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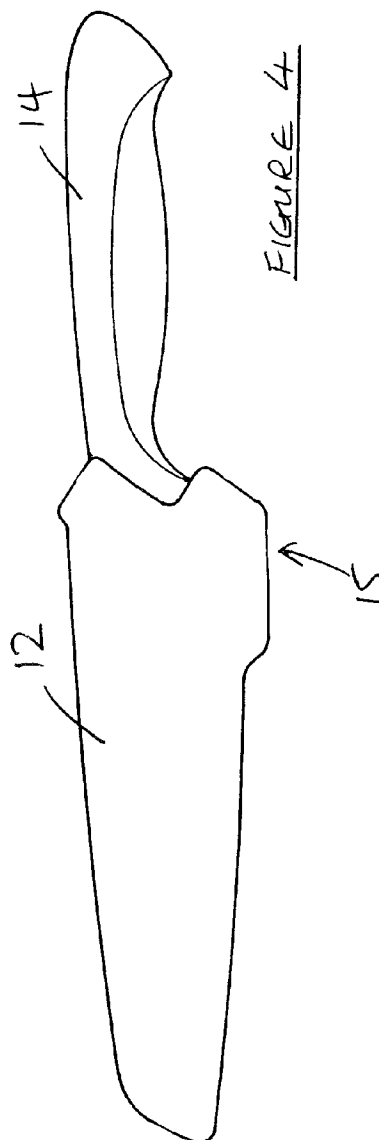
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(54) Knife holster arrangement

(57) There is provided a holster 12 for receiving and retaining the blade of a knife such that the handle 14 of the knife remains largely outside the holster 12. The retention is by way of a catch arrangement 15 inside the holster 12 which is actuated by surfaces provided on the handle. The retention can be overcome by a suitable force of withdrawal of the knife.



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Description

This invention relates to knife holsters and combinations of knives and holsters.

According to a first aspect of the present invention there is provided a holster for a knife which holster has an opening through which the blade is inserted, the holster incorporating a catch arrangement for retaining the knife blade within the holster, it being possible to overcome the retention action of the catch arrangement so as to remove the knife from the holster.

In the preferred arrangements the catch arrangement is located adjacent the chamber opening and the catch arrangement comprises a catch element which is resiliently deflectable from a rest or catch position to an open position.

Preferably the catch element comprises a separate member having a first portion which is held in position by the holster and a second or free portion which comprises a resiliently deflectable portion which, in use, is engaged by a forward portion of the knife handle adjacent the knife blade. Also the free portion may incorporate a groove which is aligned with the opening of the holster to allow passage of the blade, the parts of the free portion forming the sides of the groove being engaged in use, by projecting parts of the knife handle, deflecting on insertion of the knife blade and snapping back behind the projecting parts of the handle to retain the knife.

In some embodiments the first portion of the catch element is held in a slot in the holster and the first portion has a projection which locates in a recess in the slot.

Another feature is that the holster provides at least one abutment wall for engaging the knife handle to prevent over-insertion of the knife.

Conveniently the holster, in use, shields all of the or each cutting edge of the knife. A preferred feature is that the holster provides a chamber for the knife blade which chamber is accessible only by way of the opening, thereby completely enclosing the blade of the knife. Also the catch element is preferably made from a flexible plastics material.

According to a second aspect of the present invention there is provided in combination a holster as described above and a knife, the knife having a blade and a handle incorporating a cam surface for engaging and deflecting the free portion of the catch element and a return surface behind which said free portion of the catch element engages to retain the knife blade within the holster.

Preferably the cam surface is located adjacent the knife blade. Conveniently the cam surface is adjacent the cutting edge of the knife blade and the return surface also acts as a finger abutment.

According to a third aspect of the present invention there is provided in combination, a holster and a knife, said holster incorporating a tamper evident arrangement for retaining the knife within the holster until such time as it is to be removed, the tamper evident arrangement

being attached to the holster by one or more frangible bridges.

Preferably the tamper evident arrangement or lock comprises a locking element which in use is located behind a projecting portion of the knife. It is a preferred feature that the projecting portion is located on the handle of the knife. Conveniently the projecting portion comprises a finger abutment adjacent the knife blade.

In preferred arrangements a frangible bridge is located closely adjacent the locking surface of the tamper evident arrangement.

With preferred embodiments the tamper evident arrangement incorporates hanging means for retail display, which hanging means is removed from the holster when the frangible bridges are severed. Preferably the tamper evident arrangement incorporates a graphics/information section which is also removed from the holster when the frangible bridges are severed.

A preferred construction involves the holster and the tamper evident arrangement being formed from two parts secured together along a generally lengthwise plane with the knife inserted between the two parts before being secured. A further feature is that the graphics/information section is formed from card and is sandwiched between the two parts of the tamper evident arrangement.

Embodiments of the present invention will now be described in more detail. The description makes reference to the accompanying diagrammatic drawings in which:

Figure 1 is a side view of a holster according to the present invention;

Figure 2 is a right hand end view of the holster of Figure 1;

Figure 3 is a side view of a knife for use with the Figure 1 holster;

Figure 4 is a side view of the knife inserted in the holster;

Figure 5 is an enlarged sectional view of a catch arrangement provided in the Figure 1 holster;

Figure 6 is a similar view to the Figure 5 arrangement with a knife being inserted;

Figure 7 is a similar view to the Figure 6 arrangement with the knife fully inserted;

Figure 8 shows a side view of a modified holster incorporating a tamper evident arrangement;

Figure 9 is a right hand end view of the Figure 8 holster; and

Figure 10 is a side view of the Figure 8 holster with a knife inserted.

Referring to Figures 1 to 7 there is shown a knife 11 and a holster 12 or sheath for receiving the knife 11. The knife 11 has a blade 13 and a handle 14, the blade 13 being substantially enclosed by the holster 12 when inserted therein. The holster 12 protects the blade 13 from damage when the knife is not in use and prevents accidental harm being caused by the blade 13 when the knife is not in use.

The holster 12 incorporates a catch arrangement 15 for retaining fully the knife 11 in the holster until such time as the knife is needed. A partially exposed blade can still damage and be damaged.

The catch arrangement 15 provides a catch element 16 made of a flexible plastics material. One end 17 of the catch element 16 is received and held in a slot 18 formed in the holster 12. In the embodiment shown the holster is formed from two parts 12a, 12b which are joined together with the end 17 of the catch element 16 held captive therebetween. The end 17 also has a projection 19 which locates in a recess 20 in the slot 18 and assists in the correct positioning of the element 16 and prevents its withdrawal from the slot.

The free end 21 of the catch element 16 projects beyond the slot 16 and has two parts 22 defining a groove 23 therebetween. This groove 23 is generally aligned with an opening 24 in the holster 12 for the knife blade 13. The free end 21 of the catch element 16 is resiliently deflectable to the left as shown in Figures 5, 6 and 7.

The forward end of the knife handle is provided with a cam surface 25 and a return surface 26 immediately behind. Figures 6 and 7 clearly illustrate the insertion of a knife 11 into the holster 12. The knife blade 13 is inserted into the opening 24 of the holster until the cam surface 25 abuts the parts 22 of the free end 21 of the catch element 16. Further insertion of the knife 11 causes the parts 22 to deflect to the left. As the cam surface 25 passes the parts 22 the resilient nature of the catch element 16 causes the end portion 21 to snap back behind the return surface 26 of the handle.

Withdrawal of the knife is a reversal of this process and a predetermined withdrawal force must be overcome in order to extract the knife 11 from the holster 12. This force is dependent largely on the flexibility of the catch element 16 and the angle of the return surface relative to the axis of withdrawal.

A further feature is the presence of abutment walls 27 (only one shown) inside the holster 12. The walls 27 engage the cam surface 25 of the handle 14 to prevent over-insertion of the knife in the holster 12. In the embodiment shown the flexible nature of the catch element 16 holds the handle 14 in engagement with the abutment wall 27. This assists in the prevention of movement of the knife relative to the holster, which movement could involve unwanted noise and result in damage to the knife or holster and compromising of the retention action.

Figures 8 to 10 show a holster 12 which is identical in many respects to that shown in Figures 1 to 7. However, the holster 12 need not necessarily incorporate the catch arrangement 15. In Figures 8 to 10 there is shown a tamper-evident arrangement 30 which is for use up to the time when the end consumer purchases the knife/holster combination.

A locking element 31 is provided by the tamper-evident arrangement 30 which is attached to the holster 12 by a number of frangible bridges 32. The locking element 31 has a locking surface 33 which engages behind the return surface 26 of the knife handle 14 when fully inserted in the holster 12. (If there is no catch arrangement involved then the return surface 26 will be provided on the knife handle as a finger abutment). It is therefore impossible to extract the knife from its holster without breaking one or more of the frangible bridges 32. Broken bridges 32 would therefore indicate to the purchaser that the pack had been tampered with and the knife possibly extracted and maybe used or damaged.

It will be seen that one of the bridges 32 is located very close to the locking surface so that it is more difficult to somehow bend the locking element 31 in such a way as to extract the knife 11.

Associated with the tamper-evident arrangement 30 is a hole 34 for hanging the article on display in a shop for example. This hole 34 is formed in a portion 35 which is also attached to the holster 12 by means of frangible bridges 36. This portion 35 can therefore be broken off after sale with the tamper evident arrangement 30 to leave the holster/knife combination ready for use by the consumer.

A graphics/information card 37 is attached between the tamper evident arrangement 30 and the portion 35. This card 37 can carry whatever information etc as desired and is removed when the frangible bridges 32, 36 are severed.

In the particular arrangement shown the holster 12, tamper evident arrangement 30, hole portion 35 and bridges 32, 36 are formed from two plastics mouldings 12a, 12b which are assembled in the following manner. If being used, the catch element 16 and knife 11 are located in one of the holster mouldings 12a. Also the card 37 is placed over relevant parts of the hole portion 35 and the tamper evident arrangement 30. The other holster moulding 12b is then placed over moulding 12a and the two are secured by suitable means such as heat treatment, adhesive. In this way the knife is securely held in the holster in a tamper-evident manner. For ease of production the bridges may be formed only on one of the holster mouldings.

It will be appreciated that the arrangements shown are only examples of the shapes, configurations and materials used. For example the resilience of the catch element 16 could be replaced by biasing means such as a spring. Also the catches could engage other areas of the knife handle and could be provided in plurality. The catches and tamper evident arrangements could also

engage the blade rather than the handle of the knife.

Claims

1. A holster for a knife which holster has an opening through which the blade is inserted, the holster incorporating a catch arrangement for retaining the knife blade within the holster, it being possible to overcome the retention action of the catch arrangement so as to remove the knife from the holster.
2. A holster as claimed in claim 1 wherein the catch arrangement is located adjacent the holster opening.
3. A holster as claimed in claim 1 or claim 2 wherein the catch arrangement comprises a catch element which is resiliently deflectable from a rest or catch position to an open position.
4. A holster as claimed in claim 3 wherein the catch element comprises a separate member having a first portion which is held in position by the holster and a second or free portion which comprises a resiliently deflectable portion which, in use, is engaged by a forward portion of the knife handle adjacent the knife blade.
5. A holster as claimed in claim 4 wherein the free portion incorporates a groove which is aligned with the opening of the holster to allow passage of the blade, the parts of the free portion forming the sides of the groove being engaged in use, by projecting parts of the knife handle, deflecting on insertion of the knife blade and snapping back behind the projecting parts of the handle to retain the knife.
6. A holster as claimed in claim 5 wherein the first portion of the catch element is held in a slot in the holster and the first portion has a projection which locates in a recess in the slot.
7. A holster as claimed in claim 6 wherein the holster provides at least one abutment wall for engaging the knife handle to prevent over-insertion of the knife.
8. A holster as claimed in any one of claims 1 to 7 wherein the holster, in use, shields all of the or each cutting edge of the knife.
9. A holster as claimed in claim 8 wherein the holster provides a chamber for the knife blade which chamber is accessible only by way of the opening, thereby, in use, completely enclosing the blade of the knife.
10. In combination a holster and a knife, said holster

having an opening and incorporating a catch arrangement and the knife having a blade and a handle incorporating a cam surface and a return surface for engaging the catch arrangement, the catch arrangement retaining the knife blade within the holster, it being possible to overcome the retention action of the catch arrangement so as to remove the knife from the holster.

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11. A combination as claimed in claim 10 wherein the cam surface is located adjacent the knife blade.
12. A combination as claimed in claim 11 wherein the cam surface is adjacent the cutting edge of the knife blade and the return surface also acts as a finger abutment.
13. In combination, a holster and a knife, said holster incorporating a tamper evident arrangement for retaining the knife within the holster until such time as it is to be removed, the tamper evident arrangement being attached to the holster by one or more frangible bridges.
14. A combination as claimed in claim 13 wherein the tamper evident arrangement or lock comprises a locking element which in use is located behind a projecting portion of the knife which projecting portion is located on the handle of the knife.
15. A combination as claimed in claim 14 wherein the projecting portion comprises a finger abutment adjacent the knife blade.
16. A combination as claimed in claim 15 wherein a frangible bridge is located closely adjacent the locking surface of the tamper evident arrangement.
17. A combination as claimed in claim 16 wherein the tamper evident arrangement incorporates hanging means for retail display, which hanging means is removed from the holster when the frangible bridges are severed.
18. A combination as claimed in claim 17 wherein the tamper evident arrangement incorporates a graphics/information section which is also removed from the holster when the frangible bridges are severed.
19. A combination as claimed in claim 18 wherein the holster and the tamper evident arrangement are formed from two parts secured together along a generally lengthwise plane with the knife inserted between the two parts before being secured.
20. A combination as claimed in claim 19 wherein the graphics/information section is formed from card and is sandwiched between the two parts of the

tamper evident arrangement.

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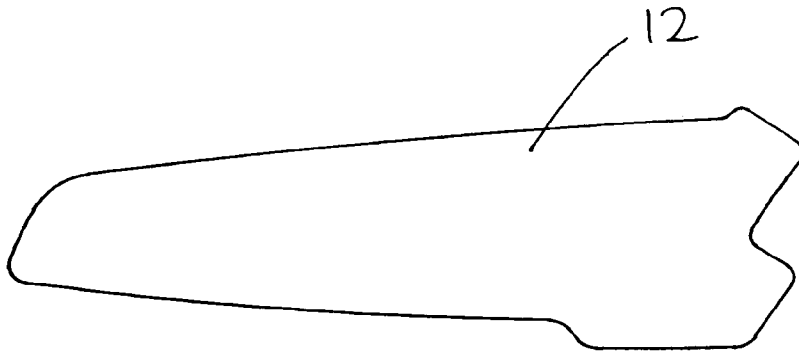


FIGURE 1

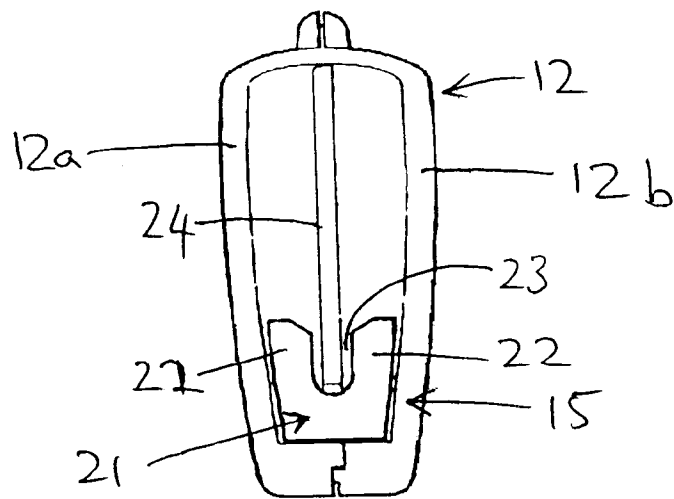


FIGURE 2

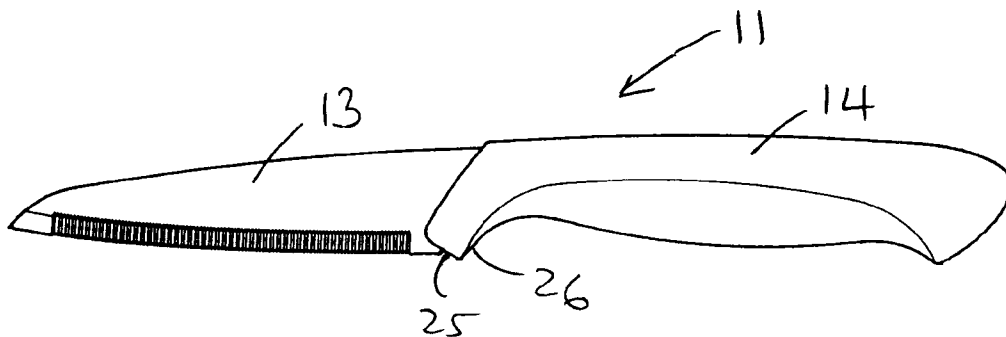


FIGURE 3

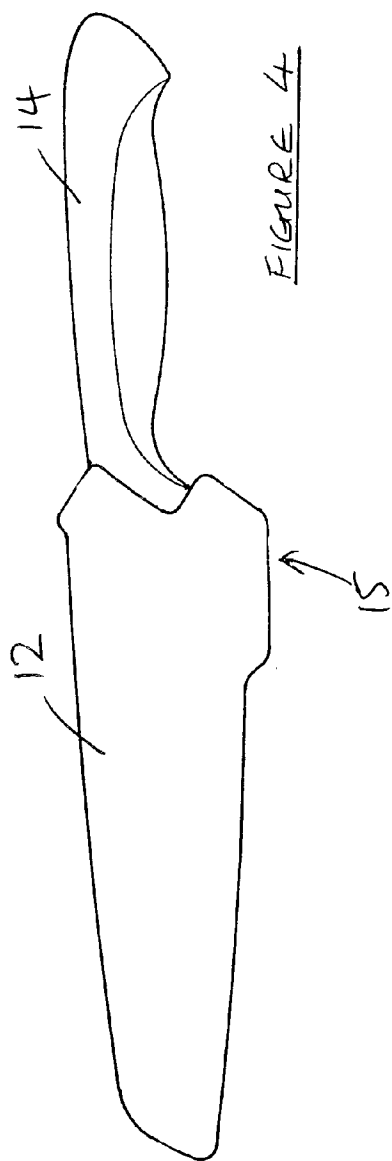


FIGURE 4

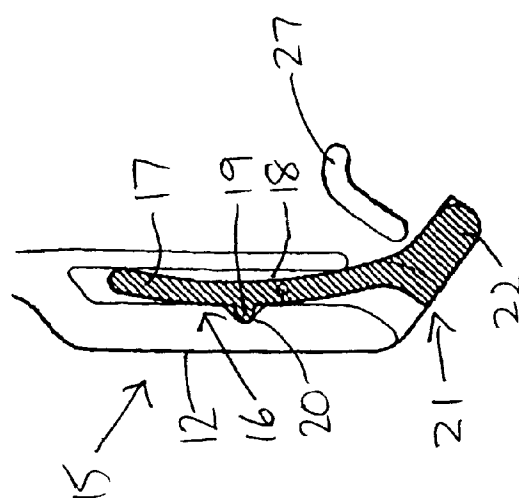


FIGURE 5

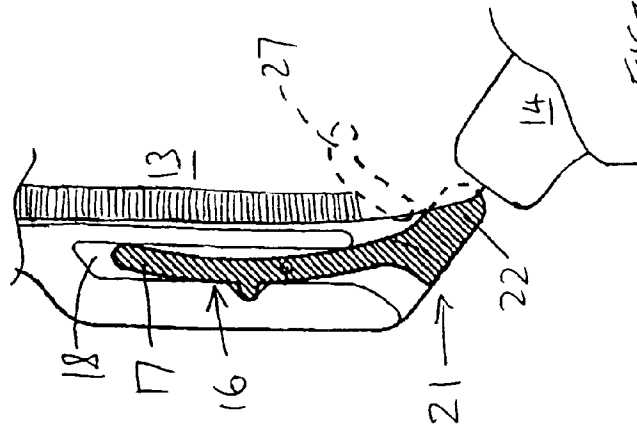


FIGURE 6

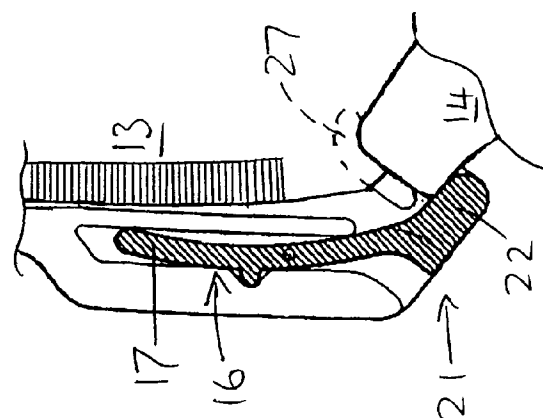


FIGURE 7

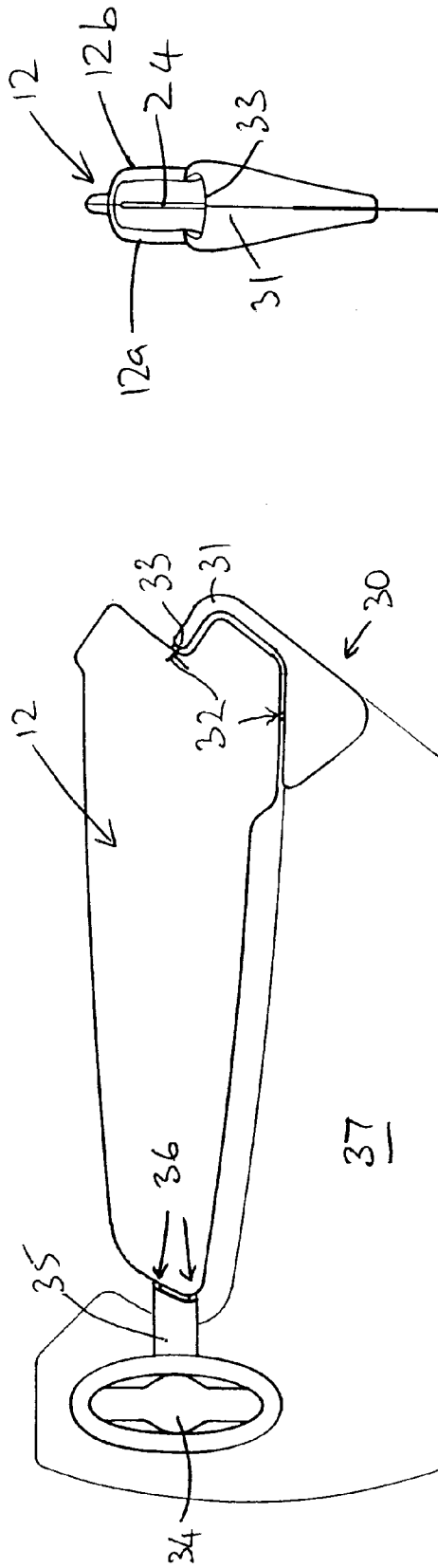


FIGURE 8

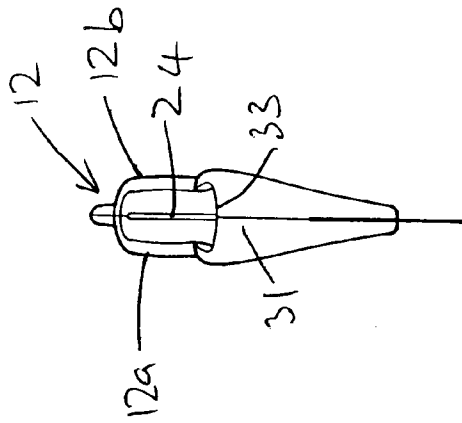


FIGURE 9

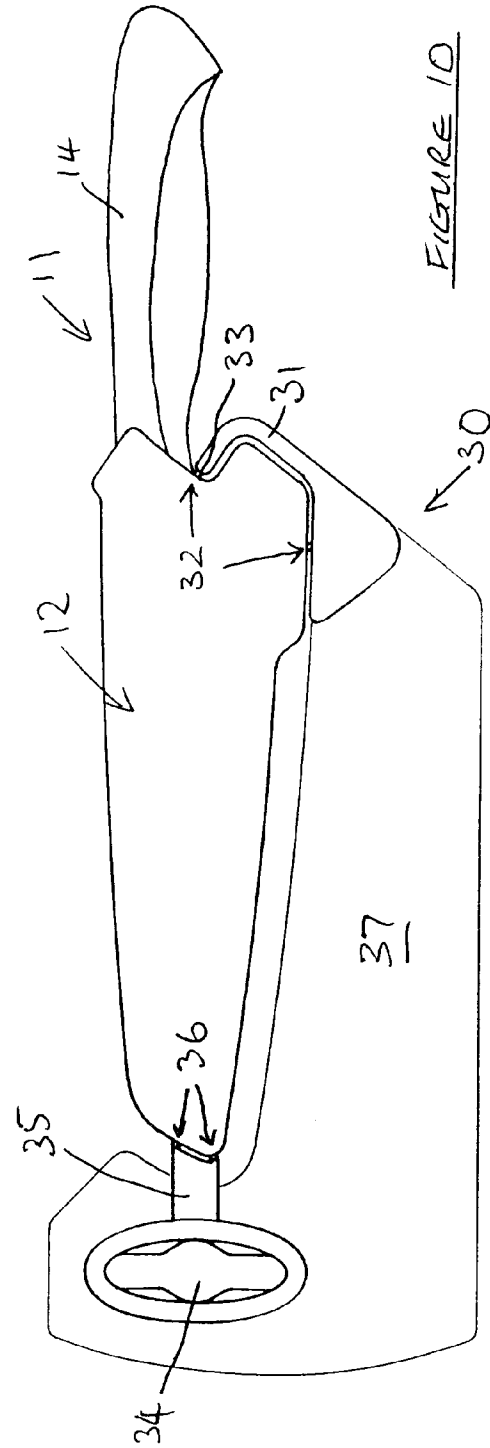


FIGURE 10