Feb. 20, 1951 C. J. HUEBER 2,542,278

PRINTING DEVICE CARRIER

Original Filed June 1, 1945

Fig. 1

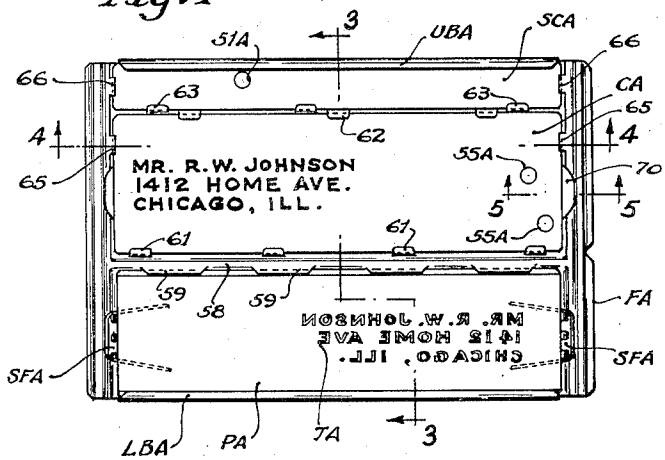


Fig. 3

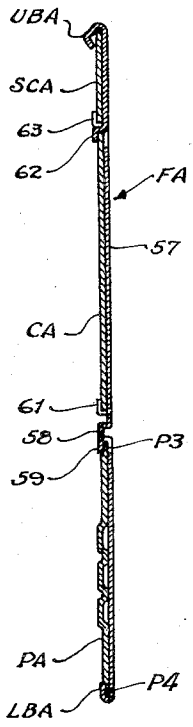


Fig. 2

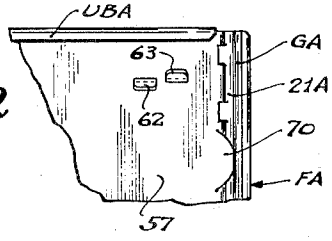


Fig. 4

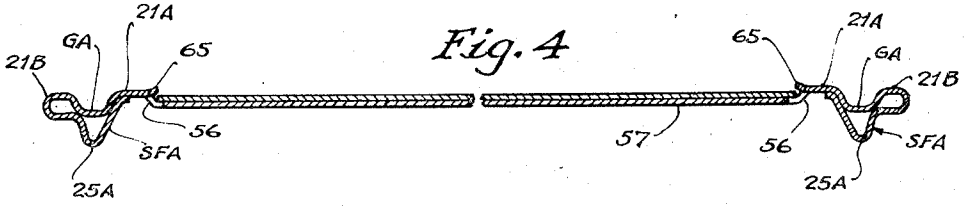
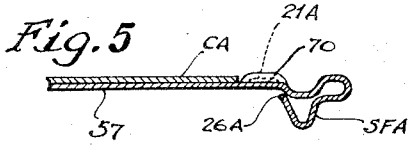


Fig. 5



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PRINTING DEVICE CARRIER

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Original application June 1, 1945, Serial No. 596,991, now Patent No. 2,425,324, dated August 12, 1947. Divided and this application February 5, 1947, Serial No. 727,471

1 Claim. (Cl. 40—152)

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This invention relates to printing devices of the character that are sequentially fed through printing and like machines to have operations performed directly thereon or under control thereof and which are also sometimes known as printing and control devices.

This application is a division of my copending application, Serial No. 596,991, filed June 1, 1945, and which on August 12, 1947, was issued as Patent 2,425,324.

The printing device of the present invention includes a carrier having a depressed panel therein in which a card may be releasably retained. This card may bear an impression from all or a selected portion of the type characters embossed on a plate releasably retained on the carrier. This card and the underlying portion of the carrier may also have aligned openings formed therein to afford data representations.

It is advantageous that a card of the aforesaid nature be firmly retained on the carrier of the printing device and the retaining devices for securing the card are arranged to insure this. In such instances, however, when it becomes desirable to remove one card from the carrier so that another can be substituted therefor it is advantageous to so arrange the carrier that removal of a card therefrom will be expedited. Hence it is an object of this invention to so arrange a printing device carrier of the aforesaid kind that removal of a card retained thereon will be expedited.

A more specific object of this invention is to depress at least one marginal portion at an end of a depressed panel in the carrier in such a way as to afford a restricted extension of the depressed panel so as to thereby enable the edge of a card disposed in the panel to be grasped.

Other and further objects of the present invention will be apparent from the following description and claim and are illustrated in the accompanying drawings which, by way of illustration, show preferred embodiments and the principle thereof and what I now consider to be the best mode in which I have contemplated applying that principle. Other embodiments of the invention embodying the same or equivalent principle may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claim.

In the drawings:

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

Fig. 2 is a fragmentary rear elevational view

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of a portion of the printing device shown in Fig. 1; and

Figs. 3, 4 and 5 are sectional views taken substantially and respectively on the lines 3—3, 4—4 and 5—5 on Fig. 1.

In the drawings, an embodiment of my invention is illustrated wherein separate cards CA and SCA are movably mounted on the face of a carrier or frame FA. The carrier FA has an embossable printing plate PA secured on the operative face thereof near the lower edge of the frame, and this printing plate is adapted to have embossed type characters TA formed thereon and from which printed impressions may be made. The illustrated printing device is of such a character that the removably mounted printing plate PA and the cards CA and SCA are disposed in recessed panels formed in the face of the frame FA in the manner disclosed in my copending application, Serial No. 450,320, filed July 9, 1942, and now issued as Patent No. 2,425,323, patented August 12, 1947. The frame FA has spacing flanges SFA formed thereon that extend along the shorter edges of the rectangular frame from one of the longer edges thereof to the other.

The spacing flanges SFA have relatively narrow lower edges 25A and the upper marginal portions at the ends of the frame are so formed that grooves GA are afforded along these upper surfaces of the frame parallel to the end edges of the frame and in such positions that the narrow edges 25A of the spacing flanges may, in a stacked group of printing and control devices, be located in the grooves GA so as to prevent endwise displacement of the printing devices relative to each other.

Inwardly of the grooves GA, the frame FA has flat upper surfaces 21A that lie in a plane somewhat higher than the surfaces 21B that are adjacent to the end edges of the frame, and it will be observed that the flat surfaces 21A are offset downwardly as at 56 so as to afford depressed panels as 57 that extend between the two flat surfaces 21A in a direction longitudinally of the frame. In the present instance the panel 57 in which the printing device PA is mounted is substantially the same as disclosed in my aforesaid copending application Serial No. 450,320, this panel being defined by a lower bead LBA and by a reenforcing bead 58 that is extended across the frame parallel to the lower bead and in such a position as to be located adjacent to the upper edge of the printing plate PA. The rib 58 has retaining devices 59 formed

at spaced positions thereon and extending in a direction parallel to the bottom of the panel so as to overlie a relatively thin edge flange P3 formed along the upper edge of the printing plate PA. The printing plate PA has a similar flange P4 along its lower edge and this flange is engaged within the lower bead LBA. Thus the retaining devices 59 and the lower bead LBA hold the printing plate PA against face to face displacement with respect to the frame FA, and spring retaining devices SFA are afforded in the frame FA in the manner disclosed in my aforesaid copending application Serial No. 450,320 so as to hold the printing plate PA against endwise displacement.

The bead 58 also serves to define the lower edge of the panel 57 within which the cards CA and SCA are mounted, the upper border of this panel being defined by an upper bead UBA that is formed along the upper edge of the frame. The lower edge of the control card CA is held in position within the depressed panel 57 by retaining devices 61 that are formed in the present instance somewhat above the upper edge of the rib 58 as will be evident in Figs. 1 and 3, and the upper edge of the card CA is held in place by retaining devices 62 that are struck from the metal of the frame FA. Just above the line of retaining devices 62, a plurality of retaining devices 63 are struck from the metal of the frame FA in positions spaced from the upper bead UBA so as to engage and overlie the lower marginal portions of the selecting card SCA, and hence the selecting card may be held in place by the cooperating action of the upper bead UBA and the retaining devices 63. The cards CA and SCA are held against endwise displacement by separately formed retaining devices 65 and 66 that are formed so as to project from the panels or surfaces 21A.

The retaining devices 65 and 66 are bent slightly upwardly, the devices 65 being so shown in Fig. 4, thereby to facilitate engagement and disengagement of the end edges of the cards with these retaining devices. In order that the removal of the card CA may be simplified, the surfaces 21A, between the retaining devices 65 and the lower edge of the card CA, are recessed as at 70 so as to lie substantially in the plane of the panel 57 as shown in Figs. 1 and 5, so that the fingernail of an operator may be inserted in a direction parallel to the bottom of the panel 57 and into position beneath the end edge of the card CA. In order that such formation of the recesses 70 may be accomplished, the edge portion 26A of the material that forms the spacing flange is cut away so as to afford clearance into which the metal that normally affords the surface 26A may be displaced downwardly into the plane of the panel 57.

In the form of the invention shown in the drawing, the area of the frame FA that is disposed beneath the card SCA is not perforated at the various selecting or classifying positions. Thus in the formation of index or classifying perforations 51A, Fig. 1, the perforation is simultaneously made through the card SCA and the underlying portion of the frame FA. When the classification of the printing device is to be changed, it is merely necessary to remove the card SCA, substitute a new card and form the new classifying perforation 51A therein at the desired position on the card SCA.

The control data may of course be formed by perforations 55A in the control card CA, and these data representing perforations may be formed in accordance with any desired positional code of numbers or the like. When the control data are to be changed, the card CA may be removed and replaced, and perforations 55A representative of the new control data may then be formed through the card CA and the underlying portions of the frame.

While it has been proposed heretofore to provide perforations in the main body of the frame or a printing device that underlie a card as shown, for example, in Bailey Patent No. 1,807,887, patented June 2, 1931, this arrangement has heretofore been provided in an extension formed on the body of the printing device that projects beyond the ends of the spacing flanges as SFA. It has been observed, however, that when the sensing pins provided in the sensing head of the selector of an addressing machine, such as are shown, for example, in my Patent No. 2,359,857, patented October 10, 1944, are caused to move toward perforations provided in such an extended portion on the frame of a printing device, that in some instances the pressure of the pins will be effective to cause the printing device to cant, and in some instances it has been observed that this would interfere with proper passage of the sensing pins through aligned perforations in a card as SCA. Hence, in accordance with the present invention the spacing flanges as SFA and the grooves as GA aligned therewith are caused to extend along the ends of the area covered by the card SCA in which perforations as 51A are formed and this location or extension of the flanges SFA affords ample support for such portion of the frame and insures against canting of the printing device upon movement of sensing pins in a sensing head of the selector of a printing machine toward the perforated area in a frame or carrier as FA and, therefore, accurate cooperation of the sensing pins with aligned perforations in a card as SCA and a frame or carrier as FA is assured.

From the foregoing it will be apparent that the present invention enables the classification area along the top or upper edge of the printing devices to be effectually supported in the proper position at the sensing station of a printing machine or the like, and more specifically, the provision of spacing flanges that extend along the opposite ends of the classification area simplifies the handling and storage of the printing devices and also contributes materially to the strength of such printing devices.

It will also be apparent from the foregoing that the herein illustrated and described embodiment of my invention enables the above set forth and kindred objects of my invention to be realized and while I have illustrated and described a selected embodiment of my invention, it is to be understood that this is capable of variation and modification and I, therefore, do not wish to be limited to the precise details set forth, but desire to avail myself of such changes and alterations as fall within the purview of the following claim.

I claim:

A printing device carrier formed from sheet material in a substantially rectangular form to afford raised end panels disposed along and substantially across opposite marginal end portions thereof, and having the part thereof intermediate said raised end panels disposed below the exposed faces of said raised end panels to afford a depressed panel adapted to receive a card with

opposite ends of such card located closely adjacent to said raised end panels, retaining means formed on said carrier from the sheet material thereof and arranged to engage and overlie the opposite edges of such a card to hold the edge portions of such card against said depressed panel, additional retaining means extended from said raised end panels in position to overlie marginal end portions of such a card to hold the same in position on and against said depressed panel, at least one of said raised end panels having a depressed portion of substantial width formed therein to afford a groove extended across such raised end panel, the depressed portion forming the bottom of said groove being disposed substantially in the plane of said depressed panel to expose the adjacent end edge of a card mounted on said depressed panel and to thereby enable such edge to be readily engaged for removal of the card from its position on said depressed panel.

CARL J. HUEBER.

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