(No Model.) 2 Sheets—Sheet 1.

J. J. McDADE.

MACHINE FOR AFFIXING POSTAGE STAMPS OR GUMMED LABELS.

No. 549,650. Patented Nov. 12, 1895.

Fig. 1.

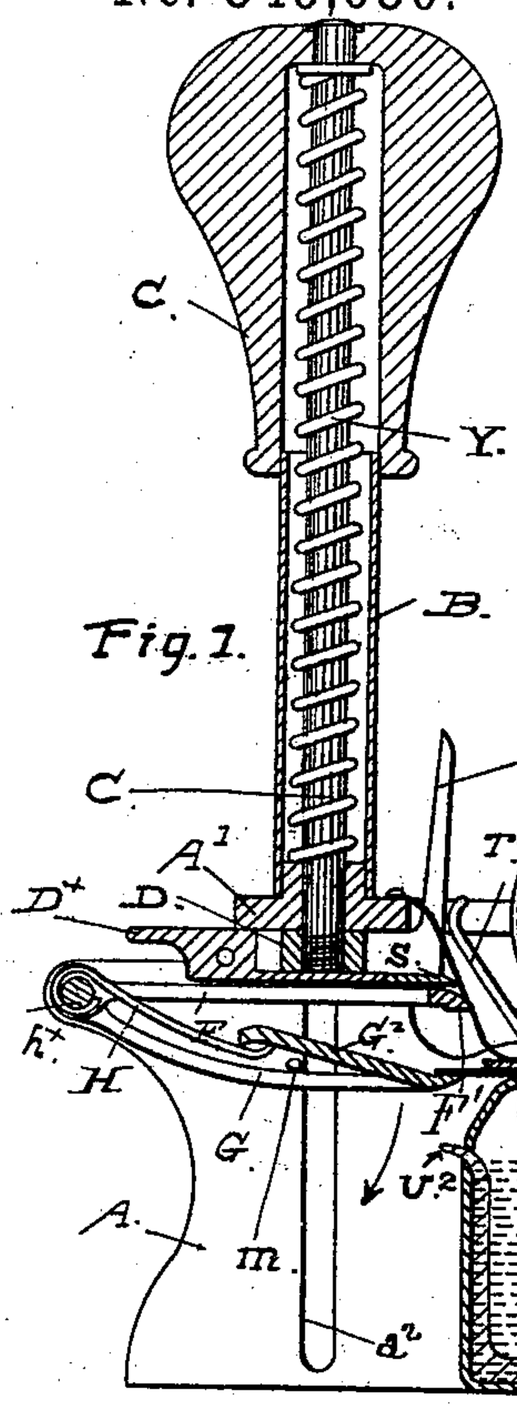


Fig. 5.

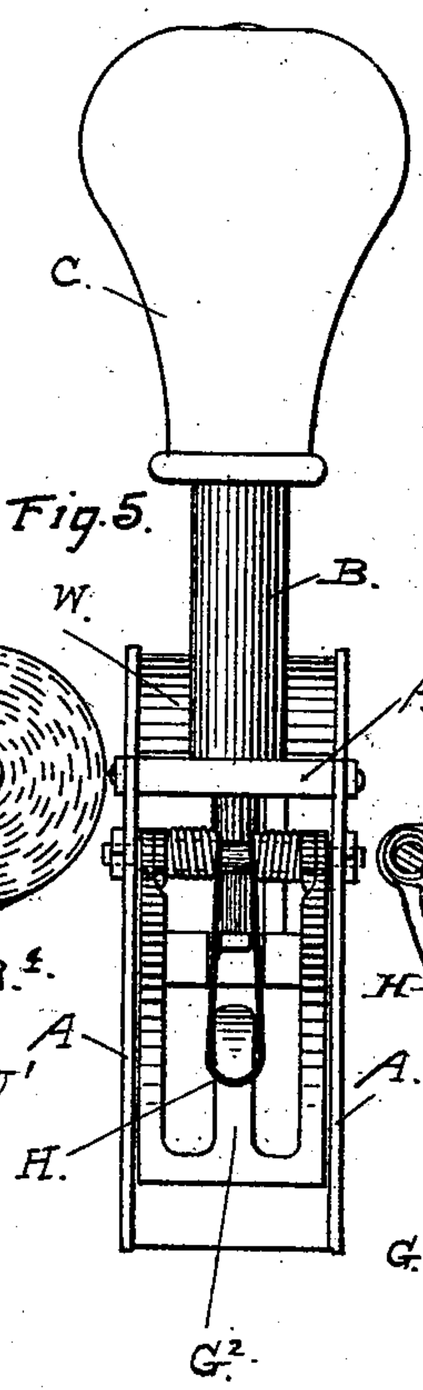


Fig. 2

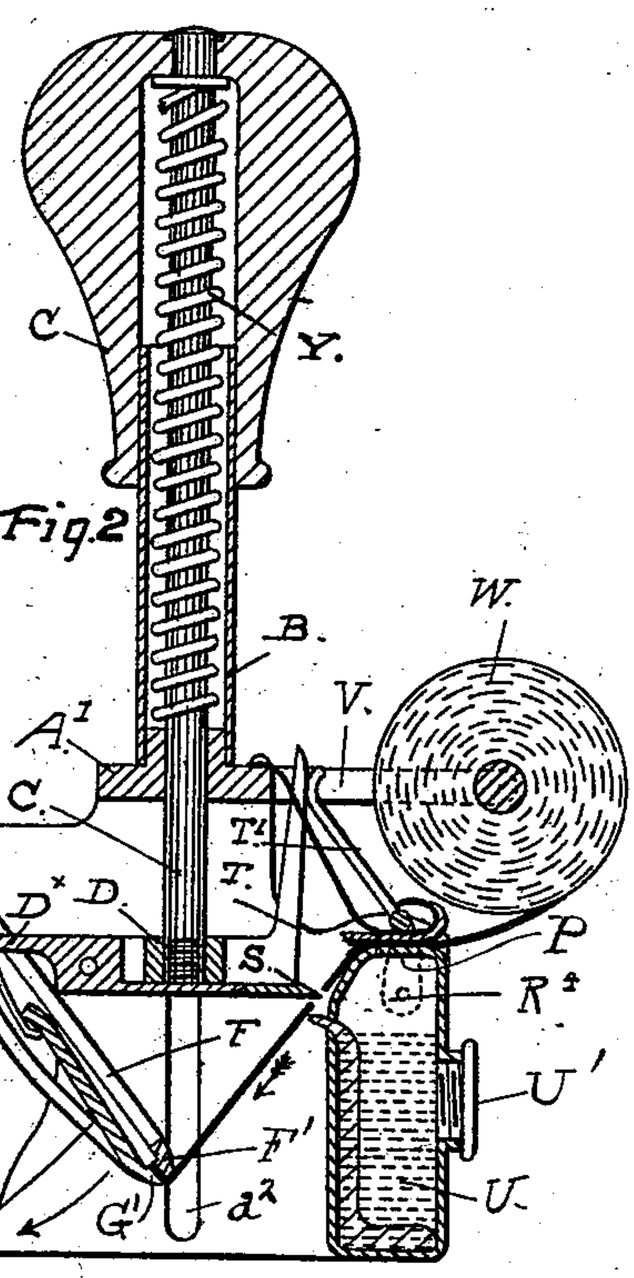


Fig. 3.

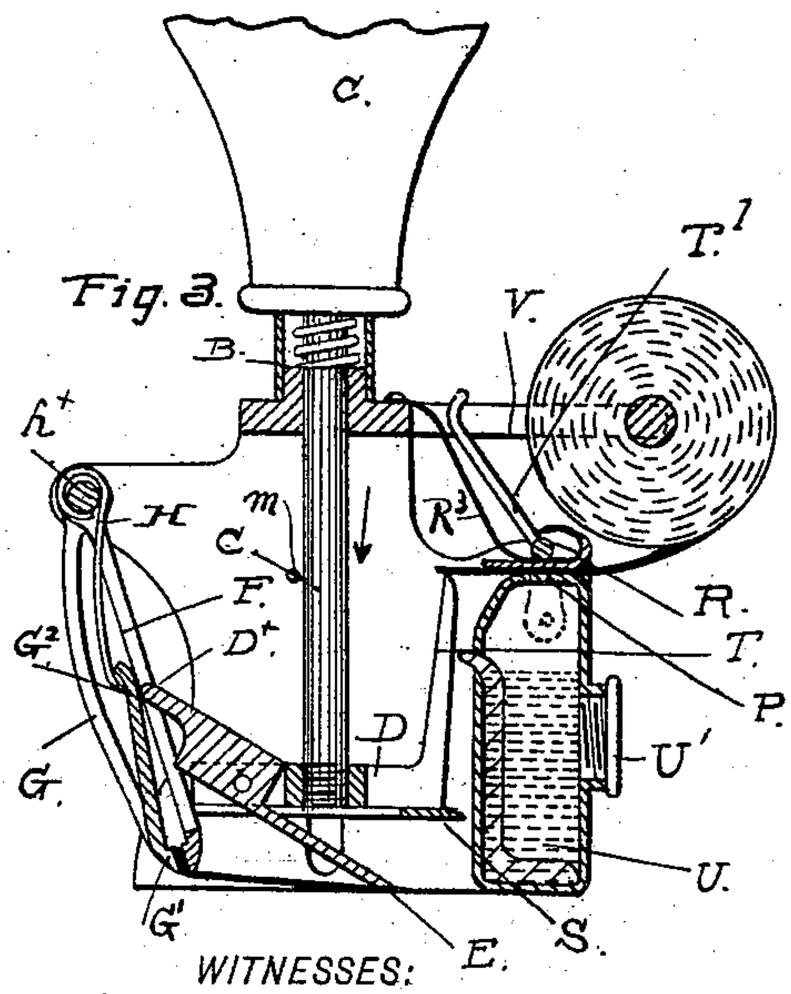
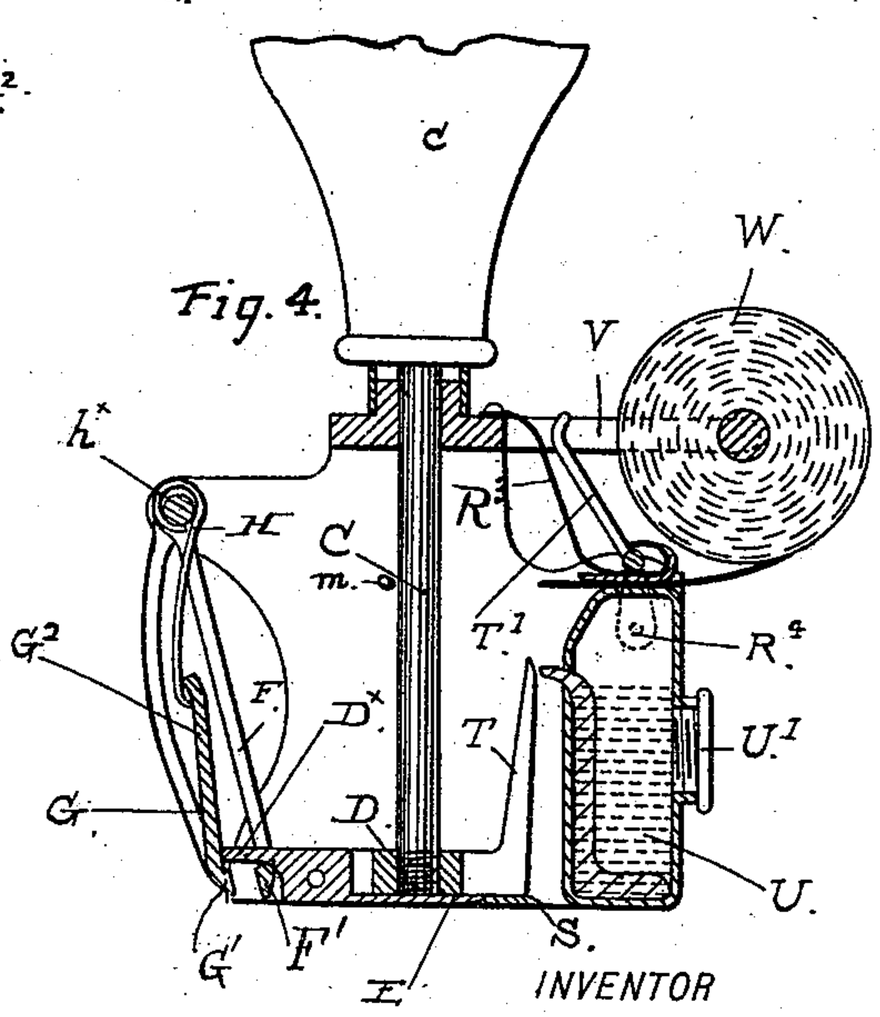


Fig. 4.



WITNESSES:
Edward M. Dade.
M. Regner.

INVENTOR
John J. McDade
BY Smith & Osborn
ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

J. J. McDADE.

MACHINE FOR AFFIXING POSTAGE STAMPS OR GUMMED LABELS.

No. 549,650. Patented Nov. 12, 1895.

Fig. 6.

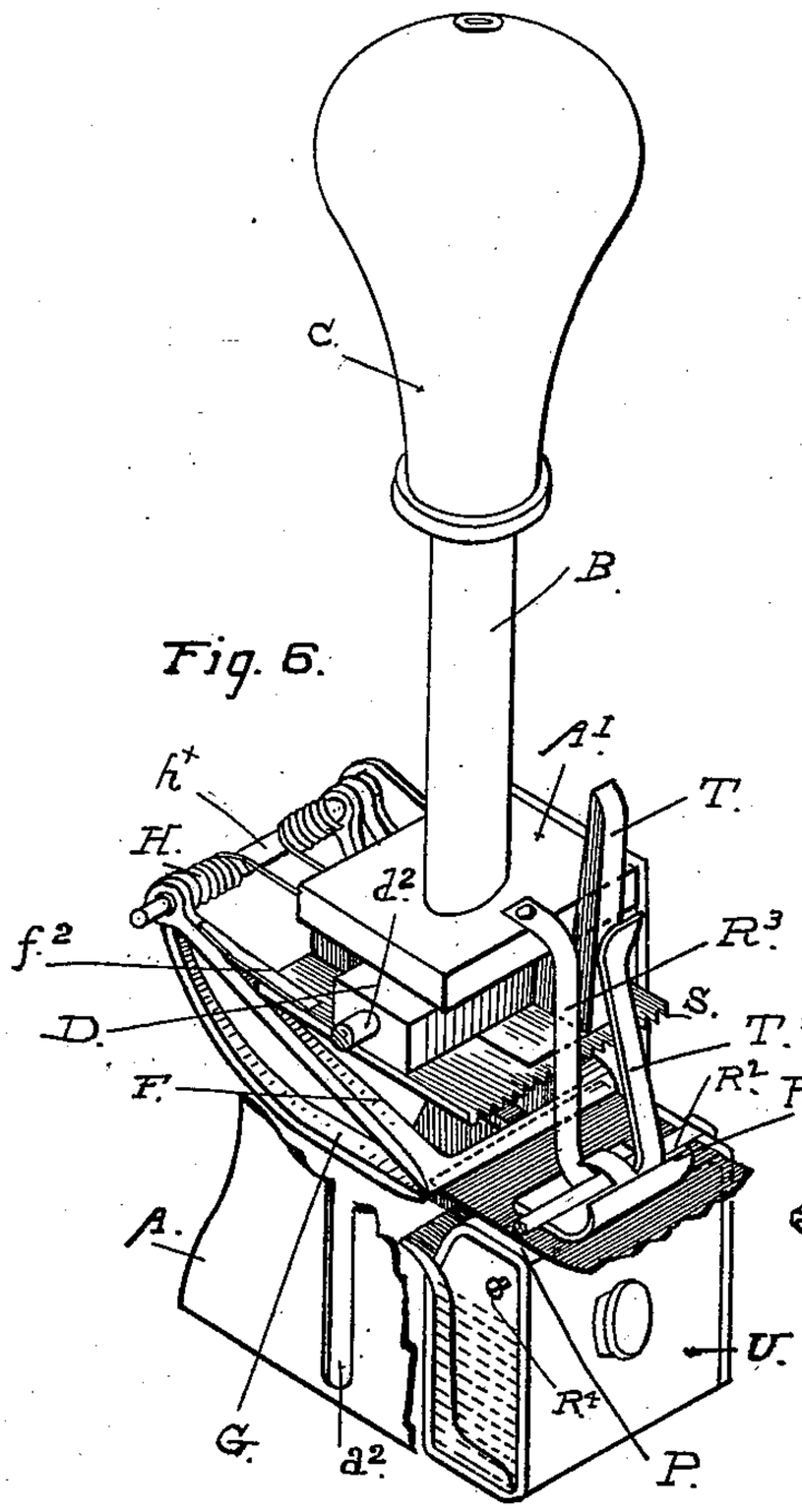


Fig. 7.

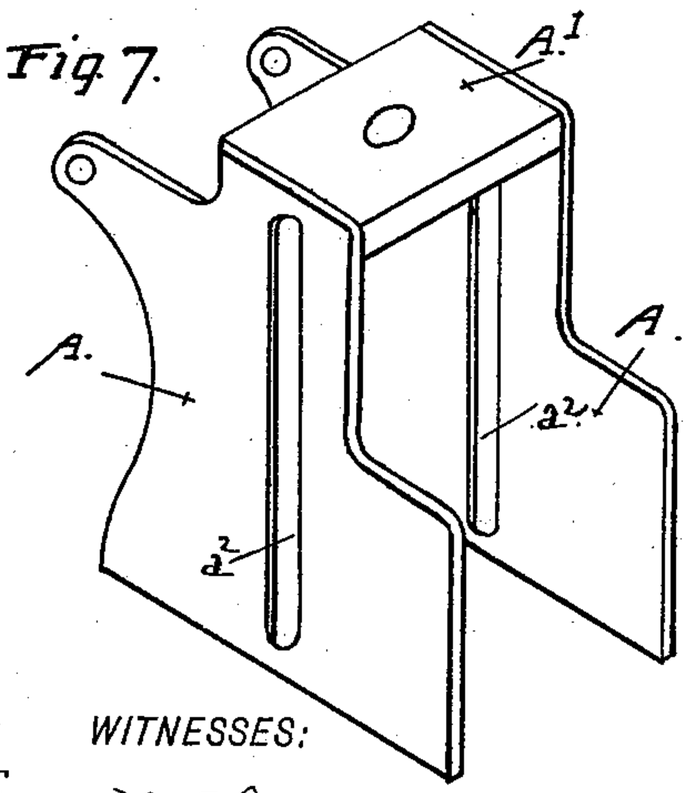


Fig. 8

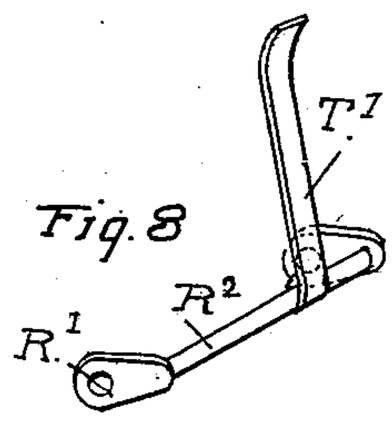


Fig. 9.

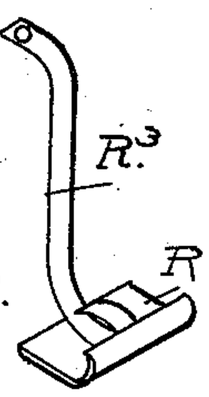


Fig. 11.

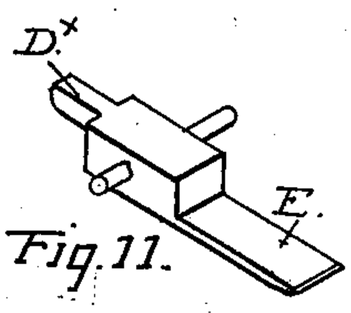


Fig. 10

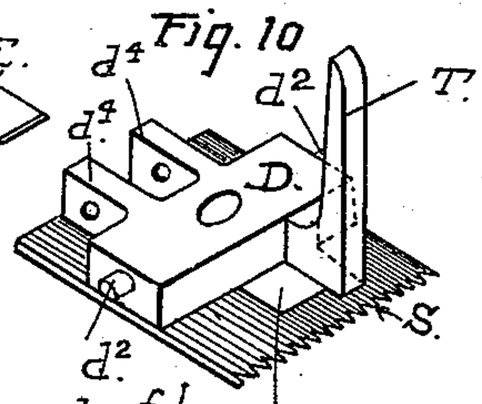


Fig. 13.

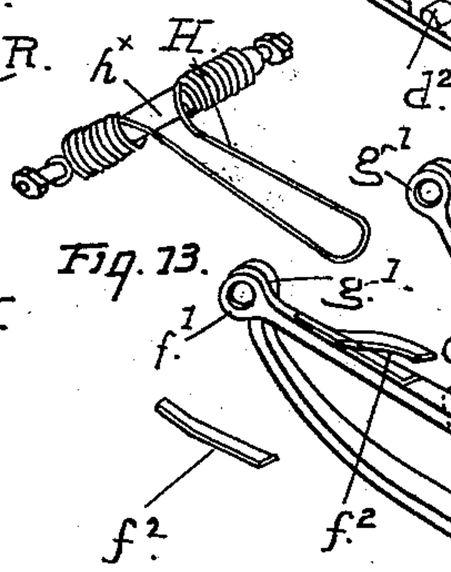
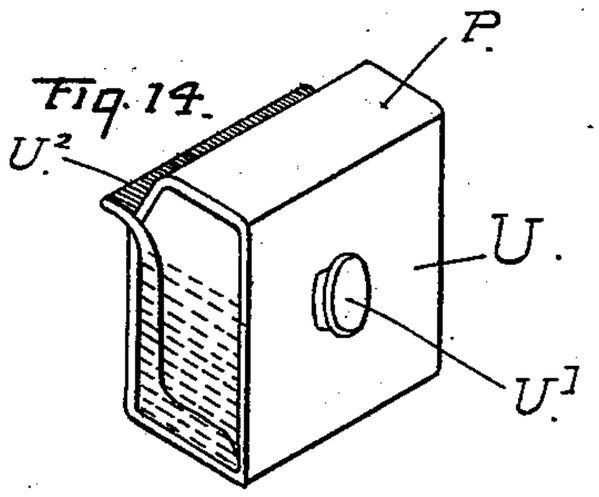


Fig. 12.

Fig. 14.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN J. McDADE, OF SAN FRANCISCO, CALIFORNIA.

MACHINE FOR AFFIXING POSTAGE-STAMPS OR GUMMED LABELS.

SPECIFICATION forming part of Letters Patent No. 549,650, dated November 12, 1895.

Application filed November 10, 1894. Serial No. 528,406. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. McDADE, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Machines for Affixing Postage-Stamps or Gummed Labels, of which the following is a specification.

My invention relates to improvements made in machines or mechanical devices that are constructed to separate a postage-stamp or a label from a continuous strip or ribbon, moisten the back, and fix it to a letter or other object by pressure applied upon the face; and the improvements constituting my present invention, consist mainly in certain mechanisms of novel construction and operation combined and arranged within and upon a suitable frame and all actuated by the single downward movement of a vertical plunger or rod, as hereinafter fully explained, and composed of the following elementary parts: a reel holding a ribbon of stamps or labels, in which they are divided by lines or perforations in the usual manner for ready separation; a clamp holding the end of the ribbon and presenting it in position to be seized and drawn from the reel; a pair of gripping-jaws swinging in the arc of a circle and adapted to seize the free end of the strip or ribbon and draw it outward and downward a given distance; a reciprocating head and a plunger operating to close the jaws upon the end of the strip and move the jaws downward toward the surface upon which the machine is placed; a device on the reciprocating head, acting in the working movement of that part to detach the seized stamp or label from the strip at the line of perforations; a presser-foot on the bottom of said head acting to press the stamp or label flat and smoothly upon the surface or object set beneath it, and a moistening device in the frame to wet the gummed surface of the stamp or label before it is severed from the strip. Several of these parts also are novel in their construction and operation, and the novel features thereof are hereinafter more fully described, and pointed out in the claims.

The following description explains the manner in which I proceed to construct, produce, and apply my said improvements, reference being had to the accompanying drawings, that form part of this specification.

In the drawings, Figure 1 is an elevation in longitudinal section of a machine embodying my said improvement. Fig. 2 is a similar view, in section, showing the position of the parts when the seized stamp is in the act of being drawn from the reel. Fig. 3 is a sectional view showing the position of the parts when the severed stamp is pressed against the surface on which it is being fixed. Fig. 4 shows the position of the parts after the stamp is fixed. Fig. 5 is an end view looking at the left-hand side of Fig. 1. Fig. 6 is an isometric view of the machine, the parts being in position with the end of the strip seized by the jaws. Fig. 7 is an isometric view of the frame. Figs. 8, 9, 10, 11, 12, and 13 are isometric views in detail of the separate pieces. Fig. 14 is a view of the water-tank.

A skeleton frame to contain and carry the operating parts is constructed with parallel upright sides A A and a cross-piece A′, uniting the sides across the top. In this cross-piece is fixed a relatively long tubular socket B, that forms a guide for a rod or plunger C. To the lower end of this rod is fixed a square foot-plate D, the bottom of which is finished flat to form a presser-foot, and to the top end of the same rod is fixed a knob or head C′, bored and fitted to slide smoothly over the fixed tube B, and of suitable length also to let it play up and down upon the tube.

The shape of the part D is shown in Fig. 10, Sheet 2. On its sides are lugs or projections d^2 d^2, playing in vertical guide-slots a^2 in the sides of the frame, and in the center is a longitudinal slot or opening d^3, in which is pivoted a toe-piece E, filling the slot when closed down and setting flush with the bottom face that forms the presser-foot. This toe-piece is pivoted between lugs d^4 on the heel of the foot, and it extends beyond the pivot, terminating in the backwardly-projecting finger $D^\times$, the function of which will be explained hereainfter in connection with the part it operates upon.

F and G are two skeleton jaws having at the front the opposing straight gripping-faces F′ G′ and at the rear or opposite end termi-

nating in eyes or knuckles f' g'. The width of these jaws or that of the gripping portions at the front end corresponds to the width of the stamp or label strip, and at the rear end they are set on a shaft or bar $h^{\times}$, the ends of which are fixed in the sides of the frame, the knuckles being fitted on this bar to turn smoothly.

H is a spring-bridle formed of coils placed on and carried by the bar $h^{\times}$. A long loop, extending from these coils forward and under the lower one G of the jaws, bears against the back of a stiff tongue G^2 in the center of the jaw. The function of this spring is to hold up that jaw with sufficient degree of force to grip and hold the end of the strip when it is seized between the jaws and during the downward movement of the jaws on the pivot $h^{\times}$. The upper jaw is raised and held up against the presser-foot, when that part is at its highest point, by a projecting lip f^2 on the top of that jaw, under which the back end of the presser-foot catches in the movement of the lower jaw in the upward direction, so that the foot raises and holds up the jaw when it is at rest. The upward movement of the lower jaw is limited by a stop-pin m on the inside of the frame, and by these joint means the two jaws are spread apart to take in the end of the strip as often as the presser-foot is returned to the highest point of its movement in the frame. As long as the two jaws stand at rest the lower one is held directly in line with and in close relation to the edge of the stationary bed P, fixed between the sides of the frame, and on this bed the free end portion of the strip is held by a yielding clamp R, the construction and arrangement of which part will be understood from Figs. 8 and 9, Sheet 2. This device is formed of a flat plate attached to one end of a flat spring-arm R^3 and by that piece held down upon the bed P, the said spring being fixed at the upper end to the top A′ of the stationary frame. The pressure of this plate R upon the strip of stamps or labels is sufficient to hold it from slipping and is at the same time so regulated that the strip is drawn readily off the reel by the feeding mechanism; but in addition to this function the plate R is caused to grip the strip and hold it firmly on the bed at the time in the downward stroke of the presser-foot when the stamp seized by the jaws is to be detached from the strip. The means by which the plate R is so caused to act consists of a rod or bar R^2, setting across the bed P, over the plate, and attached to the sides of the machine-frame or the box U at points below the plane of the label-bed by means of short arms R′, loosely attached to the sides of the frame by pivot-screws R^4 and rigidly attached to the ends of the said rod, so that the rod has a limited rocking movement in an arc on the screws R^4 as a center. Such movement of the rod in an outward and downward direction causes it to press the plate down upon the bed P, but in the opposite direction to rise and stand clear of the plate without exerting any pressure upon it. This before-mentioned means consists of the rigid finger T on the presser-foot and the rigid post T′, fixed on the clamp and shaped to set in the path of the finger and be pressed downwardly by the contact of that part with its top end. Both the finger T and the standing post T′ are bent to shape, as seen in Figs. 6, 8, and 9, so that in the movement of the presser-foot downward the part T, striking the top of the other part T′, will bear upon it and press the clamp R strongly down against the bed beneath it at the moment that the seized stamp is severed from the strip. During the remainder of its movement the finger will give no additional pressure and only the spring R^3 will act.

Beneath the stationary bed before mentioned a device to moisten the gummed back of the stamp or label is situated. This part consists of a water-tank U, provided with an opening in the front, closed by a screw cap or plug U′, and having in the back a slit or narrow opening extending from side to side, directly under and in line with the back edge of the bed, the top of the tank in this case forming the stationary bed before mentioned. In the tank and projecting to the outside through the slit is a moistening-pad U^2, of some suitably soft and absorbent material, having sufficient projection to touch the gummed face of the strip as the same is drawn downward by the swinging jaws.

The reel W, holding the strip of stamps or labels, is mounted directly over the bed and moistening-tank, suitable supports, such as the arms or brackets V V, being provided on the frame.

The means to sever one stamp or label from the next one on the strip consists of the straight blade formed with a notched or serrated edge S on the front end of the presser-foot or that side of the foot which is presented next to the edge of the label-bed. This cutting or severing edge is set at such height or position with relation to the jaws F G and to their movements that as the presser-foot or part on the end of the plunger descends and carries the closed jaws with the end of the stamp or label between them downward past the edge of the bed the serrated edge will come in contact with the smoothly, stretched strip just at the line of perforations, and at that time the parts T T′ are adjusted to come into working contact and press down the clamp R. This point at which the blade S and the strip come in contact is so regulated that it is below the back edge of the bed, and consequently a portion of the strip at the end, after the stamp is severed, is left to extend outward from between the clamp and bed and beyond the edge of the bed. The free portion of the strip thus projecting is of sufficient length to be seized and gripped by the swinging jaws in the next downward movement, and the end of the strip springs

into place upon the end of the lower jaw as the upper jaw passes it and reaches the end of its upward movement. At such time the two jaws are separated and remain standing open until the plunger is pressed down again. The movements of these several parts and mechanisms at different times in the operation of the machine are illustrated particularly in Figs. 1, 2, 3, and 4, Sheet 1.

The first position at the beginning of the operation is shown in Fig. 1, when the jaws stand open ready to seize the free end of the strip that is resting on the lower jaw, and in the downward stroke of the plunger, the jaws first being closed, move downward in an arc, drawing the strip of stamps off the reel a sufficient distance to bring the first line of perforations to the required distance beyond the rear edge of the bed to be caught by the severing-blade. This last-mentioned position is illustrated in Fig. 2. The third position, Fig. 3, represents the position of the parts when in the continued movement of the plunger the gripping-jaws approach the end of their swing and the presser-foot is in close proximity to the surface on which is to be fixed the severed stamp. At this time in the movement of the presser-foot the hinged toe in the opening of the foot is thrown down in advance of the foot by the finger making contact with and being pressed upward by the tongue on the lower jaw G, so that the outer end of the toe presses upon the free end of the stamp or label and holds the same down just before the presser-foot comes down against the stamp. By the before-mentioned contact of the finger with the tongue G^2 the jaw G is pressed back, and thus the jaws are opened, and the stamp is released just as the presser-foot makes full contact and pressure upon and over the entire breadth of the top face of the stamp.

The spiral spring Y in the handle is of suitable power to bring the handle and plunger readily up into position as soon as the pressure on the plunger is taken off, and this movement takes place when the parts are in the position represented in Fig. 4, with the plunger at the end of the stroke, and as soon as the pressure of the hand is taken off the plunger.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a plunger-socket; a plunger having a presser-foot on the lower end and a handle on the upper end; a spring actuating said plunger in one direction; a pair of gripping-jaws hinged together at one end, the said hinge being located to one side of the line of the plunger and movable in an arc beneath the presser-foot, whereby said jaws are closed together in the downward movement of the plunger; a spring beneath the lower jaw acting to hold it against the upper jaw; a stop on the frame to limit the upward movement of the lower jaw; means on the presser-foot for detachably connecting the upper jaw to the presser-foot as that part arrives at the limit of the upward movement; and means actuated by the presser-foot to separate the jaws at the end of the downward stroke of the presser-foot, constructed for operation substantially as set forth.

2. The combination of the vertically movable presser-foot; a pair of jaws hinged together at one end and movable in a vertical arc on said hinge as a center to swing inward and beneath, and outward and to one side out of the path of said presser-foot; a spring acting to hold the lower jaw against the upper jaw, and a stop limiting its upward movement without affecting the upper jaw; means for holding the upper jaw in open position to be pressed down by the plunger; and a hinged toe-piece on the presser-foot adapted to make contact with the surface against which the presser-foot is pressed in advance of the presser-foot and by such contact to force back the lower jaw from the upper jaw and open the opposing gripping edges, substantially as described.

3. The combination, of the stationary-bed, a clamp-plate upon the bed, a reciprocating presser-foot, a spring serving to hold the clamp against the bed, the fixed projecting finger on the presser-foot and a standing post on the clamp located in the path of the finger and adapted by the contact of that part in the downward movement of the presser-foot to exert pressure upon the back of the clamp, substantially as described.

4. The combination, of the vertically-reciprocating presser-foot; a pair of hinged jaws beneath the presser-foot movable in a vertical arc and by the contact of the presser-foot with the upper jaw adapted to be closed together and to be moved to one side from beneath that part in its downward movement; a spring serving to return said jaws to position in the return movement of the presser-foot; a stationary-bed and a yielding clamp located with relation to the front end of the jaws as described; means for throwing open said jaws at the end of their upward swing; a severing blade located on the presser-foot and over the upper jaw in position to strike the strip seized in the jaws and to sever it at a point between the jaws and the stationary-bed; and means operated by the presser-foot to hold the clamp against the bed at the time of such contact and separation of the said portion from the strip by the blade, substantially as described.

5. In a machine for affixing postage stamps and gummed labels, the combination of a reel, a stationary-bed and a yielding clamp upon said bed; a vertically reciprocating presser-foot; a pair of hinged jaws movable in the arc of a circle on the said hinge as a center and swinging forward into position under the presser-foot to seize the end of the strip from the reel and by the backward movement in an arc to carry the stamp into position under the presser-foot; means for opening said jaws

at the end of their downward throw to release the stamp; a moistening device over which the stamp is drawn by the said jaws; means for holding the jaws open in their position of rest before the presser-foot acts upon them; and means actuated by the presser-foot to sever the stamp in the downward movement of that part after the jaws have seized and closed upon the stamp, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

JOHN J. McDADE. [L. S.]

Witnesses:

EDWARD W. McDADE,

EDWARD E. OSBORN.