Title: A POP-UP CONTAINER USED FOR TEMPORARY STORAGE

Abstract: A framework for a pop-up structure is provided comprising three or more loops (18, 12, 22) and a plurality of resilient deformable elongate members (14) extending between adjacent loops. The elongate members are pivotally attached to the loops (18, 12, 22) and the framework is extensible between a collapsed condition and an expanded condition, upon rotation of one loop relative to an adjacent loop. There is also provided a pop-up container comprising said framework and having an attachable cover.
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

— with information concerning request for restoration of the right of priority in respect of one or more priority claims (Rules 26bis.3 and 48.2(b)(vii))
A POP-UP CONTAINER USED FOR TEMPORARY STORAGE

TECHNICAL FIELD OF THE INVENTION

This invention relates to pop-up container used for temporary storage.

BACKGROUND ART

Pre-assembled containers are known and are used for the temporary storage of various types of goods. These containers are easily transportable: as they fold compactly and used only when needed.

These containers are compactable and are collapsed by the rotation thereof relative to their longitudinal axes. Amongst these containers are products which include spiral frames which are collapsible by rotation of the spiral, and then stored. These containers can only extend up to a low height and cannot maintain strength and stability at a greater height.

Furthermore, there are containers (NL8503S40), which have frames including horizontal hoops which are interconnected by flexible profiled rods, and once extended the frames are covered in transparent flexible panels to form the container. The extension and collapsing of the frame of these containers occurs by rotation of the hoops relative to the longitudinal axis of the frame. The rods are connected to the hoops by hinge pins which assist in the collapsing of the frame of the container. These containers may only extend to a certain height and remain cumbersome in that there are numerous parts to be connected to form the container.

After storage and use of these types of containers, the containers often do not assemble effectively due to stress on the parts of the container frame.
The inventor believes that there is a need for a pop-up container which will alleviate some of the above mentioned problems, at least partially.

**SUMMARY OF THE INVENTION**

According to an aspect of the invention, there is provided a framework for a pop-up structure comprising three or more loops and a plurality of resiliency deformable elongate members extending between adjacent loops, the elongate members being pivotally attached to the loops, the framework being extensible between a first expanded condition and a second collapsed condition, upon rotation of one loop relative to an adjacent loop.

The elongate members may be attached to the loops by various attachment means, which pivot relative to the loops.

An attachment means may include a plug portion for receiving a first end of the elongate member and a further transverse aperture for receiving a loop therethrough. A further attachment means may include a plug portion for receiving a second end of the elongate member and a further aperture to receive an adjacent loop. The elongate members expand the framework to the first expanded condition.

The rotation of one loop relative to an adjacent loop causes the elongate members between the two loops to collapse vertically; and the framework to move to the second collapsed condition, the pivotal attachment means assisting in allowing the elongate members to collapse to a substantially parallel position relative to the loops.

Each loop may comprise a variety of shapes.

Each loop may be circular in shape and the framework forming a tubular structure in the first expanded condition.

The framework may be lightweight, yet will provide strength and remain flexible. The framework may be manufactured from any suitable material including fiberglass.
The framework may include a plurality of loops with interconnecting elongate members, the framework maintaining structural stability at varying heights.

The framework may include various support surfaces including shelves, which may assist in facilitating the graphic display of various goods.

According to a further aspect of the invention, there is provided a pop-up container comprising a framework having an attachable cover, the framework including three or more substantially parallel loops and a plurality of resiliency deformable elongate members extending between adjacent loops, the elongate members being pivotably attached to the loops, the framework of the container being extensible between a first expanded container condition and a second collapsed container condition, upon rotation of one loop of the framework relative to an adjacent loop.

Each loop may be circular in shape, and the container being tubular in shape in the first expanded condition.

The container may include an attachment means to secure the container into the second compact position.

The container may include a carrying means in the form of a handle or a bag.

**BRIEF DESCRIPTION OF THE DRAWINGS**

The Invention will now be explained with reference to the following non-limiting drawings.

Figure 1(a) shows the pop-up container in the first expanded condition;

Figure 1(b) shows an attachment means;

Figure 1(c) shows an attachment means when the container is in the second collapsed condition;
Figure 1(d) shows the attachment means when the container is in the first expanded condition;

Figure 2 shows a pop-up container in accordance with the invention; and

Figure 3 shows the framework including various support surfaces.

DETAILED DESCRIPTION* OF THE INVENTION

In the drawings, reference numeral 10 refers to a pop-up container in accordance with the invention.

A pop-up container 10 in accordance with the invention comprises at least three circular loops 12 of a container 10, a plurality of resiliency deformable elongate members 14 which are attached to the loops 12 by various attachment means 16 (as shown in figures 1(b), (c) and (d)) which are pivotally associated with the loops 12, the attachment means 16 operable to pivot the elongate members 14 relative the loops 12 thereby allowing for collapsing of the container 10 from a first expanded position to a second collapsed position, by rotation of the first loop 18 relative an adjacent loop 20.

The container 10 is tubular in shape and the loops 12 and the elongate members 14 are made from lightweight and flexible material, specifically fiberglass, to maintain the strength of the structure. The tubular shape of the container 10 is formed by the attachment of a suitable fabric to the loops 12 of the framework of the container 10 during manufacture.

The elongate members 14 are connectable between the first loop 18 and the second loop 20, and furthermore, between the second loop 20 and the third loop 22. These elongate members 14 are also manufactured from a lightweight and flexible material which maintains strength of the pop-up framework and container 10.
Figure b,c and d show that the attachment means 16 include a plug portion 30 for receiving a first end 24 of the elongate member 14 and a further aperture 36 for receiving a loop 18 therethrough. A further attachment means 16 includes a plug portion 30 for receiving a second end 26 of the elongate member 16 and a further aperture 36 to receive an adjacent loop 20. The elongate members 14 expand the framework to the first expanded condition.

The rotation of one loop relative to an adjacent loop causes the elongate members 14 between the two loops 12 to collapse vertically, and the framework to move to the second collapsed condition, the pivotal attachment means 16 assisting in allowing the elongate members 14 to collapse to a substantially parallel position relative to the loops 12.

Figure 1(d) shows the attachment means 18 when the framework of the container is in the first expanded condition, whilst figure 1(c) shows the attachment means 16 when the framework is in the second collapsed condition.

As shown in figure 2, the container 10 can be covered in a layer of suitable material 30 and form a bin. In a further embodiment of the invention, as shown in figure 3, the framework of the container 10 includes various support surfaces 32 for the display of goods.

This invention relates to a novel pop-up container for the temporary storage of goods or for use as a bin.
1. A framework for a pop-up structure comprising three or more loops and a plurality of resiliently deformable elongate members extending between adjacent loops, the elongate members being pivotally attached to the loops, the framework being extensible between a first expanded condition and a second collapsed condition, upon rotation of one loop relative to an adjacent loop.

2. The framework for a pop-up structure as claimed in claim 1, characterized in that the elongate members are attached to the loops by various attachment means, which pivot relative to the loops.

3. The framework for a pop-up structure as claimed in claim 2, characterized in that the attachment means includes a plug portion for receiving a first end of the elongate member and a further transverse aperture for receiving a loop there through.

4. The framework for a pop-up container as claimed in either claim 2 or claim 3, characterised in that a further attachment means includes a plug portion for receiving a second end of the elongate member and a further aperture to receive an adjacent loop.

5. The framework for a pop-up container as claimed in any one of the preceding claims, characterized in that the elongate members expand the framework to the first expanded condition.

6. The framework for a pop-up container as claimed in any one of the preceding claims, characterized in that the rotation of one loop relative to an adjacent loop causes the elongate members between the two loops to collapse vertically, and the framework to move to the second collapsed condition, the pivotal attachment means assisting in allowing the elongate members to collapse to a substantially parallel position relative to the loops.
7. The framework for a pop-up container as claimed in any one of the preceding claims, characterized in that each loop comprises a variety of shapes.

6. The framework for a pop-up container as claimed in claim 7, characterized in that each loop is circular in shape and the framework forming a tubular structure in the first expanded condition.

9. The framework for a pop-up container as claimed in any one of the preceding claims, characterized in that the framework is lightweight, will provide strength and remain flexible and is manufactured from any suitable material.

10. The framework for a pop-up container as claimed in claim 9, characterized in that the framework is manufactured from fiberglass.

11. The framework for a pop-up container as claimed in either claim 9 or 10, characterized in that the framework includes a plurality of loops: with interconnecting elongate members, the framework maintaining structural stability at varying heights.

12. The framework for a pop-up container as claimed in any one of the preceding claims, characterized in that the framework includes various support surfaces including shelves, which assist in facilitating the graphic display of various goods.

13. A pop-up container comprising a framework having an attachable cover, the framework including three or more substantially parallel loops and a plurality of resiliently deformable elongate members extending between adjacent loops, the elongate members being pivotally attached to the loops, the framework of the container being extensible between a first expanded container condition and a second collapsed container condition, upon rotation of one loop of the framework relative to an adjacent loop.

14. A pop-up container comprising a framework as claimed in claim 13, characterized in that each loop is circular in shape, and the container is tubular in shape in the first expanded condition.
15. A pop-up container comprising a framework as claimed in either claim 13 or 14, characterized in that the container includes an attachment means to secure the container into the second compact position.

16. A pop-up container comprising a framework as claimed in any one of claims 13 to 15, characterized in that the container includes a carrying means in the form of a handle or a bag.
A. CLASSIFICATION OF SUBJECT MATTER
IPC: B65D 21/08 (2006.01); A47F 5/10 (2006.01)
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
A47F, B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPDOC, WPI, TXTnun

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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<td>WO 03 101853 A1 (BUTTLE) 11 December 2003 (11.12.2003) figs. 1-5, 8, 10, 11: pages 1-13</td>
<td>1-5, 8, 10-16</td>
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<td>US 2008056625 A1 (STANTON ET AL.) 06 March 2008 (06.03.2008) whole document</td>
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<td>X</td>
<td>US 400588 A1 (MEYERING ET AL.) 02 April 1889 (02.04.1889) figs. 1, 2, 7</td>
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Further documents are listed in the continuation of Box C.

See patent family annex.

Special categories of cited documents:

'A' document defining the general state of the art which is not considered to be of particular relevance

'E' earlier application or patent but published on or after the international filing date

'L' document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

'O' document referring to an oral disclosure, use, exhibition or other means

'P' document published prior to the international filing date but later than the priority date claimed

'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

'X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

'L' document member of the same patent family

Date of the actual completion of the international search
07 May 2015 (07.05.2015)

Date of mailing of the international search report
21 May 2015 (21.05.2015)

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Form PCT/ISA/21(i) (second sheet) (July 2009)
INTERNATIONAL SEARCH REPORT

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<td>2. □ Claims Nos.: 6, 7, 9</td>
<td>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, specifically:</td>
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<td>Claim 6 attempts to define the subject-matter in terms of the result to be achieved but does not include any additional technical feature. The use of the term &quot;each loop comprises a variety of shapes&quot; renders the scope of claim 7 unclear. Article 6 PCT. Claim 9 attempts to define the subject-matter in terms of the result to be achieved and renders the scope of the claim unclear by the term: &quot;manufactured from any suitable material&quot;</td>
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<td>3. □ Claims Nos.:</td>
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<td>4. □ 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 claims Nos.:</td>
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Remark on Protest
- □ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- □ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- □ No protest accompanied the payment of additional search fees.
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