



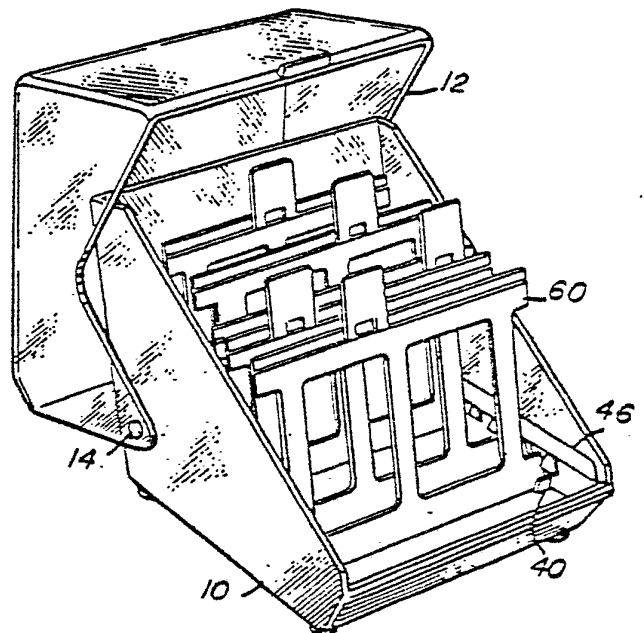
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<p>(51) International Patent Classification³ : A47B 63/00; B65D 5/50, 85/00</p>	<p>A1</p>	<p>(11) International Publication Number: WO 82/ 01810 (43) International Publication Date: 10 June 1982 (10.06.82)</p>
<p>(21) International Application Number: PCT/US80/01581 (22) International Filing Date: 24 November 1980 (24.11.80)</p> <p>(71) Applicant (for all designated States except US): INNOVATIVE CONCEPTS, INC. [US/US]; 2284 Ringwood Avenue, San Jose, CA 95131 (US).</p> <p>(72) Inventors; and (75) Inventors/Applicants (for US only): LONG, Jerry, M. [US/US]; 117-1/2 Blueberry Drive, Scotts Valley, CA 95066 (US). WOMACK, James, A. [US/US]; 16545 Shadyview Lane, Los Gatos, CA 95030 (US).</p> <p>(74) Agent: HAMRICK, Claude, A., S.; 3211 Scott Boulevard, Suite 200, Santa Clara, CA 95051 (US).</p>		<p>(81) Designated States: AT (European patent), BR, CH (European patent), DE (European patent), DK, FR (European patent), GB (European patent), JP, LU (European patent), NL (European patent), NO, RO, SE (European patent), US.</p> <p>Published With international search report.</p>

(54) Title: DISKETTE FILING AND STORAGE CONTAINER

(57) Abstract

A filing and storage container for floppy disks and diskettes including a molded base unit (10), a molded cover unit (12) pivotally attached to the base, a plurality of indexing file separators (60), and means (40), (46) provided along the lower portions of the inside walls of the base unit for receiving the lower edges of the file separators and allowing them to pivot between rearwardly inclined positions and forwardly inclined positions.



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Specification

"Diskette Filing and Storage Container"

BACKGROUND OF THE INVENTION5 Field of the Invention

The present invention relates generally to desk top storage containers and more particularly to such containers designed specifically for filing and storing floppy disks and diskettes.

10 Description of the Prior Art

Numerous attempts have been made to provide a desk top filing and storage container suitable for filing the floppy disk and diskette media now commonly used in word processing systems. However, such systems have either been unattractive, unduly expensive
15 or impractical.

SUMMARY OF THE PRESENT INVENTION

It is therefore a primary objective of the present invention to provide a new filing and storage container for floppy disks and diskettes which is highly
20 functional, simple in construction, yet attractive in design.

Another object of the present invention is to provide a container of the type described which can
25 be readily manufactured using injection molding techniques.

Another object of the present invention is to provide a container of the type described having means for separating and identifying various media envelopes
30 filed therewithin.



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Briefly, a preferred embodiment of the present invention includes a molded base unit, a molded cover unit pivotally attached to the base, a plurality of indexing file separators, and means provided along the lower portions of the inside walls of the base unit for receiving the lower edges of the file separators and allowing them to pivot between rearwardly inclined positions and forwardly inclined positions.

An important advantage of the present invention is that all component parts are of molded plastic material which snap fit into engagement with each other thereby requiring no assembly tools or special assembly equipment.

Another advantage of the present invention is that simple stop means are provided for determining the rearly most inclined position and the forwardly most inclined position of the index separators.

These and other objects and advantages of the present invention will no doubt become apparent to those skilled in the art after having read the following detailed description of a preferred embodiment shown in the several figures of the drawing.

IN THE DRAWING

Fig. 1 is a perspective view showing the exterior of a closed diskette filing and storage container in accordance with the present invention;

Fig. 2 is a partially broken elevational view showing the rear side of the container illustrated in Fig. 1;

Fig. 3 is a side elevation illustrating the right side of the container shown in Fig. 1;

Fig. 4 is a transverse cross-sectional view taken along the line 4-4 of Fig. 2;

Figs. 4a and 4b are respectively partial cross-sectional views taken along the lines 4a and 4b in Fig. 4;

5 Fig. 5 is a perspective view of a container in accordance with the present invention showing the cover in one open position;

10 Fig. 6 is a perspective view of a container in accordance with the present invention showing the cover in a second open position;

Fig. 7 is an elevational view showing a file separator in accordance with the present invention; and

15 Fig. 8 is a side elevational view of the separator shown in Fig. 7.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

20 Referring now to Figs. 1-3, it will be noted that the subject storage container includes a molded base unit 10, and a molded cover unit 12 which is pivotally secured to base 10 by means of hinge pins 14. As best illustrated in Fig. 3, base 10 has a rearwardly sloped rear wall 16 which, as will be further discussed below, allows floppy disks or diskettes stored therein to recline rearwardly. Attached to the bottom
25 of base 10 are four rubber support buttons 18.

30 Cover 12 is partially open on its rear side, as illustrated at 20 in Fig. 3 and 22 in Fig. 2, so as to accommodate opening of the cover into the positions illustrated in Figs. 5 and 6. Cover 12 also includes a tab 24 at the front thereof for facilitating opening of the cover.

The pivot pin 14 includes a button portion 26 (Fig. 2) and an integrally formed shaft portion 28 which extends through circular openings 27 and 29 in

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the side walls of cover 12 and base 10 respectively. A molded annular washer 30 is tightly fit over shaft 28 in order to secure pin 14 to cover portion 12 and serves as a spacer separating the downwardly extending extremities 32 of cover 14 from the sidewalls of base 10 thereby avoiding scuffing between the two parts as the cover is rotated between its opened and closed positions.

Referring now additionally to Fig. 4, which is a cross section taken along the line 4-4 in Fig. 2, it will be noted that the upper portion of the rear wall 16 of base 10 is provided with a recess 36 which extends across the entire rear wall. This recess and the downwardly sloped upper portion thereof provide a convenient hand-hold means by which the container can be carried by simply inserting the fingers thereinto as illustrated by the dashed lines 38 in Fig. 4.

As shown in Figs. 4 and 5, a plurality of up-standing divider tabs 40 are integrally formed along each interior side of base 10 and slope forwardly as indicated. Disposed immediately above the tabs 40 is an indexing rail 46, the ends 48 and 50 of which are inserted into the openings 42 and 44 respectively, in the front and rear walls of base 10.

As indicated more clearly by the cross section shown in Fig. 4a, the upper portion 52 of rail 46 is tapered downwardly so as to facilitate entry of diskettes into the container as will be discussed below. The lower portion of rail 46 is formed into downwardly extending generally triangularly shaped stop tabs 54. Note that the rear side edge 56 of each tab 54 slopes forwardly so as to be parallel to the front surfaces of divider tabs 40 and is spaced forwardly of the corresponding tab 40 for reasons to be explained below.

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The forward side edge 57 of each tab 54 is inclined rearwardly to provide a stop as discussed below.

5 Referring now to Figs. 7 and 8 which illustrate file separators in accordance with the present invention, it can be seen that such separators include a separating portion 60 and an indexing tab portion 62 which can be selectively positioned along the length of portion 60. To accommodate such positioning, a groove 64 is provided in the face of separator 60 and the upper rear edge 66 thereof is slotted. Tab 62 is configured to have a pair of downwardly extending legs 68 on each side with rearwardly extending projections 70 at their distal ends for engaging groove 64. A centrally disposed downwardly extending leg 72 is also provided which extends behind portion 60 to engage slot 66. The sides of separator 60 are notched as illustrated at 61 to form laterally extending separator tabs 63 which when properly positioned engage tabs 40 and stop tabs 54.

The container is assembled by first gluing the rubber feet 18 onto the bottom of base 10. The side rails 46 are then bowed so that the end 48 can be inserted into opening 42 in base 10 and the end 50 can be inserted into opening 44. The separators 60 are then bowed so that the tabs 63 can be positioned between the tabs 40 and 54 as illustrated in Figs. 4 and 5. Next, the pivot pins 14 are inserted through openings 27 in the downwardly extending extremities 32 of cover 14, and the annular collars 30 are inserted over the shafts 28. With the pins so installed, the cover extremities 32 may then be deflected outwardly so that the pins 14 can clear the sidewalls of base 14. The pins 14 are then aligned with the openings 29 in the sides of base 10 and the sidewalls are

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allowed to spring back into position driving pins 26 into mating engagement with the openings 29.

5 As illustrated in Figs. 5 and 6, when in use, the cover 12 can be opened into the position shown in Fig. 5 so that the rear portion thereof rests upon the supporting surface. In such position, access is readily had to any files stored within the base between the separators 60. Alternatively, cover 12 can
10 be rotated further rearwardly with base 10 raised such that it assumes the position illustrated in Fig. 6. The cover 12 thus provides a stand for elevating the base 10 above the supporting surface.

In Fig. 4, it is apparent that the file separators 60 will normally be positioned inclining to the
15 rear with the lower edge thereof engaging the rear side of one of the divider tabs 40, as illustrated at 74, and the upper portion of the separator tabs 63 resting against the forward most side edges of a pair
20 of tabs 54, as indicated at 75. Separator 60 can also be rotated into a forwardly inclining position as illustrated by the dashed lines 60' whereby the lower edge thereof engages the front sides of a pair
25 of tabs 40, as indicated at 74', and the upper portion of the separator tabs 63 engage the rear edges of a pair of tabs 54, as illustrated at 75'.

Note that in the illustrated embodiment, as many as 11 separators can be utilized to separate as many floppy disks as can be stored within the container.
30 Note also that since the uppermost portions 52 of side rails 46 are beveled, a floppy disk can be easily inserted between any two of the separators without interference with either the tabs 40 or the tabs 54. The container therefore provides a convenient means
35 of storing a large number of floppy disks on a desk

top, readily accessible to a typist or operator using
a word processor or other computerized device. Since
the file is both light and readily portable, it can
5 also be easily removed to a storage area and be re-
placed by another container.

Although a single embodiment of the invention
has been described above, it is understood that num-
erous alterations and modifications thereof will be-
10 come apparent to those skilled in the art after having
read the above disclosure. It is therefore intended
that the appended claims be interpreted as covering
all such alterations and modifications as fall within
the true spirit and scope of the invention.

15 What is claimed is:

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CLAIMS

1. A filing and storage container for floppy diskettes and the like comprising:

5 means forming a container base having a bottom, upstanding sidewalls and a rear wall, said base having means forming divider tabs positioned at spaced intervals along the inside of at least one of said sidewalls where it engages said bottom;

10 separator means disposed at least partially within said base means and held in spaced apart relationship by said divider tabs, said separator means being rotatable between rearwardly inclined positions and forwardly inclined positions; and

15 cover means having a top, a downwardly front wall, downwardly extending sidewalls, and means for pivotally attaching said sidewalls to said base portion so that said cover means can be rotated from a closed position covering said base and said separator means to an open position exposing separator means.

25 2. A filing and storage means as recited in claim 1 and further comprising stop means disposed above said divider means and forming forward and rear stops to be engaged by said separator means so as to define said forwardly inclined portions and said rearwardly inclined position.

30 3. A filing and storage means as recited in claim 2 wherein said stop means is formed by at least one side rail affixed to said base, said rail having projections extending therefrom to form said forward and rear stops.



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4. A filing and storage means as recited in claim 3 wherein said separator means are provided with laterally extending tabs for engaging said rail projections to limit rotation of said separator means.

5. A filing and storage means as recited in claims 1, 2, 3 or 4 wherein said rear wall includes means forming a hand-hold for facilitating the carrying of said container.

6. A filing and storage means as recited in claims 1, 2, 3 or 4 wherein said separator means includes separator bodies and indexing tabs and means for allowing said indexing tabs to be attached to and selectively positioned along an upper portion of said separator bodies.

7. A filing and storage means as recited in claims 3 or 4 wherein said side rail is affixed to said base by inserting the ends thereof into openings formed in said base.

8. A filing and storage means as recited in claims 3 or 4 wherein said projections are generally triangular in shape and extend downwardly from a main rail body, said forward and rear stops being formed by opposite sides of said triangular projections.

9. A filing and storage means as recited in claims 1, 2, 3 or 4 wherein said cover means may be pivotally rotated beyond said open position into a support position wherein the rearmost side of said top engages said bottom, and said cover means serves as a support for said base holding it in raised posi-



tion above a supporting surface.

5 10. A filing and storage means as recited in claims 1, 2, 3 or 4 wherein said front wall and said rear wall incline rearwardly relative to said bottom and lie substantially parallel to the planes of said separator means when said separator means are in their rearwardly inclined positions.

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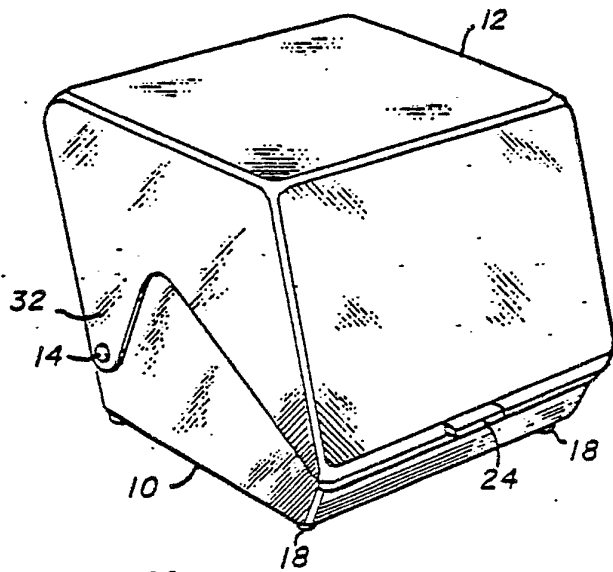


Fig. 1

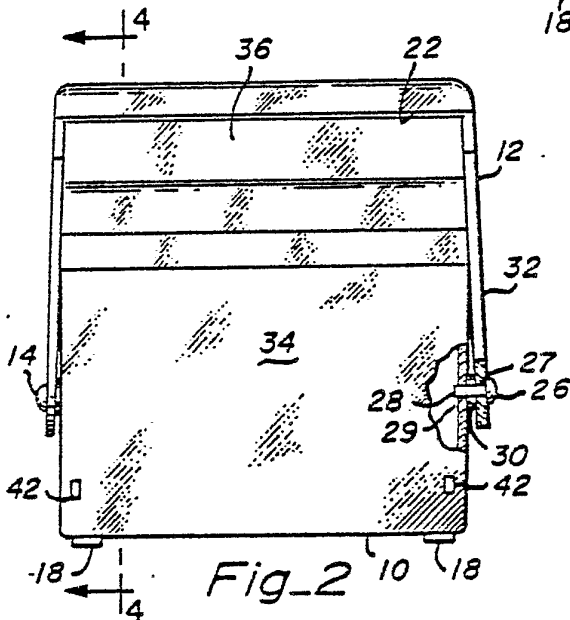


Fig. 2

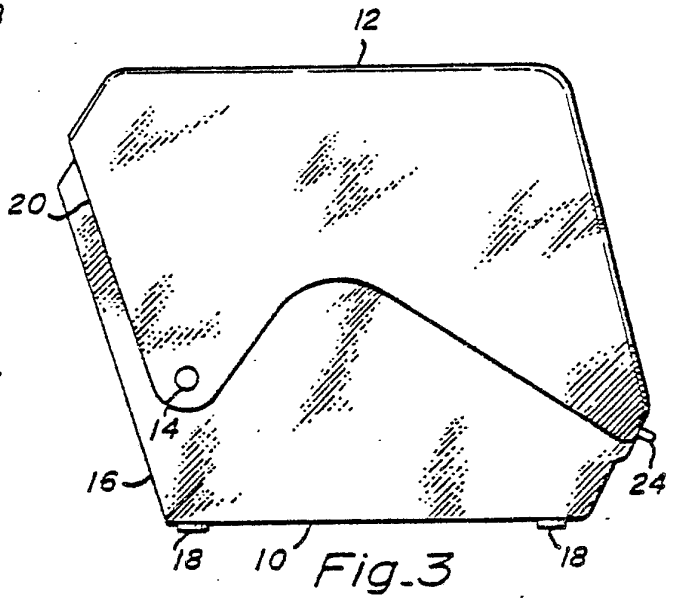


Fig. 3

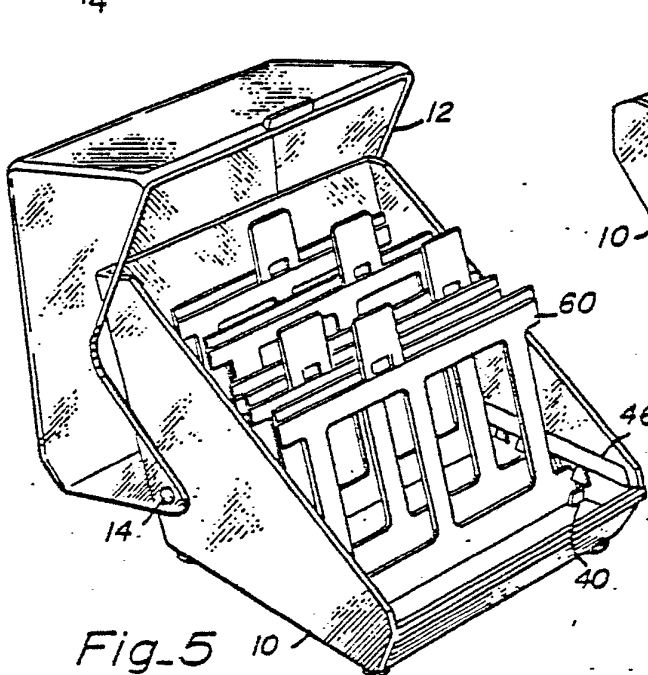


Fig. 5

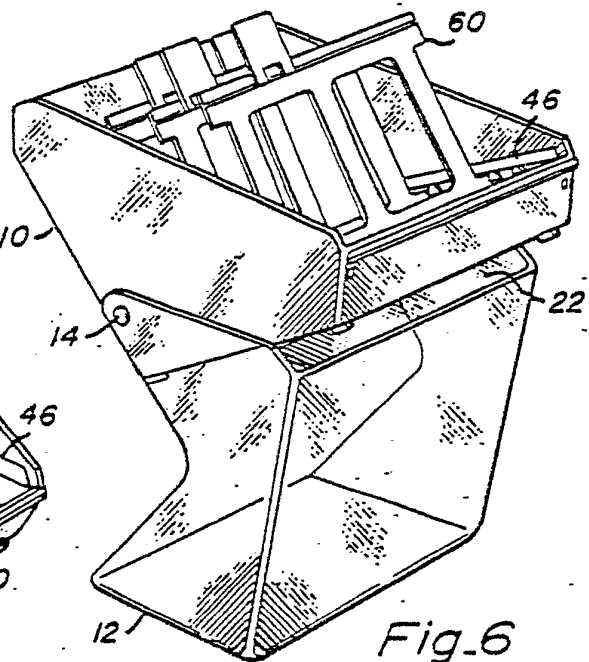


Fig. 6

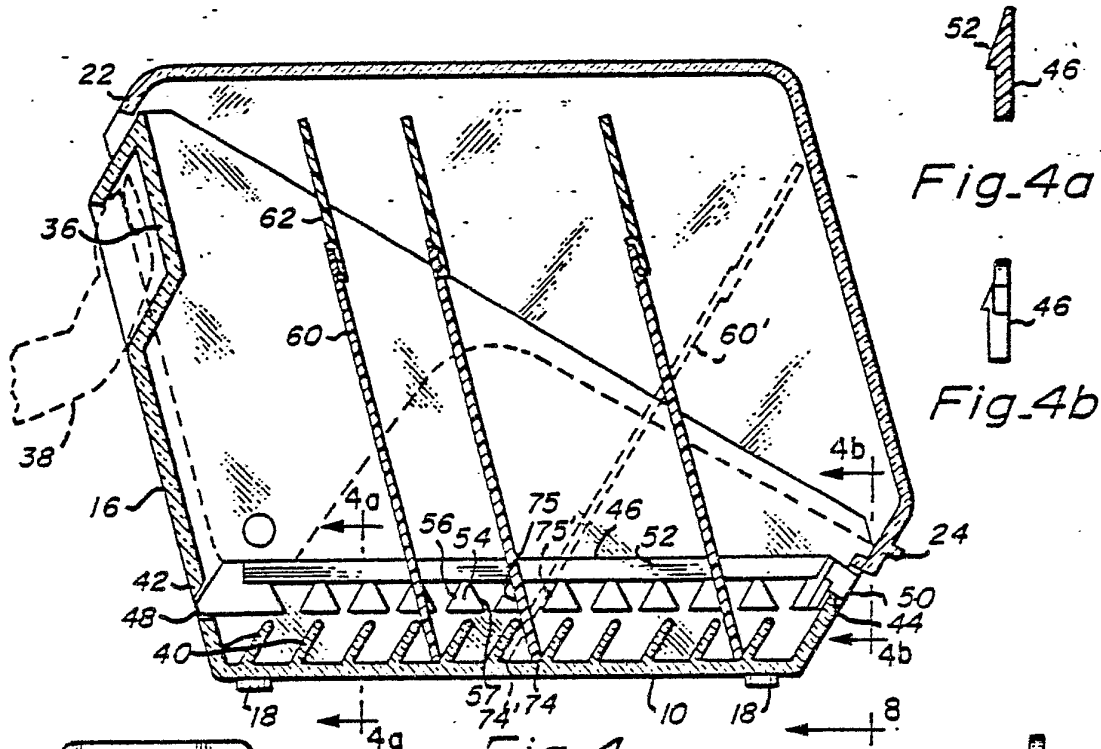


Fig. 4a

Fig. 4b

Fig. 4

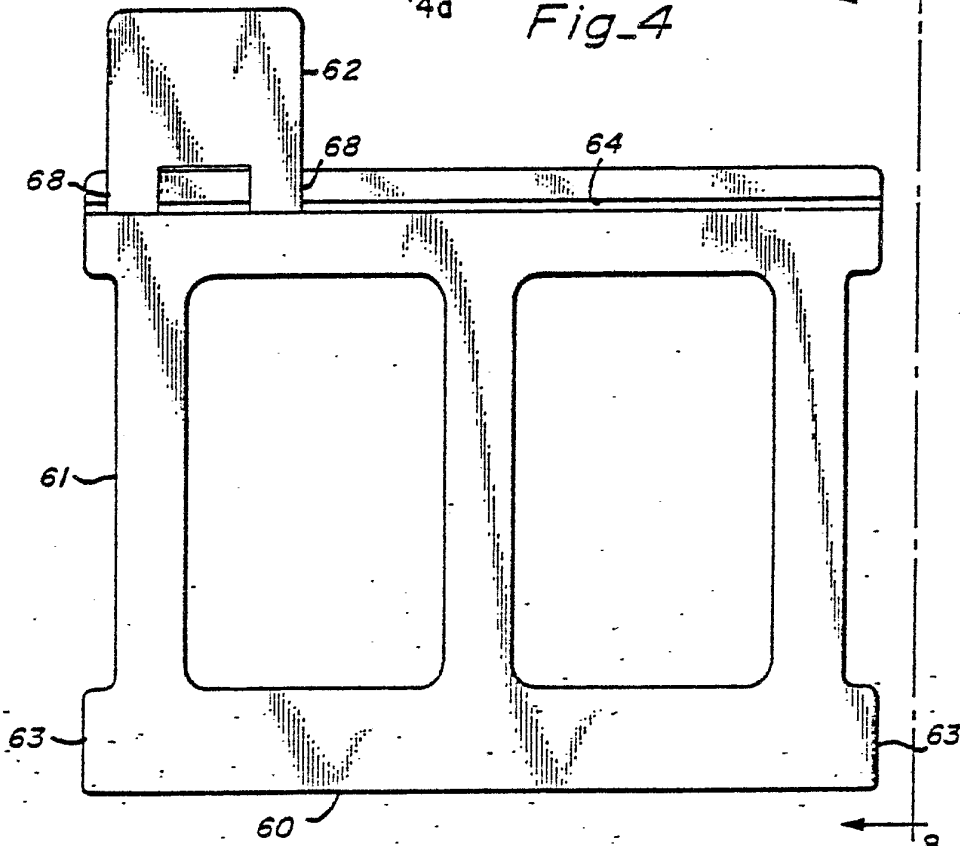


Fig. 7

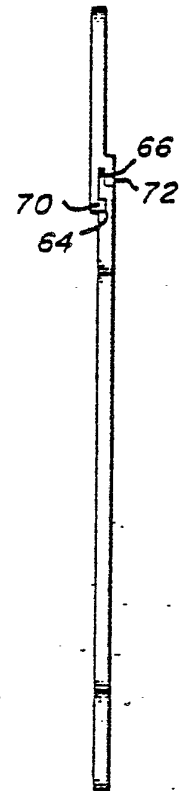


Fig. 8

INTERNATIONAL SEARCH REPORT

International Application No PCT/US80/01581

I. CLASSIFICATION OF SUBJECT MATTER (If several classification symbols apply, indicate all) ³		
According to International Patent Classification (IPC) or to both National Classification and IPC		
Int. Cl. ³ A47B 63/00; B65D 5/50, 85/00. US, CL. 312/183 & Dig.33;206/425;220/22.1,22.3 & 22.5.		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁴		
Classification System	Classification Symbols	
United States	312/183, Dig. 33 and 326 206/425; 220/22.1, 22.2,22.3 and 22.5	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁵		
III. DOCUMENTS CONSIDERED TO BE RELEVANT ¹⁴		
Category ⁶	Citation of Document, ¹⁶ with indication, where appropriate, of the relevant passages ¹⁷	Relevant to Claim No. ¹⁸
A	DE,C, 702,647 Published 13, February 1941 Haberfeld	i
A	US,A, 464,544 Published 8, December 1891 Wood	1 & 8
A	US,A, 2,233,938 Published 4, March 1941 Jones	1 & 8
A	US,A, 2,244,561 Published 3, June 1941 Lombardini	1 & 8
A	WO 80/058 Published 29, May 1980 Solomon	1
A	DE,C 829,656 Published 28, January 1952 Azone et al	1
A	US,A, 3,554,381 Published 12, January 1971 Guest	3,4 & 7
A	US,A, 4,084,865 Published 18, April 1978 Joyce	5
A	US,A, 3,696,926 Published 10, October 1972 Syversen	6
A	GB,A, 150,835 Published 16, September 1920 Gilbert	6
A	US,A, 4,168,870 Published 25, September 1979 Hill	9
A, E	US,A, 4,239,307 Published 16, December 1980 Schweizer	10
<p>⁶ Special categories of cited documents: ¹⁸</p> <p>"A" document defining the general state of the art</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document cited for special reason other than those referred to in the other categories</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but on or after the priority date claimed</p> <p>"T" later document published on or after the international filing date or priority date and not in conflict with the application, but cited to understand the principles or theory underlying the invention</p> <p>"X" document of particular relevance</p>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search ²	Date of Mailing of this International Search Report ²	
17 July 1981	23 JUL 1981	
International Searching Authority ¹	Signature of Authorized Officer ¹⁰	
ISA/US	<i>Walter N. Habers</i>	

FURTHER INFORMATION CONTINUED FROM THE SECOND SHEET

A	US, A, 3,065,308	Published 20, November 1962 Suyeoka	9
A	US, A, 3,817,393	Published 18, June 1974 Neilsen	10

V. OBSERVATIONS WHERE CERTAIN CLAIMS WERE FOUND UNSEARCHABLE ¹⁰

This international search report has not been established in respect of certain claims under Article 17(2) (a) for the following reasons:

1. Claim numbers _____, because they relate to subject matter ¹³ not required to be searched by this Authority, namely:
2. Claim numbers _____, because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out ¹³, specifically:

VI. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING ¹¹

This International Searching Authority found multiple inventions in this international application as follows:

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims of the international application.
2. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims of the international application for which fees were paid, specifically claims:
3. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claim numbers:

Remark on Protest

- The additional search fees were accompanied by applicant's protest.
- No protest accompanied the payment of additional search fees.