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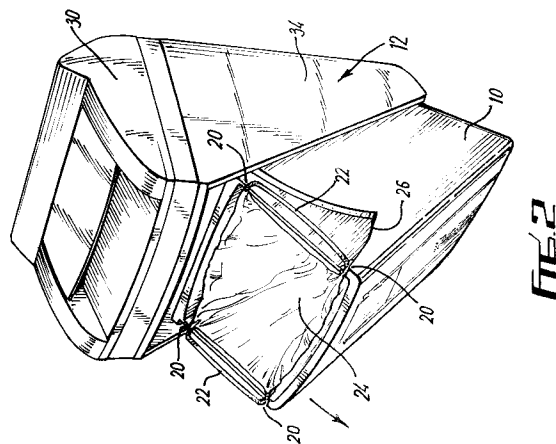
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(54) **Waste receptacle.**

(57) A container, for example a container for dog waste, is pivotally mounted in a cover 12 which surrounds the rear sides and top of the container 10 for movement between an in use position in which it can receive waste through an aperture 39 in the top of the cover to an unloading position in which a bag 24 lining the container can be fitted or removed. The top rim 18 of the container has two pairs of slots 20 in opposite edges thereof to receive parts of the handles 22 of the bag 24 with the handles retained outside of the container.



The present invention concerns improvements in or relating to containers, particularly but not exclusively containers for dog waste.

To facilitate the disposal of rubbish from containers, for example domestic containers, rubbish containers located in public places and containers for dog waste, plastic bags are used to line the containers, the bags facilitating the emptying of the container and the onward transport of the emptied rubbish. Particular problems may occur where the contents of the bag are unpleasant, for example, dog waste.

Many existing rubbish containers utilise plain plastics rubbish bags which are often known as black bin liners. The bag is placed in the container and its upper open edge draped around the exterior of the container top. This method presents a number of difficulties, for example the bag may not be securely located if its periphery around its open top is much greater in size than the periphery of the opening to the container or, conversely, if it is close to the size of the periphery of the container fitment is difficult. Additionally, it is desirable that the bottom of the bag lies in close proximity with the bottom of the container so that heavy loads are supported by the bottom of the container rather than the bottom of the bag. A further disadvantage of this existing arrangement is that the portion of the bag outside the container can be unsightly. This method of mounting the bag sometimes results in the opening to the bag being partially or fully closed by virtue of the lower regions of the bag remaining "stuck" to each other. Furthermore, if the bag is not carefully filled the portion overlying the top of the container, that is the portion which will be handled when the bag is removed from the container, can be contaminated.

A further type of existing bag used to line containers is known as a "bunny" bag. These bags are provided with two handle formations at their upper end, the handles being used to carry a filled bag and also, if necessary, to tie off the top of a filled bag. Bunny bags are used in a manner similar to normal bin liners, that is the area surrounding the upper opening is draped around the top of the container. This arrangement of mounting the bag is disadvantageous for the reasons described in the preceding paragraph.

It is an object of the present invention to obviate or mitigate these and other disadvantages.

According to the present invention there is provided a container adapted to receive a lining bag, the container having an open top defined by a top rim portion, said rim portion being provided with two opposed pairs of downwardly extending slots adapted to receive sections of the lining bag whereby portions of the lining bag can lie outside the container between the slots.

Preferably opposed sides of the container are each provided with a pair of slots.

Preferably the rim portion of the container in the

region of and between the slots is recessed.

Preferably a member projects partially across the open top of each slot. The member may be a resilient member fixed to the top rim portion.

Preferably, the container is rectangular in cross-section.

Preferably the container is provided with a cover to enclose its open top, the cover having an aperture therethrough. A flap arrangement may be located in the aperture to provide a platform for receiving articles to be deposited in the container when the arrangement is in its open position and deposit them in the container when the arrangement is in its closed position.

Preferably the container is pivotally mounted relative to the cover which is provided with mounting means whereby it can be attached to a wall, mounting post or any other suitable support member.

Preferably locking means are provided to hold the container in its closed position.

Preferably the cover, in addition to extending across the top of the container in the closed position, extends down the rear and sides of the container.

Preferably a resilient sealing gasket is provided in the under face of the cover against which the upper rim of the container can abut and seal when the container is in its closed position.

Preferably an odour absorber is fitted in the upper portion of the cover.

Preferably the portion of the cover extending over the rear and sides of the container supports a container mounting bar on which the rear lower edge of the container can be removably pivotally supported. To interconnect with the mounting bar, the rear lower edge of the container includes a downwardly opening channel whereby the container can be removed by lifting it away from the bar such that the channel disengages the bar.

Preferably means are provided for limiting the pivotal movement of the container relative to the bar. Said means may comprise a rear stop to prevent pivotal movement of the container in a rearwards direction beyond the position where the top of the container is not in registry with the aperture in the cover. Said means may comprise also a forward stop comprising an abutment surface projecting from the rim portion of the container and engageable with a corresponding abutment surface towards the front of the cover against which the container abutment surface contacts when the container is pivoted forwardly about the pivot bar to a container unloading position where substantially the entire open top of the container is exposed.

Preferably the container and cover are manufactured from plastics material.

Preferably when the container is mounted on a post a pedal operated linkage is provided to move the flap between its open and closed positions.

An embodiment of the present invention will now be described by way of example only with reference to the accompanying drawings, in which:-

Fig. 1 shows a perspective view from the front one side and above of a dog waste container in its closed position;

Fig. 2 shows a view similar to Fig. 1 with the container in its open position;

Fig. 3 shows a partial perspective view of the top of the container showing a lining bag in its in-use position;

Fig. 4 shows a rear perspective view of the container in the open position;

Fig. 5 shows partial perspective view from the front and below of the container in the open position;

Fig. 6 shows a partial perspective view from the front and below of the cover of the container;

Fig. 7 shows a fragmentary perspective view of part of the top of the container;

Fig. 8 shows a side view of the part of the top of the container shown in Fig. 7;

Fig. 9 shows a diagrammatic side view of a post mounted container with a pedal operated flap opening mechanism; and

A container assembly which, in the embodiment to be described, is intended for use in streets, parks and other areas to receive dog waste, includes a rectangular cross-section open top container 10 pivotally mounted about its rear lower edge in a cover member 12 provided with mounting means 14 by which it is mounted on a post 16.

The container 10 has an upper generally rectangular rim portion 18 from which extend downwardly on two opposite sides slots 20 for receiving the handles 22 of a bunny bag 24 fitted within the container 10 to line it, the handles 22 of the bunny bag lying alongside the outer edges of the rim portion 18 in a recess 26 formed therein and in the slots 20 whereby no portion of the bag overlaps the top edge 31 of the container 10. The slots 20 are so positioned and spaced that they stretch the opening of the bunny bag 24 across substantially the entire area of the opening of the container 10 with the handles held close to the outer sides of the container.

The opening to each slot 20 is partially restricted by a tongue member 21 (Figs. 7 & 8) frames from a relatively resilient plastics material shut and fixed over the opening by a rivet 23. The tongue member serves to retain the bag handle in the slot but does not prevent the removal by force of the handle when the bag is manually removed.

The cover 12 has a top portion 30 from which extends downwardly a rear portion 32 and sides 34 and the container 10 is removably pivotally mounted on the rear portion 32. An arcuate downwardly opening channel 38 (Fig. 1) is provided at the rear edge of the container and, in use, is supported on a bar 40 extend-

ing across the rear 32 of the cover 12. It will be realised therefore that the container can be pivoted from a closed position as shown in Fig. 1 in which its rear wall is in contact with or adjacent to the downwardly extending portion 32 of the cover to an open position, as illustrated in Figs. 2, 4 and 5 in which the open top of the container pivots clear of the top portion 30 of the cover.

The top portion 30 of the cover 12 has an aperture therethrough by which the container 10, when it is in its closed position, can be loaded. The aperture is provided with a flap assembly 42 comprising a cover member 44 and a loading member 46 (Fig. 1) fixed at an angle thereto. When the flap assembly is opened the loading member 46 closes off the aperture 39 and can receive waste to be deposited in the container 10. Pivoting the flap assembly 42 to close the cover moves the loading member 46 downwardly towards the container thereby depositing the waste into the container while maintaining the contents of the container screened from view.

The outer regions 48 of the underside of the top portion 30 of the cover 12 are substantially planar and are provided with a resilient gasket 50 (Fig. 5) against which the upper edge 31 of the container 10 seats when in its closed position. It will be realised that the handles 22 of the bunny bag 24 lining the container 10 lie outside the periphery of the gasket 50 so that there is no possibility of them becoming contaminated by waste material introduced into the container.

An odour absorber 52 may be incorporated in the upper portion of the cover 12.

A lock 54 operated by a key 56 may be incorporated in the cover 12 at the junction between the upper and rear portions. The lock 54 is intended to receive a notched tongue 58 (Fig. 5) extending rearwardly from the rear upper rim 18 of the container 10 so that by co-operation of the tongue 58 in the lock 54 the container 10 can be locked in its closed position within the cover 12.

The use of the container when receiving waste has been described above and there now follows a description of the use of the container when it is being emptied.

To empty the container it is necessary to allow it to move from its closed position as illustrated in Fig. 1 to its open position as illustrated in Figs. 2, 4 and 5. This is done by operating the key 56 in the lock 54 so that the container 10 pivots forwardly under its own weight relative to the rear support bar 40.

The surface 60 (Fig. 5) defining the rear edge of the handle receiving recess 26 abuts stop 62 protruding laterally from the forwardly directed side 34 of the cover thereby preventing further pivotal movement. The sides of the container and consequently the recesses 26 at the container top housing the bunny bag handles 22 are then readily accessible to the operative emptying the container who, without any problem

from contamination can grip the handles 22, remove them from the notches 20 by forcing them past the tongue members 21 and remove the bag 24 from the container thereafter closing off the bag by tying the handles 22. A new empty bag can then be placed in the container which is returned to its closed position ready to receive further waste.

If, for example after the accidental rupture of a bag it is desired to clean the container 10 this can readily be achieved by removing it from the cover 12. The container 10 is moved to its open position and then lifted upwardly to disengage the pivotal mounting channel 38 from the pivot bar 40, so that it can then be dropped away from the cover. It is replaced by following the reverse procedure.

Figs. 9 and 10 show a modified post mounted container having a pedal operated linkage moving the flap assembly 42 between its open and closed position. In this modification the post 16 is of hollow square cross-section and has a lateral extension 70 rigidly fixed to its lower end. A linkage 72 having a foot pedal 74 at its outer free end is pivotally mounted to the extension 70 about a pivotal axis 76, the inner free end 78 terminating within the post 16 and being pivotally connected to a connecting link 80 having an operating bar 84 fixed to its upper end. The operating bar 84 passes through a slot in the post 60 and has a flap operating yolk 86 pivotally mounted thereto. In Fig. 10 only a representation 34' of the cover is shown on the drawing, the rest of the cover being omitted for clarity but it can be observed that the container 34' provides guide slots 88 for the yolk 86.

In operation downward pressure on the pedal 74 causes result and upward movement with all the links and yolks, 72,80,84,86 and an upward pivotal movement in the direction of arrow A of the flap 42. Obviously releasing the pedal results in downward movement of the arms, links and yolks and the flap under the action of gravity.

It would be realised that the flap 42 can be opened, as before, by hand if desired. It will be further realised that all the arms, links and yolks are located either within the post or within the cover so that they are effectively vandal proof.

Various other modifications can be made without departing from the scope of the invention, for example, a standard plastic bin bag or liner can be used and the same advantages can be achieved. When using bag or liner only its opposite sides are caused to overlap the upper rim portion 18 of the container. The front and rear edges of the bag are located within the container and at their lateral edges pass through the notches 20 in the opposed sides of the container.

In a further modification a standard lidded cover may be provided for the container, for example, a swing lid, a pivotal lid or a simple removable lid.

The pivotal arrangement may be modified for example, it is not necessary to provide a bar extending

across the rear bottom edge of the container and a complimentary channel formed in the container. Stub axles may be provided at each side of the cover receivable in recesses having downwardly directed openings.

In a further alternative the means for limiting the forward movement of the container could be substituted by a removable chain or cable of fixed length extending from the container to the rear portion of the cover.

The notches or slots in the upper rim portion of the container could be repositioned. For example, a single slot could be provided in each side. Alternatively, two opposed sides could each be provided with a single slot.

Claims

1. A container adapted to receive a lining bag, the container having an open top defined by a top rim portion, characterised in that said rim portion is provided with two opposed pairs of downwardly extending slots (20) adapted to receive sections (22) of the lining bag (24) whereby portions of the lining bag (22) can lie outside the container (10) between the slots (20).
2. A container as claimed in claim 1, characterised in that opposed sides of the container are each provided with a pair of slots (20) and in that the rim portion (18) of the container (10) in the region of and between the slots is recessed (26).
3. A container as claimed in claim (2), characterised in that a member (21) projects partially across the open top of each slot (20), the member being a resilient member fixed to the top rim portion (18).
4. A container as claimed in any of claims 1 to 3, characterised in that it is provided with a cover (12) to enclose its open top, the cover having an aperture (39) therethrough with a flap arrangement (42) located in the aperture to provide a platform (46) for receiving articles to be deposited in the container (10) when the arrangement (42) is in its open position and deposit them in the container when the arrangement is in its closed position.
5. A container as claimed in any of claims 1 to 4, characterised in that the container (10) is pivotally mounted relative to the cover (12) which is provided with mounting means whereby it can be attached to a wall, mounting post (16) or any other suitable support member and in addition to including a top portion (30) extending across the top of the container (10) in the closed position,

has sides (34) and a rear portion (32) extending down the rear and sides of the container.

6. A container as claimed in any of the preceding claims, characterised in that a resilient sealing gasket (50) is provided in the under face (48) of the cover (12) against which the upper rim (31) of the container (10) can abut the seal when the container is in its closed position.

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7. A container as claimed in any of the preceding claims, characterised in that the portions (32),(34) of the cover (12) extending over the rear and sides of the container (10) supports a container mounting bar (40) on which the rear lower edge of the container (10) is removably pivotally supported, said rear lower edge of the container includes a downwardly opening channel (38) whereby the container (10) is removable by lifting it away from the bar (40) such that the channel (38) disengages the bar.

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8. A container as claimed in claim 7, characterised in that means are provided for limiting the pivotal movement of the container (10) relative to the bar (40) said means comprising a rear stop (26),(62) to prevent pivotal movement of the container (10) in a rearwards direction beyond the position where the top (18) of the container is not in registry with the aperture (39) in the cover and a forward stop comprising an abutment surface (60) projecting from the rim portion (18) of the container (10) and engageable with a corresponding abutment surface (62) towards the front of the cover (12) against which the container abutment surface (60) contacts when the container is pivoted forwardly about the pivot bar (40) to a container unloading position where substantially the entire open top of the container is exposed.

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9. A container as claimed in any one of claims 4 to 8, characterised in that the container (10) and cover (12) are manufactured from plastics material.

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10. A container as claimed in any one of the claims 1 to 9 when mounted on a post (16) , is characterised in that when the container is mounted on a post, pedal operated linkage is provided to move the flap arrangement (42) between its open and closed positions.

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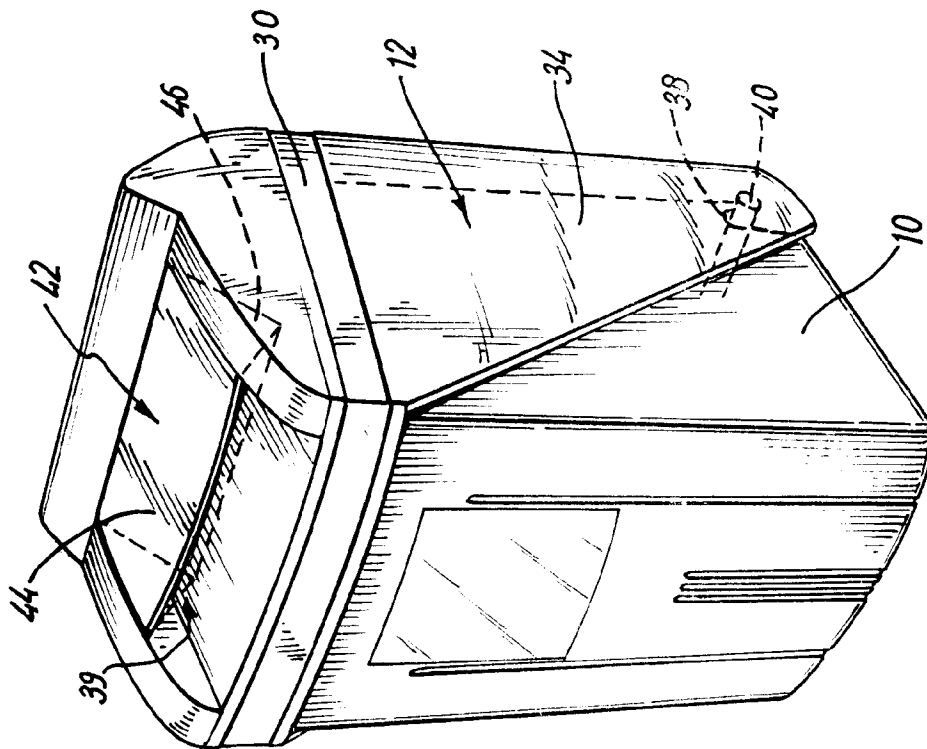


Fig. 1

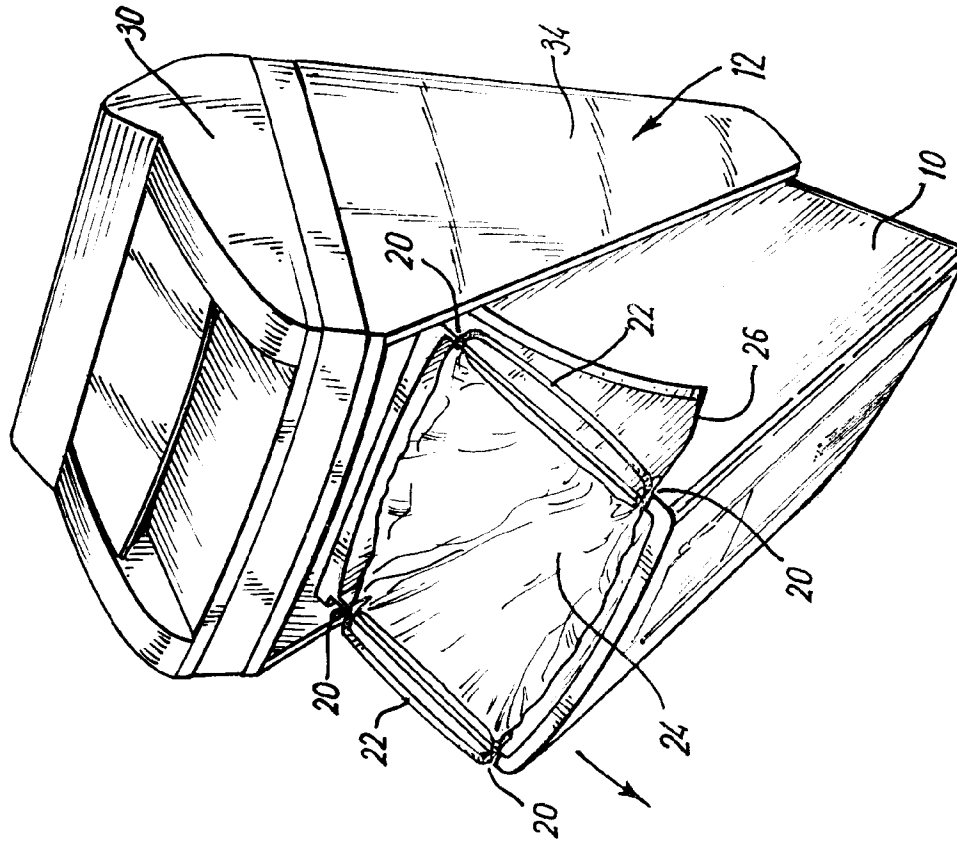


Fig. 2

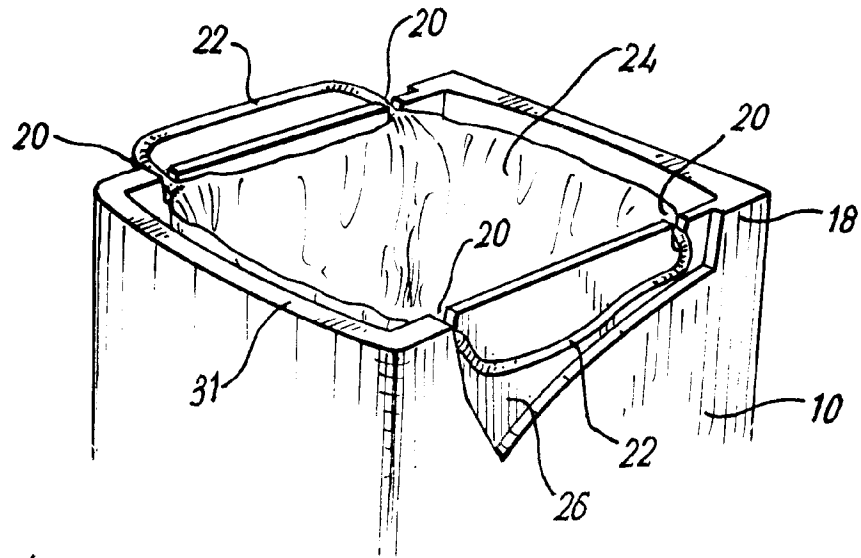


Fig. 3

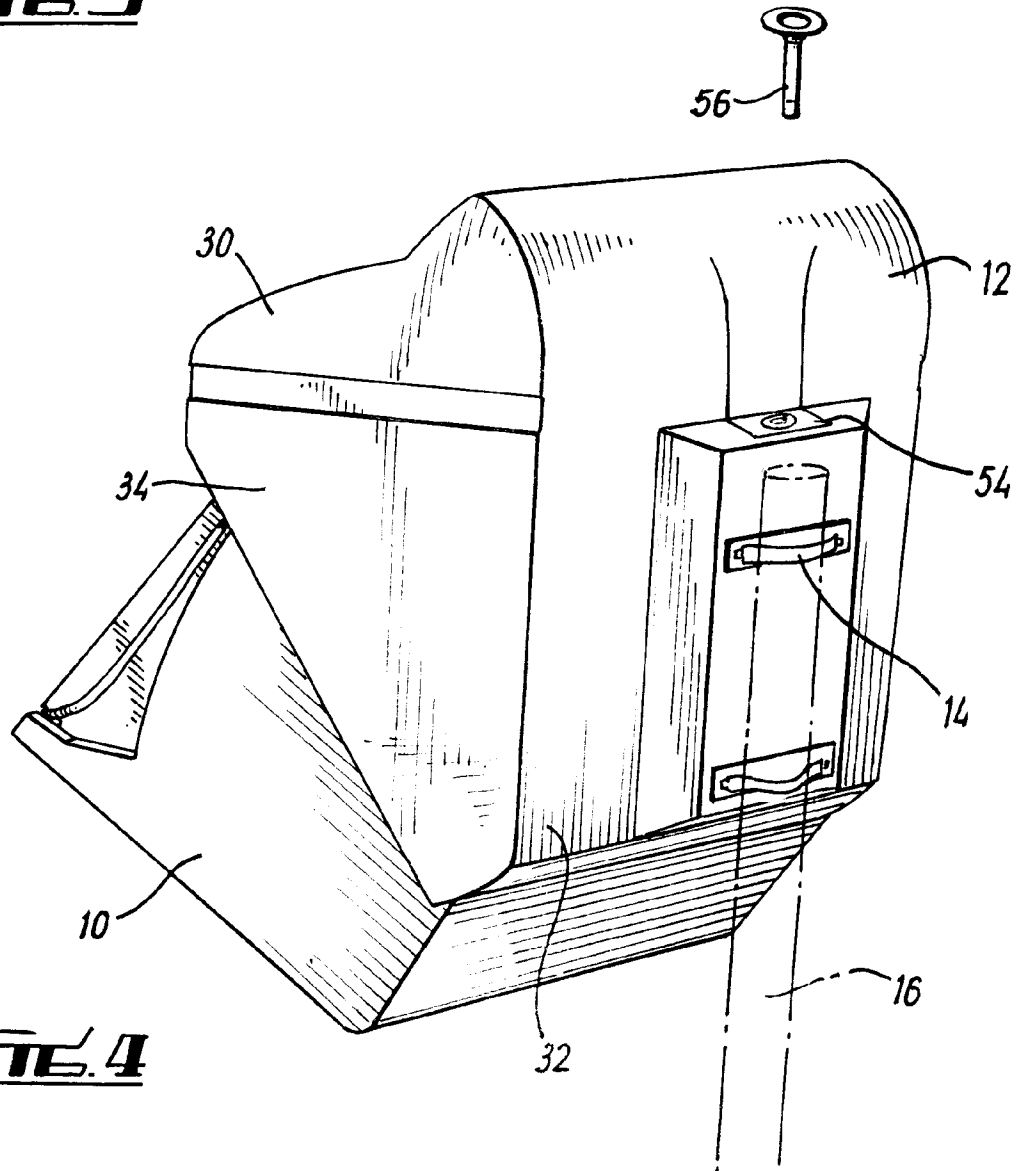
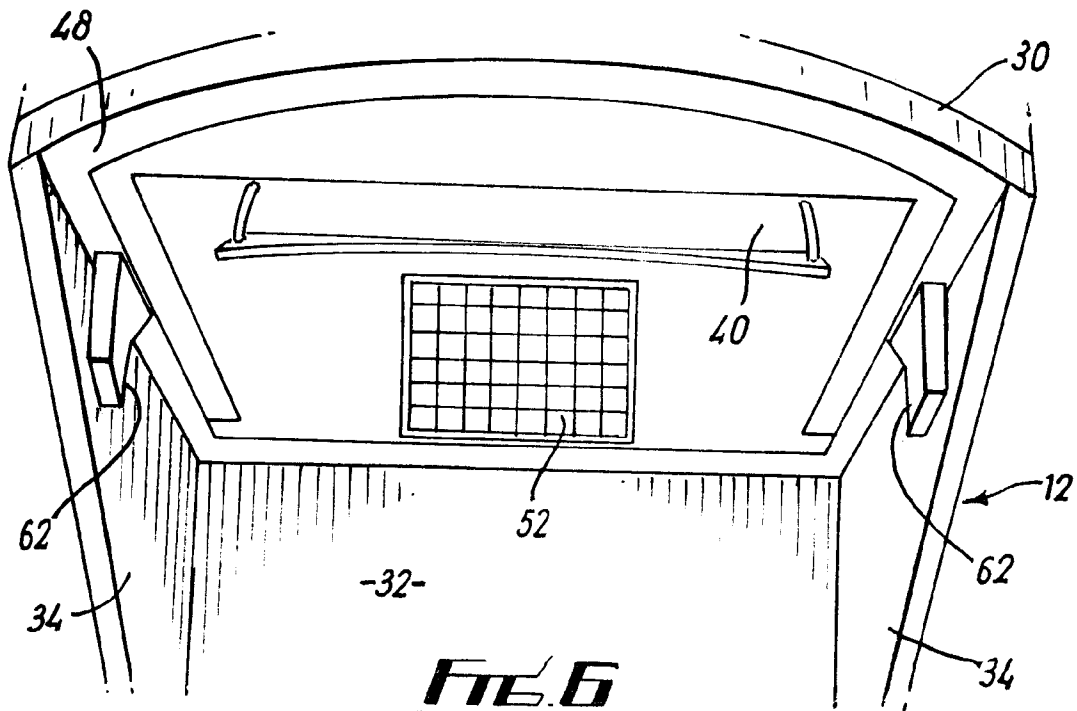
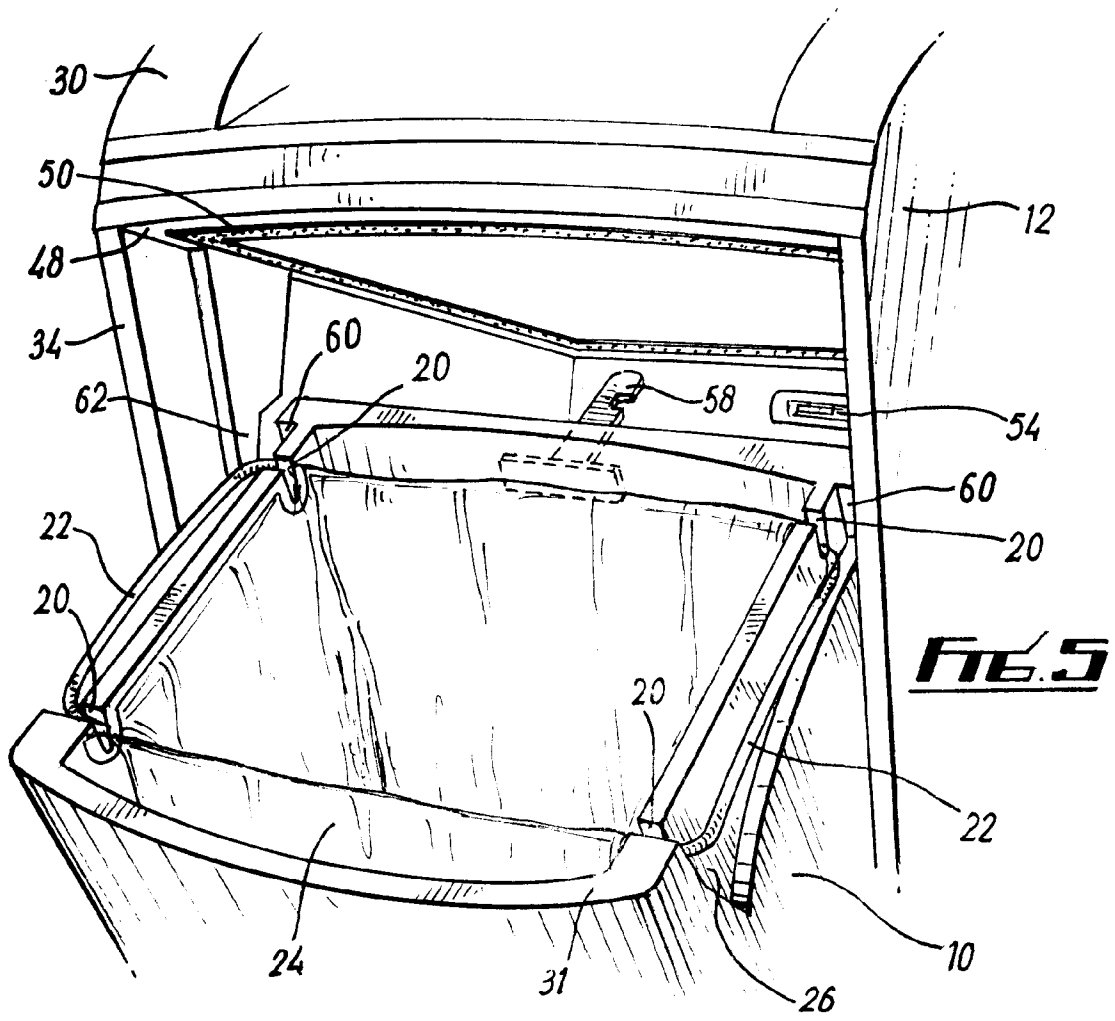


Fig. 4



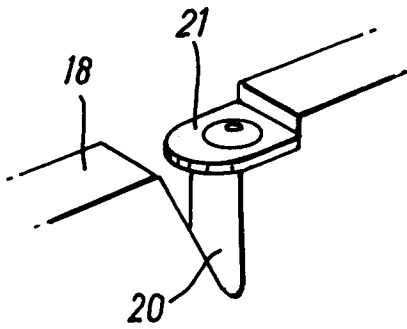


FIG. 7

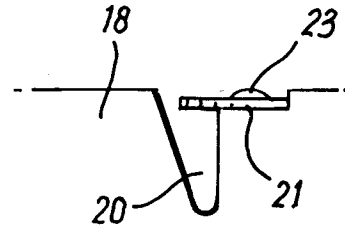


FIG. 8

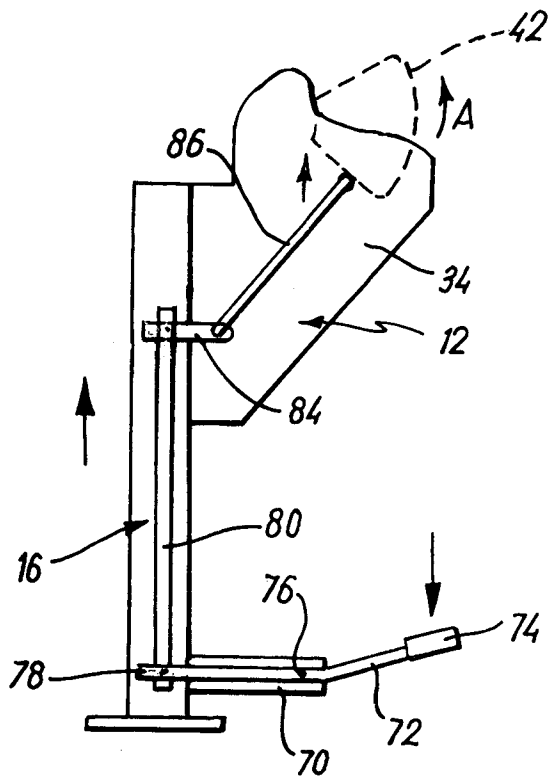


FIG. 9

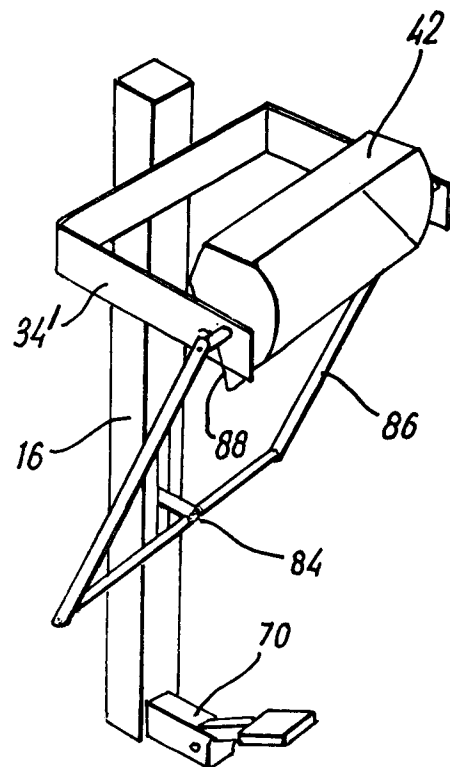


FIG. 10