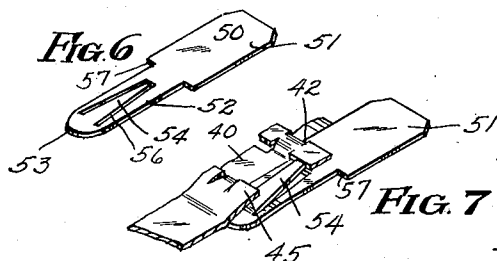
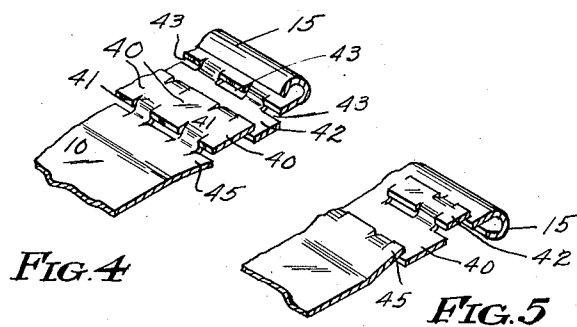
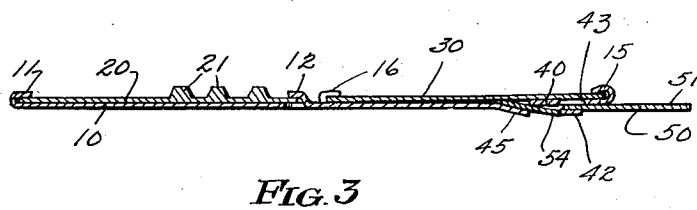
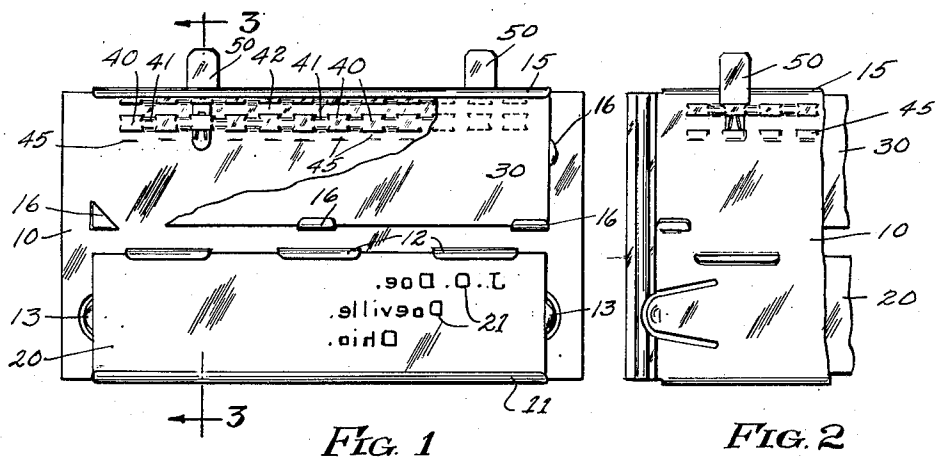


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INDEX DEVICE

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16 Claims. (Cl. 129—16.8)

It is frequently desirable to provide means such as index tabs whereby plates, cards, separators, etc. may be distinguished one from the other, due to the form or position of the tab. This enables address plates, for instance, to be classified either for purposes of ready manual sorting or to enable an address printing machine to distinguish mechanically between the different plates and print only from certain selected plates.

It is the general object of my invention to provide such mutual formation of the plate and the index tab that the latter may be readily mounted on the former, preferably in any of a number of locations, and may be removed at will, or changed from location to location, but when in place will effectively hold its position without danger of inadvertent removal.

I accomplish the desired result by providing a tab with a tongue normally lying in the plane of the tab, and a member to be indexed which is formed to receive the tab and has a camming surface which will bend the tab upon insertion sufficiently to cause the tongue to become a projecting barb registering with a retaining shoulder on the indexed member. Thus the tab is held in place against removal, but may readily be freed by a slight manual pressure against the tongue pressing it back into the plane of the tab.

My invention is illustrated in the drawing hereof, as embodied in an indexed address plate; and is hereinafter more fully explained. The essential novel characteristics, not necessarily limited to an address plate, are set out in the claims. The tab shown herein, and claimed herein in combination with the plate illustrated, is claimed per se in my divisional application No. 48,670, filed November 7, 1935, for an Index tab.

In the drawing, Fig. 1 is a face view of an address plate equipped with my index tab; Fig. 2 is a fragmentary rear elevation of such address plate and tab; Fig. 3 is a cross-section of the plate and tab taken on the line 3—3 in Fig. 1, but on a larger scale; Figs. 4 and 5 are respectively fragmentary perspectives of the upper portion of the address plate looking at the face and the rear respectively; Figs. 6 and 7 are perspectives of the tab itself showing it in the normal position and in the distorted position when mounted respectively.

As is indicated in Figs. 1, 2 and 3, the member to be indexed consists of an address plate comprising essentially a sheet-metal member 10, ordinarily called the plate or holder, and a printing member 20 thereon, may be a strip of sheet-metal embossed with printing characters 21. The hold-

er also preferably carries a suitable index card 30.

As shown, the printing plate 20 is held between the curled-over lower edge 11 of the holder 10, and suitable lips 12 cut out from the holder and turned toward the edge 11 and suitable end stops 13. The index card 30 is shown as held by the curled-over upper edge 15 of the holder, and suitable lips, a corner pocket and an end stop (each designated 16) pressed out from the plate 10. It should be understood, however, that the particular form of the holder plate 10, as well as the means for holding the printing surfaces thereof and for holding the card, if one is employed, may be varied at will.

Formed by the material of the plate 10 is a row of keepers 40, which are in the plane of the plate or very slightly above it. Each keeper comprises a strap separated above and below from the plate proper (which is relatively depressed in these regions) and connected at their ends by intermediate plate portions 41, which are bowed upwardly from the plane of the adjacent plate portions, being connected therewith above and below by gradual offsets. Thus, the strap portions form loops relatively raised from the portions of the plate immediately above and below them.

Between the row of keepers and the adjacent edge of the plate is one of the relatively depressed regions above mentioned, which comprises a horizontal zone 42 depressed from the plane of the plate, and at the top of this region are a series of openings 43 through the offset region where the zone 42 joins the body of the plate, adjacent the lower edge of the curled-over end 15. Below the various keepers 40 is an inclined region 45 of the plate which extends upwardly and backwardly from the face surface of the plate, the upper edge of the incline terminating in a horizontal line which is directly behind the horizontal line defining the lower edge of the keepers 40. This inclined portion forms the other relatively depressed region of the plate.

It results from the above described construction that the plate or other member to be indexed has, along its upper portion, a row of pockets open at the upper end, each pocket having its admission through a slot 43, then a forwardly open portion in front of the zone 42, then a rearwardly open portion behind the keepers 40 and finally a forwardly open, but rearwardly closed, inclined portion 45. These pockets are intended to cooperate with my index tab about to be explained.

The tab 50 is of the form shown in the perspective in Fig. 6 comprising an upper or visible

portion 51 and a central downwardly projecting shank 52 preferably rounded at its lower end 53. Formed in the shank 52 is a tongue 54 integral with the shank near the lower end thereof but otherwise separated from the shank. As shown, this separation is effected by a narrow V shaped slit 56. The tongue 54 normally lies in the same plane as the shank 52 of the tab, as shown in Fig. 6.

10 The shank 52 has a width only slightly less than that of any pocket of the member to be indexed and the thickness of the tab is only slightly less than the depth of the pocket, as bounded at the rear by the front face of the zone 42 and at the front by the rear face of the keepers 40. Accordingly, the tabs may readily be pushed down into position through the openings 43 near the top of the plate so that they stand as illustrated in Figs. 1 and 2.

20 Now, when the tab is inserted a peculiar action takes place. As soon as the lower end of the shank engages the incline 45 of the plate, the further shoving in of the tab bends the lower end forwardly by reason of the camming action of the plate and this projects the tongue rearwardly as illustrated in Fig. 7. When in this position, the end of the tongue stands directly in line with the offset body portion 42 of the plate, as illustrated in Fig. 3. Accordingly, the tab cannot be drawn out when the tongue is in this position.

It will be seen from the above description that the tab may be very readily inserted in place and when in place it becomes automatically locked by reason of the tongue being bent behind the retaining zone 42 of the plate. The tab is thus effectively held so that it will not be inadvertently removed either manually or by the action of the selector mechanism coacting with a tab, in an address-printing machine. However, the tab may be released whenever desired by a slight manual pressure, as, for instance, by the user's thumb nail against the tongue 54 at the rear side of the plate. As shown in Fig. 2, the space behind the keepers 40 is open, and accordingly, the tongues 54 are readily accessible, and a slight pressure against the tongue bends it back into the normal plane of the tab shank so that the tab may be very readily removed.

50 It will be seen that the tabs having the tongue normally in the same plane as the rest of the tab, as is shown in Fig. 6, possess a decided advantage over tabs having projecting bars or wings. My tabs may be more compactly stored; are not likely to become tangled; may be used without possibility of injuring the operators' fingers; are insertable with either face forward, and are adapted for very cheap manufacture. It should also be noted that the peculiarly formed plate, provided with the open ended pockets having the camming surfaces at the bottom and the rearwardly open portion for the tongues of the tabs, may be very readily made by a stamping action which distorts the abutment portion rearwardly, and inclines the cam portions rearwardly.

70 The lateral extension of the tab head 51 beyond the narrower shank 52 results in shoulders 57 which engage the top of the rearwardly pressed zone 42 of the plate when the tab is put in place. Accordingly, it is impossible to shove the tab too far down into the plate; and when placed, it is accurately held with its head projecting the desired amount, by reason of the two abutments 57, 54 of the tab, one preventing

inward movement and the other preventing outward movement.

As already stated, my indexing means is adapted for indexing various members, plates, cards, separators, etc., and is well adapted for use on an address plate. In the latter use, if an index card is employed, it may readily be mounted on the upper portion extending over the row of keepers and the adjacent surfaces of the plate, the card being held at the upper end by the curled-over edge of the plate. In such embodiment, the tab shanks lie behind the card, but they do not in any manner distort the card, as even the projecting lower ends thereof are not materially above the plane of the plate.

When an index card is employed, the only portion of the tab visible at the front is the projecting head which acts as the index, while at the rear, there is accessible not only the head but the tongue portion of the tab. Thus, the head may be grasped between the operators' fingers and the tongue pressed forwardly by the operators' thumb at the rear of the plate to remove the tab. Accordingly, insertion and removal of the tab is readily accomplished without disturbing the index card on the face of the plate.

I claim:

1. The combination of a plate having a row of keepers adjacent its upper edge, said keepers being free from the body of the plate at their upper and the lower edges, the plate having a relatively rearwardly depressed zone just beyond the tops of the keepers and having a rearwardly inclined zone just below the bottoms of the keepers, and an index tab having a shank adapted to be inserted behind any keeper and with its lower end engaging the incline, said tab having a tongue which is projected to engage the edge of the plate material at the depressed zone by reason of the bending of the lower end of the tab by the inclined zone of the plate.

2. The combination of a plate to be indexed and a tab, said plate having a row of keepers parallel with its upper edge and separated from the body of the plate above and below, the plate having a relatively rearwardly depressed zone above the keepers with its forward surface in a plane parallel with and behind the plane defining the rear surface of the keepers, the plate having an inclined region below the keepers with its upper edge at the rear of the plane defining the rear face of the keepers, there being openings through the upper portion of the plate to the front of the relatively depressed zone, whereby the tab may be inserted through one of such openings in front of the depressed zone and behind a keeper, and then at its lower end come onto the inclined surface, said tab having a tongue adapted to be swung by the engagement of the shank with the inclined surface to cause the tongue to project from the body of the tab into position to engage the under edge of the relatively depressed portion above the keepers, and a transverse shoulder on said tab adapted to abut the plate as the tab is inserted therein and limit its inward movement with respect to the plate.

3. The combination of a member to be indexed, having a series of pockets adjacent its upper end, an index tab adapted to be inserted in any of the pockets, said tab having a tongue normally held in the plane of the tab, means on the member for moving the tongue into an abnormal position upon insertion of the tab, and means on the member adapted to be engaged by the tongue when in

such abnormal position, to prevent the removal of the tab.

4. The combination of a plate having a pocket adjacent its upper end, said pocket having a camming surface at its lower end, there being an abutment between the camming surface and the upper edge of the plate, and an index tab adapted to be inserted in said pocket, said tab having a tongue normally in the plane of the tab, but adapted to be automatically bent to cause said tongue to come into position to engage said abutment when the lower end of the tab engages the cam at the lower end of the pocket.

5. The combination of a plate having a row of keepers adjacent its upper end, said plate having an opening above and one below each keeper and having an inclined surface below the keepers, and an index tab having a shank adapted to be inserted behind any keeper with its lower portion engaging the corresponding portion of the incline, said tab having a tongue adapted to be projected into abutting relation with the lower edge of the keeper consequent upon the lower end of the tab encountering the inclined surface of the plate.

6. The combination of a member to be indexed and an index tab, wherein the member has a series of keepers under any of which the tab may be inserted and the tab has a tongue cut out from the body of the tab, and means on the member adapted to act upon the tab and displace the tongue from position by reason of the insertion of the tab so that the tongue will come into abutting relation with a portion of the member to prevent inadvertent removal of the tab.

7. The combination of a member to be indexed, having a series of open pockets arranged in a row adjacent its upper edge, and a tab having a reduced shank adapted to enter any of said pockets with a shoulder at the head of the shank abutting the top of the pocket and preventing further inward movement of the tab, the tab having also an upwardly projecting tongue and there being means on the member adapted to act on the tab to distort it by the act of the insertion of the tab, so that the end of the tongue may engage the underside of a portion of the pocket and prevent the inadvertent removal of the tab.

8. A metal plate having its upper edge curved forwardly and having below such upper edge a relatively rearwardly depressed portion, and below such relatively depressed portion a row of relatively raised keepers having flat faces in a plane parallel with the general plane of the plate, and below the keepers an inclined portion of the plate, the keepers being separated above and below from the depressed portion and the inclined portion respectively to provide a passageway behind the keepers, and there being openings through the body of the plate adjacent the curled-over edge aligning with the passageways of the keepers.

9. A metal plate having below its upper edge a rearwardly offset portion, and below such rearwardly offset portion a row of keepers, and below the keepers an inclined portion, the keepers being separated above and below from the offset portion and the inclined portion respectively to provide vertical openings, and there being openings through the body of the plate adjacent the upper edge aligning with the openings of the keepers, and an index tab having a shank adapted to be inserted from the upper edge through any of the openings into the region in front of the rearwardly offset region and behind the keepers, and the shank having a tongue which becomes deflected toward the rear by reason of the cam-

ming action of the inclined surface of the plate so that the tongue stands in line with the metal of the plate at the rearwardly offset region.

10. The combination of a member to be indexed, having a shoulder, and a tab adapted to be inserted thereon, having a tongue and means on the member adapted to engage the tab when inserted and cause the tongue thereof to project at an angle to the body of the tab, so as to register with the shoulder, whereby inadvertent removal of the tab is prevented.

11. The combination of a member to be indexed having a series of pockets adjacent its upper end and having shoulders adjacent the pockets and a tab adapted to be inserted in any of the pockets and having a tongue normally lying in the plane of the tab, and means on the member adjacent each pocket, adapted to act on the inserted tab to move the tongue thereof into position where it stands opposite said shoulder, thereby preventing inadvertent removal of the tab.

12. The combination of a member, adapted to be indexed and a tab adapted to be mounted thereon, the member having a shoulder and a camming surface and the tab having a resilient shank with a tongue lying normally in the plane of the shank, a portion of said shank being adapted to engage the camming surface and be thereby bent to cause the tongue to project at an acute angle to the plane of the tab and above it so that the point of the tongue lies outside of such plane and in abutting relation with the shoulder on the member to lock the tab to the member.

13. The combination of a member to be indexed and an index tab, wherein the member has a series of keepers, any one of which may be engaged by the tab, said member having a series of shoulders adjacent the keepers respectively, and the tab has two abutments, one engaging the member upon the insertion of the tab to limit the inserting movement of the tab and the other being adapted when distorted from the plane of the tab to stand in abutting relation with the corresponding shoulder on the member to prevent inadvertent removal of the tab, and means on the member engaging the tab upon insertion to cause such distortion automatically.

14. The combination, with a member adapted to be indexed, of a tab adapted to be mounted thereon, the tab having a shank with a tongue cut out from it and normally lying in the plane of the shank connected at its lower end with the shank and projecting toward the top of the tab, said tongue having a length materially greater than its width, whereby it may be readily bent at an acute angle to the shank to carry the point of the tongue to the side of the shank, the member having a shoulder in registration with which the point of the tongue lies when thus distorted, said shoulder comprising the lower edge of a strap-like portion of the member across which the shank of the tab extends, and the member having means for distorting the tongue to register with said shoulder automatically upon insertion of the tab.

15. The combination of a member adapted to be indexed and a tab adapted to be mounted thereon, the tab having a shoulder and a tongue lying normally in the plane of the tab and having its end facing said shoulder, and the member having a keeper to retain said tab, comprising a portion disposed between said tab-shoulder and tongue, and means on the member to cause said tongue to engage one side of said disposed portion while

said tab-shoulder engages the other side thereof, whereby said tab is retained on said member.

16. A plate arranged to carry printing characters and having a depression extending along the plate adjacent one edge, a row of keepers
5 raised from the bottom of the depression and

open at their top edges and openings through the wall of the depression adjacent said edge of the plate and in registration with the passages of the keepers, whereby index tabs may be passed through the openings and beneath the keepers.

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