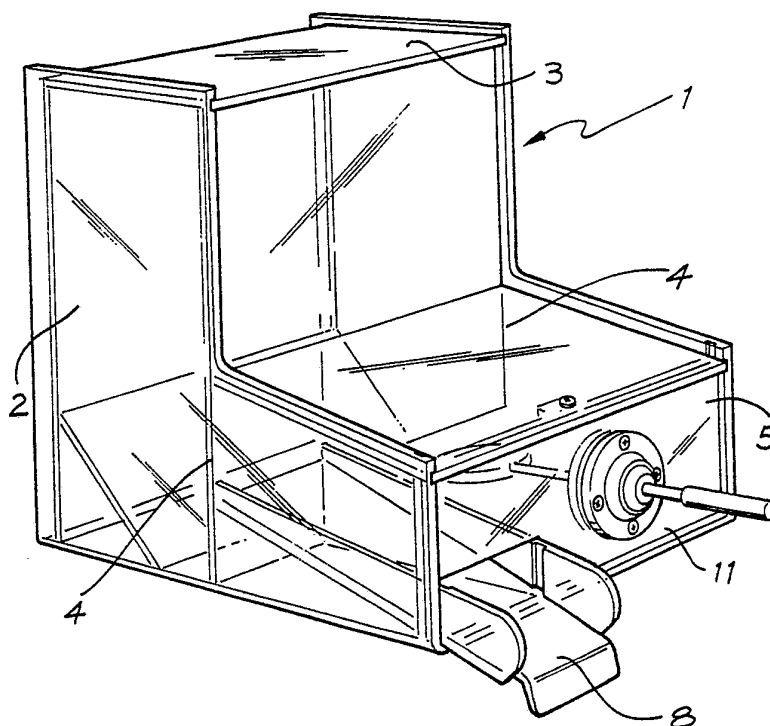




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(54) Title: DISPENSING APPARATUS**(57) Abstract**

A dispensing container (1), comprising a hopper storage chamber (2), a dispensing chamber (5) in communication with said hopper storage chamber (2), a shute means (8) connected to said dispensing chamber (5) and a dispensing device (11) to transfer products from said storage dispensing chamber (5) to said shute (8).

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DISPENSING APPARATUS

The present invention relates to a dispensing apparatus and, in particular, a dispensing apparatus for granular or similar products whereby the products are removed remotely by the operator ensuring no contamination of products by the operator.

In certain product lines, because of strict health requirements in Australia, it is not permitted that purchasers should have direct access to the products in a self-serve arrangement. To overcome this problem the applicant has provided an apparatus whereby a purchaser can dispense his own purchases without any risk of contamination of the remaining products.

A dispensing container comprising:

a hopper chamber into which objects to be dispensed are placed;

a second chamber in communication with the hopper means; to receive objects from the hopper chamber

a chute means connected from said second chamber to pass outside the container; and

a dispensing means extending through an opening into said second chamber whereby operation, remote from said container, of the dispensing means allows products in said second chamber to be transported by the dispensing means into the chute to be collected external of the container.

The present invention has uses for dispensing many products, however, at present it will be described with respect to one embodiment of the invention for use in dispensing sweets. Preferably the dispensing means comprises a ladle, The

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present invention relates to a dispensing apparatus and, in particular, a dispensing apparatus for granular or similar products whereby the products are removed remotely by the operator ensuring no contamination of products by the operator.

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The present invention has uses for dispensing many products, however, at present it will be described with respect to one embodiment of the invention for use in dispensing sweets. Preferably the dispensing means comprises a ladle, however it could comprise extendable and closable finger grabbers or rakes or the like.

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The present invention will now be described by way of example to the accompanying drawings in which:

Figure 1 illustrates the front view of one embodiment of the dispenser;

Figure 2 illustrates a plan view of the embodiment to illustrating Figure 1;

Figure 3 illustrates an elevation view of the embodiment as shown in Figures 1 and 2;

10 Figure 4 illustrates a side view of the embodiment shown in figure 1;

Figure 5 illustrates a view of another embodiment of the present invention;

Figure 6 shows a detailed sectional view of one form of the dispensing means and its respective retention means; and figures 6a and 6b show various forms of ladles or scoops.

One embodiment of the present invention, particularly useful for dispensing of sweets, is shown in figures 1 to 4. This device is constructed of transparent material such as perspex or the like which allows the contents i.e.
20 multi-coloured sweets to be displayed in the containers.

The dispensing apparatus 1 comprises a hopper section 2 into which articles to be dispensed can be inserted through an opening which is closed by a suitable lid 3 which can be locked into position by any suitable means.

A weir wall 4 separates the hopper from the dispensing compartment 5 except for the area 6 where the weir wall 4 stops short of the base 7 of the container, to allow material in the hopper 2 to flow into the dispensing compartment 5, so as to fill said dispensing compartment 5 to a level as determined by

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the weir wall 4. This weir wall 4 can be adjustable to decrease or increase the gap below it, so as to obtain the most efficient flow of sweets.

Situated in the dispensing compartment 5 is a discharge chute 8 which is separated from the materials to be dispensed by any suitable means such as a wall or the like. To dispense products, a ladle 9 is rotatably and pivotally connected into a joint 10 in the front wall 11.

10 A detailed view of this joint is shown in Figure 6 whereby the handle 12 of the ladle extends through a roller 13 which has a curved periphery 14 which is enclosed in an annular sleeve 15 which has a complementary inner surface to allow the roller 13 to rotate and pivot within the sleeve 15. The sleeve 15 is connected into a hole in the front wall 11 and is secured by any suitable means to the front wall. The ladle 9 is therefore located on a ball joint which allows a large degree of freedom of movement of the ladle scoop end.

20 In use, the user grasps the handle 12 from outside the dispensing compartment 5 and moves the ladle scoop 16 into the articles to be dispensed and lifting these articles onto the discharge chute 8 whereby they are collected external of the dispenser.

As shown in figure 5, a further embodiment comprises a hopper section 2 and a weir wall 4 as described previously. However the handle of the rake 16 extends through an opening 17 in the front of the dispenser, and in use, the user by the operation of the handle 12, rakes the sweets up into the chute 18 after collection.

As shown in figures 6a and 6b the dispensing means can

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have any desired shaped collecting end, such as a rack shown in figure 6a a ladle as shown in figure 6 or a combination as shown in figure 6b. Therefore the products are dispensed remote from the dispenser satisfying the requirements of the Department of Health, that there can be no contamination of materials which have not been dispensed. The ladle handle can be provided with appropriate stops, to allow for limited longitudinal movement.

10 The connection of the ladle handle to the container can be of any suitable means such as an elastomeric sleeve, or instead of the ladle or grabbers, an elastomeric glove could be used whereby the user inserts his or her hand into the glove and scoops the articles into the discharge chute.

Thus in a preferred form of the invention, with the dispenser made of transparent material, the users can readily see the material on display, especially if the product is multi-coloured sweets and can choose and dispense his own products in a self-serve manner without any risk of back contamination of the products not dispensed.

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THE CLAIMS

1. A dispensing container comprising:
 - a hopper chamber into which objects to be dispensed are placed;
 - a second chamber in communication with the hopper means to receive objects from the hopper chamber through an opening;
 - a chute means connected from said second chamber; and
 - a dispensing means extending through an opening into said second chamber whereby operation, remote from said container, of the dispensing means allows products in said second chamber to be transported by the dispensing means into the chute to be collected external of the container.
2. A dispensing container according to claim 1 wherein a weir wall separates the hopper chamber from said second chamber to provide an opening between the wall and the floor of the second chamber.
3. A dispensing container according to claims 1 or 2 wherein said dispensing means comprises a longitudinal handle with scooping means located at one end, wherein said handle extends externally of the second chamber.
4. A dispensing container according to claim 3 wherein said scoop means is spoon shaped.
5. A dispensing means according to claim 3 wherein said scoop means is shaped as a croupier's rake.
6. A dispensing container according to claim 2 or claims 3, 4, or 5 when appended to claim 2, wherein the height of the opening between the hopper chamber and the second chamber is adjustable by movement of the weir wall.

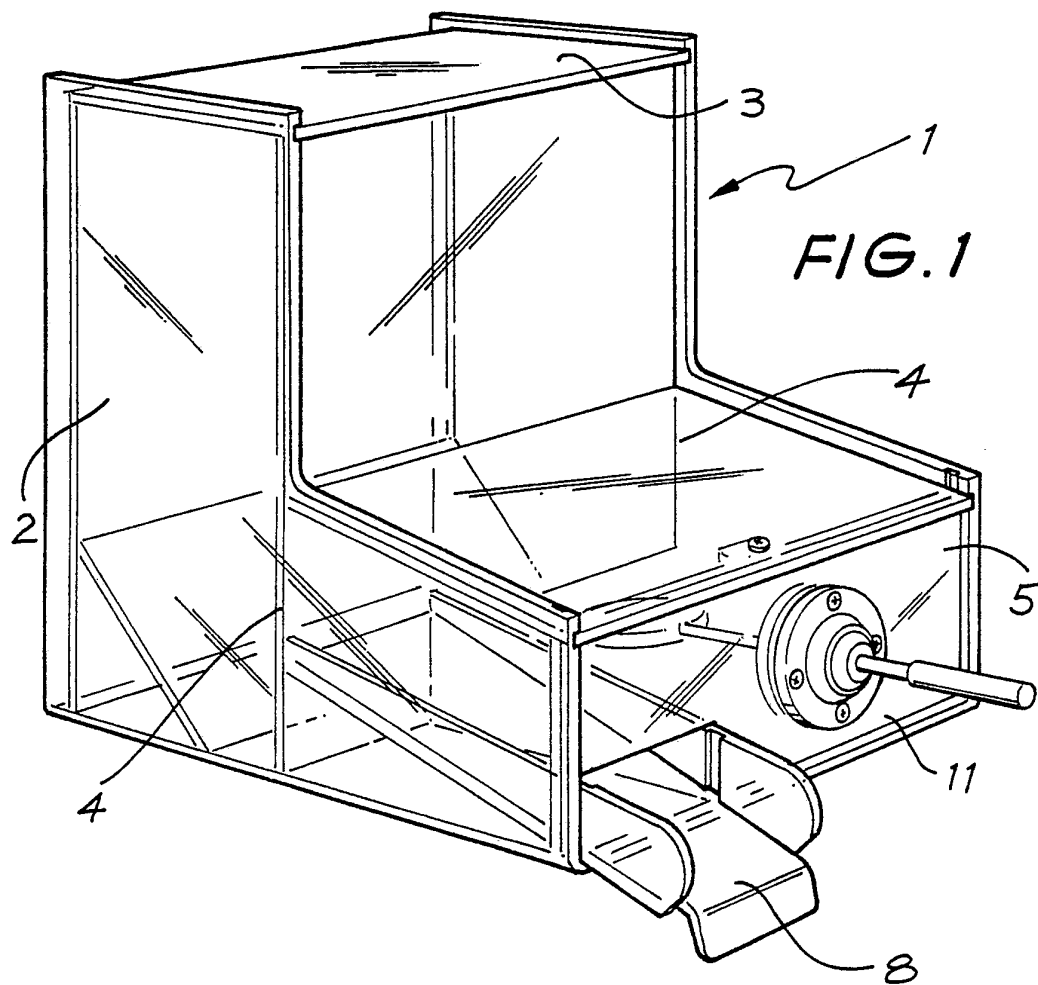
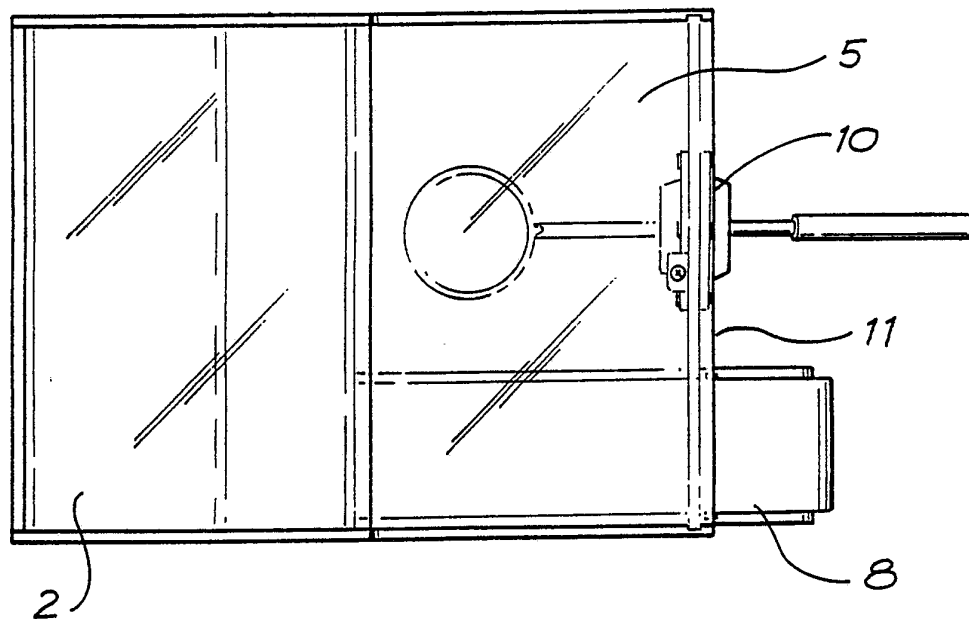
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7. A dispensing container according to any one of the claims 2 to 6 wherein said chute has side walls which are raised above the level of the opening from the hopper chamber into the second chamber.
8. A dispensing container according to claim 3 or any claim when appended to claim 3, wherein said handle is slidably located in a roller having a curved periphery which is held in position in the opening in the second chamber by means of an annular sleeve with a complimentary inner surface to that of the outer surface of the roller, to allow the roller to rotate and pivot within the sleeve.
9. A dispensing container according to claim 3 or any claim appended to claim 3 wherein said handle is held in said opening by an elastomeric sleeve.
10. A dispensing container according to claim 5 wherein said chute has its entrance from the second chamber located near the base of said second chamber, whereby objects to be dispensed are raked onto the chute.
11. A dispensing container substantially as hereinbefore described with reference to the accompanying drawings.

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**FIG. 2****SUBSTITUTE SHEET**

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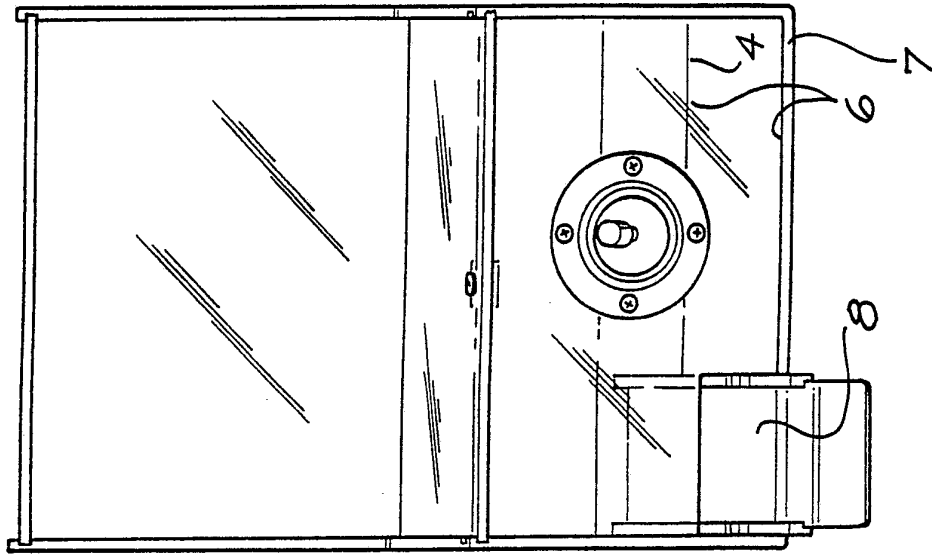


FIG. 3

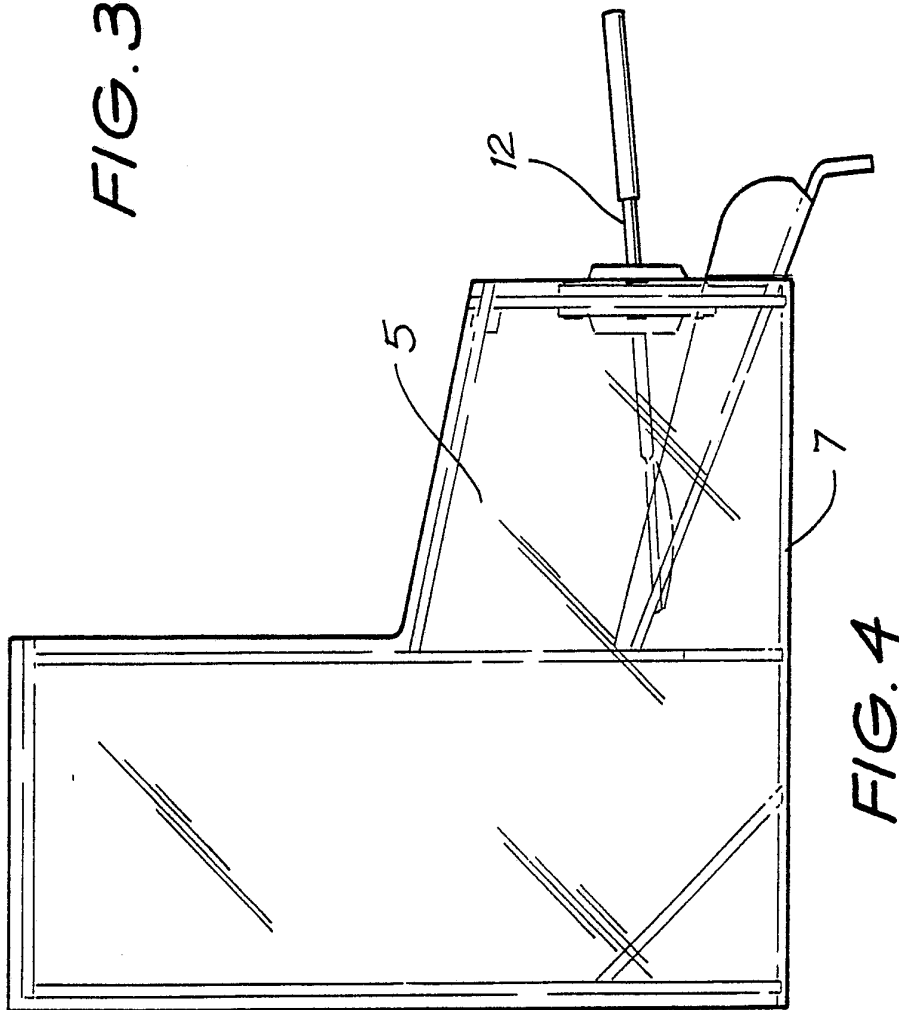


FIG. 4

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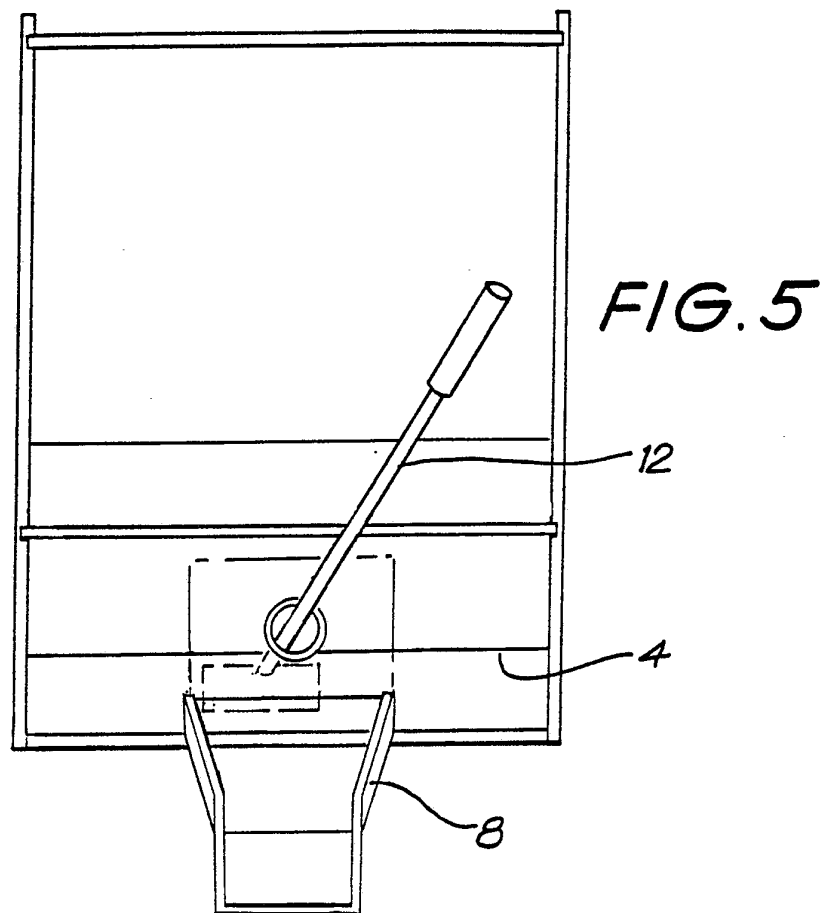
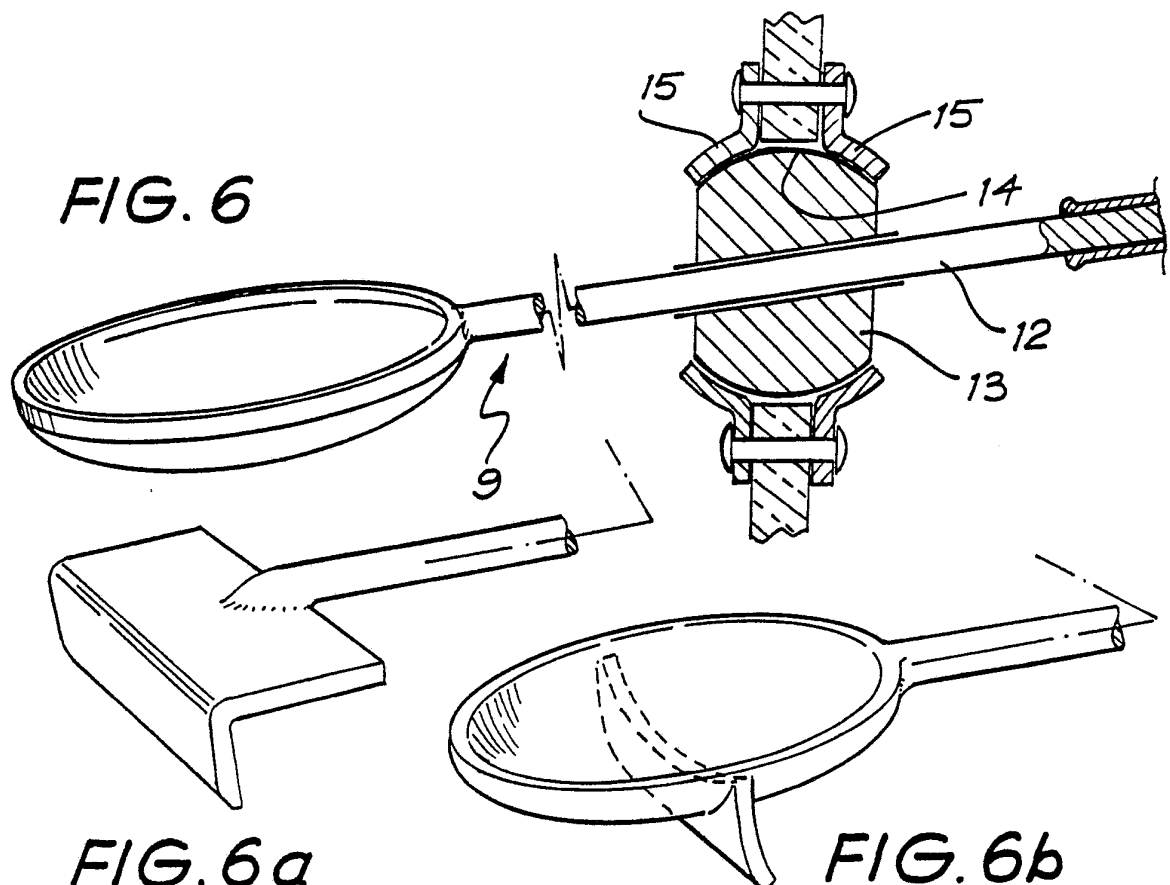


FIG. 6a

FIG. 6b

INTERNATIONAL SEARCH REPORT

International Application No PCT/AU 89/00077

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ⁶ According to International Patent Classification (IPC) or to both National Classification and IPC <div style="text-align: center; font-size: 1.2em;">Int. Cl. ⁴ A47F 1/03, 1/035</div>																				
II. FIELDS SEARCHED <div style="text-align: right; font-size: 0.8em;">Minimum Documentation Searched ⁷</div> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%; border-bottom: 1px solid black; font-size: 0.8em;">Classification System</td> <td style="border-bottom: 1px solid black; font-size: 0.8em;">Classification Symbols</td> </tr> <tr> <td style="text-align: center; padding: 10px 0;">IPC</td> <td style="text-align: center; padding: 10px 0;">A47F 1/03, 1/035</td> </tr> </table> <div style="text-align: center; font-size: 0.8em; margin-top: 10px;"> Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸ </div> <div style="text-align: center; padding: 10px 0; font-size: 1.1em;"> AU : IPC as above </div>			Classification System	Classification Symbols	IPC	A47F 1/03, 1/035														
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IPC	A47F 1/03, 1/035																			
III. DOCUMENTS CONSIDERED TO BE RELEVANT ⁹ <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.9em;"> <thead> <tr> <th style="width: 10%;">Category ¹⁰</th> <th style="width: 70%;">Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²</th> <th style="width: 20%;">Relevant to Claim No. ¹³</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td>FR,A, 1250115 (BEVERE) 24 March 1961 (24.03.61)</td> <td style="text-align: center;">(1,3-5,7)</td> </tr> <tr> <td style="text-align: center;">X</td> <td>AU,B, 27995/77 (506620) (BLAZEVIC) 22 February 1979 (22.02.79)</td> <td style="text-align: center;">(1)</td> </tr> <tr> <td style="text-align: center;">X</td> <td>AU,B, 64927/86 (564224) (SMITH) 6 August 1987 (06.08.87)</td> <td style="text-align: center;">(1,2)</td> </tr> <tr> <td style="text-align: center;">X</td> <td>GB,A, 1053983 (MONASH INDUSTRIES) 4 January 1967 (04.01.67)</td> <td style="text-align: center;">(1)</td> </tr> <tr> <td style="text-align: center;">X</td> <td>US,A, 4053087 (LACK) 11 October 1977 (11.10.77)</td> <td style="text-align: center;">(1)</td> </tr> </tbody> </table>			Category ¹⁰	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³	X	FR,A, 1250115 (BEVERE) 24 March 1961 (24.03.61)	(1,3-5,7)	X	AU,B, 27995/77 (506620) (BLAZEVIC) 22 February 1979 (22.02.79)	(1)	X	AU,B, 64927/86 (564224) (SMITH) 6 August 1987 (06.08.87)	(1,2)	X	GB,A, 1053983 (MONASH INDUSTRIES) 4 January 1967 (04.01.67)	(1)	X	US,A, 4053087 (LACK) 11 October 1977 (11.10.77)	(1)
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<div style="display: flex; justify-content: space-between; font-size: 0.8em;"> <div style="width: 45%;"> <p>¹⁰ Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"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</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"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.</p> <p>"A" document member of the same patent family</p> </div> </div>																				
IV. CERTIFICATION <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border-bottom: 1px solid black; font-size: 0.8em;"> Date of the Actual Completion of the International Search <div style="text-align: center; font-size: 1.1em;">6 June 1989 (06.06.89)</div> </td> <td style="width: 50%; border-bottom: 1px solid black; font-size: 0.8em;"> Date of Mailing of this International Search Report <div style="text-align: center; font-size: 1.2em;">27 June 1989 (27.06.89)</div> </td> </tr> <tr> <td style="border-bottom: 1px solid black; font-size: 0.8em;"> International Searching Authority <div style="text-align: center; font-size: 1.1em;">Australian Patent Office</div> </td> <td style="border-bottom: 1px solid black; font-size: 0.8em;"> Signature of Authorized Officer <div style="text-align: center;"> </div> </td> </tr> </table>			Date of the Actual Completion of the International Search <div style="text-align: center; font-size: 1.1em;">6 June 1989 (06.06.89)</div>	Date of Mailing of this International Search Report <div style="text-align: center; font-size: 1.2em;">27 June 1989 (27.06.89)</div>	International Searching Authority <div style="text-align: center; font-size: 1.1em;">Australian Patent Office</div>	Signature of Authorized Officer <div style="text-align: center;"> </div>														
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