Sept. 20, 1971 I. J. FERDINAND ET AL 3,606,512

STEEL SHELF DRAWER

Filed Feb. 11, 1970 2 Sheets-Sheet 1

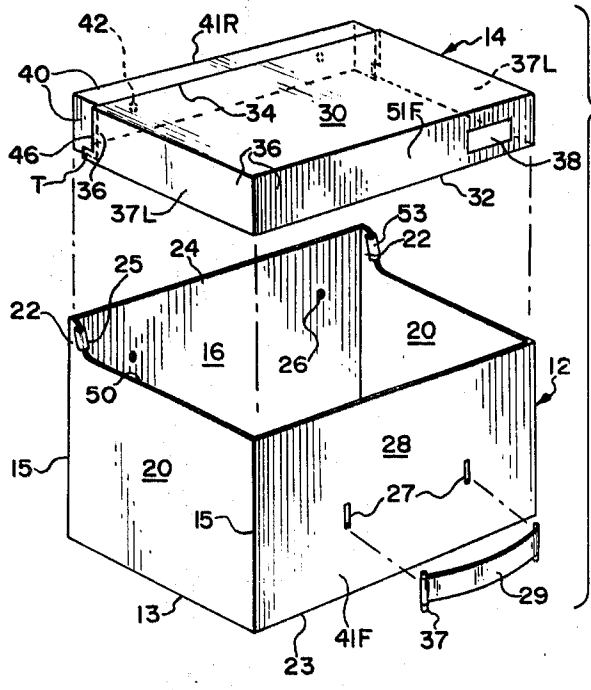


FIG. 1

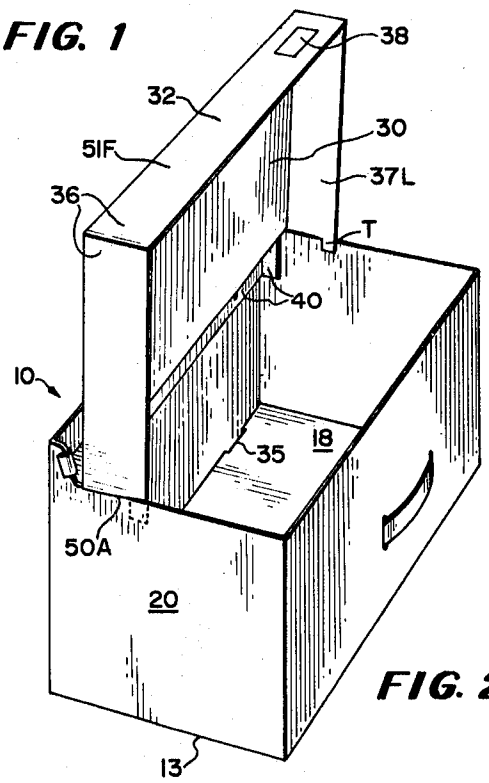


FIG. 2

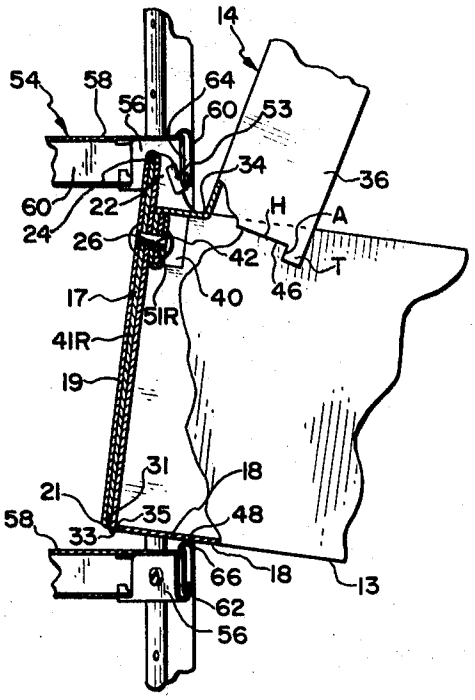


FIG. 4

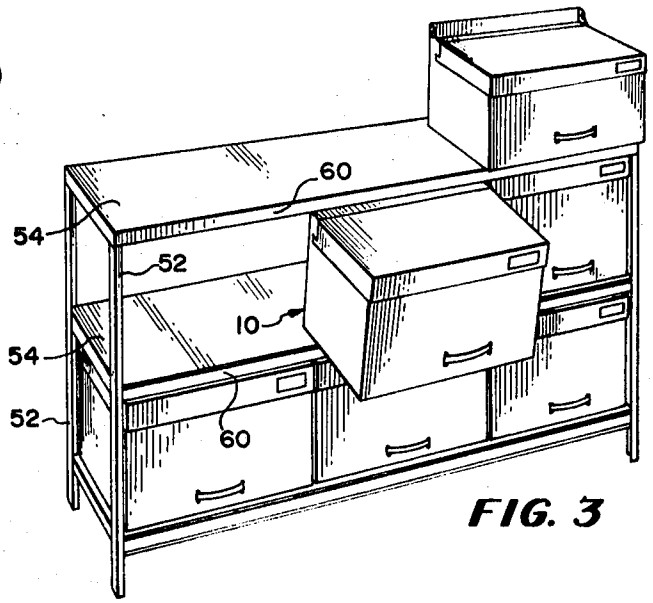


FIG. 3

INVENTORS:
IRWIN J. FERDINAND
IRWIN R. KULBERSH
GERALD D. CASSIERE

By Harbaugh & Thomas Attys.

Sept. 20, 1971 I. J. FERDINAND ET AL 3,606,512

STEEL SHELF DRAWER

Filed Feb. 11, 1970 2 Sheets-Sheet 2

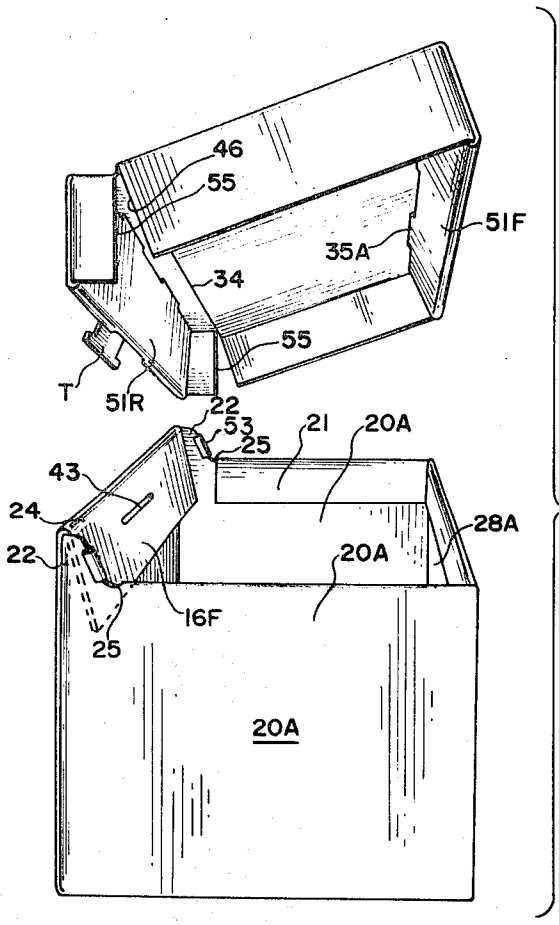


FIG. 5

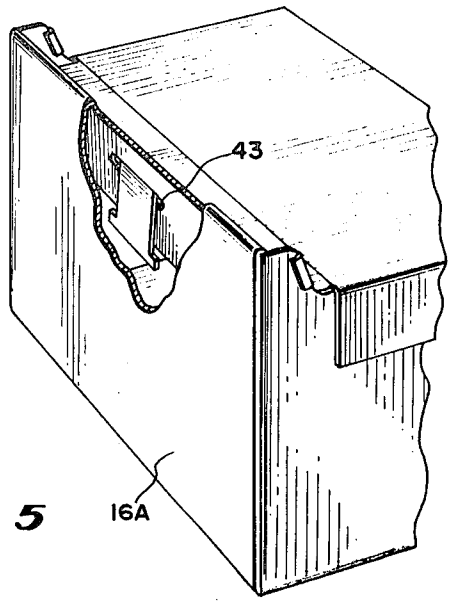


FIG. 6

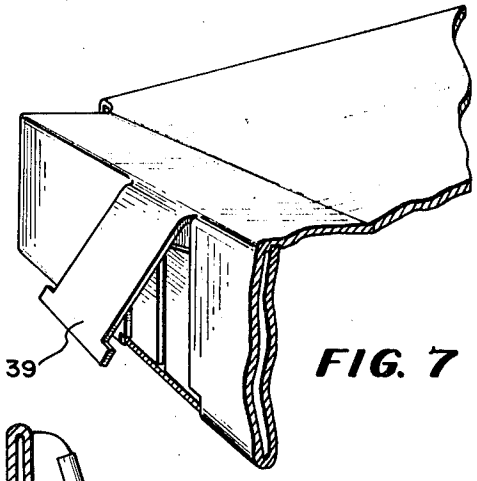


FIG. 7

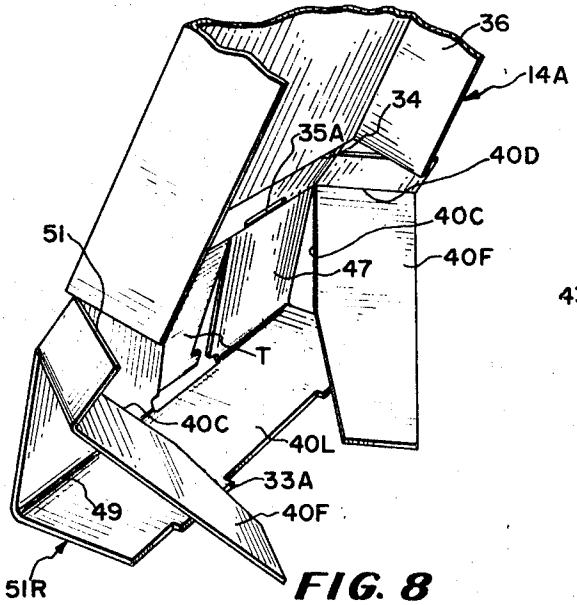


FIG. 8

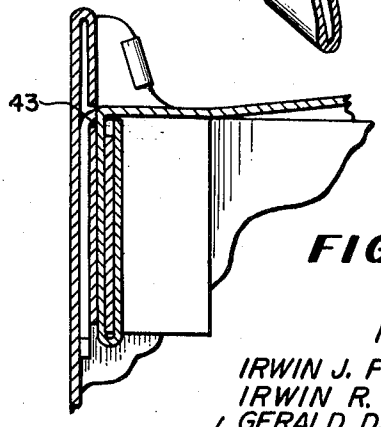


FIG. 9

INVENTORS:
IRWIN J. FERDINAND
IRWIN R. KULBERSH
GERALD D. CASSIERE
By Harbaugh & Thomas Attys.

United States Patent Office 3,606,512 Patented Sept. 20, 1971

3,606,512

STEEL SHELF DRAWER

Irwin J. Ferdinand, Glencoe, Irwin R. Kulbersh, Morton Grove, and Gerald D. Cassiere, Chicago, Ill., assignors to The Hirsh Company, Skokie, Ill.

Filed Feb. 11, 1970, Ser. No. 10,357
Int. Cl. A47b 88/06
U.S. Cl. 312—323 16 Claims

ABSTRACT OF THE DISCLOSURE

A knockdown, top-opening, hinged-cover, drawer-type receptacle for closed storage of objects between two lightweight steel shelves. An upstanding lip at the rear of the receptacle engages depending shelf flanges along the front and rear of the upper shelf to prevent accidentally moving the unit off of the lower shelf. This interengagement at the front flange also serves to support the receptacle in its access position, preferably tilted to some degree, or lifted out for removal. A cover member, easily assembled and hinged at the rear, cooperates with the upper edge of the receptacle to hold the cover in its fully open position when opened.

BACKGROUND OF THE INVENTION

Lightweight shelving units have come into wide use for various storage needs in homes, stores and offices. Many objects require storage in deep or closed containers for several reasons. Either individual storage of small objects wastes space, or many objects must be protected from dust or handling or against damage or breakage, depending on the nature of the objects, and files and records should be concealed.

Metal filing and storage cabinets are often used but their great expense and weight make them impractical for many applications. Conventional filing, packing or storage containers, made of cardboard, although inexpensive and light in weight, fail to provide vertical support for stacking, or, can easily be dropped off of shelves and spilled before or during the time the container is being handled or its contents are laboriously being inspected. In fact, stacking is dangerous if not impossible with drawer type cardboard containers and such containers not only have very little versatility but also are of limited application.

Front opening containers have often been used since they provide the easiest access without removal. However, the use of a front opening access arrangement severely limits the use of the container. It cannot be used as a bin to store small objects to save space, nor can it be used as a file drawer. Also the contents are not easily inspected on low shelving. Another drawback is that much of the space in the container must be wasted at the front to prevent stored objects from spilling out whenever the container is opened.

Shelf received top opening containers heretofore used, while solving some side opening problems, present difficulties of their own including falling off of a shelf, front or back. With access through the top, the container must be pulled forward to clear it from beneath the shelf above to open the top. Carrying the container to an examination point and lifting and lowering it for that purpose is tedious if the contents are heavy. The user generally attempts to keep the container on the shelf and many accidents become imminent. Removal of the cover requires that the back of the container be pulled to the front edge of the shelf and leaned outwardly. What can happen with a slight error in this operation is often experienced and can cause the container and its contents to be dumped onto the floor and be seriously damaged.

Handling of the container contents requiring two hands is most difficult if attainable. The container must be balanced by the user while the cover is removed, the contents dealt with and the cover replaced. If an object or file is being added or removed, it is apparent that three or four hands are required. Hinged covers, if used, have to be held by one hand while holding the storage container free of any interference between cover and shelf to keep the cover from falling back onto the top opening. Attempts to alleviate these difficulties merely encounter other difficulties or added expense, particularly where planar top and bottom shelves are involved.

It is desired that a light inexpensive storage receptacle be provided that is supported within a sturdy shelving unit to afford the most efficient and versatile closed storage system at the lowest practicable cost for ready inspection and minimum handling should be provided with a strength unweakened by stacking, and, cannot be dislodged inadvertently when stored.

Various containers can be and are used in conjunction with various types of shelving. But for more efficient use of available space a knock down container having a rectangular cross-section is provided by the invention whose height approximates the vertical space betwen flanges of vertically adjacent shelves, and whose width is an aliquot divisor of the longest shelf dimension for full use of the shelf area.

SUMMARY OF THE INVENTION

The present invention provides an inexpensive, lightweight drawer-type storage drawer which can be managed easily with one hand, if need be, and enables the use of only two hands to accomplish what otherwise requires three or more hands to do. It is top opening and provides substantially total access through the opening at oft used storage levels. The height of the drawer is just less than the vertical distance between the top of the front retainer flange on one shelf and the bottom of a depending stop flange on the shelf above it. These retainer flanges at the front and rear of the lower shelf positions on the self fore and aft in its resting or storage position. An upstanding lip extension projecting above the back side of the unit serves as a stop against removal of the drawer from the shelving and extends around the rear corners into side walls of the unit for strengthening against stresses in all directions. This lip projects high enough above the level of the bottom of the front and rear depending flange on the upper shelf to cooperate therewith and prevent accidental removal of the unit from the shelf when pulled forward on the shelf to its access position or pushed rearward to its storage position. Removal must be intentionally accomplished by a different maneuvering or permutation of moves that is only useful for removal.

A cover member is hinged at the rear of the unit on a fixed axis just forward of the upstanding lip to facilitate opening without interference from the depending upper shelf flange that engages the lip in the access position. The cover member has depending front and side flanges around the front and side walls and the side flanges are so constructed that while the cover is in the open position, either lid flange may be biased or placed by one hand where it abuts the top edge of the corresponding side of the drawer whereby the top member is held in its open position.

The advantages of the present invention can be best demonstrated with reference to the drawings.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded perspective view partially in section of the storage unit of this invention;

FIG. 2 is a perspective view of the storage unit with its cover open demonstrating its shelf-holding feature;

FIG. 3 is a perspective view of the shelving used in this invention shown with storage units thereon, one of them in access position;

FIG. 4 is a fragmentary side plan view of the storage unit shown in access position with its cover partially open within a shelving unit shown cross-sectionally;

FIG. 5 is an exploded perspective view of another embodiment of the invention;

FIG. 6 is a perspective view partly in section taken from the rear of the container showing another method of attaching the lid;

FIG. 7 is an enlarged perspective view of the lid attaching means shown in FIG. 6;

FIG. 8 is a knockdown view of the fastening elements shown in FIG. 2; and

FIG. 9 is a cross-sectional view of the lid support elements shown in FIG. 8 when made up and attached to the bin portion of the container.

THE PREFERRED EMBODIMENTS

The knockdown container or drawer **10**, best shown in FIGS. 1 and 2, is preferably formed by cutting and folding a blank of stiff, strong, corrugated cardboard exhibiting adequate strength for shape and size. Other lightweight material may be specifically selected for special purposes such as transparency, fire resistance, waterproofness or other characteristics. The drawer **10** can be provided in two parts, a bottom part which by itself can serve as a bin type drawer **12** and an upper part which serves as a lid of cover **14** that can be either removable as a lid or mounted either permanently or temporarily on the bin as a hinged cover with or without a latch or lock.

The embodiment of the knockdown drawer **10** illustrated is constructed and arranged to best attain the objects of the invention including the mounting and control of the hinged lid and is preferably rectangular in cross-section. It can be folded from a generally cruciform shaped blank pattern or a rectangular pattern (FIG. 5) cut and creased with appropriate fold lines. The central or bottom portion **18** can be provided as a single thickness or a multiple interlocked flap thickness rectangular bottom wall. In either instance the side walls **20** and **20A** conventionally are single thickness walls raised from the bottom at fold lines **13** and have either cut top edges **50** (FIG. 1) or inwardly folded flaps **21** for folded edges (FIG. 5). The front and back walls may be multiple thickness or partially single thickness walls. For multiple thickness construction swing flaps extending laterally from each side wall at vertical fold lines **15** may be folded towards each other for coplanar orientation to form cores **17** for both the back and front walls **16** and **28** respectively. In either case the side walls are cut to provide upstanding extensions **22** adjacent to the rear corners and the back wall is provided with an extra height to provide the reinforced lip **24** for purposes to be further described.

More particularly as shown in FIG. 4 incorporating coplanar core flaps **17**, the front and rear flaps **19** are turned up at fold lines **23** and **21** and terminally folded inwardly over, around the core flaps **17** and down against the opposing faces of the respective cores **17** to provide triple thickness walls **41F** and **41R** in front and the rear of the bin part **12** of the drawer **10**. The terminal lower edges **31** of the front and rear flaps may extend downwardly any desired distance and if they extend to the bottom wall **18** they are secured either by a flat bottom plate (not illustrated) that is snugly pressed downwardly into place, or, preferably by tabs **33** on their lower edges snapped into slots **35** provided through the bottom wall **18** proximate to the fold lines **23** and **21**.

It will be observed that in FIG. 5 the inwardly turned flaps **21** terminate at the front edge of the lip **24** as at **25** and the heights of the rear wall **16** and extended portions **22** are greater than that of the remainder of the walls. The differential in heights is related to the depth of the front flange of the upper shelf as later described and the wall portions portraying this difference is referred to structurally as the lip **24** which is already indicated includes the upper portion of the rear wall and the upper rear portions of the side walls which brace the back wall. The leading edges **25** are shaped to properly engage the rear face of said shelf flange **60** with the best bearing relationship possible and preferably are protected by a U-shaped plastic channel element **53** clamped on the working edge of the lip. Apertures **26** may be provided on the rear wall **16** to facilitate connection of the lid **14**, and slots **27** may be provided on the front wall **28** of the bin **12** to accommodate insertion of a handle **29**. The handle may be omitted or affixed to the wall **28** in any desired manner as by looped ends thereon extending through the slots and receiving anchor pins **37** through the loops inside the front wall **28**. The structure of the drawer thus far described is designed to utilize lightweight materials and to best withstand the forces exerted on it in its many functions and relationships.

The lid **14**, formed as described for the bin **12** shown in FIG. 4, has the single thickness top wall **30** and side walls **37L** and triple thickness front and rear walls **41L** defining a depending peripheral flange **32** that is continuous at its corners. The top wall **30** of the lid **14** is lineally creased therealong adjacent to the rear wall **51R** to form the hinge line **34**. The side walls **37L** of the flange **32** are severed at the ends of the hinge line **34** into the forward flange portion **36** which includes the front wall **51F**, and the rear flange portion **40** which includes the rear wall **51R**. The severed ends of the rear flange portion **40** are offset inwardly in a direction towards each other with respect to the severed edges of the front portion **36** so that the overall horizontal width of the rear flange portion **40** is less than that of the forward flange portion **36**, by a distance approximately equal to the thickness of the side wall **20** in order to straddle the side walls of the bin **12** when the lid is closed.

In FIG. 4 apertures **42** are provided in the rear flange portion **51R** to align with the apertures **26** in the rear wall **16** of the bin **12** when the lid **14** is in place on the bin **12** and the two are held together by fasteners or rivets **44**. An indicia receiving frame **38** can be provided, if desired, on the front wall **51F** of the lid **14**. In FIGS. 7 and 8 the reversely folded flap portion **16F** of the rear wall **16A** is slotted as at **43** just below the lip **24**, and a T-lock tongue **39** is rule cut from the rear wall of the lid **51R** to be received in the slot **43** whereby the lid is mounted and held in operative positions.

When the lid **14** and tongue **39** are secured to the bin **12**, the rear flange portion **40** of the lid **14** fits within the walls of the bin **12** with the front edges **55** of the rear wall **51R** of the lid pressed into abutting alignment with the rear edges **25** of the front flange **51F** (FIG. 5) while the forward flange portion **36** of the lid **14**, being of greater width, as noted, fits outside the walls of the bin **12** to encompass and protect the bin walls while the front of the lid **14** is free to pivot around the hinge line **34** between its fully open position, shown in FIG. 2, and its fully closed position, shown in FIG. 3.

While the unit is in its fully open position, the severed edge **46** of the forward flange portion **36**, which preferably is slightly concave or notched, may be brought inwardly across and into edge abutment, as at **50A** (FIG. 2), with the top edge **50** of the side wall **20** of the bin **12**. This abutting relationship occurs at cut edges of single thickness walls and the longer contour at the corners as where an ear **45** straddles the bin wall and holds the lid **14** in its open position without any other support. The lid **14** may be closed when desired by opening it a slight distance further and moving the ends of the flange **36** outwardly to free the ear **45** or edge **46** from abutment with the edge at **50**.

The shelving preferably used in connection with the present invention is shown in FIGS. 3 and 4. This shelving is described in detail in the Ferdinand et al. Pat. No. 3,255,722 or 3,276,403 and has corner support members **52**

holding shelves **54** in vertically spaced relationship. The supports **52** may be tubular and are attached at the corners of the shelves **54** preferably by corner clip assembles **56**. The shelf **54** is preferably rectangular in shape and formed from sheet metal to provide front and back flanges **60** along the edges of the shelf **54** preferably extending a slight distance above the shelf to provide a retaining edge as well as a substantial distance below the planar portion of the shelf. The flange **60** is preferably a box flange having smooth outer and inner contours, the inner face of the rear flange (not shown) abutting the back side of the lip **24** to locate the drawing in its resting position and the inner face of the front flange being engaged by the front edges **25** of the extension portions **22** to locate the drawer in its access position.

The shelving may or may not be of a type which is vertically adjustable, but, in either case, for proper functioning of the present invention, the height of the container or drawer **10** and the space between two consecutive shelves **54** is related to a predetermined distance. The shelves **54** should be so arranged that, when the storage unit **10** is placed on a shelf **54**, there is a clearance between the top wall **30** of the closed lid **14** and the depending flange **60** of the shelf **54** above the container **10** preferably approximating one-half the height of the flange or about one-half of an inch. The height of the upstanding lip **24** on the bin **12** of the drawer **10** preferably is approximately equal to that of the flange **60**. However, any bin height may be provided which is less, provided the elevation of the lip **24** is carried at a height at which it will engage the back of the front flange when the front of the drawer tilts downwardly as the center of gravity of the shelf is moved forwardly out of the vertical projection of the supporting shelf.

Thus when the drawer **10** is pulled forwardly on shelf **54**, the upstanding lip **24** at the rear of the container approaches the depending flange **60** on the shelf **54** above. As the front portion of the drawer leaves the shelf, its weight tends to pull the front downward. The lip tends to engage the bottom face of the planar portion of the upper shelf, and before the rear of the container can reach the front edge of the shelf **54**, the lip **24** comes into abutment with the flange **60** above, preventing removal, unless and until the front of the drawer is intentionally tilted upwardly for removal while manually supporting the weight of the drawer.

More particularly, as the drawer is pulled outwardly and when the front of the drawer is lowered, the front edge **66** of the supporting shelf **54** acts as a fulcrum causing the rear of the drawer to become elevated until either the lip **24** engages the upper shelf **54** above or, with close clearance bins, the side walls **20** of the bin **12** abut the flange **60** above. The leading edge **25** of the lip **24** ultimately reaches and abuts the flange **60** and thereby obstructs further pull out of the drawer, the portions **22** being deep enough horizontally to be tilted and engage the flange while the lower rear of the drawer bottom still substantially overlaps the shelf supporting it. The container is now in its access position, illustrated in FIGS. 3 and 4. In this position the hinge line **34** is located forward of the lip **24** and the lid **14** may be opening without interference from the shelf above. The lid **14** is now lifted, the edges **46** are pressed outwardly and locked open, as shown in FIG. 2 so that no external support is required to maintain the container fully open in its access position.

To remove the container **10** from the shelving, the container should be pulled forward on the level until the lip **24** is in or nearly in abutment with the flange **60**. The front of the container can then be lifted which moves the lip **24** rearwardly so that the drawer can be pulled farther forward to clear the shelf **54**. The back edge of the drawer may then be lowered to bring the lip **24** from behind the flange **60** and free the drawer from restraint by the shelves.

Insertion of a drawer requires substantially the opposite procedure. While the drawer **10** is oriented with its front raised slightly higher than the rear, the lip **24** is positioned behind the flange **60**. Lowering the front moves the bottom over and onto the shelf **54** from which position it can then provide access or be pushed to its storage position.

Thus, the embodiment lends itself to wide tolerances and sizes as where the degree of drawer tilt in an access position can be structurally arranged in relation to the overall height of the lip **24** with respect to the distance between planar portions of successive shelves. A comparatively wide latitude is available. The tilt angle of the drawer from the horizontal can be equal to an angle from the perpendicular that is defined by the radius of a circle centered on the lip **22** when the radius passes through the point where the front edge of the lower shelf contacts the bottom wall of the drawer. If the radius of this circle is not less than the clearance between the front flanges of the two shelves, withdrawal movement will be obstructed before the drawer is pulled free. The greater the length of this radius, up to the distance between the planar portions of the two shelves, the less will be the tilt angle. Also the greater the ratio between the drawer height and the height of the shelf flange the less will be the tilt. Thereby deeper drawers can be located towards the bottom of the shelving while shallower drawers can be located towards the top for greater tilting and easier access.

The front edge **25** of the extension **22** should coincide with the radius interconnecting the inside face of the shelf flange and the line contact as indicated at **48** between the lower shelf and the bottom of the drawer when in access position. Thereby there need not be any damageable "point" of limited contact between the front edge **25** and inner flange face **64**. The work effort is distributed throughout the length of the front edges **25** and to provide a firm engagement at this edge the U-shaped channel member **53** of plastic is clamped thereon to provide a wear surface and distribute the ultimate effect of a limited area contact that might be encountered as where contact is made as the drawer is tilted up and completely removed with a quick action.

What is claimed is:

1. A storage unit comprising:

vertically spaced shelves the upper one of which has a depending flange defining a lower edge disposed along one side;

drawer means slidably supported by the lower end of the shelves for movement between the shelves;

lip means on said drawer means at the rear side thereof extending to a height greater than the height of the opening between the spaced shelves to engage said lower edge and obstruct rectilineal horizontal removal of the drawer means from between shelves and supporting the drawer means in a tilted open access position when the shelf is moved in a forward direction.

2. The combination called for in claim **1** in which the bottom of said drawer means is substantially planar and said flange is a box flange having smooth lower edge.

3. The combination called for in claim **2** in which said lip means has an edge slidable vertically along the inside face of said flange in tilting movements of the drawer.

4. A storage unit comprising:

vertically spaced shelves the upper one of which has a depending flange defining a lower edge disposed along one side;

drawer means slidably supported by the lower one of the shelves for movement between the shelves;

lip means on said drawer means at the rear side thereof extending to a height greater than that of said lower edge to engage the lower edge and obstruct removal of the drawer means from between shelves and supporting the drawer means in a tilted open access position when the shelf is moved in a forward direction,

said upper shelf having another depending flange spaced from the first flange and defining a lower edge along the opposite side of the upper shelf engageable by said lip means to locate said drawer means in its stored position and to obstruct any withdrawal of the drawer means in the opposite direction.

5. The combination called for in claim 1 in which the drawer means carries a cover hinged along a line in front of said flange when said lip means engages the flange;

said tilt upon the drawer means affording movement of the cover through an arc appreciably greater than 90° between the flange and the top of the drawer.

6. The combination called for in claim 5 in which said cover includes a flange telescoping with three sides of the drawer and terminating at approximately the hinge line;

the end edge of the flange at the hinge line being movable to a substantially horizontal position for engaging with its edge an adjacent edge of a side wall of the drawer means when the cover is raised.

7. A storage unit comprising:

vertically spaced shelves the upper one of which has a depending flange defining a lower edge disposed along one side;

drawer means slidably supported by the lower one of the shelves for movement between the shelves;

lip means on said drawer means at the rear side thereof extending to a height greater than that of said lower edge to engage the lower edge and obstruct removal of the drawer means from between shelves and supporting the drawer means in a tilted open access position when the shelf is moved in a forward direction,

a cover hinged to said drawer means along a line disposed in front of said flange when said lip means engages the flange;

said tilt upon the drawer means affording movement of the cover through an arc appreciably greater than 90° between the flange and the top of the drawer,

said cover including a flange telescoping with three sides of the drawer and terminating at approximately the hinge line,

the end edge of the flange at the hinge line being movable to a substantially horizontal position for engaging with its edge an adjacent edge of a side wall of the drawer means when the cover is raised, and

the end of the flange being appreciably offset adjacent the free end of its edge to move into and out of said engaging position when said cover is opened farther than its resting position.

8. The combination called for in claim 1 in which said drawer means is made of folded, corrugated board having a plural thickness back wall co-level with said lip means and extending to a point closely adjacent to the lower end of which the front edge of the lower shelf engages the bottom wall of said drawer means.

9. A storage unit comprising:

vertically spaced shelves the upper one of which has a depending flange defining a lower edge disposed along one side;

drawer means slidably supported by the lower one of the shelves for movement between the shelves;

lip means on said drawer means at the rear side thereof extending to a height greater than that of said lower edge to engage the lower edge and obstruct removal of the drawer means from between shelves and supporting the drawer means in a tilted open access position when the shelf is moved in a forward direction,

said drawer means being made of folded, corrugated board having plural thickness back wall closely adjacent to the lower end of which the front edge of the lower shelf engages the bottom wall of said drawer means, and

a cover whose back wall is of triple thickness and secured against the front face of the back wall,

said cover having depending flanges externally enclosing the two front corners of the drawer in closed position.

10. The combination called for in claim 1 in which the lower shelf has an upstanding retainer edge along its front edge engaging the bottom of said drawer in its resting position and requiring a slight raising of the front end of the drawer when being drawn from its stored position on the lower shelf.

11. A storage unit comprising:

vertically spaced shelves the upper one of which has a depending flange defining a lower edge disposed along one side;

drawer means slidably supported by the lower one of the shelves for movement between the shelves;

lip means on said drawer means at the rear side thereof extending to a height greater than that of said lower edge to engage the lower edge and obstruct removal of the drawer means from between shelves and supporting drawer means in a tilted open access position when the shelf is moved in a forward direction,

said drawer means being made of folded, corrugated board having plural thickness back wall closely adjacent to the lower end of which the front edge of the lower shelf engages the bottom wall of said drawer means, and

the rear wall of said lid means is provided with a tab inserted in a slot in the front element of the back wall of the bin construction to rest in lid securing position between the wall portions of the rear wall.

12. In a storage unit the combintion of:

vertical support members;

shelf members secured to said support members in fixed predetermined vertically spaced relation and having marginal flanges with horizontally spaced walls defining a retainer flange extending a short distance above the plane of each shelf and a depending flange extending a substantial distance below the plane of each shelf defining a lower edge;

drawer means of folded, corrugated board slidably supported on the lower one of the shelves of a limited height for movement outwardly across the lower retainer flange in weight bearing relationship;

lip means on the drawer means at the rear side thereof extending to a level between those of the planar portion and the lower edge on said upper shelf;

said lip means engaging one of the upper shelf flanges by movement in one direction and the other upper shelf flange by movement in the opposite direction to obstruct removal of the drawer means from the lower shelf;

said drawer means pivoting on said lower retainer flange when tilting to its open position with said lip means engaging the depending flange above the said retainer flange.

13. A storage unit comprising:

vertically spaced upper and lower shelves defining a storage space between them, said upper shelf having a flange disposed along one side depending below a planar portion of the upper shelf;

storage means supported by said lower shelf for movement in said storage space;

lid means pivotally mounted on said storage means along a hinge line adjacent the rear side of the storage means;

upwardly extending lip means on said storage means disposed horizontally between said hinge line and the rear wall of the storage means, said lip means extending above said lower end of said depending flange to engage said planar portion in slidable relationship when said lip means approaches said depending flange.

14. A storage unit in accordance with claim 13 wherein:

said lid means has a greater portion and a lesser portion on opposite sides of said hinge line, said lesser

portion being disposed next to said lip means and said greater portion being adapted to slidably engage the lower edge of said flange when the greater portion is raised;

said lesser portion including means to secure the lid means in place on said storage means.

15. In a storage unit the combination of:

vertical support members;

sheet metal shelf members secured to said support members in fixed predetermined vertically spaced relation and having marginal flanges with horizontally spaced walls along the front and back edges defining upright retainer flanges extending a short distance above the plane of each shelf and depending retainer flanges extending a substantial distance below the plane of each shelf and defining an opening between shelves; and

a drawer member of a height over the major front portion of its top less than the height of said opening and constructed of folded, corrugated board, said drawer member having a planar bottom dimensioned to be received and located in resting position between the upright retainer flanges against relative horizontal displacement on the lower one of the shelves and being slidably supported on the lower one of the shelves for movement upwardly, at the front edge, outwardly and pivotally across one of the lower retainer flanges in weight bearing relationship thereon for access thereto;

the drawer member extending at its rear to a level above the lower edges of said depending retainer flanges on the upper shelf when the drawer member is moved in one direction across and pivotally tilted on said one of the lower retainer flanges;

the top rear of the drawer member engaging the depending retainer flange on the upper shelf directly above said one of the upright retaining flanges on the lower shelf to support the drawer member in its tilted accessible position.

16. The combination called for in claim **15** in which the drawer member carries a cover hinged along a line that is located in front of and parallel with said depending retainer flange when said top rear of the drawer member engages it;

said tilt upon the drawer member affording movement of the cover through an arc appreciably greater than 90° between the flange and the top of the drawer member.

References Cited

UNITED STATES PATENTS

651,739	6/1900	Woodruff	312—323
731,654	6/1903	Bankman	312—323
1,959,066	5/1934	Schmitz	229—9
2,123,803	7/1938	Regenhardt	312—323
2,367,476	1/1945	Tryseck	229—44UX
2,704,699	3/1955	Evans	312—348
3,255,722	6/1966	Ferdinand et al.	108—144
3,417,861	12/1968	Levy	229—44X
3,458,113	7/1969	Swartzbaugh	229—44
3,487,991	1/1970	Stern	229—44X

JAMES T. McCALL, Primary Examiner

U.S. Cl. X.R.

312—348