



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
12.12.2018 Bulletin 2018/50

(51) Int Cl.:
F41C 33/02 ^(2006.01) **F41C 33/04** ^(2006.01)

(21) Application number: **18176343.4**

(22) Date of filing: **06.06.2018**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(71) Applicant: **Resca, Franco**
KILNERPARK 0186 (ZA)

(72) Inventor: **Resca, Franco**
KILNERPARK 0186 (ZA)

(74) Representative: **Boult Wade Tennant LLP**
Verulam Gardens
70 Gray's Inn Road
London WC1X 8BT (GB)

(30) Priority: **06.06.2017 ZA 201703858**

(54) **HOLSTER**

(57) A holster arrangement (8) which includes a holster (10) which includes a body (12) having walls (16) defining a cavity (18) within which part of a firearm is receivable. The arrangement includes adaptor elements (70, 82) whereby the shape of the cavity and accordingly the firearm which can be received therein is adjustable. The holster further includes a retaining member (14) for

retaining a firearm in the holster, the force required to insert or remove a firearm from the holster being adjustable. The retaining member includes an arm element (112) and a nose element (114) which are manufactured separately and connected together to facilitate ready modification of the retaining member.

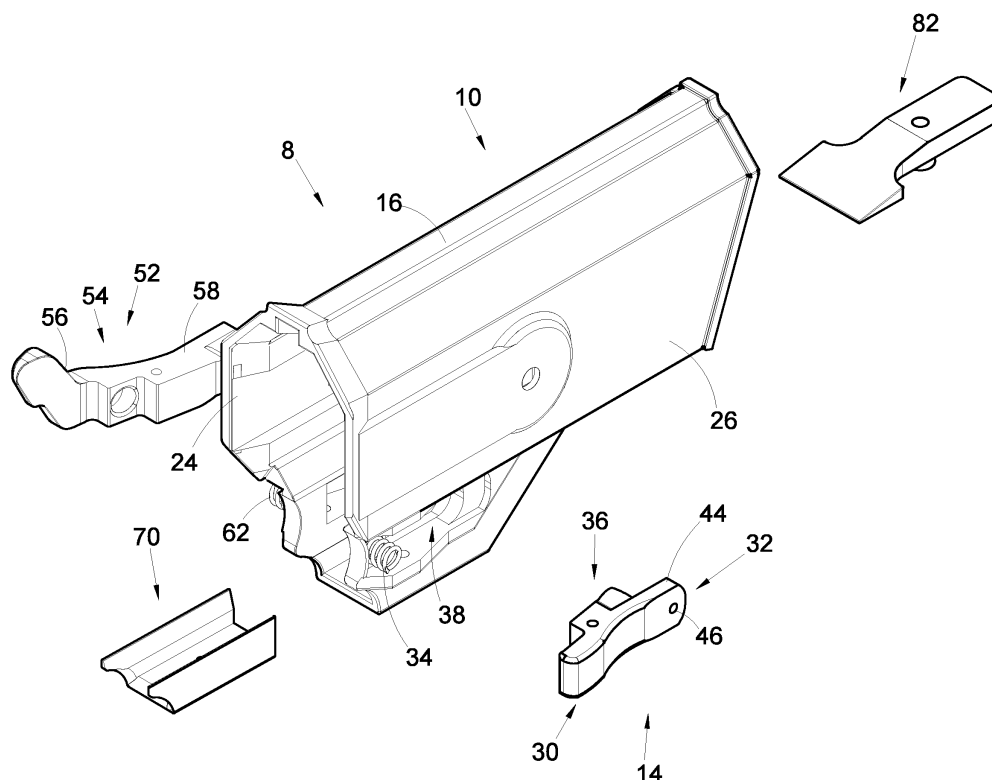


Fig. 3

Description

[0001] This Invention relates to fire-arms. More particularly, it relates to a holster arrangement. It further relates to a holster and to a holster adaptor.

[0002] According to one aspect of the invention, there is provided a holster arrangement which includes:

a holster which includes a body having walls defining a cavity having a muzzle receiving region and a trigger guard receiving region within which at least part of a muzzle and a trigger guard of a firearm are respectively receivable when the firearm is inserted into the holster;

retaining means for retaining the firearm releasably in the holster; and

at least one adapter element which is mounted or mountable to the body of the holster in order to permit the shape of the cavity to be modified to conform to and accommodate different firearms.

[0003] In the context of the specification, the term "muzzle" is to be interpreted relatively broadly to include the front portion of a firearm including the slide, barrel and front part of the frame.

[0004] The trigger guard receiving region may be generally channel shaped in cross-section and the holster arrangement may include a trigger guard receiving region adapter element which has a channel shaped cross-section having an outer surface which corresponds to an inner surface of the body defining the trigger guard receiving region of the cavity and an inner surface configured to snugly accommodate the trigger guard of a firearm with which the modified holster is intended to be used.

[0005] Instead, or in addition, the holster arrangement may include a muzzle receiving region adapter element which is mounted or mountable in the muzzle receiving region of the cavity in order to change the effective shape of the muzzle receiving cavity in order to accommodate the muzzle of a firearm with which the modified holster is intended to be used.

[0006] The body of the holster and the or each adaptor element may be provided with complementary locating formations in order to locate the adaptor element in the body. The locating formations may include a lug on one of the body and the adaptor element and a complementary recess or hole on the other of the body and the adaptor element.

[0007] The adaptor element may be secured in position in the body by means of a fastener extending through a hole in the body into engagement with the adaptor element. The position of the adaptor may be adjustable, e.g. using spacers and/or a jacking screw to permit it to be configured to suit a particular firearm and thereby ensure that the firearm is a snug fit in the holster.

[0008] The retaining means may include a retaining member which is mounted on the body and displaceable

between a retaining position towards which it is resiliently biased and a release position, the retaining member having a trigger guard engaging formation which, in the retaining position of the retaining member, protrudes into the cavity, the trigger guard engaging formation being configured such that insertion of a firearm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position towards its release position to permit the trigger guard to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, and such that when the firearm is withdrawn from the holster, the trigger guard engages and displaces the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and permit withdrawal of the firearm from the holster; and adjustment means whereby the force required to displace the retaining member away from its retaining position and hence to withdraw the firearm from the holster is adjustable.

[0009] The adjustment means may be configured to adjust the depth to which the trigger guard engaging formation protrudes into the cavity.

[0010] The retaining member may be pivotally mounted to the body and may be biased towards its retaining position by means of a resilient biasing means such as spring, e.g. a coil or other type of spring. In particular, the spring may be a coil spring which is mounted in compression between the retaining member and the body of the holster.

[0011] The adjustment means may include an adjusting screw which serves as a stop to adjust the extent to which the trigger guard engaging formation extends into the cavity of the holster when the retaining member is in its retaining position. Hence, by way of the adjusting screw the retaining member can be adjusted to accommodate different fire-arms, the trigger guards of which may vary and also to adjust the force required in order for the retaining member to be displaced away from its retaining position when withdrawing a fire-arm from the holster. Another way in which the force required for the retaining member to be displaced away from its retaining position is by changing the spring rate of the spring.

[0012] The body may be formed of a synthetic plastics material and have a guide arrangement for facilitating the insertion of a firearm into the holster.

[0013] An inner surface of the body may be inclined to guide a fire-arm into the holster. In particular, the body may define a flared mouth at an entrance to the cavity to facilitate aligning a muzzle of a fire-arm with the cavity of the holster.

[0014] The retaining means may include a locking arrangement whereby a firearm inserted into the holster can be locked releasably in position.

[0015] The locking arrangement may include a locking member which is mounted on the body and is displaceable

able between a locked position towards which it is biased and a release position, the locking member when in its locking position being displaceable by a trigger guard of a firearm upon insertion of the firearm into the holster to displace the locking member away from its locked position to permit the trigger guard to pass the locking member and to permit the locking member to return to its locked position once the trigger guard has passed the locking member and in which the locking member serves to inhibit unauthorised withdrawal of said firearm from the holster.

[0016] The locking member may be pivotally connected to the body and may be configured such that an attempt to withdraw a said firearm from the holster without manually displacing the locking member towards its release position will result in the locking member being urged more firmly into its locked position.

[0017] In one embodiment, the retaining means includes a locking member and a retaining member mounted on opposite sides of the body.

[0018] The retaining means may include a retaining member comprising an arm element and a nose element on which the trigger guard engaging formation is provided, the arm element and nose element having complementary mounting formations whereby the nose element is dismountably mounted or mountable to the arm element.

[0019] Hence, the arm element may be used with a plurality of different nose elements thereby effectively modifying the retaining arrangement for use with a plurality of different firearms. By virtue of the fact that the nose element is considerably smaller than the arm element substantial savings can be achieved on the cost of dies and hence the manufacturing of the holster.

[0020] The mounting formations may include a recess in one of the arm element and the nose element and a complementary protrusion on the other of the arm element and the nose element which is receivable in the recess and a locking arrangement for locking the protrusion releasably in position in the recess. The locking arrangement may include at least one locking pin which extends between the arm element and the nose element. In a preferred embodiment of the invention, the protrusion may be secured releasably in position in the recess by a pair of locking pins. One of the locking pins may form a pivot pin whereby the retaining member is pivotally mounted to the body for displacement between its retaining position and its release position.

[0021] In particular, the adaptor elements will be configured to compensate for trigger guards having different shapes, widths and/or heights thereby permitting the use of the holster with multiple firearms and increasing its versatility.

[0022] According to another aspect of the invention, there is provided a holster for a firearm having a trigger guard, which holster includes:

a body having walls defining a cavity, for receiving

at least part of a said fire-arm including at least a portion of the trigger guard;

a retaining member which is mounted on the body and displaceable between a retaining position towards which it is resiliently biased and a release position, the retaining member having a trigger guard engaging formation which in the retaining position of the retaining member protrudes into the cavity, the trigger guard engaging formation being configured such that insertion of a fire-arm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, and such that when the fire-arm is withdrawn from the holster, the trigger guard engages and displaces the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and permit withdrawal of the fire-arm from the holster; and

adjustment means whereby the force required to displace the retaining member away from its retaining position and hence to insert and/or withdraw the fire-arm from the holster is adjustable.

[0023] According to yet another aspect of the invention, there is provided a holster for a firearm having a trigger guard, which holster includes:

a body having walls defining a cavity, for receiving at least part of a said fire-arm including at least a portion of the trigger guard;

a retaining member which is mounted on the body and displaceable between a retaining position towards which it is resiliently biased and a release position, the retaining member having a trigger guard engaging formation which in the retaining position of the retaining member protrudes into the cavity, the trigger guard engaging formation being configured such that insertion of a fire-arm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, and such that when the fire-arm is withdrawn from the holster, the trigger guard engages and displaces the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and permit withdrawal of the fire-arm from the holster; and

adjustment means whereby the depth to which the trigger guard engaging formation protrudes into the cavity is adjustable.

[0024] According to a further aspect of the invention, there is provided a holster for a firearm having a trigger guard, which holster includes:

a body having walls defining a cavity having a muzzle receiving region and a trigger guard receiving region within which at least part of a muzzle and a trigger guard of a firearm are respectively receivable when the firearm is inserted into the holster; and
a mounting formation whereby at least one adaptor element is mountable to the body in the trigger guard receiving region of the cavity in order to permit the shape of the cavity to be modified to accommodate different firearms.

[0025] According to still another aspect of the invention, there is provided a holster for a firearm having a trigger guard, which holster includes:

a body having walls defining a cavity, for receiving at least part of a said fire-arm including at least a portion of the trigger guard;
a retaining member which is mounted on the body and displaceable between a retaining position towards which it is resiliently biased and a release position, the retaining member having a trigger guard engaging formation which in the retaining position of the retaining member protrudes into the cavity, the trigger guard engaging formation being configured such that insertion of a fire-arm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, and such that when the fire-arm is withdrawn from the holster, the trigger guard engages and displaces the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and permit withdrawal of the fire-arm from the holster; and
a locking arrangement whereby a firearm inserted into the holster can be locked releasably in position.

[0026] According to a further aspect of the invention, there is provided a holster for a firearm having a trigger guard, which holster includes:

a body having walls defining a cavity, for receiving at least part of a said fire-arm including at least a portion of the trigger guard; and
a retaining arrangement which is mounted on the body and displaceable between a retaining position towards which it is resiliently biased and a release position, the retaining arrangement having a trigger guard engaging formation which in the retaining position of the retaining member protrudes into the cav-

ity, the trigger guard engaging formation being configured such that insertion of a fire-arm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, the retaining arrangement including an arm element and a nose element on which the trigger guard engaging formation is provided, the arm element and nose element having complementary mounting formations whereby the nose element is dismountably mountable to the arm element.

[0027] According to a still further aspect of the invention, there is provided a holster adaptor element for adapting a holster which is configured to be used with one firearm to render it suitable for use with another firearm, the adaptor element including a body configured such that the adaptor element is mountable in said holster, and configured to modify the shape of a firearm receiving cavity defined by the holster such that the other firearm is snugly receivable therein.

[0028] The body of the adaptor element may have a channel shaped inner surface within which, in use, at least part of a trigger guard of the other firearm is snugly receivable when the other firearm is inserted into the holster.

[0029] The trigger guard engaging formation may include a first surface against which the trigger guard abuts when being inserted into the holster and a second surface against which the trigger guard abuts when a said fire-arm is being withdrawn from the holster.

[0030] According to another aspect of the invention, there is provided a holster for a firearm having a trigger guard, which holster includes:

a body having walls defining a cavity, for receiving at least part of a said fire-arm including at least a portion of the trigger guard, the body being formed of a synthetic plastics material and having a guide arrangement for facilitating the insertion of a fire-arm into the holster.

[0031] According to another aspect of the invention there is provided a holster for a firearm having a trigger guard, which holster includes

a body having walls defining a cavity having a muzzle receiving region and a trigger guard receiving region within which at least part of a muzzle and a trigger guard of a firearm are respectively receivable when the firearm is inserted into the holster; and
a mounting formation whereby at least one adaptor element is mountable to the body in the trigger guard receiving region of the cavity in order to permit the holster to be modified to accommodate firearms having different trigger guards.

[0032] The holster may include a passive retaining ar-

rangement whereby a firearm is held releasably in position in the holster.

[0033] The passive retaining arrangement may include a retaining member which is mounted on the body and displaceable between a retaining position towards which it is resiliently biased and a release position, the retaining member having a trigger guard engaging formation which in the retaining position of the retaining member protrudes into the cavity, the trigger guard engaging formation being configured such that insertion of a fire-arm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, and such that when the fire-arm is withdrawn from the holster, the trigger guard engages and displaces the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and permit withdrawal of the fire-arm from the holster.

[0034] The invention will now be described, by way of example, with reference to the accompanying diagrammatic drawings.

[0035] In the drawings:

Figure 1 shows a three-dimensional view of a holster arrangement in accordance with the invention;

Figure 2 shows, a three-dimensional view of a body of a holster forming part of the holster arrangement of Figure 1;

Figure 3 shows a three-dimensional exploded view of the holster arrangement of Figure 1;

Figure 4 shows an exploded front view of the holster arrangement of Figure 1;

Figure 5 shows a partially exploded top view of the holster arrangement of Figure 1;

Figure 6 shows a partially exploded side view of the holster arrangement of Figure 1;

Figure 7 shows a longitudinal sectional view of the holster arrangement of Figure 1;

Figure 8 shows another sectional view;

Figure 9 shows, on an enlarged scale, another locking member in accordance with the invention;

Figure 10 shows an exploded view of the locking member of Figure 9;

Figure 11 shows a three-dimensional view of an arm element of the locking member of Figure 9;

Figure 12 shows a three-dimensional view of a nose element of the locking member of Figures 9 and 10;

Figure 13 shows another three-dimensional view of the nose element of Figure 12;

Figure 14 shows a side view of the nose element of Figure 12;

Figure 15 shows a side view, similar to Figure 14, of another nose element in accordance with the invention;

Figure 16 shows a side view similar to Figure 14 of

another nose element in accordance with the invention;

Figure 17 shows a three-dimensional view of a holster arrangement in accordance with the invention to which a belt hanger is connected; and

Figure 18 shows a top view of the holster arrangement and connected belt hanger of Figure 17.

[0036] In the drawings reference numeral 8 generally indicates a holster arrangement in accordance with the invention. The holster arrangement 8 includes a holster in accordance with the invention which is generally indicated by reference numeral 10. The holster includes a body 12 and a retaining member, generally indicated by reference numeral 14 mounted on the body 12.

[0037] The body 12 includes a holster body wall 16 which could be formed by moulding, e.g. injection moulding, 3-D printing, vacuum forming or the like and which defines a cavity 18 for receiving at least part of a firearm. More particularly, the cavity 18 has a trigger guard retaining region 20 and a muzzle receiving region 22.

[0038] The body 12 includes a flared mouth 24 at an entrance to the cavity 18 which serves as a guide arrangement to facilitate aligning an end of a muzzle of a firearm with the entrance to the cavity 18 and thereby facilitates insertion of the firearm into the holster. The retaining member 14 is pivotally mounted to an outer surface 26 of the body 12 for limited pivotal translation about a pivot axis defined by a pivot pin 28 (Fig 8). The retaining member 14 is in the form of a first order lever and includes an effort arm 30 and a working arm 32 positioned on opposite sides of the pivot axis. A biasing spring 34 is positioned in compression between the effort arm 30 of the retaining member 14 and the body 12, biasing the effort arm 30 in the direction of arrow 31 (Fig 8) away from the body 12 into a retaining position of the retaining member 14 (shown in Figure 8).

[0039] The working arm 32 includes a trigger guard engaging formation 36 which, in the retaining position of the retaining member 14 protrudes through an aperture 38 in a side of the body 12 into a trigger guard passage interfering position in the trigger guard retaining region 20 of the cavity 18.

[0040] As can best be seen in Figures 4 and 8 of the drawings, the trigger guard engaging formation 36 includes a first inclined surface 40 against which a trigger guard 41 of a firearm abuts when a firearm is being inserted into the holster and a second inclined surface 42 against which the trigger guard abuts when a said firearm is being withdrawn from the holster 10 as described in more detail below. The first surface 40 and second surface 42 are angularly spaced-apart and configured such that when a firearm is inserted into the holster, the trigger guard 41 engages the first surface 40 and urges the trigger guard engaging formation 36 outwardly against the bias of the spring 34 to permit the trigger guard 41 to pass the trigger guard engaging formation which then returns to its retaining position under the influence of the

spring 34 once the trigger guard 41 has passed. The second surface 42 is configured such that upon withdrawal of a firearm from the holster, the trigger guard 41 engages the second surface 42 and displaces the trigger guard engaging formation 36 away from its retaining position against the bias of the spring 34 to permit the trigger guard to pass the trigger guard engaging formation 36. It will be appreciated that by changing the shape and/or inclination of the surfaces 40, 42 the force which must be applied to a firearm to insert it into or remove it from the holster can be varied.

[0041] In addition, the working arm 32 includes a lug 44 and an adjusting screw 46 (Fig 8) which extends through a hole in the lug 44 and abuts against an outer surface of the body 12. By adjusting the position of the screw 46, the depth to which the trigger guard engaging formation 36 protrudes into the cavity 18 is adjustable. This, in turn, will permit the distance the formation 36 must be displaced in order to permit the trigger guard to pass and hence the force required in order to insert a firearm and/or remove a firearm from the holster to be adjustable. Instead, or in addition, in order to adjust the force required in order to insert a firearm and/or remove a firearm from the holster, the spring rate of the spring 34, may be changed thereby adjusting the force required in order to compress the spring and hence to insert or remove a firearm.

[0042] The retaining member 14 accordingly functions as a passive retaining arrangement for retaining a firearm releasably in the holster. In other words, the retaining member 14 serves to retain a firearm in the holster but, with the application of sufficient force to the firearm in order to overcome the bias of the spring 34, the retaining member 14 can be displaced away from its retaining position to a release position in which it permits the trigger guard to pass the trigger guard 41 engaging formation 36 and for the firearm to be removed or inserted into the holster.

[0043] In the embodiment shown, the holster 10 includes, in addition to the retaining member 14, a locking arrangement, generally indicated by reference numeral 52 whereby a firearm inserted into the holster can be locked releasably in position. It will be appreciated that it is unlikely that both the passive retaining arrangement in the form of a retaining member 14 and the locking arrangement 52 will be used simultaneously. However, this option is available.

[0044] The locking arrangement 52 includes a locking member 54 which is pivotally mounted on an outer surface of the body 12, on an opposite side to the side on which the retaining member 14 is mounted. The locking member 54 is in the form of a first order lever and includes an effort arm 56 and a working arm 58 positioned on opposite sides of a pivot axis defined by a pivot pin 60 (Fig 8) whereby the locking member 54 is pivotally mounted to the body. A biasing spring 62 is positioned in compression between the effort arm 56 of the locking member 54 and the body 12, biasing the effort arm 56 in the di-

rection of arrow 63 away from the body 12 into a locked or fire-arm retaining position of the locking member 54. In the locked position of the locking member 54, a portion of the working arm 58 protrudes through an aperture 64 into the trigger guard retaining region 20 of the cavity 18. Two spaced-apart trigger guard engaging surfaces 66, 68 are provided on that portion of the working arm 58 which, in the locked or fire-arm retaining position of the locking member 54 protrudes through the aperture 64 into the trigger guard retaining region 20.

[0045] The trigger guard engaging surface 66 is inclined and operates in a similar fashion to the first surface 40 of the retaining member 14 such that, when a firearm is inserted into the holster, the trigger guard 41 abuts against the surface 66 and displaces the working arm 58 outwardly against the bias of the spring 62 to permit the trigger guard to pass, after which the locking member 54 returns to its locked position. However, the trigger guard engaging surface 68 is configured such that when an attempt is made to withdraw the firearm from the holster, the trigger guard abuts against the trigger guard engaging surface 68 and exerts a moment on the locking member 54 about the pivot axis which urges the locking member more firmly into its locked position thereby inhibiting withdrawal of the firearm from the holster. In order to withdraw the firearm from the holster, it is necessary first manually to displace the effort arm 56 inwardly towards the holster body against the bias of the spring 62 thereby displacing the working arm and more particularly the trigger guard engaging surface 68 outwardly to permit the passage of the trigger guard and withdrawal of the firearm from the holster.

[0046] The length of the effort arm 56 may be made adjustable to permit a user to adjust it to his particular preference.

[0047] The pivot pins 28, 60, are typically screw-threaded for part of their length. The holes in the retaining member 14 and locking member 54 through which the pivot pins 28, 60, extend, are provided with complementary screw-threads which serve to retain the pivot pins in position and reduce the risk that they may disengage with the body 12.

[0048] In the embodiment described above, the locking member 54 is typically formed as a unitary moulding of a synthetic plastics material. Referring now to Figures 9 to 14 of the drawings, reference numeral 110 refers generally to another locking member in accordance with the invention. The locking member 110 is substantially identical to the locking member 54 and unless otherwise indicated, the same reference numerals above are used to designate similar parts. The main difference between the locking member 110 and the locking member 54 is that instead of being formed as a unitary moulding, the locking member 110 comprises two components, namely an arm element 112 and a nose element, generally indicated by reference numeral 114.

[0049] The arm element 112 includes a pair of transversely spaced parallel lugs 116 which define, between

them, a slot or recess 118. The nose element 114 includes a body 120 on which the trigger guard engaging surfaces 66, 68 are provided. A protrusion 122 protrudes from the body 120 and, as illustrated in Figures 9 and 10 of the drawings, is snugly receivable in the slot 118. The nose element 114 is secured to the arm element 112 by means of pins 124, 126 extending through aligned holes 128, 130 in the arm element 112 and the protrusion 122.

[0050] It will be appreciated that, once assembled, the locking member 110 would be mounted on the body 12 and used in a substantially identical fashion to the locking member 54 described above. In this regard, one of the pins 124 may be used as the pivot pin whereby the locking member 110 is pivotally mounted to the body 12. It will further be appreciated that the locking member 54, 110 can be mounted on either the side of the holster body 12 enabling its use by both lefthanded and righthanded persons. The Inventor believes that an advantage with the present invention is that the locking member 54, 110 can be positioned on the side of the body which will enable it to be thumb operated which reduces the risk of inadvertent discharge of a firearm being withdrawn from the holster.

[0051] It will be appreciated that, in order to accommodate firearms having different trigger guards, the trigger guard engaging surfaces 66, 68 may have to change to accommodate the particular firearm. To this end, as illustrated in Figures 15 and 16 of the drawings, in which reference numerals 132 and 134 refer respectively to different nose elements, the appropriate nose element 114, 132, 134 can be selected and attached, in the manner described above, to the arm element 112. The nose elements 114, 132, 134 are considerably smaller than the arm elements 112 and accordingly, the size and cost associated with the dies for manufacturing a plurality of different nose elements would be considerably less than the cost associated with moulding different locking members 54 in order to accommodate a variety of firearms. In this way, the Inventor believes that the cost associated with the manufacture of the holster can be reduced whilst at the same time greatly improving the versatility thereof.

[0052] It will further be appreciated, that the retaining member 14 could be manufactured making use of two separate parts in the same manner as described above resulting in cost savings and increased versatility.

[0053] The body 12 defines a longitudinally extending groove 68 within which a forward sight of the firearm is slidably receivable.

[0054] It will be appreciated, that the dimensions of the muzzles and trigger guards of firearms vary from firearm to firearm. With a view to permitting the holster 10 to accommodate different firearms, the body 12 may include mounting formations whereby one or more spacing elements can be mounted within the body in order to adapt the shape and dimensions of the cavity 18 in order to suit a particular firearm. Hence, as illustrated in the drawings, the holster arrangement 8 may include an adapter element 70 which is mountable to the body 12

in the trigger guard receiving region 20 of the cavity 18 in order to permit the holster to be modified to accommodate a firearm having a different and specifically a narrower trigger guard.

[0055] As can be seen in the drawings, the trigger guard receiving region 20 is generally channel-shaped in cross-section. The adapter element 70 has a channel-shaped cross-section having an outer surface 72 which corresponds to an inner surface of the body 12 defining the trigger guard receiving region 20 of the cavity 18. The adapter element 70 further includes an inner surface 74 which is generally channel-shaped and has a width configured such that a trigger guard of a firearm with which the adapter element is intended to be used is snugly receivable therein.

[0056] The channel shape of the inner surface 74 serves further to centralise the trigger guard of the firearm to ensure the desired degree of interference between the trigger guard, the retaining member 14 and/or the locking member 54 to ensure consistent operation thereof.

[0057] The body 12 and the adapter element 70 are provided with complementary locating formations in the form of a lug 76 on the adapter element 70 which is receivable in a complementary recess 78 on an inner surface of the body 12. In addition, a fastener in the form of a screw 80 extends through an aperture in the body 12 into screw-threaded engagement with the lug 76 in order to retain the adapter element 70 in position.

[0058] The holster arrangement 8 further include an adapter 82 which is mountable to an inner surface of the body 12 in the muzzle receiving region 22 of the cavity 18 in order to adapt the cavity to receive a muzzle of a firearm other than the one with which the holster body is intended to be used. The adapter 82 includes an inner surface 84 having an inclined face 86 which serves to guide a muzzle of a firearm being inserted into the holster 10.

[0059] The adapter 82 is mounted to the body 12 in a similar fashion to the adapter element 70 by means of a lug 88 forming part of the adapter 82, a complementary recess 90 on an inner surface of the body and a locking screw 92 which is inserted into screw-threaded engagement with the lug, through an aperture in the body 12.

[0060] In order to provide finer adjustments for the adapter element 70 and/or adapter 82, spacers or shims 97 (Figure 7) may be provided between the adapter element 70 or the adapter 82 and the body of the holster. Instead, or in addition, an adjusting screw 93 may extend through a hole 95 in the body 12 and abut against the adapter element 70 or the adapter 82, as the case may be. Accordingly, in order to adjust the holster 10 to a specific firearm, with the screws 80, 92 relatively loose, a firearm is inserted into the holster. The adjusting screw 93 is then screwed in or out until the firearm is a snug fit. At this position, the screws 80, 92 are tightened in order to lock the adapter element 70 and adapter 82 in position.

[0061] It will be appreciated, that the holster arrangement 8 could be provided in a kit form comprising a holster

in accordance with the invention and a plurality of adaptors whereby the holster can be modified to render it suitable for use with a plurality of different firearms.

[0062] A resiliently deformable stop or buffer 104 (Figure 7) is positioned in a complementary recess 106 in the body 12. The stop or buffer 104 is typically formed of elastically deformable elastomeric material such as Nitrile foam rubber and a free end thereof is positioned closely spaced from the surfaces 42, 68. Accordingly, when a trigger guard passes the surfaces 42, 68 and the elements 30, 52 return to their rest positions, the trigger guard is sandwiched between the surface of the buffer 104 and the surfaces 42, 68 thereby securing the firearm snugly in the holster and avoiding rattling of the firearm within the holster. Instead, or in addition to the buffer 104, as shown in broken lines in Figure 7, the recess 106 may define a screw-threaded hole 107 within which an adjustable screw is screw-threadedly mountable in order to form an adjustable stop against which a trigger guard can abut when the firearm is fully inserted into the holster.

[0063] The holster 10 includes mounting formations 94, 96 provided on opposite sides of the body 12 whereby the holster is connectable to a belt hanger. The provision of the mounting formations 94, 96 permit the use of the holster by both left and right-handed users. Each mounting formation 94, 96 includes a raised formation 98 and a centrally disposed mounting hole 100 in each formation 98. Inside the holster body 12, a recess is provided in register with each of the raised formations 98 and, as illustrated in Figures 17 and 18 of the drawings, a head of a screw 152 whereby the holster body 12 is secured to a belt hanger 154, which could take any suitable form, is received in the recess thereby reducing the risk that it will damage the surface finish of a firearm being inserted into or removed from the holster. A serrated washer 156 is typically provided between the holster body and a belt hanger in order to resist relative rotation between the two to ensure that the holster remains at a desired position facilitating easy access to a firearm mounted in the holster. Instead of making use of a serrated washer 156, the holster body and belt hanger may be provided with complementary formations which, when urged together, serve to resist relative rotation between the belt hanger and the holster body.

[0064] The body 12 is symmetrical about a longitudinal centre line permitting the retaining member 14 and the locking member to be mounted on either side of the body enabling the holster 10 to be set up for use by both left and right-handed persons.

[0065] It will be appreciated that various configurations of the holster are possible. For example, it could be used simply with the retaining member 14 or the locking member 54. Further, depending upon whether or not the user is left or right handed, the retaining member 14 could be mounted on the appropriate side of the body 12. Further, it could be used where both the retaining member 14 and the locking member 54 are present. This provides an additional degree of security in that it inhibits unauthor-

ised withdrawal of the firearm from the holster. Naturally, once again, the retaining member 14 and locking member 54 can be mounted on either side of the body of the holster. If desired, the holster may make use of two retaining members 14 which are positioned on opposite sides of the holster body 12. When the holster is to be used with a firearm having a different configuration to that of the firearm with which the holster is intended for use, one or both of the adapter element 70 and the adapter 82 could be used. It will be appreciated that any combination of these features could be mounted on the body of the holster in order to render it suitable for use with a particular firearm and for an intended purpose be it sport or law enforcement use.

[0066] In addition, by virtue of the adjustability of the stop in the form of the screw 46, the effort required to insert the firearm into the holster and to remove it from the holster can be adjusted to suit the user's particular preference.

[0067] The Inventor believes that a holster arrangement in accordance with the invention will permit a single holster body 12 to be used with a variety of firearms simply by making use of the appropriate adaptor elements. In addition, by virtue of the substantial degree of adjustability, the user can tailor the holster for his desired preferences. In addition, despite the versatility of the holster arrangement in being able to accommodate a range of firearms, it is particularly compact which improves comfort and facilitates access to a firearm mounted in the holster. The holster body 12 will typically be formed by injection moulding which, the Inventor believes has the advantage that the shape of the body 12 will not change as a consequence of temperature variation.

Claims

1. A holster arrangement (8) which includes:

a holster (10) which includes a body (12) having walls (16) defining a cavity (18) having a muzzle receiving region (22) and a trigger guard receiving region (20) within which at least part of a muzzle and a trigger guard of a firearm are respectively receivable when the firearm is inserted into the holster;
retaining means (14) for retaining the firearm releasably in the holster (10); and
characterised in that the holster arrangement (8) includes at least one adapter element (70, 82) which is mounted or mountable to the body (12) of the holster (10) in order to permit the shape of the cavity (18) to be modified to conform to and accommodate different firearms.

2. A holster arrangement as claimed in claim 1, **characterised in that** the trigger guard receiving region (22) is generally channel shaped in cross-section,

the holster arrangement including a trigger guard receiving region adapter element (70) which has a channel shaped cross-section having an outer surface which corresponds to an inner surface of the body defining the trigger guard receiving region of the cavity and inner surface configured to snugly accommodate the trigger guard of a firearm with which the modified holster is intended to be used.

3. A holster arrangement as claimed in claim 1 or claim 2, **characterised in that** it includes a muzzle receiving region adapter element (82) which is mounted or mountable in the muzzle receiving region (22) of the cavity in order to change the effective shape of the muzzle receiving region of the cavity in order to accommodate the muzzle of a firearm with which the modified holster is intended to be used.
4. A holster arrangement as claimed in any one of claims 1 to 3 in which the body (12) of the holster (10) and the adapter element (70, 82) are provided with complementary locating formations in order to locate the adapter element in the body, the locating formations optionally including a lug (76) on one of the body or the adapter element and a complementary recess (78) or hole on the other of the body or the adapter element, the adapter element preferably being secured in position in the body by means of a fastener (80) extending through a hole in the body into engagement with the adapter element.
5. A holster arrangement as claimed in any one of the preceding claims, in which the position of the adapter element (70, 82) is adjustable to permit it to be configured to suit a particular firearm and thereby ensure that the firearm is a snug fit in the holster.
6. A holster arrangement as claimed in any one of the preceding claims, in which the retaining means includes a retaining member (14) which is mounted on the body (12) and displaceable between a retaining position towards which it is resiliently biased and a release position, the retaining member having a trigger guard engaging formation (36) which, in the retaining position of the retaining member, protrudes into the cavity (18), the trigger guard engaging formation being configured such that insertion of a firearm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position towards its release position to permit the trigger guard (41) to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, and such that when the firearm is withdrawn from the holster, the trigger guard engages and displaces the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard

engaging formation and permit withdrawal of the firearm from the holster; and
adjustment means (46) whereby the force required to displace the retaining member away from its retaining position and hence to withdraw the firearm from the holster is adjustable.

7. A holster arrangement as claimed in claim 6, in which in which the retaining member is pivotally mounted to the body and is biased towards its retaining position by means of a resilient biasing means (34), the adjustment means (46) being configured to adjust the depth to which the trigger guard engaging formation protrudes into the cavity, the adjustment means including an adjusting screw which serves as a stop to adjust the extent to which the trigger guard engaging formation extends into the cavity of the holster when the retaining member is in its retaining position.
8. A holster arrangement as claimed in any one of the preceding claims, in which the body is formed of a synthetic plastics material and has a guide arrangement for facilitating the insertion of a firearm into the holster, in particular, in which an inner surface of the body is inclined to guide a firearm into the holster and more particularly, in which the body defines a flared mouth (24) at an entrance to the cavity to facilitate aligning a muzzle of a firearm with the cavity of the holster.
9. A holster arrangement as claimed in any one of the preceding claims, in which the retaining means (14) includes a locking arrangement (52) whereby a firearm inserted into the holster can be locked releasably in position, the locking arrangement preferably including a locking member (54) which is mounted on the body (12) and is displaceable between a locked position towards which it is biased and a release position, the locking member when in its locking position being displaceable by a trigger guard of a firearm upon insertion of the firearm into the holster to displace the locking member away from its locked position to permit the trigger guard to pass the locking member and to permit the locking member to return to its locked position once the trigger guard has passed the locking member and in which the locking member serves to inhibit unauthorised withdrawal of said firearm from the holster and more particularly, in which the locking member is pivotally connected to the body and is configured such that an attempt to withdraw a said firearm from the holster without manually displacing the locking member towards its release position will result in the locking member being urged more firmly into its locked position.
10. A holster arrangement as claimed in any one of the preceding claims, in which the retaining means in-

cludes a retaining member (14) and/or a locking member (110) comprising an arm element (112) and a nose element (114) on which the trigger guard engaging formation is provided, the arm element and nose element having complementary mounting formations (116, 118, 120) whereby the nose element is dismountably mountable to the arm element, the mounting formations preferably including a recess (118) in one of the arm element and the nose element and a complementary protrusion (122) on the other of the arm element and the nose element which is receivable in the recess and a locking arrangement for locking the protrusion releasably in position in the recess, the locking arrangement including at least one locking pin (124, 126) which extends between the arm element and the nose element the protrusion typically being secured releasably in position in the recess by a pair of locking pins, one of the locking pins forming a pivot pin whereby the retaining member is pivotally mounted to the body for displacement between its retaining position and its release position

11. A holster (10) for a firearm having a trigger guard, which holster includes:

a body (12) having walls (16) defining a cavity (18), for receiving at least part of a said fire-arm including at least a portion of the trigger guard; a retaining member (14) which is mounted on the body and displaceable between a retaining position towards which it is resiliently biased and a release position, the retaining member having a trigger guard engaging formation (36) which in the retaining position of the retaining member protrudes into the cavity, the trigger guard engaging formation being configured such that insertion of a fire-arm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, and such that when the fire-arm is withdrawn from the holster, the trigger guard engages and displaces the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation (36) and permit withdrawal of the fire-arm from the holster; and

characterised in that it includes adjustment means (46) whereby the force required to displace the retaining member away from its retaining position or alternatively the depth to which the trigger guard engaging formation protrudes into the cavity and hence the force required to insert or remove a firearm from the holster is adjustable.

12. A holster (10) for a firearm having a trigger guard, which holster includes:

a body (12) having walls (16) defining a cavity (18), for receiving at least part of a said fire-arm including at least a portion of the trigger guard; a retaining member (14) which is mounted on the body and displaceable between a retaining position towards which it is resiliently biased and a release position, the retaining member having a trigger guard engaging formation (36) which in the retaining position of the retaining member protrudes into the cavity, the trigger guard engaging formation being configured such that insertion of a fire-arm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, and such that when the fire-arm is withdrawn from the holster, the trigger guard engages and displaces the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation (36) and permit withdrawal of the fire-arm from the holster; and

the holster being **characterised in that** it further includes a locking arrangement (52) whereby a firearm inserted into the holster can be locked releasably in position.

13. A holster (10) for a firearm having a trigger guard, which holster includes:

a body (12) having walls (16) defining a cavity (18), for receiving at least part of a said fire-arm including at least a portion of the trigger guard; and

a retaining member (14) which is mounted on the body and displaceable between a retaining position towards which it is resiliently biased and a release position, the retaining member having a trigger guard engaging formation (36) which in the retaining position of the retaining member protrudes into the cavity, the trigger guard engaging formation being configured such that insertion of a fire-arm into the holster causes the trigger guard to engage the retaining member and to displace the retaining member away from its retaining position to permit the trigger guard to pass the trigger guard engaging formation and to permit the retaining member to return to its retaining position once the trigger guard has passed, the retaining arrangement being **characterised in that** it includes an arm element (112) and a nose element (114) on which the

trigger guard engaging formation is provided, the arm element and nose element having complementary mounting formations (116, 118, 120) whereby the nose element is dismountably mountable to the arm element.

5

14. A holster adaptor element (70, 82) for adapting a holster (10) which is configured to be used with one firearm to render it suitable for use with another firearm, the adaptor element being **characterised in that** it includes a body configured such that the adaptor element is mountable in said holster, and configured to modify the shape of a firearm receiving cavity defined by the holster such that the other firearm is snugly receivable therein.
15. A holster adaptor as claimed in claim 14, in which the body of the adaptor element (70) has a channel shaped inner surface (74) within which, in use, at least part of a trigger guard of the other firearm is snugly receivable when the other firearm is inserted into the holster.

10

15

20

25

30

35

40

45

50

55

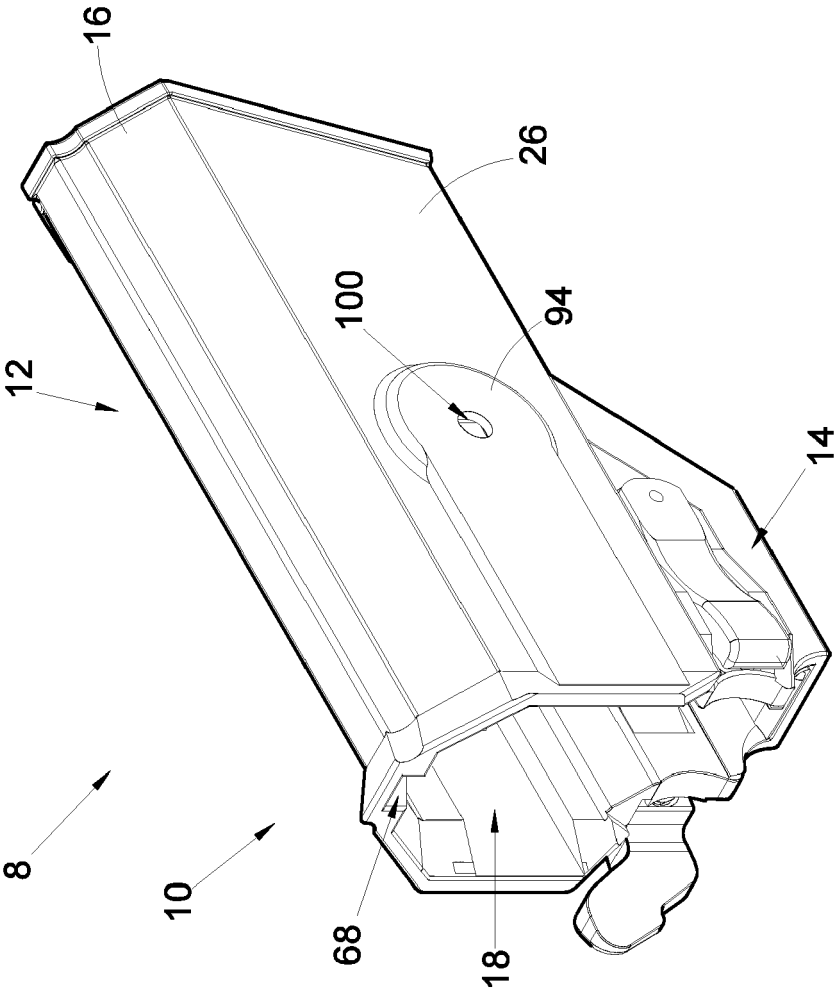


Fig. 1

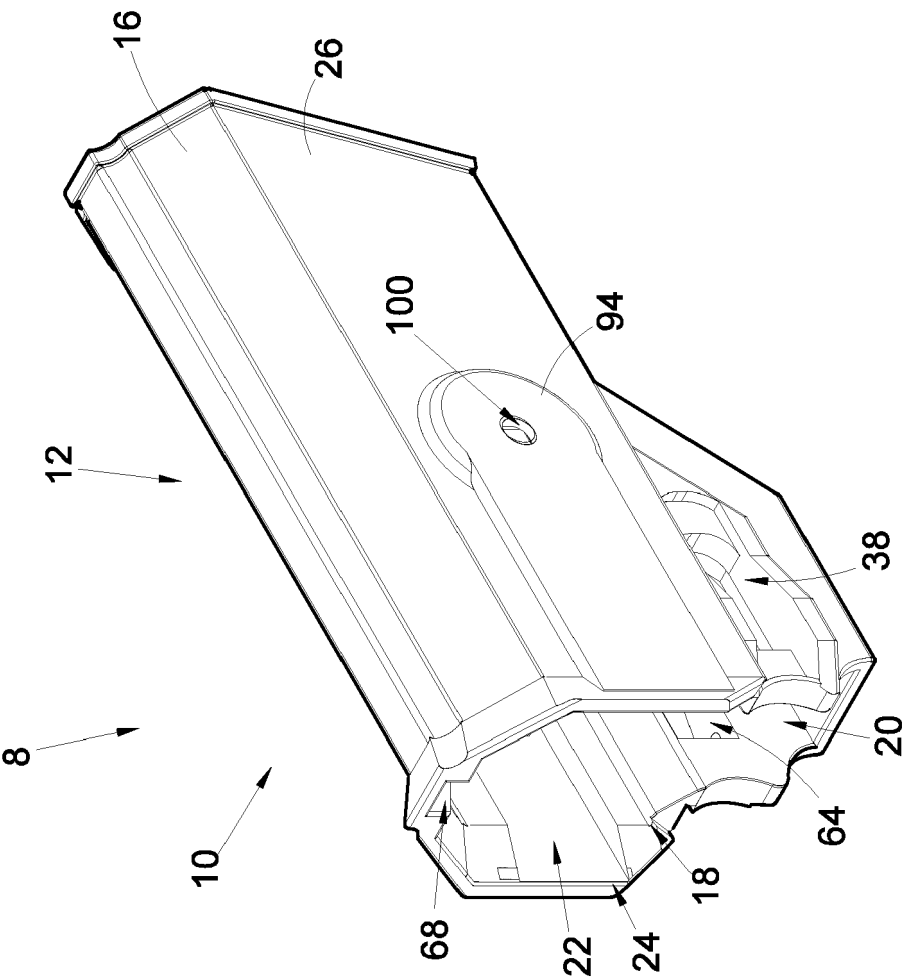


Fig. 2

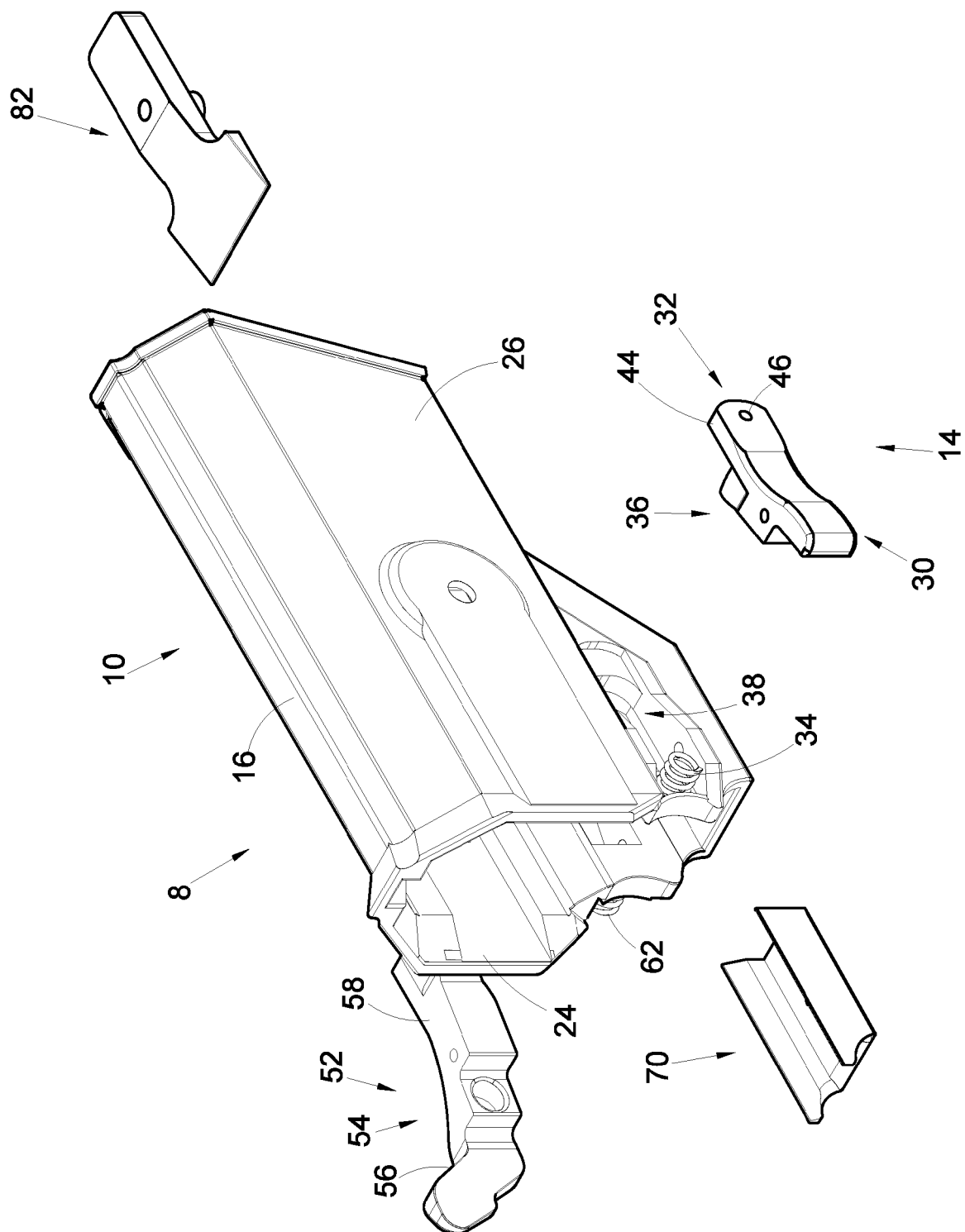


Fig. 3

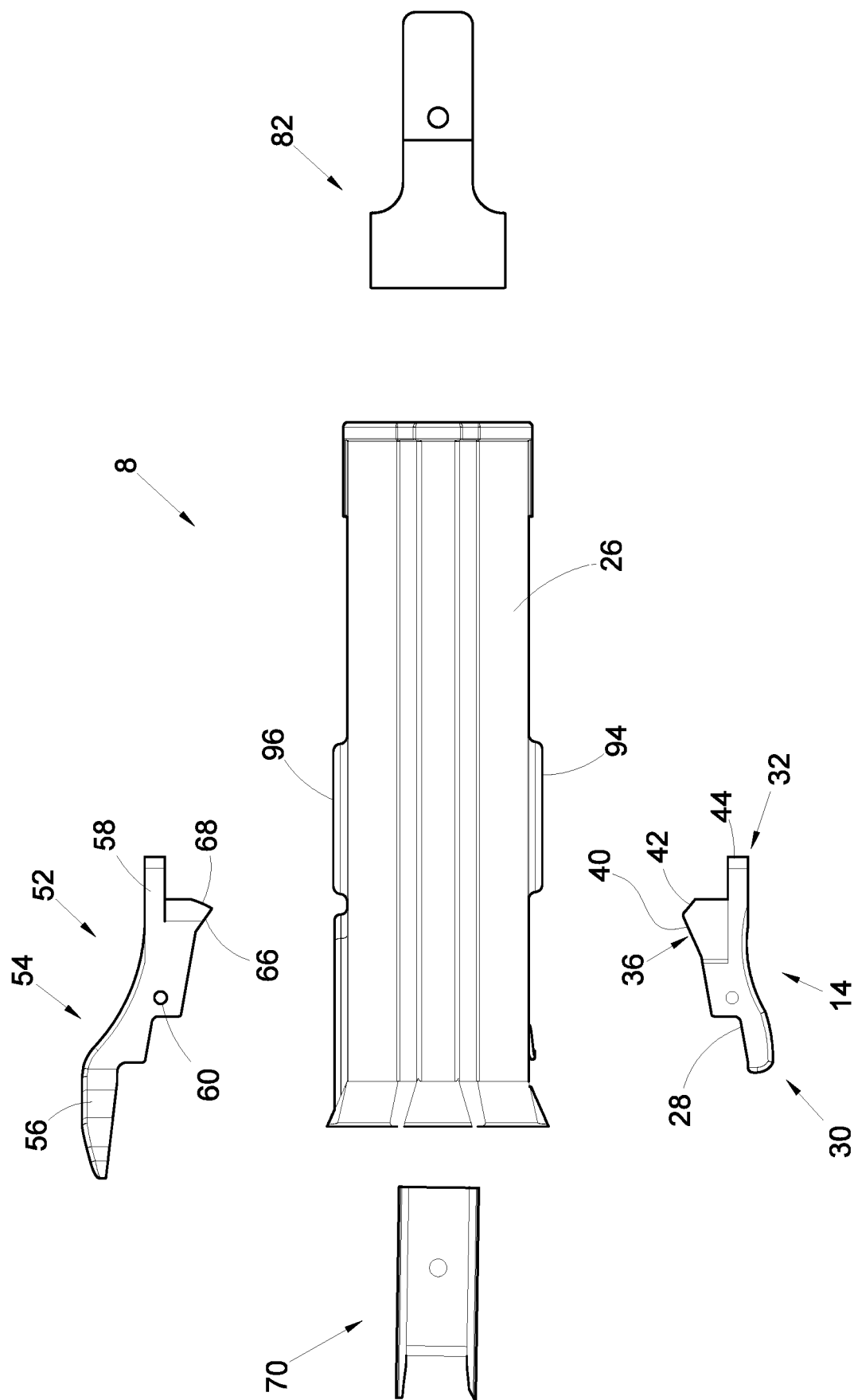


Fig. 4

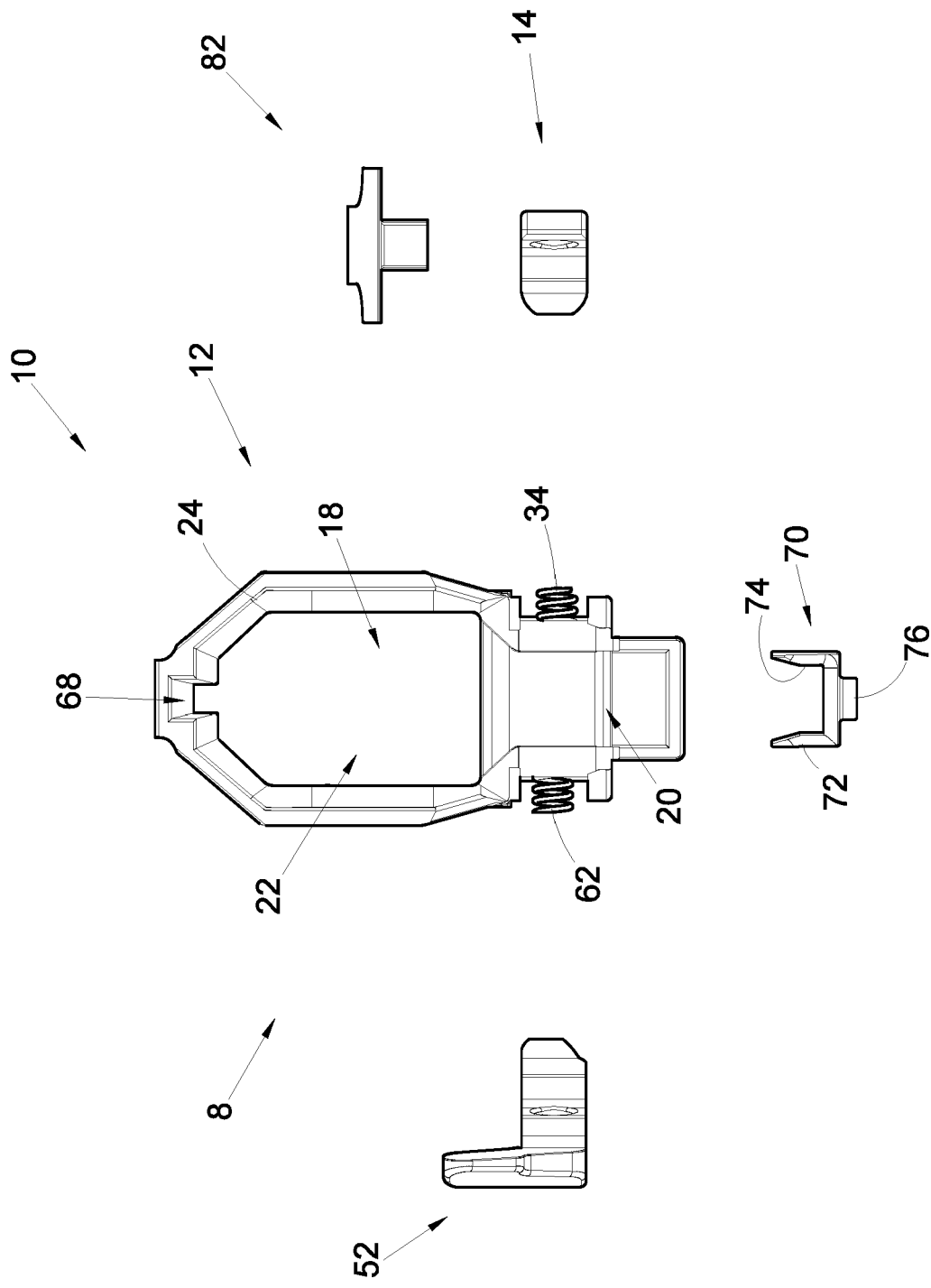


Fig. 5

8

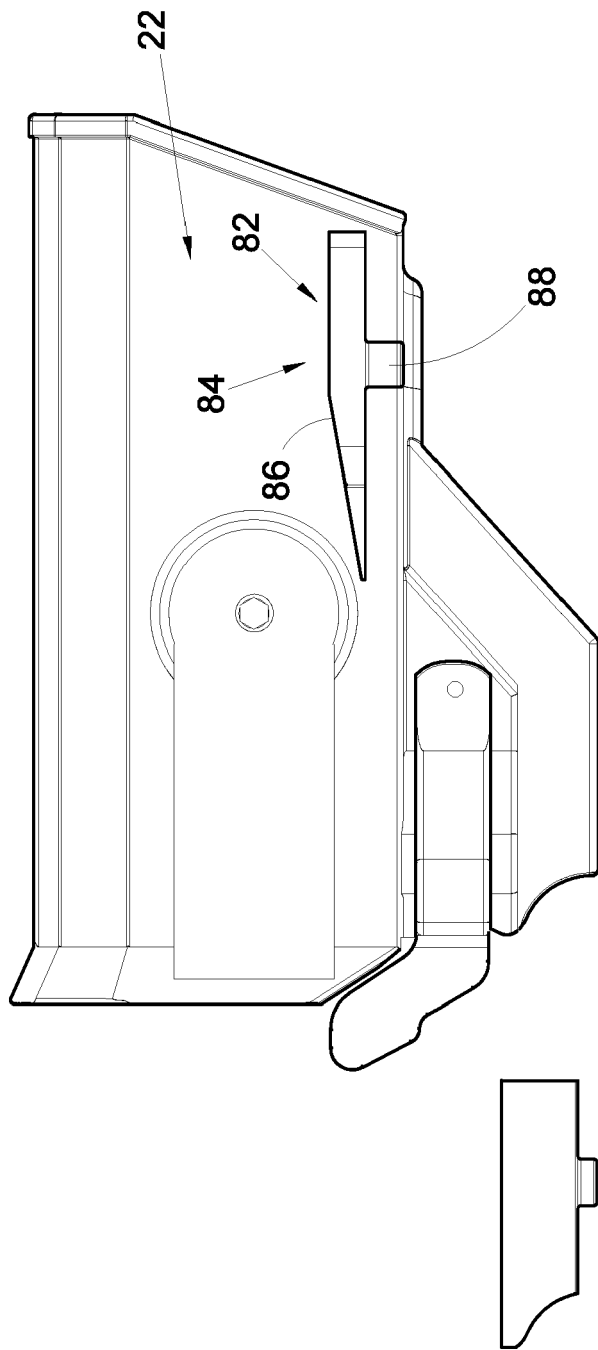


Fig. 6

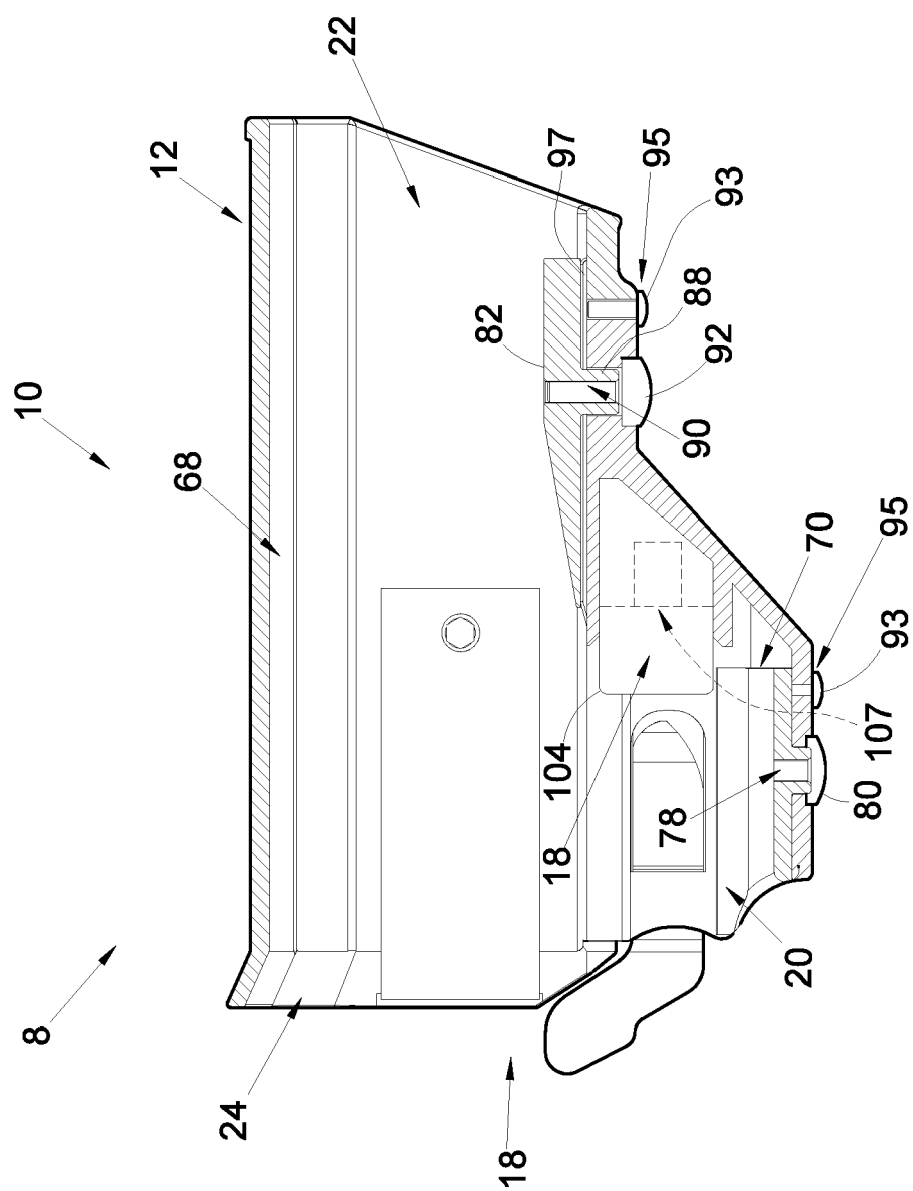


Fig. 7

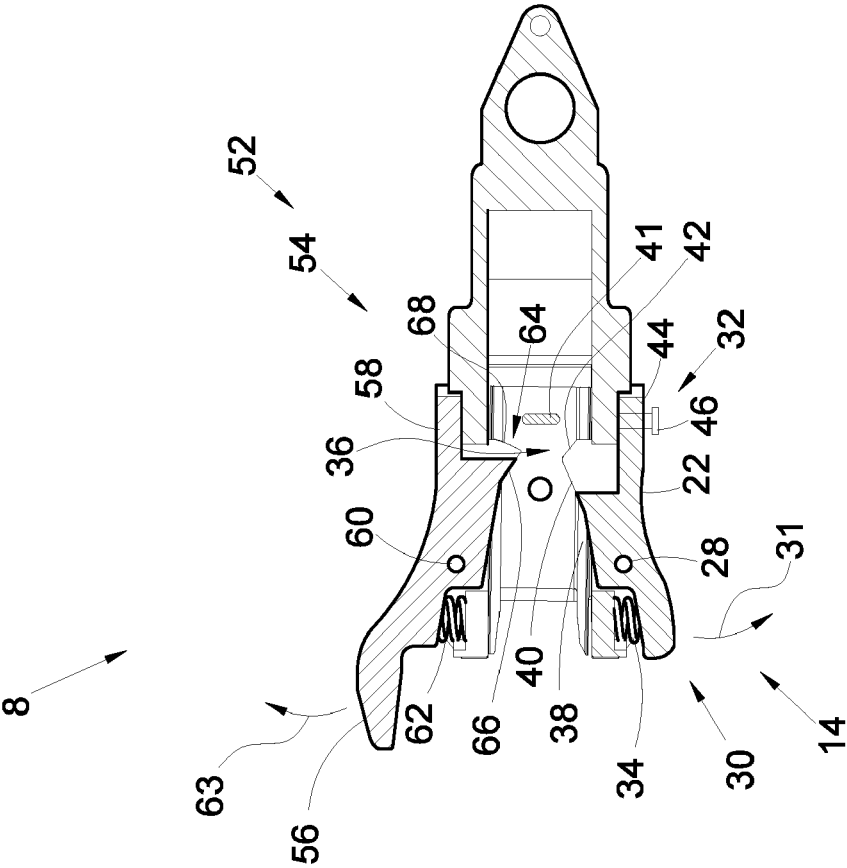


Fig. 8

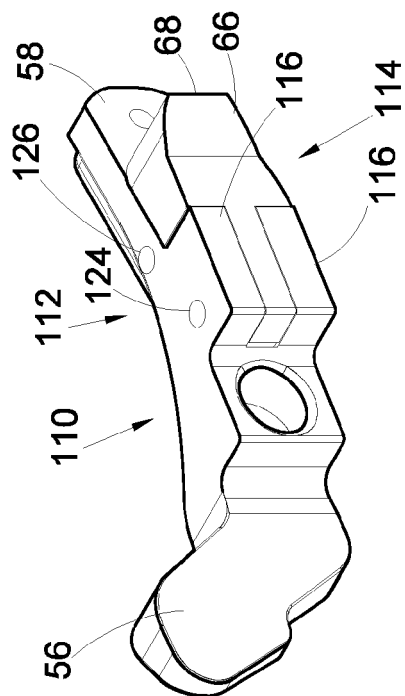


Fig. 9

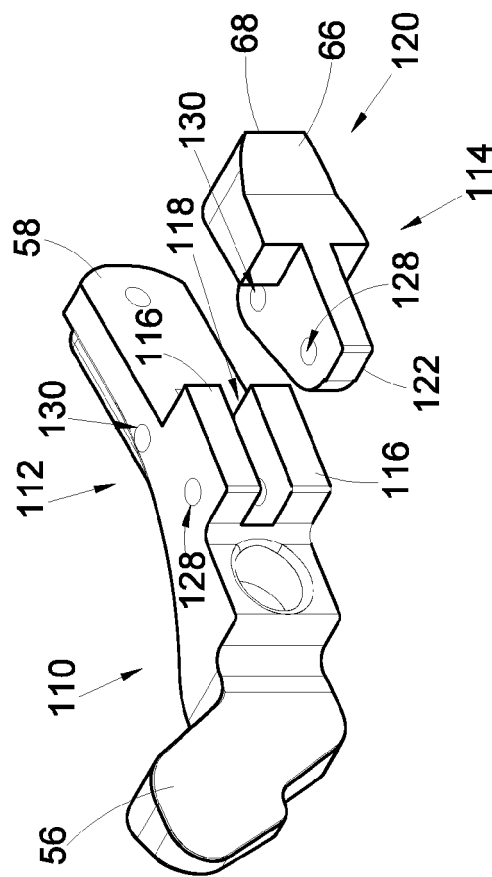


Fig. 10

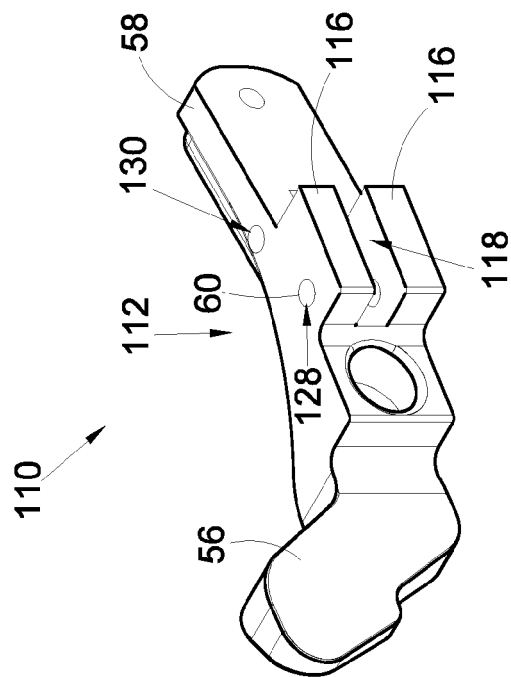


Fig. 11

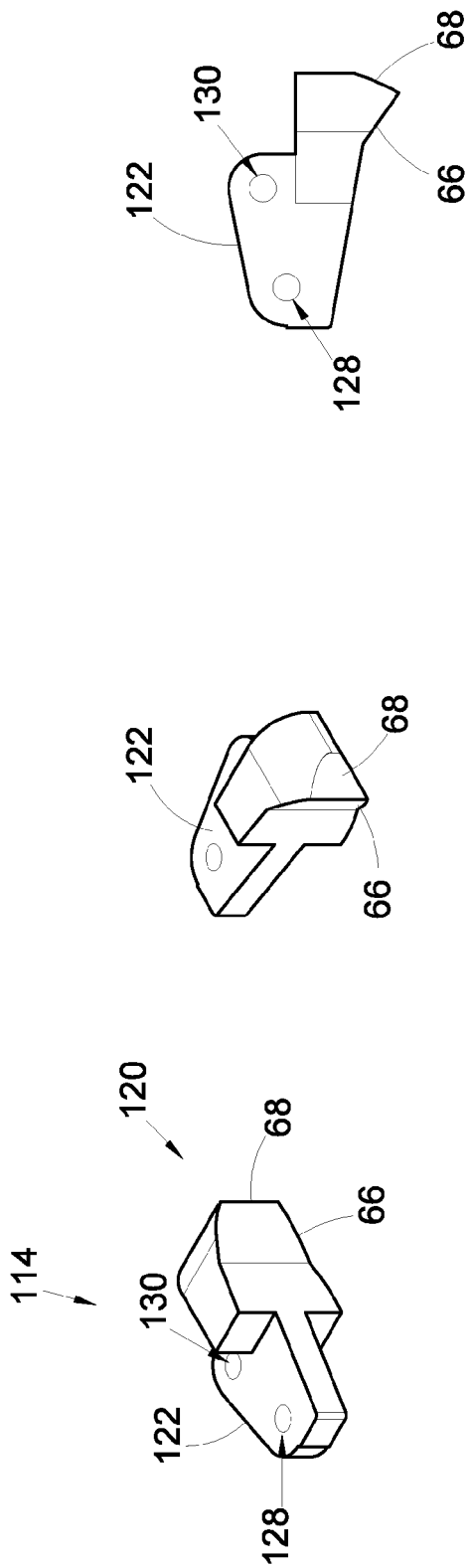


Fig. 12

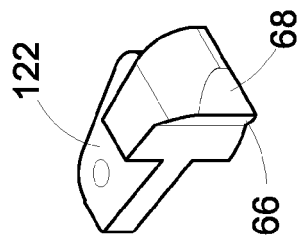


Fig. 13

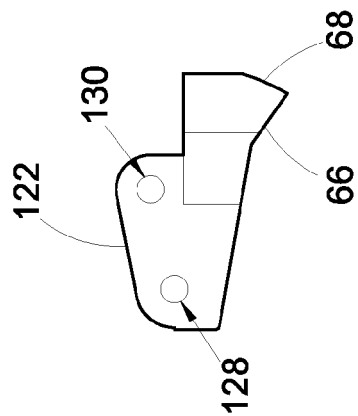


Fig. 14

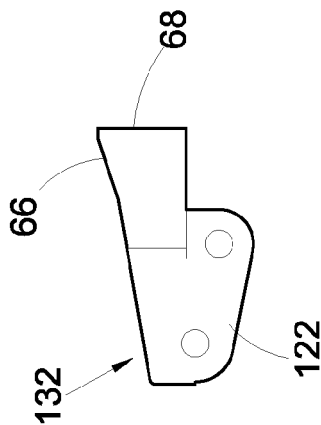


Fig. 15

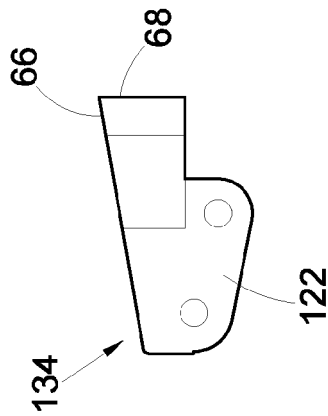


Fig. 16

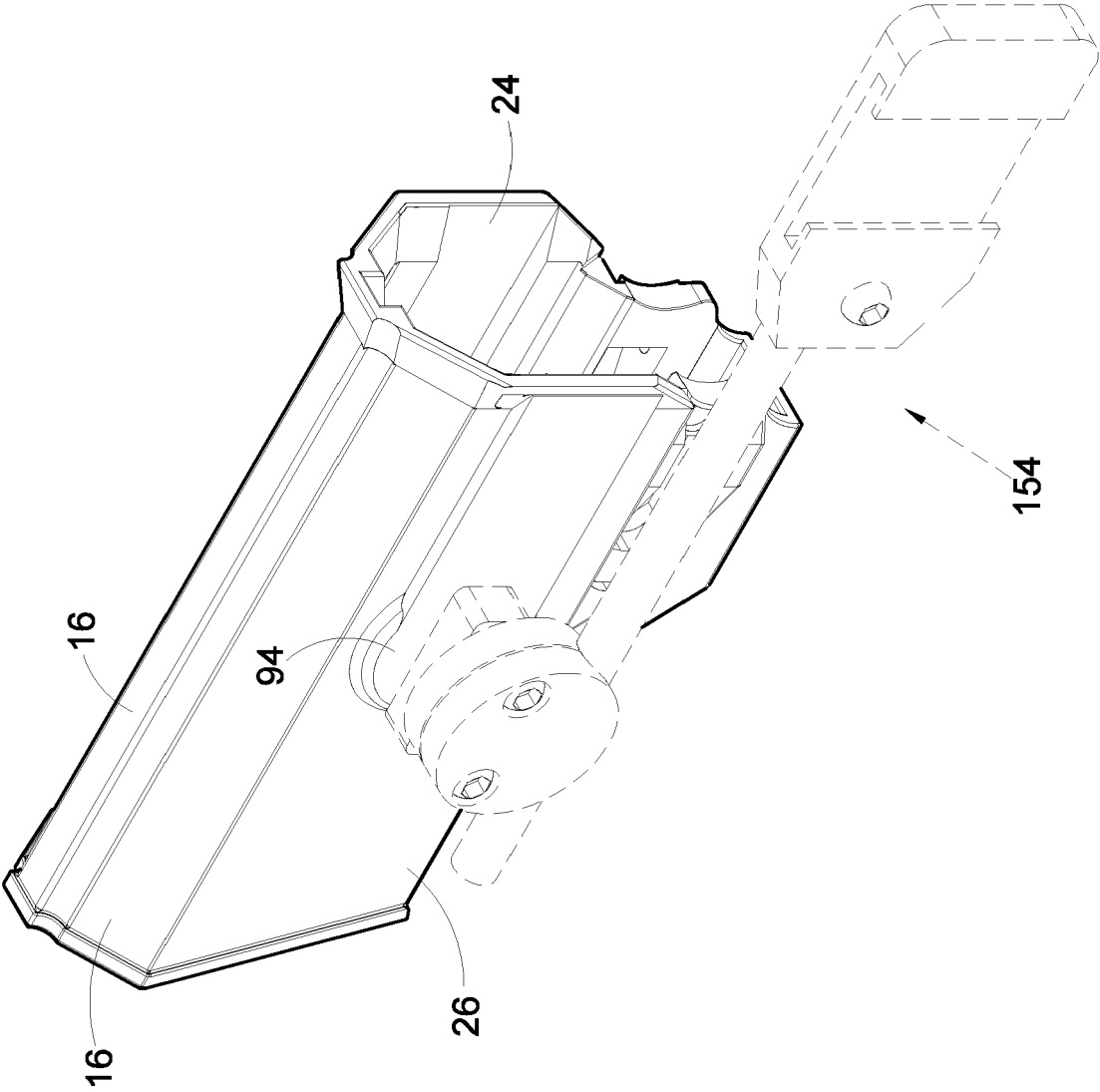


Fig. 17

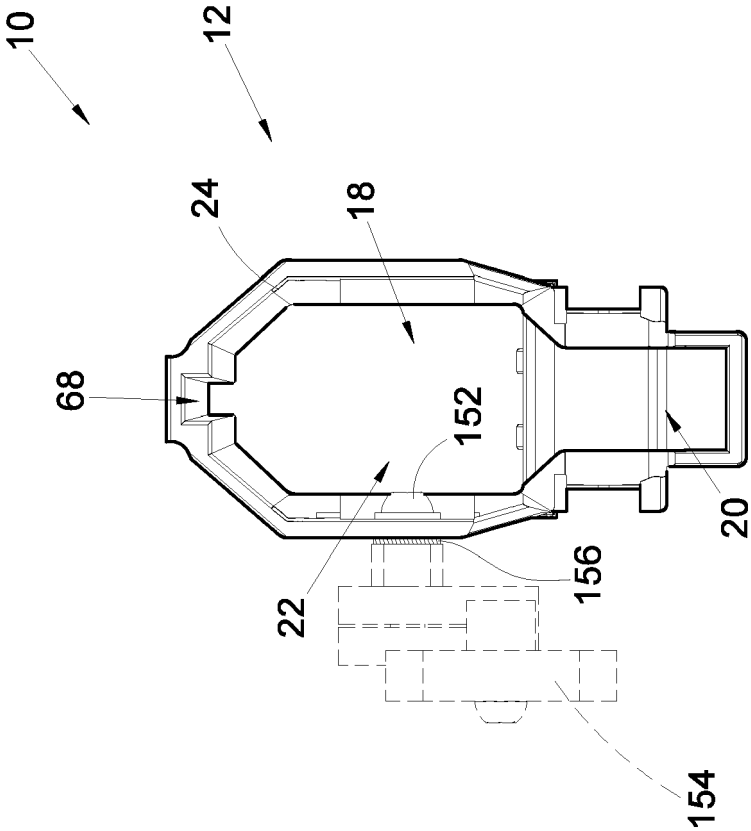


Fig. 18



EUROPEAN SEARCH REPORT

 Application Number
 EP 18 17 6343

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2007/181619 A1 (SEYFERT TODD [US] ET AL) 9 August 2007 (2007-08-09)	1-4,8,9,14,15	INV. F41C33/02 F41C33/04
Y	* abstract; figures 1,4,7,9-11 * * paragraph [0006] * * paragraphs [0029], [0031] * * paragraphs [0037] - [0040] * * paragraph [0053] *	6	
X	US 5 810 222 A (SHOEMAKER RANDY R [US]) 22 September 1998 (1998-09-22)	11	
Y	* abstract; figures 1, 2, 4-7 *	6	
A	* column 2, line 25 - column 3, line 10 *	10,13	
X	WO 98/31977 A1 (BIANCHI INT [US]) 23 July 1998 (1998-07-23)	12	
A	* abstract; figures 1-5 * * page 5, paragraph 1 - page 6, paragraph 1 * * page 7, paragraph 1 *	10,13	
X	US 2015/285588 A1 (IRWIN KELLY [US]) 8 October 2015 (2015-10-08)	1,3,5,14	TECHNICAL FIELDS SEARCHED (IPC) F41C
X	FR 2 963 092 A1 (GK PROFESSIONAL [FR]) 27 January 2012 (2012-01-27)	1-4,8,14,15	
A	* abstract; figures * * page 2, line 29 - page 5, line 6 * US 2012/097718 A1 (BAUMANN JOHN [US] ET AL) 26 April 2012 (2012-04-26)	7,9,10,13	
	* abstract; figures 1, 2, 8, 9, 11, 13-17 * * paragraph [0031] * * paragraphs [0038] - [0042] *		
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 26 September 2018	Examiner Schwingel, Dirk
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			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 18 17 6343

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

26-09-2018

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007181619 A1	09-08-2007	NONE	
US 5810222 A	22-09-1998	NONE	
WO 9831977 A1	23-07-1998	AU 3897497 A US 5810221 A WO 9831977 A1	07-08-1998 22-09-1998 23-07-1998
US 2015285588 A1	08-10-2015	NONE	
FR 2963092 A1	27-01-2012	NONE	
US 2012097718 A1	26-04-2012	NONE	

15

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82