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(54) **Spacer for holding an openable member in an open position.**

(57) The invention relates to a spacer for use in holding an openable member, such as the rear door of an estate car, in at least a partially open position, the spacer including spaced apart first and second sections at least one of which sections is engagable with part of lock means which normally holds the openable member in a closed position.

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A SPACER

This invention relates to a spacer for use in holding an openable member in an open position and is particularly, though not exclusively, concerned with a spacer for use in enabling a member such as a rear door or boot lid of a car to be securely retained in at least a partially open position.

It is well known that distress can be caused to a pet animal, such as a dog, left alone in a parked car on a hot day if adequate ventilation is not provided. Usually some ventilation can be provided by leaving a window of the vehicle open. However, opening a window to an extent which will allow sufficient flow of air into the car is disadvantageous from a security point of view. Leaving the rear door, or boot lid, of the car completely open is disadvantageous for the same reason.

According to one aspect of the invention there is provided a spacer for holding an openable member in at least a partially open position, the spacer including spaced apart first and second sections at least one of which is engagable with part of lock means which normally holds the member in a closed position.

The openable member is preferably the boot lid of a saloon car, or rear door of an estate car or hatchback. It will be appreciated, however, that the openable member could be any other similarly pivotable member which it is desirable to hold securely in a partially open position e.g. a gate.

The lock means may comprise first and second co-operable lock members which interengage when the lock means is in a locked condition, in such a case, one lock member engages the first or second section of the spacer.

Preferably, the first section engages a first lock member comprising the lock means and the second section engages a second lock member comprising the lock means.

The first lock member may co-operate with the first section of the spacer so that one of the first lock member and first section of the spacer is received in a first recess or aperture defined by the other of the first lock member and first section of the spacer.

The second lock member may co-operate with the second section of the spacer so that one of the second lock member and second section of the spacer is received in a second recess or aperture defined by the other of the second lock member and second section of the spacer.

The second recess or aperture may be defined by overlapping portions of the spacer.

The spacer may comprise two elongate halves. The two halves may be pivotally interconnected.

Preferably, the two halves are pivotally interconnected by an element e.g. a rivet. The element may be positioned between the first and second sections.

Preferably the two halves are pivotally interconnected whereby a lock member may be introduced between said halves in an open position and then securely engaged by the halves by pivotal movement of the halves into a closed position.

It is preferred that the two halves are provided with respective complementary recesses which align to define the second aperture when the halves are in the closed position.

A surface of said first section may be transverse to a surface of said second section. Preferably said surfaces are perpendicular to each other.

Where the spacer comprises two elongate halves, the halves forming the first section may define said first aperture. Each half may be formed with an aperture so that when the halves are closely adjacent the two apertures align to form said first aperture.

The spacer may be formed from strip material. Preferably, the spacer is formed from metal e.g. mild steel. Alternatively, the spacer may be cast for example in alloy or may be moulded in a strengthened plastics material.

A shaped protective element may be provided which at least partially encases the spacer in use. Preferably, the protective element is shaped to encase the spacer and a portion of the lock means.

The protective element may be formed from a tough material. Preferably the protective element is formed from an opaque plastics material.

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

Figure 1 is a plan view of a spacer in accordance with the invention in a closed position;

Figure 2 is a plan view of the spacer in Fig. 1 in an open position;

Figure 3 is a side view of the spacer in Fig. 1 in a closed position;

Figure 4 is a schematic diagram showing the spacer of Figs. 1 to 3 in use;

Figure 5 is a plan view of a protective cover for use with the spacer of Figs. 1 to 4;

Figure 6 is a view from above of the protective cover of Fig. 5;

Figure 7 is a side view of the protective cover about a spacer; and

Figure 8 is a plan view of the spacer and protective cover shown in Fig. 7 and a lock.

The spacer 10 comprises first and second sec-

tions 12 and 14 respectively and is formed from mild steel. The spacer is formed in two halves, 16, 18 respectively, which are pivotally connected by a rivet 20 whereby the two halves can be moved between the open position shown in Fig. 2 and the closed position shown in Fig. 1. The first and second sections 12, 14 are substantially at right angles to each other.

The first section 12 defines an aperture 21 therethrough which is substantially rectangular.

Two complementary recesses 22 and 24 are defined by halves 16 and 18 in section 14. The recesses 22 and 24 align when the spacer is in the closed position to define a substantially circular aperture 26.

In use the spacer 10 is used to hold the rear door, or boot lid, of a car in a partially open position as shown in Fig. 4. The rear door 30 of the car has a lock 32 mounted thereon adjacent its lower edge. The lock 32 includes a latch 34 (the first lock member) which in normal operation engages a striker 36 (the second lock member) mounted on the bodywork 38 of the car whereby the rear door 30 can be held in a closed position.

To allow the rear door 30 to be held in a partially open position, the spacer 10 is first manipulated by a user into the open position. The spacer is then placed so that the striker 36 is between recesses 24 and 22. The spacer 10 is then manipulated into the closed position whereby the striker is securely retained between two halves 16, 18 of the spacer within the aperture 26.

The rear door 30 is then pivoted down about its hinges (not shown) with the lock 32 in an unlocked position until the tip 40 of the latch 34 is aligned with the aperture 20 defined by the first section 12 of the spacer 10. The lock is then operated so that the latch 34 passes through the aperture 20 so that the lock is in a locked position.

Thus, the rear door 30 is held securely in a partially open position allowing ventilation into the rear of a car. In this position the door is securely retained and cannot be removed without operation of the lock. Thus the car may be left unattended with a pet in the rear.

To close the rear door 30, the lock 32 must be operated to remove the latch 34 from the aperture 20 whereupon the spacer 10 can be manipulated into the open position, releasing the striker 36, and removed. The door 30 can then be closed normally.

The protective cover 60 is formed from for example plastics materials and is placed about the spacer 10 after it has engaged the striker 36 and protects the mechanism of lock 32 from tampering. Although the protective cover 60 shown is transparent for clarity it would usually be manufactured from an opaque material so that the lock 32 would

be obscured from view.

It will be appreciated that the spacer in accordance with the invention can be made with different dimensions, such as the length of the spacer or size and shape of the aperture, to suit the car or vehicle with which it will be used. Typically, the spacer will be 10-15 cm in length to give adequate ventilation to an animal in the rear of a car. However, the spacer may be made long enough to hold the boot or tailgate in a more open position so that large loads can be carried in the rear of the car, partially extending therefrom. For example, the spacer can be made about 50cm long. The spacer may be provided with means for holding it in a closed position. The means may be for example a threaded element such as a bolt and wing nut. The optional protective cover 60 can also be adapted in shape and configuration to suit the vehicle used.

The spacer of the invention can be quickly and easily fitted or removed from a vehicle and provides a high degree of security as it co-operates with an existing vehicle lock.

Claims

1. A spacer for holding an openable member in at least a partially open position, the spacer including spaced apart first and second sections at least one of which sections is engagable with a part of lock means which normally holds the member in a closed position.

2. A spacer according to claim 1 in which the first section engages a first lock member comprising the lock means and the second section engages a second lock member comprising the lock means, the lock members interengaging when the lock means is in a locked condition.

3. A spacer according to claim 1 or 2 in which the first section of the spacer co-operates with the first lock member so that one of the first section of the spacer and the first lock member is received in a recess of aperture defined by the other of the first lock member and first section of the spacer.

4. A spacer according to claim 1, 2 or 3 in which the second section of the spacer co-operates with the second lock member so that one of the second section of the spacer and the second lock member is received in a second recess or aperture defined by the other of the second lock member and second section of the spacer.

5. A spacer according to claim 4 in which the second aperture is defined by overlapping portions of the spacers.

6. A spacer according to any preceding claim which comprises two elongate halves.

7. A spacer according to claim 6 in which the two halves are pivotally interconnected.

8. A spacer according to claim 7 in which the two halves are pivotally interconnected whereby a lock member can be introduced between said halves in an open position and then securely engaged by the halves by pivotal movement of the halves into a closed position. 5

9. A spacer according to any one claims 6 to 8 in which the halves forming the spacer define the second aperture.

10. A spacer according to any preceding claim which is formed from strip material. 10

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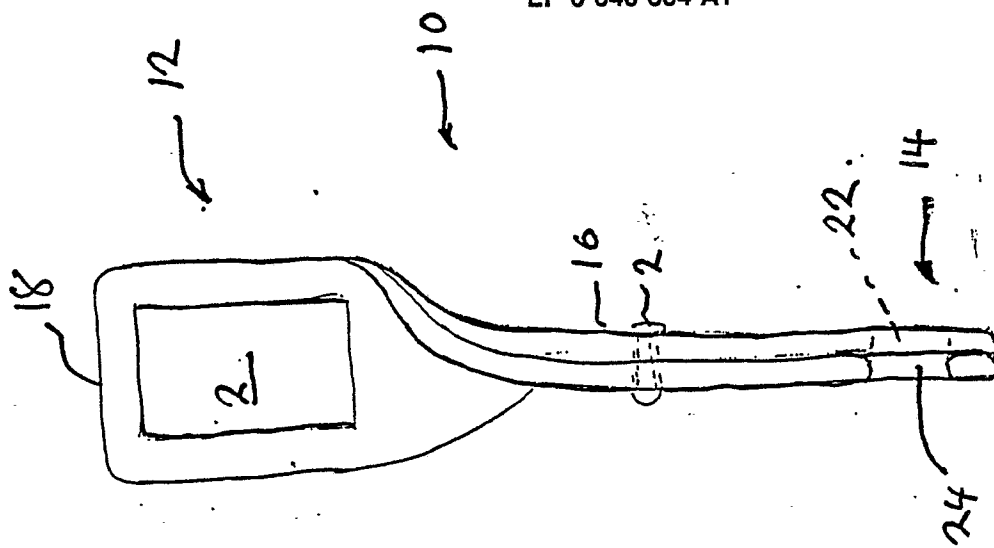


Fig. 1

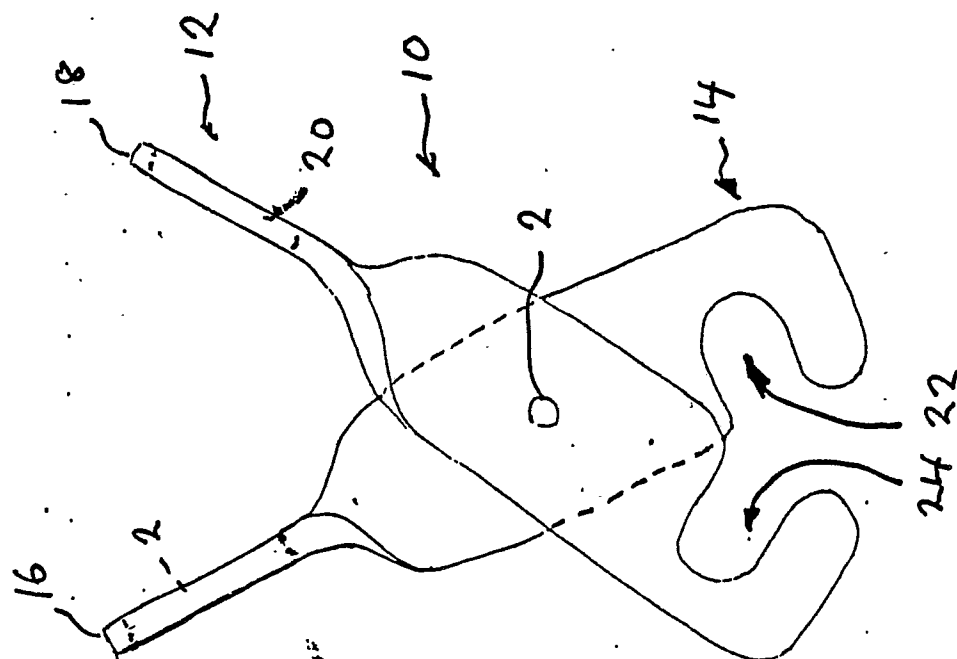


Fig. 2

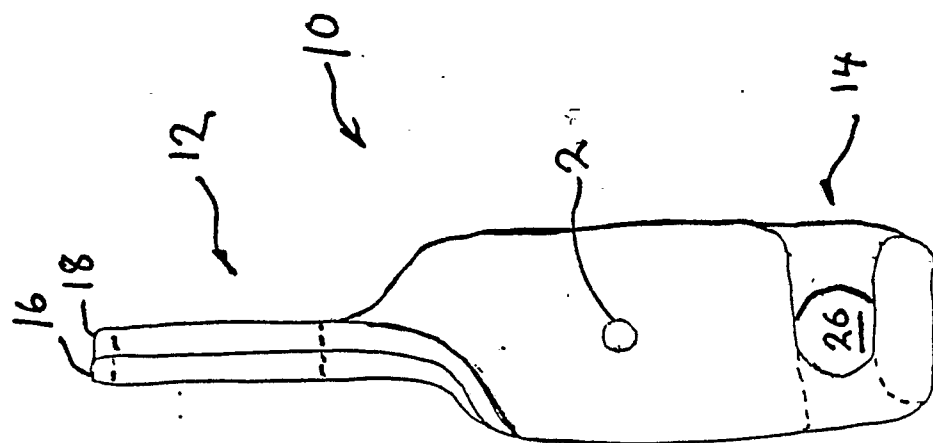
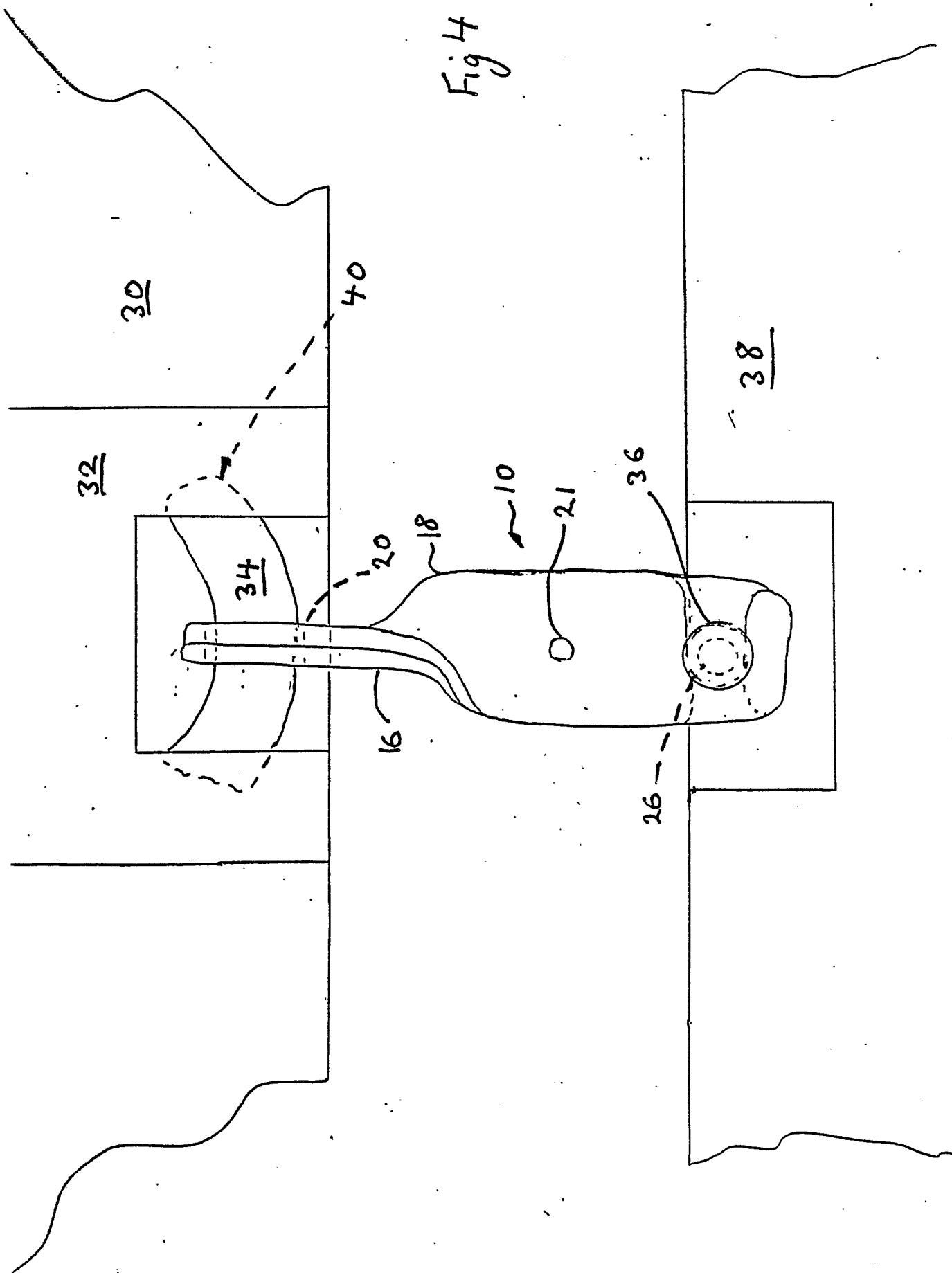


Fig. 3

Fig 4



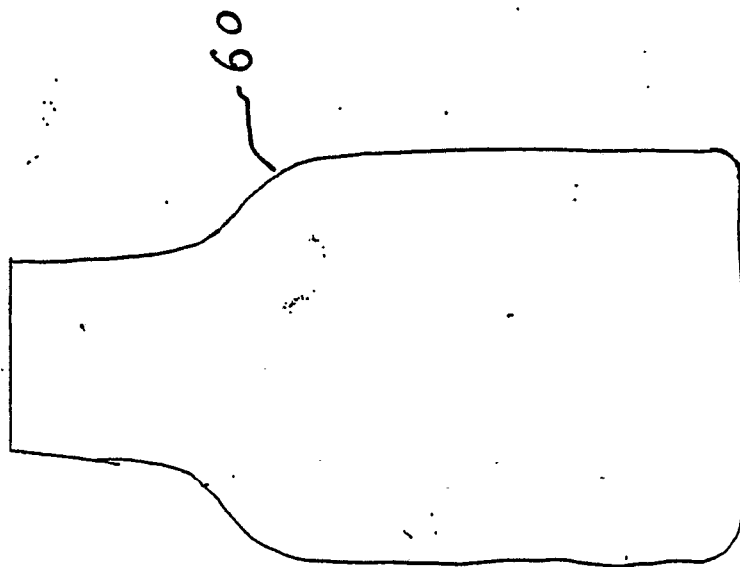


Fig 5

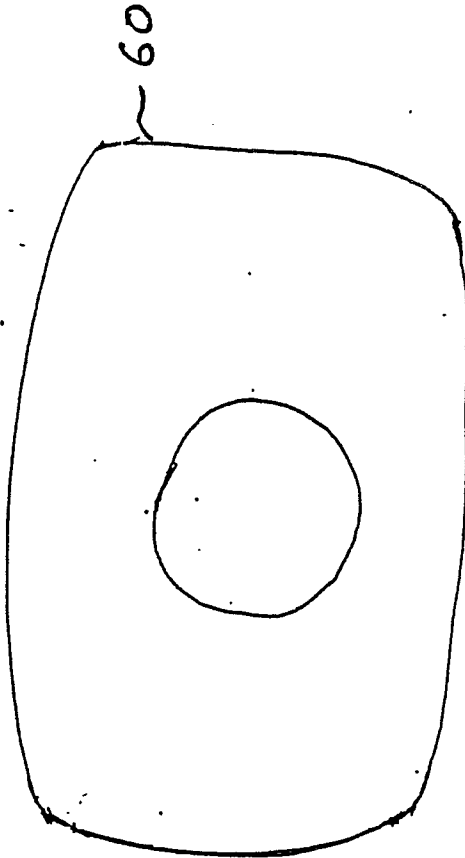


Fig 6

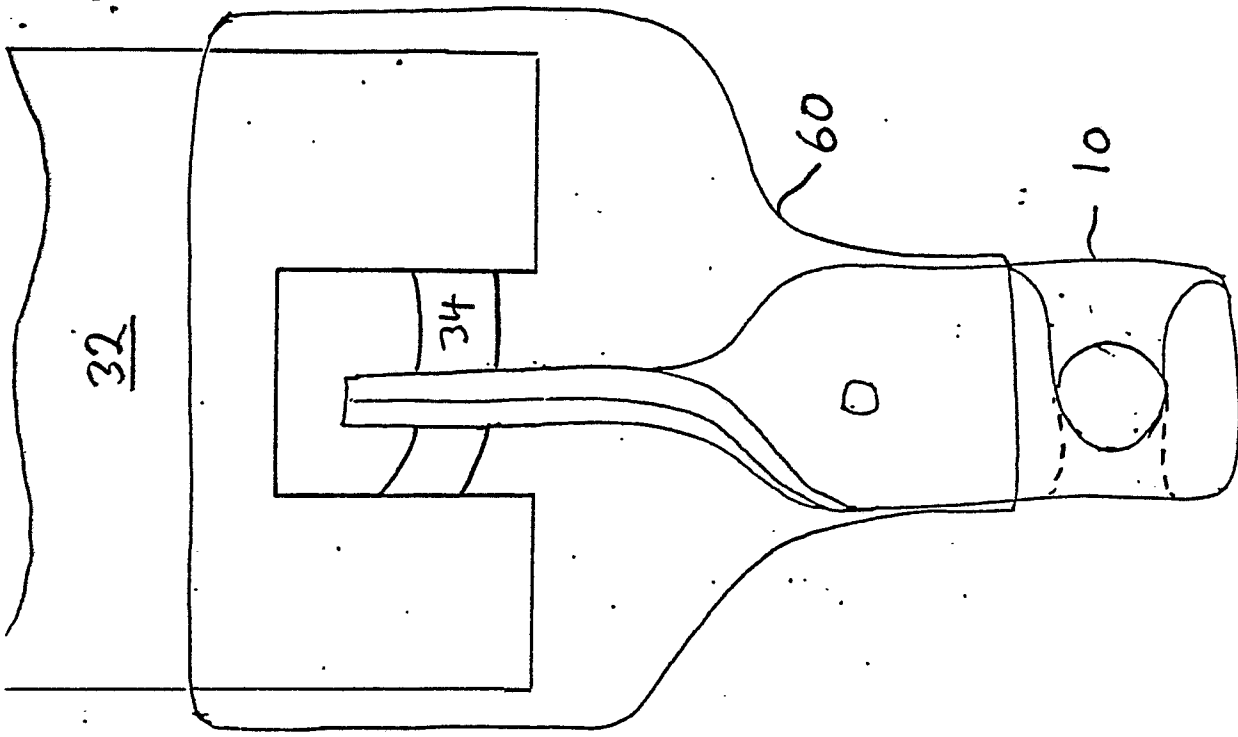


Fig 8

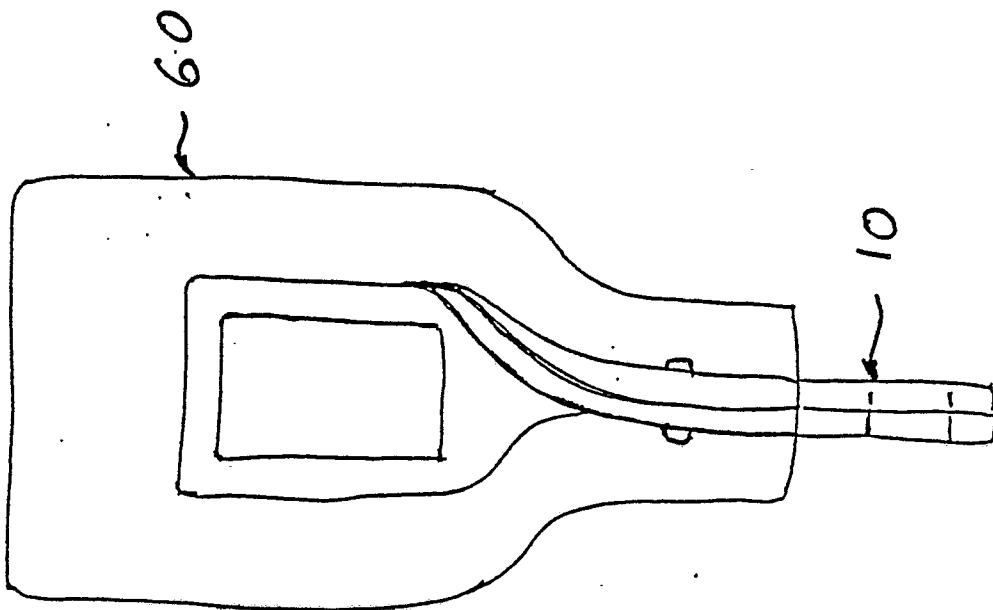


Fig 7



| 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.4) |
| Y | DE-A-2 747 096 (GLOCK) * Whole document * --- | 1-10 | E 05 C 17/02 |
| Y | US-A-2 560 624 (BARTLETT) * Figures 1-2; column 1, lines 51-53 * ----- | 1-10 | |
| | | | TECHNICAL FIELDS SEARCHED (Int. Cl.4) |
| | | | E 05 B E 05 C |
| The present search report has been drawn up for all claims | | | |
| Place of search THE HAGUE | | Date of completion of the search 14-04-1989 | Examiner POOLER L.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 | |