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(54) Hook and bracket security assembly

(57) For use with slat wall lining, a security assembly for suspended items on display comprises a bracket (10) provided with a hook (12), the bracket having means (14) for engagement in a slot of the slat wall lining, a second component (16), also having means (13) for engagement in a slot of the slat wall lining, and connector means engageable with the hook (12) whereby the second component(16) and the bracket (10), when engaged with adjacent slots of the slat wall lining, may be connected together and clamped between said adjacent slots so that neither is removable therefrom. The connector means may be provided on a separate connector component (e.g 18) which may have clip means or deformable or crimpable portions (21 - 24) for engagement with the hook (12) as well as spring means (20) to urge the second component (16) into clamping co-operation with the bracket (10). Alternatively, the connector means may comprise a strap or barbs provided on the second component itself. A special locking device (19) with two arms (45, 41) may also be provided.

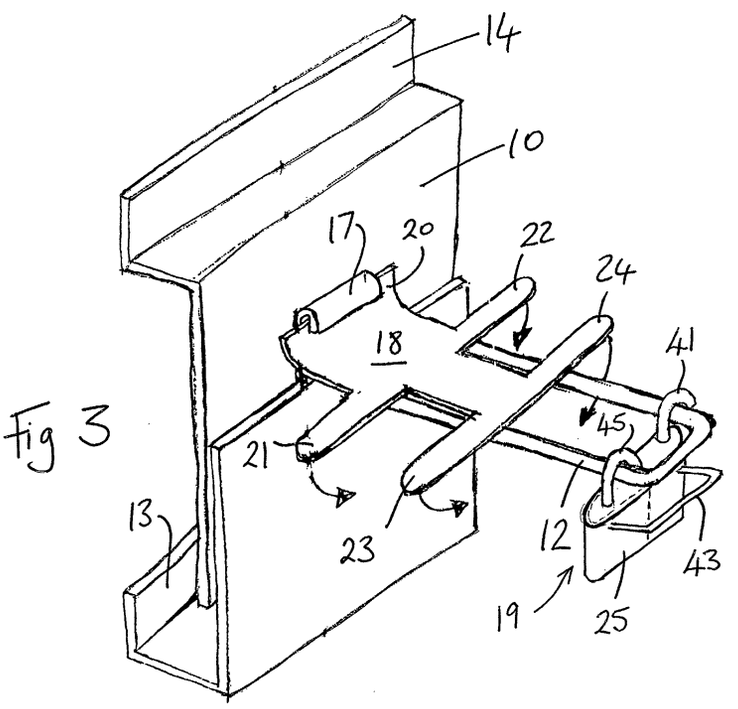

Fig 3

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Description

[0001] This invention concerns a security assembly for suspended items on display.

[0002] It is well known to display items for sale by suspension from a hook, of a type which comprises an elongate finger-like projection attached to an upright supporting surface, such as a wall or a partition panel. Items displayed in this way are usually packed in a transparent plastics casing, commonly known as a "bubble pack", which is provided with an aperture through which the hook is inserted. A series of identical items are generally suspended in this way one in front of the other on a common hook.

[0003] Where the items being displayed in this way are of significant value, such as cameras, mobile telephones, electronic cards and the like, theft can be a problem. The provision of a lockable element at the free end of the hook, to prevent easy removal of individual packaged items, is a partial solution, but a determined thief might still remove the entire hook from its mounting on the supporting surface along with all the displayed items suspended therefrom.

[0004] Slat wall lining is a commercially available style of wall panelling wherein each panel is provided with a plurality of equally spaced parallel slots of L-shaped cross-section which in use are intended to be arranged horizontally. Brackets having angled edge margins can then be retained by insertion of said edge margins at selected positions in any of the L-shaped slots (i.e. at any chosen height interval). They are retained simply by abutment with the walls of the slot and by gravity and can readily be removed and repositioned. Hooks for suspension of items for sale are attached to or formed integrally with such brackets.

[0005] An object of the invention is to provide means whereby items to be displayed can be securely retained upon hooks which are mounted upon such slat wall lining.

[0006] It is not desirable to secure any component to the slat wall lining panels by means of screws or bolts since release and/or repositioning of same would ruin the appearance of the panel, which is a relatively costly form of retail fitting. Moreover, such release and repositioning, which is the whole purpose of use of such panels, would also be much more troublesome for staff as it would involve the use of tools, namely screw drivers, pliers and the like.

[0007] According to one aspect of the invention, a security assembly for suspended items on display comprises a bracket provided with a hook, the bracket having means for engagement in a slot of a slat wall lining, a second component, also having means for engagement in a slot of the slat wall lining, and connector means engageable with the hook whereby the second component and the bracket, when engaged with adjacent slots of the slat wall lining, may be connected together and clamped between said adjacent slots so that neither is removable therefrom.

[0008] In many practical embodiments, some of which are illustrated in the accompanying drawings, the connector means are provided on a separate connector component.

[0009] However, in alternative embodiments, the connector means may be provided on the second component, for example, in the form of a plastic strap which is threaded through apertures in the second component, looped around the hook, and secured to itself in conventional manner. For this purpose, the second component may have an additional flange provided with the apertures for the strap.

[0010] According to another aspect of the invention, a locking device, specially designed for attachment to a hook, which is formed as a loop, to prevent removal of items suspended therefrom comprises a lock body, and two locking arms (one for engagement with each limb of the looped hook) extending therefrom, at least one of which has its free end securable to the body.

[0011] The aforesaid lock body may also be provided with a slot, or other attachment means, to facilitate attachment of sales indicia relative to the items suspended from the hook.

[0012] The invention will be described further, by way of example, with reference to the accompanying drawings, in which:

Fig 1 is a perspective view of the components of a first embodiment of the security assembly of the invention;

Fig 2 is a similar view showing how the first two of the components are fitted together in use;

Fig 3 is a similar view showing how the other components are then fitted thereto and attached to provide a functioning assembly;

Fig 4 is a reduced scale perspective view of the first two components, fitted together, of a modified embodiment of the assembly of the invention;

Fig 5 is a fragmentary perspective view of conventional slat wall lining to which the assembly of the invention is adapted to be secured;

Fig 6 is an enlarged perspective view of part of a first component with a third component fitted thereto of another modified version of the assembly of the invention;

Fig 7 is a perspective view of a second and third component of another, quite different embodiment of the assembly of the invention;

Fig 8 is an exploded perspective view of a locking device, which may be used as part of the security

assembly of the invention or separately therefrom; and

Fig 9 shows the same device with the two parts fitted together.

[0013] Referring firstly to Figs 1 to 3, a first embodiment comprises four components, namely a bracket (10) provided with a hook (12), a second component (16), a connector component (18), and a locking device (19).

[0014] The bracket (10) is equivalent to a known slat wall mounting bracket (often called a "Eurohook"). It is formed of a sheet of metal or plastics material which is bent or formed into an L-shape along an edge margin (14). The hook (12) is a wire loop which is permanently attached near the centre of the bracket (10) extending outwards generally at right angles to the sheet. The L-shaped margin (14) is of a shape and size corresponding to a slot (42) of a slat wall lining panel (40), as shown in Figure 5, so that it can be located therein and will allow the first bracket (10) to be retained hanging down from that slot (42). A conventional "Eurohook" bracket would be readily detachable from the slot (42) from which it was suspended. However, the purpose of the assembly of the present invention is to prevent that.

[0015] The second component (16) is also formed of a sheet of metal or plastics material which is bent into an L-shape along an edge margin (13). However, this L-shape margin (13) is turned inwards to provide a channel, in contrast to the margin (14) of the bracket (10). The opposing edge to the channel (13) has an upstanding tab (15) at a central location with a folded or hooked edge (17).

[0016] In use, the edge margin (14) of the bracket (10) is located in a slot (42). The channel (13) of the second component (16) is inserted into the slot therebelow and the tab (15) then projects between the limbs of the wire hook (12), as shown in Fig 2.

[0017] The connector (18) is a piece of stainless steel sheet of approximately ½ mm thickness provided with a curving spring portion (20) at one end and four arms (21-24), two at each side, which can be manually folded and crimped. In use, this is positioned on top of the hook (12), as shown in Fig 3, with the spring portion (20) locating into the hooked edge (17) of the second component (16). This is important in order to bias the second component (16) upwards and retain its channel (13) in the lower L-shaped slot (42), in other words to retain the bracket (10) and the component (16) in engagement with the respective pair of slots (42). The arms (21-24) are folded around and pressed onto the limbs of the hook (12), as indicated by the arrows in Fig 3, to hold the spring portion (20) in position.

[0018] The inter-engaged bracket (10) and lower component (16) may still be capable of being slid along the slat wall lining, but cannot be demounted to the front without disconnecting the connector (18).

[0019] Items for display are suspensibly mounted on the hook (12). A conventional padlock may be secured at or near the other end of the hook (12) to prevent their removal. The presence of the items makes access to the connector (18) difficult, thus minimising likelihood of theft by its removal.

[0020] An alternative to a conventional padlock is the locking device (19) which is shown in Figs. 1 and 3. This device (19) may comprise a conventional padlock onto which a special casing or sleeve (25) is mounted so that the padlock provides its conventional locking arm (45) securable to the body of the device, while the casing provides an additional arm (41) to one side of the securable arm (45). Thus, this modified device (19) can be mounted transversely of the hook (12), as is evident in Fig. 3, with the extra arm (41) engaged over the other loop of the hook (12), its free end not being secured. A further appendage (43) on the front of the casing (25) forms a slot and provides a rail which allows for attachment of sales indicia, such as price information regarding the items (not shown) suspended from the hook (12).

[0021] This locking device (19) is a novel feature in its own right and could be used with any hook of this style, separate from the remainder of the security assembly. Other versions could be specifically fabricated, but it is probably easier and cost effective just to add a casing provided with a free arm (41) to a commercially available padlock.

[0022] Figures 8 and 9 show a slightly modified version (49) of such a locking device. This comprises a conventional padlock (50) and a sheath or casing (51), which fits over the padlock (50), but is wider. It is preferably formed of plastics material. This sheath (51) has a recess (52) into which the body of the padlock (50) is a snug fit, and a slot (53) in the top of the recess (52) is provided for the securable locking arm (57) of the padlock (50) to project through. Adjacent the recess (52), there is a solid extension (54) to the sheath (51). A hooked arm (55) projects upwards therefrom. This arm (55) curls towards the recess (52), whereas the arm (41) of the device (19) shown in Figs. 1 and 3 curls away. The configuration of the arm (41), (55) should be chosen according to ergonomic criteria, as to what best fits onto a display hook (12) and suspends the device (19), (49) in a well-balanced manner. Again, a rail (56) is provided for attachment of sales indicia.

[0023] Thus, only the padlock arm (57) is securable, while the other arm (55) has a free end. However, because of the configuration of the sheath (51) and the arm (55), the latter is firmly retained, hooked over the other limb of the main display hook (12), when the padlock arm (57) is locked in position.

[0024] Fig 4 shows an alternative to the security assembly of Figs. 1 to 3 where the hook is a flat strip (27) and a pair of tabs (28), each having a hooked edge (29), project up from the second component (26) to locate at either side of the hook (27). In other respects the assembly may be as in Figs 1 to 3 or as in Fig 6, although

the locking device (19 or 49) will not be securable to such a hook.

[0025] Fig 6 shows another alternative wherein the connector component is a clip device (30) having opposing engagement means (32) to clip around the sides of the hook (12), whether of wire loop form, as shown, or in the form of a flat strip, as in Fig 4, instead of having deformable arms (21-24). The clip device (30) still has an upturned spring portion (31) to engage and bias the second component, which can be substantially as shown in Figs 1 to 3.

[0026] Another version (not shown) of clippable connector device may clip in between the limbs of a wire loop hook.

[0027] Fig 7 illustrates a different form of assembly, still within the scope of the invention. The bracket and hook are as shown in Figs 1 to 3 and are not illustrated again. The second component (36) is of narrow box section form, with an L-shaped external flange (33) to fit into the slot (42) of the slat wall lining (40). In use, the box section part lies beneath the hook (12). A connector element (38) is inserted between the limbs of the hook (12) from above to interconnect with the box section part. An arched flange (37) at each side of the connector element (38) engages around the respective limbs of the hook (12), and resilient barbed prongs (39) engage into the box section cavity. One or more of the barbs clip into apertures (35) in the sides of the box section and may be released therefrom using a tool. Thus secure interengagement of the hook (12) (and hence the bracket to which it is attached) and the second component (36) is achieved.

[0028] The provision of multiple barbs on the flexible prongs (39) allows for fine adjustment in the tightness of the interconnection between the hook (12), on the one hand, and the second component (36), on the other hand. As previously explained in connection with the Fig. 1 to 3 embodiments, it is important that the bracket (10) and the second component (36) are sufficiently close that neither engagement portion (14) nor (13) can be disengaged from its respective slot (42).

[0029] Another particular advantage of having multiple barbs on the prongs (39) is that this accommodates variations which occur in conventional, pre-existing slat wall lining and Eurohooks, to which the invention is to be applied. Thus, the spacing between the horizontal slots (42) in the lining (40) (Fig.5) may vary, and this can be accommodated by engagement of higher or lower barbs in the box section apertures. Similarly the position of the hook (12) may vary, as regards its height on the bracket (10) and again this can be accommodated by engagement of higher or lower barbs with the second component.

[0030] Many other variations are possible within the scope of the invention, the foregoing being merely illustrative of the possibilities.

[0031] A separator connector device, as embodied by devices 18, 30 and 38 above may not always be necessary and other embodiments are envisaged where the connector means is provided directly upon or integrally with the second component. For example with a second component similar to that shown in Figs 1 to 4 (16, 26), resilient barbs could be provided on the tabs (15,28) to directly engage with the sides of the respective hook (12, 27).

Claims

1. A security assembly for suspended items on display comprising a bracket provided with a hook, the bracket having means for engagement in a slot of a slat wall lining, a second component, also having means for engagement in a slot of the slat wall lining, and connector means engageable with the hook whereby the second component and the bracket, when engaged with adjacent slots of the slat wall lining, may be connected together and clamped between said adjacent slots so that neither is removable therefrom.

2. A security assembly according to claim 1 wherein the connector means are provided on a separate connector component.

3. A security assembly according to claim 2 wherein the separate connector component includes resilient prongs and/or barbs.

4. A security assembly according to claim 2 wherein the separate connector component has deformable or crimpable portions serving as the connector means.

5. A security assembly according to claim 2 or claim 3 wherein the separate connector component includes spring means to urge the second component into clamping cooperation with the bracket.

6. A security assembly according to claim 1 wherein the connector means are provided on the second component.

7. A security assembly according to claim 1 or 6 wherein the connector means comprise resilient prongs and/or barbs.

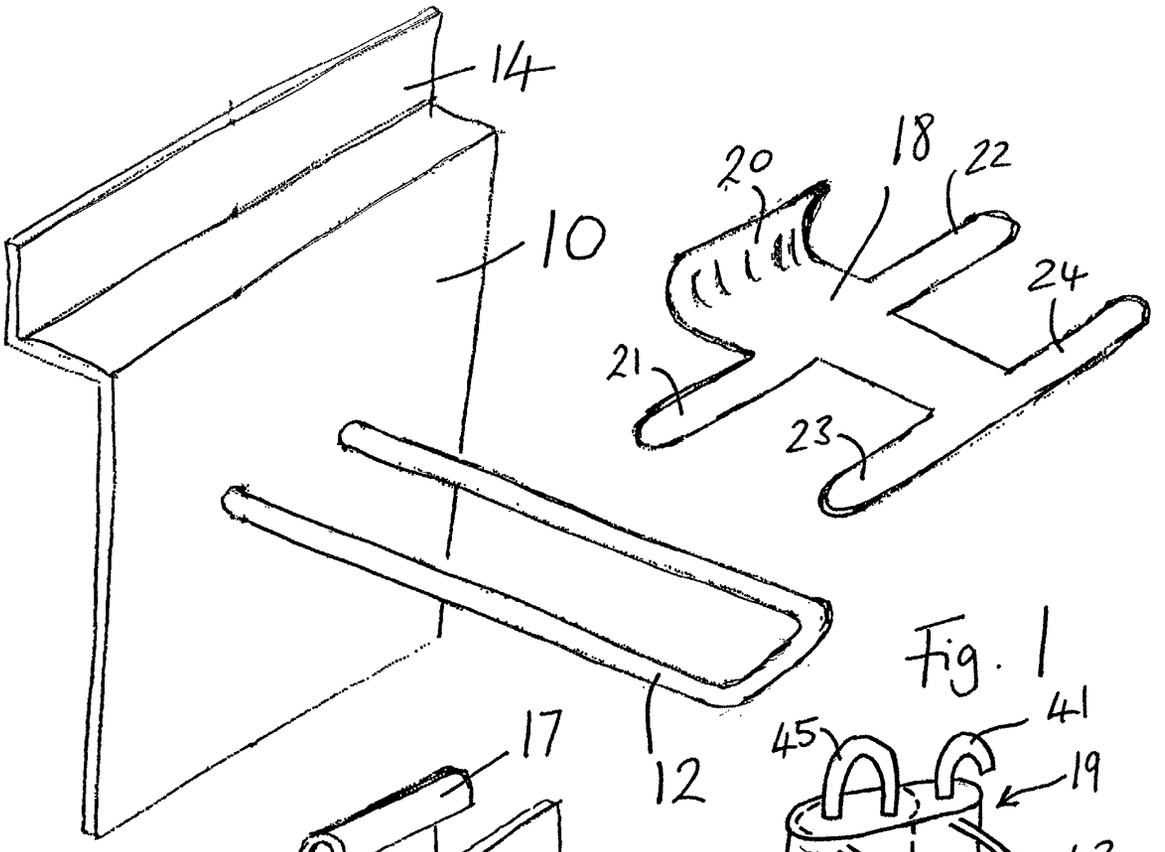
8. A security assembly according to claim 1 or 6 wherein the connector means comprises a plastics strap.

9. A security assembly according to any preceding claim further including a locking device attachable to the hook, when formed as a loop, to prevent removal of items suspended from the hook, said device comprising a lock body having two arms ex-

tending therefrom, at least one of which has its free end securable to the body.

10. A locking device attachable to a hook for suspension of items on display, the hook being of the type formed as a loop and the purpose of the device being to prevent removal of items suspended therefrom, said device comprising a lock body having two locking arms extending therefrom, only one of which has its free end securable to the body.

11. A device according to claim 10 comprising a sheath fitted over a conventional padlock in which respect the padlock provides one of the arms and the sheath provides the other of the arms.


14
10
20
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21
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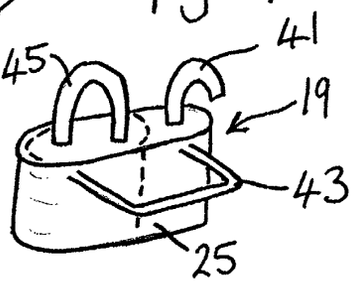
12

Fig. 1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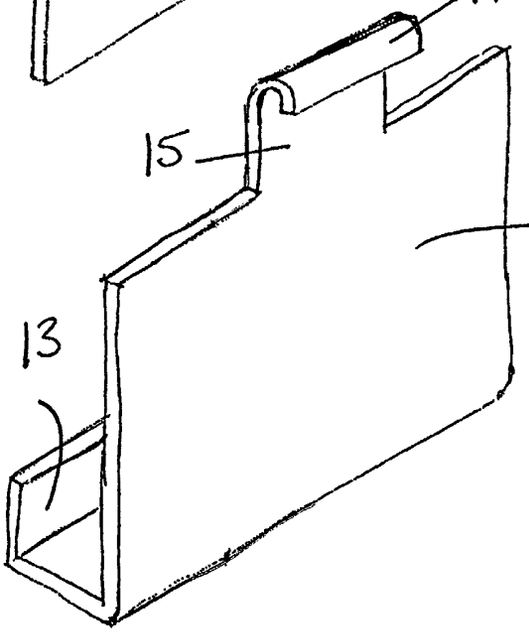
25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16
13

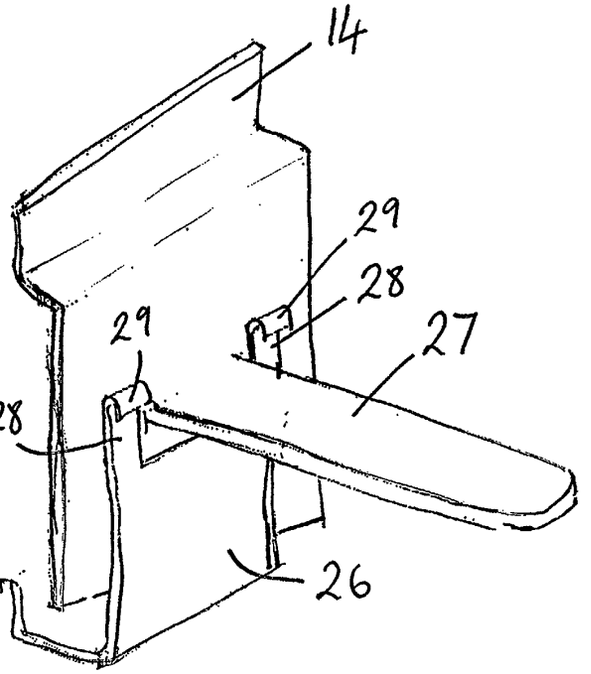
14
29
28
29
27
28
26

Fig. 4

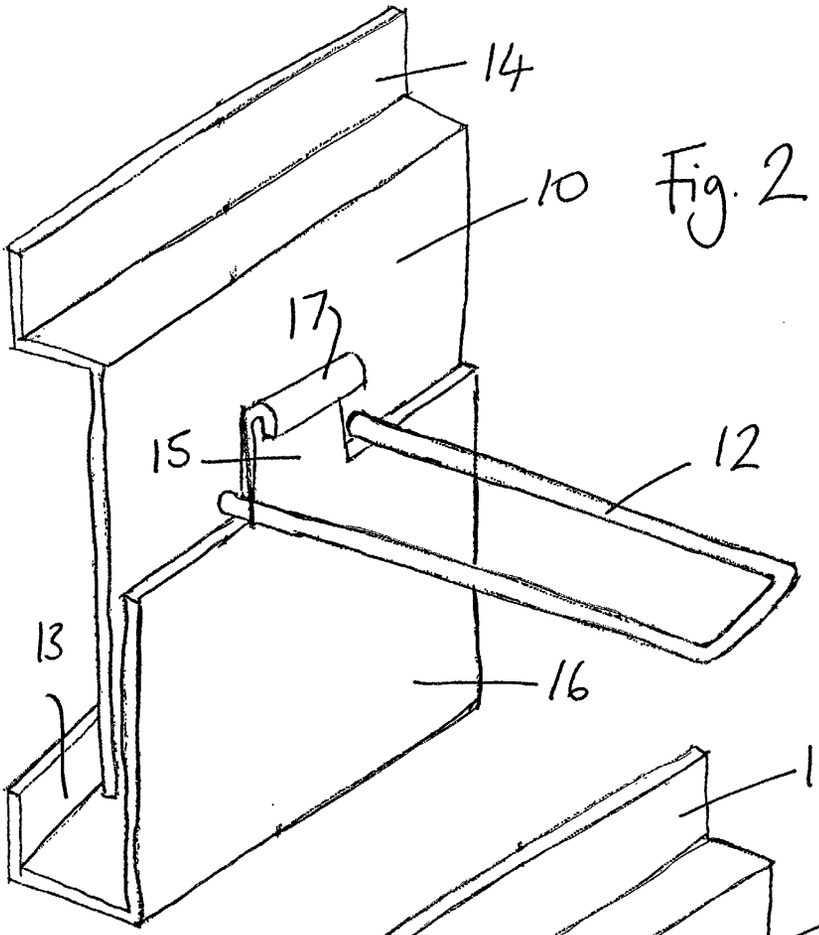

Fig. 2

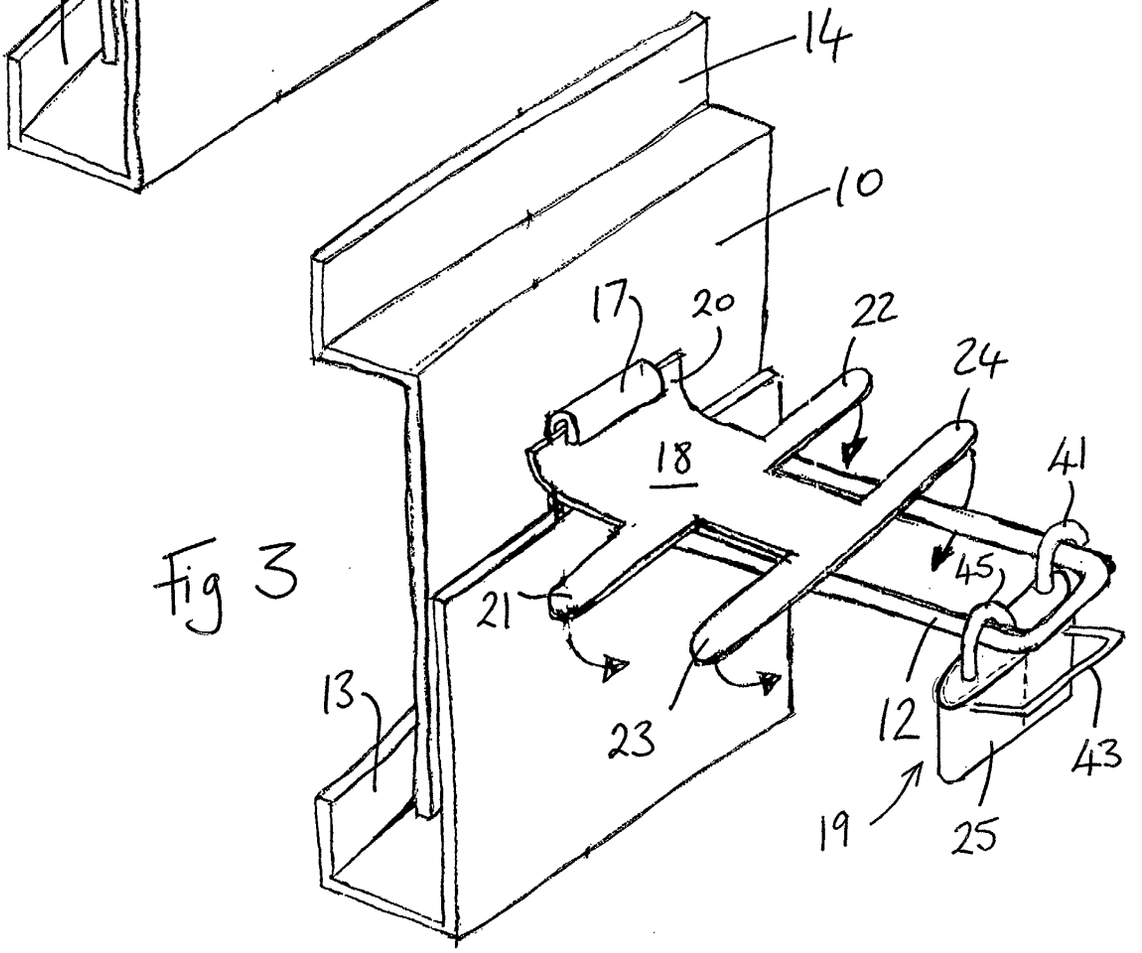

Fig 3

Fig. 5

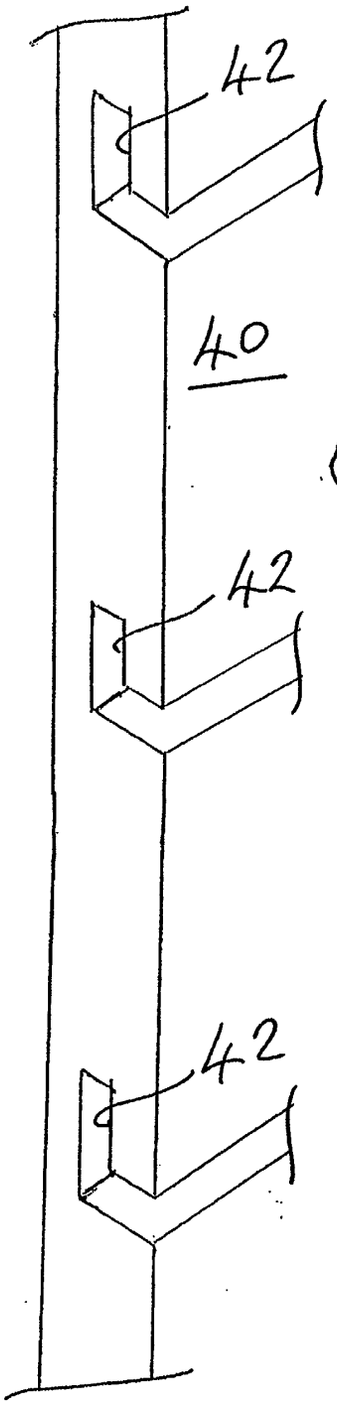

Fig. 6

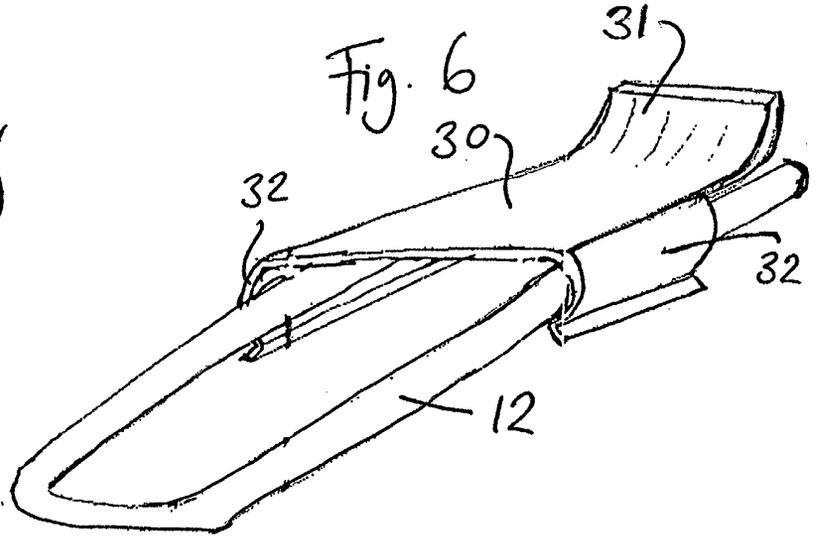

Fig. 7

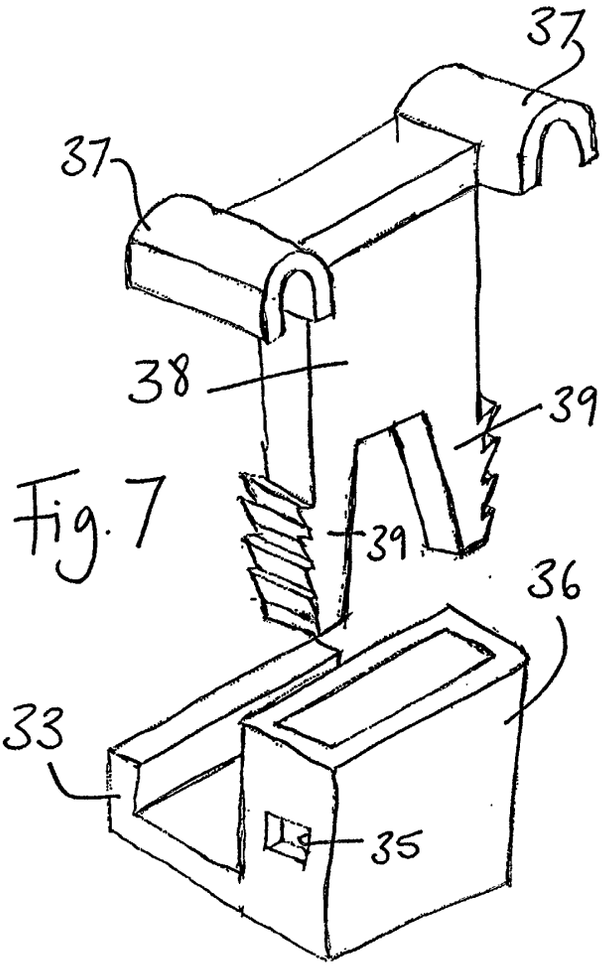

Fig.8

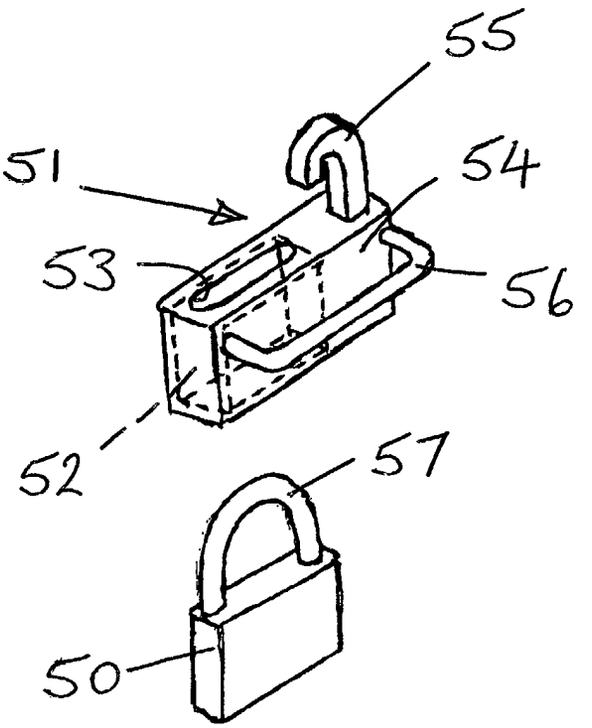

Fig.9