

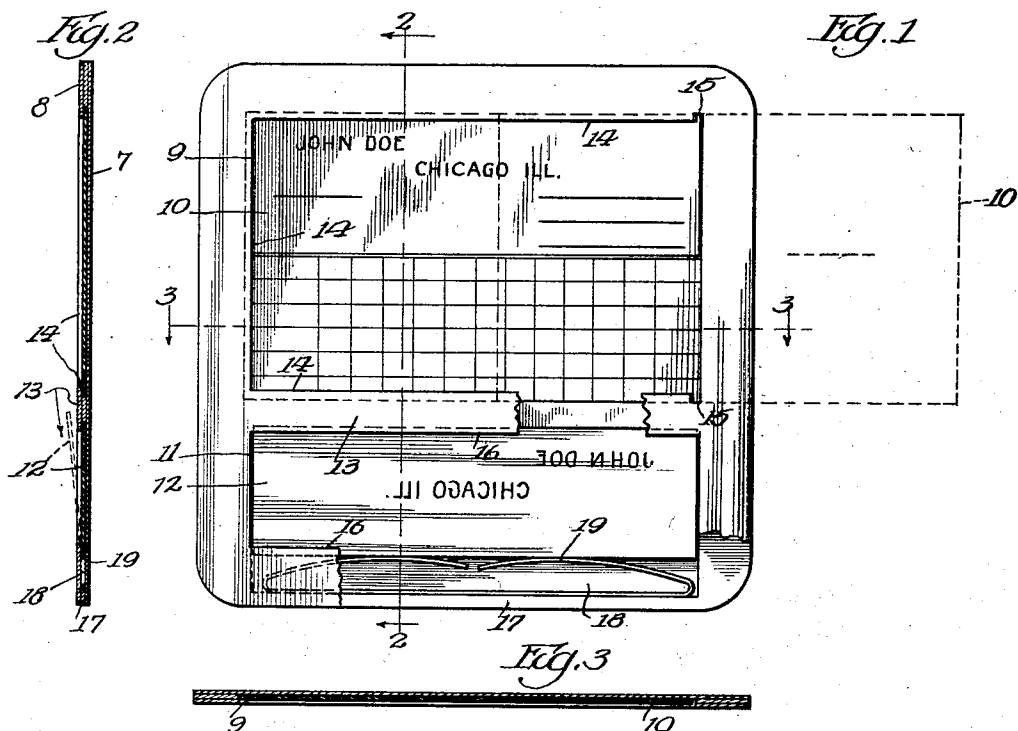
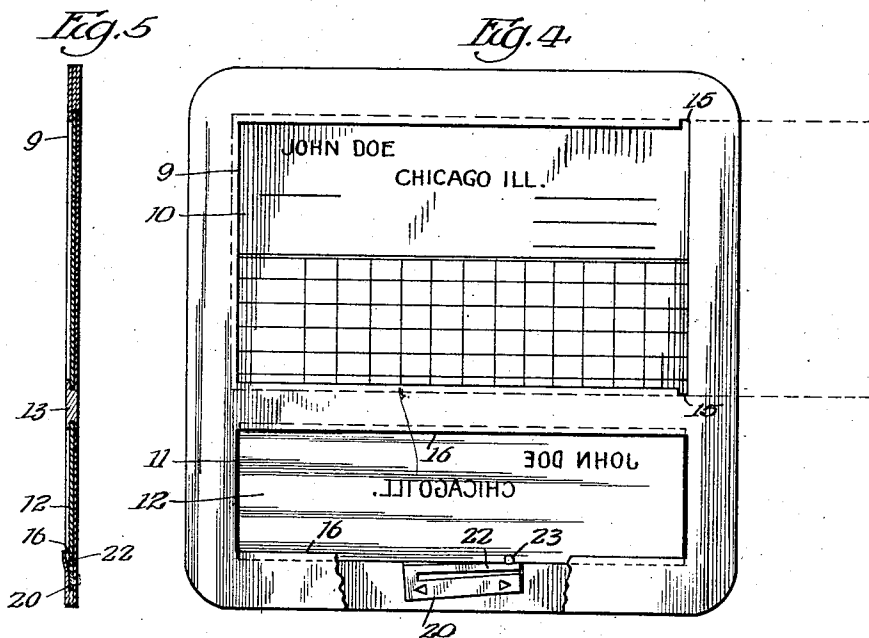
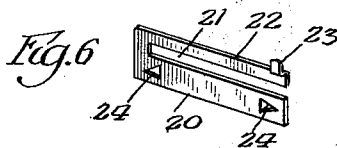
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PRINTING DEVICE

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UNITED STATES PATENT OFFICE

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PRINTING DEVICE

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This invention relates to printing devices of the kind which are adapted to be run through an addressing machine for making printing impressions and are stored in trays or drawers in accordance with a selected classification system.

The object of the invention is to provide a printing device of simple construction and light in weight and comprising a removable card and a removable printing plate which can be easily and quickly changed whenever desired.

Another object of the invention is to provide a lightweight printing device comprising a frame made of cardboard, fibre board or other suitably stiff and substantial material, a metal printing plate having type characters embossed thereon and an information card, the frame being provided with retaining means of simple character whereby the plate and the card may be detachably mounted in the frame so that either or both may be changed easily and quickly without separating the device from the set or system for any material length of time.

In the accompanying drawings illustrating a selected embodiment of the invention,

Fig. 1 is a front elevation of a printing device embodying the invention, parts thereof being broken away.

Fig. 2 is a vertical sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a view similar to Fig. 1 showing another form of spring.

Fig. 5 is a vertical sectional view on the line 5—5 of Fig. 4.

Fig. 6 is a detail view of the spring shown in Fig. 4.

Referring to the drawings the frame of the printing device comprises a back 7, a skeleton mat 8 fastened to the face of the back and provided with an opening 9 for a card 10 and an opening 11 for a printing plate 12. The frame may be made of cardboard, light fibre board or other light material and in any desired size and shape. The mat may be made of the same size as the back and the opening 9 is located above the opening 11 and separated therefrom by an integral strip 13. Filler strips are interposed between the mat and the back to space the mat slightly from the face of the back. These filler strips are preferably made in an integral member conforming generally with the shape of the mat. The top, left end and bottom marginal edges of the opening 9 project inward beyond the filler to form flanges 14 to receive the card 10, and at the right end of the opening the flanges 14 are notched at 15 to permit insertion of the card through said notches into the opening 9 and beneath the top and bottom flanges 14. When the card is inserted it is moved to the left, Fig. 1, beneath the flanges 14 and in the opening 9 until its left marginal edge is engaged with the flanges 14 at the left end of the opening 9, and the right end of the card 10 will then lie alongside the inner marginal edge of the mat at the right end of the opening 9. The card can be removed by lifting the right end thereof sufficiently to clear the mat adjacent thereto after which it can be withdrawn by sliding it to the right as indicated in broken lines in Fig. 1. The card will be made of light material which will enable it to be flexed sufficiently for insertion and removal as just described, but it will be understood that in many cases a card will remain for a long time in the frame and when it is removed it is for replacement, in which case the old card can be destroyed, so that it is immaterial if the right end of the card becomes damaged in removing the card from the frame. The plate is preferably made of metal with embossed printing characters and it is held in place in the opening 11 by top and bottom flanges 16. The filler 17 at the bottom of the frame is narrower than the mat to provide a pocket 18 in which a spring 19 is located. This spring is arranged to engage the lower edge of the plate and hold the plate in place in the opening 11 with its upper edge seated beneath the top flange 16, the parts being so proportioned that when the upper edge of the plate is seated beneath the top flange 16, the lower edge of the plate will also be seated beneath the lower flange 16. The plate is arranged in

place in the opening 11 by inserting its lower edge beneath the lower flange 16 and engaging the spring and compressing the spring until the plate may be laid flat against the back to engage the flange 16 and it may be moved up under this flange by pressure of the fingers, and then the spring will hold the plate in place properly registered in the opening 11 with its top and bottom edges engaged beneath the flanges 16. To remove the plate it is moved downward by pressure of the fingers, compressing the spring 19, until the upper edge is free from the top flange 16 whereupon the plate may be lifted out of the opening and removed from the frame. A plate can be quickly removed from the frame and a new plate inserted in the frame without requiring that the device be separated for any material length of time from the set or system of which it forms a part. The spring 19 in Fig. 2 is made of resilient wire but this spring may be made of sheet material as shown in Figs. 4-6. This latter spring is formed from a flat strip of metal 20 slit at 21 to provide a spring arm 22. The free end of this spring arm is preferably provided with a retaining lug 23 and prongs 24 may be struck up from the plate strip to engage the frame. This locking device is secured in the frame below the opening 11 and between the mat and the back in an inclined position so that the free end of the spring arm 22 will engage the bottom edge of the plate 12 to thrust the plate upward beneath the top flange 16 as heretofore described. The retaining lug 23 will overlap the bottom edge of the plate and cooperate with the bottom flange 16 to hold the plate in the frame. With this spring the plate is inserted and removed in the same manner as heretofore described. While it is intended that the frame should be made of some light material, such as paper, cardboard or fibre board, it can nevertheless be made sufficiently strong and substantial for many practical uses and the construction is such that the card and plate may be inserted and removed easily and quickly whenever changes are required in maintaining the set or system.

Changes in the form, construction, proportion and arrangement of the invention may be made without departing from the spirit or sacrificing the advantages thereof and I reserve the right to make all such changes as fall within the scope of the following claim.

I claim:

1. A printing device comprising a frame and a printing plate, said frame having flanges to engage the marginal edges of the plate at the top and bottom thereof, and yielding means carried by the frame and engaging said plate and holding the plate in yielding engagement with the flanges.

2. A printing device comprising a frame and a printing plate, said frame having a

flange to engage one edge of the plate and a spring pressing against the other edge of the plate to hold said plate with its edge engaged with said flange.

3. A printing device comprising a frame and a printing plate, said frame having a flange to engage one edge of the plate, and a spring seated in the frame and pressing against the opposite edge of the plate to hold said plate in engagement with said flange.

4. A printing device comprising a frame having a pocket, yielding pressure means arranged in said pocket, and a flange disposed opposite said pressure means, and a printing plate held on the frame in engagement with said flange by direct engagement of said pressure means with the plate.

5. A printing device comprising a frame and a printing plate, said frame having a flange to engage one edge of said plate, and yielding means pressing the plate in engagement with said flange and having a retaining lug engaging said plate.

6. A printing device comprising a frame having a back and a mat secured to the back and provided with an opening to receive a printing plate, a printing plate, flanges on the mat to engage the top and bottom marginal edges of the plate, and yielding means pressing against one of said edges and holding the other edge in engagement with the flange.

7. A printing device comprising a frame having a back and a mat secured to the back and provided with an opening to receive a printing plate, a printing plate, a flange on the mat to engage the top marginal edge of the plate, and yielding means confined between the back and the mat and pressing against one of the edges of the plate and holding the other edge in engagement with the flange.

8. A printing device comprising a frame and a printing plate, said frame having oppositely disposed flanges to overlap opposite marginal edges of the plate for retaining the plate in the frame, there being a stop to limit the movement of the plate under one flange, and yielding means pressing upon said plate to hold it against said stop with its opposite marginal edges engaged by said flanges.

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