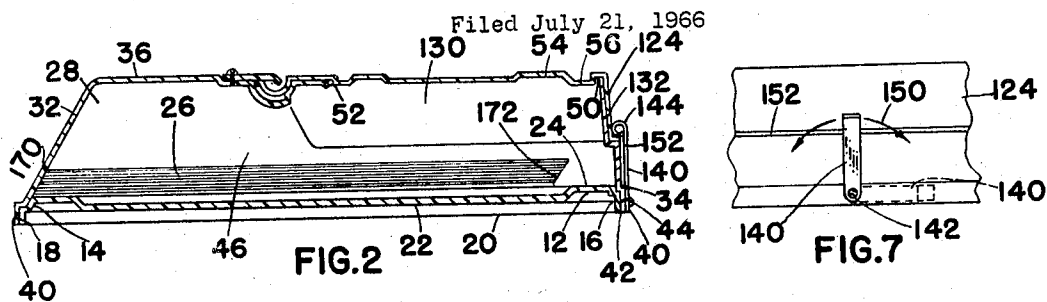
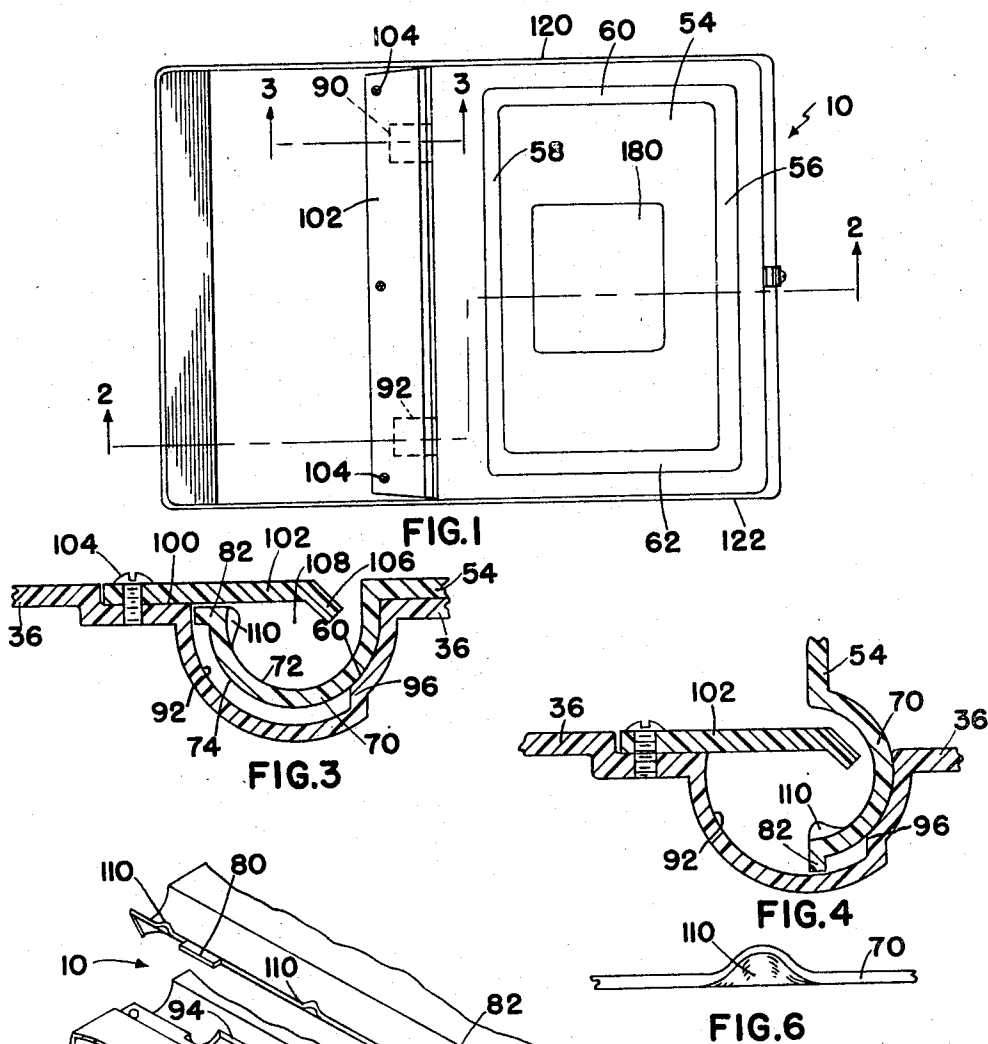


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PROTECTIVE STORAGE AND DISPENSING RECEPTACLE



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PROTECTIVE STORAGE AND DISPENSING RECEPTACLE

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ABSTRACT OF THE DISCLOSURE

The present invention constitutes a combination storage receptacle for and dispenser of flat sheet-like material, such as photographic paper and the like. The receptacle is generally rectangular and of shallow profile and is made of an opaque plastic material so as to be light tight when an access opening in the top thereof is closed by the cover of similar material. The hinge is a light tight hinge having mating convex and concave members. Detachable plate means is provided to keep the members in assembled relation with the convex member having a lip and the latter means including a rib that coact to prevent hinge disassembly except on detachment of the plate means. The lower edges of the front, rear and side walls are formed to mate with and are joined with peripheral edges of the bottom wall to form a light tight rabbet-type joint. The rear wall is upwardly and forwardly inclined to enable ready stacking of paper therein to have the forward edges of the paper upwardly and forwardly inclined. A resilient latch is pivoted on the front wall for coaction with the cover for releasably retaining the cover closed.

The present invention relates to new and useful improvements in receptacles for protective storage of light sensitive materials, and more particularly pertains to a receptacle of such character in which a vertical stack of sheet materials can be dispensed and conveniently dispensed therefrom a single sheet at a time, and which includes improved means for excluding light and/or dust therefrom both when and when not light sensitive materials are being removed therefrom.

The primary object of this invention is to provide a light-tight storage receptacle for vertically stacked sheets of light sensitive materials such as photographic paper, film, and the like, such receptacle being provided with means whereby the same can be readily opened for the insertion or removal of sheet materials therefrom, and which when in its closed position will provide reliable exclusion of light and dust from the interior thereof.

Still another important object of the invention is to provide a receptacle of the character specified above such that the interval during which the receptacle must be opened for either the insertion or removal of materials therefrom is minimal, and particularly it is an objective of this invention to minimize the time necessary for a person to keep the receptacle open while separating and removing a single sheet of material from a stack of such sheet materials within the receptacle.

It is another object of the present invention to provide a receptacle of the character described above such that the receptacle is particularly secure against inadvertent opening thereof, and which can be positively retained in closed position.

Still another object of the present invention is to provide a simple and reliable hinge construction for an access door or closure wall such that no possibility of leakage of either light or dust into the receptacle can occur through such hinge construction.

Yet another object of the present invention is to provide a receptacle of the character described above which

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will be simple and economical in manufacture, and yet which will be very durable and reliable in use, and in particular it is an object of this invention to provide such a receptacle wherein virtually all components thereof can be readily formed from plastic or synthetic resin materials such as by vacuum forming of sheet stock, injection molding, and the like, or formed from sheet metal by deep drawing, and wherein such separate components can be efficaciously assembled.

A broad aspect of the invention involves a receptacle for vertically stacked, uniformly dimensioned, rectangular sheets of flat material, such receptacle being of the type including a generally rectangular and horizontal bottom wall having opposite side edges and a rear edge extending between the side edges, and having side walls and a rear end wall connected to and extending upwardly from the side edges and the rear edge of the bottom wall, respectively, said side walls being vertical and parallel; and improvement thereof for facilitating removal of individual sheets of material comprising said side walls having coplanar rear edges that extend upwardly and forwardly from the rear edge of the bottom wall, and said rear wall being flat and connecting the rear edges of the side walls, whereby a vertical stack of rectangular sheets in the receptacle may be caused, by movement of the latter such as to impinge forcefully the rear end of such stack against the rear wall, to assume a stacked configuration wherein such stack is upwardly and forwardly inclined to project the forward end of each sheet forwardly of all those therebelow.

Still another broad aspect of the invention involves a receptacle of the type including a receptacle wall having an access opening therethrough with said wall having an external side against which is disposed a movable closure wall for closing the access opening, said walls being hingedly connected adjacent the access opening whereby the closure wall may be swung outwardly from the receptacle wall to open the access opening; an improved means for hingedly connecting the walls comprising said receptacle wall having an elongated straight groove in the external side thereof, said groove being generally semi-cylindrical in transverse configuration, said closure wall having an enlarged marginal edge portion having a generally semi-cylindrical configuration on the side thereof facing the receptacle wall, said marginal edge portion being slidably received within the groove when the closure wall is positioned to close the access opening, said edge portion of the closure wall being so constructed and arranged with respect to the groove that the former turns within the groove on swinging the closure wall from the receptacle wall, and means for limiting turning movement of the edge portion in the groove, said last means comprising said groove having a portion of its transverse extent of relatively greater depth to define a stop shoulder at a transverse end of said portion, and said edge portion of the closure wall having a flange received within said portion of the groove, whereby said flange will engage the stop shoulder to limit swinging movement of the closure wall.

An important feature of the invention resides in the rear wall of the receptacle being upwardly and forwardly inclined, whereby a stack of rectangular and similarly sized sheet materials can be impacted thereagainst on appropriate manipulation of the receptacle to result in the forward edge of each sheet being projected forwardly to a greater extent than all the sheets therebelow, whereby the uppermost sheet can be readily separated from all those therebelow.

Still another important feature of the invention resides in side walls, front and rear walls of the receptacle being integral and formed at their lower margins so as to join with the bottom wall in a rabbet-like joint, whereby the

advantages are realized of assuring proper mating of the bottom wall with the side walls, rear and front walls; the juncture is such as to be especially lightproof because of the tortuous path light would have to follow therethrough; the walls can be secured together very readily by means of cement, staples, rivets, or the like; and the latch means can be secured to the receptacle in such a manner as not to involve any likelihood of light entering the receptacle.

Yet another important feature of the invention resides in the means provided in connection with the closure wall for effecting a particularly efficient light seal for preventing light entering the receptacle through the access opening, such means comprising a closure wall having a depressed portion which peripherally fits within the access opening.

A final important feature to be specifically enumerated resides in the provision of a light and dustproof hinge means for the hinge connection between the closure wall and the top wall of the receptacle, wherein such hinge means involves no openings through the top wall and wherein the hinge is constituted of a groove in the top wall which oscillatably receives a marginal edge of the closure wall that is generally complementary to the groove.

These and other objects, aspects and features of the invention will become apparent during the following description of a preferred embodiment of the invention, such description to be taken in conjunction with the accompanying drawings, wherein:

FIGURE 1 is a top plan view of a receptacle according to the invention, with hidden details of construction being shown in dashed outline;

FIGURE 2 is a vertical sectional view taken upon the plane of the broken section line 2—2 shown in FIGURE 1;

FIGURE 3 is an enlarged fragmentary vertical sectional detail view taken upon the plane of the section line 3—3 in FIGURE 1;

FIGURE 4 is a view similar to FIGURE 3; however, this view showing the positions assumed by the structure on the closure wall being swung to the open position;

FIGURE 5 is a fragmentary exploded perspective view of the hinge construction;

FIGURE 6 is an enlarged fragmentary detail view illustrating one of the lips provided for preventing separation of the parts of the hinge construction; and

FIGURE 7 is a fragmentary front elevational view of a central portion of the receptacle illustrating in full lines the latch structure in latching position, and illustrating in dashed outline the position of the latch in the unlatched position.

Referring now to the drawings, wherein like numerals designate like parts throughout the various views, the reference numeral 10 designates the receptacle of the present invention generally.

The receptacle 10 comprises a bottom wall 12 of substantially uniform wall thickness and preferably made of an opaque synthetic resin material such as polystyrene, polyethylene, acrylate resins, phenolic resins, and the like. The synthetic resin material constituting the bottom wall 12 can incorporate therein opaque filler material such as to enhance the opaqueness thereof. If the synthetic resin selected for the bottom wall 12 is sufficiently opaque in and of itself in the thickness employed, the use of a filler material is of course unnecessary; however, if the synthetic resin is transparent or translucent, it is preferred that an opaque filler material be incorporated in the synthetic resin in a sufficient concentration to achieve a desired degree of opacity (preferably of black color because of a psychological or subjective reason, black seems to be opaque, and for the further and better founded reason that the high absorptivity of black will tend to attenuate any light passing through any joint). The particular filler can be such as those conventionally employed in paints to increase the opacity thereof and can, for example, be

carbon black, color pigments, titanium oxide, barium or lead sulphate, lead sulfide, or metallic lead dust. Opacity must in this connection be considered in relationship to the character of radiation to which the receptacle 10 is to be subjected and the sensitivity characteristics of the contents of the receptacle 10. For example, if the receptacle 10 is to be exposed to X-rays and the receptacle 10 is to be used for the storage of materials sensitive to X-rays, the bottom wall 12 should be selected so as to substantially attenuate the passage of X-rays therethrough (this can be accomplished readily by making the wall 12 sufficiently thick and inclusive of lead or compounds thereof in relation to the hardness of the X-rays).

The bottom wall 12 is preferably, though not necessarily, of substantially uniform wall thickness throughout its extent, and is about its entire periphery provided with an integral marginal portion that initially is downwardly extending as at 14, thence horizontally and outwardly extending as at 16, and finally is downwardly extending as at 18 to terminate in a horizontal and coplanar edge 20. A central rectangular area of the bottom wall 12 is depressed as indicated at 22 below an annular (actually rectangular rather than circular) coplanar area 24 of the bottom wall 12 that intervenes between the annular peripheral margin of the bottom wall 12 and the depressed central portion 22 of the bottom wall 12 to surround the depressed central area 22. It is to be understood that a stack of rectangular sheet materials such as indicated at 26 in FIGURE 2 can rest upon the bottom wall 12 and be supported thereby in such a manner as to be spaced above the centrally depressed portion 22 of the bottom wall 12; this relationship being important for reasons to be brought forward subsequently.

As thus far described, it will be clear that the bottom wall 12 has a configuration such as to readily yield to fabrication thereof from flat sheet stock of a suitable thermoplastic synthetic resin by vacuum forming techniques.

The receptacle 10 also includes integral side walls 28 and 30, rear wall 32, front wall 34 and top wall 36. The walls 28, 30, 32, 34 and 36 are in the preferred construction of substantially uniform wall thickness and are formed of the same type of material such as indicated as suitable for the bottom wall 12. The side walls 28 and 30 are generally parallel to each other, but can if desired be slightly convergent upwardly so as to more readily yield to vacuum forming or other forming techniques from flat sheet material stock. The rear edges of the side walls 28 and 30 are upwardly and forwardly inclined and joined by upwardly and forwardly inclined rear wall 32, as clearly shown in FIGURE 2. The upper edges of the side walls 28 and 30 and the upper edges of the rear and front walls 32 and 34 are integrally joined by the top wall 36 as shown in FIGURE 2, and the forward end edges of the side walls 28 and 30 are integrally joined by the front wall 34, also as clearly shown in FIGURE 2. The front wall 34 can if desired be inclined slightly rearwardly and upwardly from the vertical in order to facilitate manufacturing, as previously indicated with respect to side walls 28 and 30. Thus, the walls 28, 30, 32, 34 and 36 are integral and the horizontal extent of the side walls 28 and 30 and the front and rear walls 34 and 32 are unbroken and continuous. The unbroken and continuous extent of the lower margins of the walls 28, 30, 32 and 34 are formed with a continuous outwardly offset flange 40, such flange 40 terminating at its lowermost extent in a continuous edge 42 that is coplanar with the previously mentioned coplanar edge 20 of the bottom wall 12.

As clearly shown in FIGURE 2, the bottom wall 12 is received within the offset flange 40 defined about the lowermost edges of the walls 28, 30, 32 and 34 and seats against the inner sides of such walls and the offset flange 40 along a tortuous or zigzag zone of contact in the nature of a rabbet joint 44. The rabbet-like joint 44, since it constitutes surfaces contacting about double bends is quite

efficient insofar as exclusion of any light from the interior 46 of the receptacle 10 is concerned. Furthermore, it will be readily appreciated by those skilled in the art that such continuous joint about the entire lower periphery of the receptacle 10 positively assures proper alignment of the two integral components (one component being comprised of the bottom wall 12, and the other of such two components being comprised of walls 28, 30, 32, 34 and 36), and the limits the extent to which the bottom wall 12 can be inserted during assembly. Furthermore, it will be appreciated that the two coplanar edges 22 and 42 each make substantial contributions to the support of the receptacle 10 upon a planar support, not shown. Permanent assembly can be readily accomplished by simply coating one or both of the peripheral contacting portions of the rabbet-like joint 44 prior to pressing the bottom wall 12 within the annular confines of the offset flange 40. The choice of a suitable cement will depend upon the synthetic resin constituting the joined materials, and a suitable choice is deemed well within the skill of the art. When the materials joined at the rabbet-like joint 44 are thermoplastic synthetic resins, conventional heat welding techniques can be employed about the lowermost peripheral extent of the rabbet-like joint, that is, along the edges 22 and 42. Rather than utilizing a cement or adhesive, or utilizing heat welding or heat bonding techniques, the bottom wall 12 can be secured to the offset flange 40 by the application of a plurality of rivets or staples (not shown) through the rabbet-like joint 44.

The top wall 36 is provided with a rectangular access opening having a forward edge 50 parallel to and closely spaced to the front wall 34, and a rear edge 52 at a position spaced intermediate the rear and front walls 32 and 34 as shown in FIGURE 2, it being understood that the rectangular access opening has side edges spaced from the side walls 28 and 30. A closure wall 54 is provided for closing the access opening and the closure wall 54 overlies the access opening as shown in FIGURE 2 when the closure wall 54 is in closing position. The closure wall 54 is preferably made of the same sort of materials and by the same manufacturing techniques as previously set forth in connection with the walls 12, 28, 30, 32, 34 and 36. As clearly shown in FIGURE 2, the closure wall 54 is preferably of substantially uniform wall thickness.

The closure wall 54 is provided with relatively depressed strips or areas 56 and 58 that are elongated and in parallelism to the edges 50 and 52 of the access opening and are so spaced as to be received within the access opening with a running clearance along the edges 50 and 52. Similarly, depressed strips or areas 60 and 62 are provided which connect between the opposite ends of the depressed strips 56 and 58 in parallelism with the side walls 28 and 30 for being received within the access opening with close running tolerance to the opposite side edges of the access opening. If desired, the entire area of the closure wall 54 directly overlying the access opening can be depressed rather than simply the peripheral strips or margins 56, 58, 60 and 62. The relationship of the depressed areas 56, 58, 60 and 62 to the access opening is such as to constitute a more effective light seal by the closure wall 54 as against entry of light into the interior 46 of the receptacle 10 through the access opening.

The closure wall 54 can be moved from the position shown thereof closing the access opening to a position wherein the closure wall 54 has been swung or pivoted to a substantially vertical position from the horizontal position shown thereof, whereby materials such as the sheet materials 26 can be inserted into and removed from the receptacle 10. The means for establishing such hinged connection between the closure wall 54 and the top wall 36 will now be described, and for this purpose attention is especially directed to FIGURES 3, 4 and 5.

The top wall 36 is provided with a transversely extending elongated groove 60 in the top or external surface thereof. The groove 60 is substantially semi-cylindrical

in transverse section throughout the longitudinal extent of the groove 60. The groove 60 is positioned at a position intermediate and spaced from the rear wall 32 and the rear edge 52 of the access opening. The rear marginal portion of the closure wall 54 is formed as a semi-cylindrical shell 70 having a concave upper side 72, and a semi-cylindrical lower side 74 that is received within and which is substantially complementary to the groove 60 when the closure wall 54 is in the position thereof closing the access opening (see FIGURE 3). The relationship between the rear marginal portion 70 of the closure wall 54 to the groove 60 is such that the closure wall 54 can be swung counterclockwise from the position shown thereof in FIGURE 3 about the common center or axis of curvature of the contacting surfaces of the groove 60 and the portion 70 to open the rectangular access opening that is defined between the edges 50 and 52. FIGURE 4 shows the closure wall 54 swung in such a manner to a vertical position that approaches being in the limiting position thereof subsequently explained. Thus, the relationship of the groove and the marginal portion 70 is such as to constitute a hinge or pivot-like connection between the top wall 36 and the closure wall 54, it being important to note that such hinged connection does not involve any openings through the top wall such as might admit light into the receptacle, nor does such hinged connection involve any structure (ears or the like) projecting above the surface of the top wall that would interfere with compact and stable stacking of a plurality of receptacles 10.

A combined means is provided for limiting the pivotal or oscillatory movement of the marginal portion 70 of the closure wall 54 in the groove 60 and for preventing relative movement of the marginal portion with respect to the groove 60 in a direction paralleling the longitudinal extent of the groove 60. Limiting of the pivotal or oscillatory movement is desirable in order to limit swinging movement of the closure wall 54 in such a manner that the closure wall 54 will be nearly vertical but inclined slightly to the rear upwardly from the top wall 36 in such a manner as to remain in the fully open position with a sufficient degree of stability so as not to require the user to hold the same open while inserting or removing materials from the receptacle 10. In other words, the closure wall 54 is limited in its pivotal movement so that the center of gravity of the closure wall 54 and the structure subsequently attached integrally thereto will be slightly to the rear of the groove 60 when the closure wall 54 is opened. Such combined means comprises the marginal portion 70 of the closure wall 54 having a pair of rearwardly extending and spaced flanges 80 and 82 at its rearmost extremity. The rearwardly extending integral flanges 80 and 82 of the closure wall 54 extend rearwardly when the closure wall 54 is in the position thereof closing the access opening as shown in FIGURE 3, and such flanges 80 and 82 extend downwardly and forwardly when the closure wall 54 is swung to its limited and fully open position (somewhat more forwardly than the position shown of the flange 82 in FIGURE 4).

As clearly shown in FIGURES 3, 4 and 5, grooves 90 and 92 are provided in the rear and lower portion of the internal surface of the groove 60, such grooves 90 and 92 being spaced from each other along the length of the groove 60 and having configurations comparable to the volumes swept by the flanges 80 and 82 during the swinging movement of the closure wall 54 from the position thereof closing the access opening to the fully open position thereof. In other words, the grooves 90 and 92 constitute relatively depressed portions of the groove 60 such as to accommodate the flanges 80 and 82 during swinging movement of the closure wall 54. The grooves 90 and 92 have forward ends defining stop shoulders 94 and 96, and such stop shoulders 94 and 96 coact respectively with the flanges 80 and 82 to limit swinging movement of the closure wall 54 as will be clearly evident upon inspection of FIGURES 3 and 4. The extents of the grooves 90

and 92 is just slightly in excess of the extent of the flanges 80 and 82 in such direction, whereby the flanges 80 and 82 coact with the sides of the grooves 90 and 92 to substantially prevent any movement of the closure wall 54 in the direction of the longitudinal extent of the groove 60. It will be noted that the stop shoulders 94 and 96 (see FIGURES 3 and 4) extend vertically rather than toward the center of curvature or axis of the pivotal connection defined by the groove 60 and the arcuate marginal portion 70 of the closure wall 54, such vertical inclination of the stop shoulders 94 and 96 being effective for the function desired and yet being such a structure as to be readily fabricated by vacuum forming techniques. Obviously, the stop shoulders could extend towards the axis of the pivotal or hinge connection; however, such a provision would tend to complicate or make more difficult the fabrication of the structure.

Means is provided for preventing inadvertent removal of the marginal or hinge portion 70 of the closure wall 54 from the groove 60. Such means comprises the upper surface of the top wall 36 being recessed or depressed along the rear edge of the groove 60 as indicated at 100, and the rear portion of a mounting plate 102 is seated in the recess 100 and detachably secured in such position by threaded fasteners 104 extending through the mounting plate 102 and into the top wall 36 at the bottom of the recess 100. The elongated mounting plate 102 projects horizontally and forwardly over the groove 60 with the forward edge of the mounting plate 102 terminating in a downturned rib 106. The downturned rib 106 projects downwardly into the hollow space 108 defined within the concave side 72 of the arcuate marginal portion 70 of the closure wall 54. The rear edge of the marginal portion 70 is bent forwardly (as seen in FIGURE 3) at spaced positions along the length of such edge to define a plurality of spaced lips 110 that coact with the rib 106 to prevent removal of the marginal portion 70 from the groove 60 except when the mounting plate 102 is removed. It is to be understood that the spacing of the free lower edge of the rib 106 from the concave surface 72 of the marginal portion 70 is sufficiently close to prevent passage of the lips 110. If desired, the lower free edge of the rib 106 can terminate in closer proximity to the concave surface 72 than as shown, provided sufficient tolerance is provided for free hinging movement of the closure wall 54; however, it is preferred that a greater spacing than mere running clearance or tolerance be provided to obviate any possibility of binding or jamming of the hinged connection.

It is to be especially noted that the entire configuration of the hinge construction is such that vacuum forming manufacturing processes can be employed to make all the components thereof. The entire structure relating to the groove 60 is an integral part of and made of the same materials as the top wall 36, and similarly the entire structure relating to the marginal portion 70 is integral with and made of the same material as the enclosure wall 54. In the preferred construction the mounting plate 102 is made of the same material as the top wall 36 and the closure wall 54. If desired, the threaded fasteners 104 can also be of plastic, such as nylon; however, metallic screws are employed. Inasmuch as there is very little if any possibility of it ever being necessary to disassemble the receptacle 10 by removing the plate 102, the latter can if desired be permanently cemented by any suitable adhesive (or heat bonded in the case of thermoplastic resins) to adjoining areas of the top wall. It will be apparent also that it is possible to employ rivets, rather than screws 104, if desired.

The side and forward edges of the closure wall 54 are provided with integral depending flanges 120, 122 and 124 that are made of the same material as the closure wall 54, such depending flanges 120, 122 and 124 being disposed, when the closure wall 54 is in position closing the access opening, in closely spaced relationship

to the exterior of the side walls 28 and 30 and the front wall 34 respectively. Such flanges 120, 122 and 124 are integral with each other so as to be U-shaped in horizontal section and have their lower edges terminating in a plane approximately at the midpoint of the overall vertical height of the receptacle 10. In the preferred construction, the portions of the side walls 28 and 30 and the front wall 34 overlapped by the flanges 120, 122 and 124 are recessed inwardly a sufficient extent to accommodate the thickness of the depending flanges 120, 122 and 124, such feature of construction being clearly shown in FIGURE 2 wherein it will be seen that the side wall 28 has an inwardly recessed portion 130 to accommodate the depending flange 120, and the front wall 34 is inwardly recessed at 132 to accommodate the depending flange 124.

Means is provided for releasably securing the closure wall in its closed position, such means comprising an elongated latch member 140 having one end pivotally secured to the lower forward edge of the receptacle 10 by a rivet 142 and having its upper end bent to form a latch 144 (see FIGURES 2 and 7). The rivet or pivot pin 142, which can be metallic or plastic (the latter case can be such as a nylon pin having its opposite ends upset by local application of heat and pressure), extends through the lower marginal edges of the bottom wall 12 and the front wall 34 at a position such that no possibility of light entering the receptacle 10 at such pivotal connection is possible. The rivet or pivot pin 142 enables the latch member 140 to be swung from the latching position shown in full lines in FIGURE 7 in either direction indicated by the arrows 150 to unlatching positions such as the one shown in dashed outline in FIGURE 7. The latch member is formed of flat leaf spring stock, which can be metallic or a resilient synthetic resin or plastic, so that the upper end thereof, namely, the end thereof remote from the rivet 142 can be moved outwardly from the receptacle 10, it being understood that the resilient character of the latch member 140 is such as to have the end thereof remote from the rivet 142 biased against the receptacle 10. The lower edge portion of the depending flange 124 of the closure wall 54 is outturned as indicated at 152, and the latch portion 144 of the latch member 140 is engaged over such outturned portion 152 when the latch member 140 is in the full line position shown thereof in FIGURE 7. Accordingly, when the latch member 140 is in the full line positions shown thereof in FIGURES 2 and 7, the closure wall 54 is prevented from being moved from its access opening-closing position. When it is desired to raise the closure wall 54 from its access opening-closing position, the free end of the latch member 140 is grasped by the fingers and pulled from the receptacle 10 to an extent sufficient to clear the outturned portion 152 of the depending flange 124, at which time the closure wall 54 can be raised, and if it is desired, the latch member 140 can be swung to its unlatched position shown in dashed outline in FIGURE 7, whereby it is not necessary to concurrently bend the latch member while raising the closure wall 54.

The operation and use of the receptacle 10 will be readily understood. The latch member 140 is moved from its latching position and the closure wall 54 raised so as to open the access opening. With the closure wall 54 in its open position, the vertical stack of rectangular sheets of material (photographic paper, film plates, and the like) 26 is inserted into the receptacle 10, and the rear edges 170 of the sheets of material constituting the stack 26 are caused to bear against the inner surface of the rear wall 32. Such rear edges 170 can be caused to individually bear against the rear wall 32 by pressing a finger against the forward edges 172 of the individual sheets of material constituting the stack 26 (it being noted that the depressed central portion of the bottom wall results in sufficient space being provided such that

the finger can bear against all the sheets in the stack 26), or alternatively, the forward end of the receptacle 10 can be raised and the receptacle 10 shaken in a fore and aft direction so as to impact or impinge the rear end of the stack 26 against the rear wall 32 which will result in impinging the individual sheets at their rear edges against the rear wall 32 in a forwardly and upwardly cant to the stack 26 as shown in FIGURE 2. When the stack 26 is canted as shown in FIGURE 2 by the use of the pressing of a finger against the forward end of the stack 26, it is of course necessary that the closure wall 54 be kept open until such operation is complete; however, the closure wall 54 can be closed immediately as soon as the stack 26 has been placed within the receptacle 10 when the stack 26 is canted by the procedure of impacting the rear end of the stack 26 against the inner surface of the rear wall 32.

The advantage of the stack of sheet materials 26 being canted as shown in FIGURE 2 resides in the fact that the forward end edge of each sheet of material in the stack 26 projects forwardly above all the forward edges of the sheets of material therebelow. Thus, the forward edge of each successive uppermost sheet of material is projected forwardly to a greater extent than all the other sheets of material and such uppermost sheet of material can be readily separated from those therebelow by engaging such edge by a finger and raising such uppermost sheet by its forward end portion.

As previously described, the contour of the bottom wall 12 is such as to support rectangular materials placed therein along one end and along the sides thereof, and the width of the support along each of the sides is such that such materials can be so supported even when such materials are considerably narrower than the spacing of the side walls of the receptacle 10. Materials considerably shorter than shown in FIGURE 2 can be properly supported in the receptacle 10 and the operation be such as described. Indeed, the bottom wall 12 can be, if desired or deemed expedient, entirely flat for the entire internal extent of the receptacle 10, though this is not preferred as the lowermost sheet or sheets may present a minor (though certainly not serious) degree of difficulty in getting a finger engaged thereunder.

While the use of the receptacle 10 has only been described in connection with a single stack of uniformly sized rectangular sheets, it is pointed out that a plurality of stacks can be stacked one upon the other in the receptacle 10, wherein each separate stack is of uniformly sized sheets, but with the sheets of different stacks being of differing dimensions (width and/or length). In fact, it is most probable that the greatest use of the receptacle 10 will be in the storage of a plurality of stacks. In such most probable use, the inclination of the rear wall serves the same function as with a single stack, namely, to cant the forward end of each separate stack forwardly and upwardly, as will be evident. When the various stacks are of differing lengths, the user can select and separately remove the top or uppermost sheet of any selected one of the vertical stacks, this being especially easily accomplished when shorter length stacks are stacked upon relatively longer stacks.

The receptacle 10 is of use in protecting and storing any material, rectangular or otherwise, and whether or not such material is flat. For example, the receptacle 10 can be used for storage of rolls or reels of photographic film as may be convenient immediately prior to or at some stage during such processing of the film.

If desired, the central part of the portion of the closure wall 54 overlying the access opening can be relatively depressed to provide an area 180 in which can be mounted any suitable label or set of instructions, not shown, such as to identify the character of the sheet material stored within the receptacle 10, the procedures to be employed in the use of such materials, etc.

Although it has hereinabove been stressed that with

the possible exception of the threaded fasteners 104, the latch member 140 and the rivet 142, all the structure of the receptacle 10 is preferably made of a synthetic resin incorporating such fillers as may be necessary for the desired degree of opacity, and particularly that the receptacle 10 is such as to be readily made by a vacuum forming or injection molding processes, it must be abundantly clear to those skilled in the art that other materials and manufacturing processes can be employed to produce the receptacle 10. Clearly, thermosetting as well as thermoplastic synthetic resins can be used in conjunction with appropriate molding or pressing process appropriate to the selected resin. The desired degree of opacity is not necessarily dependent upon incorporating particulate filler material in the resins, as will be readily appreciated when it is considered that the various components of the receptacle 10 can be pressed from heated sheets of a clear thermoplastic material such as an acrylic resin, and after having been formed and cooled, such components can be painted on one or both sides with an opaque paint or coated with an opaque material.

Notwithstanding the particularly suitability of the structure of the receptacle 10 to be made of plastic materials, the receptacle 10 can be, as will be evident to those skilled in the art, made of other materials such as metals. For example, the component parts thereof can be stamped with use of suitable dies from metallic sheet stock, or die cast from aluminum or suitable alloys of zinc, tin and lead. Indeed, though probably prohibitive in cost, the same can be made of wood, preferably of cemented very thin layers of wood.

From the foregoing it will be evident that the receptacle 10 is comprised of very few parts or components, that each of such parts or components are very simple and of such character as to lend themselves to economical manufacture, that the assembly of such components or parts is especially simple, and that the resulting receptacle 10 is of such character as to be rugged and durable and very efficient and reliable for its intended functions. The assembly of the component parts of the illustrated embodiment of the invention involves merely the insertion of the bottom wall 12 within the lower peripheral edges of the side walls 28 and 30, and the rear and front walls 32 and 34 with the use of an adhesive or suitable cement, securing the latch member 140 with the rivet 142, positioning the closure wall 54, and attachment of the mounting plate 102 with cement or with the threaded fasteners 104.

Notwithstanding the foregoing very detailed description of the preferred embodiment of the invention, it is to be understood that such detailed description has been given solely for the purpose of conveying a complete and full understanding of the invention, and that any narrowness in scope of the invention is not to be thereby implied. Accordingly, attention is directed to the appended claims in order to ascertain the actual scope of the invention.

I claim:

1. In a receptacle for vertically stacked, uniformly dimensioned, rectangular sheets of flat material, such receptacle being of the type including a generally rectangular and horizontal bottom wall having opposite side edges and a rear edge extending between the side edges, and having side walls and a rear end wall connected to and extending upwardly from the side edges and the rear edge of the bottom wall, respectively, said side walls being vertical and parallel; an improvement thereof for facilitating removal of individual sheets of material comprising said side walls having coplanar rear edges that extend upwardly and forwardly from the rear edge of the bottom wall, said rear wall being flat and connecting the rear edges of the side walls, whereby a vertical stack of rectangular sheets in the receptacle may be caused, by movement of the latter such as to impinge forcefully the rear end of such stack against the rear

wall, to assume a stacked configuration wherein such stack is upwardly and forwardly inclined to project the forward end of each sheet forwardly of all those therebelow, top and front walls closing the receptacle, with one of the last recited walls being provided with access means that comprises said one wall having an access opening, a closure wall swingably mounted on said one wall for swinging between positions opening and closing said opening, said side, rear, top and front walls are integral and of substantially uniform wall thickness throughout their extents, said bottom wall also being of substantially constant wall thickness, said bottom wall having a downturned peripheral flange with a pair of opposite double bends in said peripheral flange such that such peripheral flange extends downwardly, thence outwardly and finally downwardly, said side, rear and front walls having lower and continuous margins that are outwardly offset with the peripheral flange of the bottom wall being received within and engaging the lower and continuous offset margins of the side, rear and front walls in such relationship as to constitute a peripherally extending rabbit-like joint, said peripheral flange being secured to the side, rear and front walls to connect the bottom wall to the latter walls, said one wall being the top wall, said closure wall having a continuous depending flange overlapping the front and side walls when the closure wall is in its opening-closing position, and latch means carried in part by said depending flange for releasably securing the closure wall in opening-closing position.

2. The combination of claim 1, wherein said latch means includes the depending flange having a lower and outwardly turned marginal portion, a leaf spring latch having one end pivotally secured to one of the lower and outwardly offset margins of the front and side walls for pivotal movement about a horizontal axis between release and latching positions, and said spring latch when in latching position having an upper and second end that projects toward the depending flange and is engaged over the outwardly turned marginal portion of the latter to releasably retain the closure wall in the opening-closing position, the arrangement being such that the second end of the spring can be flexed from the depending flange and swung to release position.

3. In a receptacle of the type including a receptacle wall having an access opening therethrough with said wall having an external side against which is disposed a movable closure wall for closing the access opening, said walls being hingedly connected adjacent the access opening whereby the closure wall may be swung out-

wardly from the receptacle wall to open the access opening; an improved means for hingedly connecting the walls comprising said receptacle wall having an elongated straight groove in the external side thereof, said groove being generally semi-cylindrical in transverse configuration, said closure wall having an enlarged marginal edge portion having a generally semi-cylindrical configuration on the side thereof facing the receptacle wall, said marginal edge portion being slidably received within the groove when the closure wall is positioned to close the access opening, said edge portion of the closure wall being so constructed and arranged with respect to the groove that the former turns within the groove on swinging the closure wall from the receptacle wall, means for limiting turning movement of the edge portion in the groove, said last means comprising said groove having a portion of its transverse extent of relatively greater depth to define a stop shoulder at a transverse end of said portion, said edge portion of the closure wall having a flange received within said portion of the groove, whereby said flange will engage the stop shoulder to limit swinging movement of the closure wall, and means for retaining the edge portion of the closure wall in the groove, said last means comprising the edge portion of the closure wall being concave on the side thereof opposite said groove, an elongated mounting plate secured to the receptacle wall and having an edge disposed over the groove and the marginal edge portion of the closure wall in the latter, said edge of the plate having a rib thereon extending toward and received within the concave side of the marginal edge portion of the closure wall.

4. The combination of claim 3, including the concave side of the marginal edge portion of the closure wall having an upstanding lip engageable with the rib to prevent removal of the marginal edge portion from the groove in the receptacle wall.

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