

Nov. 23, 1965

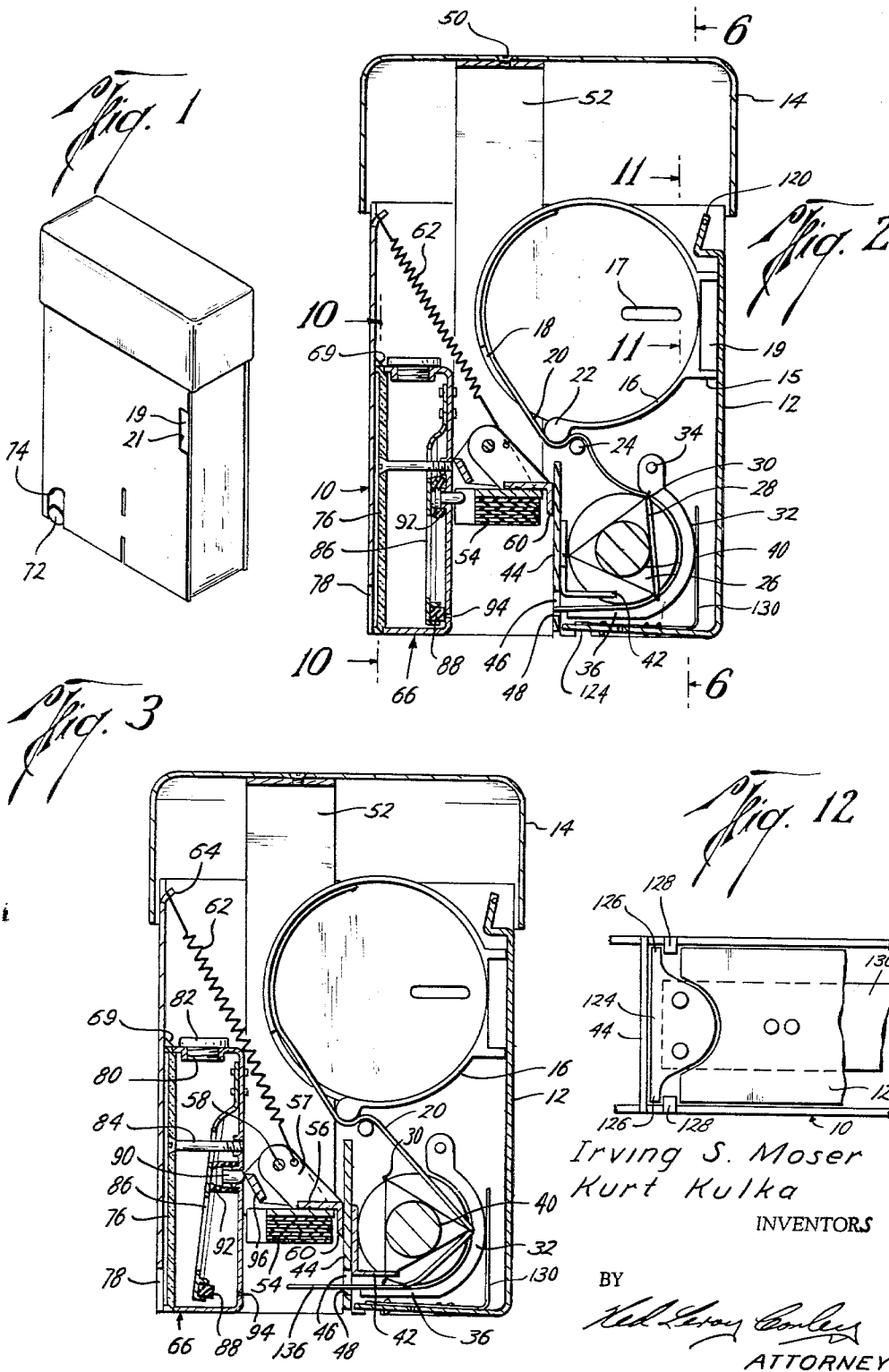
I. S. MOSER ETAL

3,219,511

STAMP AFFIXER

Filed Dec. 11, 1962

4 Sheets-Sheet 1



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Fig. 4

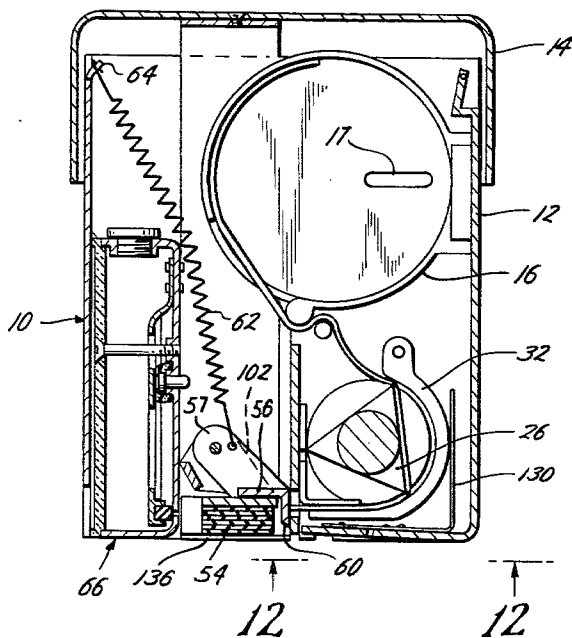


Fig. 6

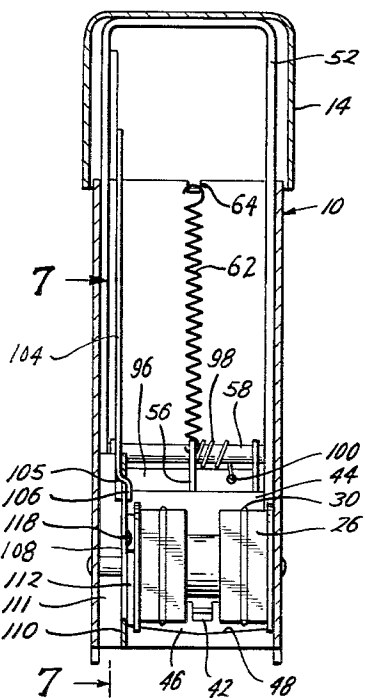
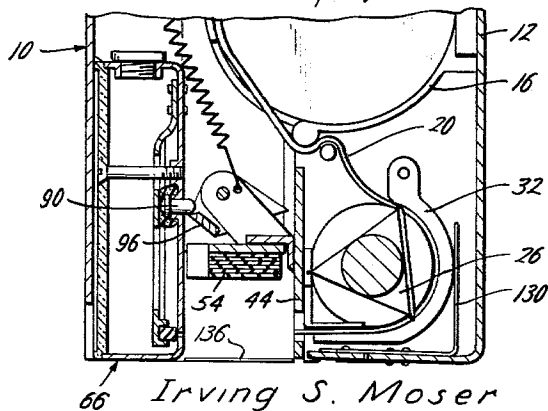


Fig. 5



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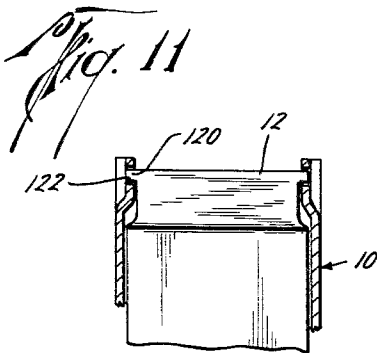
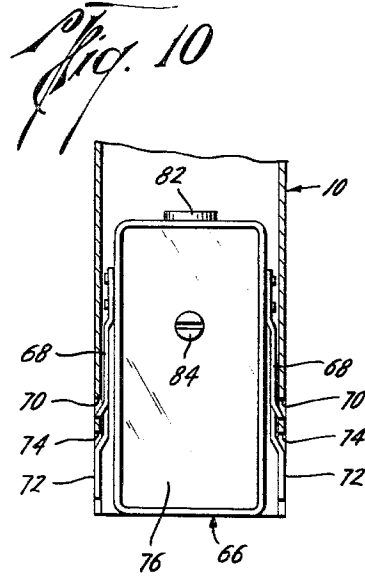
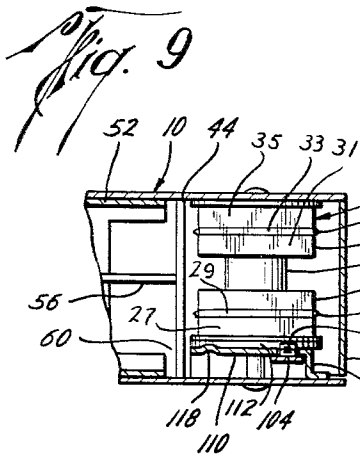
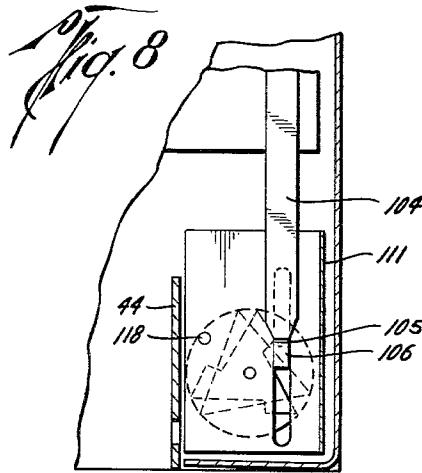
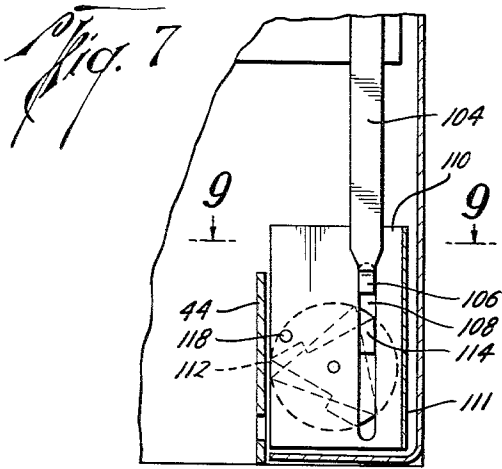
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STAMP AFFIXER

Filed Dec. 11, 1962

4 Sheets-Sheet 3



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STAMP AFFIXER

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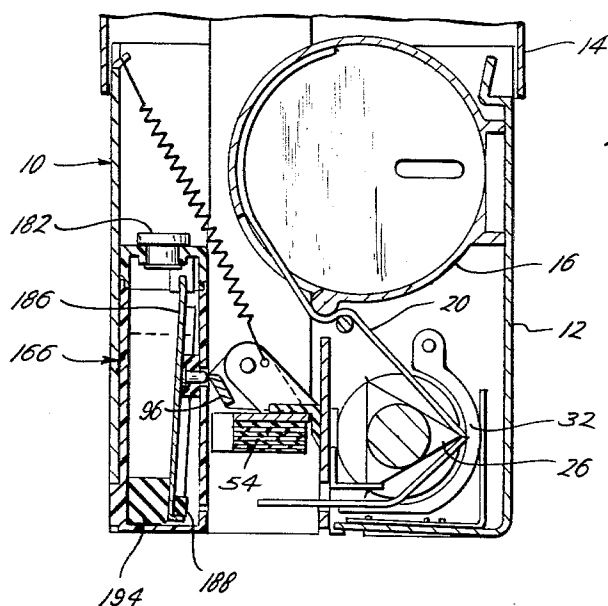


Fig. 13

Fig. 14

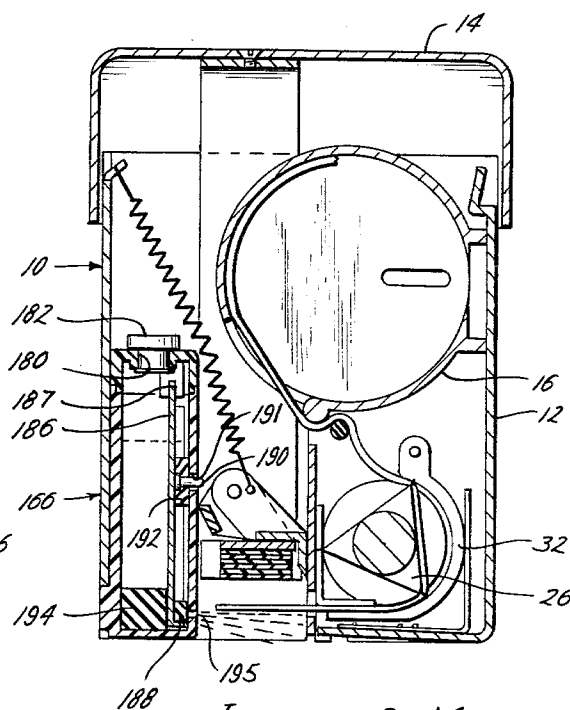
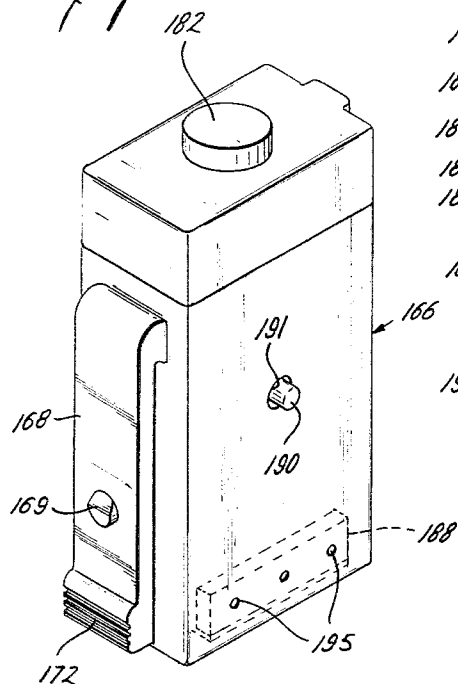


Fig. 15



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3,219,511 STAMP AFFIXER

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Altos, Calif., a corporation of Delaware
Filed Dec. 11, 1962, Ser. No. 243,953
3 Claims. (Cl. 156-532)

This invention relates to the apparatus for quickly and easily affixing postage stamps.

This application is a continuation-in-part of copending application Serial No. 187,340, filed April 13, 1962, and now abandoned.

The apparatus of this invention is a small portable device which is adapted to contain a supply of postage stamps and which with a relatively simple movement feeds the stamps one at a time, cuts the stamps apart, wets them and presses them against the surface against which the stamp is to be affixed. The invention includes the novel means for feeding the stamps and further includes novel apparatus for properly depositing moisture as required for adherence of the stamp to the surface.

Other novel features and advantages of this invention will become more apparent upon consideration of the following description and the accompanying drawings wherein

FIGURE 1 is a perspective view of one embodiment of the invention showing the outside appearance of the embodiment;

FIGURE 2 is a vertical sectional view of one embodiment of the invention showing the apparatus in its normal condition, i.e. as it appears when at rest;

FIGURE 3 is a vertical sectional view similar to FIGURE 2 except showing the apparatus in the process of being actuated;

FIGURE 4 is a view similar to FIGURES 2 and 3 except showing the apparatus in a fully actuated condition;

FIGURE 5 is a view of the lower portion of the embodiment shown in FIGURES 2, 3 and 4 showing the apparatus in the condition of partial return to normal position;

FIGURE 6 is a vertical sectional view of the embodiment of FIGURES 2 through 5 taken at line 6-6 of FIGURE 2 but with portions being removed for clarity;

FIGURE 7 is a fragmentary vertical sectional view of the embodiment of FIGURES 1 through 6 taken at line 7-7 of FIGURE 6;

FIGURE 8 is a view similar to that of FIGURE 7 but showing the apparatus in a partially actuated condition as in FIGURE 3;

FIGURE 9 is a fragmentary horizontal sectional view of the embodiment of FIGURES 1 through 8 taken at line 9-9 of FIGURE 7;

FIGURE 10 is a fragmentary vertical sectional view of the embodiment of FIGURES 1 through 9 taken at line 10-10 of FIGURE 2;

FIGURE 11 is a fragmentary vertical sectional view of the foregoing embodiment taken at line 11-11 of FIGURE 2 with parts being removed for clarity;

FIGURE 12 is a bottom view of a portion of the foregoing embodiment, taken at line 12-12 of FIGURE 5;

FIGURE 13 is a vertical sectional view of another embodiment of the invention, shown at the same stage of actuation as in FIGURE 3;

FIGURE 14 is a vertical sectional view of the embodiment of FIGURE 13, shown in fully actuated position as in FIGURE 13; and

FIGURE 15 is an enlarged perspective view of the water can used in the embodiment of FIGURE 13.

The mechanism of the apparatus of this invention is contained within a housing 10 which is provided with a pivotably opening door 12 which may be opened for inser-

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tion of a new roll of stamps. A cap 14 fits over and closes the upper end of the housing and forms means for actuating the mechanism. Affixed within the upper portion of the housing and adjacent the door side of the housing is a removable cylindrical cup shaped receptacle utilized as a cartridge for a roll of postage stamps, the receptacle being identified by number 16 in FIGURE 2 of the drawing. The stamp cartridge is provided with a flat boss 15 on the side thereof facing the door 12, and this boss has a laterally extended lug 19 which nests in a notch 21 in the wall of the housing (see FIG. 1), so as to properly position the cartridge in the housing. An aperture 17 is provided in the housing and in the cartridge for observation of the amount of stamps in the cartridge.

The cylindrical wall of the receptacle is broken to provide an opening 18 therein through which stamps may be fed to the mechanism of the apparatus. As shown in the drawing, a strip of stamps 20 is being fed through this opening. The edge of the cylindrical wall forming the lower end of the opening 18 is formed in a cylindrical bead 22. A pin 24 extends through the housing and is utilized to hold the housing together. This pin is parallel to and spaced slightly away from the cylindrical bead 22 and is positioned so that its upper surface is slightly above the lower surface of the bead 22. The spacing between the pin 24 and bead 22 is sufficient to allow the strip of stamps 20 to be threaded therebetween so that the strip of stamps passes below the bead 22 and above the pin 24.

In the lower portion of the housing 10 a feed wheel 26 is provided to feed the strip of stamps upon actuation thereof. In the embodiment shown, the feed wheel comprises a block having a triangular cross section and having a length slightly greater than the width of the stamps being fed thereby. Cross sectional configurations other than triangular, e.g. four, five or more sides, can be used, and a square cross section feed wheel gives excellent results, but the triangular configuration has been found to be the optimum configuration because of space-saving considerations. The feed wheel is rotatably disposed about an axis parallel to the pin 24 and the bead 22, and is positioned below the receptacle 16 and near the lower end of the housing and also adjacent the door 12.

In a particularly advantageous construction, the feed wheel is laminated, being formed of five separate pieces 27, 29, 31, 33, and 35 (see FIG. 9) which are assembled together by means of cement or by dowel pins extending therethrough in a well-known manner. When such construction is used, elements 27, 31 and 35 are advantageously molded from plastic, and elements 29 and 33 are stamped from sheet metal. Small integrally formed pins 30 project from each corner of elements 29 and 33, which are spaced apart by element 31 so that the pins 30 can engage the perforations between stamps in the stamp well. The width of each side 28 of the feed wheel is preferably no greater than about the width of a stamp so that when the pins 30 on the corners of the feed wheel are engaged in the perforations between adjacent stamps, a single stamp will overlay one side of the feed wheel. It will be appreciated that when the pins 30 are engaged in the perforations between adjacent stamps a rotation of the feed wheel through 120 degrees will feed a single stamp from the roll within the receptacle 16. As the stamps are fed from the receptacle around pin 24 they will be pulled against this pin in a reverse bend so as to remove the curvature in the stamp which resulted from rolling the strip of stamps. This greatly assists in insuring that the stamp is substantially flat when it is applied to an envelope or other surface to which the stamp is to be affixed.

Referring now to FIGURES 2-5, it is seen that a shoe 32 is pivotally attached to the housing at 34, the pivot axis being parallel to the axis of the feed wheel 26. Shoe 32 is an arcuately formed element extending slightly more

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than 120 degrees around the feed wheel and spaced slightly away from the feed wheel so as to allow the strip of stamps 20 to be fed therebetween. The width of the shoe 32 is preferably such as to fit between the pins 30 on the feed wheel. In addition to its arcuate portion the lower end of the shoe has a straight portion 36 tangent to the arcuate portion and extending horizontally so as to support the strip of stamps being fed by the wheel.

Referring again now to FIGURE 9, it will be seen that the center element 31 of the feed wheel comprises two triangular portions 38 with a reduced preferably cylindrical portion 40 therebetween. This reduced cylindrical portion is provided in order to allow clearance for a stamp takeoff member 42 which may be seen in FIGURES 2 through 5. This stamp takeoff member is an L-shaped device which functions as a doctor blade and is mounted on a mounting bracket 44 which comprises a vertical wall extending from the lower end of the housing up to above the elevation of the feed wheel. The stamp takeoff member 42 is a relatively narrow width element which extends into the space formed by the reduced cylindrical portion 40 of the feed wheel so as to disengage the stamps from the lower portion of the feed wheel and cause the stamps to be fed through a horizontally disposed aperture 46 in mounting bracket 44. Thus the stamps are fed between the straight portion 36 of the shoe and the stamp takeoff member. The lower edge of the aperture 46 also comprises a stationary knife blade 48 as will become apparent hereinafter.

Mounting bracket 44 serves many important functions in the apparatus of this invention. It serves as a support for the stamp takeoff member and as a stationary knife, and also separates the stamp feeding portion of the mechanism of this invention from the remainder of the mechanism.

The cap 14 has affixed thereto by means of screws 50 an actuator frame 52 which extends downwardly from the cap within the housing and is slidably disposed between the walls of the housing on the side of the mounting bracket 44 opposite that of the feed wheel. The configuration of this actuator frame 52 is more clearly shown in FIGURE 6 wherein the apparatus is shown with the door 12 and stamp receptacle 16 removed and with the cap shown in section. Affixed to the lower end of the actuator frame 52 is a resilient pad 54 which is proportioned to engage substantially the entire surface of an individual stamp so as to press the stamp down onto the surface to which it is to be affixed. The actuator frame is of a length sufficient for the pad to be moved to the lower end of the housing when the apparatus is in the actuated position as shown in FIGURE 4. A moving knife mounting bracket 56 is affixed within the actuator frame 62 just above the pad 54, being pivotally mounted on a pin 58 which extends through an arm 57 on the mounting bracket. The mounting bracket 56 has attached thereto a moving knife 60 whose edge is disposed intermediate the pad and the mounting bracket 44 in a horizontal position so as to be slidable vertically along the surface of the bracket 44. Thus when the cap with its attached sliding actuator frame 52 is moved downwardly the moving knife 60 is moved downwardly along the surface of the bracket 44 past the aperture 46 and the stationary knife blade 48 so as to cut off a stamp extending through the aperture 46. A tension spring 62 attached to the arm 57 on the moving knife bracket and to an ear 64 formed in the wall of the housing serves to return the cap to its normal position after actuation of the stamp affixing device. The point of attachment of spring 62 is intermediate the axis of the pin 58 and the downwardly extending knife blade 60, so that the tension of the spring holds knife 60 closely against bracket 44.

Slidably mounted within the lower end of the housing on the side opposite the door is a water can 66. The can 66 slides up through the open bottom of the housing and is held in place by means of resilient spring clips 68 (see

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FIG. 10) which engage apertures 70 in the wall of the housing, and by a stop 69 which limits the upward movement of the water can into the housing. The spring clips may be depressed by pressing on finger grips 72 thereon so as to disengage the spring clips from the apertures 70 and withdraw the can from the housing. The finger clips are accessible through a U-shaped opening 74 extending to the bottom of the housing (see FIG. 1).

The body of the can is preferably made of brass or other corrosion resistant material with a transparent wall 76. The transparent wall allows observation of the water level within the can through a U-shaped opening 78 in the wall of the housing. The can is provided with a filler opening 80 and a filler cap 82. The transparent wall 76 is secured to the can by means of a screw 84. A sealant may be applied between the transparent wall and the body of the can to insure water-tight engagement therewith. Within the can a leaf spring 86 is attached at one end near the upper end of the can. The leaf spring extends downwardly from its point of attachment to adjacent the lower end of the can. Attached to the lower end of the leaf spring is a spanker pad 88 made of resilient material such as rubber, which normally is in engagement with the wall of the can. Slidably positioned in this wall of the can at a point intermediate the ends of the leaf spring is a push rod 90. A flexible seal member 92 surrounds the push rod and extends between the leaf spring 86 and the wall of the can. The seal member, in the embodiment shown, comprises a tubular element formed of a closed cell sponge material such as natural or synthetic rubber, which has a length and compressibility sufficient to sealingly engage both the can wall and the leaf spring in all positions of the leaf spring, i.e., at either of the positions shown in FIGURES 2 and 3. The push rod is adapted to be moved longitudinally in an aperture in the wall. Upon movement through said aperture into the can the head of the push rod engages the leaf spring 86 and causes the lower end of the leaf spring to be moved laterally away from the wall of the can so as to disengage the spanker pad 88 from the wall of the can. The wall of the can is perforated at 94 with small perforations which are closed by the spanker pad when the spanker pad is in engagement with the wall of the can. Upon movement of the push rod into the can the spanker pad is disengaged so as to uncover the perforations, and allow water in the can to flow into the space between the spanker pad and the perforations. Then upon rapid movement of the push rod back out of the can the resiliency of the leaf spring causes the spanker pad to slap against the perforations. When there is water in the can which is sufficiently high to cover the perforations the slapping of spanker pad 88 against the perforations 94 causes small amounts of the water to be squirted through the perforations and onto the surface to which the stamp is to be affixed. The location of the perforations is such that this surface is immediately below the pad 54 and also immediately below a stamp which is cut off by the knife blades.

The movement of the push rod 90 is achieved by means of a striker plate 96. Striker plate 96 is pivotally mounted on a pin 58 extending transversely of the actuator frame 52. As more clearly seen in FIGURE 6 a torsion spring 98 is fitted around pin 58 and has one end in the arm 57 and the other end in an aperture 100 in the striker plate. This torsion spring serves to resiliently urge the striker plate in a clockwise direction about pin 58 toward its normal position as shown in FIGURE 2 and FIGURE 4 wherein the upper edge of the striker plate substantially contacts the water can. The striker plate is formed with a sloping surface extending downwardly and laterally away from the adjacent wall of the water can so that the lower edge of the striker plate is farther from the water can than is the upper edge. An ear 102 forming a part of the striker plate element is adapted to engage the lower end of the frame 52 to which the resilient pad 54 is fastened to limit the movement of the striker plate in the

clockwise direction to which it is biased by the torsion spring. Contact of the lower edge of the sloping surface of the striker plate on top of the lower end of the frame 52 limits the pivoting of the striker plate in the opposite direction.

As is apparent from FIGURES 2, 3, 4 and 5, when the cap is moved downwardly the sloping surface of the striker plate contacts push rod 90 and, being prevented from rotating clockwise, it forces the push rod to move inwardly into the can. The push rod in turn acts against the leaf spring 86 and pushes the spanker pad 88 away from the perforations 94. Then as soon as the upper edge of the sloping surface of the striker plate has been moved past the push rod the leaf spring 86 is released suddenly so that the spanker pad strikes the perforations and forces droplets of water therethrough as has been previously described. Upon release of the cap 14, the spring 62 urges the cap together with the actuator frame 52 upwardly. When the upper edge of the sloping surface of the striker plate contacts the push rod on this upward movement the contact is made against the side of the push rod rather than the end so that the striker plate is caused to pivot about pin 58 and the push rod is not depressed into the can. When the striker plate has pivoted enough to clear the push rod it rides up over the push rod and then returns to its normal position as shown in FIGURE 2, by virtue of the biasing of the torsion spring 98.

Mechanism for indexing the feed wheel is shown in FIGURES 6, 7, 8 and 9. A leaf spring 104 is attached to the actuator frame 52 near the upper end thereof and extends downwardly therefrom. A misaligned portion formed by a bend, a sloping portion 105, and an opposite bend on the lower end of the leaf spring forms a pawl 106 thereon. The pawl extends through an elongate slot 108 which extends downwardly along the line of travel of the pawl through a guide housing 110, which is formed by a thin piece of resilient sheet material attached on one side 111 (see FIG. 9) to the inside wall of the housing 10. The pawl engages a ratchet wheel or feed cam 112 which is affixed to the end of the feed wheel 26. In the embodiment shown, the ratchet wheel 112 has three teeth 114 positioned to be engaged by the pawl. The ratchet is basically triangular in shape, with a tooth being formed on one side of each point of the triangle. As the pawl moves downwardly by virtue of downward movement of the cap, the pawl engages the upper edge of one of the teeth 114 as shown in FIGURE 7, so that further downward movement of the pawl causes the ratchet to rotate. As shown in FIGURE 8 this rotation is continued until the pawl has moved all the way past the ratchet, or 120 degrees in the embodiment shown. This movement brings another tooth 114 into position to be engaged by the pawl. Release of the cap then causes the pawl to move upwardly, guided by the slot 108. Then the sloping portion 105 forming the upper edge of the pawl contacts the tooth which has newly been brought into position for engagement. The pawl rides laterally outwardly over this tooth due to the sloping transition portion 105 between the pawl and the main body of the leaf spring. The resiliency of the spring allows this outward movement of the pawl. A detent 118 (see FIGURES 7 and 9) formed in the wall of the guide housing 110 is engaged by the ratchet wheel to resist further movement of the ratchet, which might otherwise result from the upward movement of the pawl over this tooth of the ratchet wheel.

Referring now to FIGURES 11 and 12, the door 12 enclosing the side and a portion of the bottom of the apparatus of this invention is pivotally attached to the housing near the upper end thereof by means of integrally formed pins 120 on the upper end of the door which fit into holes 122 formed in opposite sides of the housing. The L-shaped door extends down the side of the housing and is turned underneath the housing to extend laterally up to mounting bracket 44. A latching element 124 (FIG. 12) forms the end of the door and is provided on each side with lugs 126 which are engaged

behind inturned catches 128 on the bottom of the housing. The latching element is attached to the door by means of an L-shaped spring 130 in such a manner that the lugs 126 are spaced away from the main portion of the door so as to form a slot between the lugs and the door. Thus the latching element is resiliently attached to the door so that by depression thereof the lugs 126 may be moved upwardly to clear latch 128 so that the door can be opened. It will be noted in FIGURES 2 through 5 that spring 130 also serves to retain the shoe 32 in proper position for guiding of the stamp strip 20. Thus when the door is open the shoe 32 may be swung up to allow threading of the strip of stamps around the feed wheel but when the door is closed the spring 130 holds the shoe in position.

To operate the device of this invention the door is opened by pressing the latching element 124 and swinging the door open about the integrally formed hinge pins 120. The stamp cartridge 16 is then slipped out and a roll of stamps placed in it, the end of the strip of stamps extending up through the opening 18. The shoe 32 is swung up so as to reveal the feed wheel 26 and the end of the strip of stamps is placed around the feed wheel with the end extending into the aperture 46 in mounting bracket 44 and with the pins 30 on the points of the triangular feed wheel engaged in the perforations in the roll of stamps. The shoe 32 is then closed around the strip of stamps to retain the pins 30 in engagement in these perforations. The cartridge is then slipped back into the housing so that the strip of stamps overlaps pin 24 and the stamps are thereby given a reverse bend around bead 22 and pin 24. The water can 66 is filled with water by removing filler cap 82. The water can is then replaced into the housing by sliding it up through the open bottom of the housing until the spring clips 68 engage in the aperture 70. The stamp affixer is then placed on the surface to which a stamp is to be affixed and the cap 14 is pressed downwardly. As the cap is moved downwardly the pawl 106 engages one of the teeth 114 of the ratchet wheel 112 and causes the feed wheel 26 to rotate far enough to feed one stamp through the opening 46. The elements are proportioned so that the rotation of the ratchet wheel ceases just as the perforations of a single stamp 136 (see FIG. 3) reaches the cutting surface 48 of bracket 44, i.e., the surface on which the moving knife 60 slides. The feeding movement must, of course, cease completely before the knife 60 reaches cutting surface 48. As the cap is moved further down, the actuating frame 52 also moves the sloping surface of the striker plate 96 down to engage the push rod 90. The push rod 90 pushes the leaf spring 86 outwardly so that spanker pad 88 is moved away from perforations 94 in the water can. Continued downward movement moves the upper edge of the striker plate clear of the push rod so that the push rod, by virtue of the resiliency in leaf spring 86, snaps back and allows the spanker pad to strike the water can wall over the perforations and squirt out small droplets of water onto the area directly under the stamp 136 which is to be affixed. Continued downward movement of the cap moves the knife blade 60 down into contact with the perforated line between two stamps so that a single stamp 136 is cut off when further downward movement brings knife blade 60 into cutting position at the stationary cutting edge 48. The cut off stamp 136 drops immediately under the resilient pad 54 and onto the wetted area, so that the pad presses the stamp against the wetted surface.

During the downward movement and the feeding of stamp 136, the rotation of the feed wheel 26 has of course positioned another stamp for feeding through the aperture 46.

Upon release of the cap, spring 62 pulls the actuator frame 52 upwardly so that the pawl 106 slides upwardly and rides over the next tooth 114 on the ratchet wheel 112 and moves upwardly into position for engaging this next tooth. At the same time the resilient pad 54 is

moved upwardly and the upper edge of the sloping edge of the striker plate 96 engages the side of the push rod 90 and is pivoted counterclockwise against the resiliency of the torsion spring 98 so as to move upwardly past the push rod without depressing it. The spring 98 then pulls the striker plate back into position for engaging and depressing the push rod on the next downward movement. Thus the entire stamp affixer is again returned to a condition suitable for affixing another stamp.

In the embodiment of the invention shown in FIGURES 13, 14 and 15 a modified form of the water can is disclosed. In this embodiment water can 166 is preferably molded from a transparent plastic such as an acrylic material. As in the previously described embodiment water can 166 slides up through the open bottom of the housing 10 and is held in place by means of a resilient spring clip 168 which is preferably molded integrally with the body of the water can. The clip 168 is provided with a detent 169 which engages an aperture (not shown) in the wall of the housing to hold the water can in position in the housing. The spring clip 168 may be depressed by pressing on finger grip 172 thereon so as to disengage the detent 169 from the aperture and withdraw the can from the housing. As in the previously described embodiment the finger grip is accessible through the U-shaped opening 74 in the wall of the housing.

Water can 166 is provided with a filler opening 180 and a stopper 182 therefor which is preferably made of a resilient material such as rubber. Within the can a leaf spring 186 is attached to the upper end of the water can as by means of cementing into a slot 187. The leaf spring extends downwardly from its point of attachment to adjacent the lower end of the can. Attached to the lower end of the leaf spring is a spanker pad 188 made of a resilient sealing material such as rubber, which normally is in engagement with the wall of the can. At the lower end of the water can means are provided to assist in biasing the leaf spring in a direction to cause the spanker pad to sealingly engage one wall of the water can. Such means comprises a resilient block 194 positioned between the leaf spring and the opposite wall of the water can. This resilient block 194 is formed of a closed cell foamed material such as, for example, a foamed natural or synthetic rubber of a polyurethane composition. In its relaxed condition this resilient block substantially fills the space between the lower end of the leaf spring and the opposite wall of the water can.

Slidably positioned in an aperture 191 in the wall of the can at a point intermediate the ends of the leaf spring is a push rod 190. A flexible seal member 192 surrounds the push rod and extends between the leaf spring 86 and the wall of the can. The seal member 192, in the embodiment shown, comprises a tubular element formed of a closed cell sponge material such as a spongy natural or synthetic rubber, which has a length and compressibility sufficient to sealingly engage both the can wall and the leaf spring in all positions of the leaf spring, that is, at either of the positions shown in FIGURES 13 and 14.

As in the previously described embodiment the push rod 190 is adapted to be moved longitudinally through aperture 191 in the wall of the water can. Upon movement through said aperture into the can the head of the push rod engages the leaf spring 186 and causes the lower end of the leaf spring to be moved laterally away from the wall of the can so as to disengage the spanker pad 88 from the wall of the can. At the same time this causes compression of the resilient block 194. The wall of the can is perforated at 195 with small perforations, preferably three, which are closed by the spanker pad when the spanker pad is in engagement with the wall of the can. Upon movement of the push rod into the can the spanker pad is disengaged so as to uncover the perforations and allow water in the can to flow into the space between the spanker pad and the perforations. Then upon rapid

movement of the push rod back out of the can the resiliency of the leaf spring causes the spanker pad to slap against the perforations. Thus small amounts of water are squirted through the perforations and onto the surface to which the stamp is to be affixed.

In the earlier described embodiment of the invention the movement of the push rod 90 into the water can in effect decreases the volume of the can so as to exert a slight pressure on the water in the can. If the can is full or nearly full of water this slight pressure is sufficient to sometimes cause a small amount of water to ooze out through the perforations 94. However in the presently described embodiment such difficulty is not encountered. Instead, although the movement of the push rod into the can decreases the effective volume of the can, this same movement pushes the leaf spring back to compress resilient block 194 by an amount greater than the volume decrease resulting from the movement of the push rod, so that the effective volume of the can is increased slightly. Thus instead of a slight pressure being exerted upon the water in the can, a slight vacuum is exerted, so that there is no tendency for there to be any leakage of water through the perforations even though the can may be full.

Numerous aspects of the apparatus of this invention make this apparatus far superior to stamp affixers known in the prior art. As one example the means which include pin 24 for applying a reverse bend to the normal curvature of the stamp eliminates the tendency for the stamp to curl after it has been placed on the moistened surface to which it is to be affixed. This insures that few if any of the stamps will tend to curl up and not be cemented to the surface. Another advantageous feature of this invention is the novel means by which the stamp is moistened for activation of cement on the stamp. The modification described in FIGURES 13, 14 and 15 is particularly advantageous because it substantially eliminates any possibility of leakage of water from the stamp affixer and insures that water is applied only to the surface to which the stamp is to be affixed. Still another advantageous feature is the positioning of the spring 62 in such a manner that it serves to bias the moving knife 60 against bracket 44 so as to insure closer engagement between the moving blade 60 and the stationary blade 48 for better cutting of the stamps. Still another advantageous feature is the novel pawl and ratchet means used for feeding a single stamp at a time with complete accuracy and no possibility of feeding too little or too much. Still another advantageous feature is the removable stamp cartridge which allows quick and easy replenishing of the stamp supply in the stamp affixer.

Although certain preferred embodiments of the invention have been shown and described herein, many modifications incorporating the advantageous features of this invention will be apparent to those skilled in the art. The invention is therefore not limited to the modifications shown and described but only as set forth by the following claims:

1. In a stamp affixer, means for moistening a surface to which a stamp is to be applied, comprising
 - (a) a container having a wall positioned adjacent said surface,
 - (b) at least one perforation in said wall,
 - (c) a spanker pad in said container having a normal position covering said perforation and an actuated position away from said perforation,
 - (d) resilient means biasing said spanker pad toward said perforation-covering position,
 - (e) a push rod operably engaging said spanker pad, extending through said wall of said container and adapted to be moved through said wall to move said spanker pad to its actuated position, and
 - (f) a block of resilient, closed-cell foamed material in said container positioned so as to be compressed upon movement of said spanker pad to its actuated position.

2. In a stamp affixer comprising
- (a) means for feeding a stamp from a strip of stamps into a cut-off position above a surface to which the stamp is to be affixed,
 - (b) means for detaching said stamp from said strip when said stamp is in said cut-off position, 5
 - (c) means for moistening said surface,
 - (d) means for pressing said stamp onto said moistened surface, and
 - (e) actuating means operably engageable with the aforesaid means, the improvement wherein 10
 - (f) said indexing means comprises
 - (1) a rotatable feed wheel,
 - (2) a ratchet wheel affixed to and having a common axis with said feed wheel, and 15
 - (3) a pawl affixed to said actuating means adapted to engage and rotate said ratchet wheel sufficient to feed a stamp upon each operation of said actuating means,
- said pawl being on the free end of a leaf 20
spring attached to said actuating means and being resiliently biased in a direction parallel to the axis of the ratchet wheel toward a position engageable with the ratchet wheel, and said leaf spring having a sloping surface adjacent to said pawl, whereby 25
after operation of said actuating means the return of the actuating means to its original position causes said pawl to move upwardly and to ride laterally outwardly of said 30
ratchet wheel by virtue of engagement of said sloping surface with said ratchet wheel so that the ratchet wheel is not rotated on the return movement.
3. A stamp affixer comprising 35
- (a) means for feeding a stamp from a strip of stamps into a cut-off position above a surface to which the stamp is to be affixed,
 - (b) means for detaching said stamp from said strip when said stamp is in said cut-off position, 40
 - (c) means for moistening said surface comprising

- (1) a container having a wall positioned adjacent said surface,
 - (2) at least one perforation in said wall,
 - (3) a spanker pad in said container having a normal position covering said perforation and an actuated position away from said perforation,
 - (4) resilient means biasing said spanker pad toward said normal position,
 - (5) a push rod operably engaging said spanker pad, extending through said wall of said container and engageable upon feeding of said stamp for movement into said container to move said spanker pad to its actuated position,
 - (6) a block of resilient, closed-cell foamed material in said container positioned so as to be compressed upon movement of said spanker pad to its actuated position, and
 - (7) means operable upon said feeding of said stamp to cause said spanker pad to be moved to its actuated position and then suddenly released to resume its normal position, and
- (d) means for pressing said stamp upon said moistened surface.

References Cited by the Examiner

UNITED STATES PATENTS

993,732	5/1911	Storck	156—530
1,012,021	12/1911	Schweiger et al.	156—532
1,029,671	6/1912	Daniel et al.	156—532
1,289,240	12/1918	Onderdonk	156—532
1,682,084	8/1928	Leopold	156—524
1,877,849	9/1932	Gmelin et al.	156—532

FOREIGN PATENTS

279,415 10/1914 Germany.

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