March 3, 1953 E. C. HANSON 2,630,084

PASS TRAY EQUIPMENT

Filed April 3, 1948 2 SHEETS--SHEET 1

FIG. 1

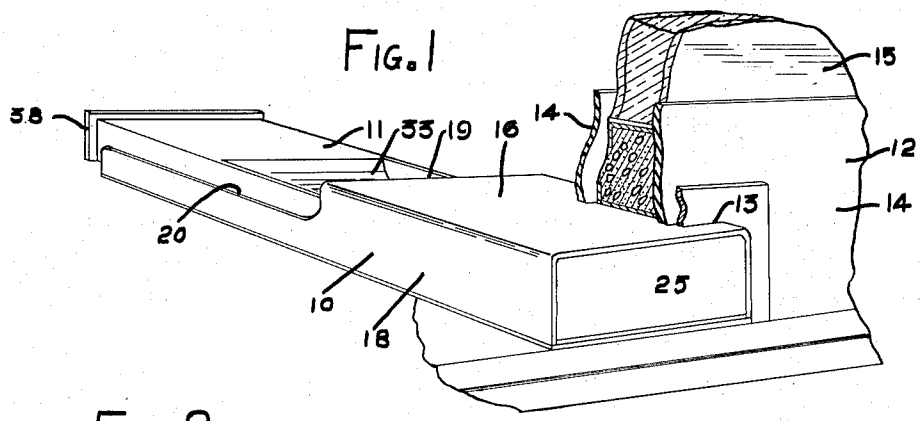


FIG. 2

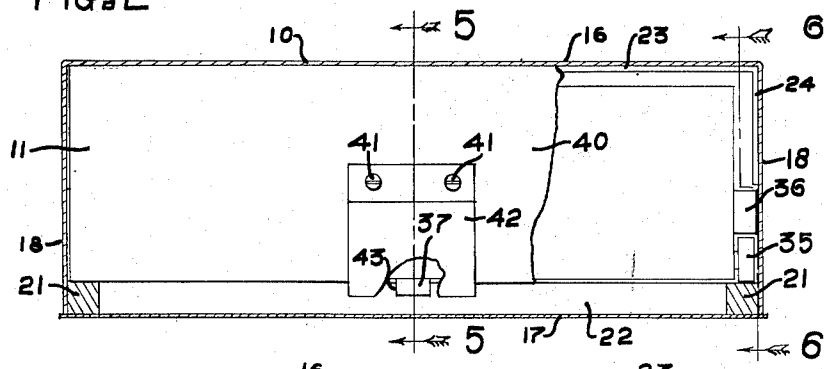


FIG. 3

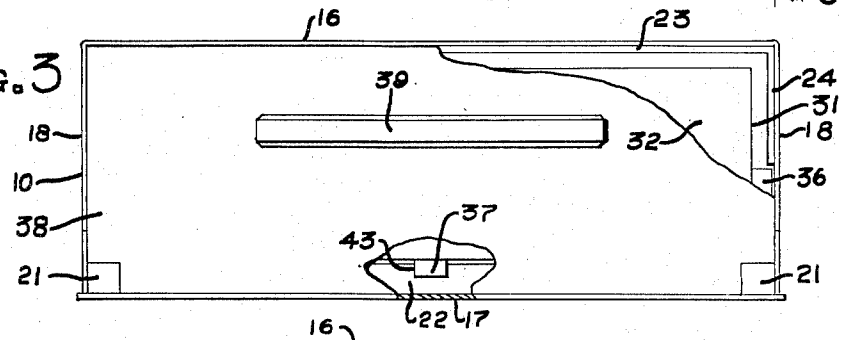
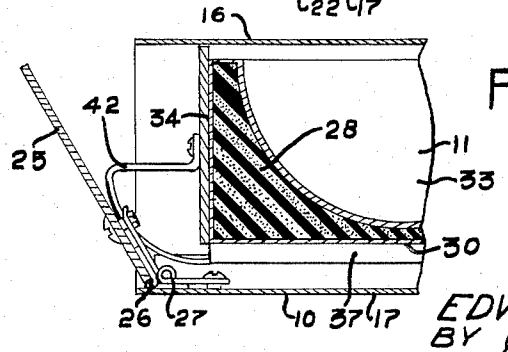


FIG. 4



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PASS TRAY EQUIPMENT

Filed April 3, 1948 2 SHEETS—SHEET 2

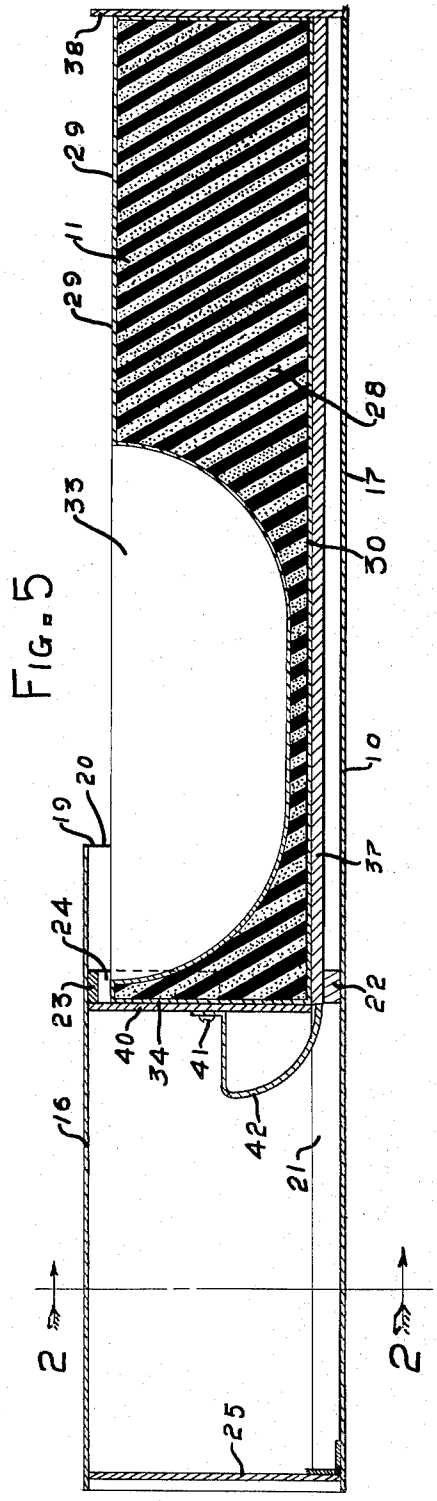

FIG. 5

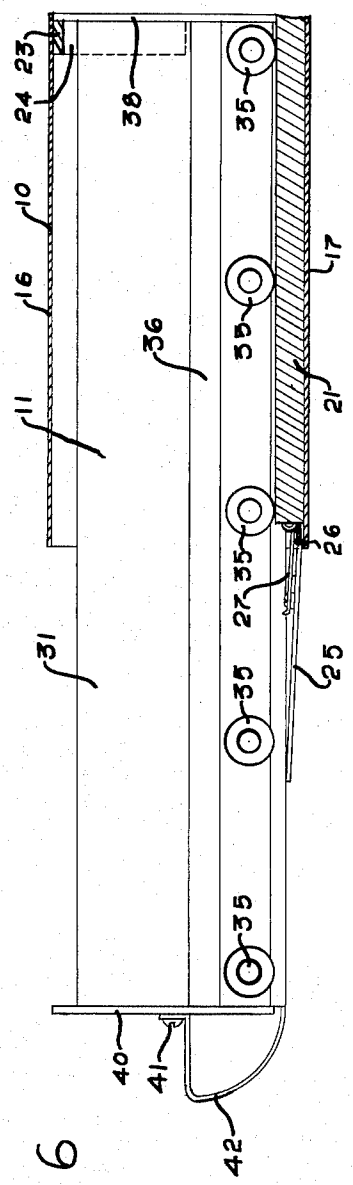

FIG. 6

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Patented Mar. 3, 1953

2,630,084

UNITED STATES PATENT OFFICE

2,630,084

PASS TRAY EQUIPMENT

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Application April 3, 1948, Serial No. 18,762

5 Claims. (Cl. 109—19)

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The present invention has relation to a pass tray equipment of the so-called bandit barrier type.

An object of the invention is to provide a pass tray equipment which will be of new and improved construction.

A further object is to provide a pass tray equipment wherein will be incorporated desirable and improved features and characteristics novel both as individual entities of the equipment and in combination with each other.

And a further object is to provide a pass tray equipment of construction as hereinafter set forth.

With the above objects in view, as well as others which will appear as the specification proceeds, the invention comprises the construction, arrangement and combination of parts as now to be fully described and as hereinafter to be specifically claimed, it being understood that the disclosure herein is merely illustrative and intended in no way in a limiting sense, changes in details of construction and arrangement of parts being permissible as long as within the spirit of the invention and the scope of the claims which follow.

In the accompanying drawings forming a part of this specification,

Fig. 1 is a perspective view of a pass tray equipment made according to the invention as when applied to use;

Fig. 2 is an enlarged transverse sectional view, taken as on line 2—2 in Fig. 5, of a housing of the equipment disclosing a pass tray with appurtenances of said equipment in exterior end elevation and partially broken away;

Fig. 3 is an enlarged interior end elevational view of the equipment, partially in section and partially broken away;

Fig. 4 is a detail sectional view corresponding generally with the disclosures of Figs. 5 and 6, but showing the pass tray as when in a position between its innermost and outermost positions;

Fig. 5 is a vertical longitudinal sectional view, taken as on line 5—5 in Fig. 2, showing said pass tray as when in its innermost position, a drawer pull on the pass tray being omitted; and

Fig. 6 is a fragmentary vertical longitudinal sectional view, taken as on line 6—6 in Fig. 2; showing the pass tray as when in its outermost position, the drawer pull being omitted.

Speaking generally, the new and improved pass tray equipment consists of an open ended housing 10 and a pass tray 11 slidably mounted in said open ended housing. When the pass tray equipment is applied to use, an intermediate portion of the housing 10 is rigidly supported in a wall such as 12 with an exterior end of said housing situated at or beyond an outer surface of said wall and an interior end portion of the housing situated interiorly of the wall, about as disclosed in Fig. 1 of the drawings.

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The wall 12 includes a portion thereof in surrounding relation to the housing 10 having a horizontally disposed, rectilinear opening 13 fixedly containing said housing and lined at its outer and inner sides by bullet resistant steel plates indicated 14. Above the steel plates 14 said wall 12 is constituted as thick bullet proof resistant glass 15. An operator; say, for instance, a teller; of the equipment will be situated within a building of which the wall 12 is a part, a customer intending to transact business with the operator will be at the outer side of said wall adjacent the equipment, and the glass 15 will be transparent so that the operator and customer can be visible to each other.

The open ended housing 10 is of rectilinear configuration as shown, and said housing can consist of any rigid material suitable to its purpose, such for example, as stainless steel. It is evident that the housing should be both bullet proof and weather proof.

Said housing 10 is constituted as a unitary structure the exterior end portion of which is defined by spaced apart, parallel, horizontal upper and lower walls, denoted 16 and 17, respectively, and spaced apart, parallel vertical side walls, represented 18, 18. The interior end portion of the housing is constituted as a continuation of the lower wall 17 and continuations of lower parts of the side walls 18, 18. Stated otherwise, the interior end portion of the upper wall 16 is cut away as at 19, and upper parts of the interior end portions of the side walls 18, 18 are cut away as at 20, 20.

Spaced apart, longitudinally extending supporting rails in the housing 10 are designated 21, 21. Said supporting rails 21, 21 can be of any material suitable to their purpose, such, for example, as steel. There is a supporting rail 21 rested upon and secured to the inner upper surface of the lower wall 17 of said housing 10 at each of its opposite sides in contiguous relation to inner lower surfaces of the side walls 18, 18, and said supporting rails extend the full length of said lower wall.

A transversely extending lower bar upon and secured to the inner upper surface of the lower wall 17, between the supporting rails 21, 21, is denoted 22. Said transversely extending lower

bar 22 can be of any material suitable to its purpose. As disclosed, the transversely extending lower bar 22 is within the confines of the exterior end portion of the housing 10 in considerably closer relation to the cut-away portion 19 than to the exterior end of said housing. The upper surface of the transversely extending lower bar 22 is situated at about the elevation of the upper surfaces of the supporting rails 21, 21.

A U-shaped piece includes a transversely extending upper bar 23 upon and secured to the inner lower surface of the upper wall 16, directly above the transversely extending lower bar 22, and spaced apart, vertical bars 24, 24 upon and secured to upper portions of the inner surfaces of the side walls 18, 18 and in vertical alinement with said lower and upper bars 22 and 23. The lower ends of the spaced apart, vertical bars 24, 24 terminate at a location about midway between the lower and upper bars 22 and 23 in the disclosure as made. The U-shaped piece can consist of any material suitable to its purpose.

The exterior and interior surfaces, respectively, of the transversely extending upper bar 23 and the spaced apart vertical bars 24, 24 are situated in vertical planes disposed perpendicular to the longitudinal axis of the housing 10 and constitute stops for arresting or limiting the extent of outward and inward sliding movement of the pass tray 11 in a manner which will be set forth.

The exterior end of the housing 10 is effectively closed by an openable door 25 having its lower edge portion hingedly supported, as at 26, within the exterior end portion of said housing upon its lower wall. A spring device 27 normally retains the door 25 in its closed condition, and the construction and arrangement will be such that said door when in closed condition will be situated well within the confines of and in perpendicular relation to the housing, about as disclosed in Fig. 5. The door 25 can be of any material suitable to its purpose. Desirably, said door can be of stainless steel.

The pass tray 11 is of general rectilinear configuration. It is constituted as a hollow body of any material, such as stainless steel, suitable to its purpose containing a filler material 28. An interior end portion of the hollow body of said pass tray is defined by spaced apart, parallel, horizontal upper and lower walls, indicated 29 and 30, respectively, spaced apart, parallel, vertical side walls, designated 31, 31 and a transversely extending interior end wall 32 integral or rigid with said upper, lower and side walls. An exterior end portion of said hollow body of the pass tray is constituted as a continuation of the lower wall 30, continuations of the side walls 31, 31, a concave member 33 integral or rigid with and set into the upper wall 29 and a transversely extending exterior end wall 34 integral or rigid with the lower and side walls 30 and 31, 31 and with a portion of the upper wall 29 at the side of the concave member 33 adjacent said exterior end wall 34. Said concave member 33 is situated close to the exterior end of the pass tray beneath the upper wall 29 of its hollow body and constitutes an upwardly opening compartment of said pass tray for receiving articles such, for example, as money, negotiable instruments, checks, etc. The filler material 28 desirably can be constituted as sponge rubber.

Each of the spaced apart, parallel, vertical side walls 31, 31 suitably and conveniently supports a plurality of horizontally alined, spaced apart rollers, each denoted 35, situated at the outer side of the corresponding side wall, and rollers 35 at the opposite sides of the pass tray are in the same plane and oppositely disposed rollers are in alinement in direction transversely of said pass tray.

The pass tray has width somewhat less than a measurement representing the distance between the side walls 18, 18 of the housing 10 and depth somewhat less than a measurement representing the distance between the upper and lower walls 16 and 17 of said housing, and said pass tray is adapted to be freely received in the housing to be slidable therealong with the oppositely disposed rollers 35 on the pass tray rested upon the supporting rails 21, 21 in adjacent spaced relation to said side walls 18, 18. The construction and arrangement is such that the rollers support the pass tray so that its lower portion is elevated a trifle above the upper surfaces of the supporting rails 21, 21. Longitudinally extending guide rails 36, 36 upon the outer surfaces of the vertical side walls 31, 31 of the pass tray, situated above and in clearing relation to the rollers and below and in clearing relation to the lower ends of the vertical bars 24, 24, include outer surfaces situated outwardly of outer portions of said rollers in clearing relation to the side walls 18, 18 of the housing 10. The obvious purpose of said guide rails 36, 36 is to limit sidewise movement or play of the rollers thus to insure that said rollers will remain in their intended positions upon the supporting tracks 21, 21.

A longitudinally extending, centrally arranged bar 37 secured to the lower surface of the lower wall of the hollow body of the pass tray extends from end to end of said hollow body. Said longitudinally extending bar 37 is situated to be slidable in a transverse slot 43 in the upper surface of the transverse lower bar 22 with movement of the rollers 35 along the supporting rails 21, 21.

The interior end wall 32 of the hollow body of the pass tray rigidly supports a rectangular plate 38 situated at the inner side of the interior wall and including portions which project at each of the four sides of said hollow body. Said rectangular plate 38 is cut away to clear the supporting tracks 21, 21 and its overall dimensions are such that it can be snugly, slidably received within the interior end of the exterior end portion of the housing 10. The construction and arrangement will be such that outward movement of this rectangular plate, and hence outward movement of the pass tray, will be arrested by engagement of its projecting portions with the interior surfaces of the transverse lower and upper bars 22 and 23 and vertical bars 24, 24. A drawer pull upon the rectangular plate 38 is represented 39.

The exterior end wall 34 of the hollow body of said pass tray rigidly supports a rectangular plate 40 situated at the outer side of said exterior wall and including portions which project at the upper and opposite sides of said hollow body. The construction and arrangement will be such that said rectangular plate 40 can be snugly, slidably received within the exterior end portion of said housing 10 and also such that inward movement of this rectangular plate, and hence inward movement of the pass tray, will be arrested by engagement of its projecting portions with the exterior surfaces of the transverse upper bar 23 and vertical bars 24, 24.

The rectangular plates 38 and 40 desirably can be of stainless steel.

A lower portion of the exterior surface of the rectangular plate **40** rigidly supports, as at **41**, a door opener **42** constituted as an exteriorly projecting element disposed at the longitudinal center of said rectangular plate. An upper part of the door opener or exteriorly projecting element **42** is substantially horizontally disposed, a lower part of said door opener or exteriorly projecting element is curvilinear and extends downwardly and rearwardly and the rearward end of said curvilinear, lower part is in the horizontal plane of the longitudinally extending bar **37** and contiguous with the forward end of said longitudinally extending bar. The door opener can desirably be of stainless steel.

The manner in which the pass tray equipment is adapted to function will be apparent. Longitudinal sliding movement of the pass tray will be accomplished by a person at the interior side of the equipment. In Figs. 1 and 5 of the drawings, the pass tray is at its innermost position with the rectangular plate **40** up against the exterior surfaces of the upper and vertical bars **23, 24, 24** and the concave member **33** at the interior side of the wall **12**. In Fig. 4 the pass tray is disclosed as when being extruded, or intruded. During extrusion of the pass tray, the door opener **42** will force the door **25** to open position against resilient action of the spring device **27**, and during intrusion of said pass tray, said door will become closed by action of said spring device upon being released by said door opener. In Fig. 6 the pass tray is at its outermost position with the rectangular plate **38** up against the interior surfaces of the lower, upper and vertical bars **22, 23, 24, 24** and the concave member **33** at the exterior side of said wall **12**. Stated differently, in Figs. 1 and 5 the compartment which the concave member **33** provides is situated interiorly of the interior end of the exterior end portion of the housing **10**, and in Fig. 6 said compartment is situated exteriorly of the exterior end of said housing.

What is claimed is:

1. A pass tray equipment comprising an open ended housing adapted to be rigidly fitted in an opening through a wall with its exterior end contiguous with an outer side of said wall and its interior end open to an inner side of said wall, a pass tray slidably supported in said housing including an article receiving compartment adapted to be situated at the outer side of said wall and housing in response to outward sliding movement of the pass tray and to be situated to be accessible at the inner side of said wall in response to inward sliding movement of said pass tray, a self-closing door pivotally mounted within said exterior end of said housing for movement to an open position when said pass tray is slid in outward direction and impinges on said door and to move to close said housing when said pass tray is slid in inward direction to position clear of said door, and means for limiting the extent to which said pass tray can be slid both outwardly and inwardly.

2. A pass tray equipment comprising an open ended housing adapted to be rigidly fitted in an opening through a wall with its exterior end contiguous with an outer side of said wall and its interior end open to an inner side of said wall, a pass tray supported in said housing for sliding movement longitudinally thereof and including an article receiving compartment adapted to be situated at the outer side of said wall clear of the housing in response to outward sliding movement of the pass tray and to be situated at the inner side of said wall clear of the housing in response to inward sliding movement of the pass tray, a stop means wholly within said housing adapted to be engaged by an element rigid with an interior portion of said pass tray to limit the extent to which the pass tray can be slid outwardly, said stop means being adapted to be engaged by an element rigid with an exterior portion of said pass tray to limit the extent to which the pass tray can be slid inwardly, and a self-closing door pivotally mounted within said exterior end of said housing for movement to an open position when said pass tray is slid in outward direction and impinges on said door and to move to close said housing when said pass tray is slid in inward direction to position clear of said door.

3. A pass tray equipment comprising a horizontally disposed, open ended housing, a pass tray within the housing including an article receiving compartment adapted to be selectively situated clear of exterior and interior ends of said housing, complemental means upon the pass tray and the housing supporting said pass tray for slidable movement longitudinally of said housing, and a self closing door pivotally mounted within said exterior end of said housing for movement to an open position when said pass tray is slid in outward direction and impinges on said door and to move to shut off the exterior end of said housing when said pass tray is slid in inward direction to position clear of said door.

4. A pass tray equipment comprising an open ended passageway through a wall, a pass tray slidably supported in said passageway including an intermediate portion of the pass tray providing an article receiving compartment adapted to be situated at the outer side of said wall in response to outward sliding movement of said pass tray and to be situated at the inner side of said wall in response to inward sliding movement of the pass tray, an exterior portion of said tray adapted to substantially close the passageway when the compartment is situated at the inner side of said wall and an interior portion of the pass tray adapted to substantially close said passageway when said compartment is situated at the outer side of said wall, and a spring operated, self-closing door shutting off the outer end of said passageway pivotally mounted at said outer end of said passageway for movement to an open position when said pass tray is slid outwardly and impinges on said door and to move to shut off the outer end of said passageway when said pass tray is slid in inward direction to position clear of said door.

5. A pass tray equipment comprising an open ended housing, a pass tray within that housing including an intermediate portion of the pass tray providing an article receiving compartment adapted to be selectively situated clear of exterior and interior ends of said housing, an exterior portion of said pass tray adapted to substantially close the housing when the compartment is situated clear of the interior end of said housing and an interior portion of the pass tray adapted to substantially close the housing when said compartment is situated clear of the exterior end of said housing, means for limiting the extent to which said pass tray can be longitudinally moved in the housing, and a self-closing door shutting off the exterior end of said housing pivotally mounted at a bottom surface of

said exterior portion of said housing for movement to an open position when said pass tray is moved to cause said article receiving compartment to be situated clear of said exterior end of said housing and thereby impinges on and over rides said door to move to shut off the exterior end of said housing as said pass tray is moved to be clear of said door and to cause said article receiving compartment to be situated clear of said exterior end of said housing.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
451,317	Carman	Apr. 28, 1891
1,256,360	Ohlson et al.	Feb. 12, 1918
1,458,202	Stout	June 12, 1923
1,654,692	Marois	Jan. 3, 1928
1,714,305	Gassen	May 21, 1929