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(54) Title: A SUPPORT APPARATUS

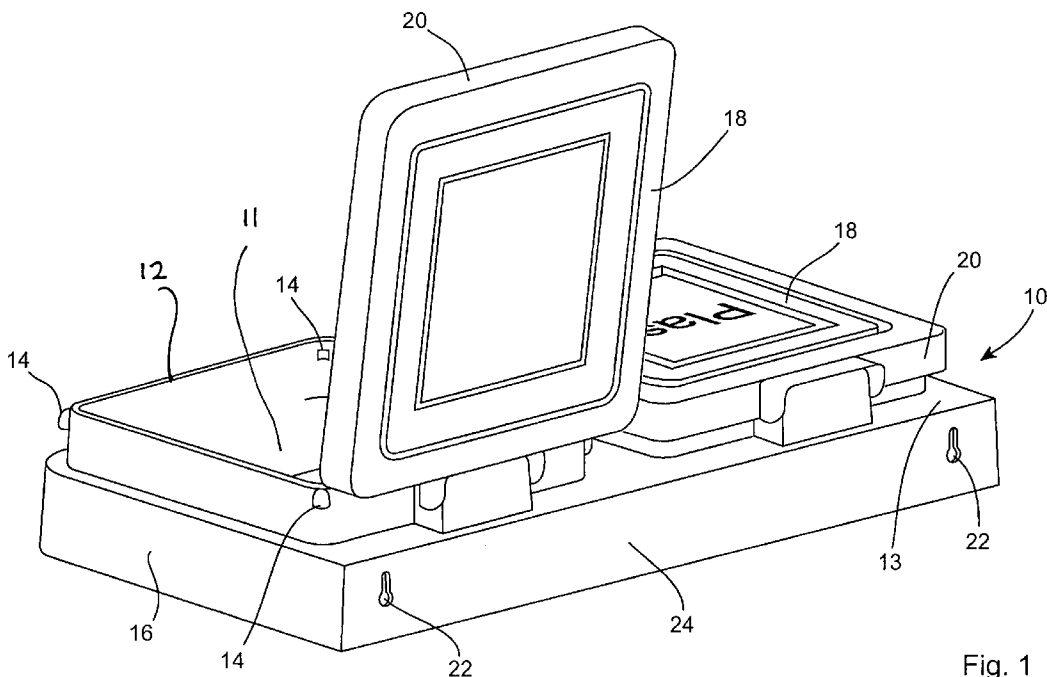


Fig. 1

(57) Abstract: A support apparatus for a refuse bag or bags comprises a support frame 10, the support frame having an upstanding lip 12 which defines an opening 11 for a refuse bag. The upstanding lip has a plurality of protrusions 14 on which a refuse bag may be engaged to maintain the bag in an open condition. A lid 18 is provided which has a depending surround 20 which in use engages over the lip 12. The support apparatus may be mounted on a stand or may be wall mounted.

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A SUPPORT APPARATUS

This invention relates to a support apparatus for holding one or more bags each to contain segregated waste materials from a selection of 'dry' items as glass, metal, plastic or
5 'wet' items such as garden or vegetable rubbish.

A problem exists in disposing of domestic waste. In the ecological environment in which we live, waste materials require to be segregated from each other and disposed of separately rather than being all deposited in one refuse bin. In areas where separate refuse bins for segregated rubbish are not provided by the local Council, it is necessary for a
10 householder to establish a segregated regime for waste materials.

An object of the present invention is to obviate or mitigate this problem.

The present invention provides a support apparatus for a bag, comprising a support frame having a retaining means, to retain a bag in an open condition. The retaining means preferably comprises at least one protrusion on the support frame. The retaining means
15 preferably comprises a plurality of protrusions.

Preferably the support apparatus comprises a support frame to be support mounted in a substantially horizontal attitude, the support frame having one or more apertures therein, the or each aperture being defined by a lip upstanding from the support frame. Preferably, the or each lip has a plurality of protrusions spaced around the outside face thereof. A bag
20 of flexible material to be positioned through the or each aperture with the material at the open end of the or each bag being passed over the respective lip and tightly held by the protrusions.

Preferably, the support frame is supported at a height to allow the bottom of the or each bag to be ground-engaging.

25 Preferably also, the protrusions are provided on the lip of the or each aperture. Each protrusion is desirably in the shape of a parrot's beak.

Preferably also, the support frame has a depending flange to impart strength to a planar surface of the support frame.

Preferably further, the or each aperture is provided with a lid hinged at the side of the
30 support frame intended to be the back, the lid overlying and masking the respective aperture with a downwardly depending surround extending over the lip. The support frame is preferably mounted on a base stand.

Embodiments of the present invention will now be described, by way of example, with reference to the accompanying drawings in which;

Figure 1 shows a top perspective view from the back of a support apparatus according to the present invention;

Figure 2 is a perspective view of another embodiment of support apparatus according to the invention;

5 Figure 3 is an enlarged view of a corner of the apparatus of Figure 2, and, Figure 4 is a front perspective view of the support apparatus of Figure 1.

Referring to the drawings, wherein similar numerals have been used to indicate like parts a support apparatus comprises a support frame 10 to be mounted on a wall in a substantially horizontal attitude. The support frame 10 has two substantially square
10 apertures 11 therein. Each aperture 11 is defined by a lip 12 upstanding from a planar surface 13 of the support frame 10. Each lip 12 has a plurality of four protrusions 14 spaced around the outside face thereof. A bag (not shown) of flexible material is positioned through each aperture 11 with the material at the open end of each bag being passed over the respective lip 12 and tightly held by the protrusions 14. Each protrusion 14 is in the shape
15 of a parrot's beak and one protrusion is provided at each corner of the lip 12.

The support frame 10 has a depending flange 16 to impart strength to the planar surface 13 in which the apertures are formed and two spaced inverted keyholes 22 are provided in the side 24 of the flange 16 of the support frame 10 intended to be at the back, one near to each end of the side 24.

20 Each aperture is provided with a lid 18 hinged at the side 24. The lid 18 overlies and masks the respective aperture with a downwardly-extending surround 20 extending over the lip 12.

The support frame 10 is supported at a height to allow the bottom of each bag to be ground-engaging.

25 The support frame 10 can be support mounted on a self-supporting stand (Figure 2).

In use, the support apparatus is wall mounted with the support frame 10 hooked onto two headed fasteners plugged in the wall and the keyholes being engaged by the heads. Bags are inserted into the apertures 11 with the open end of the bags being engaged over the protrusions as above described. When full, the bags are removed and fresh bags inserted.
30 The support frame 10 is supported at the height of a bag so that when partly or fully filled with a segregated waste material, the weight of the waste material is carried by the ground rather than the support frame 10.

Referring now to Figures 2 and 3 a "single bag" version of the support apparatus is shown as 10'. The apparatus 10' has a cover lid 18. As shown in Figure 3 the aperture 11

for a bag 30 is defined by a lip 12' which is provided with four outwardly projecting protrusions 14. The protrusions enable the bag to be securely retained on the support apparatus 10'.

5 The protrusion 14 is either integrally formed with the support apparatus 10' in an injection or blow moulding process. Thus, the protrusion 14 is arranged above an aperture 15 in the lip 12 of the support frame 13. The aperture 15 enables the open end of a bag to be securely engaged under the protrusion 14. The aperture 15 extends into the planar surface 13.

10 The support apparatus 10' may be free standing or alternatively may be secured to a wall or other structure. If it is to be free standing the support apparatus 10' is provided as shown in Figure 2 with a frame 40 including side supports 41 and a base frame 42. If a plurality of the support apparatus 10' are used side by side, for example for several different types of waste material then the bags 30 will be colour coded to match a coloured panel 50 on the top of the cover lid 18.

15 The support frame may have only one or more than one aperture depending on what waste material is to be segregated.

It will be clear that the construction of support apparatus 10' of Figures 2 or 3 or both, may be applied equally to the constructions of the apparatus shown in Figures 1 and 4. Thus, the protrusion 14 arrangement of Figure 3 may be employed in the construction of
20 Figure 1, either with a single bag version or a double bag version.

Variations and modifications can be made without departing from the scope of the invention described above.

25

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CLAIMS

- 5 1. A support apparatus for a refuse bag, comprising a support frame, the support frame having retaining means to retain a refuse bag in an open condition.
2. A support apparatus for a bag as claimed in Claim 1 wherein the retaining means comprises at least one protrusion on the support frame.
- 10 3. A support apparatus for a bag as claimed in Claims 1 or 2 wherein the retaining means comprises a plurality of protrusions.
4. A support apparatus for a bag as claimed in Claims 2 or 3 wherein the support frame has an upstanding lip, which defines an opening for the refuse bag.
- 15 5. A support apparatus for a bag as claimed in Claim 4 wherein the upstanding lip has a plurality of corners and each corner has a protrusion.
- 20 6. A support apparatus for a refuse bag as claimed in any preceding claim wherein the support frame has a depending flange.
7. A support apparatus for a refuse bag as claimed in any preceding claim wherein the apparatus has a lid.
- 25 8. A support apparatus for a refuse bag as claimed in any preceding claim wherein the lid has a depending surround.
9. A support apparatus for a refuse bag as claimed in any preceding claim wherein the support frame is mounted on a base stand.
- 30

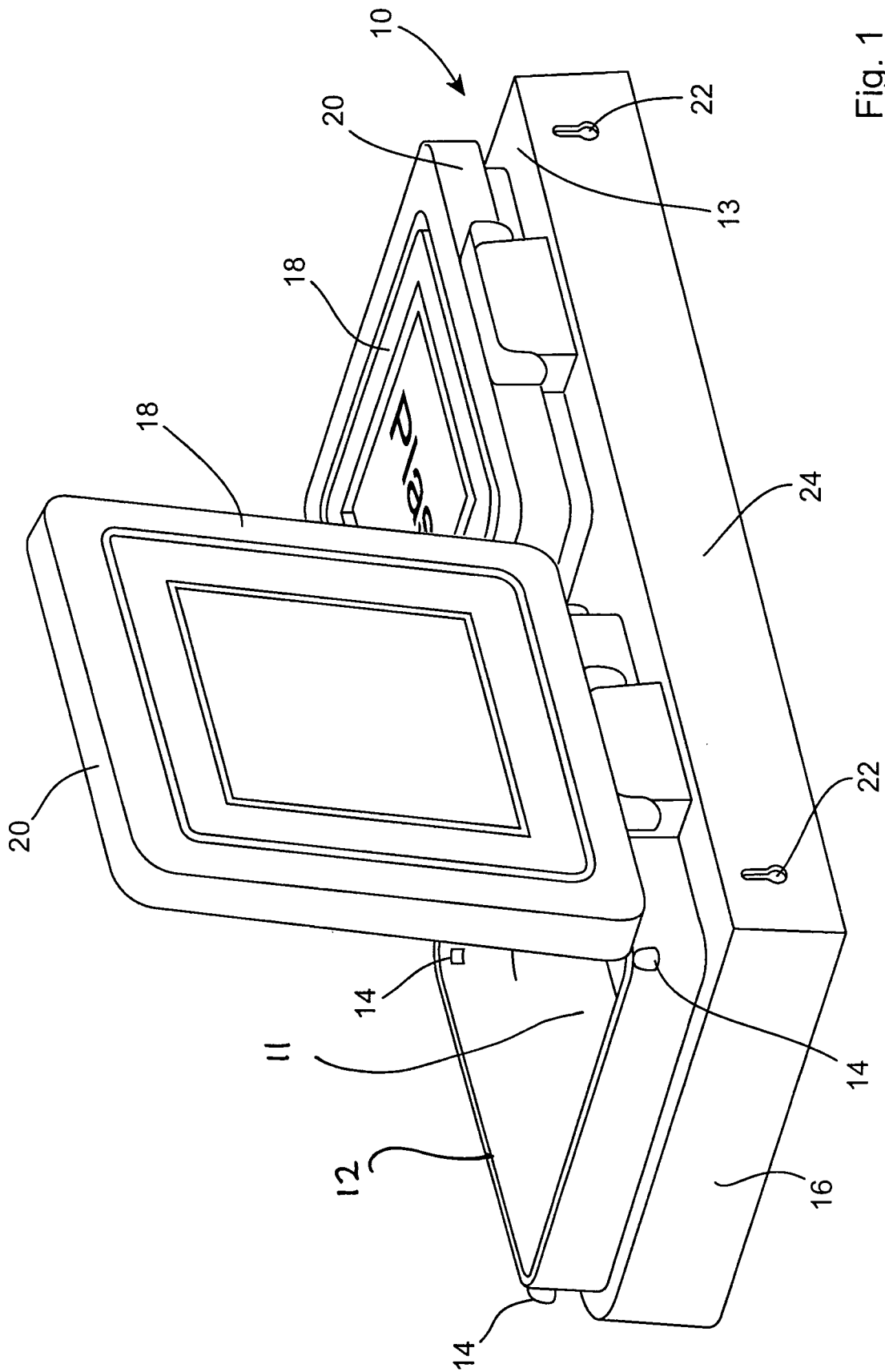


Fig. 1

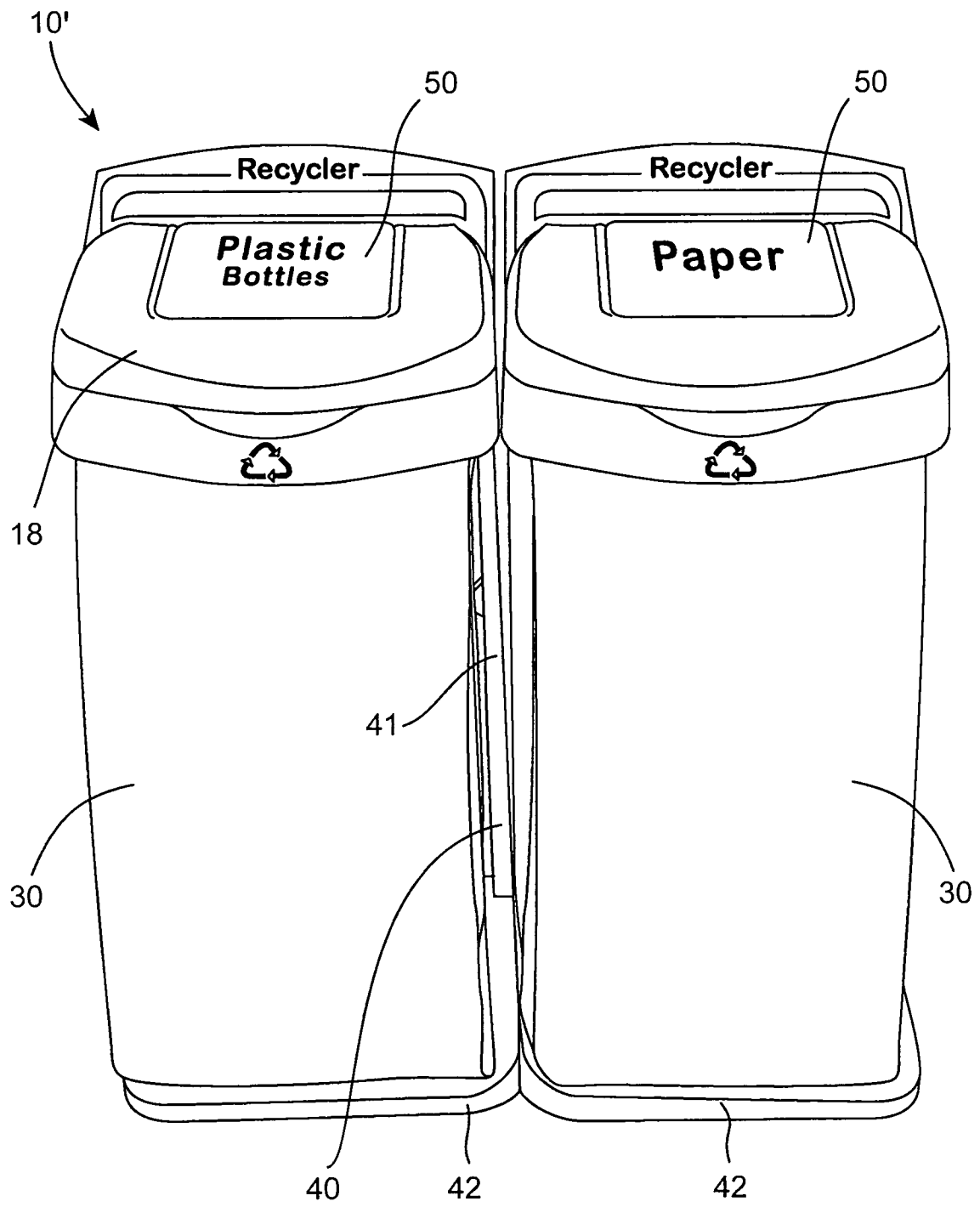


Fig. 2

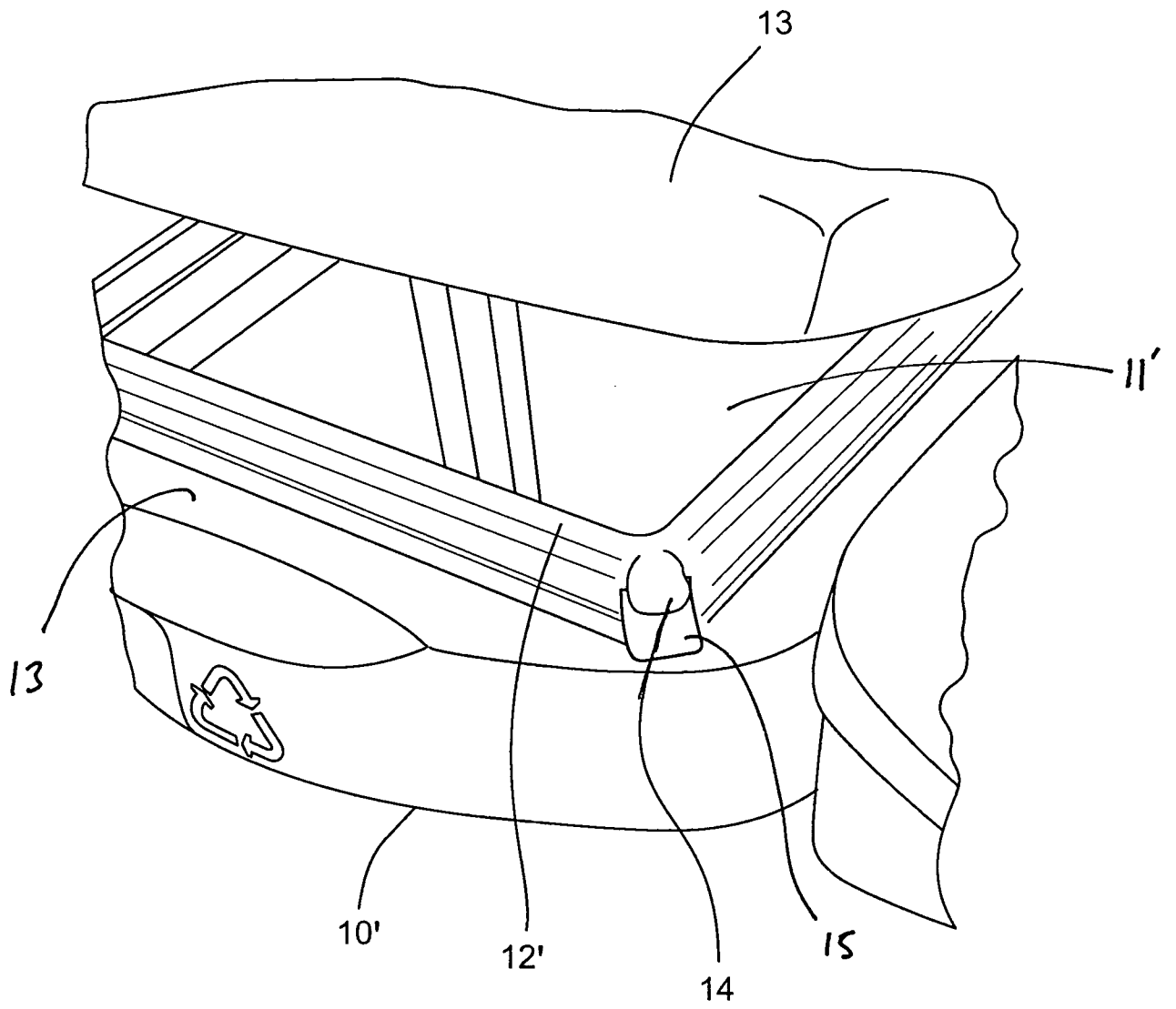
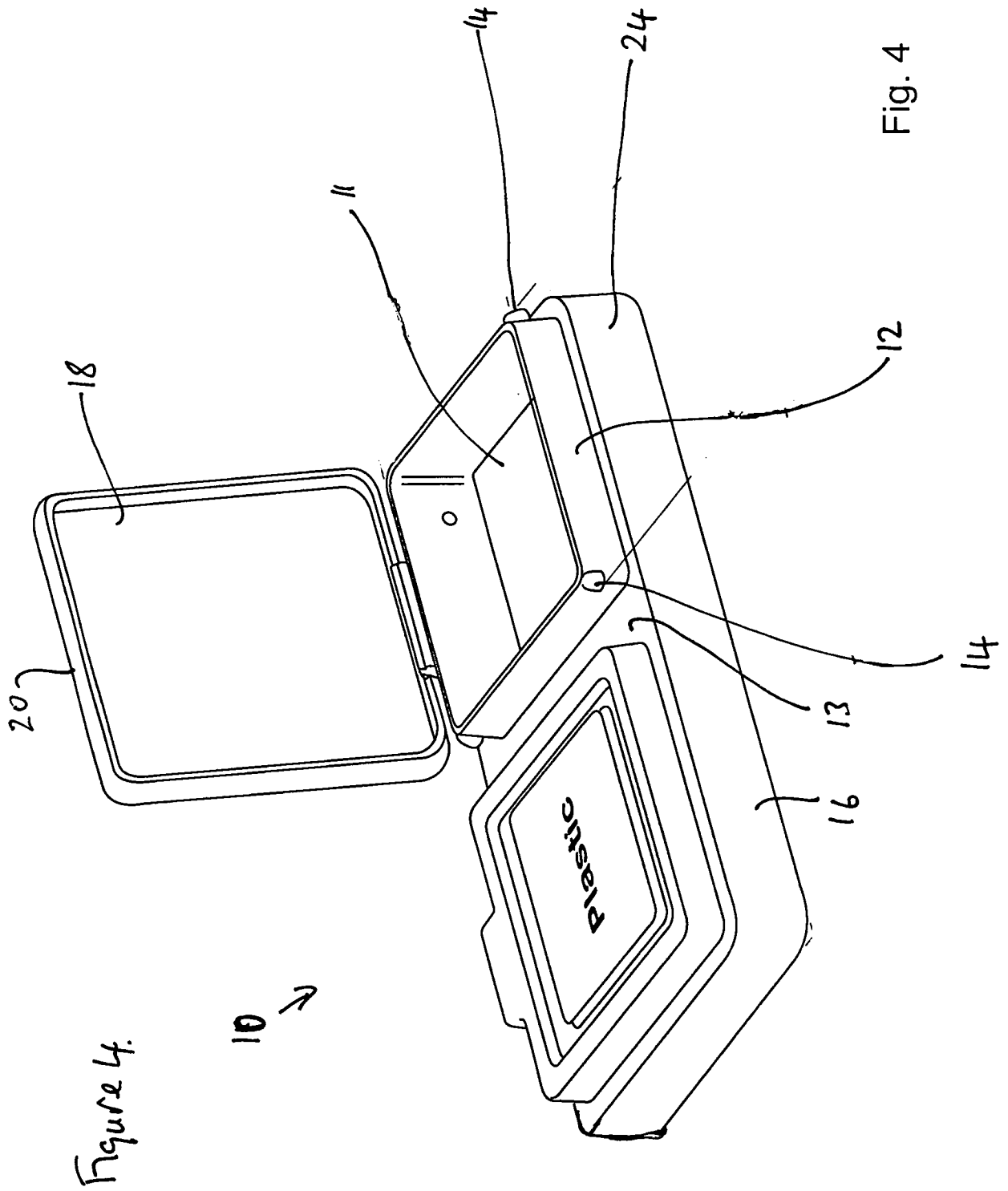


Fig. 3



INTERNATIONAL SEARCH REPORT

International application No

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A. CLASSIFICATION OF SUBJECT MATTER

INV. B65F1/14

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)

B65F B65B

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 893 615 A (W. JOHNSON) 8 July 1975 (1975-07-08) column 2, line 6 - line 54 figures 1-4,9,10	1-9
X	DE 92 05 867 U (L. FINK) 3 December 1992 (1992-12-03) page 5, line 1 - page 7, line 5 figures 1-3	1-5,7-9
A		6
X	CH 690 299 A (PEKA-METALL AG) 14 July 2000 (2000-07-14) column 2, line 50 - column 3, line 49 figures 1-4	1-5,9
X	DE 42 35 457 A (STAHEL + KÖNG AG) 28 April 1994 (1994-04-28) column 2, line 7 - line 35 figures 1-4	1-4,6,9
A		5

 Further documents are listed in the continuation of Box C. See patent family annex.

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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

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Z document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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