Dec. 23, 1952 J. J. ACKELL ET AL 2,622,514

POSTAGE PRINTER FOR ADDRESS PRINTING MACHINES

Filed Jan. 24, 1950 2 SHEETS—SHEET 1

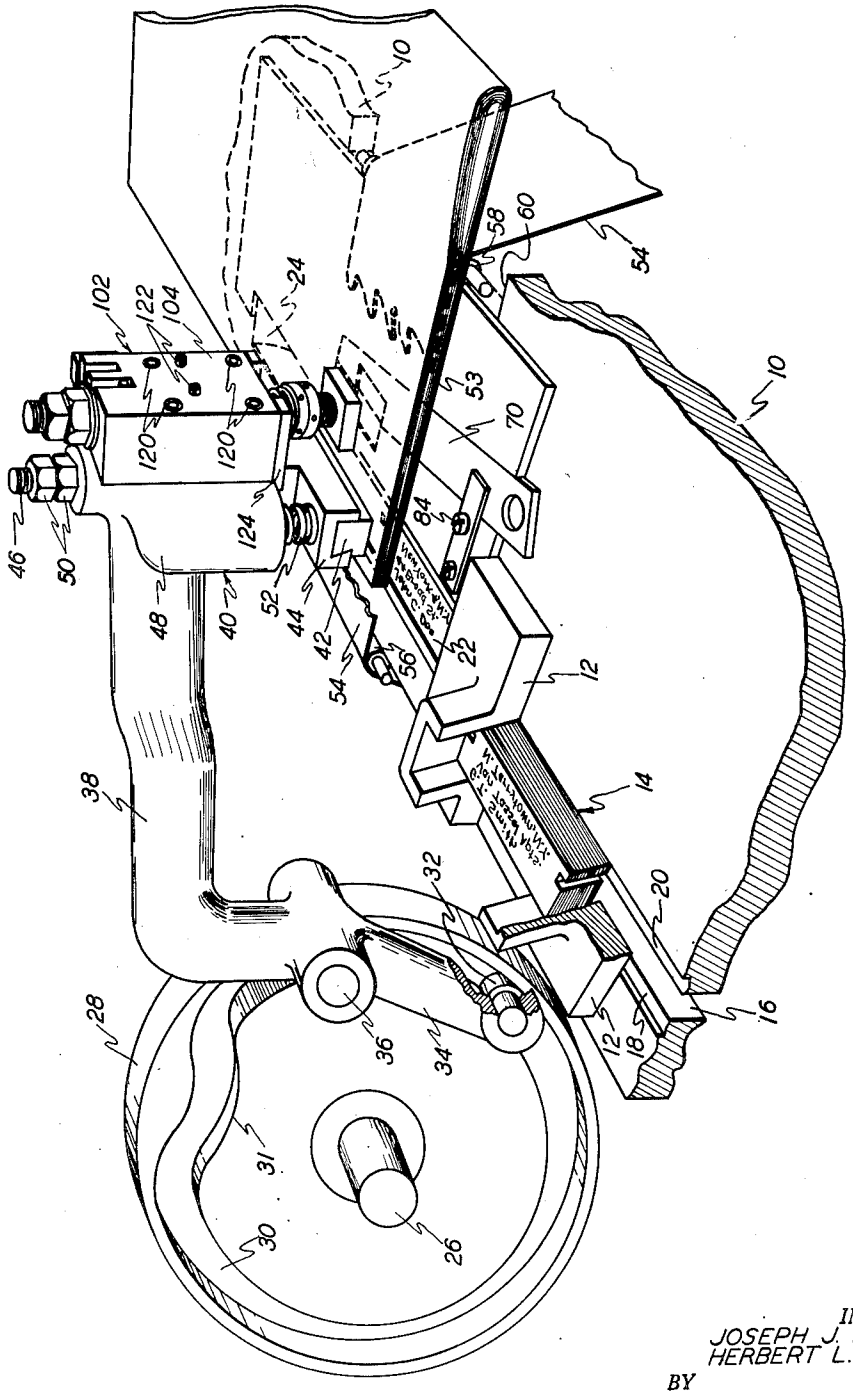


FIG. 1

INVENTORS
JOSEPH J. ACKELL
HERBERT L. PAULDING

BY

ATTORNEY

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POSTAGE PRINTER FOR ADDRESS PRINTING MACHINES

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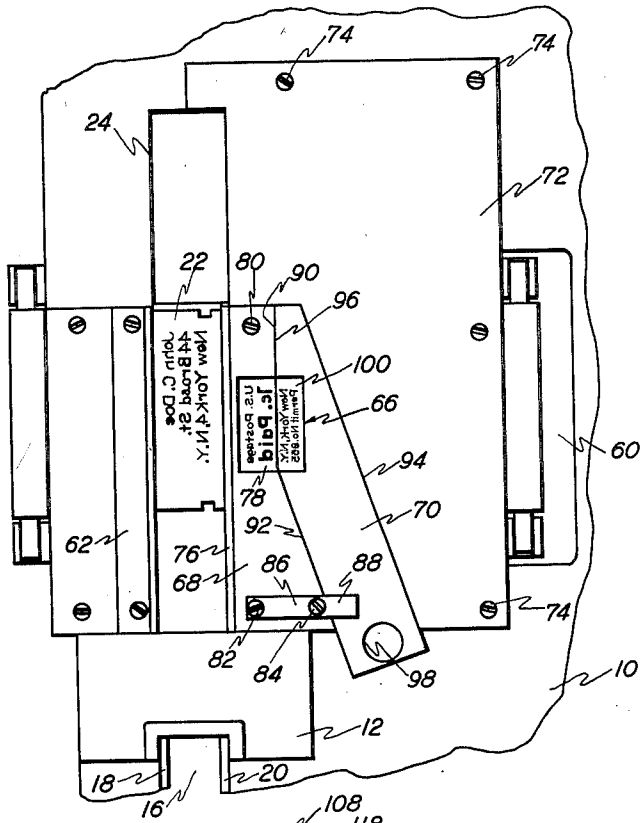


FIG. 2

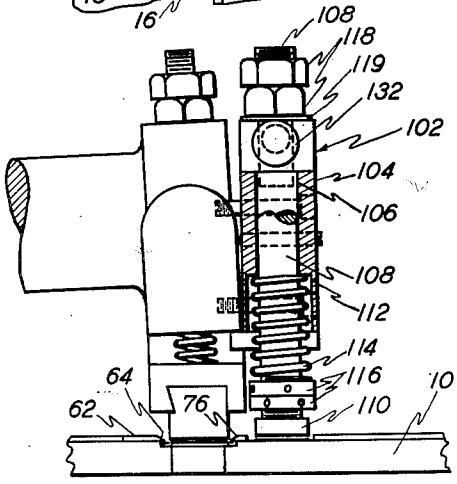


FIG. 3

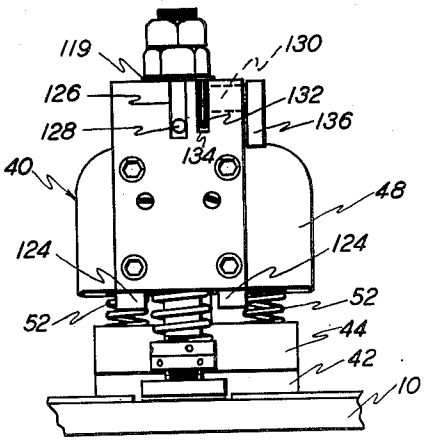


FIG. 4

INVENTORS
JOSEPH J. ACKELL
HERBERT L. PAULDING

BY

H. C. Chisholm

ATTORNEY

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UNITED STATES PATENT OFFICE

2,622,514

POSTAGE PRINTER FOR ADDRESS PRINTING MACHINES

Joseph J. Ackell, Bellaire, and Herbert L. Paulding, Port Washington, N. Y., assignors to Dow Jones & Company, Inc., Wilmington, Del., a corporation of Delaware

Application January 24, 1950, Serial No. 140,236

1 Claim. (Cl. 101—57)

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The present invention relates to a machine which will print addresses on articles and which, when desired, will simultaneously print a postage-paid indicia closely adjacent to the address. Since postage-paid indicia must identify the city from which mail is dispatched under a postage-paid permit, provision is also made for convenient and rapid changing of the portion of the postage-paid printing plate which identifies the city.

One machine to which the present invention may be adapted is a commercially available addressing and wrapping machine particularly designed for use with newspapers. Ordinarily the newspapers are folded once along a horizontal centrally located line and they are fed through the machine with the mast-head down to a position wherein the upper right-hand corner of the front page is positioned over an address printing plate lying in printing position within a channel in the bed of the machine. An impression head is arranged to strike the newspaper directly above the address printing plate when the newspaper is positioned as just described. The newspaper is then fed from the printing position to suitable folding and wrapping mechanism from which it is ejected with the address exposed as required by postal regulations. The address plates are successively fed through the channel in timed relation with the feeding of newspapers by mechanism which is well known and need not be described herein. An inking ribbon is mounted so as to be disposed above the address printing plate and thus to lie between the plate and the portion of the newspaper upon which the address is to be printed. Well-known mechanism is provided for feeding the inking ribbon through the machine so as to present freshly inked portions when needed.

In accordance with the present invention a supplemental printing plate assembly and supplemental impression head is provided so that, when desired, postage-paid indicia may be printed upon the newspaper at a point very close to the address as required by postal regulations. To this end the bed of the addressing machine is altered to permit the insertion at a level generally coinciding with the level of the address printing plate of a postage-paid printing plate assembly. The postage-paid printing plate assembly is preferably made in two parts, one of which may be more or less permanently affixed to the bed and the other of which is so designed as to be conveniently accessible from a position beyond the inking ribbon and readily removable

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for the purpose of replacing it with one of a series of similar printing plate portions.

The supplemental impression head may be mounted upon the arm which carries the address impression head and preferably includes conveniently accessible means for withdrawing the supplemental impression head from operative position when it is not desired to print postage-paid indicia simultaneously with the address.

With the apparatus thus generally described, it is possible to address and wrap all of the newspapers published in a particular plant which are to be distributed by mail. For those newspapers which are addressed to points requiring no postage-paid indicia, the address alone is printed. For those newspapers which are to be shipped in bulk to a distant city for distribution by mail from the post office in the latter city, the postage-paid indicia with proper city designation is printed.

It is the object of the present invention to provide apparatus for printing, when desired, postage indicia simultaneously with and adjacent to address indicia on articles which are to be distributed by mail. Other and further objects will become apparent upon a consideration of the following detailed description of a preferred form of the invention taken in connection with the drawing accompanying and forming a part of this specification.

In the drawings:

Fig. 1 is a perspective view of a portion of an addressing machine to which the present invention is applied;

Fig. 2 is a plan view of a portion of the machine shown in Fig. 1;

Fig. 3 is a detailed view, partially in section, of the impression mechanism of the machine shown in Fig. 1; and

Fig. 4 is an elevational view of the impression mechanism shown in Figs. 1 and 3.

Referring now to the drawings, in Fig. 1 there are shown certain essential parts of an addressing and wrapping machine commercially available and widely used in the newspaper publishing business. Such machine includes a bed 10 upon which is mounted a magazine 12 for holding a stacked supply of address plates 14. The bed 10 has formed therein a transverse slot 16 at the upper edges of which are formed shoulders 18 and 20 which lie at a level slightly below the plane of the top of the bed 10. The lowermost address plate 14 within the magazine 12 rests upon the shoulders 18 and 20 and at the

proper time such lowermost address plate 14 is moved transversely from the magazine to slide along the shoulders 18 and 20 to the printing position occupied by the address plate 22 as shown in Fig. 1. The mechanism for moving the address plates along the shoulders 18 and 20 includes a shuttle mechanism (not shown) working through the slot 16. Such mechanism is well known and need not be described herein, it being understood that the address plates are moved individually and intermittently across the machine to successively occupy the printing position and thereafter to be ejected through a suitable opening 24 into a collecting magazine (not shown beneath the bed 10.

The movement of the address plates from the magazine 14 is timed with the operation of the impression mechanism in a well-known manner. The impression mechanism includes a shaft 26 which may rotate constantly during operation of the machine, and to which is fixed a cam 28 having a cam track 30 in which is positioned a roller follower 32 carried by the lower end 34 of an impression arm pivoted on a shaft 36. The impression arm includes a generally horizontally disposed upper portion 38 which carries an address impression head 40 of conventional construction.

The address impression head 40 includes an impression block 42 positioned within a carrier 44 which is fixed to a vertically disposed threaded rod 46 extending through a suitably shaped portion 48 of the casting forming the impression arm 38. The upper end of the threaded rod 46 extends above the arm 38 and receives a pair of lock nuts 50 which may be adjusted into desired position for printing on newspapers of various thicknesses. Compression springs are positioned between the casting 48 and the carrier 44 to urge the impression block 42 downwardly to the position permitted by the lock nuts 50. The springs 52 serve to apply yielding pressure to the impression block 42 when the impression arm 38 is moved downwardly to cause the printing of an address.

The cam track 30 has a depressed portion 31 which is so positioned and timed with relation to the address plate feeding mechanism as to swing the impression arm 38 downwardly when an address plate has been moved to the position 22 and a newspaper 53 has been moved to the position shown in Fig. 1.

An inking ribbon 54 extends lengthwise of the bed 10 over a roller 56 at the rear of the bed 10 and over a roller 58 located within a suitable opening 60 toward the front of the bed 10. The inking ribbon 54 is conducted downwardly through the opening 60 to suitable feeding mechanism (not shown) which serves to move the ribbon 54 slowly along the bed 10 to present freshly inked portions to the impression point.

As shown most clearly in Figs. 2 and 3, a retaining plate 62 is secured to the bed 10 in such a position as to slightly overlap the shoulder 18 of the address plate slot 16. This retaining plate 62 extends from the magazine through the zone in which the address plates are successively positioned for printing. Thus the address plate 22 is shown lying beneath the extended lip of the plate 62. The lip aforesaid may be beveled as shown at 64. Ordinarily there is another retaining plate similar to the plate 62 mounted in such position as to extend over the shoulder 20 of the slot 16. Such plate is provided by the manufacturer of the machine but it has been removed for the purposes of the present invention.

The machine as described to this point is a commercially available machine, the specific details of which form no part of the present invention, it being understood that machines of generally similar nature but differing in detail may be used in connection with the present invention. In the event the present invention is to be adapted to machines of other types, it is essential that the postage printing plate assembly be mounted very close to the impression point for the address plates and such positioning may or may not involve the removal of any of the standard parts of the machine to which the invention is to be adapted.

The postage printing plate assembly of the present invention is indicated generally at 66. It is preferably made up of two separate parts 68 and 70 which are fitted into a plate 72 secured to the bed 10, for example, by screws 74.

The part 68 of the postage printing plate assembly comprises a metal plate having a beveled edge 76 overhanging the shoulder 20 of channel 16 and serving the purpose of retaining the address plates within the channel. The plate 68 has certain postage printing indicia 78 formed therein or attached thereto in any suitable manner; for example, the plate 68 may be engraved leaving appropriate lettering in relief. Alternatively the plate 68 may have an opening of suitable size cut therein in which there may be fastened a separate plate having appropriate lettering. The plate 68 is secured to the bed 10 by screws 80, 82 and 84, the screws 82 and 84 being passed through a narrow strip of metal 86 having a free end 88 which extends beyond an edge of the plate 68 for a purpose to be described. As shown in the drawing the plate 68 is of irregular outline having an edge portion 90 which is parallel with the path of travel of the address plates through the machine and having a portion 92 which is disposed at an angle to said path. The plate 72 is provided with an edge 94 which is parallel with the edge 92 of the plate 68 whereby the edges 92 and 94 will define a channel having parallel walls to receive the plate 70 of the postage printing plate assembly.

The plate 70 comprises a metal plate of width suitable for reception in the channel between the edges 92 and 94 aforesaid. The plate 70 is also irregularly shaped having an edge 96 which is cut at an angle to the remainder of the plate 70 so that the edge 96 will coincide with the edge 90 when the parts are in the position shown in Fig. 2. The plate 70 is held firmly in position by pressure exerted by the extension 88 of the strip 86. The screw 84 may be loosened to permit the plate 70 to be withdrawn by sliding downwardly as viewed in Fig. 2. Finger hole 98 is provided to facilitate handling of the plate 70. The plate 70 has suitable lettering formed therein or attached thereto as described above in connection with the plate 68. Such lettering is indicated at 100 and is so positioned on the plate 70 as to be properly aligned with the lettering carried by the plate 68.

Ordinarily the plate 68, which is more or less permanently attached to the bed 10, will carry the legend "U. S. Postage 1¢ Paid." The plate 70 will carry lettering identifying the city from which the mail is to be dispatched and ordinarily will include the permit number. The plate 70 may be one of a group of plates carrying suitable

lettering for printing the name of any desired city and for printing the appropriate permit numbers.

The plate 70 lies in the channel between the walls 92 and 94 as described above and this channel is disposed at an angle to the path of the address plates through the machine. This disposition makes it possible to remove the interchangeable plate 70 without interference with the base 12 of the address plate magazine. It also will be observed that the free end of the plate 70 extends into an accessible position well beyond the inking ribbon 54 and beyond any newspaper which might be positioned in the machine at the time it is desired to change the city designation in the postage printing plate assembly.

The construction just described results in a considerable saving in cost over the cost that would be involved if the postage paid plate for each city were to be made complete in one piece. In the latter event each such plate would have to include the letters "U. S. Postage 1¢ Paid" in addition to the city designation and permit number. Obviously costs are reduced in proportion to the reduction in the number of letters which must be formed. Therefore it is advantageous to provide the plate 68 with such lettering as must accompany all city designations and to place on the removable plate 70 only such lettering as must be changed when a city designation is changed. It will be observed that the lettering 78 on the plate 68 is located very close to the channel within which the address plates move and is so positioned that an impression formed from the lettering on the plate 68 will lie very close to the impression formed from the address plate 22.

A supplemental impression head generally indicated at 102 is provided for making an impression from the postage plate assembly when it is desired to do so. The supplemental impression head 102 may be attached to the address impression head 40 on the impression arm 38 so that the impressions may be formed simultaneously. As shown in the drawings, the supplemental impression head 102 may comprise a block 104 having a vertically disposed bore 106 for receiving a rod 108 having an impression block 110 secured to the lower end thereof. A recess 112 is formed in the block 104 to receive a compression spring 114, the lower end of which rests upon a pair of lock nuts 116 carried by a threaded portion of the rod 108. At its upper end, the rod 108 is threaded to receive another pair of lock nuts 118, the lower one of which bears upon a washer 119 resting upon the upper surface of the block 104. The lock nuts 118 at the upper end of rod 108 may be adjusted to raise and lower the impression block 110 for operation upon newspapers of various thicknesses. The spring 114 is provided to apply yielding pressure through the impression block 110 onto the newspaper positioned therebeneath in registry with the indicia carried by the postage printing plates 68 and 70. The lock nuts 116 may be adjusted in accordance with the adjustment of the lock nuts 118 so that the pressure exerted by the spring 114 may be kept uniform irrespective of the vertical position of the impression block 110 as determined by the lock nuts 118. It will be understood that if the lock nuts 116 were not provided, the spring 114 would exert varying degrees of pressure, depending upon the particular adjustment of the lock nuts 118.

The supplemental impression head 102 may be

secured to the regular impression head 40 in any suitable manner. As shown in the drawings four screws 120 may be extended through suitable unthreaded openings formed in the block 104 and projected into engagement with threaded openings formed in the casting 48 forming a part of the impression head 40. Two set screws 122 may be threaded into the block 104 and provided with pointed ends which bear against the face of the casting 40. At the lower end of the block 104 there may be secured two parallel bars 124 which extend rearwardly beyond the block 104 so as to catch under the lower edge of the casting 48 of the regular impression head 40. By suitable adjustment of the screws 120 and the set screws 122, the block 104 may be tilted relative to the regular impression head 40 and held in proper adjusted position wherein the lower face of the impression block 110 will lie in the proper plane for forming an impression from the postage printing indicia. The downward thrust incident to printing is transmitted from the impression arm 38 to the supplemental impression head 102 through the bars 124 and screws 120, 122 aforesaid.

To prevent rotation of the rod 108 within the block 104, there is provided a vertically disposed slot 126 cut in the block 104 and disposed radially of the rod 108. A pin 128 is secured to the rod 108 in a radial position and extends into the slot 126 wherein it may move to and fro vertically as the rod 108 moves within the block 104.

As stated above, there may be occasions when it is not desired to print postage indicia simultaneously with the printing of addresses, and to that end suitable mechanism is provided for raising the impression block 110 against the spring 114 into a position wherein it will not touch the article when the impression arm 38 is moved downwardly to print the address. To this end the block 104 may be provided with a suitable horizontally disposed opening which receives a short shaft 130 having an eccentric cam 132 positioned at the inner end thereof beneath the washer 119. The cam 132 may lie in a suitable slot 134 cut in the block 104 as clearly shown in Figs. 3 and 4. At its outer end, the shaft 130 is provided with a handle 136 secured to the shaft and so located as to be conveniently accessible. When the cam 132 and handle 136 are in the positions shown in Figs. 3 and 4, the low part of the cam 132 lies beneath the washer 119 and the impression hammer 110 lies in operative position. Turning the handle 136 through 180° will rotate the high part of the cam 132 in such manner as to raise the washer 119 and the shaft 108 into such position that the impression hammer 100 is inoperative.

Modifications and variations in detail may occur to those skilled in the art, and since the present disclosure is illustrative rather than limiting, it is intended that the invention shall include such modifications and variations as fall within the proper scope of the following claim.

What is claimed is:

In an addressing machine a bed having a channel formed therein for receiving a series of individual address printing plates, a first postage printing plate secured to said bed carrying postage printing indicia in close proximity with said channel, a blank plate secured to said bed, one edge of said blank plate and an edge of said postage printing plate being spaced from one another to define a slideway, a second postage printing plate having additional postage printing indicia thereon, said second postage printing plate

being shaped to fit said slideway and being one of a series of plates of identical shape with different indicia thereon, an inking ribbon disposed over said address printing plate and over the indicia on said first and second postage printing plates, said second postage printing plate having an extension thereon projecting beyond said inking ribbon to provide ready access thereto for interchange with other plates of said series, and means accessible beyond said inking ribbon for clamping said second postage printing plate in a position with the printing indicia thereon in predetermined relation with the indicia on said first postage printing plate.

JOSEPH J. ACKELL.
HERBERT L. PAULDING.

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