Feb. 3, 1931. V. J. MOHLER 1,790,717

PRINTING DEVICE

Filed March 3, 1930

Fig. 1.

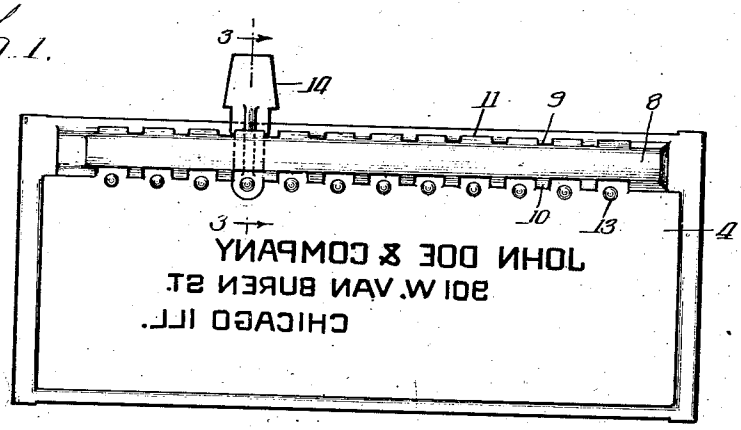


Fig. 2.

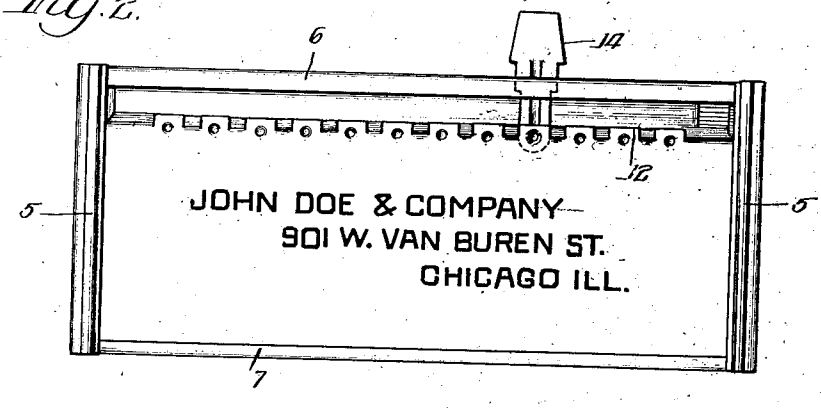
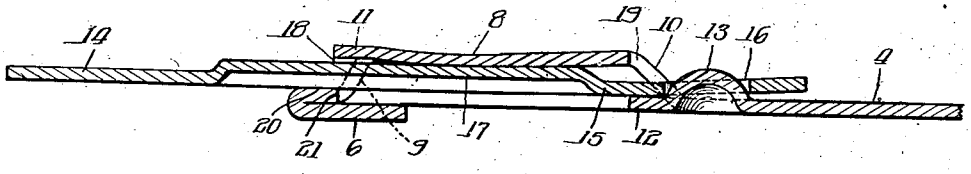


Fig. 3



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UNITED STATES PATENT OFFICE

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PRINTING DEVICE

Application filed March 3, 1930. Serial No. 432,812.

This invention relates to printing devices of that class which are adapted to be stored in accordance with a card index system and to be run through addressing or other machines for printing.

It is customary to provide these printing devices with keepers adapted to receive removable index tabs and it is important that the tabs should be held rigidly in fixed position in the keepers and also that they should be easily insertable and removable. These printing devices are subject to frequent examination in the storage drawers, they are often removed from the drawers and handled separately for various purposes, they are deposited in the magazine of an addressing machine a drawer full at a time and are run through the machine one at a time, and they are then returned to the drawer from which they were removed. In these and other uses of the printing devices the tabs may be bent accidentally or by reason of rough treatment, and when they are bent they are more easily disengaged from the keepers and are liable to accidental disengagement. If a tab becomes displaced from its printing device and the loss thereof remains unnoticed the classification will to that extent be destroyed and consequent damage may result. I have found that the tabs as previously used will not become displaced under ordinary conditions unless they are bent but that bending the tabs seems to relieve them of the clamping action of the keepers and enables the release of the tabs from the retaining stud and the keepers. This result occurs, as I believe, because the keeper permits the tab to be bent too close to the end which engages the retaining stud and also because there is no support for the stud above the keeper panel to prevent the tab from being bent over the panel.

My invention has for its object to provide means for holding a tab rigidly and securely on a printing device and at the same time permit it to be readily inserted and removed.

Another object of the invention is to provide means in conjunction with the tab keeper to extend the clamping and securing effect of the keeper throughout a greater portion of the length of the stem than has been customary heretofore whereby the stem is prevented from bending in the keeper, the clamping effect of the keeper and other retaining means and effective engagement of the stem with the locking stud being thereby preserved.

And a further object of the invention is to avoid cutting out any metal at the top of the keeper, thereby reducing the cost of manufacture, and utilizing the metal heretofore cut out to form lips for supporting and protecting the tabs above the keeper.

I have selected for illustrating the invention in the accompanying drawings a metal plate printing device having printing characters embossed thereon but I do not restrict the invention to this particular embodiment as it may be used with other printing devices for which it is or may be adapted.

In the drawings

Fig. 1 is a front view of the printing device.

Fig. 2 is a back view of the printing device.

Fig. 3 is an enlarged sectional view on the line 3—3 of Fig. 1.

The printing device herein shown comprises a metal plate 4 having printing characters embossed in relief thereon and provided with spacing flanges 5 at its ends, with a bead 6 at its top and with a bead 7 at its bottom. A keeper panel 8 is stamped up from the plate and offset preferably on the front thereof, as shown, adjacent to and parallel with the top edge of the plate. This panel is joined with the plate at its top edge by the spaced connections 9 and at its bottom edge by the spaced connections 10 and between these connections the panel is free from the body of the plate. Lips 11 are formed on the upper edge of the panel between the connections 9 and these lips project above the panel parallel with that part of the plate above the panel. The material forming the lips 11 has been cut out heretofore leaving the edge of the panel between the connections 9 considerably below the upper edge of the plate. In the present invention the lips are not cut out but are left on the

upper edge of the panel and project upwardly in or about the plane of the panel and parallel with the upper edge portion of the plate and nearly as high as the top of the plate. Lips 12 are provided on the back of the plate at the bottom of the panel and between the keeper connections 10, and studs 13 are punched in the plate opposite these lips. The tab 14 may be of any suitable kind having a stem 15 provided with an opening 16 near its free end to receive the stud 13. The stem is preferably provided with a rib 17 extending longitudinally to strengthen the stem and to aid in effecting clamping engagement with the keeper. The construction provides a slot 18 at the top of the keeper panel and close to the top of the printing device, and a slot 19 at the bottom of the panel and close to the stud 13. These slots are arranged in vertical alinement and they are formed by cutting the plate and pressing the panel outward from the body of the plate without removing any metal. These slots are adapted to receive the stem of the tab which is inserted therein with a straight downward thrust and is bent only sufficient at its lower end to engage the stud 13. The tab is then held in upright position by engagement at its back with the lip portion 12 and the top edge portion 20 of the plate and by engagement at its front with the keeper panel 8. The keeper is slightly curved transversely, Fig. 3, which has the effect of forming an effective bearing to clamp the stem of the tab. The bottom end of the stem is shown slightly sprung away from the body of the printing device, Fig. 3, which is due to the fact that the opening 16 in the stem is preferably a trifle less in size than the greatest size of the stud and the lower end of the stem will normally lie in the sprung position so that it will not stick on the stud but will slide thereover when the tab is pulled in a normal way out of the keepers. The top edge of the lip 11 which forms one wall of the slot 18 is in substantially the same plane as the edge 21 which forms the opposite parallel wall of the slot and these walls are close together forming a narrow slot to freely receive the tab, but the tab cannot move sufficiently in the slot to cause that part of the stem in the keeper to bend sufficiently to enable accidental displacement of the tab from the printing device. And while the tab is thus securely held against accidental displacement a sufficient straight pull may be exerted on the tab to release it from the stud and remove it from the printing device. The slots 18 and 19 correspond in length closely to the width of the tab stem to receive the stem freely and to hold the tab upright therein against lateral movement. As many alined pairs of slots are provided as may be required and as the length of the keeper panel will permit to furnish the tab positions on the printing device.

My invention is simple in character but it performs the very useful and important function of preventing displacement of the tab from the printing device accidentally or due to careless or rough handling of the printing device. The lip 11 constitutes a guide to receive the end of the tab and facilitates the insertion of the tab in the printing device. It has been the practice heretofore to punch out slugs of metal in forming a continuous offset panel on the plate with top and bottom slots to receive the tab and it has been necessary to keep the punching tool sharp to provide smooth edges at the slots to permit ready insertion and removal of the tabs. In the present invention the slots are formed by a shearing action and since no slugs are punched out it is much easier to keep the tools in proper working condition.

I have described the invention in a simple form as embodied in a one-piece printing plate but I do not limit the invention to this embodiment and reserve the right to make all such changes in the form, construction and arrangement of parts as may be necessary or desirable for adapting the invention for other printing devices or for other purposes within the scope of the following claims.

I claim:

1. In a printing device of the character described, a body having a tab-keeper panel struck up therefrom, and a lip projecting from the upper edge of the panel to extend along the tab.

2. In a printing device of the character described, a body having a tab-keeper panel struck up therefrom and a lip projecting from the upper edge of the panel and parallel with the body to extend along the tab.

3. In a printing device of the character described, a body having a tab-keeper panel struck up therefrom, there being spaced connections between the panel and the body between which the tab is adapted to be selectively received, and lips on the upper edge of the panel between said connections to extend along the tab.

4. In a printing device of the character described, a body having a tab-keeper panel struck up therefrom, the top edge of the panel being integrally joined to the body of the device by a plurality of spaced connections between any two of which the tab is adapted to be received, and projections on the upper edge of the panel alternating with said connections to extend upwardly along the tab.

5. In a printing device of the character described, a body having a tab-keeper panel struck up therefrom, said panel being connected integrally at spaced intervals at its top and bottom edges with the body and

forming slots at the top and bottom of the panel between itself and the body, said slots being alined to receive the tab, and a lip projecting from the upper edge of the panel opposite each upper slot to form the outer edge of the upper slot and to extend along the tab.

6. In a printing device of the character described, a body having a tab-keeper panel struck therefrom, said panel being connected integrally as spaced intervals at its top and bottom edges with the body and forming slots at the top and bottom of the panel between itself and the body, said slots being alined to receive the tab and disposed in substantially parallel relation, the panel being curved transversely, and a lip projecting from the upper edge of the panel opposite each upper slot to extend along the tab.

VALENTINE J. MOHLER.