

AUSTRALIA
Patents Act 1990

632946

PATENT REQUEST: STANDARD PATENT/PATENT OF ADDITION

I, being the person(s) identified below as the Applicant, request the grant of a patent to the person identified below as the Nominated Person, for an invention described in the accompanying standard complete specification.

Full application details follow.

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[70] Nominated Person: PAUL RICHMOND BILLINGHAM

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[54] Invention Title: STORAGE SYSTEM

[72] Name(s) of actual inventor(s):
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BASIC CONVENTION APPLICATION(S) DETAILS

[31] Application Number 9014837
[33] Country GREAT BRITAIN
Country Code GB
Date of Application 4.7.90

DATED this 3rd day of July 1991

PAUL RICHMOND BILLINGHAM

By:


Registered Patent Attorney

TO: THE COMMISSIONER OF PATENTS
AUSTRALIA

AUSTRALIA

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NOTICE OF ENTITLEMENT

(To be filed before acceptance)

I, PAUL RICHMOND BILLINGHAM
of 22 Heathfield Terrace, Chiswick London W4 4JE, England,
being the applicant in respect of Application No. the attached application, state the following:-

Part 1 - Must be completed for all applications.

The person(s) nominated for the grant of the patent:

☒ *is / *are the actual inventor(s)

or

☐ has, for the following reasons, gained entitlement from the actual inventor(s):

.....
.....
.....
.....

Part 2 - Must be completed if the application is Associated with one or more provisional applications.

The person (s) nominated for the grant of the patent *is / *are:

☐ the applicant(s) of the provisional application(s) listed on the patent request form

or

☐ entitled to make a request under Section 113 of the Act in relation to the provisional application(s) listed on the patent request form.

Part 3 - Must be completed if the application is a Convention application.

The person(s) nominated for the grant of the patent *is / *are:

☒ the applicant(s) of the basic application(s) listed on the patent request form

or

☐ entitled to rely on the basic application(s) listed on the patent request form.

Part 4 - Must be completed if the application was made under the PCT.

The person(s) nominated for the grant of the patent *is / *are:

☐ the applicant(s) of the application(s) listed in the declaration under Article 8 of the PCT

or

☐ entitled to rely on the application(s) listed in the declaration under Article 8 of the PCT.

(Continued over)

Part 5 - Must be completed if the application is a Divisional application.

The person(s) nominated for the grant of the patent *is / *are:

- ☐ the applicant(s) / patentee(s) of the original application / patent
or
☐ entitled to make a request under Section 113 of the Act in relation to the original application / patent.

Part 6 - Must be completed if the application relates to a microorganism and relies on Section 6 of the Act.

The person(s) nominated for the grant of the patent *is / *are:

- ☐ the depositor(s) of the deposits listed hereafter (by number, depositary institution and date)
or
☐ entitled to rely on the deposits listed hereafter (by number, depositary institution, date, and depositor's name and address) for the following reasons:

.....
.....
.....

Part 7 - Must be completed if the application is a Convention application, or the application was made under the PCT and the applicant made a declaration under Article 8 of the PCT in respect of the basic application.

- ☒ Except as stated in the next paragraph, the basic application(s) *listed on the patent request form / *referred to in the declaration under Article 8 of the PCT *is / *are the application(s) first made in a Convention country in respect of the invention.
- ☐ A request has been made under Section 96 of the 1990 Act (or Section 142AA of the 1952 Act) to disregard the following application.

.....
.....
.....

Paul Richmond Billingham
By his Patent Attorneys

3-7-91

(Signature)

(Date)

CULLEN & CO.

Part 8 - Must be completed if the applicant for a patent of addition is not the applicant or patentee of the main invention.

I,
the *applicant / *patentee for *application / *patent No.
authorise
to apply for a further patent for an improvement in, or modification of, the main invention.

Note: This MUST be signed by the applicant or patentee of the main invention.

(Signature)

(Date)



AU9180131

(12) PATENT ABRIDGMENT (11) Document No. AU-B-80131/91
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 632946

(54) Title
STORAGE SYSTEM

International Patent Classification(s)
(51)⁵ B65D 005/02 B42F 007/14 B65D 005/10 B65D 005/66
B65D 021/02 B65D 043/16

(21) Application No. : 80131/91 (22) Application Date : 03.07.91

(30) Priority Data

(31) Number (32) Date (33) Country
9014837 04.07.90 GB UNITED KINGDOM

(43) Publication Date : 06.02.92

(44) Publication Date of Accepted Application : 14.01.93

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(56) Prior Art Documents
AU 63528/80 B65D 21/02
AU 19245/67 B65D 5/66

(57) Claim

1. A storage box having a generally rectangular body, one side of which comprises an opening for access to the interior of the box, and is sloped, relative to the opposite side; the said open side having inwardly flanged edges and being adapted to receive a lid having co-operating side edge walls with a complementary sloped formation, the lid being permanently or detachably connected to the box, and being made smaller in plan than the box so as to co-operate with said flanged edges to facilitate opening the box when it is stacked together with a plurality of similar boxes.

632946

COMPLETE SPECIFICATION
FOR A STANDARD PATENTAUSTRALIA

Patents Act 1990

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Australia.

Invention Title: STORAGE SYSTEM

The following statement is a full description of this invention,
including the best method of performing it known to me:

"Storage System"

5 This invention relates to storage systems and containers, and particularly to storage boxes suitable inter alia for the archival filing of documents and folders.

10 Archival filing boxes of various kinds are already known, and the most common type of simple filing box has a removable cover or lid, and may be stacked up with other similar boxes, when it has been filled with files and the lid closed. However, it is then impossible to reach stored files in the lower part of the stack, without taking other boxes off the top of the stack so as to enable the lower boxes to be opened. More complex types of archival filing systems, which do allow access to the contents of
15 intermediate boxes in a stack, may for example be provided with internal "drawers" which have to be pulled out to a considerable extent, to reach files stored at the back of the drawers, and it is difficult to construct containers of this kind cheaply whilst at the same time making them
20 sufficiently strong for normal use.

Accordingly, the present invention seeks to provide a storage system comprising boxes which can be easily constructed from a cheap material such as corrugated cardboard, and are sufficiently rigid to withstand repeated
25 opening and closing, and removal and replacement of the contents, whilst at the same time being easily and securely "stackable" to form a rigid array of containers.

30 Accordingly, the present invention provides a storage box having a generally rectangular body, one side of which comprises an opening for access to the interior of the box, and is sloped, relative to the opposite side; the said open side being adapted to receive a lid having co-operating side edge walls with a complementary sloped formation.

Preferably the lid is detachably connected to the

box and is adapted to hinge about one edge of the opening, and has a rectangular edge wall member opposite the hinged edge, and triangular side edge wall members, so as to form a complementary shape to the open side of the box.

5 Preferably, the edges of the open side are inwardly flanged, and the lid is made correspondingly smaller in plan than the box, so as to facilitate opening the box when it is stacked together with a plurality of similar boxes.

10 Preferably, in order to facilitate stacking of the boxes together in rigid arrays, each box is provided with a slot or slots extending along at least one of its side edges, so that when two boxes are arranged with their corresponding walls in abutment, they can be held together
15 by means of a suitably shaped retaining clip inserted into the aligned slot or slots.

 The invention also extends to a retaining clip adapted for insertion into two closely adjacent parallel slots, so as to retain two slotted articles in abutment with
20 one another, the clip comprising a pair of generally parallel, flat leg portions each of which is adapted to engage with one of the slots, and an interconnecting body portion providing a grip which enables the clip to be held by an operator. Preferably, the clip is generally
25 "butterfly" shaped, so that it can be rotated or slid laterally in the slot after insertion, so as to lock it into position.

 In a preferred form of the invention, the storage box further includes a slidable insert, adapted to be
30 inserted through the open side of the box, and also being open at least on the side which co-operates with the box opening, the insert being substantially rectangular on all its outer sides, and conforming to the largest internal dimensions of the box, so that three of its edges stand proud of the sloped open side of the box after insertion.

In this way the lid can fit over the projecting edges of the insert. In a preferred embodiment of the invention, the hinged lid is hinged to the fourth edge of the insert, rather than to the corresponding edge of the box, so that the insert and lid can be removed together.

The insert may have various different internal formations such as partitions or drawers.

Some embodiments of the invention will now be described by way of example with reference to the accompanying drawings, in which:

Figure 1 is a front perspective view from above and one side of a box comprising a first embodiment of the invention and also indicating how a second box may be attached to the first;

Figure 2 is a front perspective view, corresponding to the view of Figure 1, but showing the box in its open condition;

Figure 3 illustrates the preferred method of interconnecting boxes to form a stack;

Figure 4 shows a retaining clip and illustrates how it is used to hold boxes together next to one another;

Figure 5 shows a blank used for making the box of Figure 1;

Figure 6 shows a blank for a slidable insert for the box of Figure 2;

Figures 7 and 8 show other possible types of inserts;

Figures 9 and 10 illustrate the use of the box for storing box files;

Figure 11 illustrates an arrangement of the box with a concertina file; and

Figure 12 illustrates an arrangement which includes drawers in the insert.

Referring to Figure 1, the box comprises a rectangular container 2, having a hinged lid 4 on one side.

The lid 4 is hinged to the box along one edge 6, and as will be apparent from the figure, the length and width of the lid along the edge 6 and edge 8 indicated in the drawing, are both slightly less than the corresponding dimensions of the box, and in addition the face of the box carrying the lid is inwardly flanged and is also sloped back slightly from the hinged edge, along its opposite sides 10 and 12. The corresponding sides 14 and 16 of the lid are triangular in shape, with a corresponding angle, so that the top of the lid 4 is parallel with the base of the box when the lid is closed.

The effect of this arrangement is that the edges of the lid are inset from the corresponding edges of the box, and thus when a series of boxes are stacked one on top of another, or next to one another, the user can still easily grasp the edges of the lid to open it. The open configuration is illustrated in Figure 2, from which it will be seen that, since the hinged edge 6 is at the extreme edge of the lid and the box, the process of opening the lid does not interfere with a lower box in the same stack when the boxes are stacked together. Figure 2 also illustrates the preferred form of insert for the box, which is adapted to receive folders in a "lateral filing" type of arrangement, and it will be seen that the insert 30 provides a flange extending from the opening of the box, against which the lid 4 is closed in use. In the preferred form of the invention, the insert can be slid in and out of the box, and in addition the edge 6 of the lid may be hinged to the corresponding edge of the insert rather than to the corresponding edge of the box itself so that the insert and lid can be removed together. This leaves a simple open sided box for filing in situations where a lid is not required.

Referring once again to Figure 1, a second box 40 may be held in side-by-side relation to the first by

inserting a special retaining clip 42 (shown somewhat enlarged in the figure) into slots 44 at the adjacent edges of the two boxes. As shown in the drawing, two sets of slots 44 and 46 are provided along the top side edges of the boxes, respectively near the rear and front walls, with their entries in the top surface. The construction and manner of insertion of the retaining clip 42 is illustrated in Figure 4. Figure 4(a) shows a blank (for example of stiff but "foldable" plastic) having two "leg" portions 48 and 50 which are each bent in the same direction at right angles to the central strip like body 52, so as to form a clip as shown in cross-section in Figure 4(b). This is then inserted into the slots 44 for example, in the orientation illustrated in Figure 4(c) and then rotated to the position of Figure 4(d) so as to be effectively locked in position. Figure 4(e) shows a cross-section on the lines E-E of Figure 4(d), showing how the legs 48, 50 of the clip hold the adjacent side walls of the two boxes between them.

As shown in Figures 1 and 3, the edges of the boxes may also be provided with horizontally-extending slots 54 to allow boxes to be similarly secured together in a superimposed relationship so that large arrays can be built up. In addition the rear edges of the boxes can be suitably slotted to allow boxes to be arranged back-to-back.

Figure 5 illustrates a possible configuration of a blank for making up the box while Figure 6 illustrates a blank for the insert 30. As shown the lid structure is formed by flap 60 attached to the box blank. However, as mentioned above, the lid may be attached to the corresponding edge of the insert so that the lid and insert can be removed together.

The arrangement illustrated and described above is particularly useful as an archival file storage system but it will be appreciated that the box(es) of the invention may be used for many other purposes. To this end more complex

inserts may be provided to divide the interior into smaller compartments to suit the articles to be stored. Possible exemplary arrangements are shown in Figures 7 and 8. As another alternative the insert may be plain, i.e. with no subdividing partitions, so that box files can be stored in it as illustrated in Figures 9 and 10.

A further arrangement illustrated in Figure 11, includes a plain insert 100 with a hinged lid 104, which is adapted to receive a concertina file 102 so that the file can be extended out onto the open lid for access to the contents.

As shown in Figure 12, another possible form of internal storage comprises a set of slidable drawers 110 fitted into the insert, which may optionally be separated by horizontal partitions in the insert (not shown).

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A storage box having a generally rectangular body, one side of which comprises an opening for access to the interior of the box, and is sloped, relative to the opposite side; the said open side having inwardly flanged edges and being adapted to receive a lid having co-operating side edge walls with a complementary sloped formation, the lid being permanently or detachably connected to the box, and being made smaller in plan than the box so as to co-operate with said flanged edges to facilitate opening the box when it is stacked together with a plurality of similar boxes.
2. A storage box according to claim 1 in which the lid is detachably connected to the box and is adapted to hinge about one edge of the opening, the lid also having a rectangular edge wall member opposite the hinged edge, and triangular side edge wall members, so as to form a complementary shape to the open side of the box.
3. A storage box according to claim 1 or claim 2 further comprising a slidable insert, adapted to be inserted through the open side of the box, and also being open at least on the side which corresponds to the box opening, the insert being substantially rectangular on all its outer sides, and conforming to the largest internal dimensions of the box, so that three of its edges stand proud of the sloped open side of the box after insertion.
4. A storage box according to claim 3 in which the lid is hinged to the fourth edge of the insert, so that the insert and lid can be removed together.
5. A storage box according to claim 3 or claim 4 in which the said insert comprises one or more internal partitions so as to divide the interior into compartments.
6. A storage box according to any one of claims 3 to 5



further comprising at least one slidable drawer mounted in the insert.

7. A storage box according to claim 2 or claim 3 which is adapted to receive a co-operating concertina file so that the file can be opened out to extend over the inner surface of the lid, when the box is open.

8. A storage box according to any one of the preceding claims and further comprising a slot or slots extending along at least one of its side edges, so that when two such boxes are arranged with their corresponding walls in abutment with the corresponding slots suitably aligned, they can be held together by means of a suitable shaped retaining clip inserted into the aligned slot or slots.

9. An assembly of at least two storage boxes according to claim 8, in which adjacent boxes are held together by at least one retaining clip, the or each clip comprising a pair of generally parallel, flat leg portions each of which is adapted to engage with one of the slots, and an interconnecting body portion providing a grip which enables the clip to be held by an operator.

10. An assembly according to claim 9 in which the or each clip is generally "butterfly" shaped, so that it can be rotated or slid laterally in the slot after insertion, so as to lock it into position.

11. A storage box substantially as herein described with reference to the accompanying drawings.

DATED this 6th day of November 1992

PAUL RICHMOND BILLINGHAM

By his Patent Attorneys

CULLEN & CO.



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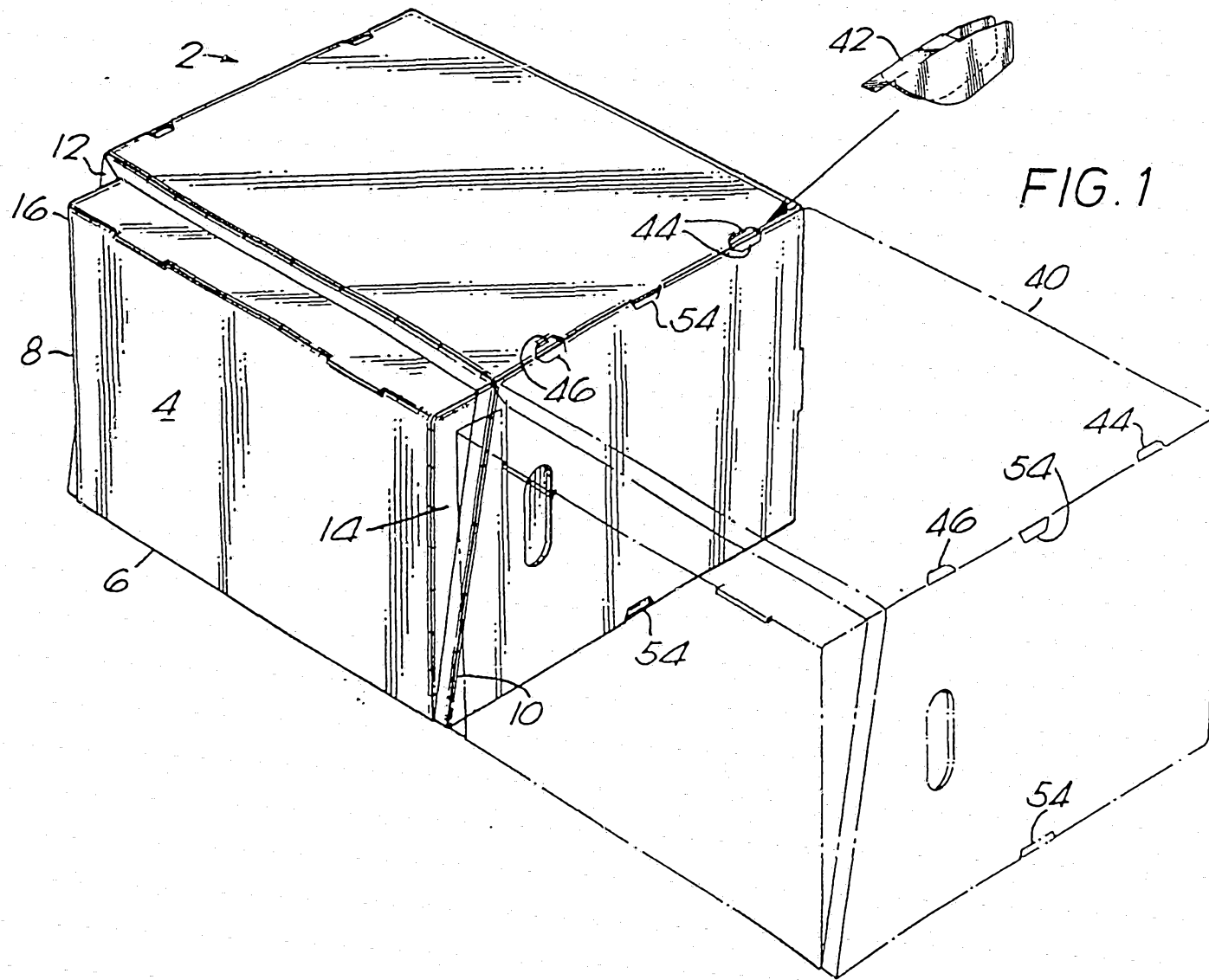
ABSTRACT

"Storage System"

A storage box for documents, files or the like, and having a generally rectangular body (2) with one open side for access which is sloped or angled, relative to the opposite side. Three of the side edges of the opening are also inwardly flanged, and a slightly smaller lid (4) of co-operating shape is hinged to the fourth edge (6) or to the edge of an insert (30) which divides the interior into sections. The insert may divide the interior into two or more such sections depending on the application.



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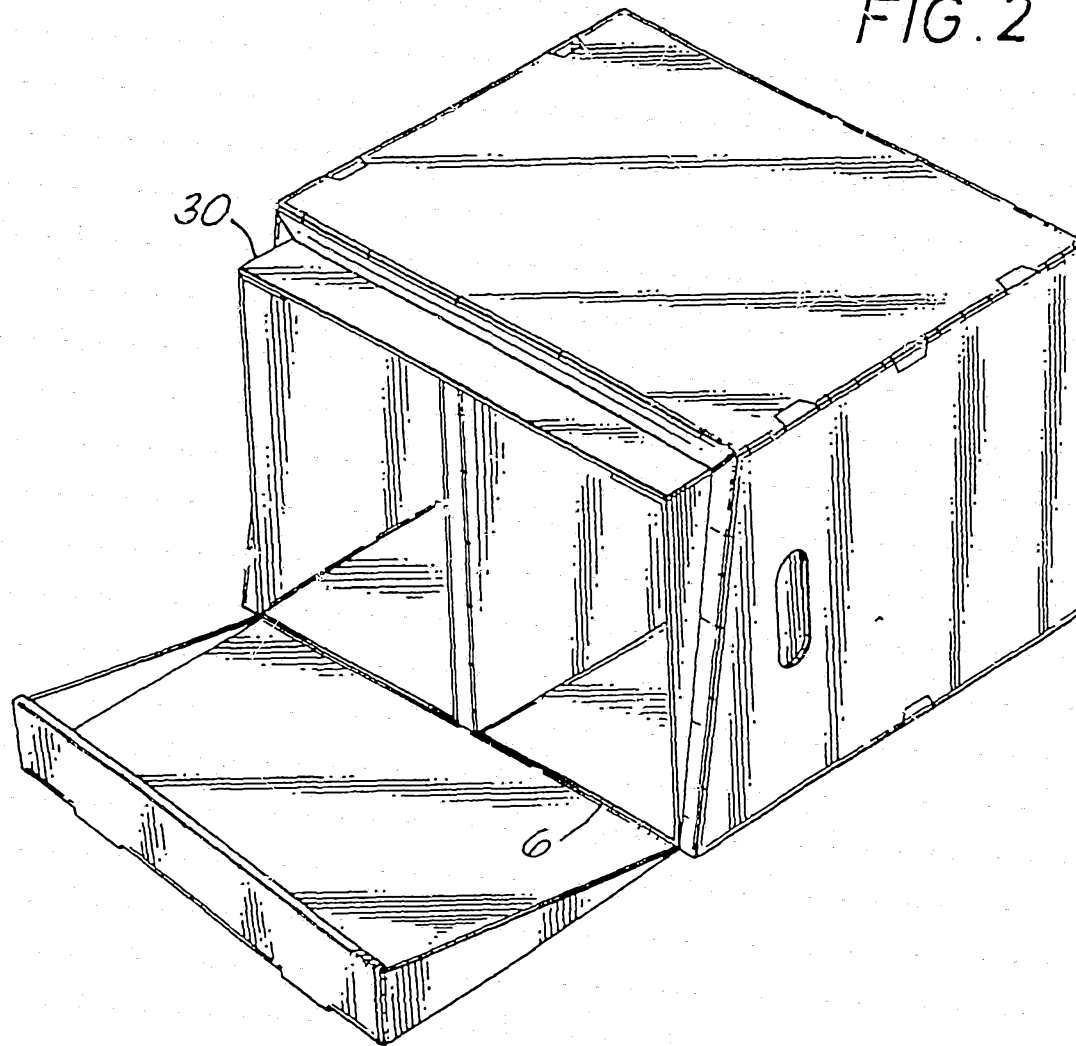


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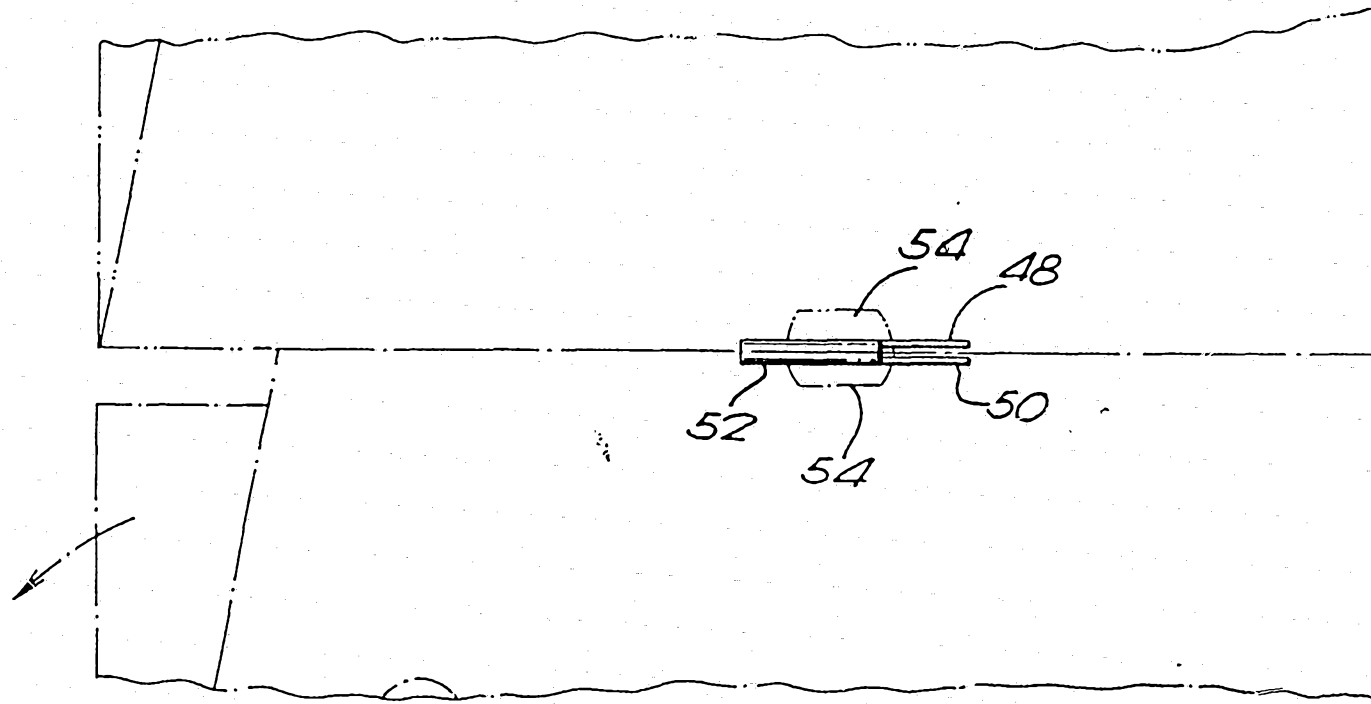
FIG. 2

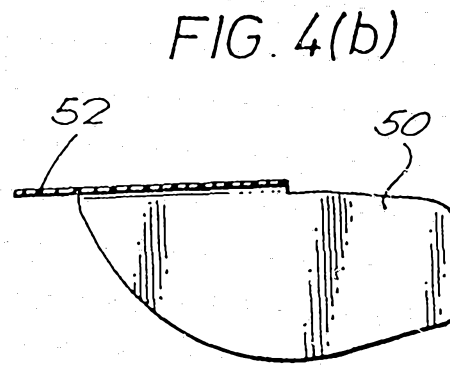
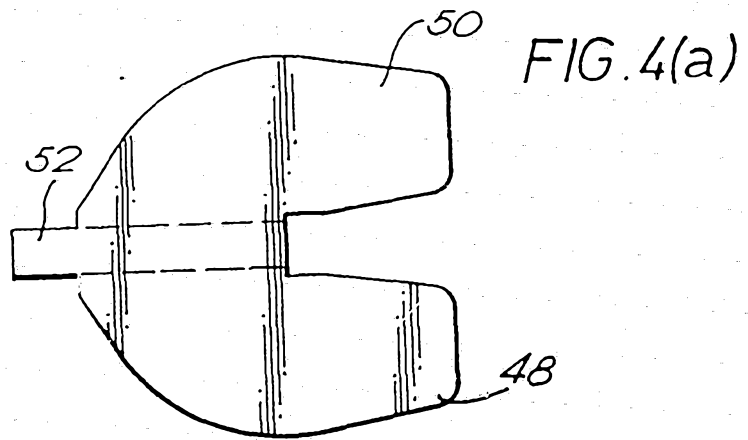


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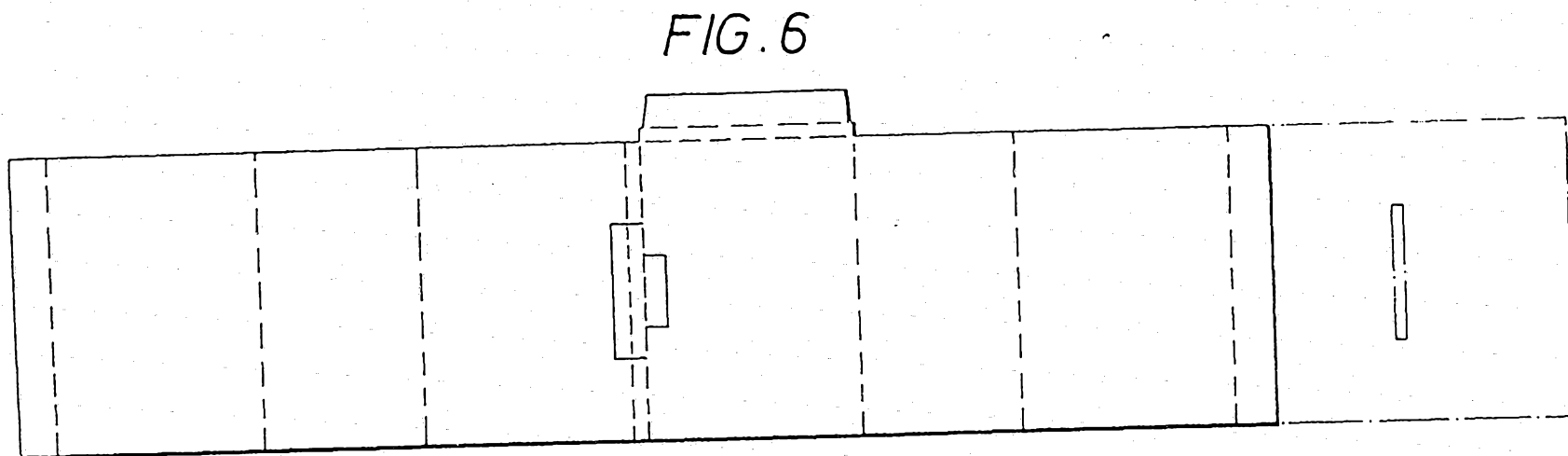
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FIG. 3

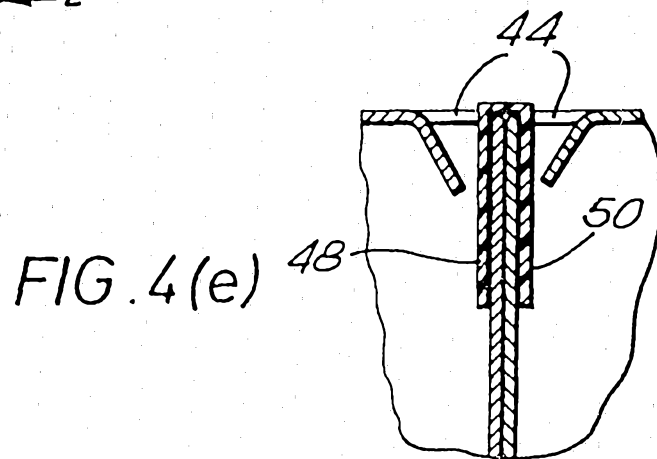
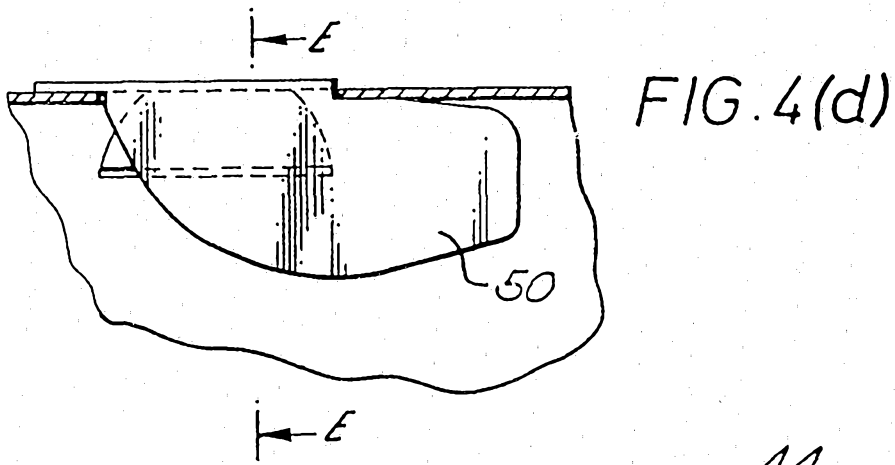
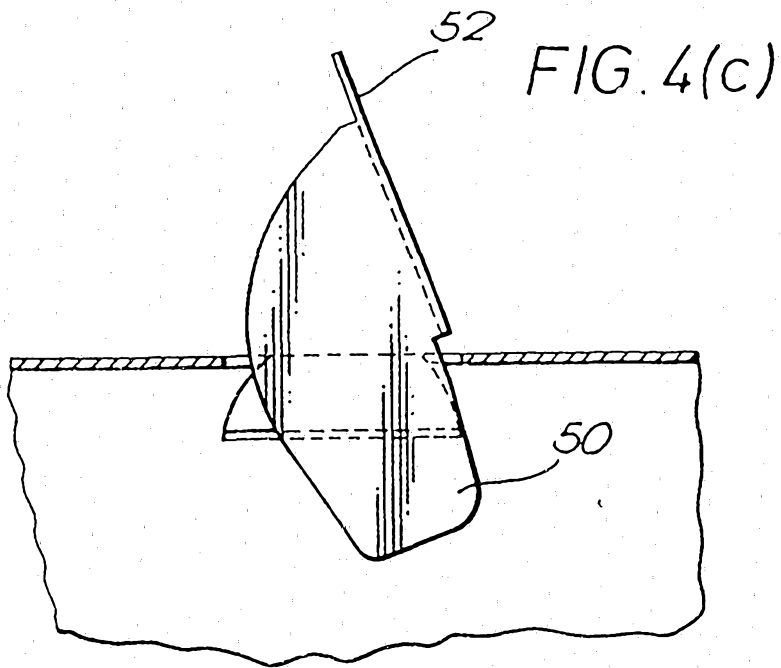




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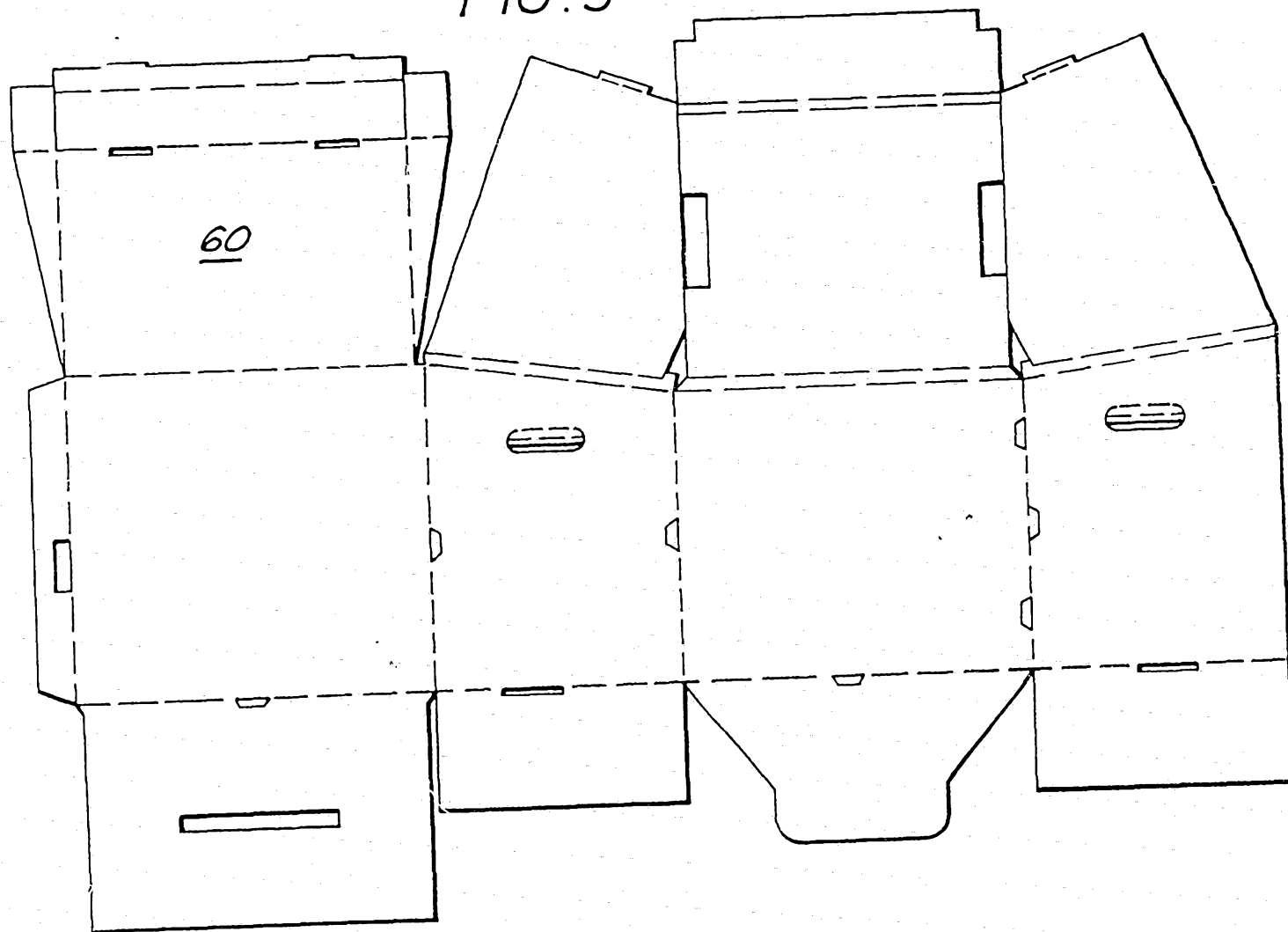


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3 7 4 1 2

FIG. 5



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FIG. 7

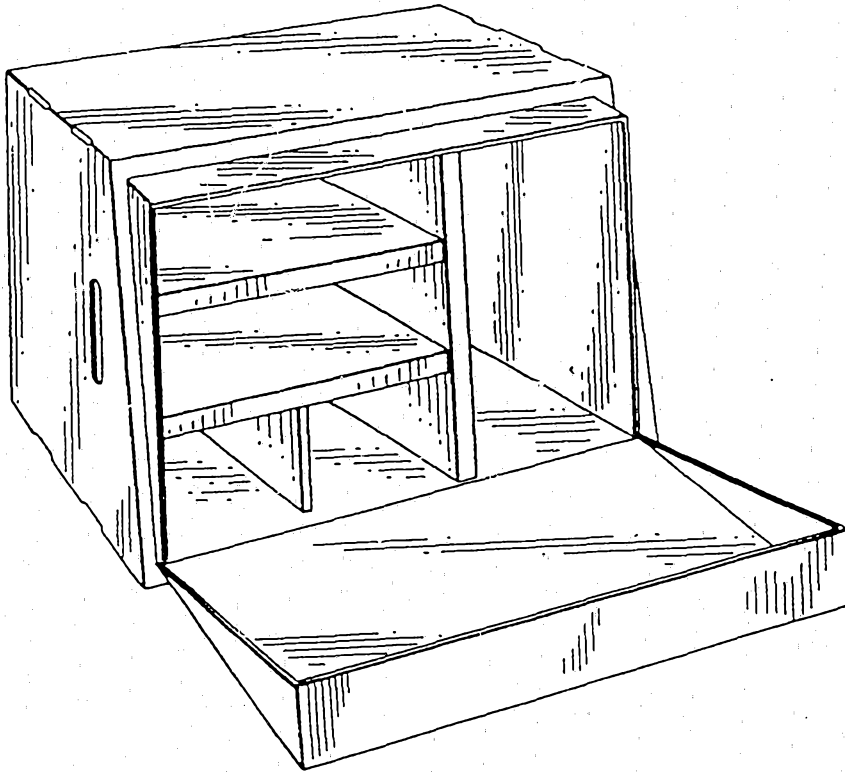
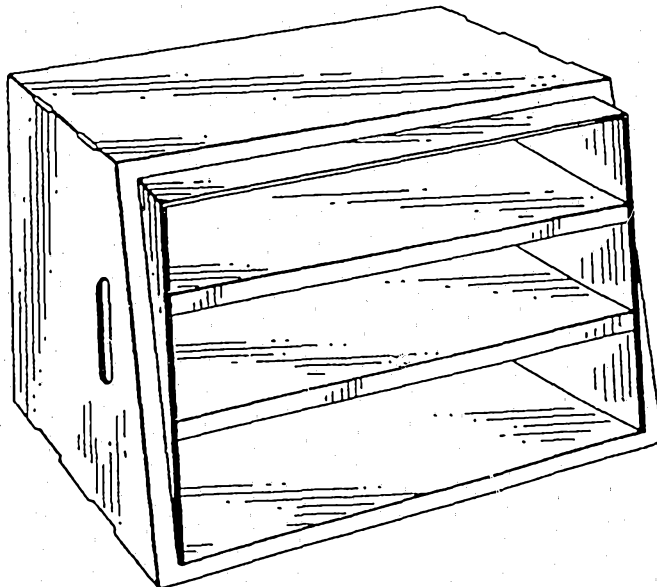


FIG. 8



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FIG. 9

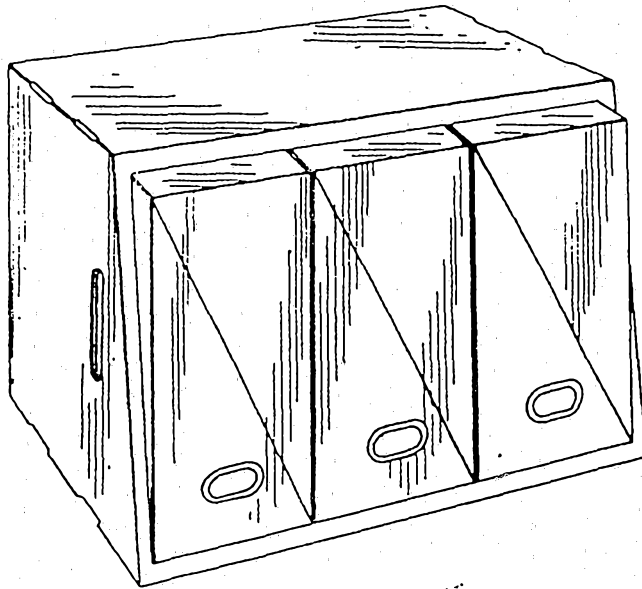
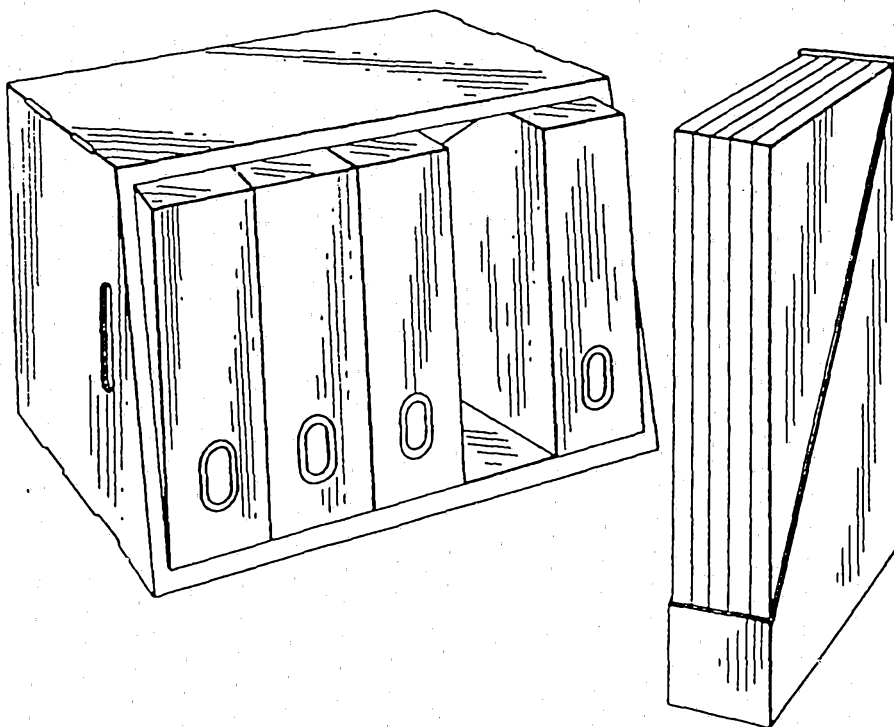


FIG. 10



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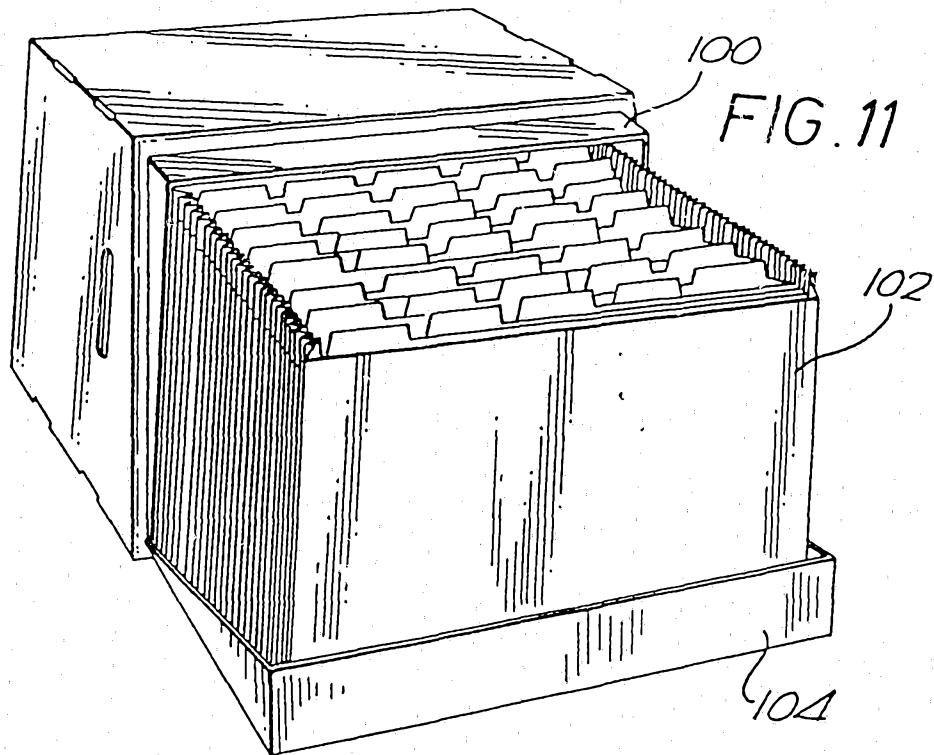


FIG. 12

