

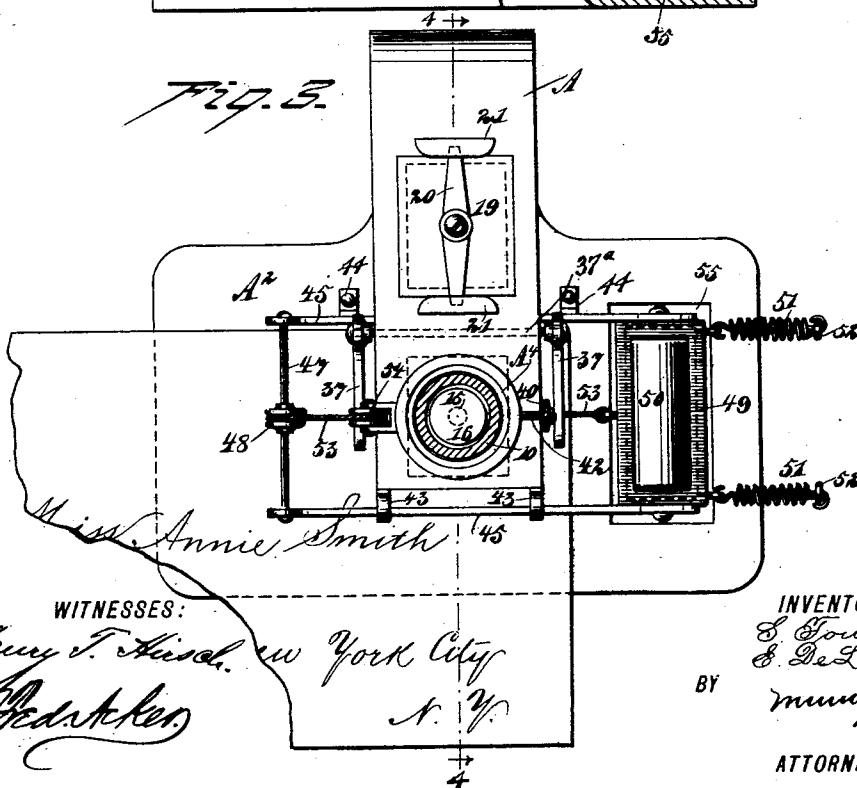
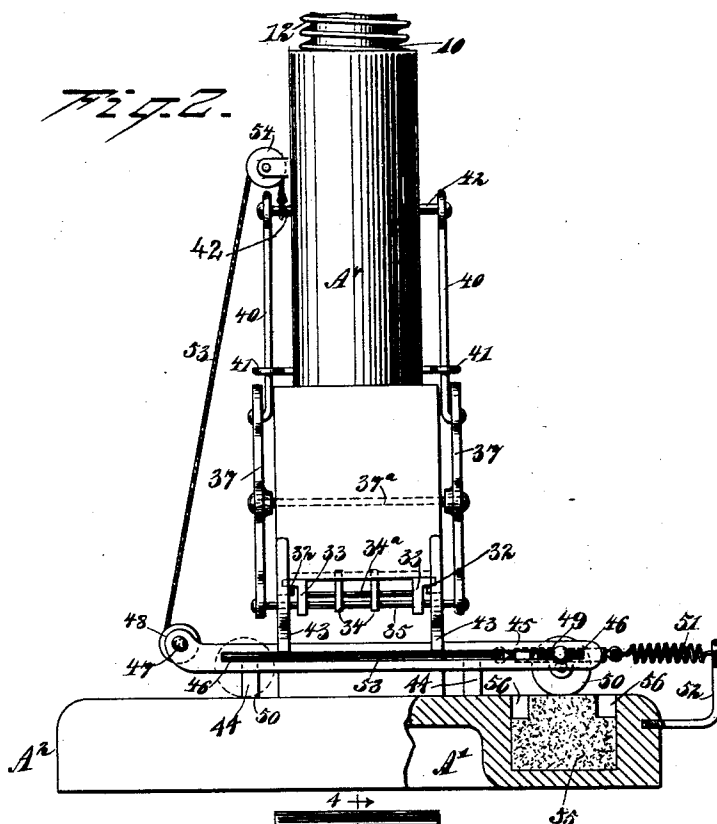
(No Model.)

3 Sheets—Sheet 2.

S. TOUSEY & E. DE LONG.
STAMP AFFIXING MACHINE.

No. 587,621.

Patented Aug. 3, 1897.



WITNESSES:

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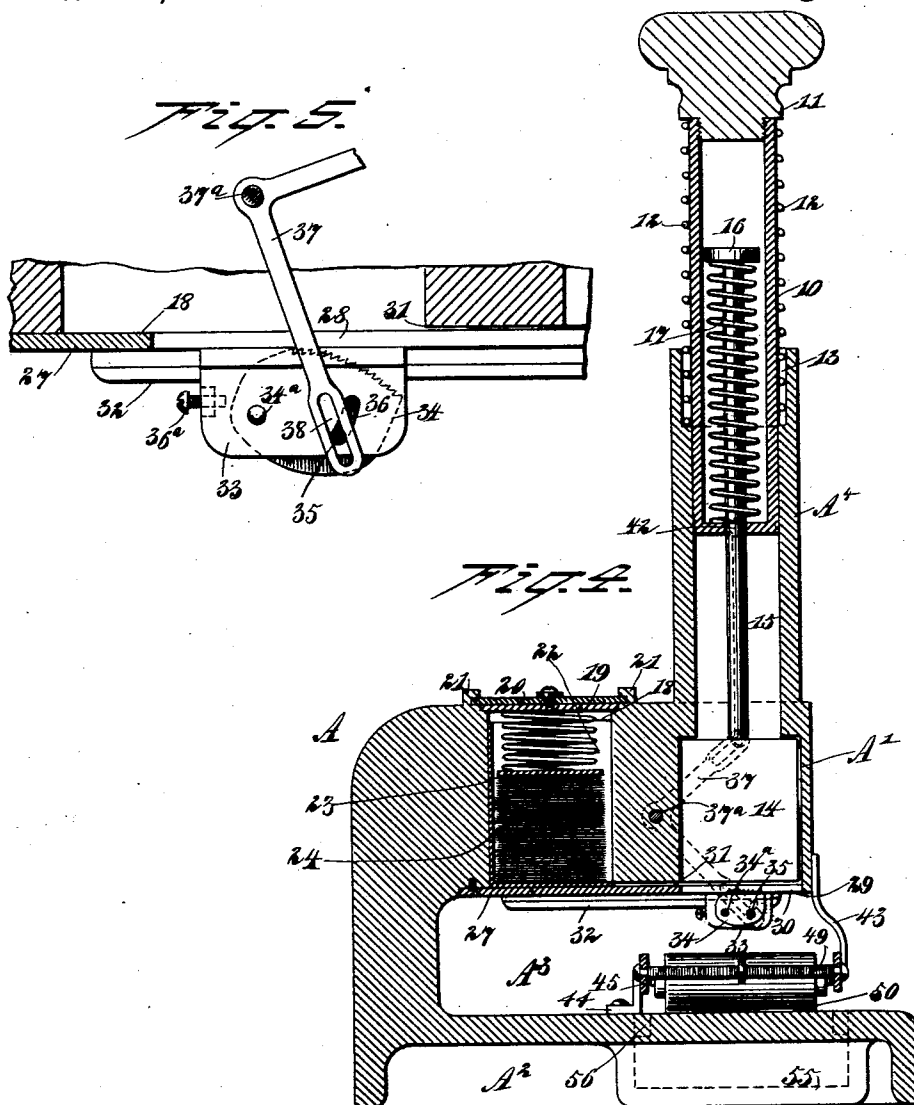
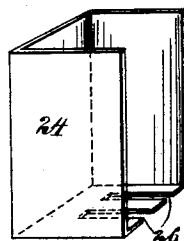


Fig. 7.



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UNITED STATES PATENT OFFICE.

SINCLAIR TOUSEY AND ELLA DE LONG, OF NEW YORK, N. Y.

STAMP-AFFIXING MACHINE.

SPECIFICATION forming part of Letters Patent No. 587,621, dated August 3, 1897.

Application filed May 15, 1896. Serial No. 591,628. (No model.)

To all whom it may concern:

Be it known that we, SINCLAIR TOUSEY and ELLA DE LONG, of New York city, in the county and State of New York, have invented a new and Improved Stamp-Affixing Machine, of which the following is a full, clear, and exact description.

Our invention relates to a machine especially adapted for affixing stamps on envelopes or packages of any description; and the object of the invention is to construct such a machine in an exceedingly simple, durable, and economic manner, providing for the envelop being moistened where the stamp is to be affixed and also providing a reservoir for the stamps and an automatic mechanism for drawing a stamp from the reservoir to a plunger, which by one movement of the hand is so operated as to place a stamp on the moistened surface of the envelop or package.

A further object of the invention is to construct a machine in which by one movement of the hand the surface to receive the stamp will be moistened and the stamp fed to the plunger and the plunger or follower operated to affix said stamp.

A further object of the invention is to provide stamp-receiving receptacles, which may be introduced at will into the machine, thereby providing for a supply of stamps of different denominations, which may be employed at will.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the machine. Fig. 2 is a front elevation of the same, a part of the top being broken away and a portion of the base being in section. Fig. 3 is a plan view of the machine. Fig. 4 is a longitudinal vertical section through the machine, the parts of the same being in their normal position. Fig. 5 is an enlarged sectional view of the carriage adapted to convey the stamps from the receptacle in which they are placed to the plunger that is adapted to affix them.

Fig. 6 is a horizontal section taken substantially on the line 6 6 of Fig. 1, and Fig. 7 is a detail perspective view of one of the reservoirs or receptacles in which the stamps are placed. Fig. 8 is a side elevation of a portion of the moistening device, the roller being in its normal position and parts of the device being broken away; and Fig. 9 is a partial side elevation and broken view of the moistening mechanism, showing the position of the moistening-roller when commencing its return movement.

In carrying out the invention the body portion A of the machine is made of any suitable material and is provided with a chamber A' at or near its forward end, the said chamber extending through the bottom portion of the body, and the aforesaid body A is connected with a base A² by means of an upright section at its rear end, providing a space A³ between the under face of the body and the upper face of the base, as shown in Figs. 1 and 4.

A tubular extension A⁴ of the body is located over the chamber A' and is in communication with the same, the tubular extension A⁴ having a recess 13 made in its inner face at the top. A tubular plunger 10 is mounted to slide in the tubular extension A⁴ of the body, the said tubular plunger being provided with a knob 11 at its upper or outer end or the equivalent of a knob, and a spring 12 surrounds the exterior of the tubular plunger, the said spring having a bearing on the base or bottom wall of the recess 13 in the tubular extension of the body of the machine-frame, as is best shown in Fig. 4.

A follower 14 is located in the chamber A' of the body, and this chamber and also the said follower are preferably polygonal in general contour. The follower 14 is attached to a rod 15, which rod 15 is passed loosely up through the bottom of the follower 10, and the said rod has a head 16 formed at its upper end and is provided with a spring 17, which is coiled around the rod and has bearing against the head 16 and the bottom of the follower, as is best shown in Fig. 4. A chamber 18 is made in the body near the back, and this chamber extends through from the top to the bottom, and is normally closed by a

cover 19, which may be secured in position, as shown in Figs. 3 and 4, by means of a button 20 entering the undercut portions 21 of the top of the aforesaid body; and a spring 22 is secured to the under face of the cover, being attached at its lower end to a compression-plate 23, of less dimensions than the cross-sectional dimensions of the chamber 18.

A receptacle 24, adapted to receive stamps placed one on the other, is fitted into the chamber 18, which may be termed a "stamp-receiving" chamber, and this receptacle, as illustrated in Fig. 7, is open at the top and forward side and receives within it the compression-plate 23; and at the front of the receptacle 24 at the bottom a horizontal opening 25 is made, while in the bottom of this receptacle slots 26 are produced, which communicate with the aforesaid opening 25. A plate 27 is secured upon the bottom of the body A, and this plate extends across the stamp-receptacle 24, substantially flush with the rear vertical wall of the plunger-chamber A'. As shown in Fig. 6, the said plate 27 is provided with longitudinal openings 28 made therein, in registry with the openings 26 in the stamp-receptacle 24. The bottom of the plunger-chamber A' is normally closed by two doors 29 and 29^a, hinged to the bottom side surfaces of the body, as shown in Fig. 6, and held closed through the medium of springs or their equivalents, and each door is provided with a slot 30, forming a continuation of the slots or openings 28 in the plate 27. A horizontal channel 31 is made in the body, establishing communication between the bottom portion of the stamp receptacle or chamber 18 and the bottom of the plunger-chamber A', so that the stamps taken from the receptacle 24, located in the stamp-chamber, may be carried between the bottom of the plunger 14 and the doors 29 and 29^a, closing the bottom of the plunger-chamber. At each side of the bottom of the body A of the machine a slideway 32 is formed, and in each slideway a cheek-piece or a hanger 33 is mounted to slide, the two hangers being connected at the rear by a rod 34^a, and a second rod 35 is passed from one hanger 33 to the other near the forward end of the hangers, the said rod 35 having movement in curved slots 36, produced in the said hangers in direction of their top and bottom edges, so that the rod 35 will have a limited vertical movement in the aforesaid hangers. Grippers 34 are attached to the movable rod 35, being fulcrumed upon the fixed rod 34^a, and these grippers consist of plates, which are preferably somewhat convexed at their rear and at the top, the top being provided with teeth, and a gripper is placed beneath each of the slots 28 in the bottom plate 27, and are likewise adapted to travel in the extensions 30 of the aforesaid slots 28, as shown in Figs. 2 and 5. The throw of these grippers is controlled through the medium of set-screws 36^a, which may be, and

preferably are, screwed into extensions from the inner faces of the rear portions of the hangers, as illustrated in Fig. 5, being adapted for engagement with the rear edges of the grippers. The toothed surfaces of the grippers are adapted to engage with the lowermost stamp in the stamp-receptacle, entering the receptacle through the openings 26 therein, and when the grippers are carried forward they will carry the stamp with them, depositing said stamp below the plunger 14. One manner in which the movement of the grippers is accomplished is shown in Figs. 1 and 5, in which it will be observed that elbow-levers 37 are pivoted at the junction of their members upon the side surfaces of the body. The lower member of each lever is provided with a slot 38, which receives the outer end of the movable rod 35, and the upper member of each lever has a longitudinal slot 39 made therein, receiving the end of a rod 40, which rods are extended upward along the tubular portion A' of the body, being passed through guides 41, and are attached to trunnions 42, which are secured to the bottom portion of the tubular plunger 10 and extend outward beyond the tubular extension A' of the body through slots 42^a, made in the sides of the same, as illustrated in Fig. 1. When the plunger 10 is in its normal position, the grippers 34 will be beneath the follower 14 and in engagement with the stamp. When the plunger, however, is forced downward, the grippers will be carried in a downward direction, occupying the position shown in Fig. 5, and will be moved rearward to such point as will enable them to enter the slots 26 in the stamp-receptacle, and when the plunger is released the spring 12 will carry said plunger upward, and the grippers in engagement with the stamp will be carried upward, taking the stamp with them and depositing said stamp between the doors 29 and 29^a and the follower 14. When the plunger is first carried downward, the rearward movement of the grippers will be accomplished, and each of the grippers will have reached its rearmost position before the cap of the plunger will engage with the head 16 of the rod 15. When such an engagement occurs, the further downward movement of the plunger will carry the rod 15 with it and force the follower 14 downward, carrying the stamp with it and opening the doors 29 and 29^a, and the downward movement of the follower is continued until it has deposited the stamp upon the surface of the envelop or wrapper prepared to receive it. The levers 37 are preferably both fulcrumed on the body by means of a pin 37^a.

The mechanism employed for moistening the surface of the envelop or wrapper that is to receive the stamp may consist, as shown in the drawings, of brackets 43, which are secured to the front of the body, extending downward therefrom a predetermined distance in direction of the base, and side brack-

ets 44, attached to and projecting upward from the base, both sets of brackets being so disposed as not to interfere in the least with the movement of the grippers or the carriage—namely, the hangers 33, carrying the same.

A side bar 45 is secured to the front brackets 43 and to the side brackets 44. These side bars are parallel and extend transversely across the base. Each side bar is provided with a longitudinal slot 46, and both side bars are connected at the rear by a rod 47, upon which rod a friction-roller 48 is mounted, and the slots of the side bars accommodate the ends of a carriage 49, which carriage, as shown in Fig. 3, is preferably of rectangular construction, although it may be otherwise formed, and journals a roller 50, adapted for moistening purposes. The carriage 49 is attached to the rear ends of springs 51, and these springs are secured to uprights 52 or their equivalents, secured at the forward end of the base, as shown in Figs. 2 and 3. The springs serve to normally hold the moistening-roller 50 over a moistened pad 55, secured in a recess or a chamber formed in the base, and this pad is cut away, ordinarily, at opposite sides, forming pockets 56, in which the moistening material is placed—water, for example.

A cable or a cord 53 is attached to the central rear portion of the carriage 49, and this cable is carried rearward over the roller 48 and upward over a second friction-roller 54, journaled upon the tubular extension of the body of the machine, as best shown in Figs. 1 and 2, and from this roller 54 the cord is passed to an engagement with the trunnion 42 from the plunger 10, so that when the plunger is forced downward and prior to the plunger operating the follower 14 the said plunger will cause a rearward movement of the carriage 49, carrying the moistening-roller over that portion of the envelop placed upon the base and adapted to receive the stamp, the moistening of the envelop taking place simultaneously with the rearward and preparatory movement of the grippers, and after the stamp is affixed to the envelop through the medium of the follower 14 the upward movement of the plunger, carrying with it the follower 14, will permit the moistening-roller to be drawn to its normal position over the moistening-pad by the springs 51 at the same time that the stamp is taken from the stamp-receptacle by the grippers and placed in position to be affixed to the envelop at the next downward movement of the plunger.

At the rearward movement of the moistening-roller it is necessary that the roller should travel over the surface of the envelop upon which the stamp is to be affixed, but upon the return movement of the said roller it should not contact with said envelop. This result may be accomplished by the method shown in Figs. 8 and 9—namely, by forming upon the bed, near its forward end preferably, two inclined planes 55, the inclination being upwardly and in a forward direction, as shown

particularly in Fig. 8, and at that point on the bed which the moistening-roller reaches at the termination of its rearward movement ordinarily one inclined plane 56 is formed on the base, as shown in Fig. 9, the inclination of which plane is upwardly and rearwardly. Either upon the carriage 49 or on the axis of the moistening-roller at both ends of the latter a lever 57 is fulcrumed, and these levers extend downwardly in direction of the base and are provided with branch arms having a forward direction, each branch arm carrying a friction-wheel 58, and the rear face of each lever at its lower extremity is curved or is inclined, and a stop-pin 59 is placed upon the carriage 49 adjacent to the rear surface or pivotal point of each lever. The levers at each side are moved simultaneously, and if one lever is moved the other lever will be given the same movement. The springs 51, connected with the carriage 49, are given a downward inclination, as is especially shown in Fig. 8.

In the normal position of the carriage the levers 57 will have a downward and rearward inclination, their lower beveled or rounded edges being in connection with the rising portions of the forward inclined planes 55 and the rollers 58 will rest upon the bed A^2 , holding the moistening-roller at an elevation above the aforesaid bed, and the slot 46 in the frame in which the moistening-roller travels is of such width as to admit of a downward and an upward movement on the part of the aforesaid roller. As the carriage for the moistening-roller is drawn rearward the levers, which are limited in their rearward movement by the pins 59, will be given a forward and downward inclination the reverse of that shown in Fig. 8, lowering the roller to a contact with the base or bed and enabling it to travel over the moistening-pad and the surface of the envelop that is to be moistened.

When the carriage has reached its farthest rearward point, the friction-roller 58 of a lever at one side of the carriage will ride up the rear inclined plane 56, as shown in Fig. 9, and the lever will be restored to its normal position—that is, it will be given a rearward and downward inclination—thereby raising the moistening-roller from the bed, as shown in said Fig. 9, and as the carriage is drawn forward by the spring 51 the moistening-roller will retain its elevated position and will not engage with the base A^3 or the envelop placed on the said base.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In a stamp-affixing machine, or a machine of like character, a base adapted to receive an envelop, having inclined planes placed at predetermined distances apart, their inclinations being in opposite directions, a carriage adapted to travel over the base and provided with a moistening-roller, levers fulcrumed upon the said carriage and provided

with surfaces adapted to travel on the base, and surfaces adapted for engagement with the aforesaid inclined planes, the arrangement of the inclined planes being such that
 5 when the levers strike the forward inclined planes the moistening-roller will be dropped to an engagement with the base, and when such levers engage with a rear inclined plane the roller will be lifted from the base, and
 10 means, substantially as described, for drawing the carriage rearward and returning it to its forward position, as set forth.

2. The combination with a body portion having a stamp-receptacle, of a plunger, a follower operated thereby and independently
 15 movable thereof, a gripper-carriage movable between the plunger and the stamp-receptacle, a bell-crank lever fulcrumed on the body portion and having loose connection with the
 20 gripper-carriage, and a connection between the bell-crank lever and the plunger, substantially as described.

3. The combination with a body portion having a stamp-receptacle, of a plunger movable in the body portion, a rod independently
 25 movable of and actuated by the plunger, a follower carried by the rod, a gripper-carriage movable between the stamp-receptacle and the follower, a bell-crank lever fulcrumed
 30 on the body portion and having slotted connection with the gripper-carriage, and a flexible connection between the plunger and the bell-crank lever, substantially as described.

4. The combination with a body portion having a slideway, of a carriage movable on
 35 the slideway, a gripping-plate pivotally mounted in the carriage, a rod fixed to the gripping-plate, and a bell-crank lever having one arm slotted to receive the rod, the bell-
 40 crank lever being capable of movement to in unison rock the gripping-plate and to slide the carriage and means for actuating the bell-crank lever, substantially as described.

5. The combination with a body portion having a slideway, of two hangers forming a
 45 carriage, the hangers being connected with each other to move in unison and having transversely-aligned arc-shaped slots, a gripping-plate pivoted between the hangers, a rod fixed
 50 to the gripping-plate and projected and movable through the slots in the hangers, a bell-crank lever, one arm of which is slotted to receive the rod, the bell-crank lever being
 55 capable of movement to in unison rock the gripping-plate and to slide the carriage and means for actuating the bell-crank lever, substantially as described.

6. In a stamp-fixing machine, the combination with a body portion, of a follower, a plunger operating the follower, a sliding gripper-
 60 carriage movable toward and from the follower, a pivoted gripping-plate supported by the carriage, a bell-crank lever fulcrumed on the body portion and having pivotal and slid-
 65 ing connection with the gripping-plate where-

by the carriage may be reciprocated and the gripping-plate rocked to engage the stamps, and a connection between the plunger and the bell-crank, substantially as described.

7. In a stamp-fixing machine, the combination with a body portion, of a plunger, a follower, the plunger operating the follower, two
 70 hangers forming a gripper-carriage and slidable in unison on the body portion, each hanger having an arc-shaped slot, a gripping-
 75 plate pivotally mounted between the hangers, a rod fixed to the gripping-plate and movable through the slots of the hangers, a bell-crank lever slotted to receive the rod, and a
 80 connection between the bell-crank lever and the plunger, substantially as described.

8. In a stamp-fixing machine, the combination with a body portion having two side bars, of a frame movable longitudinally in the side
 85 bars and capable also of slight vertical movement, a roller carried by the frame, an arm having limited pivotal movement on the frame, a roller carried by the arm and running on the body portion, and a detent rigid
 90 with the body portions and in the path of the arm, substantially as described.

9. In a stamp-fixing machine, the combination with a body portion having two slotted
 95 side bars, of a frame capable of longitudinal and vertical movement within the slots of the side bars, a roller carried by the frame and capable of engaging a part of the body portion, an arm having limited pivotal movement on the frame, and a detent-plate carried
 100 by the body portion, substantially as described.

10. In a stamp-affixing machine, the combination with a body portion having a detent, of a frame having sliding and vibratory movement on the body portion, and an arm carried
 105 by the frame and having limited movement thereon, the arm running on the body portion and supporting the frame raised above the body portion when the arm is in one position and the arm being tripped by the detent to
 110 lower the frame into engagement with the body portion, substantially as described.

11. In a stamp-affixing machine, the combination with a body portion having two detents, of a frame reciprocal past the detents,
 115 means for reciprocating the frame, and an arm carried by the frame and having limited movement thereon, the position of the arm being changed upon engagement with each detent and the arm in one position supporting
 120 the frame raised from engagement with the body portion and in the second position permitting the frame to be lowered into engagement with the body portion, substantially as described.

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Witnesses:

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