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A45C 13/18 // G08B 13/14

(52) UK CL (Edition V):
G4N NPPXA2 N2A2

(56) Documents Cited:
US 5920260 A **US 4067290 A**

(58) Field of Search:
UK CL (Edition V) **G4N**
INT CL[7] **A45C, G08B**
Other: **WPI, EPODOC, JAPIO**

(54) Abstract Title: **Snatch alarm mounted on carrying strap of bag**

(57) An anti theft alarm for a bag attached to an existing carrying strap 8 comprises a first housing 5 and a second housing 6 held together by an elasticated band 10 (see figs 2 and 4). The first housing contains an alarm (buzzer), a power source and a reed switch. The second housing contains a magnet 7. The housings together form a hole 9 into which the strap 8 is folded (fig 3). When the bag is snatched the elasticated band 10 stretches and the first and second housings separate, causing the reed switch to open which in turn operates the alarm. In an alternate embodiment the strap does not pass through the housings, but each of the first and second housings is secured separately to a free end of the strap.

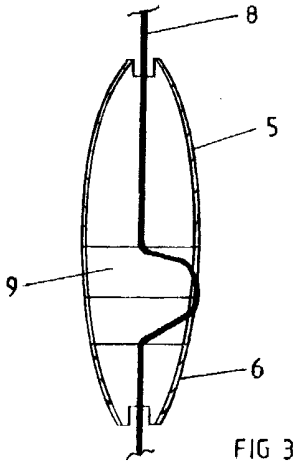

FIG 3

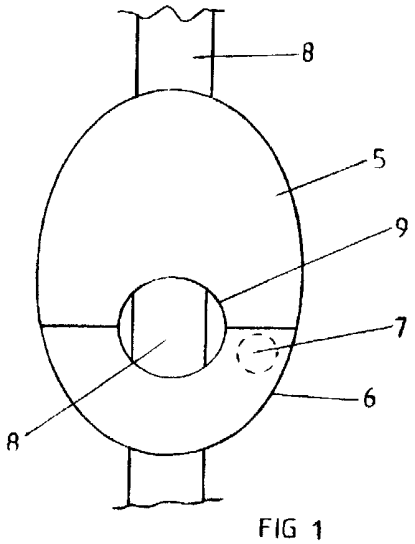

FIG 1

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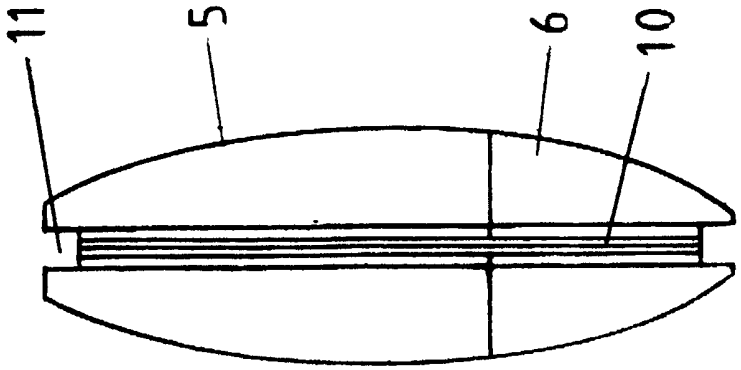

FIG 2

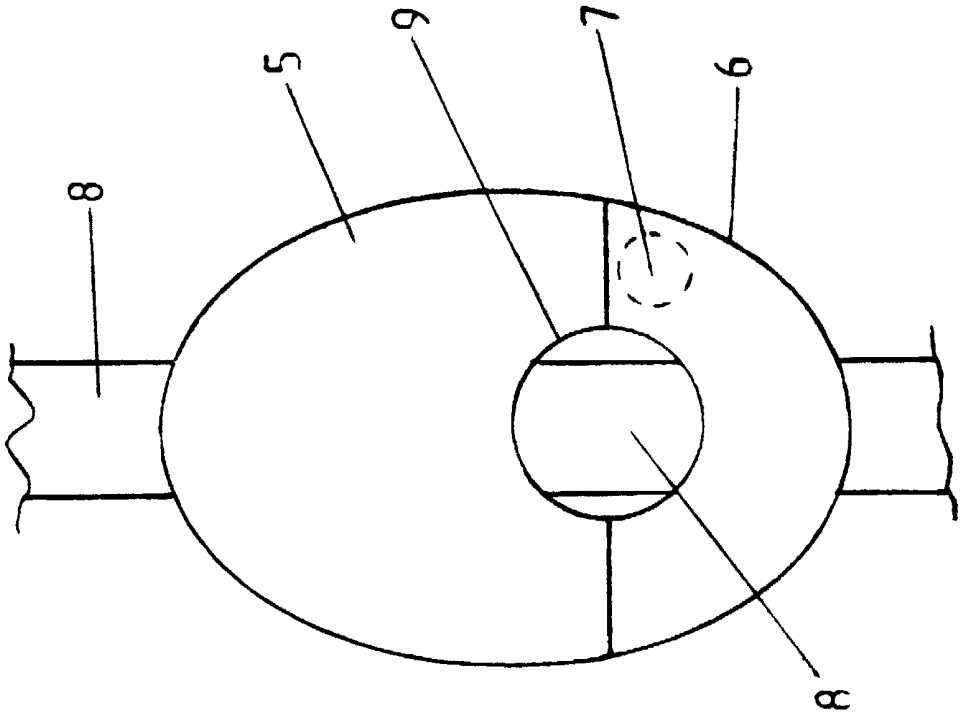

FIG 1

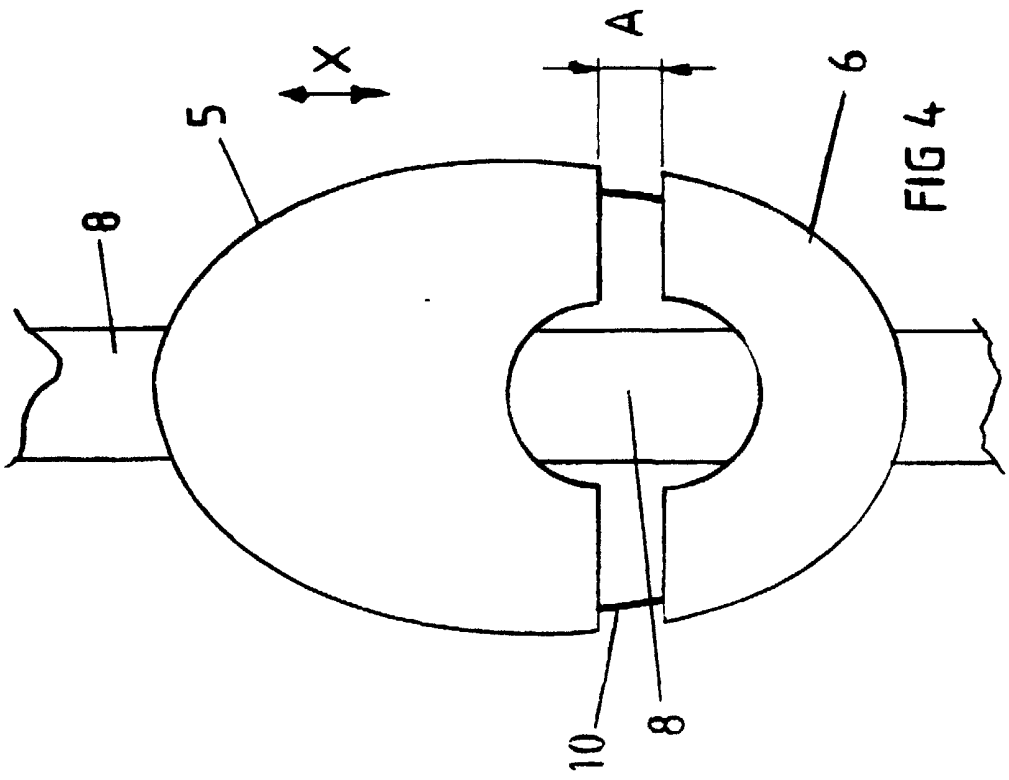

FIG 4

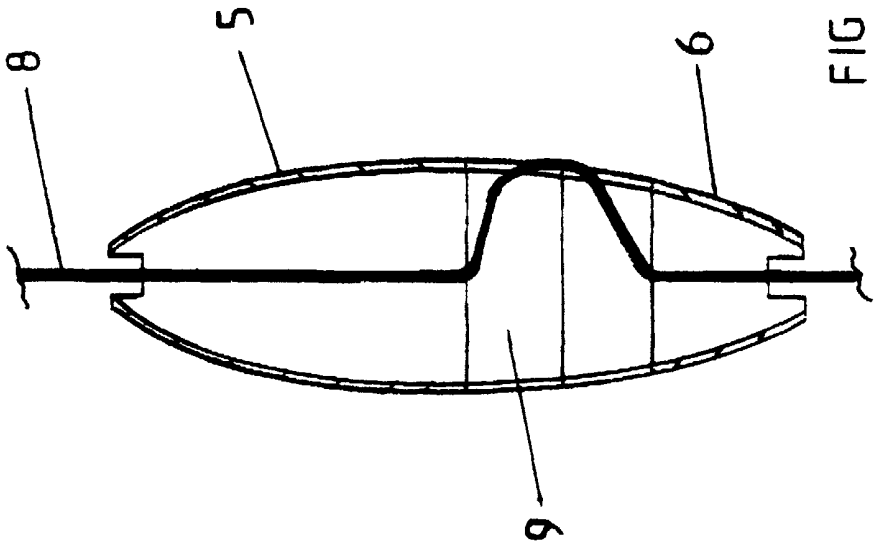

FIG 3

SNATCH ALARM

"Bag – snatching" and the criminal act of "snatching" or sudden removal by force of a persons 'bag' or container, of one kind or another by a passer-by, or would be thief, is becoming an ever increasing crime in both 'Town' and cities alike.

The bag or container will have straps of varying types and lengths, which are suitably attached to the bag;
such that the bag can be carried either from the 'shoulder' or 'hand'.

The invention by way of the following description and drawings, seeks to provide a simple and effective way in obstructing the potential act of 'snatching' when the crime takes place, causing the thief to withdraw from the scene, or even be arrested.

According to the present invention an alarm device is fitted to the 'carrier strap', or fitted to the bag at the position or point where the strap is located and fixed.

The device is self contained and houses both the power source or 'cell', an 'audible alarm' or 'buzzer' and the necessary electronics to effectively activate the 'alarm', if the 'bag' attached to the strap is suddenly snatched from the 'person' or 'victim'.

Fig 1 is a front elevation of the device, closed position

Fig 2 is a end elevation

Fig 3 is a sectional end elevation

Fig 4 is a front elevation open position

The following description describes using drawings, fig 1, 2 and 3 the device in a closed activated condition.
Item 5. Fig's 1, 2 and 3 is the 'top' part of the device manufactured from the plastic or any material which satisfies the design criteria, housing both the alarm, 'power cell' and commercial type 'reed switch' (not shown).

All suitably connected by an electronic circuit to satisfy the various electrical requirements of the components.

Item 6 fig's 1, 2 and 3 is the 'lower' part of the device manufactured from a compatible material to that of the 'top' item 5.
Item 7 fig 1 is a commercial type magnet (shown by dotted line) compatible and capable through its magnet field to operate satisfactorily the 'reed switch'.

If for example item's 5 and 6, fig 1 and 2 are manufactured from say 'mild steel' or 'tin- plate' or any magnetic material .The magnet item 7 fig 1 and the 'reed switch' (not shown) would require mounting in a suitable 'non – magnetic' pocket in both the 'top' and 'lower' parts. This will prevent amplitude or fluxation of the magnetic field, which would impair the correct workings of the 'reed switch'.

Item 8 fig's 1 and 3 is the existing 'strap of' the respective 'bag' or 'container' to which the device will be fitted.

One free outer end of the 'strap' will require to be 'passed' through suitable 'slots' or 'openings' (not shown) within the 'top' and 'lower' part items 5 and 6 fig's 1, 2 and 3 such that the 'device' becomes an integral part of the strap 8.

Two location 'pins' or 'pegs' (not shown) will be required in either the 'lower' part 6 or the 'top' part 5 such that these can locate in corresponding compatible holes in the opposite part or section.

These 'pegs' will act as locating 'pins' to ensure that the contours of the outer surfaces of the 'top' and 'lower' parts are satisfactory aligned with each other.
The 'hole' item 9 fig's 1and 3 allows the 'strap' 8 to fold neatly inside.

Item 10 fig 2 is an elasticated 'band' or 'cord' either that of a single filament or multi – strand. The pre- determined tension of the band 10, is an important factor of the design; and as such controls or retains the top item 5 and lower item 6, within the groove 11 fig 2.

In a set position relative to each other depicted by the dimension 'A' fig 4.
Within this position, the device is primed and activated as the 'reed switch' (not shown) is in its closed position; (once the 'reed switch' is in 'open' condition, then the 'alarm' will sound).

There is sufficient elasticity within the band item 10 to allow full weight of the 'bag' or item being carried such that varying movement 'upwards' and 'downwards' of the top part of the device shown by the arrow 'x' fig 4.

Once the act of 'snatching' the bag takes place, the elasticated band item 10 fig's 2 and 4; will cause the 'top' part item 5 to move rapidly away from the lower part item 6. Such that the magnetic field of reed switch (not shown) in its 'open' condition therefore the 'alarm' will sound.
This condition will remain until the 'reed switch' is returned to closed.

A further embodiment of the invention is that the 'strap' item 8 fig's 1 and 3 does not go through 'slots' or 'openings' within the 'top' and lower parts item 5 and 6 fig's 1 and 2; but alternatively is secured separately to the 'top' and 'lower' part, such that they are attached to two open ends of the strap 8 by a suitable means to satisfy the design criteria.

The two parts item 5 and 6 will have a suitable 'tongue' in one half and 'groove' in the other, and will then slot into each other, held in place by friction and a suitable pin of a specified diameter manufactured from 'plastic' or the like. This will break suddenly if the 'bag' is snatched.

Finally, if the device aforesaid described in the description, where a reed switch and magnetic are used, then it will require some form of tell – tale notification to the user. If for example the device is not active due to 'low' power of the battery 'cell', or some fault in the electronic circuit.

Claims

1. A theft Alarm device to be utilised with a 'carrier strap' or fitted to the bag at the position or point where the strap is located and fixed and comprising of

   Alarm Body TOP Section - containing the electronics and manufactured from the plastic or any such material which satisfies the design criteria, housing both the alarm 'power cell' and commercial type 'reed switch' All suitably connected by an electronic circuit to satisfy the various electrical requirements of the components

   Alarm Body BOTTOM Section - containing commercial type magnet compatible and capable through its magnet field to operate satisfactorily the 'reed switch' and manufactured from the plastic or any such material, which satisfies the design criteria.

   Elasticated 'Band' or 'Chord' - either that of a single filament or multi – strand.

2 A device as in claim 1 where the device will be activated by the stretching or braking of the elasticated band or chord

3. A device as in claims 1 and 2 where the alarm is activated by the reed switch when it is not being held in an open state by the 'magnets' magnetic field

Application No:	GB 0214629.8	5	**Examiner:**	Stephen Jennings
Claims searched:	1-3		**Date of search:**	17 October 2003

Patents Act 1977 : Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance	
A		US 5920260	(Tseng)
A		US 4067290	(Hartley)

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC[V]:

G4N

Worldwide search of patent documents classified in the following areas of the IPC[7]:

G08B, A45C

The following online and other databases have been used in the preparation of this search report:

WPI, EPODOC, JAPIO