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Amended claims in accordance with Rule 86 (2)
EPC.

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(54) **Storage box**

(57) A storage box includes an upper box body (10) and a lower box body (20) defining a respective top open chamber (12,22) and hinged together in such a manner that the upper box body can be turned horizontally relative to the lower box body between a received position where the upper box body and the lower box body are vertically arranged in a stack, and an extended position where the upper box body and the lower box body are set in an offset relationship and the upper box body defines with the lower box body a bottom open chamber (14) below the top open chamber of the upper box body for storage items.

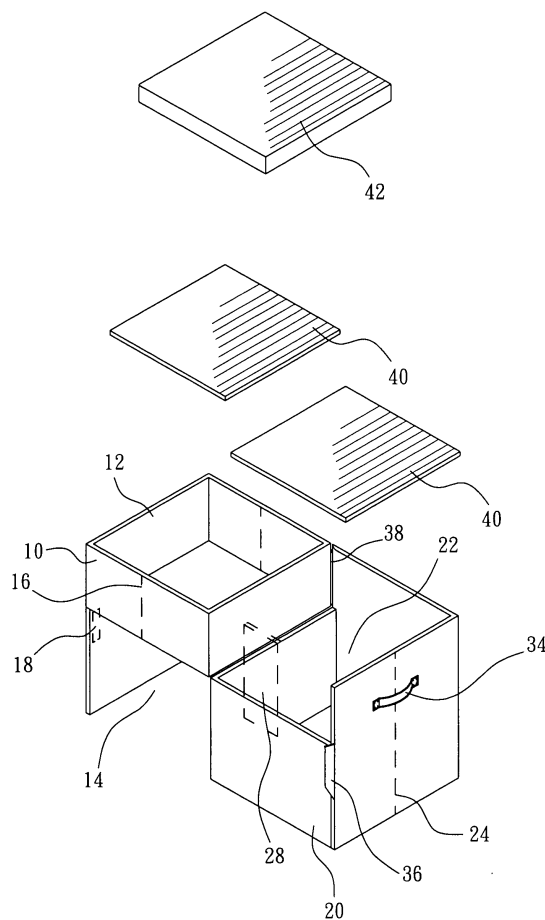


FIG. 2

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Description

BACKGROUND OF THE INVENTION

1. Field of the Invention:

[0001] The present invention relates to a storage box and more particularly, to a folding collapsible storage box.

2. Description of the Related Art:

[0002] Various storage boxes of different materials are known and commercially available for storing things. In order to save storage space, collapsible storage boxes are developed. A known collapsible storage box comprises a rectangular box body made of soft fabric, horizontal and vertical rod members respectively fastened to the four sides of each of the vertical lateral panels and bottom panel of the box body, and a hard bottom plate attached to the bottom panel inside the box body for supporting storage items. This design of collapsible storage box is functional. However, it is not attractive to consumers.

SUMMARY OF THE INVENTION

[0003] The present invention has been accomplished under the circumstances in view. According to one aspect of the present invention, the storage box comprises a lower box body, the lower box body defining a top open chamber for storage items, an upper box body, the upper box body defining a top open chamber for storage items, means connecting between the upper box body and the lower box body so that the upper box body can be turned horizontally relative to the lower box body between a received position where the upper box body and the lower box body are vertically arranged in a stack and the top open chamber of the lower box body is closed by the upper box body, and an extended position where the upper box body and the lower box body are set in an offset relationship and the upper box body defines with the lower box body a bottom open chamber below the top open chamber of the upper box body for storage items. According to another aspect of the present invention, the upper body and the lower body can be made of canvass, each having a plurality of vertically extended folding lines through which the box bodies can be folded into a flat collapsed condition. According to still another aspect of the present invention, at least one hard connecting plate is provided for fastening to the upper box body and the lower box body to hold the upper box body and the lower box body in the extended position. According to still another aspect of the present invention, each hard connecting plate comprises two male fastening elements, and the upper box body and the lower box body each comprise at least one female fastening element adapted to receive the male fastening elements of

the at least one connecting plate. Further, the upper box body and the lower box body can be made having a rectangular or cylindrical configuration.

5 BRIEF DESCRIPTION OF THE DRAWING

[0004]

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FIG. 1 is an elevational view of a storage box constructed according to the present invention.

FIG. 2 is an exploded view of the storage box shown in FIG. 1.

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FIG. 3 is a schematic drawing showing folding of the storage box shown in FIG. 2 after removal of the top cover and the hard bottom plates from the upper box body and the lower box body.

FIG. 4 is corresponding to FIG. 3, showing the storage box fully collapsed.

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FIG. 5 is an elevational view of an alternate form of the storage box according to the present invention. FIG. 6 is an elevational view of another alternate form of the storage box according to the present invention.

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FIG. 7 is an elevational view of still another alternate form of the storage box according to the present invention.

FIG. 8 is corresponding to FIG. 7, showing the storage box set in the extended position.

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FIG. 9 is an extended view of still another alternate form of the storage box according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

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[0005] In FIG. 1, a storage box is shown constructed according to one embodiment of the present invention and covered with a top cover **42**.

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[0006] FIG. 2 is an exploded view of the storage box shown in FIG. 1, showing the upper box body **10** horizontally turned outwards from the lower box body **20**. The upper box body **10** and the lower box body **20** are made of soft fabric (for example, canvass) with the respective four horizontal top sides and four horizontal bottom sides and four vertical angles respectively supported with a respective rigid rod member to maintain the shape. A hard bottom plate **40** is attached to the top surface of the bottom panel of the box body **10** or **20** for supporting storage items. The upper box body **10** defines a top open chamber **12** for storing things. The upper box body **10** further has an angled extension wall vertically downwardly extended from the outer lateral side and the back side, thereby defining a bottom open chamber **14** after the upper box body **10** has been extended out of the lower box body **20**. The upper box body **10** further has vertically extended folding lines **16**, and is provided with a fastening device **18**. A support **28** is hinged to the outer surface of the inner lateral side of

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the lower box body **20**, and can be turned relative to the lower box body **20**.

[0007] The lower box body **20** is symmetrical to the upper box body **10**, having an angled extension wall vertically upwardly extended from the outer lateral side and the back side, thereby defining a top open chamber **22** for keeping things. The lower box body **20** further comprises The upper box body **10** has folding lines **16** in the front, and is provided with a fastening device **36** corresponding to the fastening device **18** of the upper box body **10**. A flexible hinge **38** is connected between one vertical angle of the upper box body **10** and one vertical angle of the lower box body **20** so that the upper box body **10** and the lower box body **20** can be horizontally turned relative to each other between the received position where the upper box body **10** and the lower box body **20** are arranged in a stack (see FIG. 1), and the extended position where the upper box body **10** and the lower box body **20** are in an offset relationship (see FIG. 2). After the upper box body **10** has been extended out of the lower box body **20**, the support **28** is turned outwards from the lower box body **20** to stop the top side against the bottom side of the upper box body **10**, giving a support to the upper box body **10** (see FIG. 2). When set in the extended position, the top open chamber **12** and bottom open chamber **14** of the upper box body **10** as well as the top open chamber **22** of the lower box body **20** are opened for storing things.

[0008] After removal of the hard bottom plates **40** from the upper box body **10** and the lower box body **20**, the support **28** is turned inwards and closely attached to the lower box body **20**, and then the upper box body **10** and the lower box body **20** are folded up along the respective folding lines **16**, **24** and received in a flat condition as shown in FIGS. 3 and 4.

[0009] Further, the extension wall of the upper box body **10** and the extension wall of the lower box body **20** are so arranged that the four vertical lateral sides of the storage box are maintained in a flush manner after the upper box body **10** and the lower box body **20** have been set in the received position. The upper box body **10** and the lower box body **20** may be respectively provided with a handle **34** for carrying.

[0010] FIGS. 5 and 6 show two different alternate forms of the storage box. As illustrated, a number of vertically linked upper box bodies **10** and a number of vertically linked lower box bodies **20** are hinged together and can be turned between the received position and the extended position like the embodiment shown in FIGS. 1~4. Further, connecting plates **30** may be used to connect the respective upper box bodies **10** to the respective lower box bodies **20** in the extended position. Each connecting plate **30** has male (female) fastening elements **32** at the ends for fastening to respective female (male) fastening elements (not shown) at the upper box bodies **10** and the lower box bodies **20**.

[0011] FIGS. 7 and 8 show still another alternate form of the storage box according to the present invention.

According to this embodiment, the upper box body **10** and the lower box body **20** have a cylindrical configuration. The upper box body **10** has a part of the bottom side connected to a part of the top side of the lower box body **20** in such a manner that the upper box body **10** can be turned horizontally relative to the lower box body **20** between the received position as shown in FIG. 7 and the extended position as shown in FIG. 8.

[0012] FIG. 9 shows still another alternate form of the storage box according to the present invention. According to this embodiment, the upper box body **10** and the lower box body **20** are respectively made of bamboo strips, and fastened together with a metal hinge **26**.

[0013] Although particular embodiments of the invention have been described in detail for purposes of illustration, various modifications and enhancements may be made without departing from the spirit and scope of the invention. Accordingly, the invention is not to be limited except as by the appended claims.

Claims

1. A storage box comprising a lower box body, said lower box body defining a top open chamber for storage items, an upper box body, said upper box body defining a top open chamber for storage items, means connecting between said upper box body and said lower box body so that said upper box body can be turned horizontally relative to said lower box body between a received position where said upper box body and said lower box body are vertically arranged in a stack and the top open chamber of said lower box body is closed by said upper box body, and an extended position where said upper box body and said lower box body are set in an offset relationship and said upper box body defines with said lower box body a bottom open chamber below the top open chamber of said upper box body for storage items.
2. The storage box as claimed in claim 1, wherein said upper body and said lower body are made of canvass, each having a plurality of vertically extended folding lines.
3. The storage box as claimed in claim 2, further comprising at least one hard connecting plate for fastening to said upper box body and said lower box body to hold said upper box body and said lower box body in said extended position.
4. The storage box as claimed in claim 3, wherein said at least one hard connecting plate each comprises two male fastening elements; said upper box body and said lower box body each comprise at least one female fastening element adapted to receive the male fastening elements of said at least one con-

necting plate.

said upper box body (10) and said lower box body (20) have a cylindrical configuration.

5. The storage box as claimed in claim 1, wherein said upper box body and said lower box body have a rectangular configuration.

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6. The storage box as claimed in claim 1, wherein said upper box body and said lower box body have a cylindrical configuration.

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7. The storage box as claimed in claim 1, wherein said upper box body and said lower box body are made of bamboo strips.

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Amended claims in accordance with Rule 86(2) EPC.

1. A storage box comprising a lower box body (20), said lower box body defining a top open chamber (22) for storage items, an upper box body (10), said upper box body defining a top open chamber (12) for storage items and having an angled extension wall vertically downwardly extended from the outer lateral side and the back side, means (38) connecting between said upper box body and said lower box body so that said upper box body can be turned horizontally relative to said lower box body between a received position where said upper box body and said lower box body are vertically arranged in a stack and the top open chamber of said lower box body is closed by said upper box body, and an extended position where said upper box body and said lower box body are set in an offset relationship and said upper box body defines with said lower box body and said angled extension wall a bottom open chamber (14) below the top open chamber of said upper box body for storage items, **characterized in that** said upper body and said lower body are made of soft fabric such as canvass, each having a plurality of vertically extended folding lines (16; 24), and that at least one hard connecting plate (40) for fastening to said upper box body and said lower box body is provided to hold said upper box body and said lower box body in said extended position.

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2. The storage box as claimed in claim 1, wherein said at least one hard connecting plate (40) each comprises two male fastening elements (32); said upper box body (10) and said lower box body (20) each comprise at least one female fastening element adapted to receive the male fastening elements of said at least one connecting plate.

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3. The storage box as claimed in claim 1, wherein said upper box body (10) and said lower box body (20) have a rectangular configuration.

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4. The storage box as claimed in claim 1, wherein

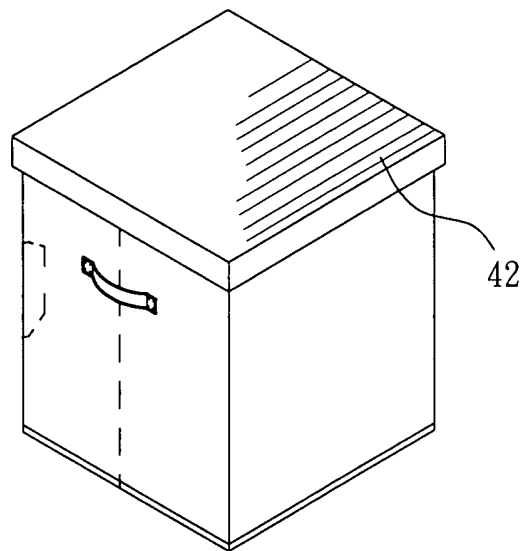


FIG. 1

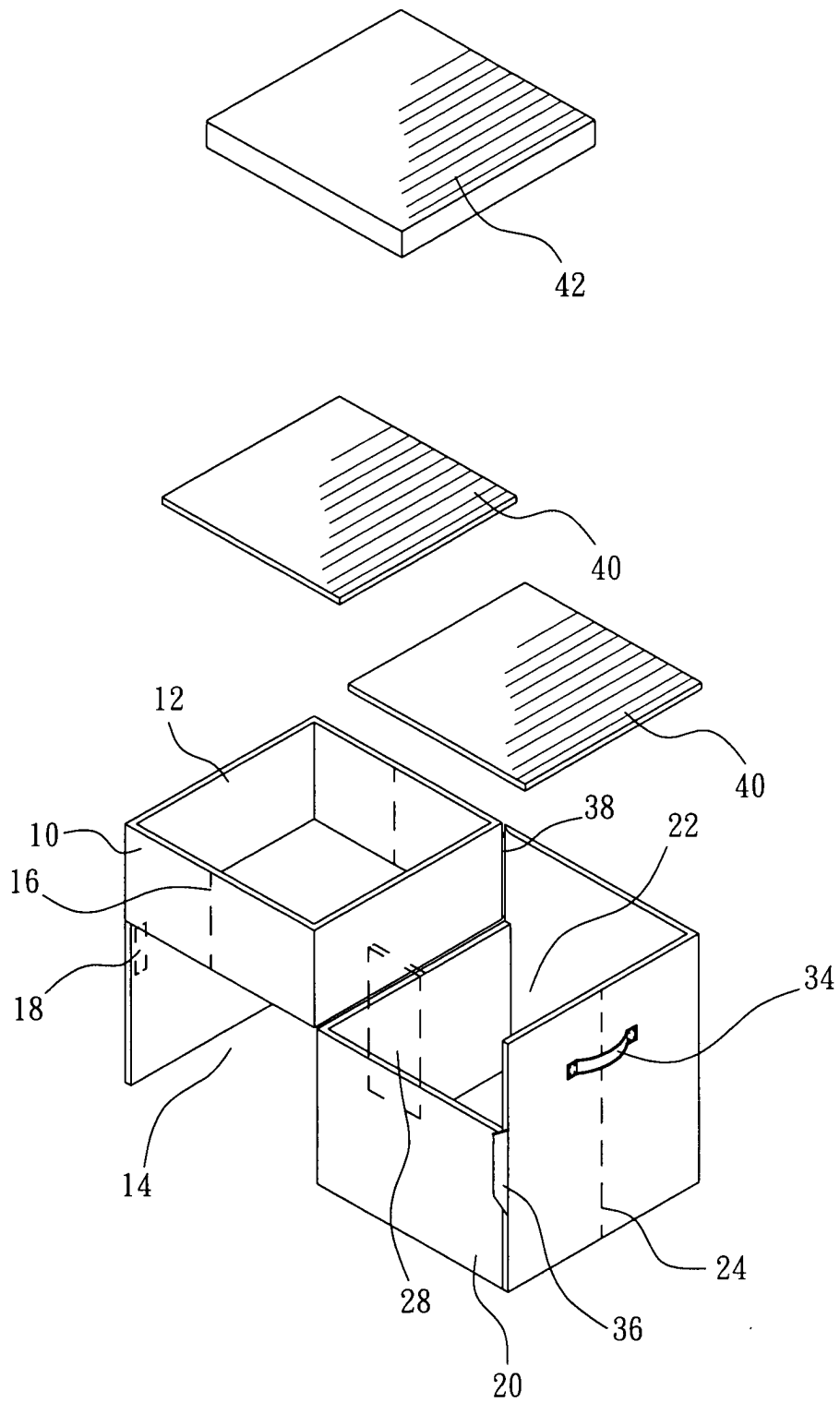


FIG. 2

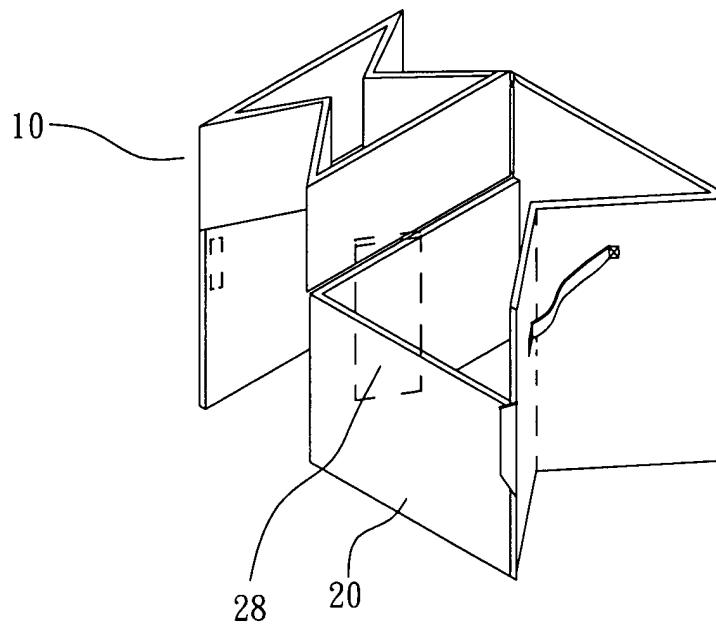


FIG. 3

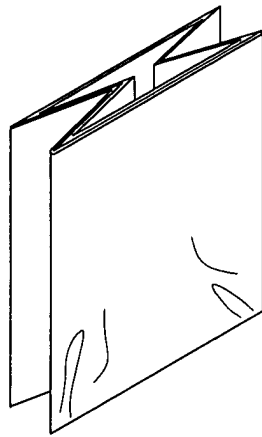


FIG. 4

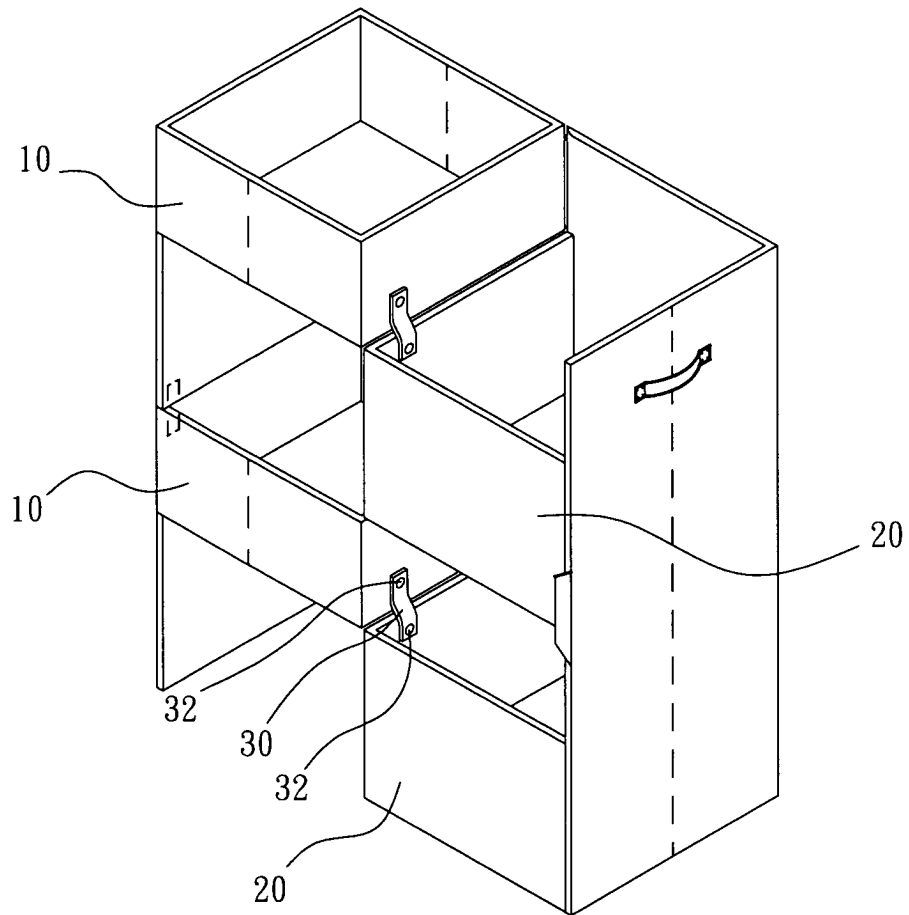


FIG. 5

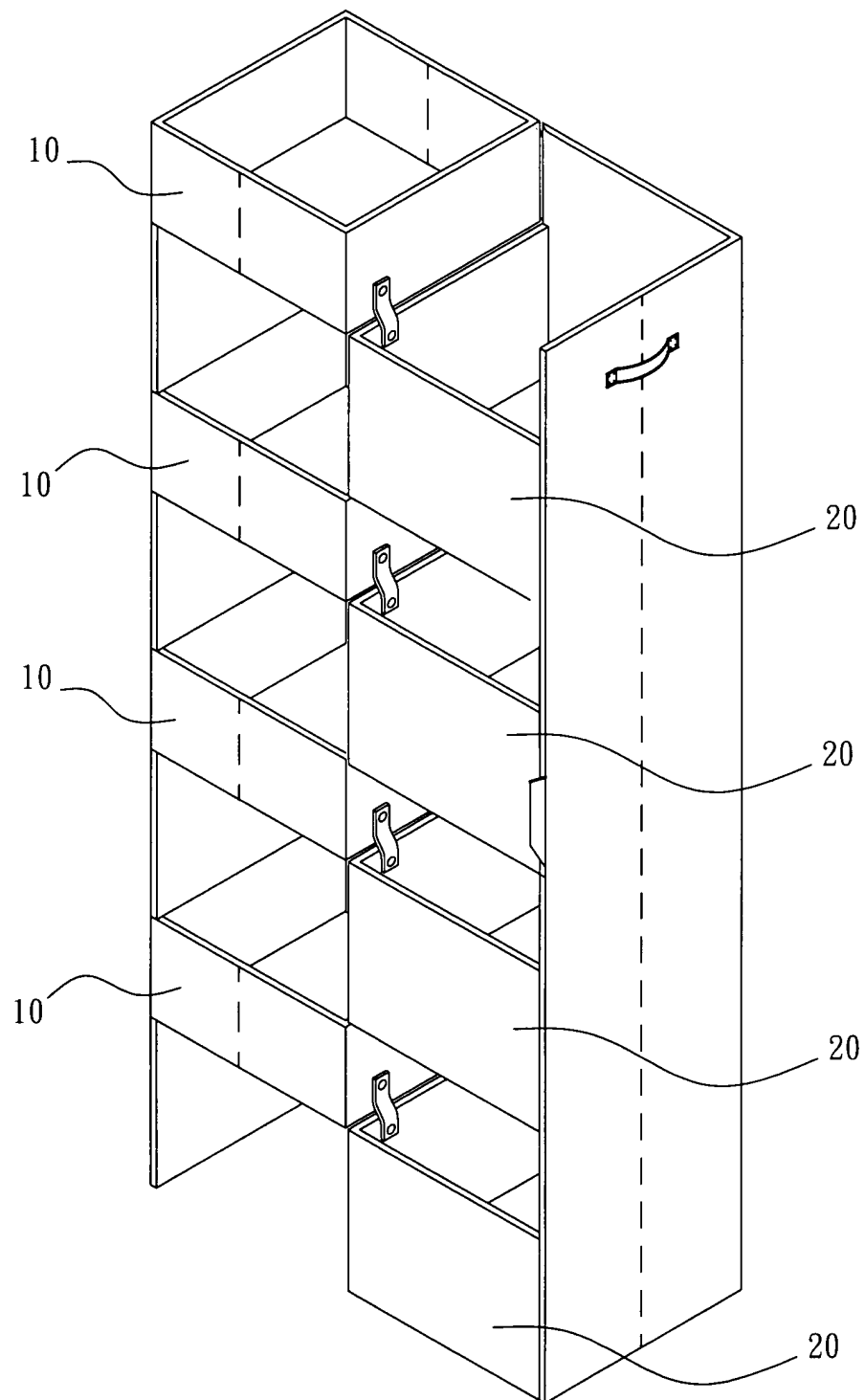


FIG. 6

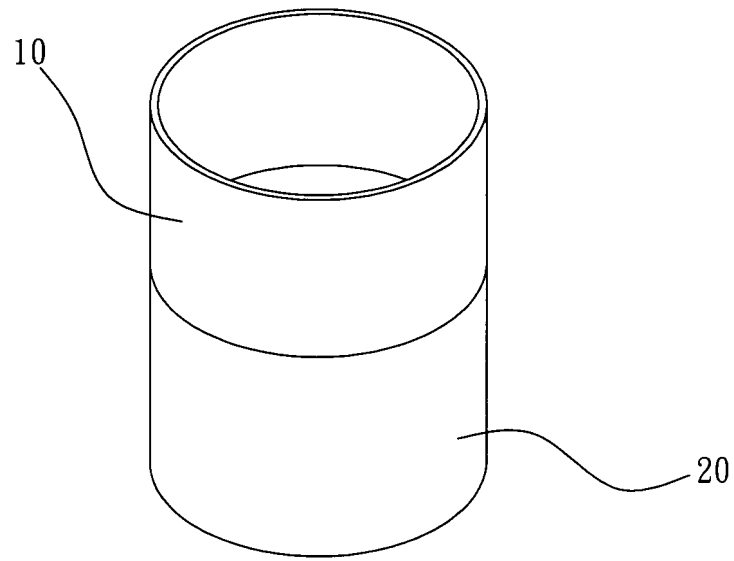


FIG. 7

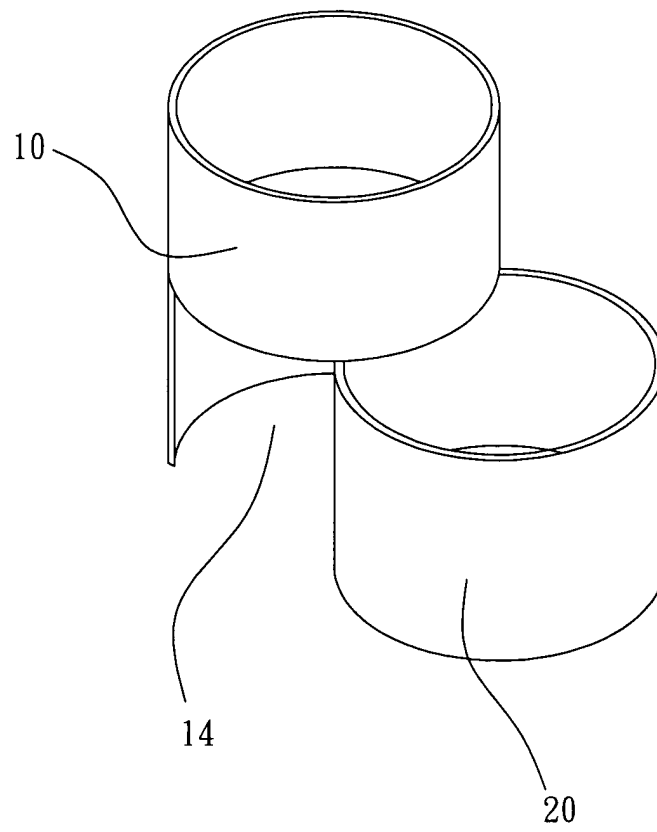


FIG. 8

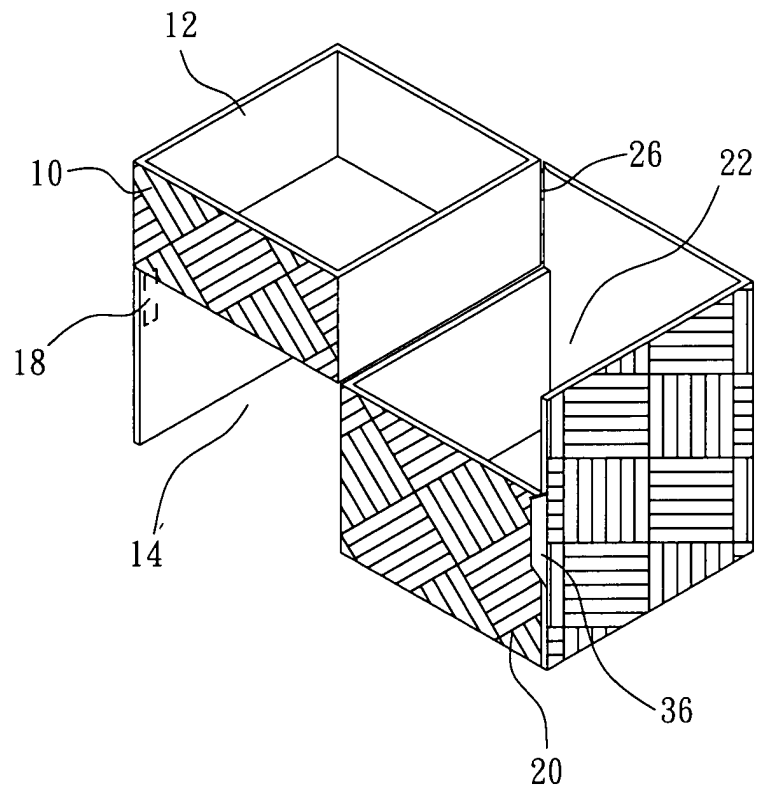


FIG. 9



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EUROPEAN SEARCH REPORT

Application Number
EP 04 00 4568

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	GB 434 215 A (GEORGE THOMAS JONES; JOHNS SON AND WATTS LTD) 28 August 1935 (1935-08-28) * figures 2,4 *	1,5,6	B65D13/00 B65D37/00 B65D43/18
A	----- US 1 090 592 A (BETHAM) 17 March 1914 (1914-03-17) * figure 1 *	1,5	
A	----- US 3 161 315 A (SAMUEL BRAUN) 15 December 1964 (1964-12-15) * figure 7 *	1,6	

			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B65D B25H
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 26 July 2004	Examiner Bridault, A
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03 82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 00 4568

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26-07-2004

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US 1090592	A		NONE	
US 3161315	A	15-12-1964	NONE	