Feb. 20, 1951 J. A. WEBER 2,542,443

BED AND PLATEN HECTOGRAPHIC ADDRESSING MACHINE

Filed Dec. 3, 1948

4 Sheets-Sheet 1

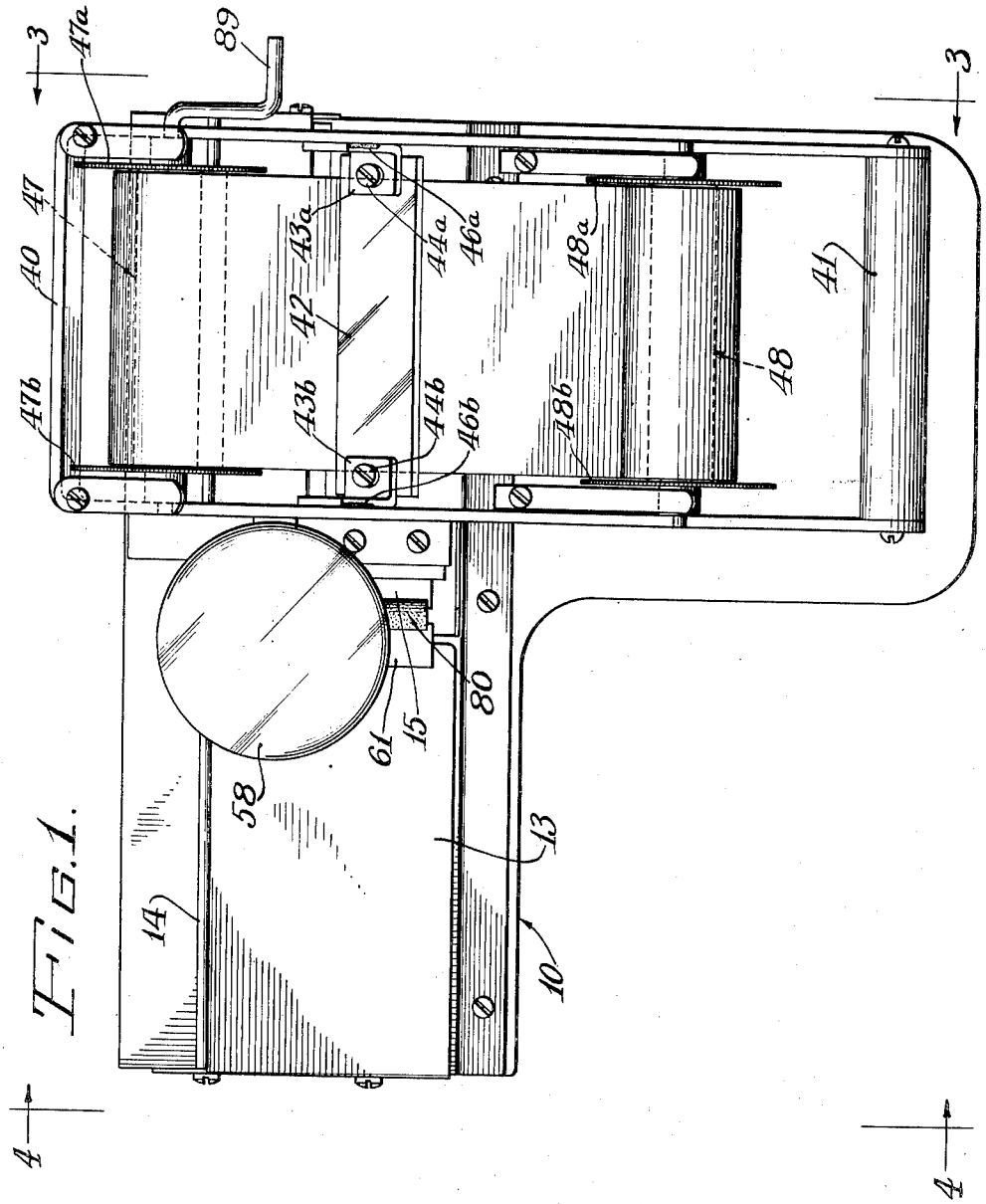


FIG. 1.

Inventor:
Joseph A. Weber
By Kenneth D. Snow
Attorney

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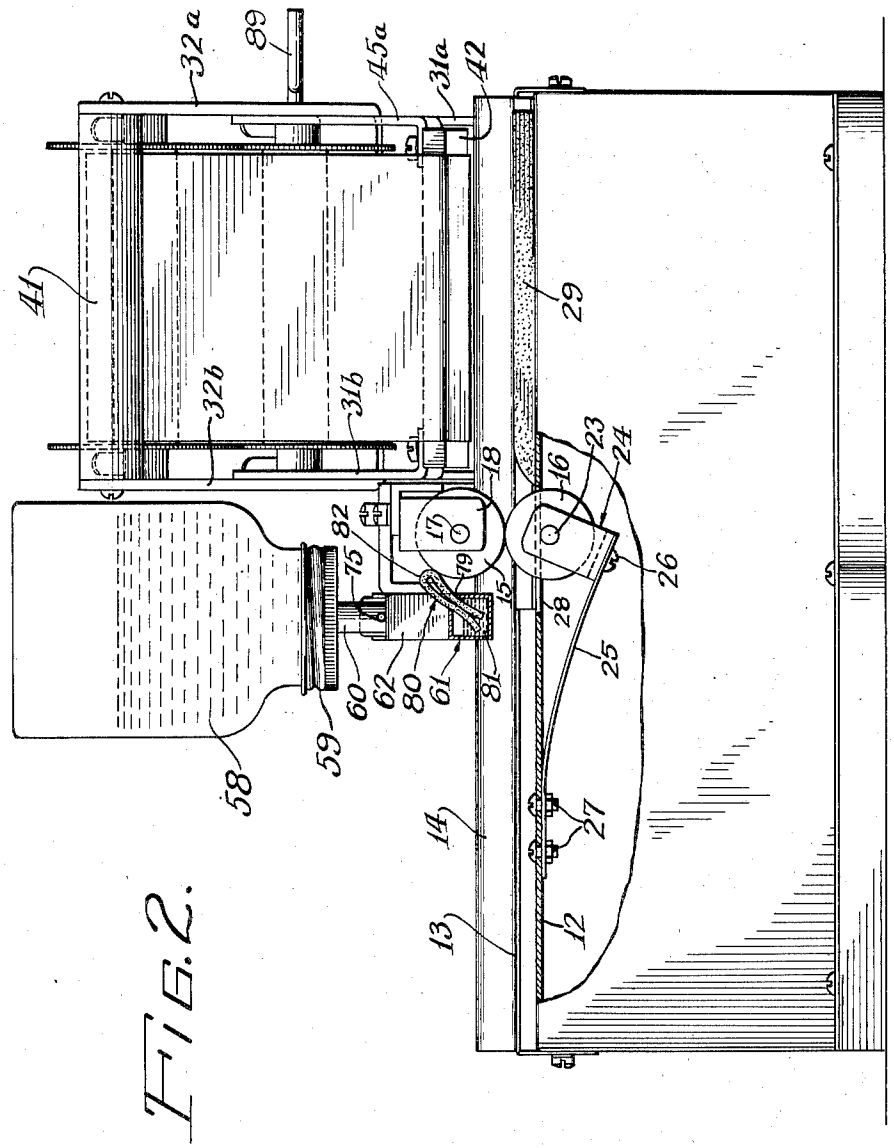


FIG. 2.

Inventor:
Joseph A. Weber
By Kenneth J. Snow
Attorney

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BED AND PLATEN HECTOGRAPHIC ADDRESSING MACHINE

Filed Dec. 3, 1948 4 Sheets-Sheet 3

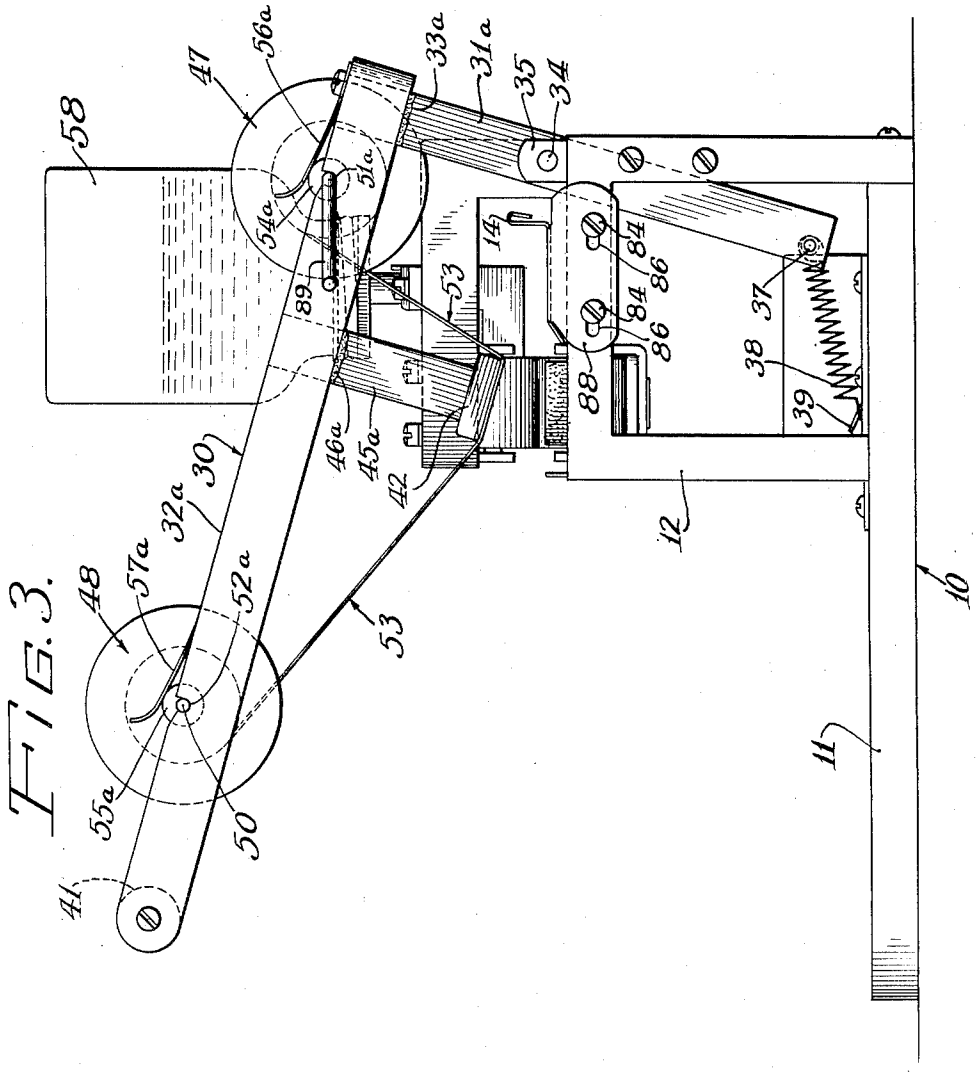


FIG. 3.

Inventor:
Joseph A. Weber
By Kenneth D. Snow
Attorney

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BED AND PLATEN HECTOGRAPHIC ADDRESSING MACHINE

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FIG. 5.

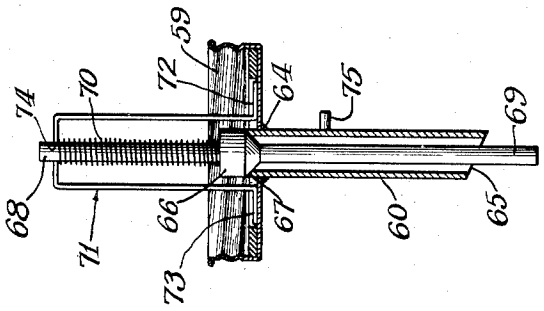
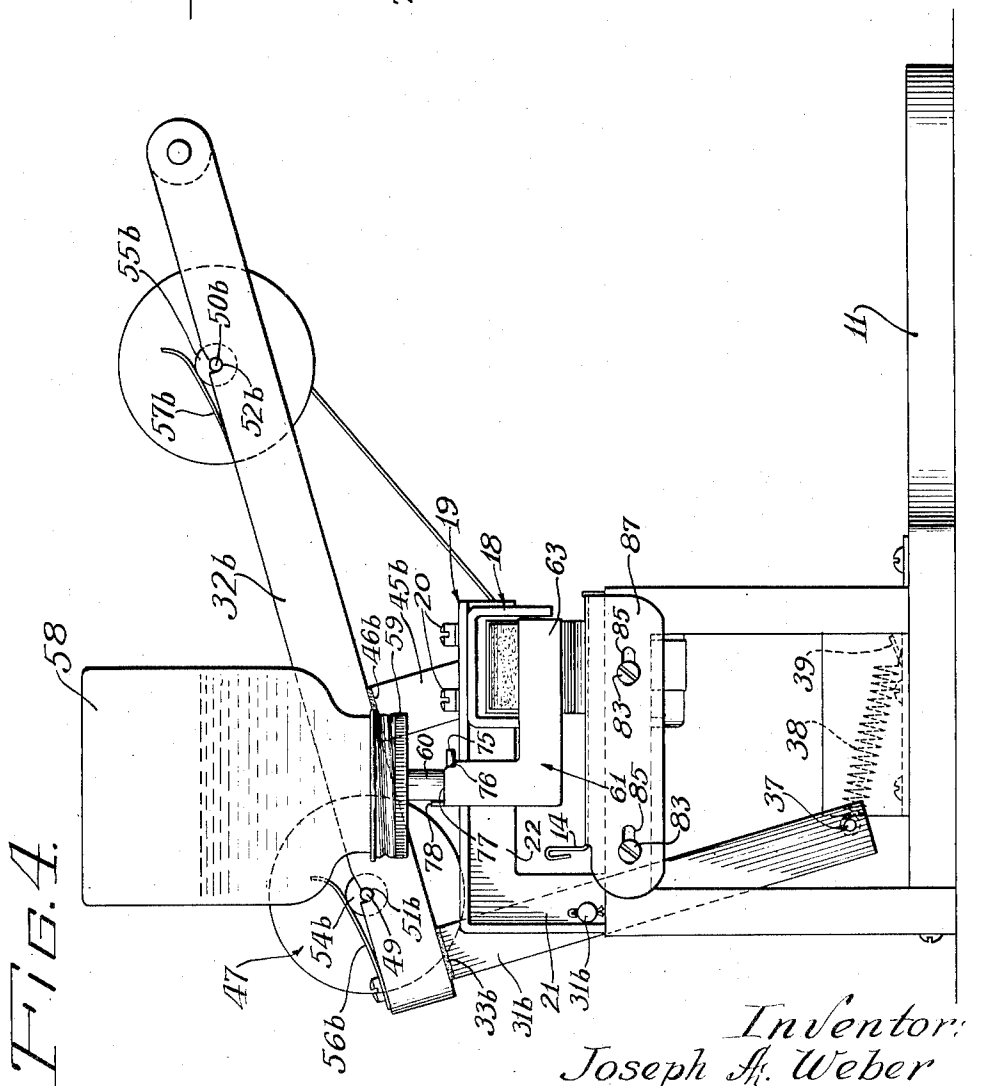


FIG. 4.



Inventor:
Joseph A. Weber
By Kenneth D. Snow
Attorney

Patented Feb. 20, 1951

2,542,443

UNITED STATES PATENT OFFICE

2,542,443

BED AND PLATEN HECTOGRAPHIC ADDRESSING MACHINE

Joseph A. Weber, Prospect Heights, Ill.

Application December 3, 1948, Serial No. 63,421

8 Claims. (Cl. 101—57)

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This invention relates to a new and improved addressing machine.

There are many devices and apparatus built for the purpose of imprinting names, addresses, and other short indicia. The majority of the presently marketed devices are costly both as to initial investment and as to the upkeep thereof. Numerous principles are employed in these various devices and yet all of them are relatively complex, making them difficult and inconvenient to operate.

In our highly specialized and advertising world the need for addressing has increased tremendously. For example, in the medical field doctors are classified in numerous categories such as physicians, surgeons, occulists, pediatricians, chiropodists, and many others. It is desirable to be able to select a list of any class in order to address mail or circulars to each of the members of that class. When a list is once made up it is important to be able to use it over and over again. Further, the list must be sufficiently flexible so that certain names can be omitted or new ones added as desired. With the constant changing of an active list of names and addresses the method and means for accomplishing an imprinting of them must be very economical. Many times a list of selected names will be relatively small yet if they must be written or typed very often some mechanical means of reproducing them will prove very beneficial. Another example of proper usage of an addressing machine is for secretaries of clubs who must address correspondence to club members at regular time intervals.

A principal object of this invention is to provide an addressing machine capable of quickly and conveniently reproducing a list of addresses or the like.

An important object of this invention is the provision of an addressing machine incorporating the principle of reproduction by the partial dissolving of dyes such as the well known aniline dyes.

Another important object of this invention is to supply an addressing machine having an arcuately swingable stamping head on which the copy list to be reproduced is carried for easy finger advancement to effect the imprinting of successive names on the list.

A still further important object of this invention is the provision of a transparent stamping head to enable convenient centering of a name and address therebeneath and/or selecting or rejecting certain names on the list.

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A further object of this invention is to provide a wetting means for the material to be imprinted for the purpose of partially dissolving the aniline dye of the list to be reproduced.

A still further important object is the provision of cooperative rubber feed rolls, yieldably separable and arranged in such a manner to contact a wetting wick which in turn wets the material to be imprinted.

Another and still further important object of this invention is to provide a reservoir of "wetting" solution arranged and constructed with adjustable means to more or less wet the material to be imprinted depending on the absorbing characteristics of that material.

Other and further important objects will become apparent from the disclosures in the following specification and accompanying drawings.

In the drawings:

Figure 1 is a top plan view of the addressing machine of this invention.

Figure 2 is a front elevational view of the device as shown in Figure 1.

Figure 3 is an end view taken on the line 3—3 of Figure 1.

Figure 4 is the other end view taken on the line 4—4 of Figure 1.

Figure 5 is a sectional view of the "wetting" device.

As shown in the drawings:

The reference numeral 10 indicates generally a supporting structure or framework upon which the addressing mechanism of this invention is mounted and carried. As best shown in Figures 3 and 4, the supporting structure includes a base member 11, and a rectangularly shaped housing 12, positioned to the rear of the base. The top of the housing 12 is equipped with a platform 13 over which material to be imprinted is passed. A guide flange 14 extending upwardly from the platform 13 is adapted to maintain the material such as envelopes or cards or the like in parallel relationship with the printing mechanism of this invention. The platform or guide plate 13 is preferably a polished metal over which the envelopes may be easily slid.

The starting point for the feeding of material to be imprinted is on the left hand side of the machine as viewed in both of Figures 1 and 2. The material to be so imprinted is moved toward the right where it is gripped by cooperative rolls 15 and 16. The upper roll designated by the numeral 15 is a moistening roll as will hereafter be described and is carried on a shaft 17 which is in turn journalled within a supporting bail-

like member 18. This bail member depends from a super structure 19 by means of cap screws 20 or the like. The super structure as best shown in Figure 4 is provided with an upwardly extending frame member 21, and a forwardly extending arm or frame member 22 which is the direct support for the depending bail 18. The lower cooperative roll 16 is similarly supplied with a shaft member 23 journalled within a bail member 24, very similar to the member 18 of the upper cooperative roll 15. The lower bail member 24 is carried on a spring arm 25 by means of cap screws or the like 26. The other end of the spring is fastened to the underside of the housing 12 by means of cap screws, bolts, or the like 27. An opening 28 in the upper portion of the housing 12 permits passage of the lower roller 16 and it will thus be seen that the roll 16 is yieldably movable toward and away from the upper roll 15.

For the purpose of better gripping material to be imprinted, the cooperative rolls 15 and 16 are made of rubber or other materials which have or possess considerable friction or gripping power within themselves. The spring-held rubber roller 16 provides for various thicknesses of materials to be imprinted and constitutes a pressure roller for the gripping of materials to be imprinted. As the envelope or card passes through the rollers 15 and 16 it enters a position over the platen 29 of the stamping machine of this invention. As shown in the drawings the platen 29 is of a sponge rubber material and is adapted to yield upon the pressing or stamping head member coming down thereupon.

The stamping head includes a structure 30 comprising spaced, parallel, substantially vertical members 31*a* and 31*b* and spaced parallel forwardly and upwardly extending members 32*a* and 32*b*. These members 31 and 32 are welded, brazed or otherwise fastened together at approximately right angles with respect to each other as shown at 33*a* and 33*b* respectively. The unitary structure 30 is hinged on a shaft 34 passing through the upright members 31*a* and 31*b* and journalled within the super structure of the housing 12. One end of the hinging shaft 34 is carried in an upwardly extending lug member 35 and its other end is carried in the upwardly extending frame member 21, which as previously described, carries the bail member 18 for journally and rotatably supporting the upper cooperative roll member 15. The substantially vertically disposed spaced members 31*a* and 31*b* extend downwardly through openings 36*a* and 36*b* in the top of the housing 12, whereupon their lower ends are joined by means of a cross shaft 37. A spring 38 is attached at one end to the cross shaft 37 and at its other end is fastened to a lug member 39 on the base 11 of the stamping machine. The spring 38 tends to normally pull the arms 31*a* and 31*b* forwardly of the machine so that the arms 31*a* and 31*b* are slightly inclined as pictured in both of the Figures 3 and 4. The rearward ends of the arms 32*a* and 32*b* are further joined by an end member 40. A handle in the form of a tubular member 41 joins the forward ends of the arms 32*a* and 32*b* and in combination with the cross member 40, makes for a rigid structure 30 which has its spacing positively maintained for the purpose of carrying a copy roll of the names and/or addresses to be imprinted by the machine.

The press or stamping head 42 is preferably in the form of a transparent plastics material which enables indicia or printed matter on the copy roll to be clearly read therethrough. The press member 42 as best shown in Figure 1 is supported at its ends by bracket members 43*a* and 43*b* which are firmly attached to the press member 42 by means of screws or the like 44*a* and 44*b*. The brackets 43*a* and 43*b* have upwardly extending members 45*a* and 45*b* respectively which are fastened by means of welding or the like as shown at 46*a* and 46*b* to the forwardly extending arms 32*a* and 32*b* respectively. It will be evident from the description of the structural members that the unit 30 may be swung downwardly about its hinge shaft 34 by a manual force exerted on the handle 41 in excess of the counter force of the spring 38 thus moving the stamping head 42 downwardly upon the cushion platen 29 and in a parallel position thereover so that material to be imprinted will get a uniform impression over the full surface thereof.

A supply spool 47 is equipped with side disc members 47*a* and 47*b* which are considerably larger than the core over which a copy roll of material to be imprinted is wound. A rewind or take-up spool 48 is similarly equipped with enlarged side disc members 48*a* and 48*b* the peripheral edges of which are knurled or milled or just roughened for easy rotation of the spool by means of finger contact. Both the supply and rewind spools 47 and 48 are journally mounted on the hinged stamping unit 30. As best shown in Figures 3 and 4, the spools 47 and 48 have shafts 49 and 50 respectively, which are journalled in aligned notches 51*a* and 51*b*, and 52*a* and 52*b* in the arms 32*a* and 32*b* respectively. Figure 3 best shows the path of the copy roll 53 passing from the supply spool 47 downwardly beneath the press or stamping head 42 and thence forwardly to its rewind position on the spool 48.

The copy roll is a list or other indicia written or typewritten on a roll of paper with an aniline dye impregnated on the underside of the paper which may be partially dissolved and transferred to other material such as envelopes or cards. Each of the spools 47 and 48 is provided with small diameter hub members 54*a* and 54*b*, and 55*a* and 55*b* respectively, for the purpose of receiving pressure by means of leaf spring members 56*a* and 56*b*, and 57*a* and 57*b* respectively. Thus the copy roll 53 may be maintained under a constant tension so that as the roll 53 is wound on the rewind spool 48 that portion of the copy roll which is beneath the stamping head 42, will be relatively flat and free of wrinkles so that a clear impression may be imparted from the aniline dye on the under side of the copy roll to the envelope or card which is being imprinted.

It is necessary in order to effect a transferring of the printed material on the copy roll to wet or otherwise moisten that portion of the envelope or card which is to receive the printed material. The function of the wetted portion is to partially dissolve the aniline dye and transfer that portion to the card or envelope. A reservoir 58 in the form of an inverted glass bottle has a screw cap 59 on the bottom thereof. A downwardly extending feeding tube 60 from the bottom cap 59 carries the liquid content from the reservoir 58 to an auxiliary tank member 61 in the form of an L-shaped member having an upright portion 62, and a horizontal portion 63. The downwardly depending tube 60 of the liquid reservoir 58 slides loosely within the tubular portion 62 of the tank

61. As best shown in Figure 5, the discharge tube 60 of the reservoir bottle 58 is brazed or otherwise fastened to the cap 59 at 64. The lower end of the tube 60 has an inclined cut-off as shown at 65 for the purpose of admitting air to the reservoir so that the liquid will freely flow from the reservoir to the tank 61. A valve 66 is adapted to engage a seat 67 formed in the upper portion of the tube 60 at the position of the cap 59. The valve 66 is provided with an upwardly extending shaft 68 and a downwardly extending aligned shaft 69. A spring 70 surrounds the shaft portion 68 and is positioned between the upper portion of the valve 66, and a bail-like bracket member 71 for normally urging the valve 66 closed against its seat 70. The bracket member 71 is provided with flanged foot portions 72 and 73 which are welded or otherwise fastened by brazing to the cap member 59. The shaft member 68 extends upwardly through an aperture 74 in the cross portion of the bail-like strip 71, so that the valve is guided for true vertical movement. When the reservoir 58 is removed from the tank 61 the valve 66 automatically closes preventing liquid from the bottle 58 to pass downwardly through the tubular feeding portion 60. However, when the reservoir is placed into the tank 61 the downward extension 69 of the valve 66 contacts the bottom of the tank 61 and pushes the valve 66 upwardly against the action of the spring 70, thus permitting flow of liquid from the reservoir 58 to the tank 61. The level of the liquid in the tank 61 may be varied by means of raising or lowering the tubular member 60 with respect to the tank 61. In order to accomplish this relative positioning of the tube 60 to the tank 61, a projection 75 is fixedly mounted on the side of the tube 60 and is adapted to extend outwardly therefrom for engagement with a plurality of stepped surfaces on the upper end of the tubular portion 62 of the tank 61. As shown in Figure 4, the projection 75 is in the lowermost notch 76 thereupon providing that the level of the liquid in the tank 61 shall be at a minimum. In addition to the stepped notch 76 the upper end of the tube 62 also includes the steps 77 and 78. By rotating the tube 60 with respect to the tube 62 and raising the tube 60 the projection 75 which is integral with the reservoir tube 60 may be lodged on either one of the steps 77 and 78. By changing the position of the projection 75 the tube 60 is raised with respect to the tank 61 thereby permitting greater quantities of liquid to flow from the reservoir 58 to the tank 61.

As best shown in Figure 2, the tank 61 is provided with an opening 79 in the right hand side thereof for passage of a wick or the like 80 which extends down into the liquid 81 within the tank 61 and projects outwardly through the slot 79 to sliding engagement with the roller 15 as shown at 82. Thus, the passing of the material to be imprinted through the feeding rollers 15 and 16 causes the rollers to rotate and the wick 80 to impart a thin layer of liquid to the moistening roll 15 which in turn imparts the liquid to the envelope or card or the like. Certain paper stock is more absorbent than others and thus the possibility of various levels of solution in the tank 61 by putting the projection 75 on the desired step 76, 77, or 78 is important to the successful wetting of all envelopes or cards used.

As best shown in Figures 3 and 4 the platform 13 over which the material to be imprinted is passed is provided with forward and rearward adjustment through the medium of screws 83 and

84 passing through elongated notches 85 and 86 respectively in downwardly depending flange portions 87 and 88 of the platform 13. The screws 83 and 84 thereupon pass into and engage the housing 12. The platform 13 and its rear guide flange 14 are thus positioned in any desired relationship with respect to the housing 12 and thus also with respect to the platen 29 and cooperative stamping head 42. By adjusting the fore and aft position of the guide 14 the printed material may be positioned at various levels on the card or envelope or the like.

In the operation of this machine a copy roll is applied on the supply spool 47 and thereupon fed beneath the stamping head 42 and attached to the rewind spool 48. If it is desired to address a plurality of envelopes with the names and addresses shown on the copy roll the following steps are performed. An envelope is slid across the platform against the guide flange 14, through the cooperative wetting and pressure rolls 15 and 16 whereupon the envelope is located over the platen 29 and beneath the stamping head 42. The first name and address on the copy roll is centered beneath the stamping head by viewing the copy roll indicia through the transparent stamping head. A downward force is exerted on the handle 41 and the wetted envelope removes a portion of the aniline dye and transfers the name and address to the envelope previously slid into position on the platen 29. This operation is successively performed and between each operation the rewind spool 48 is moved preferably by the index finger engaging the knurled edge of the side discs 48*a* and 48*b*. In view of this method of advancing the copy roll it is immaterial whether the address to be transferred has two, three, or four lines as the address can be easily centered by use of hand and eye beneath the transparent stamping head 42 and thereupon transferred to the wetted envelope on the platen 29. Further the transparent stamping head permits the selecting or rejecting of certain names on the list. The user may employ code letters or marks adjacent each name for convenience in selection of desired names. If a name and address is incorrect a small piece of paper having the correct name and address with the proper dye backing may be fastened by mucilage or the like to the copy roll directly over the incorrect name and address. In this way the copy roll may be easily kept up to date.

A hand crank 89 is provided on the supply spool in order to permit easy rewinding of the copy roll either for the purpose of replacing the roll or rerunning it through the machine for repeating the process of imprinting the several names thereon.

It is apparent that herein is provided a novel and economical means of addressing a plurality of envelopes or cards and I am aware that numerous details of construction may be varied throughout a wide range without departing from the principles disclosed herein and I therefore do not propose limiting the patent granted hereon otherwise than as necessitated by the appended claims.

What is claimed is:

1. An imprinting machine comprising a supporting structure, a platen on said supporting structure, an arm structure pivotally mounted on said supporting structure for swinging movement, a stamping head mounted on said arm structure intermediate the ends thereof and

adapted to engage said platen when the arm structure is swung downwardly, means for adjustably positioning a dye impregnated copy roll list beneath said stamping head, means for feeding material to be imprinted to said platen, means for wetting said material to be imprinted with a dye dissolving solution, said means for adjustably positioning the copy roll list beneath the stamping head comprising a copy roll list supply spool journally mounted on said swinging arm structure and spaced in one direction from said stamping head, a take-up spool for said copy roll list journally mounted on said swinging arm structure and spaced in the opposite direction from said stamping head, and finger engaging means on said take-up spool to effect feeding of said copy roll beneath the stamping head.

2. A device as set forth in claim 1 comprising spring tensioning means for the supply and take-up spools.

3. An imprinting machine comprising a supporting structure, a platen on said supporting structure, an arm structure pivotally mounted on said supporting structure for swinging movement, a stamping head mounted on said arm structure intermediate the ends thereof and adapted to engage said platen when the arm structure is swung downwardly, means for adjustably positioning a dye impregnated copy roll list beneath said stamping head, means for feeding material to be imprinted to said platen, means for wetting said material to be imprinted with a dye dissolving solution, said means for adjustably positioning the copy roll list beneath the stamping head comprising a copy roll list supply spool journally mounted on said swinging arm structure and spaced in one direction from said stamping head, a take-up spool for said copy roll list journally mounted on said swinging arm structure and spaced in the opposite direction from said stamping head, finger engaging means on said take-up spool to effect feeding of said copy roll beneath the stamping head, said stamping head being a transparent material whereby it is possible to center or select a name and address therebeneath.

4. A device as set forth in claim 1 in which the supply spool is positioned at the rear or pivotal attaching end of the swinging arm structure and the take-up spool is positioned at substantially the forward end of the arm structure.

5. A device as set forth in claim 4 comprising a handle at the forward end of the arm structure positioned closely adjacent the take-up spool whereby the take-up spool may be conveniently rotated by the operator's fingers.

6. A device as set forth in claim 1 in which the finger engaging means on the take-up spool comprises milled side discs.

7. An imprinting machine comprising a supporting structure, a platen on said supporting structure, an arm structure pivotally mounted on said supporting structure for swinging movement, a stamping head mounted on said arm structure intermediate the ends thereof and

adapted to engage said platen when the arm structure is swung downwardly, means for adjustably positioning a dye impregnated copy roll list beneath said stamping head, means for feeding material to be imprinted to said platen, means for wetting said material to be imprinted with a dye dissolving solution, said means for feeding material to be imprinted to said platen comprising a pair of cooperative rolls, the first of said rolls journalled for rotation in said supporting structure and located to one side of said platen, said second cooperative roll mounted on a spring arm carried by said supporting structure, said spring arm arranged and constructed to urge said second cooperative roll against said first roll, said means for wetting the material to be imprinted including a reservoir of dye dissolving solution, a liquid tank adjacent the first of said feed rolls, means for delivering solution from the reservoir to the tank, wick means carried in said tank and engaging said first feed roll, said means for delivering solution from the reservoir to the tank including a tubular discharge from said reservoir, the bottom of said tubular discharge having an inclined opening, a projection on the side of said tube, and step means on said tank whereby said tube projection may engage any one of the step means on the tank for permitting more or less solution to flow from the reservoir to said tank.

8. A device as set forth in claim 7 in which the reservoir includes a spring closed valve arranged and constructed to automatically open when the reservoir is in position on said tank.

JOSEPH A. WEBER.

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