

Nov. 29, 1932.

M. MACDONALD

1,889,258

TICKET DISPENSER

Filed Oct. 12, 1928

2 Sheets-Sheet 1

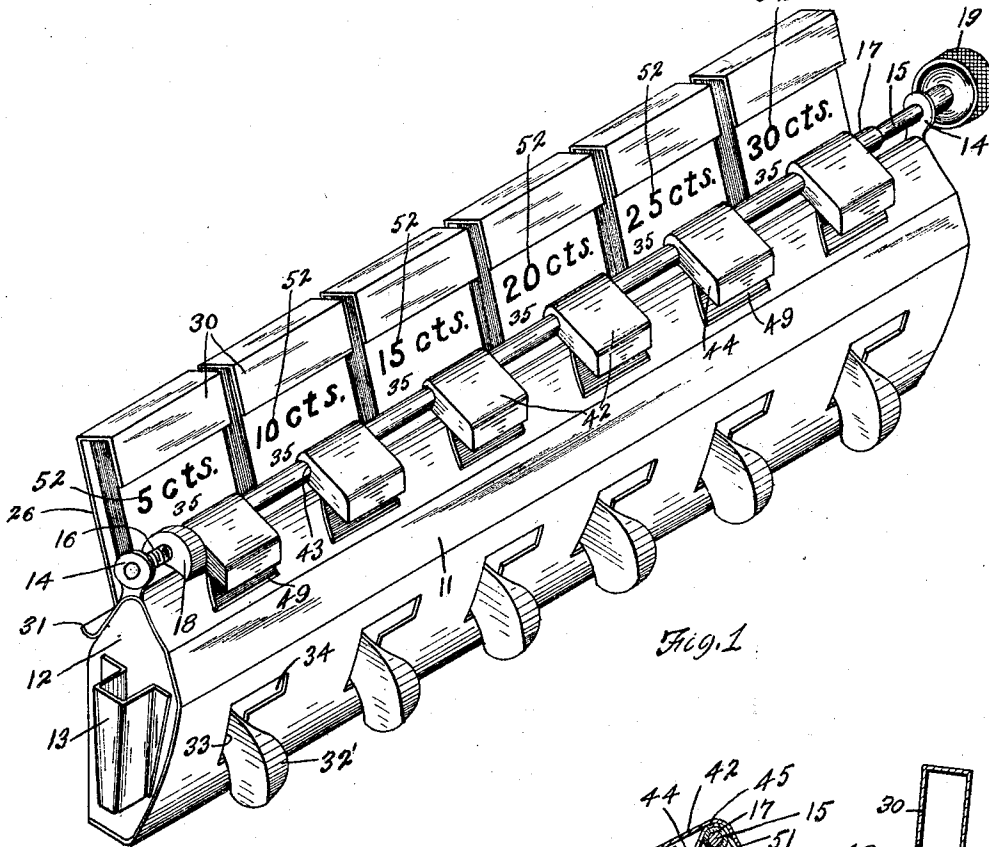


Fig. 1

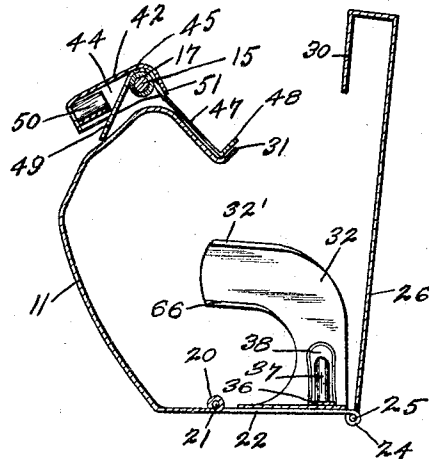


Fig. 4

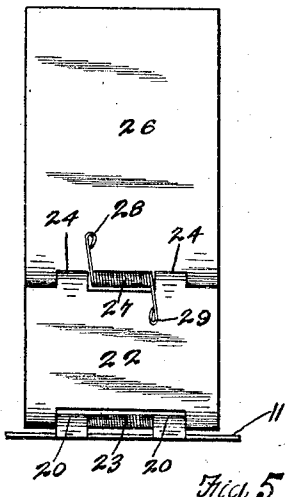


Fig. 5

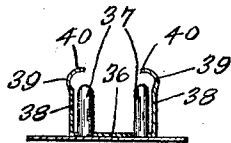


Fig. 6

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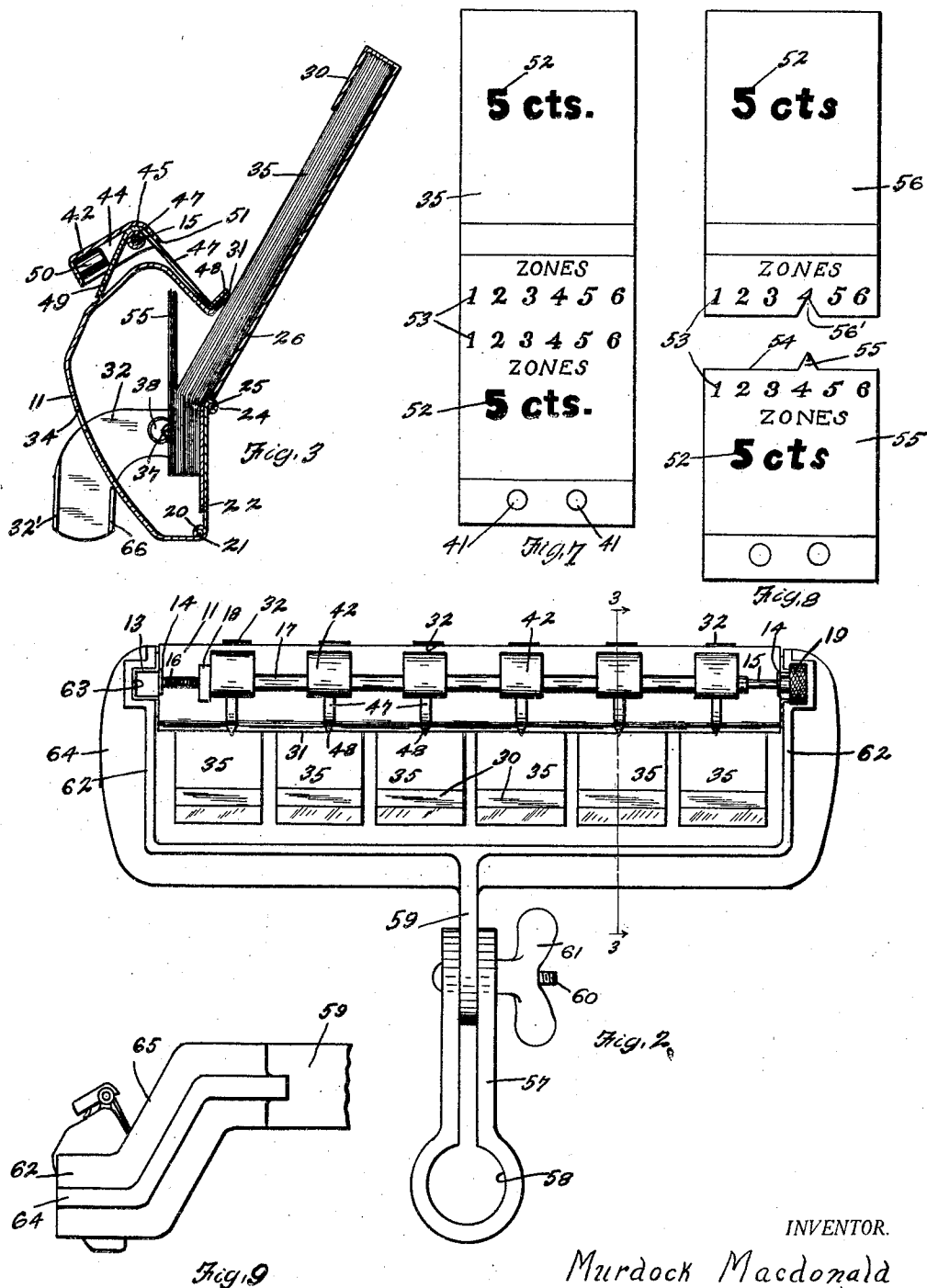
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TICKET DISPENSER

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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TICKET DISPENSER

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The present application relates, as indicated, to ticket dispensers, and more particularly to a device for use by bus and street car conductors on runs of such length as to be zoned. The primary object of the invention is to provide a device of the class described which shall be extremely simple in its operation and inexpensive to produce, and which, in its operation, will provide for the delivery to the passenger of a ticket showing on its face the zone within which he boarded the vehicle and the price which he paid for the ticket, and which will leave in the box a stub which will likewise show the zone within which each passenger boarded the vehicle and the price which he paid for his ticket. Further objects will appear as the description proceeds. To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings:

Fig. 1 is a perspective view of the dispenser; Fig. 2 is a plan view thereof, the dispenser being mounted in a supporting bracket; Fig. 3 is a vertical section through the device taken substantially upon the line 3—3 of Fig. 2, the device having been removed from the bracket; Fig. 4 is a section similar to that of Fig. 3, the tickets having been removed from the box, and the box being open; Fig. 5 is an elevation taken from the right hand side of Fig. 3; Fig. 6 is a vertical section of a detail; Fig. 7 is an elevation of a ticket adapted to be used in the dispenser; Fig. 8 is a view showing a ticket after it has been torn to produce the passenger's check and the retained stub; and Fig. 9 is a fragmentary view taken from the left hand side of Fig. 2.

Referring now more particularly to the drawings, it will be seen that I have provided a box 11 which is preferably formed

of stamped sheet metal and which is provided with end walls 12 to which are secured projections 13 elongated in the direction of height of the box 11 and tapered from their upper to their lower ends. A pair of apertured ears 14 project upwardly from the opposite ends of the box 11 and a shaft 15 is journaled in the apertures of said ears, said shaft being threaded as at 16 adjacent its one end. A sleeve or tube 17 is mounted upon said shaft 15 and has secured thereto an element 18 which is internally threaded for co-operation with the threaded portion 16 of the shaft 15. The element 18 may be considered as a part of the tube 17, since the same is rigidly secured thereto. At the end of the shaft 15 opposite the threaded portion 16 there is mounted a knurled knob 19 for rotating said shaft.

As will be clearly seen from an inspection of Figs. 3 and 4, the box 11 is formed with an open side, and at its lower end, the wall of said box is punched out and rolled as at 20 to form bearings for a pin 21 through the medium of which there is hinged to said lower end a plate 22. A coiled spring 23 on said pin 21 urges the plate 22 toward the position illustrated in Fig. 4. At its free end, said plate 22 is formed to provide a pair of ears 24 in which is mounted a pin 25 through the medium of which there is hinged to said free end of the plate 22, a plate 26. A coiled spring 27 is mounted on the pin 25 and its opposite ends 28 and 29 bear respectively upon the plates 26 and 22 tending to force said plates into the relative positions illustrated in Fig. 4. The free end of the plate 26 is rebent as at 30 for a purpose later to be described. The upper edge of the box 11 is turned upwardly to form a straight tearing edge as at 31.

As will be apparent, the box 11 is long enough to accommodate a plurality of pads of tickets, and the above described arrangement is duplicated to form a composite backing element for each of said pads. That is, in the embodiment herein illustrated, the box is of such extent as to accommodate six pads of tickets. In this embodiment, then, the ele-

ments 20 to 30 inclusive are duplicated six times.

To each of the plates 22 there is rigidly secured a latch member 32 which is formed adjacent its free end with a lateral projection 32' and with a second lateral flange 66. Corresponding to each of the members 32 and registering therewith, there is formed in the rear wall of the box 11, a vertical slit 33 which communicates at its upper end with a horizontal slit 34. The slit 33 is of such width as to permit the passage of the flange 66 when the latch member 32 is sprung slightly to the left as viewed in Fig. 1. The projection 32' forms a thumb piece against which pressure may be exerted in order to spring the latch member and to force the composite backing plate 22—26 into the position shown in Fig. 4. As will be readily seen, when the backing plate 22—26 is forced into the position shown in Fig. 3, the flange 66 springs into engagement with the rear wall of the box 11 to hold said backing plate in such position.

In order to retain pads of tickets 35 in the box, I have provided anchoring means for each of said backing plate units. Said means are most clearly shown in Fig. 6 and comprise a plate 36 of relatively resilient material brazed to the base plate of the latch member 32 and having secured thereto a pair of spaced upstanding posts 37. The opposite ends of said resilient member 36 are bent upwardly as at 38 and are adapted normally to assume positions substantially parallel to the posts 37. As is clearly shown in Fig. 6, the members 38 are separated by both of said posts 37 and project beyond the free ends of said posts. In a plane immediately beyond the plane of the free ends of said posts, said members 38 are bent outwardly to form projections 39, and beyond said projections, said members are bent inwardly to form what may be termed cam surfaces 40. Each of the ticket pads 35 is formed adjacent its one end with a pair of spaced apertures 41. The posts 37 are spaced apart a distance a trifle less than the distance between said apertures, and the outermost surfaces of the members 38 are spaced apart a distance very slightly greater than the distance between the outermost edges of the apertures 41.

Upon the sleeve 17 there are mounted a plurality of box-like elements 42, equal in number to the backing plates 22—26. Each of said elements 42 is formed with aligned apertures 43 in its opposite side flanges 44, and said apertures are of such size that, when said elements 42 are threaded onto said sleeve 17, the sleeve fits snugly within said apertures. A slightly resilient element 45 is bent to lie within each of said elements 42, being curved about the sleeve 17 within its element and fitting snugly between said sleeve and the interior of said respective element 42. One end 47 of each of said members 45

projects outwardly from its element 42 and extends downwardly along the front surface of the box 11 to a point adjacent the upturned edge 31, where said end 47 is bent upwardly to form a foot adapted to bear against the surface of the tickets in its respective pad 35. Said foot is formed to provide a sharpened end 48. The opposite end 49 of each of said members extends downwardly and rearwardly out of its respective element 42, and a leaf spring 50 is mounted within each of said elements 42 to bear against said end 49 of its respective member 45. The spring 50 tends to hold the end 49 in contact with the adjacent surface of the box 11, and tends also to rotate its element 42 in a clockwise direction as viewed in Fig. 4. Since such rotation is prevented by the engagement of the edge 51 of the element 42 with the arm 47 of the member 45, the result of the pressure of the spring 50 is to increase the friction between the sleeve 17 and the side flanges 44 of each element 42.

Of course the tickets of each pad are identical with each other, except that serial numbers may be applied thereto, and the tickets of the various pads are identical to each other except in the valuation indicia 52 imprinted thereon. Thus all of the tickets carry valuation marks 52 which vary among the various pads, and duplicate series of indicia as indicated at 53. In the present instance, it will be seen that the markings 53 indicate fare zones. When the device is operated, a ticket is torn off against the tearing edge 31, thus dividing the ticket along the line 54 (see Fig. 8) into a retained stub 55 and a check 56 for delivery to the passenger. As the ticket is torn, the foot 48 causes the formation of a tab 55' on the stub and a corresponding notch 56' in the check.

One of the objects of the present invention is to provide novel means for supporting the ticket dispenser in a convenient position for operation by the conductor or driver of the vehicle. To this end, I have provided a resilient clamping member 57 comprising a circumscribing portion 58 adapted to surround a post or the like, and terminating at its ends in parallel arms adapted to enclose, adjacent their ends, a projection 59 upon a bracket member proper. Said projection and said arms are formed with apertures which may be brought into alignment for the reception of a screw 60 onto which there may be threaded a wing nut 61 for tightening the clamp upon the post and upon the projection 59. The bracket member proper is provided with spaced arms 62 which are formed adjacent their free ends and in their facing surfaces with vertical slots 63 tapered from their upper to their lower ends for the reception and accommodation of the projections 13 on the end walls 12 of the box 11. Said bracket member is reinforced by a rib 64, and the

arms 62 thereof are offset downwardly as indicated at 65 for convenience of use of the box.

When the dispenser is first put into use, the bracket 57—64 is hung in a suitable place. By pressing upon the respective thumb pieces 32' of the various latch members 32, all of the backing plates can be moved to the position illustrated in Fig. 4. A pad of tickets 35 is then hung on each of the anchor units 36 by forcing the posts 37 and members 38 through the apertures 41 of the pads. It will readily be seen that, as the pads are forced into position, the surfaces 40 of the members 38 act as cams to cause the members 38 to be flexed inwardly to permit the projections 39 to pass through the apertures 41; and that, when the pad has been pressed home, the members 38 will spring back substantially into their normal positions, with the projections 39 overlying the upper surface of the pad. Thereafter, the outer ends of the tickets in each pad may be slipped under the rebent portion 30 of the plate 26, and the backing plates 22—26 may be pressed into the position shown in Fig. 3.

It will be readily realized that, in the use of the embodiment shown, for instance, if one pad of five or ten cent tickets is used up in a single run, the presumption is that only two or three of the thirty cent tickets would be sold during that run. Consequently, the more expensive tickets will stay in the dispenser for a relatively long time in the usual use of the device, and in the absence of some provision such as the guard 30, the outer ends of the expensive tickets probably would become wrinkled, frayed, and torn before a whole pad was used. In the use of the dispenser, the conductor or driver will probably free from the guards 30 the outer ends of about as many tickets as he expects to use during a single run.

The box 11 is hung in the bracket 59, either in the position shown in Fig. 2 or in the reverse position, as convenience may dictate. When the run is started, the knob 19 is rotated to move the tube 17 to such a position that the foot 48 of the member 45 corresponding to the five-cent ticket pad 35 overlies on said pad the numeral 1 under the word Zones. If all of the elements 42 are properly located, the foot 48 of each of the elements 45 will overlie the numeral 1 under the word Zones on its respective ticket pad. However, the tickets which are normally used in devices of this type must necessarily be very inexpensive, and often the printing thereon is out of alignment, or the holes 41 therein may be punched in an improper position. Consequently it may happen that, when the foot 48 corresponding to the five-cent pad is properly located, the foot 48 corresponding to the fifteen-cent pad and that corresponding to the twenty-five-cent pad may be im-

properly located, while the feet corresponding to the remaining pads may be in proper positions. Because of the peculiar arrangement of the elements 42, it will, in such a case, be possible to slide along the tube 17 the elements 42 corresponding to the fifteen and twenty-five cent pads to bring them into proper locations without disturbing the settings of the remaining elements 42. Each of the elements 42 is frictionally engaged with the sleeve 17, and the friction is such that the elements 42 will normally remain stationary with respect to the sleeve 17, but that, by manual manipulation, any one of said elements may be moved with respect to said sleeve 17 without affecting any one of the other elements.

As will be obvious, the operator of the device will operate the knob 19 as he enters fare zone 2 to move the feet 48 into registry with the numerals 2 on the various tickets, and will correspondingly move the elements 42 each time he enters a new fare zone.

In order to prevent interference with proper tearing by stubs of previously torn tickets, the device is so arranged that, after a ticket has been torn, the plate 22 may be swung inwardly about its pivot 21 beyond the position illustrated in Fig. 3, whereby the torn edge of the check 55 is drawn within the box 11. Upon releasing the plate 22, the spring 23 forces the same back to the position illustrated in Fig. 3 where a further movement is arrested by engagement of the flange 66 with the rear wall of the box 11.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A ticket dispenser comprising a box, means in said box for holding a plurality of pads of tickets, each of said pads projecting from said box, the tickets of all of said pads bearing the same series of indicia, a plurality of elements mounted on said box for movement longitudinally relative thereto, one of said elements being cooperable with each of said pads and with said indicia, and means operable to shift all of said elements in unison.

2. A ticket dispenser comprising a box, means in said box for holding a plurality of pads of tickets, each of said pads projecting from said box, the tickets of all of said pads bearing the same series of indicia, and a plurality of elements mounted on said box for movement longitudinally relative thereto, one of said elements being cooperable with each of said pads and with said indicia,

said elements being dependently operable and independently adjustable.

3. A ticket dispenser comprising a box, means in said box for holding a plurality of pads of tickets, each of said pads projecting from said box, the tickets of all of said pads bearing the same series of indicia, a plurality of elements mounted on said box for movement longitudinally relative thereto, one of said elements being cooperable with each of said pads and with said indicia, and means operable to shift all of said elements in unison, said elements being adjustable independently with respect to each other and to said means.

4. The combination with a plurality of pads of tickets of different values but carrying one set of common indicia, of a box adapted to hold all of said pads in side-by-side relation, said pads projecting from said box, a plurality of pointers mounted on said box for movement longitudinally thereof, one of said pointers being adapted to engage each of said pads in registry with said indicia, and means for moving said pointers in unison.

5. A ticket dispenser comprising a box adapted to receive a plurality of pads of tickets, a threaded shaft rotatably mounted on said box, a plurality of elements cooperable with said respective pads, and means connecting said elements to said shaft whereby rotation of said shaft causes movement of said elements.

6. A ticket dispenser comprising a box adapted to receive a plurality of pads of tickets, a threaded shaft rotatably mounted on said box, an internally threaded tube engaged on said shaft, and an element adapted to cooperate with one of said pads mounted on said tube for movement therewith.

7. A ticket dispenser comprising a box adapted to receive a plurality of pads of tickets, a threaded shaft rotatably mounted on said box, an internally threaded tube engaged on said shaft, an element adapted to cooperate with one of said pads mounted on said tube for movement therewith, and means preventing rotation of said tube.

8. A ticket dispenser comprising a box adapted to receive a plurality of pads of tickets, a threaded shaft rotatably mounted on said box, an internally threaded tube engaged on said shaft, and a plurality of elements cooperable with said respective pads mounted on said tube for movement therewith.

9. A ticket dispenser comprising a box adapted to receive a plurality of pads of tickets, a threaded shaft rotatably mounted on said box, an internally threaded tube engaged on said shaft, a plurality of elements cooperable with said respective pads mounted on said tube, and friction means normally holding said elements stationary with re-

spect to said tube, but permitting adjustment thereof with respect to said tube.

10. A ticket dispenser comprising a box adapted to receive a plurality of pads of tickets, said tickets projecting out of said box, a threaded shaft rotatably mounted on said box and extending transversely of said pads, an internally threaded tube engaged on said rod, a plurality of elements having apertured side flanges mounted on said tube and adapted to cooperate with said respective pads, said tube passing through the flange apertures of all of said elements, a resilient member for each of said elements, each of said members being bent to overlie said tube within its respective element and being formed at its one end with a foot adapted to engage its respective ticket pad, the opposite end of each of said members being adapted to engage said box, and a leaf spring in each of said elements and bearing on said opposite end of its respective member.

11. In a ticket box adapted to receive a pad of tickets having spaced apertures there-through, the combination which comprises means for anchoring said tickets in place comprising a pair of posts adapted to be received in said ticket apertures, and resilient means cooperable therewith and adapted to enter said apertures therewith.

12. In a ticket box adapted to receive a pad of tickets having spaced apertures there-through, the combination which comprises means for anchoring said tickets in place comprising a pair of posts adapted to be received in said ticket apertures, and a pair of resilient members normally spaced apart a distance greater than that between the remote edges of said apertures adapted to enter said apertures with said posts.

13. In a ticket box adapted to receive a pad of tickets having spaced apertures there-through, the combination which comprises means for anchoring said tickets in place comprising a pair of posts adapted to be received in said ticket apertures, and a pair of resilient members mounted adjacent said posts and extending beyond the free ends of said posts, said members being spaced apart, at their bases, a distance substantially equal to the distance between the remote edges of said aperture, and said members being formed, immediately beyond the free ends of said posts, with outward projections.

14. A ticket dispenser comprising a box open on its one side, means in said box adapted to anchor therein one end of a pad of tickets, and a backing leaf hinged to said box and adapted to close said open side thereof and to support such ticket pad, said leaf being rebent at its free end and said rebent portion being adapted to overlie such ticket pad.

15. A ticket dispenser comprising a box

open on its one side, means in said box adapted to anchor therein one end of each of a plurality of pads of tickets, means on said box for dispensing said tickets and means
5 for substantially closing said open side, said last-mentioned means being arranged to permit removal and insertion of any one pad without disturbing the remaining pads.

16. A ticket dispenser comprising a box
10 open on its one side, means in said box adapted to anchor therein one end of each of a plurality of pads of tickets, a backing leaf for each of said pads hinged to said box and adapted to support its pad in contact with
15 said open side, and latch means for holding said leaves against opening movement.

17. A ticket dispenser comprising a box
open on its one side, means in said box adapted to anchor therein one end of each of a plurality of pads of tickets, a backing leaf
20 for each of said pads hinged to said box and adapted to support its pad in contact with said open side, and independent latch means for holding said leaves individually against
25 opening movement.

18. A ticket dispenser comprising a box
open on its one side, means in said box adapted to anchor therein one end of each of a plurality of pads of tickets, a backing leaf
30 for each of said pads hinged to said box and adapted to support its pad in contact with said open side, and latch means for holding said leaves against opening movement while
35 permitting movement of said leaves in a closing direction beyond normal closed position.

19. In a ticket box, the combination which comprises a bracket adapted to be secured to a support, said bracket comprising a clamp,
40 and a bifurcated holder hinged to said support, the arms of said holder being formed in their adjacent faces with slots tapered from end to end; and a ticket dispenser comprising a box provided on its opposite ends with
45 projections elongated in the direction of height of said box and tapered from end to end, said box being adapted to fit between said arms, and said projections being adapted to enter and to fit said slots.

Signed by me this 10th day of October,
50 1928.

MURDOCK MACDONALD.