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54 **Receptacle.**

57 A disposable receptacle for smokers and other waste materials is of sheet material and has a polygonal transverse cross-section, provided by generally rectangular side wall panels (2), a sealed base wall provided by panels (10-12 & 14-16) extending inwardly from the side wall panels and secured together, and an upper end wall structure comprising generally triangular flap elements (21) extending inwardly from the side wall panels, each adjacent pair of flap elements being joined by a pair of internal panels (24) hinged together and to the flap elements, the flap elements being dimensioned so as to have a stable position in which they extend downwardly into the receptacle from which position the flaps are resiliently displaceable for entry of waste materials into the receptacle.

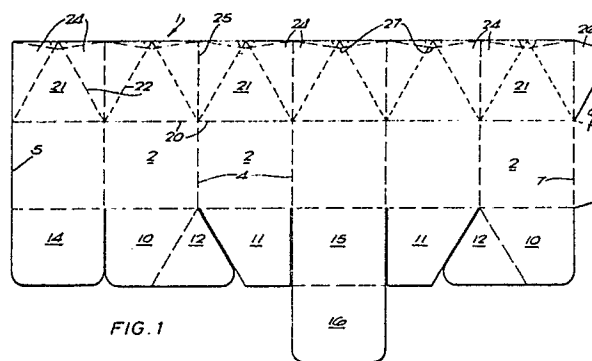


FIG. 1

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RECEPTACLE

The invention relates to a receptacle and more specifically to a receptacle intended to receive waste materials, for example waste smokers' materials, such as cigarette and cigar ash and cigarette and cigar ends.

In accordance with the invention there is provided a receptacle into which materials can be introduced by displacement of closure means biased to oppose subsequent extraction of materials. The receptacle is preferably constructed from a single piece of sheet material, although two or more pieces may be employed, the or each piece being provided with fold and score lines, or being preformed in production, so that when erected, the closure means are constituted by integral flap elements which are biased to a closed position. The flap elements can for example each extend from an edge of a hexagonal or other polygonal opening. The receptacle can be constructed so that access to its interior is by way of the closure means only, the receptacle being then intended to be disposed of when partially or completely filled. The sheet material may be advantageously biodegradable.

The invention thus also provides a sheet material blank for construction of a receptacle, the blank comprising a row of panels for forming a main body portion of the receptacle of hexagonal or other polygonal cross-section, and an adjoining parallel row of panels arranged to be folded so as to provide closure means for the receptacle in the form of flaps articulated on the main body wall and joined together by articulated pairs of panels between them.

The flaps and panels of the closure means can be defined by score lines, the structure possesses resilience so that the flaps can be depressed to permit or facilitate entry of materials into the receptacle after which they return to an unstressed condition in which the receptacle is effectively closed. The flaps can be sized so as to be inclined downwardly and inwardly in the unstressed condition, to facilitate entry into the receptacle of materials deposited on the flaps.

If the resulting receptacle is for use as an ashtray, intrinsically non-combustible material is chosen for the sheet material or blank. The receptacle will be understood to be well suited to such use as the closure flaps will retain fumes within the receptacle.

The invention can thus provide a disposable ashtray with a body of polygonal cross-section which is permanently closed at its lower end by a floor and at its upper end by closure means in the form of generally triangular panels extending from the side wall of the body to partially or completely

close the upper opening, the panels being displaceable downwardly to allow entry of materials into the ashtray, but being biased to return to a closed position after such displacement.

5 The ashtray can be provided with a layer of contents to assist in extinguishing smokers' materials which are still smouldering and such contents can be perfumed to neutralize tobacco odours.

10 The invention is further described below by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a plan view of a blank of sheet material from which a receptacle in accordance with the invention can be erected;

15 Figure 2 is a sectional side view of the assembled receptacle; and

Figure 3 is a plan view of the assembled receptacle.

20 The blank 1 shown in Figure 1 comprises an integral piece of sheet material including a straight row of six like adjoining side wall panels 2, each approximately square in shape. The adjacent edges of the panels are defined by fold lines or creases 4. One of the end panels 2 of the row has a free end edge 5 but an adjoining tab 6 extends from the end edge of the other end panel 2, being delimited from it by a further fold line 7. As will be evident, the side wall panels 2 can be formed into a cylinder or drum of hexagonal cross-section by affixing the tab 6 to the remote end panel 2 adjacent its free edge 5, by gluing the tab preferably being received inside the drum.

30 The lower aligned edges of the panels 2 as shown in Figure 1 adjoin by way of fold lines 9 respective base panels of various shapes which can be folded in and glued together to form a base or floor to the drum. The base panels can be of any suitable configuration which will prevent escape from the receptacle of its contents. The base panels are shown here as comprising two pairs of adjacent panels 10 and 11 of which each panel 10 has an adjoining portion 12 which is configured approximately as an equilateral triangle and which is glued so as to be secured underneath the adjacent panel 11 in the assembled condition of the blank. The pairs of panels 10 and 11 are separated by a generally square panel 14 and a rectangular panel 15 which extends beyond the lower edges of the other base panels in the condition of Figure 1 and which receives glue over at least its lowermost portion 16, so as to underlie and hold together the other base panels of the drum.

50 The upper aligned edges of the side wall panels 2 adjoin by way of fold lines 20 like closure panels 21 shaped as isosceles triangles. Between

each adjacent pair of the closure panels 21, there is provided a relatively inverted triangular panel portion, which is delimited with respect to the panels 21 by score lines 22 cut from the side of the blank which forms the exterior of the assembled receptacle. Each of the inverted triangular panel portions is bisected into two gusset panels 24 by a score line 25 which extends in the direction of the associated fold line 4. The score lines 25 are formed on the other side of the blank from the score lines 22, that is, on the side which provides the interior of the assembled receptacle.

At the lateral ends of the row of panels 21 and 24, single panels 24 are formed, from one of which extends a tab 26 which can be glued to enable the two end panels 24 to be connected together so as to function in the assembled receptacle in the same way as the integrally formed adjacent pairs of panels 24.

When so assembled, the panels 21 form substantially a complete hexagon with each inwardly extending side of each panel joined to the adjacent panel by a pair of the gusset panels 24. The panels 21 are however oversized with respect to the cross-sectional area of the drum, that is, they each extend away from the side wall panels 2 to a point slightly beyond the axis of the drum. As a consequence, the panels 21 and 24 can take either of two positions, one in which the panels 21 extend upwardly from the plane formed by the upper edges of the side wall panels 2, and the other in which they extend downwardly from this plane. As will appear from Figure 2, the receptacle is erected so that the panels 21 are inclined downwardly and inwardly from the side wall panels, to facilitate movement of materials into the receptacle.

In use downward pressure on any one or more of the panels 21 will move them downwardly and inwardly, so creating an opening between them through which materials can freely enter the receptacle. As shown in Figure 1 only, the panels 21 may be truncated along lines 27 so that a central opening is formed by the panels in the closed condition, which opening can be enlarged by depression of the panels. Where the receptacle is to function as an ashtray, the aperture can conveniently be circular, and of a diameter about 1 mm. in excess of the diameter of a standard cigarette.

Also, if the receptacle is to be used for smokers' materials, it can be provided with material 30 over its floor which can assist in the extinction of any inserted material which is still alight. Such extinguishing material 30 can be perfumed, to neutralize the smell of smoking tobacco. Suitable extinguishing materials include sand or other non-combustible granular or particulate material, perfumed gels, water or other suitable liquid, and chemicals capable of releasing fire blanketing substances (for

example partially stable bicarbonates) in response to heating by the smokers' materials.

If suitable, the extinguishing material can be received loose on the floor of the receptacle, but it may be confined by a suitably shaped tray 31 resting on the floor. The tray may be closed initially by a membrane 32 which is broken by hot smokers' materials, or which is punctured by the corners formed by the panels 21 and 24 as the former are depressed to admit the hot material into the receptacle.

In use, a cigarette end, for example, can be readily inserted into the receptacle, by displacement of the closure panels 21, or by insertion through the central hole if one is provided together with any necessary displacement of the panels. The closure panels 21 will thereafter resume their original position under the resilience of the sheet material from which the receptacle is formed. Fumes from the cigarette end, if not completely extinguished, will be trapped beneath the panels 21 and by gusset panels 24 between them. The floor of the receptacle can be domed or otherwise shaped so that the cigarette end tends to roll or slide towards the side wall panels 2 for better entrapment of escaping fumes.

Any suitable sheet material can be used for the blank 1, for example, aluminium or other metal foil, fire-resistant paper board, or non-combustible plastics material. The material may be laminated, for example, the blank can be of fire resistant paperboard, with the closure panels 21 and 24 carrying externally a thin metal foil. The outer surfaces of the side wall panels 2 can carry advertising or like material, either printed directly thereon or on a separate sheet which can be affixed to the side wall panels.

The invention can be carried into effect in a variety of ways other than as specifically described and shown.

Claims

1. A receptacle having an aperture through which materials can be introduced into the receptacle interior by displacement of closure means, characterised in that the closure means comprises a plurality of flap elements (21) biased into a stable condition in which the aperture is at least partially closed.

2. A receptacle as claimed in claim 1, wherein the plurality of flap elements (21) comprises sheet material flap elements interconnected by a pair of panels (24) hinged together and to the flap elements (21).

3. A receptacle as claimed in claim 2 wherein the aperture is polygonal and each of the plurality

of flap elements (21) extracts from a respective edge of the aperture.

4. A receptacle as claimed in claim 3 wherein the flap elements (21) extend downwardly from the respective edges in the stable condition.

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5. A receptacle as claimed in any preceding claim wherein access to the receptacle interior is by way of the closure means only.

6. A receptacle for waste materials, the receptacle being of sheet material and having a polygonal transverse cross-section provided by generally rectangular side wall panels (2), a sealed base wall provided by panels (10-12 & 14-16) extending inwardly from the side wall panels and secured together, and an upper end wall structure comprising generally triangular flap elements (21) extending inwardly from the side wall panels, each adjacent pair of flap elements being joined by a pair of internal panels (24) hinged together and to the flap elements, the flap elements being dimensioned so as to have a stable position in which they extend downwardly into the receptacle from which position the flaps are resiliently displaceable for entry of waste materials into the receptacle.

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7. A receptacle as claimed in any preceding claim and constructed from a single blank of sheet material.

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8. A receptacle as claimed in any preceding claim and formed of non-combustible material so as to be suitable for use as an ashtray.

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9. A receptacle as claimed in any preceding claim having in the interior means (30) to neutralize unpleasant odours produced by materials introduced therein.

10. A receptacle as claimed in any preceding claim and comprising means (30) to enhance the extinguishing of smouldering materials introduced therein.

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eingereicht / Newly filed
élément déposé

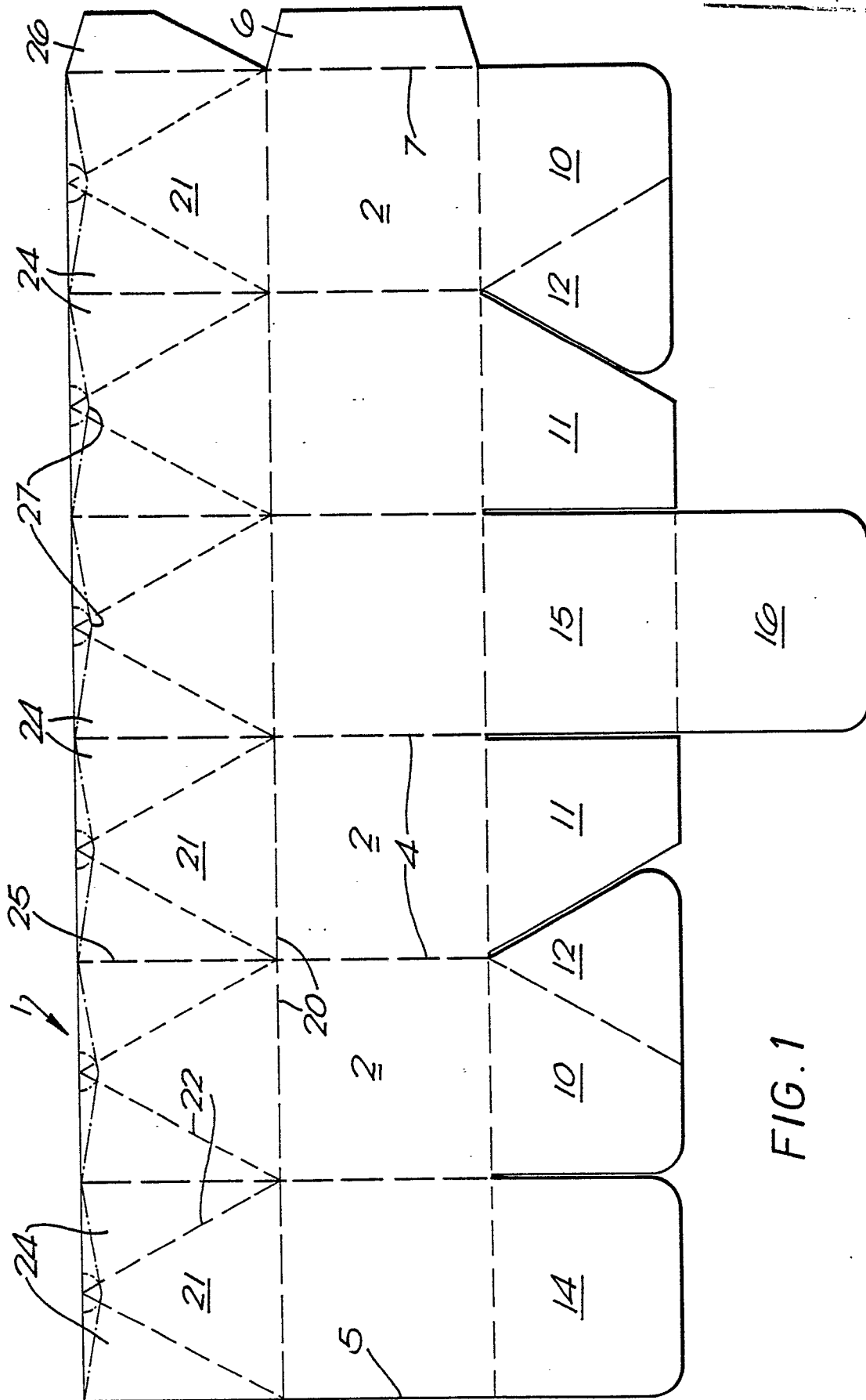


FIG. 1

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Nouvelement déposé

FIG. 2

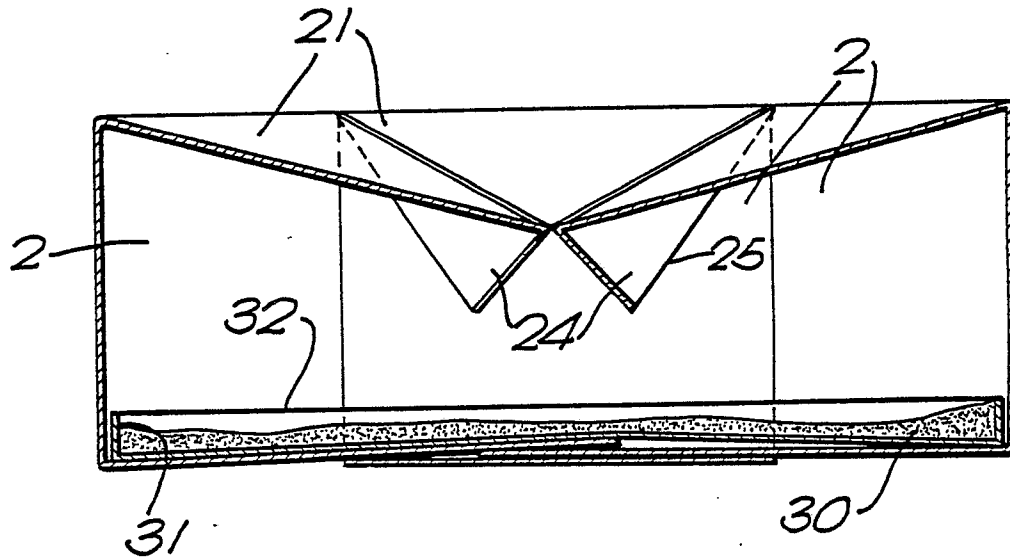
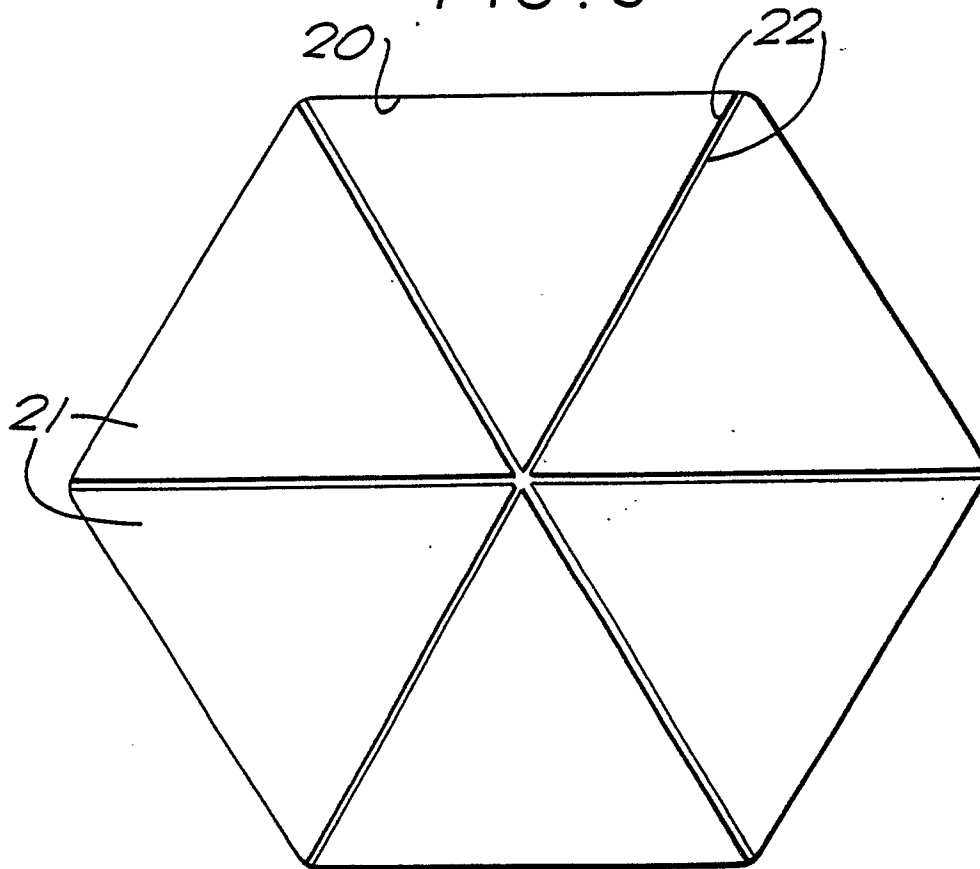


FIG. 3





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.5)
X	US-A-3 977 594 (SWAN) * Column 1, lines 39-54; figures 2,3,6,10-12,17 *	1,2,4,5 ,7	B 65 D 5/06 A 24 F 19/00
Y	---	3,6,8-10	
Y	GB-A-1 293 644 (BARFORD JOINERY) * Page 2, lines 9-18; figures *	3	
Y	---	6	
Y	FR-A-2 276 230 (NEYRET) * Page 3, lines 19-26; figures 4-6 *	8-10	
Y	US-A-4 580 581 (REECE) * Column 1, lines 42-66; figure 4 *		

The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B 65 D A 24 F
Place of search THE HAGUE		Date of completion of the search 16-11-1989	Examiner NEWELL P.G.
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	