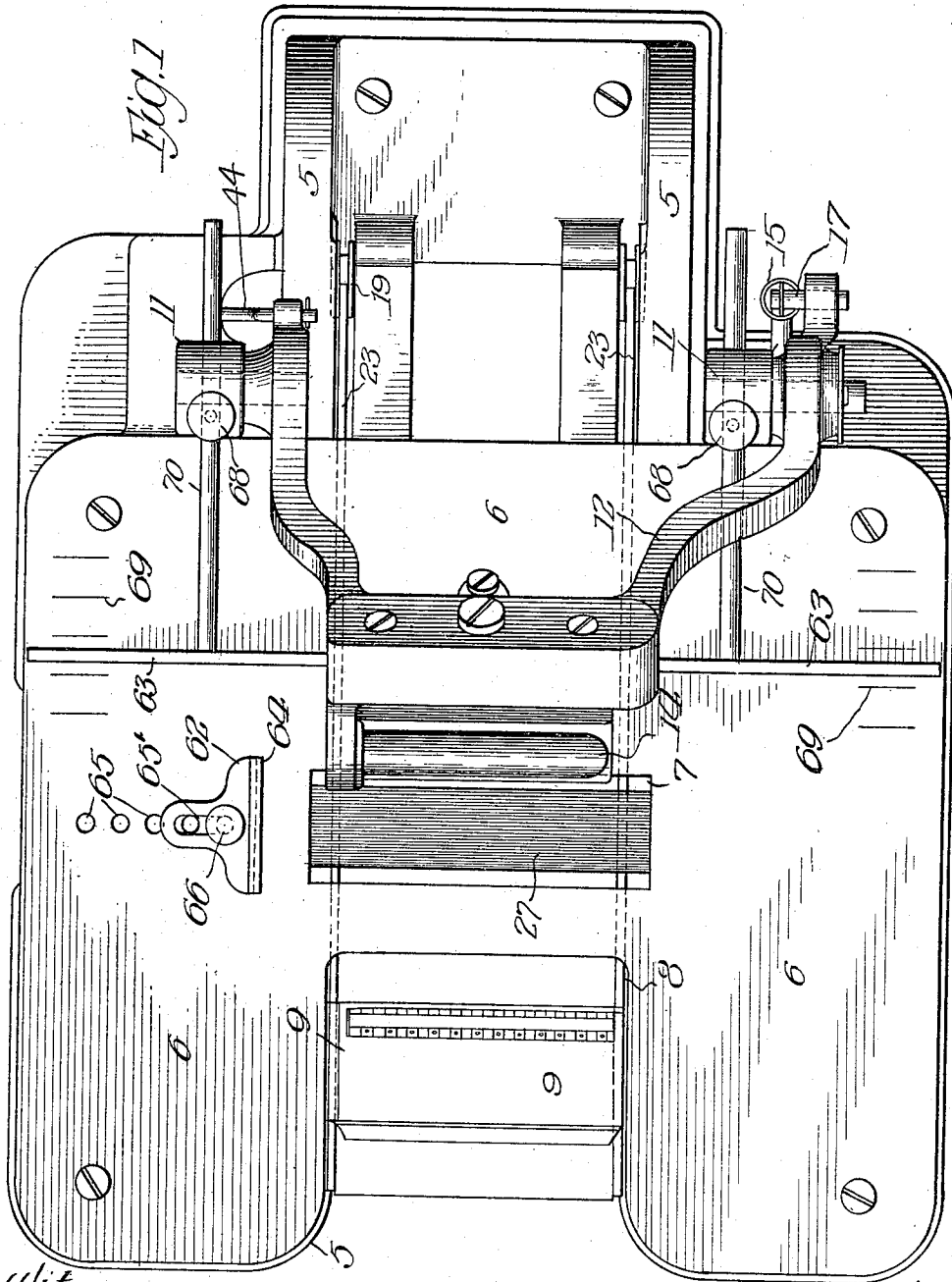


J. S. DUNCAN.
HAND ADDRESSING MACHINE.
APPLICATION FILED NOV. 17, 1913.

1,209,413.

Patented Dec. 19, 1916.

3 SHEETS—SHEET 1.



Witnesses:
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Chas. J. Wilson

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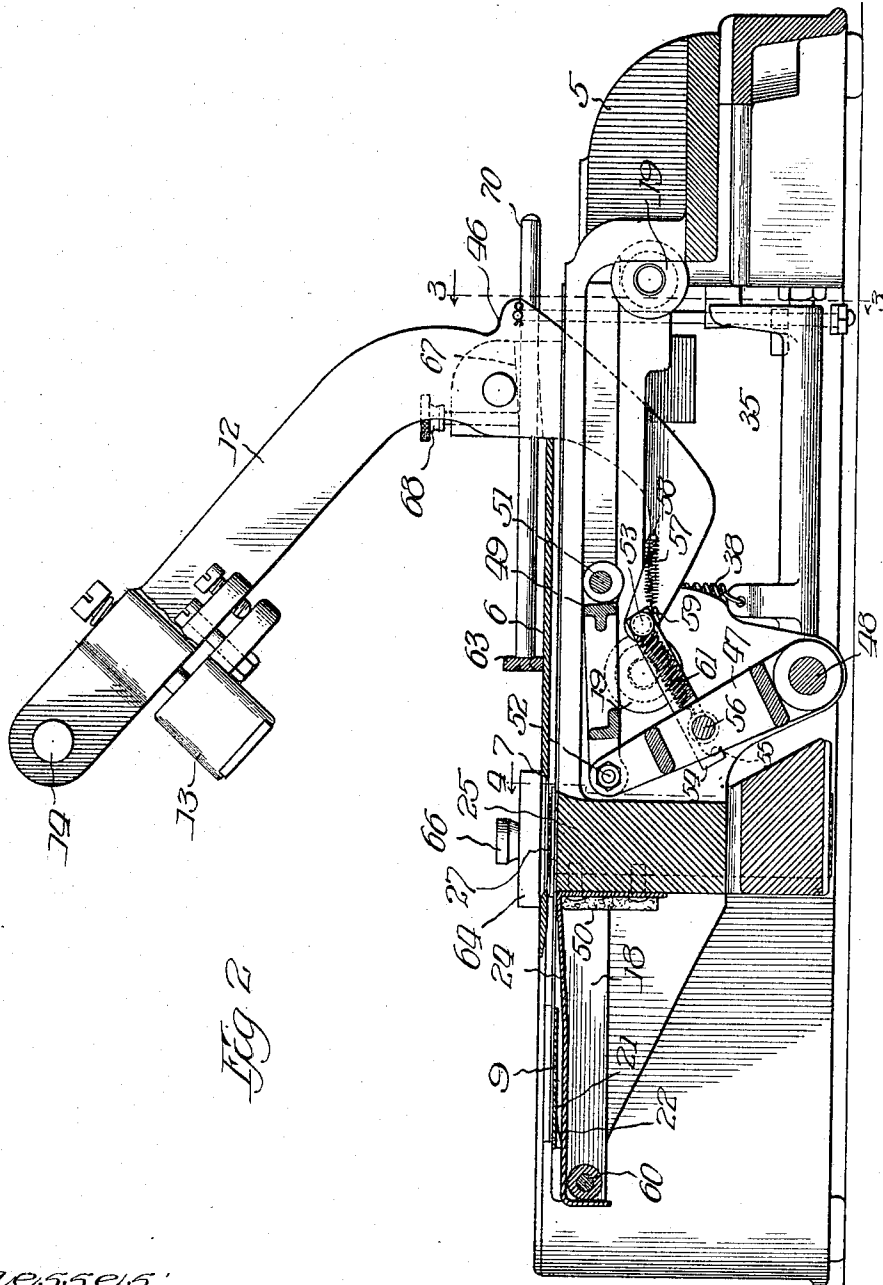


Fig. 2

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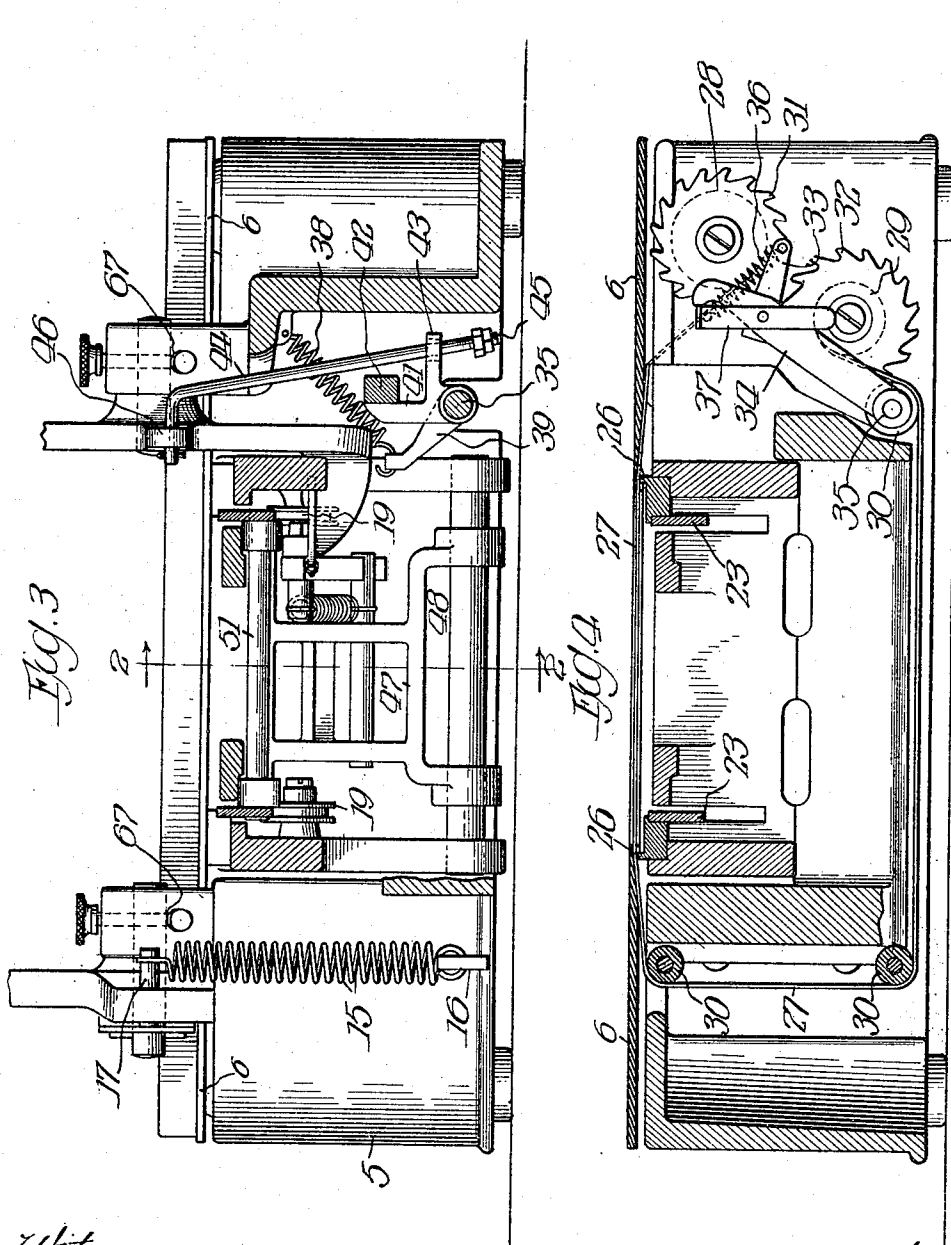
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

JOSEPH S. DUNCAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO ADDRESSOGRAPH COMPANY,
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HAND ADDRESSING-MACHINE.

1,209,413.

Specification of Letters Patent.

Patented Dec. 19, 1916.

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To all whom it may concern:

Be it known that I, JOSEPH S. DUNCAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hand Addressing-Machines, of which the following is a specification.

This invention relates in general to addressing machines and has more particular reference to small hand operated machines designed for addressing or printing shipping tags and the like, although the machine may be used to print notices or address envelopes and is capable of many allied uses.

In printing the address on shipping tags and the like it is usually desirable to print the same address on a considerable number of tags, consequently a number of impressions will be taken from one printing device, or address carrying device, before the device is changed.

The primary object of my present invention is to provide a simple, durable and efficient machine which will position a printing device in printing position upon each downward stroke of the platen and will return said device upon upward stroke of the platen to an accessible position, from which it may be readily removed by hand and replaced by another device whenever it is desirable to change the address or other printed matter.

Many other objects and advantages of this invention will be apparent as the same is better understood by reference to the following description when considered in connection with the accompanying drawings.

Referring to the drawings Figure 1 is a plan view of a machine embodying my invention; Fig. 2 is a longitudinal sectional view taken substantially centrally of the machine shown in Fig. 1; Fig. 3 is a transverse sectional view taken substantially on the line 3—3 of Fig. 2, and Fig. 4 is a transverse sectional view taken substantially on the line 4—4 of Fig. 2.

On the drawings reference character 5 designates generally the base of the machine, which is preferably cast to afford sufficient strength and stability, the frame being preferably cored to receive the operating mechanism of the machine and also to render the frame light enough to be readily portable. The frame is provided with a top plate 6 which has an opening 7 through which the

platen operates to effect the impression, and with an opening 8 through which the printing devices 9 are introduced and removed from the machine. At the rear of the plate 6 the frame is formed to provide a pair of bearing studs or bosses 11 upon which a forked platen arm 12 is pivotally mounted. This arm is provided adjacent its outer end with a platen 13 and an operating handle or grip 14. The platen is so positioned that when the platen arm is swung downwardly the platen will register with the opening 7 in the top plate. A heavy contraction spring, 15 attached at one end to a boss 16 projecting rearwardly from the main frame, and at its upper end to a pin 17 projecting laterally from a portion of the platen arm which extends rearwardly of its pivot, normally holds the platen in the elevated position shown in Fig. 2 and returns the platen to this position after each printing operation.

The printing devices 9, which in the present machine are changed by hand when required, are carried by a slide 18 projecting longitudinally of the machine and guided in its reciprocatory movements by guide-rollers 19 mounted on the main frame. At its forward end the slide is provided on its upper face with a socket, or depression, 21 shaped to receive a printing device, and in order to facilitate the removal of the printing device this socket is inclined beneath one edge of the printing device as indicated at 22, so that by pushing downwardly upon the forward edge of the printing device the device will be tilted to elevate its rear edge into position to be grasped by the fingers and removed from the machine. The slide, as will be apparent from Figs. 3 and 4, is made in the form of an open frame, the side members 23 of which carry the printing device. In order to prevent a printing device from dropping through the frame when it is being positioned in the socket 21 I prefer to mount a plate 24 on the frame of the machine so that it projects rearwardly beneath the opening 8 in position to prevent a printing device from falling through the slide frame. It will be apparent from Fig. 4 that the side members 23 travel beneath overlying flanges of the frame which prevent the projecting ends of the members shown at the left in Fig. 2 from tilting downwardly.

The main frame is constructed to provide,

immediately beneath the opening 7 in the top plate, a solid bed 25 adapted to support a printing device in printing position and to absorb the shock of the platen. The bed
 5 at each side is formed to provide upwardly projecting flanges 26 over which an inking ribbon 27 runs, the flanges being provided to space this ribbon above the bed sufficiently to permit the insertion and withdrawal of a
 10 printing device beneath the ribbon. The ribbon, as will be evident from Fig. 4, surrounds the central portion of the machine frame and its ends are attached to two ribbon rolls 28 and 29 respectively, which are
 15 rotated alternately in opposite directions to feed the ribbon from one roll to the other, excessive friction being prevented by rollers 30.

The ribbon rolls are equipped with ratchet-
 20 wheels 31 and 32 respectively which are intermittently actuated from a dog 33 pivotally mounted on an arm 34 fixed to a rock shaft 35. The dog 33 is held in operative relation to one or the other of the ratchet
 25 wheels by a contraction spring 36 attached at one end to the dog and at its other end to a lever 37 pivoted on the arm 34. When the roll 28 is to be operated the lever 37 is positioned as shown in Fig. 4 so that the spring
 30 36 holds the dog 33 in operative relation to ratchet wheel 31. When it is desired to reverse the ribbon feed the lever 37 is swung about its pivot so that the end having the spring attached thereto is disposed beneath
 35 the pivot of the dog 33. This position of the lever 37 causes the spring 36 to hold the dog in operative engagement with the ratchet wheel 32 so that roll 29 is positively driven at each oscillation of the shaft 35.
 40 The shaft 35 is normally held in the position shown in Figs. 3 and 4 by a contraction spring 38 attached at one end to the frame of the machine and at its other end to an arm 39 projecting laterally from the shaft
 45 35. The shaft also has fixed thereon a bell-crank lever comprising an arm 41 which abuts against a fixed stop 42 to limit the rocking movement of the shaft under influence of the spring 38 and another arm 43
 50 which is operated from a rod 44 passed through the arm and provided at its lower end with stop nuts 45, the upper end of the rod being bent and engaged with a boss 46 formed on the platen arm 12. It will be
 55 manifest that each downward movement of the platen will, through the rod 44 and the arm 43, rock the shaft 35 against the force of spring 38 thereby swinging the arm 34 to the left, viewing Fig. 4, and upon upward
 60 movement of the platen the shaft will be returned to normal position by the spring 38 thereby partially rotating one of the ribbon rolls through the instrumentality of the dog 33.

65 The slide 18 is reciprocated from the

platen arm by the following mechanism: A yoke 47 is pivoted on a shaft 48 near the bottom of the machine frame and its upper end is connected with the slide by a link frame 49, connected by pin 51 with the slide,
 70 and by a bolt 52 with the yoke. One of the forks of the platen arm is shaped below its pivot as shown in Fig. 2 and upon its forward extremity there is pivotally mounted
 75 at 53 a link 54 provided adjacent its free extremity with an elongated slot 55 engaged with a pin 56 of the yoke 47. The link is normally held in engagement with the pin 56 by means of a contraction spring 57, attached at one end to a boss 58 on the platen
 80 arm fork and at its other end to a boss 59 formed on the link 54. The coiled expansion spring 61, attached at one end to the pin 56 and at its other end to the pin 53, normally holds the parts in the position
 85 shown in Fig. 2 with the pin 56 engaged with the inner end of slot 55. When the platen arm is swung to bring the platen into printing position the slide 18 carrying a printing device in the socket 21 will be
 90 moved toward the right, viewing Fig. 2, to position the printing device upon the bed 25 and beneath the ribbon 27. The parts are so proportioned and arranged that the printing device will be disposed in printing
 95 position before the platen contacts with the ribbon. In order that the printing device may not overrun the bed, the movement of the slide is limited by a roller 60 carried by the slide which abuts against a yielding
 100 buffer 50 mounted at the outer edge of the bed 25. Movement of the printing device beyond printing position is thereby precluded. Continuous downward movement of the platen to effect the printing operation
 105 after the movement of the slide and printing device have been terminated is permitted by the lost motion connection between the yoke 47 and the link 54. It will be obvious that when the slide has been
 110 stopped the movement of the platen may be continued by reason of the slot and pin connection 55 and 56 and the yielding connecting spring 61. After the printing operation has been effected the parts are all returned
 115 to the normal position shown in Fig. 2 by the return spring, as has been previously explained.

In order that the tags or other articles to be printed may be properly and accurately
 120 positioned on the plate 6 I have provided guides or abutments against which the tags may be placed. These guides comprise a side-guide 62 and an end-guide 63. The side-guide 62 comprises a body-portion hav-
 125 ing an upstanding-flange 64, said body-portion being provided with an elongated slot 65' through which a set-screw 66 is threaded into any desired one of a series of tapped openings 65 in the top plate of the machine. 130

The side-guide may, by reason of this mounting, be adjusted to any required position which will dispose the card or other object to be printed in proper relation to the platen.

5 The guide 63 is carried by a pair of rods 70 which project rearwardly through apertures 67 formed into bosses 11. It will be observed from Fig. 2 that the apertures or guide bores 67 are inclined downwardly toward the fronts of the bosses 11 so that the rods 70 are supported from beneath only at the rear ends of the apertures. For the purpose of locking the rods in adjusted position to hold the guide 63 in proper relation to the printing-opening 7, I have provided 15 each boss 11 with a set-screw 68 adapted to be threaded into a bore 67 to clamp the rod 70 in adjusted position. This construction holds the guide 63 snugly against the top-plate of the machine to preclude accidental insertion of a tag or other device to be printed beneath the guide. To facilitate correct positioning of the guide 63, I prefer to provide a scale 69 along each edge of the top plate, the divisions of each scale being 25 equally spaced so that by observing the position of the ends of the guide with respect to the underlying scale the guide may be correctly adjusted.

30 It is believed that my invention and its mode of operation will be fully understood from the foregoing without any further description, and it will be further understood that various changes in the mechanical details disclosed may be resorted to without departing from the scope of the invention as defined in the appended claims.

I claim:

40 1. In a hand addressing machine, the combination of a movable platen adapted when manually actuated to strike an impression blow, a stationary bed adapted to support a printing device in printing position and to absorb the shock of the platen blow, and 45 means actuated by the movement of said platen for moving the printing device from changing position onto said bed and returning said device from said bed to changing position at each cycle of said platen.

50 2. In a hand addressing machine, the combination of a movable platen adapted when manually actuated to strike an impression blow, a stationary bed adapted to support a printing device in printing position and to 55 absorb the shock of the platen blow, a slide adapted to carry the printing device, and means actuated by the movement of said platen for actuating said slide to move the printing device from changing position onto said bed and to return said device from said 60 bed to changing position at each cycle of the platen.

65 3. In a hand addressing machine, the combination of a movable platen adapted when manually actuated to strike an impression

blow, a stationary bed adapted to support a printing device in printing position and to absorb the shock of the platen blow, a slide adapted to carry the printing device, means to support and guide said slide, and 70 means actuated by the movement of said platen for actuating said slide to move said printing device from changing position onto said bed and to return said device from said bed to changing position at each cycle of the 75 platen.

4. In a hand addressing machine, the combination of a frame, a platen movably mounted on said frame, a stationary bed disposed in said frame and adapted to support a printing device in printing position 80 and to absorb the shock of the platen blow, a slide adapted to carry the printing device, rollers mounted on said frame to support and guide said slide, and means actuated by the movement of said platen for actuating said slide to move said printing device from 85 changing position onto said bed and to return said device from said bed to changing position at each cycle of said platen.

5. In a hand addressing machine, the combination of a frame, a platen movably mounted on said frame, a stationary bed disposed in said frame and adapted to support a printing device in printing 95 position and to absorb the shock of the platen blow, a slide adapted to carry the printing device and comprising a pair of members extending longitudinally of said frame and connecting means therebetween, 100 rollers mounted on said frame to support and guide said slide, and means actuated by the movement of said platen for actuating said slide to move said printing device from changing position onto said bed and to return said device from said bed to changing 105 position at each cycle of said platen.

6. In a hand addressing machine, the combination of a platen, a stationary bed adapted to support a printing device in printing position and to absorb the shock 110 of the platen blow, a slide movable only in a single plane and adapted to carry the printing device, and connecting means between said platen and said slide whereby the latter is actuated to move said printing device from changing position onto said bed and to return said device from said bed to changing position at each cycle of said 115 platen.

7. In a hand addressing machine, the combination of a platen, a stationary bed adapted to support a printing device in printing position and to absorb the shock 120 of the platen blow, a slide movable only in a single plane and adapted to carry the printing device, and lost motion connecting means between said platen and said slide whereby the latter is actuated to move said printing device from changing position onto 125 130

said bed and to return said device from said bed to changing position at each cycle of said platen.

8. In a hand addressing machine, the combination of a pivotally mounted platen arm having an extension below its pivot, a platen carried thereby, a stationary bed adapted to support a printing device in printing position and to absorb the shock of the platen blow, a slide movable only in a single plane and adapted to carry the printing device, and lost motion connecting means between said extension and slide whereby the latter is actuated to move said printing device from changing position onto said bed and to return said device from said bed to changing position at each cycle of said platen.

9. In a hand addressing machine, the combination of a frame, a pivotally mounted platen arm, a platen carried thereby, a stationary bed adapted to support a printing device in printing position and to absorb the shock of the platen blow, a slide movable only in a single plane and adapted to carry the printing device, means on said frame to support and guide said slide, and lost motion connecting means between said platen arm and slide whereby the latter is actuated to move said printing device from changing position onto said bed and to return said device from said bed to changing position at each cycle of said platen.

10. In a hand addressing machine the combination of a slide adapted to carry a printing device to printing position and return the same from printing position, a piv-

otally mounted platen arm, a platen carried thereby and connections between said platen arm and said slide, including a pin, a slotted link engaged with said pin, and a spring yieldingly retaining said pin in engagement with one end of said slot to permit movement of said platen arm in one direction after the slide has come to rest at one end of its stroke.

11. In a hand addressing machine the combination of a bed, a reciprocatory slide, a pivotally mounted platen arm and platen carried thereby, a yoke pivotally mounted on the main frame of the machine, a link connecting the extremity of said yoke with said slide, and a yielding lost motion connection between said platen arm and said yoke whereby said slide is actuated from said platen arm.

12. In a hand addressing machine the combination of a bed, a platen movable toward and from said bed, a slide movable only in a single plane and actuated by said platen to position a printing device on said bed upon downward movement of the platen and withdraw said device from said bed upon upward movement of the platen, an inking ribbon disposed over said bed and above a printing device positioned on the bed, and means for feeding said ribbon a predetermined distance at each operation of the platen.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D C."