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A. GAY

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STAMP AFFIXING MACHINE

Filed March 6, 1930

2 Sheets-Sheet 1

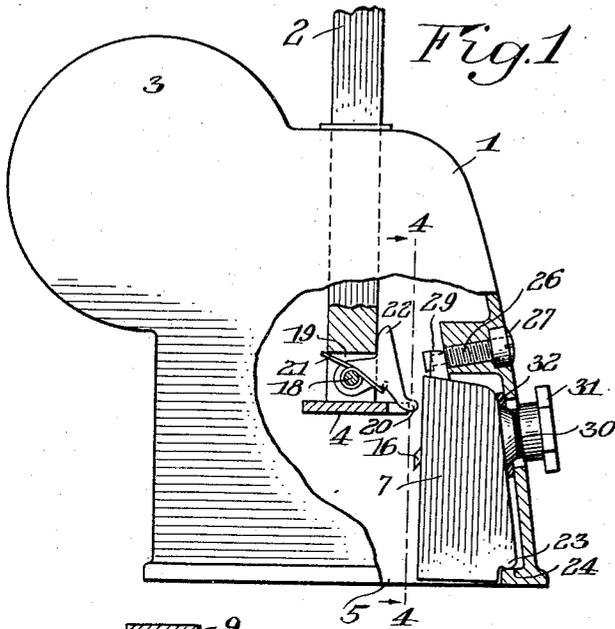


Fig. 4

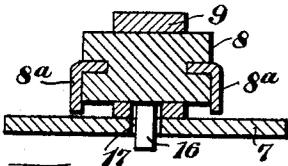
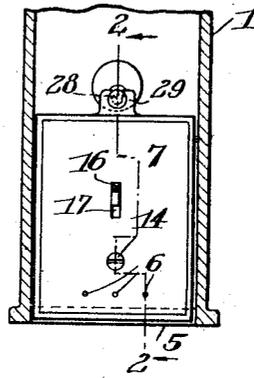


Fig. 4a

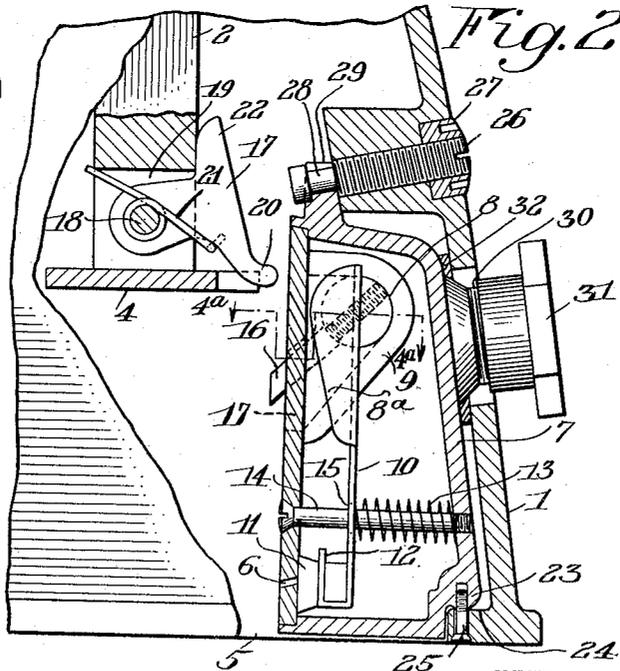


Fig. 2

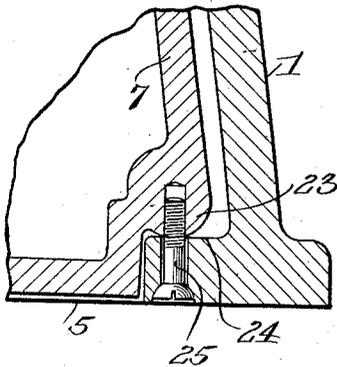


Fig. 3.

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STAMP AFFIXING MACHINE

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My present invention relates to stamp affixing and label applying, that is, the application of gummed sheets, such as postage stamps, to a surface, and it has for its object to improve the means by which the application of water in just the proper quantity is made to the gummed surface or the receiving surface.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Fig. 1 is a side view, partly in section, and partly broken away, of a familiar type of stamp affixing machine constructed in accordance with and illustrating one embodiment of my invention;

Fig. 2 is a similar further enlarged view, also in further section, taken substantially centrally and vertically of the machine, on the line 2—2 of Fig. 4;

Fig. 3 is a further enlarged fragmentary section duplicating a part of Fig. 2 but with the parts in a different position of relative adjustment;

Fig. 4 is a fragmentary section on the line 4—4 of Fig. 1;

Fig. 4^a is a horizontal section on the line 4^a—4^a of Fig. 2 taken through the inner wall of the reservoir;

Fig. 5 is an enlarged section similar to Fig. 2 of a modified construction, taken on the line 5—5 of Fig. 7;

Fig. 6 is an enlarged perspective view of the ejector shaft and trip;

Fig. 7 is an exterior elevation of the reservoir wall;

Fig. 8 is an interior elevation thereof, and

Fig. 9 is an enlarged detailed section taken on the line 9—9 of Fig. 5.

Similar reference numerals throughout several views indicate the same parts.

As illustrated, my invention is applied to a hand stamp for affixing postage stamps to letters, and I have shown in a general way so much of the old construction as is necessary to an understanding of the improve-

ments that I have made. A casing 1 has mounted therein in suitable guides a vertical plunger 2 that is depressed by a stroke of the hand and returned by suitable spring means not shown. An extension 3 of the casing is adapted to contain a roll of stamps that is fed by suitable means, also not shown, across the face of a presser foot 4 at the base of the plunger, in connection with which mechanism the stamps are carried down individually and cut off one by one to be applied to the letter or other surface upon which the casing or the machine as a whole rests. For this purpose, the presser foot 4 makes contact through an opening 5 in the bottom of the casing, which opening, by the manipulation of the machine as a whole, is positioned at the desired point.

During the passage of the stamp and the presser foot 4 from the position of the figures downwardly to the point of contact, a few drops of water are projected preferably upon the receiving surface within the confines of the opening 5 and beneath the presser foot. It is a momentary jet and issues from one or a plurality of openings 6 on the bottom rear face of a reservoir 7 for the water supply that occupies a portion of the opening 5 and the said inner wall of which is closely adjacent to the path of the presser foot 4. The downward movement of the latter actuates jet forming and controlling mechanism in the following manner:

Fixed to a shaft 8 turning in a casing 9 (Fig. 4^a) inside of the reservoir 7 is a depending swinging arm or plate 10 carrying at its lower end a rubber or similar soft pad or bar 11 which, in the present instance, is clinched thereon at its ends by fingers 12 turned up from the lower edge of the plate. The shaft 8 is of relatively large diameter and its ends, which are slotted, project from the sides of the casing to receive the yoke-shaped upper ends of the plate 10 adjacent to reinforcing ears 8^a at the sides of the latter. This pad 11 acts as a stopper normally closing the jet opening 6 under the influence of a spring 13, one end of which presses against it while the other end reacts against the outer wall of the reservoir. The spring

encircles and is carried upon a screw 14 spanning the interior of the reservoir and acting as a guide, and the arm 10 is provided with a slot 15 to permit the screw to pass through it without interfering with its swinging movement.

Also fixed to the shaft 8 in fixed relationship to the arm 10 is an actuating arm 16 which protrudes through a slot 17 in the inner wall of the reservoir. The casing 9 covers this slot 17 and is water-tight, so that the water in the reservoir 7 can not escape through the latter in whatever position the device may be left. As is apparent from an inspection of the drawings, this actuating arm 16 has a downward inclination and a mitered end bringing its outer face parallel with the wall of the reservoir through which it projects. The operation of this jet projecting means is simple and is as follows: When the actuating arm 16 is momentarily depressed and immediately released, the arm 10 swings back against the tension of the spring and then the pad 11 hammers against the jet opening 6, which it has uncovered for only an instant. The impact of the pad 11 projects a measured quantity of water onto the desired surface, the amplitude of the hammering movement regulating the volume of discharge. The movement of the arm or hammer is so rapid that no water leaks out as distinguished from that which is forcibly ejected.

The actuating arm 16 is operated by the downward movement of the presser foot 4. The latter is provided with a pawl 17 pivoted at 18 within a cavity 19 in the plunger 2. A rounded finger 20 on the pawl has the normal position shown where it is yieldingly held by a spring 21 coiled about its pivot in connection with a stop arm 22 that abuts against the side of the plunger. The end of the actuating arm 16 is in the path of the plunger or rather in the path of the finger 20, as the plunger reciprocates. On the downward movement, the finger 20 rigidly engages the actuating arm 16, sliding over and depressing it, and causing the operation of the water projecting mechanism described. On the return movement, the finger 20 yields and retracts against its spring 21 upon contact with the arm 16, leaving the latter in normal position and itself resuming normal position after passing to its upward position.

It will be obvious that the time given the water to enter the opening 6 and the amount projected therethrough is dependent upon the swing of the arm 10 and the extent to which the finger 20 dwells upon the actuating arm 16. In turn, this can all be regulated by the extent to which the arm 16 projects into the path of the finger 20. I, therefore, provide means for adjusting the arm 16 to different positions in the path of

the finger 20 and in the present instance, I accomplish this by moving the whole reservoir 7 back and forth.

Referring more particularly to Figs. 2 and 3, the reservoir is supported at the bottom by a rounded nose 23 thereon resting on a shoulder 24 at the base of the casting 1. It is held in contact by a small screw 25 having a rounded head countersunk into the base and otherwise loosely fitted so as to permit the reservoir to rock. The rocking movement to different positions of adjustment is effected by a lag screw 26 accessible from the exterior as is a countersunk lock-nut 27. A reduced portion 28 at the inner end of the screw takes into an open slotted bearing 29 in a lug on top of the reservoir. It will be seen at once that this screw 26 gives a very fine adjustment of the reservoir and hence the actuating arm 16 toward and from the path of the finger 20, the tilting movement being from the point 24 as a center or fulcrum. The range of movement required is very, very small and hence can be brought about in this simple way with the simplified construction shown.

The reservoir 7 has a filling neck 30 that projects through an opening in the casing 1 and is provided with an exteriorly arranged cap 31, a soft gasket being provided at 32. The said opening accommodates the neck and cap during the slight movements of the reservoir.

In the embodiment shown in Figs. 5 to 9, the construction, in general, is identically the same. The changes have to do with the water projecting arm 10 and its actuating pin or arm 16^a. The latter is apt to wear gradually in use and for this reason I may prefer to spread it into a shaft 8^b having bearings in the water-tight housing 9 and corresponding to the stud 8 except that it does not carry the arm 10. Instead, its ends are cut away at 33, as clearly shown in Fig. 6 to receive but move relatively to the short arm 34 of the member 10 which, in this instance, is constituted a lever pivoted on a pin 35 extending through and projecting from the housing 9. A spring 36 coiled about this pivot pin in the manner clearly shown in Figs. 5 and 8 acts upon the arm to give it its hammering action and to cause it to normally close the jet or nozzle openings 6.

It will be seen that when the rotary element 8^b is rocked by engagement of the trip member 20 with the pin or arm 16^a it will exert a mechanical advantage against the lever arm 34 and cause the momentary retraction of the arm 10 against the tension of the spring 36. A half rotation or more on its threads of the pin 16^a in either direction will carry it to a corresponding degree into or out of the path of the trip 20 and regulate the period during which the latter

dwells thereon. This correspondingly regulates the throw of the water projecting means and the amount of water ejected. With these two adjustments at 16^a and 26, a very fine regulation can be effected although either may be used alone.

I claim as my invention:

1. In a stamp affixing mechanism, the combination with a movable pressure member, a water reservoir, and a water projecting means actuated by the pressure member and controlled as to the volume of its delivery by the position of the reservoir relatively to the path of movement of the pressure member.

2. In a stamp affixing mechanism, the combination with a movable pressure member, a movable water reservoir adjustable to different positions relatively to the path of movement of the pressure member, and a water projecting means housed within the reservoir and having a protruding operating member actuated by the pressure member in different degree according to the adjustment of the reservoir.

3. In a stamp affixing mechanism, the combination with a reciprocatory pressure member, a movable water reservoir adjustable to different positions relatively to the path of travel of the pressure member and across a face of which the latter travels, and a water projecting means housed within the reservoir and having a protruding operating member actuated by the pressure member in different degree according to the adjustment of the reservoir.

4. In a stamp affixing mechanism, the combination with a tiltable water reservoir and a reciprocatory pressure member movable across a face thereof, a water projecting means housed within the reservoir and having a protruding operating member actuated by the pressure member in different degree according to the position of the water reservoir, and means for tilting the reservoir and holding it in different such positions of adjustment.

5. In a stamp affixing mechanism, the combination with a casing, a separate water reservoir tiltable mounted therein, and a pressure member mounted to reciprocate in the casing across a face of the reservoir, a water projecting means carried by and housed within the casing and having a protruding operating member actuated by the pressure member in different degree according to the position of the water reservoir, and a lag screw on the casing accessible from the exterior thereof and cooperating with the reservoir to adjust the tilted position thereof.

6. In a stamp affixing mechanism, the combination with a movable pressure member and a water reservoir, of a water projecting means actuated by the pressure

member and embodying an operating member adjustable in the path of the pressure member to control the volume of delivery.

7. In a stamp affixing mechanism, the combination with a movable pressure member and a water reservoir having an opening therein, of water projecting means actuated by the pressure member and located within the reservoir and embodying an adjustable operating member projecting into the path of the pressure member, and exteriorly accessible for adjustment, and a water tight housing for the projecting means covering the opening for the operating member.

8. In a stamp affixing mechanism, the combination with a movable pressure member and a water reservoir having an opening therein and provided with nozzle openings, of a water projecting means actuated by the pressure member embodying a lever arm cooperating with the nozzle openings, a spring normally holding the lever arm in such cooperation, a rotary element exercising mechanical advantage on the lever arm to retract it against the tension of the spring, and an actuating arm on the rotary element projecting into the path of the pressure member for actuation thereby.

9. In a stamp affixing mechanism, the combination with a movable pressure member and a water reservoir having an opening therein and provided with nozzle openings, of a water projecting means actuated by the pressure member embodying a lever arm cooperating with the nozzle openings, a spring normally holding the lever arm in such cooperation, a rotary element exercising mechanical advantage on the lever arm to retract it against the tension of the spring, and an actuating arm on the rotary element projecting into the path of the pressure member for actuation thereby, said actuating arm being threaded in the rotary element for adjustment as to its degree of projection into the path of the pressure member.

10. In a stamp affixing mechanism, the combination with a movable pressure member and a water reservoir having an opening therein and provided with nozzle openings, of a water projecting means actuated by the pressure member embodying a lever arm cooperating with the nozzle openings, a pivot for the lever arm, a spring on the pivot normally holding the lever arm in such cooperation, a water tight casing housing the said opening in the reservoir and from which the pivot for the lever arm projects, a rotary element having a bearing in the casing and projecting from the latter to exercise mechanical advantage upon the lever arm to retract it against the tension of the spring, and an arm on the rotary element projecting into the path of the pressure member for actuation thereby.

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