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(71) Applicant: **WARD LESTER DISPLAY COMPANY LIMITED**
Angel Place,
Fore Street
Edmonton, London N18 2YD(GB)

(72) Inventor: **Harrington, Anthony Frederick Robert**
303 Broomfield Road
Chelmsford, Essex CM1 4DU(GB)

(74) Representative: **Wright, Simon Mark et al**
Kilburn & Strode
30 John Street
London WC1N 2DD (GB)

(54) Cover for a fuel delivery device.

(57) A cover (3) for a fuel delivery device (1) is provided which encloses a housing (13) and handle (7) of the device (1) and is fitted by placing a collar portion (29) over the end of a nozzle (17) and sliding the collar portion (29) down the nozzle so that the cover (3) is placed over the housing (13) and handle (7). The cover (3) is then secured to the device (1) by use of clip means (37) that engage with the handle (7). A flat top (21) is provided with indicia indicating that a petrol pump is out of use. When the cover (3) has been fitted, it cannot be removed from the device (1) without first removing the device (1) from a holster (43) in which the device (1) rests when it is not in use.

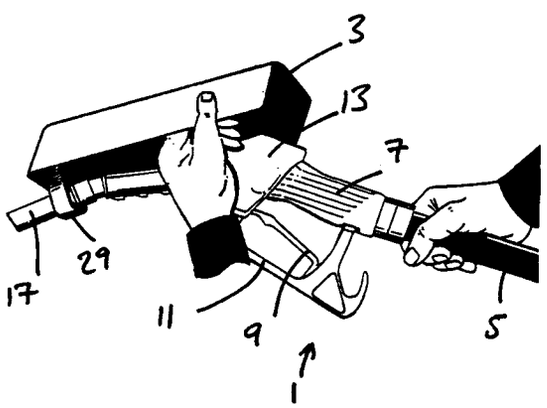

Figure 9

EP 0 608 596 A1

The present invention relates to a cover for a fuel delivery device. In particular, the invention relates to a cover that can be fitted over at least a portion of a housing, nozzle and handle of a petrol discharge or delivery unit, especially when the unit is out of use.

Most petrol pumps are provided with a concealed stationary pump for pumping petrol from an underground tank through a fuel pipe to a hand-held and manually operable fuel delivery device. Such devices often comprise the following main parts: a nozzle through which fuel is delivered or discharged; a housing which houses a fuel metering valve, the housing having a knuckle portion containing means for adjusting the valve; and a handle which is held by the person dispensing the fuel.

Petrol stations require at least one method to indicate when a particular fuel delivery device is not for use by customers. This may be for a variety of reasons, for example for some reason fuel cannot be discharged due to the fact that there is a fault with the pump, fuel line or delivery device or the underground tank is being refilled. There may of course be other reasons, for example if the underground tank supplying that fuel delivery device is empty. Whatever the reason, the petrol filling station needs to clearly inform potential customers that a particular delivery device cannot be used, and at present there are three main ways of indicating this.

Firstly, a small circular or rectangular plate is clipped to a part of the fuel delivery device. The plate has two metal clips on one side that are clipped onto the delivery device. Although these might be cheap to manufacture and easy to install, due to their relatively small size potential customers often do not initially realise that the delivery device is not for use. However, the main disadvantage is that they are too easy to remove (either by thieves or unscrupulous customers), whereupon the fuel delivery device then appears as if it is ready for use, contrary to the reality of the situation.

A second proposal is to provide a flexible plastic sheet that has a rectangular portion and a semi-circular portion which can be flexed relative to each other. The rectangular portion has one or more pairs of holes to allow string, cord or other elongate material to pass therethrough to tie the flexible sheet to the delivery device. The semi-circular portion has an aperture through which the nozzle passes. This can be difficult and fiddly to fit to the fuel delivery device. In addition, when the delivery device is placed in its rest or support (often called a holster) the semi-circular portion fouls on the holster and can hinder, if not prevent, the fuel delivery device being fitted into the holster.

A third idea involves providing a box-like device that has two clips on an inside that are adapted to fit over part of the fuel delivery device. The device is similar to a box without a lid. A back plate is provided that is substantially U-shaped, with a narrow slot running most of the length of the back plate. This slot is wider than the nozzle and so once the box-like device has been placed over the fuel delivery device, the back plate is slid over the nozzle and underneath the device, the slot forcing the ends of the clips together so that they encircle the delivery device. This is a cumbersome device, not only because it requires two separable parts. Another disadvantage is that it too can be easily removed from the fuel delivery device even when it is in its holster, thereby rendering it removable by less scrupulous clientele.

The present invention seeks to overcome, or at least mitigate, some of the aforementioned problems.

Thus according to a first aspect of the present invention there is provided a fuel delivery device cover comprising:

(a) a body adapted to cover at least a portion of the fuel delivery device;

(b) clip means adapted to clip the cover to the fuel delivery device; and

(c) a rigid and continuous collar portion that is adapted to fit around, and slide over, a nozzle of the fuel delivery device.

Here the fuel delivery device is intended to comprise a nozzle, a housing, a handle and optionally a portion of the fuel line. The housing will often comprise a knuckle portion that contains adjustment means for adjusting a fuel metering valve. The handle, which is usually (substantially) cylindrical, may comprise a gripping portion (to be held by a customer) and a lever or trigger for adjusting the rate of fuel delivery and a finger guard. The delivery device will also usually encompass a small portion of the fuel pipe (or line) such as a portion that is close to the handle.

The cover of the invention is thus adapted to be attached to the fuel delivery device. Since it is provided with a rigid and continuous collar portion, once the fuel delivery device has been placed in the holster (or other rest or support for the device), the cover cannot be removed or separated from the device without first removing the device from the holster.

Here the term "holster" is intended to encompass a rest or support for the fuel delivery device when the device is not in use (that is to say, when not delivering fuel). Usually the holster will have a recess, often in the form of a slot, into which the nozzle is placed. When replacing the fuel delivery device after use, usually the nozzle is inserted into the recess, and a portion of the delivery device

(often the finger guard) used to rest or support the device on a suitable portion of the holster ready for future use. Thus, the provision of the rigid and continuous collar may serve as a deterrent to removal of the cover from the fuel delivery device.

The fuel will usually be diesel or petrol (such as two-star, three-star, four-star, unleaded or super-unleaded).

Preferably the collar is shaped so that it does not hinder or prevent placement of the fuel delivery device in the holster (with the cover attached). One way to achieve this is to make the collar narrower than the holster, for example narrower than the holster recess.

The cover may be in the form of a five-sided (e.g. rectangular) box, for example omitting the bottom. Thus, it may consist of a top and four side walls. These walls may consist of two long walls and two short walls, the latter being placed, approximately, at the front and rear. The rear wall may be placed just inside from the ends of each of the side walls and top. Thus, the rear wall may be contiguous with both side walls and top.

At least a portion of the body is preferably substantially flat. This may, for example, be the side walls and/or preferably the top. This is to allow indicia to be placed on the flat surface, which may indicate that the fuel delivery device is out of use.

Suitably the cover will fit on top of the fuel delivery device, that is to say, it can be secured from the top of the device. In this configuration the knuckle portion of the housing may face the underside of the body (such as the underside of the top).

The body may, if desired, cover substantially the whole of the delivery device. However, it is preferred that it encloses at least the housing and handle, and perhaps also a small portion of either the nozzle and/or the fuel pipe that extend from the housing and handle respectively. By "enclose" it is meant that these portions of the fuel delivery device are (substantially if not completely) concealed within or by the body.

The clip means will suitably be a clip, snap or friction fit over at least one part of the fuel delivery device. Although a plurality of clip means may be provided, the cover may function adequately with only one.

The clip means may clip to any suitable part of the fuel delivery device, but it is preferred that it is positioned so that it engages with the handle.

The clip means may take the form of any known clip that can be releasably secured to a portion of the fuel delivery device. However, it will usually be adapted to mate with a cylinder, for example the handle. Thus, the clip may comprise two prongs, that are resiliently biased together, that will fit either side of a portion of the fuel delivery device.

Alteratively or in addition, the clip means is formed in a wall or other portion of the body. It may therefore comprise a cut-away section (for example U- or C-shaped) with a narrowed entrance. Thus, the clip means may comprise an aperture having an entrance which is narrower than the aperture. Thus, the cut-away section (or aperture) may be shaped to substantially conform with the portion of the fuel delivery device to which it is to be fitted. For example, if it is to fit on the handle, which is generally circular in cross-section, the cut-away section may also be substantially circular. In this situation the clip means is preferably formed in a wall of the body, for example in the rear wall.

The collar portion is suitably provided with a curved portion that may fit underneath the nozzle. It is suitably shaped so that it is a reasonably close fit to the nozzle. It may therefore be the only part of the cover in contact with the fuel delivery device, apart from the clip means. The curved portion may therefore be substantially circular, or, in preferred embodiments, is semi-cylindrical. This latter preference provides increased strength. However, the collar may be provided with a circular aperture if desired.

The collar is continuous so that once it has been slid over the nozzle, and the fuel delivery device placed in the holster, the cover cannot be removed. That is to say, suitably the cover and fuel delivery device cannot be separated (at least without breakage or damage to the cover).

Preferably the collar portion will extend inwardly towards the body. Suitably it will be shaped so that it does not hinder or prevent placement of the fuel delivery device (such as the nozzle) into the holster (such as the holster recess). To this end the collar is suitably narrower than the holster (such as the holster recess). The collar portion may therefore comprise the curved portion attached to the body by means of two, suitably parallel, arms. The collar portion will suitably depend from the front wall, if present.

The cover is suitably a one piece or single piece item. This may allow it to be made cheaply and efficiently. Suitably it comprises a rigid or semi-rigid plastics material that can be made, for example, using a moulding method, in particular by injection moulding. Where applicable, all of the walls (of the body, such as the top, side walls and front and rear walls, as well as the clip means) have a thickness of from 2 to 4 mm.

According to a second aspect of the present invention there is provided a method of securing a cover to a fuel delivery device, the method comprising:

(a) providing the cover with a body that is adapted to cover at least a portion of the fuel delivery device;

(b) placing a rigid continuous collar portion of the cover over the end of the nozzle, and sliding the collar along the nozzle; and

(c) attaching the cover to the fuel delivery device by clip means provided on the cover.

Stages (b) and (c) are interchangeable, although (c) will usually be the latter. All stages can be conducted manually.

Usually it will be necessary to remove the fuel delivery device from the holster (such as by taking the nozzle out of the holster recess) before performing (a). The same is true for conducting the opposite, after (c), that is to say before replacing the fuel delivery device in the holster.

A third aspect relates to a fuel delivery device fitted with a cover of the first aspect.

Other preferred features and characteristics of the second and third aspects are as the first *mutatis mutandis*.

The invention will now be described by way of example only, with reference to the accompanying drawings which are not to be construed as being limiting. In these drawings:

Figure 1 is a perspective view from below and to one side of a fuel delivery device cover in accordance with the present invention;

Figure 2 is a side view of the cover of Figure 1 with the cover in section when attached to a fuel delivery device;

Figure 3 is a plan view of the cover before use;

Figure 4 is an underneath view of the cover;

Figure 5 is a front view of the cover;

Figure 6 is a section of the cover along the line VI-VI in Figure 4;

Figure 7 is a section of the cover along line VII-VII of Figure 4;

Figure 8 is a section of the cover along line VIII-VIII of Figure 4;

Figure 9 is a perspective view of the cover being fitted onto a fuel delivery device;

Figure 10 is a perspective view of the cover when fitted on the fuel delivery device; and

Figure 11 is a perspective view of three fuel delivery devices, one being provided with a cover according to the invention.

Referring firstly to Figures 1 and 2, a fuel delivery device 1 is provided with a cover 3 according to the invention. The delivery device shown consists of a fuel pipe 5, a generally cylindrical handle 7, a trigger 9 (for controlling the rate of fuel discharge) a finger guard 11, a housing 13 including a knuckle portion 15 and a nozzle 17.

The cover 3 is generally rectangular in shape and resembles a five sided box, minus a lid (or bottom). It has a body 19 that covers part of the nozzle 17, the housing 13, the handle 7 and a small portion of the fuel pipe 5. The body has a flat top 21 that is used to display indicia or other information to potential customers, for example that the delivery device 1 is out of use.

The body 19 has four walls. There are two side walls 23,24 a front wall 25 and a rear wall 27. These walls are spaced in a slightly outwardly direction so that the area defined by the edges of the four walls 23,24,25,27 is slightly greater than the area of the top 21. When the cover 3 is placed on the fuel delivery device 1, it substantially conceals and covers the housing 13 and handle 7.

A collar portion 29 is provided that consists of two parallel arms 31 that depend from the front wall 25. The front wall 25 is proved with a U-shaped recess 33 to enable the nozzle 17 to be more easily slid through the collar. The two arms meet a curved portion 35 in the shape of a semi-cylinder.

A clip means 37 is formed in the rear wall 27. This consists of a circular aperture 39 having a narrowed entrance 41.

In use (see Figures 2, 9, 10 and 11), the fuel delivery device 1 is first removed from its holster 43. The collar portion 29 is then slid over the end of the nozzle 17 and down the nozzle 17 towards the housing 13. Once the curved portion 35 of the collar portion 29 abuts the housing 13 the cover 3 can be pushed downwardly towards the knuckle portion 15, thereby engaging the clip means 37 with the handle 7.

The handle 7 is therefore forced through the narrowed entrance 41 into the circular aperture 39, which is of a slightly greater diameter than the handle 7. The fuel delivery device 1 can then be replaced in the holster 43 by first inserting the nozzle 17 into a recess 45 of the holster 43, and allowing the finger guard 11 to rest within the holster 43. In this position, the cover 3 cannot be removed (at least not intact and without damage) from the fuel delivery device 1 while it remains in the holster 43. In addition, the width of the arms 31 of the collar portion 29 are narrower than the holster recess 45 so that the fuel delivery device 1 can be easily replaced into the holster 43 without any part of the cover snagging or fouling on the holster 43.

Claims

1. A fuel delivery device cover (3) comprising:

(a) a body (19) adapted to cover at least a portion of the fuel delivery device (1);

(b) clip means (37) adapted to attach the cover to the device; and

(c) a rigid continuous collar portion (29) adapted to fit around, and slide along, a nozzle (17) of the device (1).

2. A cover according to claim 1 which, in use, does not hinder or prevent placement of the

device into a holster (43) which acts as a rest or support for the device.

3. A cover according to claim 2 wherein the collar portion is narrower than a recess of the holster into which the nozzle is placed.

4. A cover according to any preceding claim which has a flat surface (21) which bears indicia.

5. A cover according to any preceding claim which substantially conceals at least a housing (13) and handle (7) of the delivery device.

6. A cover according to any preceding claim wherein the clip means comprises a cut-away section or opening (39) in a wall (27) with a narrowed entrance.

7. A cover according to any preceding claim made from injection moulding a plastics material in a single mould.

8. A method of securing a cover (3) to a fuel delivery device (1), the method comprising:
(a) providing a cover that comprises a body (19) that is adapted to cover at least a portion of a fuel delivery device (1);
(b) placing a rigid continuous collar portion (29) of the cover over a nozzle (17) of the fuel delivery device and sliding the collar along the nozzle; and
(c) attaching the cover to the fuel delivery device by using clip means (37) provided on the cover.

9. A method according to claim 10 additionally comprising before (a), removing the fuel delivery device from a holster that acts as a rest or support for the device, and replacing the device in the holster after (c).

10. A fuel delivery device (1) having a cover (3) according to any of claims 1 to 7 or provided with a cover (3) according to the method of claim 8 or 9.

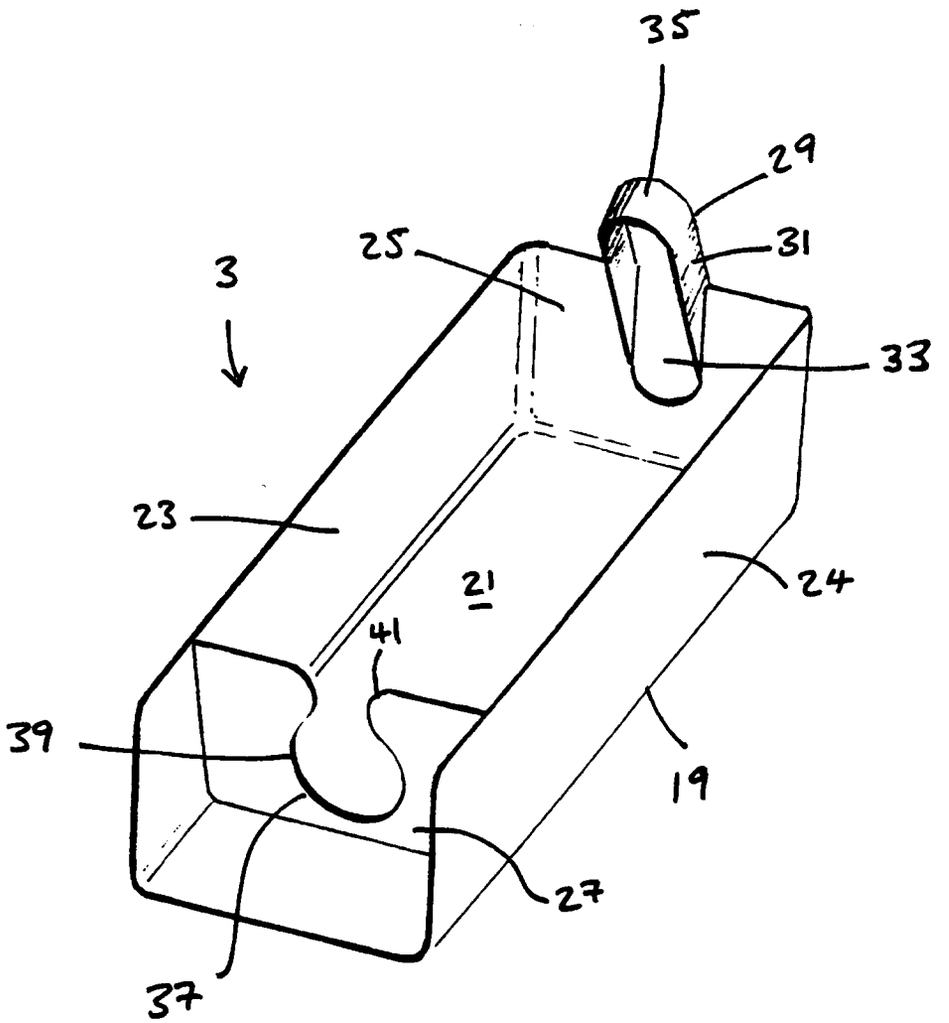

Figure 1

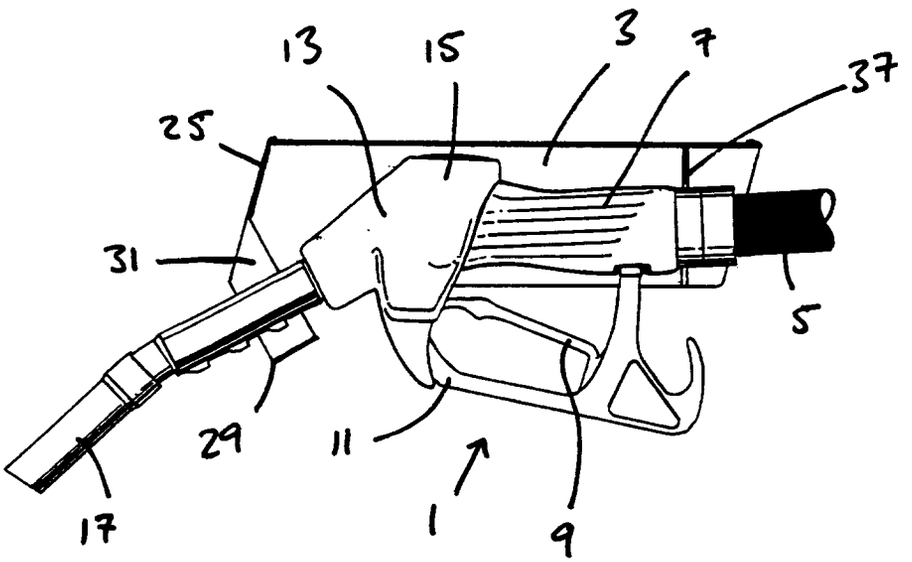

Figure 2

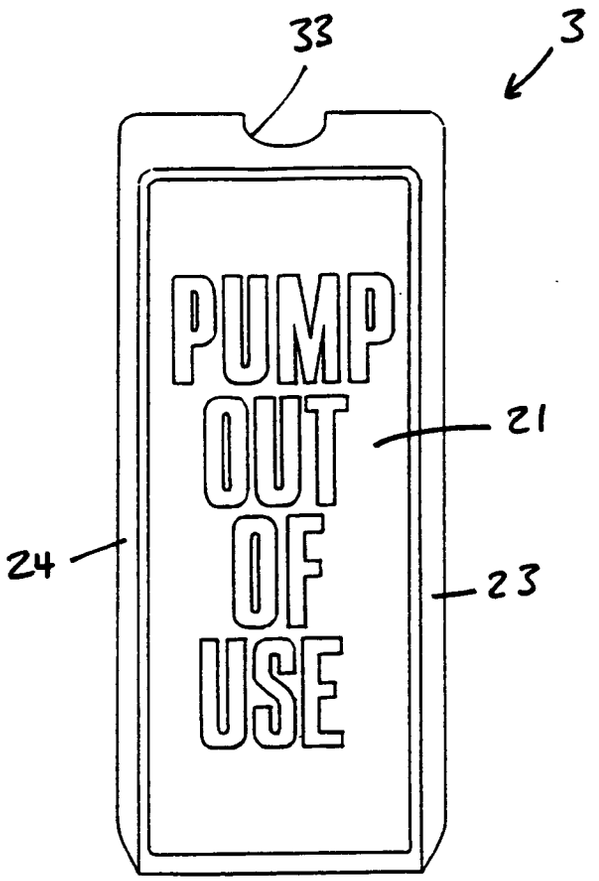

Figure 3

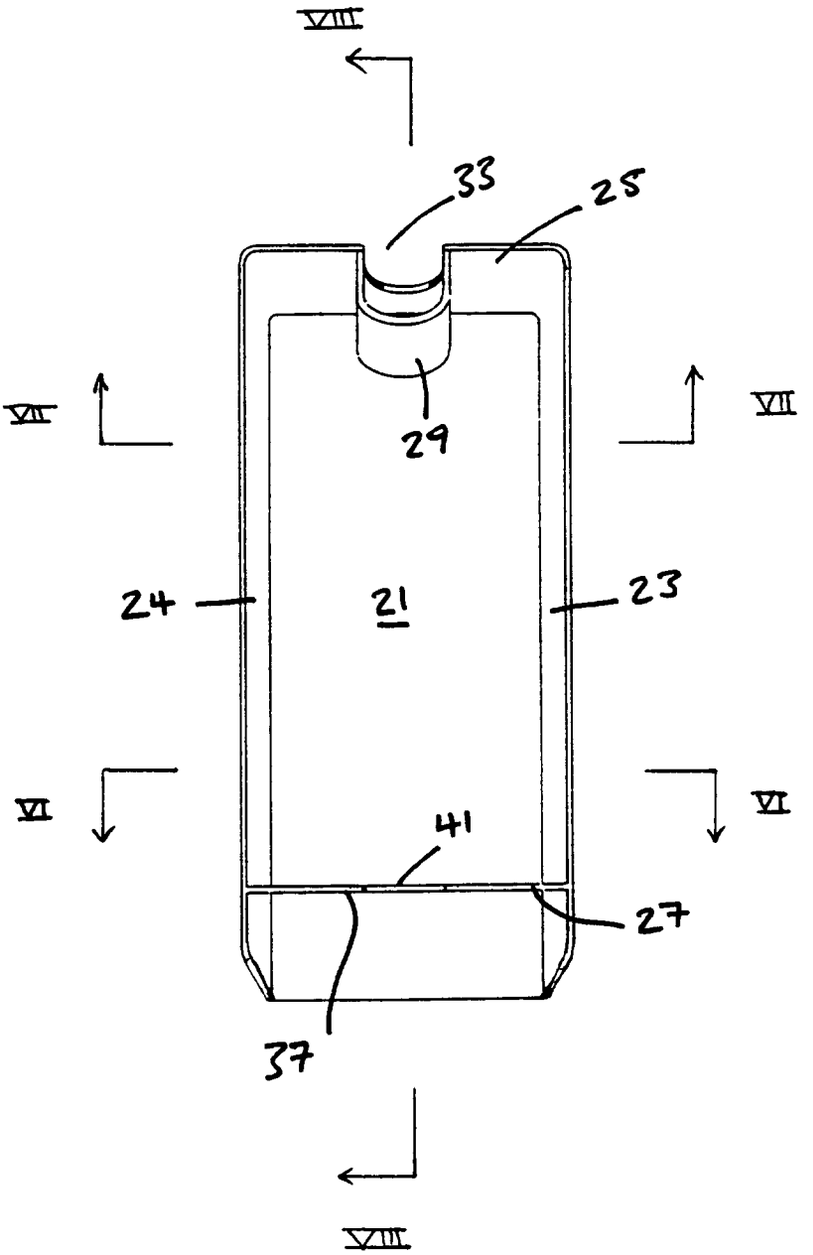

Figure 4

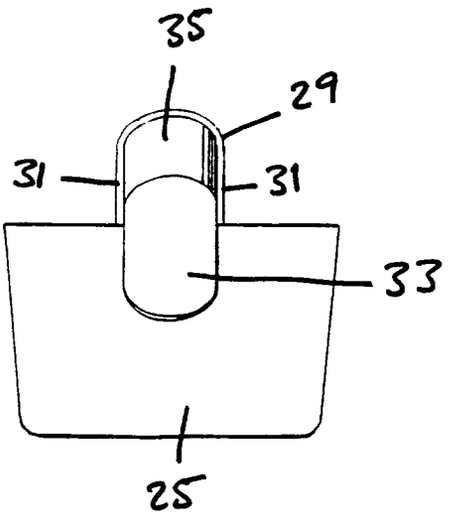

Figure 5

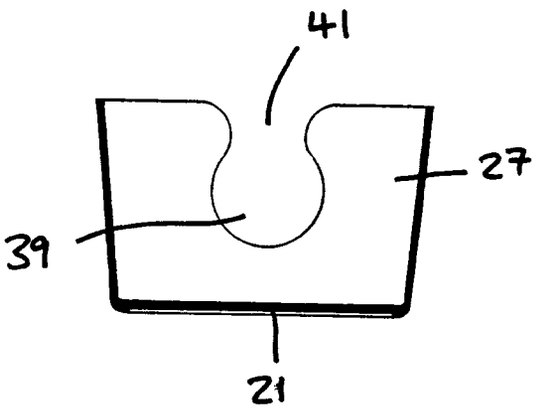

Figure 6

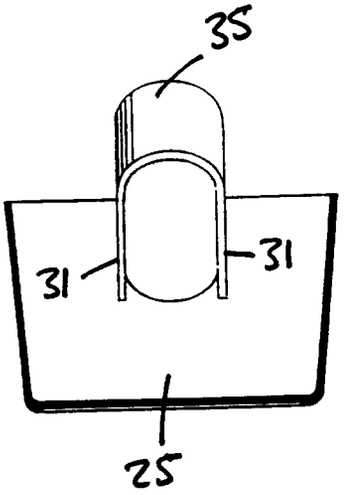

Figure 7

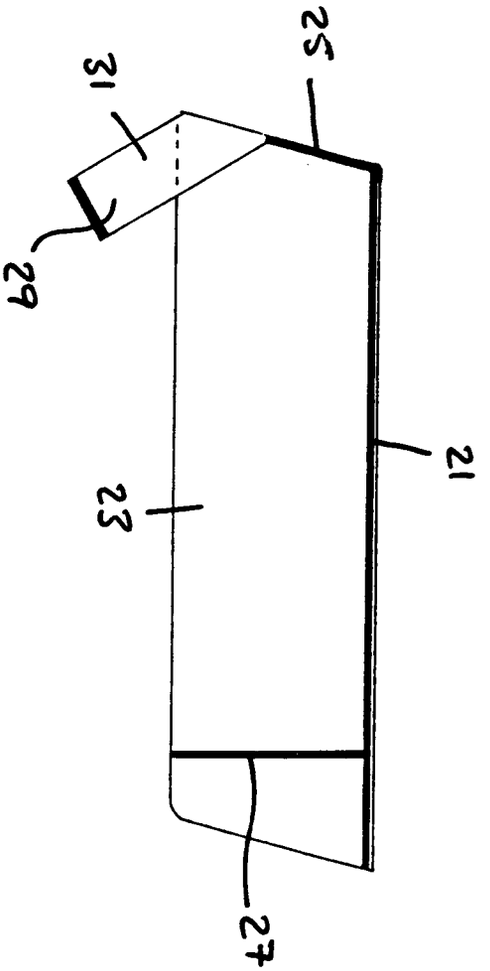

Figure 8

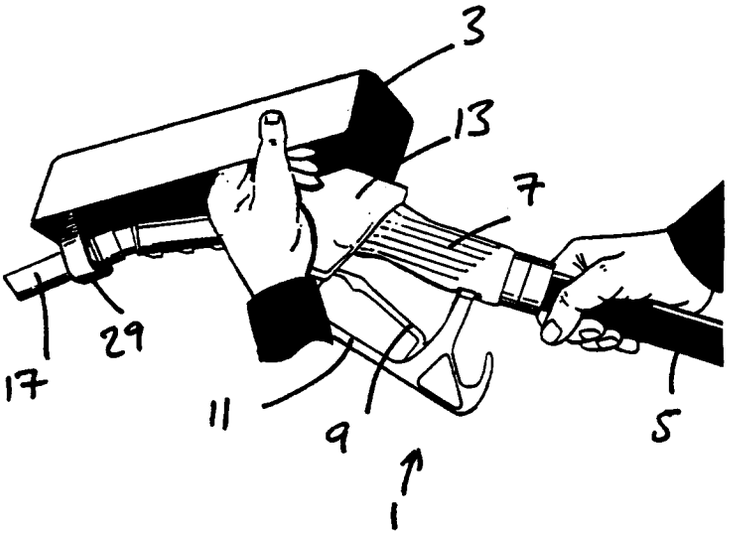

Figure 9

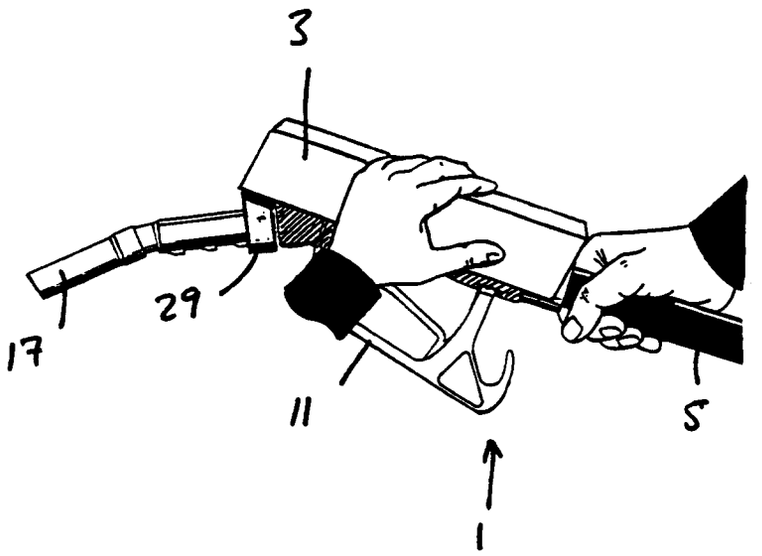

Figure 10

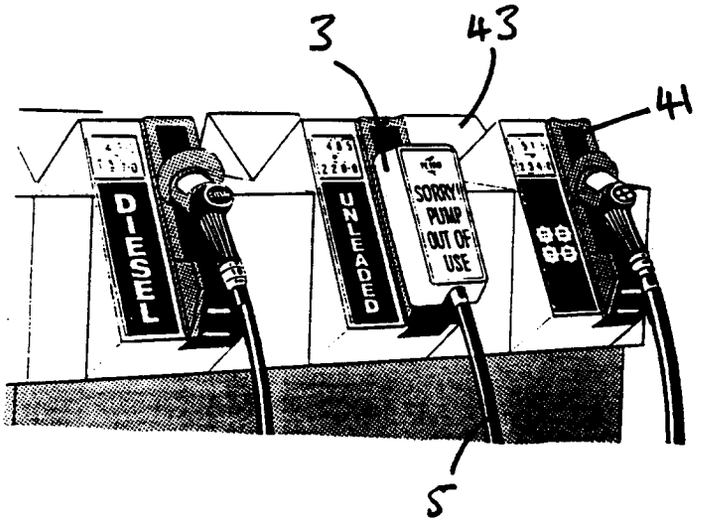

Figure 11

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 93 30 2949

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)
A	WO-A-92 03373 (RICHMOND) * the whole document * -----	1-10	B67D5/37

TECHNICAL FIELDS SEARCHED (Int.Cl.5)
B67D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	9 May 1994	Lingua, D

CATEGORY OF CITED DOCUMENTS

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