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(71)(72) Applicant and Inventor: RICHMOND, Raymond [GB/GB]; Speed Developments Ltd., 1A Barley Hill Lane, Garforth, Leeds LS25 1DX (GB).

(74) Agent: BAILEY, WALSH & CO.; 5 York Place, Leeds LS1 2SD (GB).

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(54) Title: AN INDICATOR ASSEMBLY FOR A PETROL PUMP

(57) Abstract

The invention provides that a cover for a petrol pump nozzle, to indicate that it is out of use is adapted to be connected by clips to the nozzle to cover same. The cover slidally receives a display plate which may carry the wording for example “OUT OF USE” and the display plate also in being applied to the cover locks one of the clips preventing removal of the assembly from the nozzle without removal of the plate.
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An Indicator Assembly for a Petrol Pump

This invention relates to an assembly for indicating when, for example, a petrol pump is out of use. At present, the only clearly identifiable use of the invention of which we are aware is in relation to petrol pumps (or gas pumps in the United States) and therefore although reference is made hereinafter exclusively to petrol pumps, should an equivalent use be identified where the invention is directly applicable, it is intended that such use should be covered by the present invention.

There are very many thousands of petrol pumps throughout the world, and it frequently happens that for various reasons, any particular petrol pump may be "down" or out of use. This may be due to mechanical failure, due to exhaustion of supply of petrol, due to repair or due to maintenance, but whatever the reason, it is necessary for the sake of the motorist that there should be some indication to show that the petrol pump is out of use. If there is no such indication, there is a danger that a motorist will endeavour to operate the pump and this in some circumstances could have serious repercussions.

One commonly used method for indicating that a petrol pump is out of use is to cover the pump with a tarpaulin cover which may be printed with the words "Out of Use" or alternatively an additional sign may be placed adjacent the pump to show that it is out of use. This method of indicating when a pump is out of use is satisfactory when the pump is embodied in a single unit having a single pump nozzle but there is a tendency for modern petrol pumps to comprise a housing with a plurality of independently operaable nozzles, for example for the dispensing of petroils of different grades or different compositions. Many forecourts now offer unleaded petroils as
well as leaded petrols. Where a pump housing has a bank of nozzles, and it is usual to have banks of nozzles on opposite sides of the housing so that motorists can draw up to opposite sides of the housing and select the appropriate nozzle from each bank, then when one or a pair of nozzles is out of use, it is not possible to use a tarpaulin cover satisfactorily to indicate that a particular nozzle is out of use. Merely positioning a loose sign adjacent or above the out of use nozzle is unsatisfactory because it is difficult to indicate which nozzle is out of use, and moreover loose signs do tend to be removed or displaced either purposely or accidentally, or may be blown away by the wind.

The present invention seeks to provide an assembly for indicating when a petrol pump is out of use, which overcomes the disadvantages as aforesaid.

In preferred embodiments of the invention, the assembly will be securely attached to the nozzle or the housing surrounding the nozzle so as to prevent accidental or deliberate removal of the assembly.

In a particularly preferred arrangement, the assembly serves to cover the nozzle so that it cannot be engaged by the hand, preventing any possibility of undesirable operation of the nozzle trigger.

The assembly also serves to provide a means of indicating that the nozzle to which it is attached is out of use.

According to the present invention there is provided an assembly for indicating when, for example, a petrol pump is out of use, comprising an enclosure casing or hood for housing a petrol pump nozzle and a display member connected to the casing or hood, said display member having means to
indicate or being adapted to indicate that the petrol pump is out of use, and wherein the assembly has connection means adapting the assembly to be removably attached to the petrol pump nozzle or adjacent member when the nozzle is in the out of use position whereby a motorist approaching the petrol pump will see by said display member that the pump is out of use.

As can be appreciated from the above, the pump nozzle can be concealed by the casing when the assembly is applied, and the display member will either be provided with a display message indicating for example that the pump is out of use, or a display message may readily be attached thereto.

The assembly can either be coupled to the nozzle, or may be designed to be coupled to the slot in the housing in which the nozzle in the out of use condition is placed.

It is preferred that the assembly be connected firmly to the nozzle.

The display member may be a plate removably attached to said casing or hood, and the plate may have a portion which extends outwardly from the petrol pump so that a motorist approaching the nozzle side on will see the projecting plate. Alternatively the plate may simply be a flat plate which is removably attached to said casing or hood.

In a particularly advantageous construction, the plate and casing or hood are relatively slidably for the connection and disconnection of same. This facilitates the manufacture of the assembly, but it is to be mentioned that the plate and casing or hood can be integral and can be a one-piece moulding, but forming the plate and casing or hood into relatively slidable parts provides yet a further preferred
construction of the present invention in that the connection means may include a C-clip carried by the casing or hood which is adapted to clip around the outlet tube of the petrol pump nozzle when the assembly is connected thereto, and said plate has a locking panel having a slot therein and into which the ends of the said clips slide when the plate and casing or hood are slid together into the connected position. The relative sliding of the plate and hood therefore can be used as the locking means for locking the assembly to the nozzle. The above is one particular method of achieving this, but the invention also covers other methods.

The casing or hood may include a second C-clip which is adapted to clip onto the nozzle handle grip when the assembly is connected to the nozzle.

The casing or hood and plate may be arranged such that the casing or hood is to one side of the plate, leaving a section of the plate at the other side free to carry display material, although the casing hood can be located symmetrically relative to the plate.

The casing and plate are preferably of plastics material.

As an alternative to using the plate to lock one of the clips, one or more locking pins may be used. Each of these pins is secured, through a hole in the casing, adjacent at least one of the clips.

An embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, wherein:

Fig. 1 is an exploded perspective view of an assembly according to the invention, the figure also showing a petrol
pump nozzle to which the assembly is to be attached;

Fig. 2 shows a perspective view of the assembly of Fig. 1 when attached to the petrol pump nozzle;

Fig. 3 is an exploded perspective view of the assembly of Fig. 1 but from the opposite side;

Fig. 4 is a sectional view taken on a line IV-IV of Fig. 3; and

Fig. 5 is an enlarged view of a detail of the plate of the assembly.

Referring to the drawings, in Fig. 1 is shown a petrol pump housing 10 having an inclined upper face 12 in which is provided a slot 14 receiving petrol pump nozzle 16 of conventional construction. The nozzle 16 has an outlet nozzle tube 18 from which petrol can be dispensed, and a handle grip 20 which is engaged by the user for manipulating the nozzle, and also causing dispensing of the petrol by virtue of the depression of a trigger 22 in the handle portion 20. Upon operation of the trigger 22 petrol flows from the source of the pump through flexible tube 24. The arrangement described is well known and conventional.

Fig. 1 also shows an assembly for covering the nozzle 16 when it is in the position shown in Fig. 1, and when it is out of service. The assembly comprises a casing or hood 26 which is a thermo formed plastics material component, and a display member in the form of a plastics material plate 28 which as shown is rectangular (although it could be of any suitable shape) and has a slot 30 for receiving the casing 26. The slot 30 is dimensioned to correspond to the dimensions of casing 26. Casing 26 is elongated and has a peripheral
flange 32 and holding lugs 34. The casing 26 is connected to the plate 28 simply by sliding the casing into the slot 30 as indicated by arrow 34 so that the flange 32 lies behind the side of the plate 28 which is visible in Fig. 1, whilst the lugs 34 lie above the plate side shown in Fig. 1 whereby the casing 26 and plate 28 form the assembly according to the embodiment of the invention. It will be seen that the plate 28 carries a legend 36 as follows - "SORRY OUT OF USE" which is the message to be conveyed as the assembly is applied to the nozzle 16 only when it is out of use.

Fig. 2 shows the assembly in position and covering the nozzle 16 preventing motorists from removing same from the slot 14. Fig. 2 also shows at 40 that a second nozzle 42 may be carried by the same housing 10, and the nozzle 42 may still be in service although nozzle 16 is out of use. This figure indicates how important it is to be able to provide an assembly such as the assembly according to the invention on a multi-nozzle dispenser. Fig. 2 also illustrates in dotted lines at 44 that the pumps may be arranged back to back so that there may be parallel banks of nozzles on opposite sides of housing 10. It may be necessary to use separate assemblies according to the embodiment of the invention on the back to back nozzles if they are supplied from the same source.

If reference is now made to Fig. 3, the opposite sides of the casing or hood 26 and plate 28 are shown, and it will be seen that to the top of the slot 30 the rear of the plate 28 is provided with a locking panel 46 having a locking slot 48.

The cross-sectional shape of the panel 46 is best seen in Fig. 4, and it will be seen that said flanges 50 of the panel 46 are secured to the main body of plate 28 and adjacent the flanges 50 are shoulders 52 which are spaced from edge
portions 28A of the main body of the plate 28 adjacent the slot 30, and second shoulders 54 are located further from the main body of the plate 28, and the free edges of these shoulders define a slot 56 as shown in Fig. 3, which is open towards the edge of the plate 28 into which slot 30 open. The slot 56 is shown in greater detail in Fig. 5, and it will be seen that at its open end, it is tapered as indicated by reference numeral 58 so that the opening is slightly wider than the remainder of the slot 56 for a purpose to be explained.

The casing 26 is a recessed body, and at the top end 60 there is an angled portion 62 (Fig. 1) of the base, and a section 64 which is parallel to the plane containing the flange 32.

At the lower end 66 the casing is cut away as shown at 68 in order to accommodate the flexible hose 24 when the assembly is fitted to the nozzle 16 as shown in Fig. 2.

Inside the casing 26 are provided two spring C-clips 70 and 72 which are mounted on plates 74, 76 which in turn are respectively anchored to the inner surfaces of base section 62 and base section 64 as shown. The C-clips 70 and 72 are of springy plastics material, and face towards the open side of the casing 26. The clip 70 is angled downwardly so that the clips 70 and 72 are presented at the correct angles to springingly engage the nozzle tube 18 and the handle grip 20 when the casing 26 is pushed onto the nozzle. The clip 70 as shown in Fig. 4 extends beyond the plane containing the flange 32 and the extremities 70A (Fig. 4) are turned outwardly and these extremities 70A are engaged by the free edges of the shoulders 54 of the panel 46 when the plate 28 and casing 26 are pushed together as indicated by arrow 34. Thereby the shoulders 54 or the slot 56 form a locking means locking the clip 70 firmly anchored to the nozzle tube 18 as
shown in Fig. 4. The nozzle tube 18 extends through the slot 56. For the fitting of the assembly to the nozzle 16, the casing 26 is applied first and this is followed by the sliding of the plate 28 into engagement with the casing 26. It is to be noted that the lugs 34 are provided with slots 34A for receiving the plate edges which define slot 30, as shown in Fig. 2. The chamfered lead-in portions 38 of the slot 56 enable the shoulders 54 to engage the extremities of the clip 70 and to wedge same firmly into contact with the nozzle tube 18.

An effective and secure fixing of the assembly to the nozzle tube is achieved, and as can be seen in Fig. 2, the resulting assembly has an aesthetically appealing appearance as well as performing its function satisfactorily.

The embodiment of the invention described is not intended to limit the general scope to the invention and other manifestations and modifications are possible.

As an alternative to using the plate to lock the C-clip, locking pins may be used. In this respect, a locking pin may be inserted through a hole in the casing or hood 26 at each side of the C-clip. These locking pins engage the clip ends and prevent the C-clip from opening when force is applied tending to remove the casing from the nozzle.

Alternatively, the C-clips may be held closed by means of a separate U-shaped member which is slid over the free ends of at least one of the C-clips to secure same between the parallel arms thereof.

The components of the assembly may be selected from relatively inexpensive materials whereby the cost of same is maintained at as a low a value as possible, and the size and
shape of the plate can be varied to suit any particular petrol pump or other requirement.
CLAIMS

1. An assembly for indicating when, for example, a petrol pump is out of use, comprising an enclosure casing or hood for housing a petrol pump nozzle and a display member connected to the casing of hood, said display member having means to indicate or being adapted to indicate that the petrol pump is out of use, and wherein the assembly has connection means adapting the assembly to be removably attached to the petrol pump nozzle or adjacent member when the nozzle is in the out of use position whereby a motorist approaching the petrol pump will see by said display member that the pump is out of use.

2. An assembly according to claim 1, wherein the display member is a plate removably attached to said casing or hood.

3. An assembly according to claim 2, wherein said plate and casing or hood are relatively slidable for the connection and disconnection of same.

4. An assembly according to claim 3, wherein said connection means includes a C-clip carried by the casing or hood which is adapted to clip around the outlet tube of the petrol pump nozzle when the assembly is connected thereto, and said plate has a locking panel having a slot therein and into which the ends of the said clip slide when the plate and casing or hood are slid together into the connected portion.

5. An assembly according to to claim 4, wherein said casing or hood houses a second C-clip which is adapted to clip onto the nozzle handle grip when the assembly is connected to the nozzle.

6. An assembly according to claim 3, 4 or 5 wherein said
plate has a slot into which the casing or hood slides, said casing having a peripheral flange which lies to one side of the plate and holding lugs which lie to the other side of the plate to hold the casing or hood to the plate.

7. An assembly according to any one of claims 2 to 5, wherein the casing or hood is an elongated member and the plate is generally rectangular or square and the elongated casing or hood lies parallel to an adjacent one side of the plate, leaving at the other side of the casing or hood a substantial section of the plate for display material.

8. An assembly according to Claim 1 or 2, wherein said plate and casing are integral.

9. An assembly according to Claim 1, 2, 3 or 8 wherein said connection means comprises a pair of C-clips adapted to clip onto the handle and outlet nozzle tube of the nozzle.

10. An assembly according to any preceding claim, wherein said casing or hood is a vacuum formed plastics material component.

11. An assembly for indicating when, for example, a petrol pump is out of use, substantially as hereinbefore described with reference to the accompanying drawings.
**INTERNATIONAL SEARCH REPORT**

**International Application No** PCT/GB 90/00030

**I. CLASSIFICATION OF SUBJECT MATTER**

According to International Patent Classification (IPC) or to both National Classification and IPC

IPC^5: G 09 F 23/00

**II. FIELDS SEARCHED**

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Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched

**III. DOCUMENTS CONSIDERED TO BE RELEVANT**

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<td>US, A, 2405264 (H. MARVEL) 6 August 1946, see claims</td>
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**IV. CERTIFICATION**

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International Searching Authority: EUROPEAN PATENT OFFICE

Signature of Authorized Officer: Mme N. KUIPER

*Form PCT/ISA/210 (second sheet) (January 1985)*
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