Feb. 25, 1969 P. A. SIMON ET AL 3,429,632

MULTIPLE DRAWER FILE CABINET

Filed March 15, 1968 Sheet 1 of 2

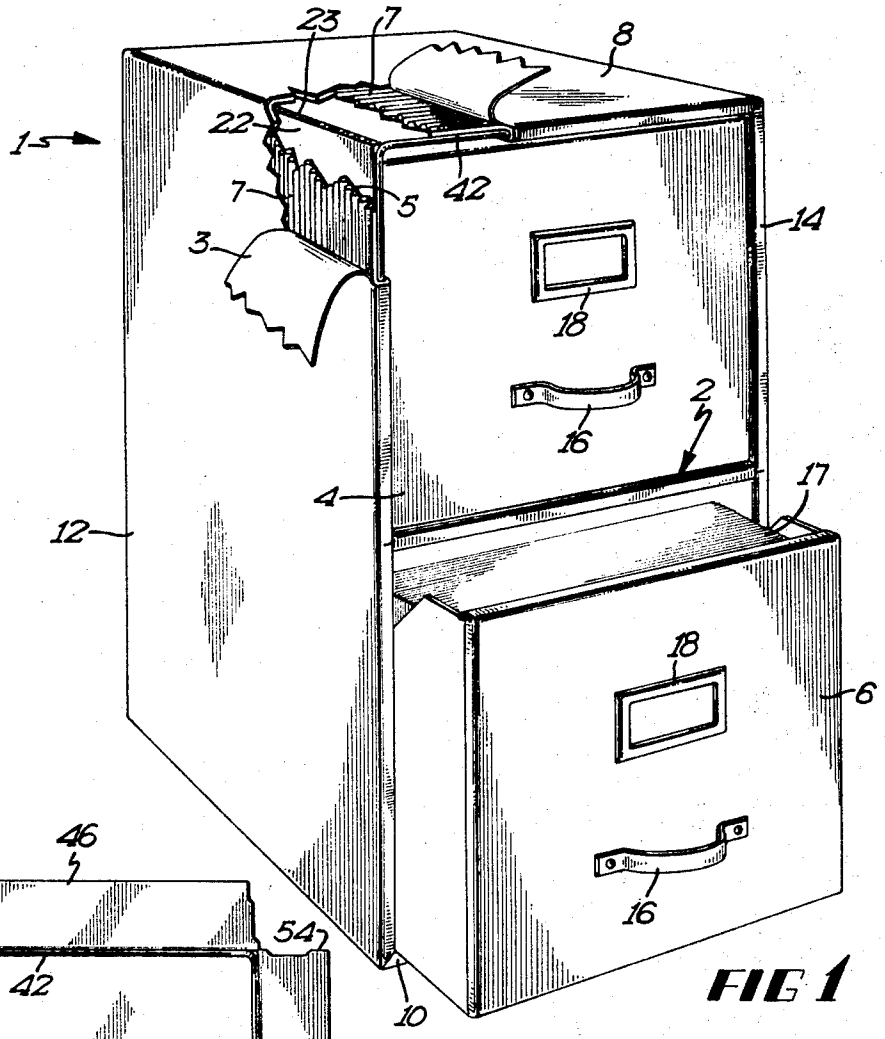


FIG 1

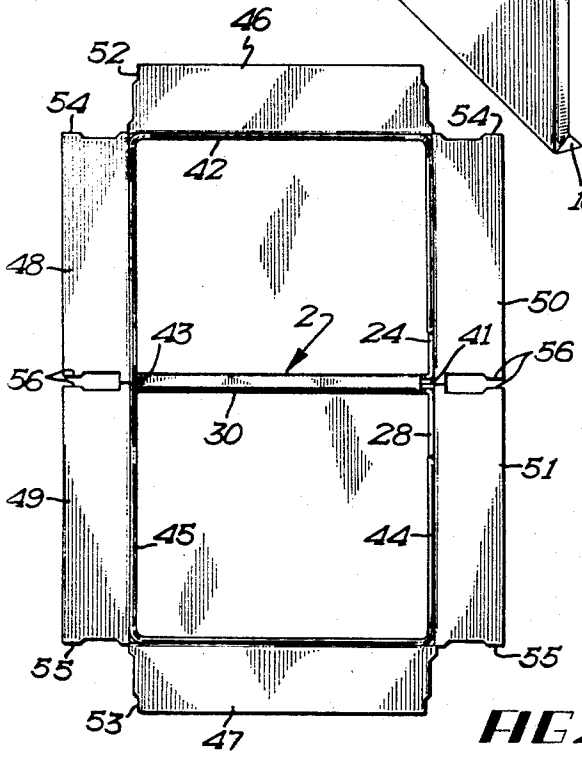


FIG 2

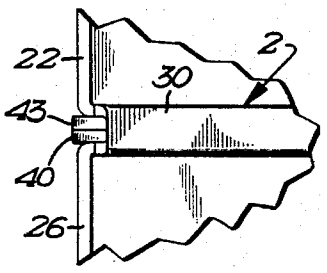


FIG 3

INVENTORS
PETER A. SIMON,
LEONARD M. PALETZ,
BENJAMIN FITERMAN
BY Williamson, Palmatier & Bains
ATTORNEYS

Feb. 25, 1969 P. A. SIMON ET AL 3,429,632

MULTIPLE DRAWER FILE CABINET

Filed March 15, 1968 Sheet 2 of 2

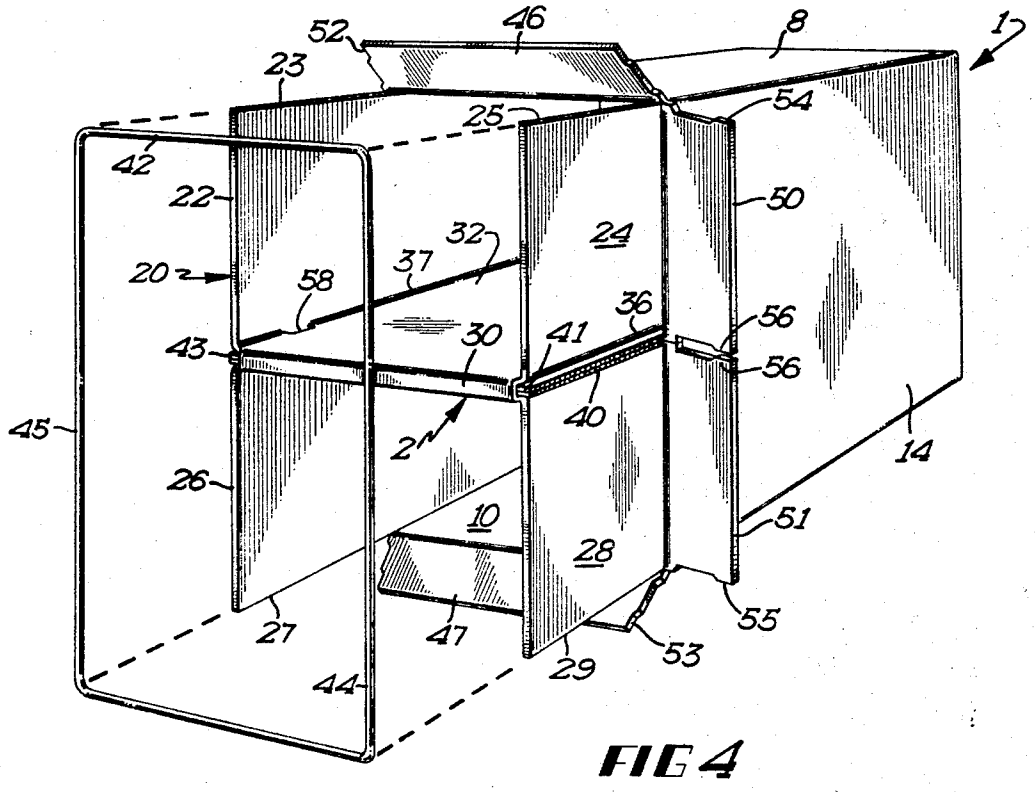


FIG 4

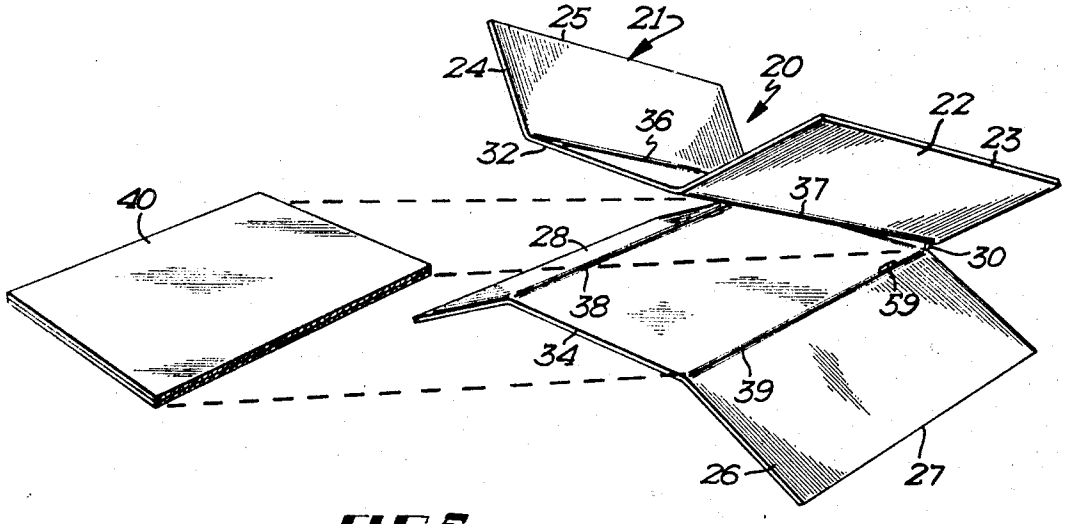


FIG 5

INVENTORS
PETER A. SIMON,
LEONARD M. PALETZ,
BENJAMIN FITERMAN
BY Williamson, Palmatier & Bains
ATTORNEYS

United States Patent Office 3,429,632
Patented Feb. 25, 1969

3,429,632

MULTIPLE DRAWER FILE CABINET

Peter Alan Simon, Leonard M. Paletz, and Benjamin Fiterman, Minneapolis, Minn., assignors to Safco Products Co., Golden Valley, Minn., a corporation of Minnesota

Filed Mar. 15, 1968, Ser. No. 713,439
U.S. Cl. 312—259 4 Claims
Int. Cl. A47b *43/00, 57/00;* B65d *5/48*

ABSTRACT OF THE DISCLOSURE

A file cabinet of the lightweight, collapsible type constructed from cardboard, fiberboard or like materials having an outer shell within which a collapsible H-frame structure is inserted, the H-frame being formed from a single blank of bendable material and including a horizontally extending divider section and vertically depending reinforcing panels which supportably engage the top and bottom walls of the outer shell. A rigid, reinforcing rim extends around the inside periphery of the open front end of the outer shell and is held in place against front edge portions of the aforesaid H-frame by inwardly turned flaps.

Background of the invention

Inexpensive storage files made from bendable blanks of scored cardboard or fiberboard are now in widespread use. Such files are normally shipped knocked down or collapsed and are erected at the point of use by the purchaser. Files of this type which employ sliding drawers are commonly manufactured and sold as single-drawer units. The file or storage units consist of a shell or casing in which a single drawer is slidably inserted. If the user wishes to provide himself with a cabinet-like structure employing a plurality of file drawers, it is necessary to stack a number of the single-drawer units on top of each other and secure them together by attachment means normally supplied by the manufacturer. To the best of our knowledge, there is not available on the market today a multiple-drawer file cabinet of the lightweight, inexpensive cardboard type wherein a plurality of sliding drawers are supported within a single outer shell or casing.

Brief summary of the invention

Having in mind the foregoing need for a collapsible and inexpensive, multiple-drawer file cabinet, we have designed and manufactured such a unit which is particularly characterized by an H-shaped drawer-supporting framework which is removably inserted within a unitary casing or shell.

The H-frame support member is advantageously formed from a single cut and scored piece of bendable material similar to the material from which the outer, collapsible shell is constructed. When folded from the knocked-down condition in which it is shipped to the shape in which it is used, the H-frame member comprises a horizontal divider section and upwardly and downwardly depending reinforcing panels which are hingedly connected to the lateral edges of the horizontal divider section.

As a particularly advantageous feature of our improved file cabinet, the aforesaid reinforcing panels of the H-frame structure include upper and lower edge portions which abut against the top and bottom walls of the outer casing, thereby substantially adding to the strength and rigidity of the entire, multiple-drawer file unit and providing good support for the horizontal divider section on which a drawer is slidably received.

As a further beneficial feature of our file cabinet, we provide a rigid reinforcing rim which is installed in frictional engagement with the inside periphery of the open front end of the outer shell. The reinforcing rim rests against the front edges of the H-frame structure, and is held in place by inwardly turned flaps which are hingedly connected to the forward ends of the top, bottom and side walls of the outer casing.

These and other objects and advantages of our invention will become readily apparent as the following description is read in conjunction with the accompanying drawings wherein like reference numerals are used to indicate like elements throughout the several views.

Brief description of the drawings

FIGURE 1 is a perspective view of the file cabinet of this invention showing two slide drawers in place;

FIGURE 2 is a front elevation view of the cabinet of FIGURE 1 with the drawers removed;

FIGURE 3 is an enlarged, fragmentary view showing a portion of the H-frame and reinforcing rim structure of FIGURE 2;

FIGURE 4 is an exploded, perspective view showing the manner in which the reinforcing rim and H-frame structure are assembled within the outer casing of the file cabinet; and

FIGURE 5 is a rear, perspective view of the partially folded and assembled H-frame member.

A preferred embodiment of the file cabinet of this invention is shown fully assembled in FIGURE 1. The cabinet is comprised of an outer casing or shell **1** and an internal shelf or divider section **2** which cooperates with casing **1** to form compartments within which drawers **4** and **6** are slidably received. Outer casing **1** is preferably formed from a single sheet of lightweight, inexpensive material such as cardboard or fiberboard. Any of the lightweight, bendable materials, including paperboard, which are commonly employed for fabricating boxes and which have sufficient strength to hold their shape when bent, could be used for casing **1**. The term "boxboard" as used hereinafter is intended to encompass all such materials. Casing **1** is preferably formed from a corrugated sheet of material which is cut and scored in such a manner that it can be folded from a collapsed or knocked-down condition in which it is shipped to the generally rectangular, cabinet configuration shown in FIGURE 1. The sheet material of which casing or shell **1** is constructed is comprised of inner and outer paper layers **3** and **5** between which a corrugated layer **7** is sandwiched. Casing **1**, as assembled at the point of use, includes top and bottom walls **8** and **10** hingedly connected along score lines to side walls **12** and **14**. A solid back wall is formed by bending and interlocking a plurality of flaps which extend freely from the rear edges of top, bottom and side walls **8**, **10**, **12**, and **14**. The rear wall is not shown since it is constructed and formed in a manner well known in the art and forms no part of this invention. Corrugations **7** extend vertically within side walls **12** and **14** so as to lend compression strength to casing **1** in a vertical direction.

The front edges of walls **8**, **10**, **12** and **14** define a front opening through which drawers **4** and **6** may be slidably inserted into casing **1**. Drawers **4** and **6** are also preferably fabricated from boxboard material, and, like casing **1**, may be shipped knocked down and assembled at the point of use. Each drawer is provided with a pull handle **16** and an index frame **18** on its front face. Lower drawer **6**, which is shown partially pulled out, has material **17** stored therein.

For the purpose of dividing casing **1** into separate, drawer compartments we have provided a unique H-frame structure generally indicated by reference numeral **20** in FIGURES 4 and 5. Frame structure **20** is comprised of a horizontally extending shelf or divider section **2**,

and upwardly and downwardly extending reinforcing panels **22**, **24**, **26** and **28**. It is desirable that the material from which frame structure **20** is fabricated be lightweight, bendable and of sufficient strength to properly support a drawer of the type described above with reference to slidable drawers **4** and **6**. Although sheet metal could be employed for this purpose, we prefer to use boxboard which can be cut and folded to provide the desired H-frame configuration. FIGURE 5 shows how a single, flat sheet of boxboard **21** could be scored and folded to provide frame structure **20**. Boxboard sheet **21** would normally be shipped in a flat, unfolded condition in a package with collapsed casing **1** and knocked-down drawers **4** and **6**. At the time of assembling the file cabinet for use, sheet **21** is very easily folded into the shape shown in FIGURE 4 by first folding it in half so as to bring central panels **32** and **34** into face-to-face relationship. Depending panels **22**, **24**, **26** and **28** are then folded upwardly and downwardly from panel sections **32** and **34** along score lines **36**, **37**, **38** and **39** to the vertical position necessary for the installation of frame structure **20** within casing **1**. A corrugated strengthening sheet **40** is then inserted between central panels **32** and **34**, the sandwich structure of panels **32** and **34** and sheet **40** comprising together a horizontal divider section generally indicated by reference numeral **2**. After being folded in the aforesaid manner, H-frame structure **20** is slidably inserted into casing **1** in the manner indicated in FIGURE 4. Edge **30** of central shelf or divider section **2** will face the open end of casing **1** in the manner indicated in FIGURES 3 and 4.

As is best indicated in FIGURES 1 and 4, vertically extending reinforcing panels **22**, **24**, **26** and **28** will be disposed adjacent to and parallel with side walls **12** and **14** of casing **1** when frame assembly **20** is installed in its position of use. Also, upper and lower edge portions **23**, **25**, **27** and **29** of the reinforcing panels will engage the inside surfaces of top and bottom walls **8** and **10**. The unitary structure of H-frame **20** and the supporting engagement of vertical panels **22**, **24**, **26** and **28** with top and bottom walls **8** and **10** of casing **1** greatly strengthens and rigidizes the entire cabinet assembly. Divider and drawer-supporting section **2** is rendered particularly sturdy and solid by virtue of the combination of corrugated sheet **40** with covering panels **32** and **34**. Depending reinforcing panels **22**, **24**, **26** and **28** also serve to solidly brace divider section **2** on which drawer **4** is slidably supported.

In order to further strengthen the cabinet structure, a rigid rim **42** of generally rectangular or quadrilateral shape is installed in frictional engagement with the inside periphery of the open end of casing **1** in the manner indicated in FIGURES 1, 2 and 4. Rim **42** abuts against and is positioned by the forward edges of panels **22**, **24**, **26** and **28** of frame structure **20**. In order to insure that rim **42** does not slip rearwardly between the aforesaid reinforcing panels and side walls **12** and **14** of casing **1**, corrugated sheet **40** of divider section **2** is sized so that it will extend laterally outwardly beyond panels **22**, **24**, **26** and **28** into contact with side walls **12** and **14**. Outwardly extending portions **41** and **43** of corrugated sheet **40** serve as shoulders against which side legs **44** and **45** of rim **42** abut, as is best shown in FIGURES 2 and 3.

In order to secure H-frame structure **20** and rim **42** in place, a plurality of flaps are hingedly connected to the forward edges of top and bottom walls **8** and **10** and side walls **12** and **14**. Top and bottom flaps **46** and **47** extend freely from top and bottom walls **8** and **10**. Two, spaced-apart flap sections **48** and **49** are hingedly connected to the front edge of side wall **12** and a similar set of flaps **50** and **51** are connected to side wall **14**. Flaps **46** and **47** are notched at their corners as is indicated at **52** and **53**; and side flaps **48**, **49**, **50** and **51** are provided with tabs **54** and **55** at their upper and lower extremities. Thus, when the flaps are folded inwardly over reinforcing rim **42** to the fully assembled position of FIGURE 1, tabs **54** will interlock with notches **52** so as to hold the side and top flaps together in a manner well known in the art. Side flaps **48**, **49**, **50** and **51** are also provided with depending tabs **56** on their inner edges. complementary locking notches **58** and **59** are provided at the opposite sides of central panels **32** and **34** of divider section **2**, these notches being shown in FIGURES 4 and 5. When side flaps **48**, **49** and **50** and **51** are turned inwardly around side legs **44** and **45** of rim **42**, tabs **56** will swing across panels **32** and **34** and engage notches **58** and **59** therein.

The construction of unitary H-frame structure **20** from a single sheet **21** of boxboard material has proved to be particularly desirable from the standpoints of both strength and ease of assembly and packaging. Packaging is simplified because sheet **21** may be shipped flat in a compact package with collapsed casing **1** and drawers **4** and **6**. These three knock-down components may be shipped in a package small enough to meet parcel post regulations. It would be possible to form an H-frame structure by using two, separate U-shaped members and securing their bases in face-to-face contact to provide a horizontal divider section comparable to section **2** of frame **20**; the side legs of the U-shaped members would extend vertically in opposite directions to serve as the upright reinforcing panels. However, such a frame assembly would not have the additional strength derived from a unitary H-frame of the type shown and described above.

A file cabinet adapted to house more than two drawers could be constructed according to the basic structural concepts of our invention by utilizing a plurality of H-frames similar to structure **20**.

We contemplate that these and other modifications in the form, detail, arrangement of the various parts may be made without departing from the spirit and scope of our invention.

What we claim is:

1. A lightweight, collapsible file cabinet comprising:
- a casing having top, bottom and side walls, said casing having a back closure wall and an open front end;
- a drawer-supporting, divider section supported within said casing between said top and bottom walls substantially parallel thereo, said divider section having upwardly and downwardly extending support panels connected to its side edges with at least said downwardly extending support panels abutting against said bottom wall at their lower edges;
- flaps hingedly secured to the front edges of said top, bottom and side walls, and folded inwardly thereover when said file cabinet is assembled, the inwardly folding flaps of each of said side walls comprising two, spaced-apart flap sections which swing inwardly over the top and bottom surfaces of said divider section;
- means securing said flap sections to said divider section;
- and two drawers removably positioned in said casing, one of said drawers being slidably supported on said divider section.

2. A file cabinet as defined in claim **1**, wherein:
- said drawer-supporting divider section and support panels are formed from a single piece of lightweight, bendable material folded over on itself so as to provide two face-to-face central panels which comprise said divider section, said support panels being hingedly connected to the side edges of said central panels along score lines;
- and further including a corrugated strengthening sheet substantially coextensive with said central panels and sandwiched therebetween.

3. A file cabinet as defined in claim **1**, wherein:
- said means securing said flap sections to said divider section comprises

lock tabs on each of said flap sections at the ends thereof adjacent said divider section; and

complementary notches in said divider section within which said tabs are received in locking engagement when said flap sections are swung inwardly.

4. A file cabinet as defined in claim 1, and further including:

a rigid, four-sided rim extending around the inside peripheral edges of said open front end of said casing, said rim having side legs which are in abutting engagement with the front edges of said support panels, and said flaps being folded inwardly over said rim on all four sides thereof.

References Cited

UNITED STATES PATENTS

2,061,485	11/1936	Scheinman	312—259 X
2,671,598	3/1954	Rosen	229—15
2,904,382	9/1959	Mitten	321—259 X
3,050,228	8/1962	Lane	229—15
3,197,111	7/1965	Kozlowski et al.	229—42
3,279,873	8/1966	Gronquist	312—259
3,321,259	5/1967	Fiterman et al.	312—259
3,348,667	8/1967	Beeby	229—15 X

JAMES T. McCALL, *Primary Examiner.*

U.S. Cl. X.R.

229—42; 312—330