

Aug. 16, 1932.

J. C. PASCHALI

1,872,173

PRINTING DEVICE

Filed Sept. 27, 1928

Fig. 1

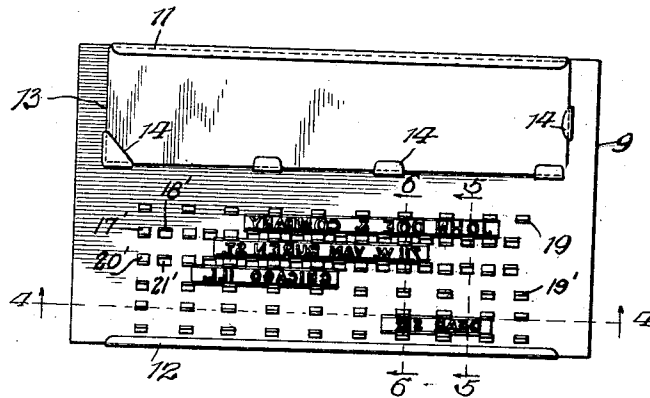


Fig. 2

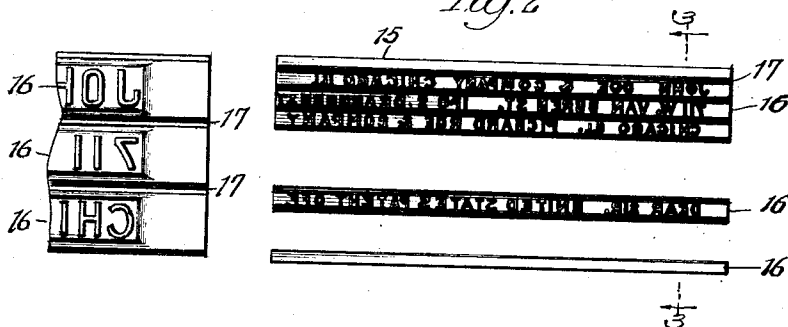


Fig. 3

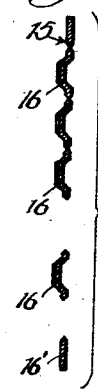


Fig. 4



Fig. 5

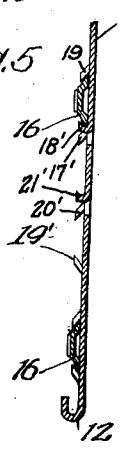


Fig. 6

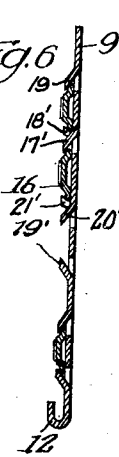


Fig. 7

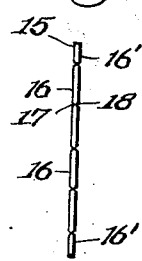
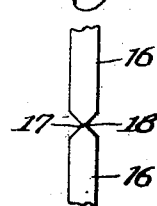


Fig. 8



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UNITED STATES PATENT OFFICE

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PRINTING DEVICE

Application filed September 27, 1928. Serial No. 308,694.

This invention relates to printing devices of that kind which comprise one or more printing plates having type characters embossed thereon and detachably engaged with a frame which also may carry an information card.

The object of the invention is to provide a novel printing device comprising a frame and one or more narrow printing plates having type characters thereon, the plates having reduced edges close to the type characters and adapted to engage retaining means on the frame in position for desired line spacing and so that any plate may be removed and replaced independently of the other plates.

A further object is to provide type line plate panels having type characters embossed thereon and of such width that several panels may be mounted on a frame in desired printing arrangement and in proper spacing with each panel rigidly engaged with retaining means on the frame.

In the accompanying drawing I have illustrated the invention in a selected embodiment in which

Fig. 1 is a front view of a printing device embodying the invention;

Fig. 2 shows the printing plate with a margin panel and one type panel detached;

Fig. 3 is a sectional view on the line 3—3 of Fig. 2;

Fig. 4 is a sectional view on the line 4—4 of Fig. 1;

Figs. 5 and 6 are sectional views on the line 5—5 and the line 6—6, respectively, of Fig. 1;

Fig. 7 is an end view of the scored printing plate blank;

Fig. 8 is a detail enlarged end view of a portion of the printing plate blank.

Referring to the drawing, the frame 9 is made of light sheet metal provided with spacing flanges 10 at its ends, and strengthening beads 11, 12 at its top and bottom edges, respectively. The frame may be made of a size, as shown in Fig. 1, to receive an information card 13 which is detachably held in the frame by the bead 11 and other retaining devices 14 of suitable construction.

Heretofore printing plate blanks have been made of standard sizes for corresponding

frames, and the type characters have been embossed on these plates in machines of the kind disclosed in Patents No. 921,600, patented May 11, 1909; No. 955,116, patented April 12, 1910, and No. 1,518,904, patented December 9, 1924. These plates have generally been one-piece plates, each having one or more lines of type characters but generally sufficient lines to make a complete address and often including the salutation. With such plates it is necessary to replace an entire plate whenever any change is to be made therein such, for example, as a street number change. It is possible to block out type characters and emboss thereover, but this is not a method which can always be practiced satisfactorily by those not especially skilled, and besides it requires considerable time. Also there is a considerable proportion of each plate left blank which represents so much waste in material and unnecessary weight, both of which are important considerations in large lists.

My invention provides printing plates having a single line, as shown in the drawing, or having a plurality of lines, each plate adapted to be detachably engaged with and held by retaining devices on the frame. The blank 15 for making the plate is made of suitable sheet material of a kind which will enable printing characters to be embossed thereon, and which is well known in the art. This blank may be of any size, and it is divided into panels 16 by parallel scoring 17 on its face and 18 on its back. The score lines on the back are opposite the score lines on the front; they are preferably V shaped as shown in Fig. 8, and they cut into the blank to a sufficient depth so that the panels may be easily separated by pressure of the fingers but are connected together so that the blank can be handled without accidental separation of the panels. The margin panels 16' are of sufficient width to accommodate the jaws which hold the blank in the embossing machine, and when the embossing operation is completed the margin panels are broken off and discarded. The type panels 16 between the margin panels 16' are narrow but of suitable width for the type characters so that the embossed panels can be mounted on the

frame in proper line spacing. It is found in practice that the type lines can be embossed on the blank, Fig. 7, in usual line spacing and still leave enough material at the margins of each type line panel for engagement with the retaining device on the frame. It is difficult to represent the exact dimensions and proportions in the pen and ink drawing, but it will be understood that the object is to have each panel as narrow as the embossing operation will permit without distorting or breaking the metal in the embossing operation, and in practice it has been found that the printing characters may be embossed in several lines on a scored plate and in close line spacing, and the type line panels separated and mounted in a frame in line spacing for addressing. It may be that the scoring permits the metal to flow more easily in the embossing operation without distorting or breaking the plate. However, this may be, I do know that type characters, upper and lower case, can be embossed in several lines, in proper type spacing and line spacing, and when the panels are separated on the score lines each panel has sufficient side margin for operative engagement with retaining devices on the frame, these devices being arranged in close line spacing or otherwise as desired. The retaining devices are lips struck up from the frame 9 in parallel rows and form channels adapted to receive and hold the type panels in juxtaposed relation. On the frame, as shown in Fig. 1, there are four rows of retaining devices to hold three address type panels and there are two other rows of retaining devices to receive a salutation panel below the set of retaining devices for the address panels. The first and fourth rows include retaining devices 19 and 19', respectively, and these retaining devices are alined with and inclined toward each other. The second row includes retaining devices 17' alined with the retaining devices in the first row and inclined toward the retaining devices in the fourth row. The second row also includes retaining devices 18' intermediate of the alined retaining devices and inclined toward the retaining devices in the first row. The retaining devices 19 and 18' cooperate to provide a channel in which the first of the address panels may be mounted. The third row includes retaining devices 20' alined with the retaining devices in the first and fourth rows and inclined toward the retaining devices in the fourth row. There are also retaining devices 21' in the third row which are alined with the retaining devices 18' in the second row and these retaining devices 21' are inclined in the same direction as the retaining devices 18'. The retaining devices 17' in the second row and the retaining devices 21' in the third row cooperate to provide a channel in which the second of the address panels may be mounted. The retain-

ing devices 20' in the third row and the retaining devices 19' in the fourth row cooperate to provide a channel in which the third of the address panels may be mounted. Since the retaining devices are disposed in parallel rows, it is apparent that they will receive and hold the type panels in juxtaposed relation. Moreover, the retaining devices in each row are spaced from each other and consequently provide a discontinuous retention along the edges of the type panels. Moreover, the retaining devices which cooperate to provide the type panel receiving channels are staggered with respect to each other to thereby insure more uniform engagement with the type panels to better secure them in position. The retaining devices for the salutation panel are alined with the retaining devices in the first and fourth rows, and these retaining devices for the salutation panel are inclined toward each other to thereby provide a type panel receiving channel in which the salutation panel may be mounted. The retaining devices receive the marginal edges of the type panels and these edges are tapered by reason of the scoring, as shown in Fig. 8, and they therefore easily fit under the lips constituting the retaining devices. The panel is light in weight, and it is only necessary to provide a slight edge engagement with the retaining lips to hold the panel on the frame. Thus it is possible to form the type characters close to the edges of the panels, because only a slight projection of the panel beyond the type is required for engagement with the retaining lips; and in the V shaped form of scoring shown, which I prefer, the extremity of the beveled edge is sufficient to effect this engagement. It will be understood, of course, that in actual practice the blank is quite thin, and the scoring is necessarily small transversely, but it is sufficient to enable the panels to be readily separated without liability of distorting the panels. The lips permit the panels to be inserted endwise and the use of light gauge metal for the plate blank; the inclined lips, forming discontinuous guide grooves for engagement of the tapered edges of the panel, enable the panel to be readily inserted and removed from the retaining devices of the frame or to be adjusted to any desired position.

Whereas it has been customary heretofore to emboss an address or other form on a single printing plate, which leaves a considerable portion of the plate blank, representing waste material and unnecessary weight in the complete printing device, with my invention the panels may be embossed for their full length and divided as required after separation from other panels so that all, or substantially all, of each panel may be employed for embossing. The type panels may be adjusted to any desired position on the frame, to provide for

block or indented arrangement of the address, for example, and any type panel may be changed without disturbing the other panels and as often as desired. This construction permits piece work on addressing and maintaining a list of addresses, because it is obvious that a stock of certain parts of the address may be maintained, and may even be set up in the frame, for use as required.

Thus, in the address illustrated in the drawing, the "Chicago, Ill." type panel and the "Dear Sir" type panel may be stock material, made up at the factory and supplied to the customer, or made up by the customer's operator at odd times; and such stock material may be kept in storage for use as required, or it may be set up in frames for use as required. When a printing device is to be discontinued for any reason, the name and street address type panels may be removed and destroyed, the frame and the city and salutation type line panels being preserved for future use. Thus the invention reduces the cost and expedites the work of maintaining a list.

I have shown and described the invention in a form which I have found satisfactory for the purpose, but I reserve the right to vary and make changes in the form, construction and arrangement of parts; as may be required or desirable in the commercial use of the invention, within the scope of the following claims.

I claim:

1. A printing device of the class described comprising a frame having parallel rows of spaced retaining devices struck up therefrom and forming channels adapted to receive and hold type panels in juxtaposed relation, there being an upper row, a lower row, and two intermediate rows of said retaining devices, the retaining devices in the upper row being equidistantly spaced from each other and the retaining devices in the lower row being alined therewith, the retaining devices in the upper and lower rows being inclined toward each other, and the intermediate rows having retaining devices alined with the retaining devices in the upper row and inclined toward the retaining devices in the lower row and also having retaining devices intermediate of said alined retaining devices and inclined toward the retaining devices in the upper row, and other rows of retaining devices below said lower row and adapted to receive and retain therebetween a salutation type panel.

2. A printing device of the class described comprising a frame having parallel rows of spaced retaining devices struck up therefrom and forming channels adapted to receive and hold type panels in juxtaposed relation, there being an upper row, a lower row, and two intermediate rows of said retaining devices, the retaining devices in the upper row being equi-

distantly spaced from each other and the retaining devices in the lower row being alined therewith, the retaining devices in the upper and lower rows being inclined toward each other, there being retaining devices in the intermediate rows alined with the retaining devices in the upper and lower rows and inclined toward the retaining devices in the lower row, and said intermediate rows also having retaining devices alined with each other but out of alinement with the retaining devices in the upper and lower rows and inclined toward the retaining devices in the upper row, the retaining devices in one row cooperating with the retaining devices in the adjacent row extending toward the retaining devices in the one row to engage opposite edges of type panels inserted therebetween at staggered places to provide a discontinuous retention for the type panels.

3. A printing device of the class described comprising a frame having parallel rows of spaced retaining devices struck up therefrom and forming channels adapted to receive and hold type panels in juxtaposed relation, there being four rows of retaining devices to hold three address type panels, the retaining devices in the first row and in the fourth row being alined with and inclined toward each other, there being retaining devices in the second and third rows alined with the retaining devices in the first and fourth rows and inclined toward the retaining devices in the fourth row, and said second and third rows also having intermediate retaining devices alined with each other but out of alinement with the other retaining devices in said four rows and inclined toward the retaining devices in the first row, and there being two rows of retaining devices to receive a salutation panel below the set of retaining devices for the address panels, the retaining devices for the salutation panel being alined with the retaining devices in the first and fourth rows and being inclined toward each other.

JAQUES CAMILLE PASCHALI.