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(71) Applicant(s):  
J & HM Dickson Limited  
(Incorporated in the United Kingdom)  
Seath Road, Rutherglen Ind Est, GLASGOW,  
G73 1RW, United Kingdom

(72) Inventor(s):  
Alan Dickson

(74) Agent and/or Address for Service:  
J & HM Dickson Limited  
Seath Road, Rutherglen Ind Est, GLASGOW,  
G73 1RW, United Kingdom

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B65D 88/16 (2006.01)

(56) Documents Cited:  
EP 2505510 A1 FR 002951439 A1  
US 20120052161 A1  
<http://www.sackmaker.com/gull-proof-sacks.html>

(58) Field of Search:  
INT CL B65D, B65F  
Other: Online: EPODOC, WPI, TXTE

(54) Title of the Invention: **Three dimensional fully closeable sack for collecting and transporting waste recycling material and refuse**

Abstract Title: **Fully closeable recycling and refuse sack**

(57) A three dimensional sack for collecting and transporting waste recycling materials and refuse comprises a fully opening and closing top forming an apex shape when closed, with two lifting handles H incorporated within the closure and secured by means of hook and loop fasteners. The sack is closed by a full width fold over flap 6 across the top, also secured with a hook and loop fastener 7. The base of the sack may comprise a tipping strap (T, figure 6) and/or a rubber weight pad.

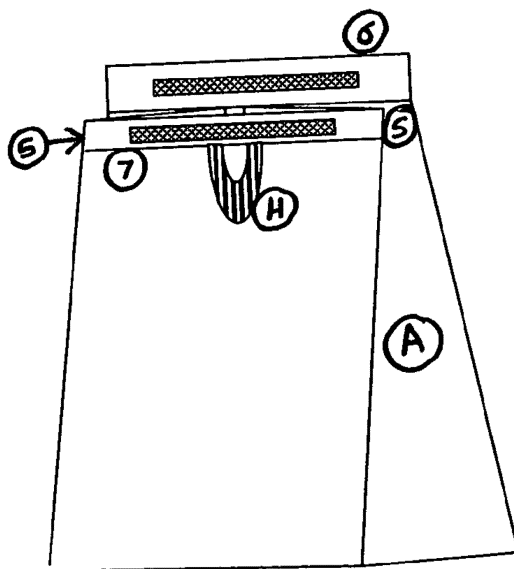


Figure 2

**Woven Polypropylene Sack with a secure top closure for collecting recyclable materials**

Figure 1

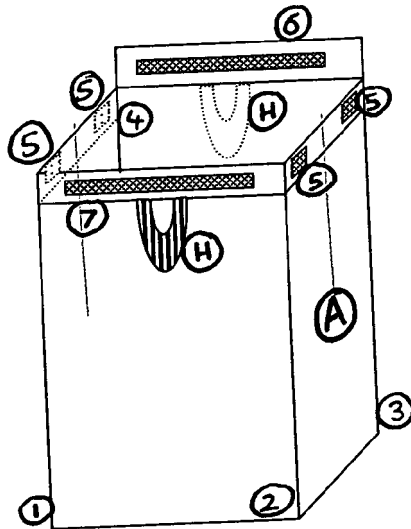


Figure 2

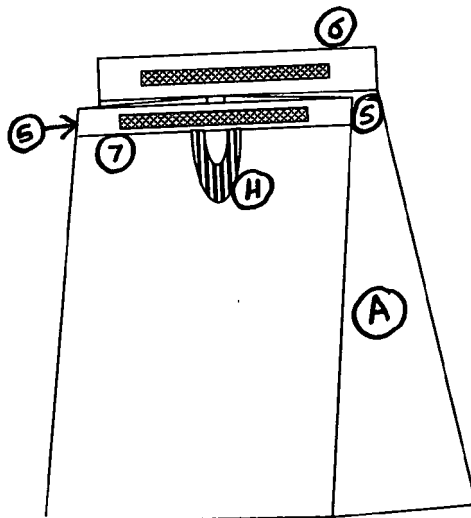


Figure 3

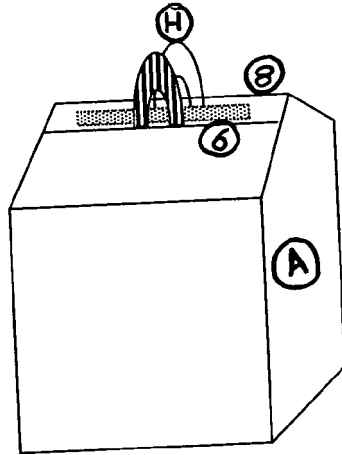


Figure 4

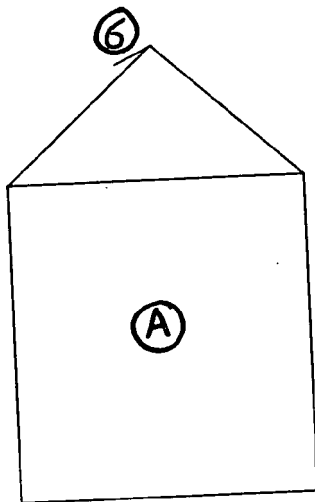


Figure 5

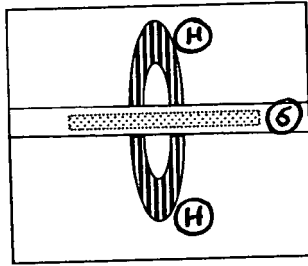
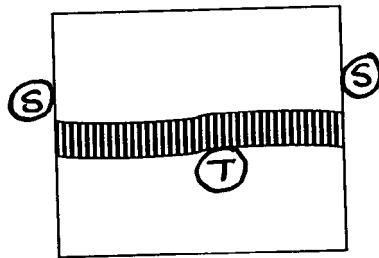


Figure 6



Three dimensional fully closeable sack for collecting and transporting waste recycling material and refuse.

## **Description**

A three dimensional sewn woven sack with a secure top closure for collecting recyclable materials (cans, newspapers, cardboard, plastics, textiles, glass and garden waste) and refuse from the kerbside or enabling secure transportation of recyclables to recycling facilities.

## **Background**

Until now local authorities and their partner waste management companies have been supplied with sacks having either an open top or with a simple flap of fabric (lid) attached to one top edge capable of folding across the top of the bag and fixing to the adjacent side using a single hook and loop strip. These sacks are sometimes supplied with an optional tipping handle on the base and or a rubber weight pad incorporated into the base between two layers of fabric.

### **Issues :**

The problem with the existing designs is the first leaves the top of the bag open and the latter leaves two sides open.

Existing closure design types do not protect the contents of the sack from weather elements.

Existing closure design types do not securely retain contents in bad weather or if the sack is knocked over.

Existing closure design types do not adequately protect contents from the growing problem of interference from vermin, gulls, foxes etc.

Existing closure design types do not adequately protect contents from vandalism (e.g. paper set on fire)

### **Invention :**

Our experience supplying over 200 local authorities UK wide over 20 years has led us to understand there is a requirement for inventing a more effective way of closing these sacks which addresses all the issues above.

The design creates a secure, apex shaped closure which sheds water off the top.

The design brings both lifting handles closer together so that the sack can be lifted single handed if it is being carried on stairways or other situations where having a hand free increases the safety of the operator.

The design can be applied to different sizes of sack depending on customer requirements.

The design enables the sack to stand open for filling and be easily and securely closed at the top when it is put out on the kerbside for collection or when it is being transported full.

The design allows for easy opening by recycling crews for emptying and can be reused many times.

The design allows for the addition of an optional tipping handle sewn into the base and or an optional rubber weight pad incorporated into the base between two layers of fabric, neither of which are new.

## Drawings

The invention will now be described solely by way of example and with reference to the accompanying drawings in which:

Figure 1 shows the sack when open

Figure 2 shows the sack after the first stage of the closing operation

Figure 3 shows the sack closed

Figure 4 shows a side view of the sack when closed

Figure 5 shows a plan drawing of the top of the sack

Figure 6 shows a plan drawing of the base of the sack

Figure 1 shows when the sack is open, four vertical seams 1,2,3,4 assist holding the shape upright for filling. It shows the sides of the bag A. It shows the two small hook and loop patches 5 on either side A of the sack's top edges. It illustrates the raised top edge 6 which has a handle H and a strip of hook or loop material incorporated by way of stitching. It shows the opposite top edge 7 where corresponding part of the hook or loop strip and another handle H is also located.

Figure 2 shows when the sack is closed, first the sides A are pushed inwards from the centre to allow the hook and loop patches 5 at the top corners to be joined together on each side.

Figure 3 shows the sack closed by bringing the raised top flap 6 across and down onto the corresponding strip of hook & loop 7 on the opposite side of the sack. The sack is illustrated in the closed position with an apex shaped top 8 and the handles H close together.

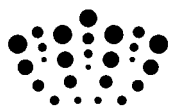
In Figure 4 the sack is shown from the side in the closed position illustrating the top flap 6

In Figure 5 the sack is shown from above in plan to illustrate the top flap 6 and the handles H

In Figure 6 the sack is shown from below in plan to illustrate the optional tipping strap across the base located into two of the sewn seams S

**Claims**

- 1) A three dimensional sack for collecting and transporting waste recycling material and refuse which has a fully opening and closing top forming an apex shape when closed and two lifting handles incorporated within the closure, secured by means of hook and loop patches on two sides and a full width fold over flap across the top, also secured with a hook & loop strip.
- 2) A three dimensional sack for collecting and transporting waste recycling material and refuse according to claim 1 which has a tipping handle sewn across the base
- 3) A three dimensional sack for collecting and transporting waste recycling material and refuse according to claim 1 which has a rubber weight pad incorporated into the base between two layers of fabric



**Application No:** GB1222432.5

**Examiner:** Miss Alison Berry

**Claims searched:** 1-3

**Date of search:** 12 April 2013

**Patents Act 1977: Search Report under Section 17**

**Documents considered to be relevant:**

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
A	-	EP 2505510 A1 (AL AUX); see WPI Abstract Accession No. 2012-M67751 [67] and figures
A	-	FR 2951439 A1 (AL AUX); see WPI Abstract Accession No. 2011-E12387 [29] and figures
A	-	US 2012/0052161 A1 (WOODHAM); see abstract and figures
A	-	<a href="http://www.sackmaker.com/gull-proof-sacks.html">http://www.sackmaker.com/gull-proof-sacks.html</a>

**Categories:**

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

**Field of Search:**

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC<sup>X</sup> :

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Worldwide search of patent documents classified in the following areas of the IPC

B65D; B65F
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The following online and other databases have been used in the preparation of this search report

EPODOC, WPI, TXTE
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**International Classification:**

Subclass	Subgroup	Valid From
B65F	0001/00	01/01/2006
B65D	0033/16	01/01/2006
B65D	0088/16	01/01/2006