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- (54) **Kétcsövű, zárt dugattyús puska**

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(54) **Double barrel bolt action rifle**

Zweiläufiges Repetiergewehr

Fusil à répétition à double canons

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(56) References cited:
**EP-A2- 0 540 220 DE-A1- 3 724 936
DE-A1- 4 136 129**

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Description

[0001] The present invention relates to the field of firearms. In particular, the present invention provides certain improvements in bolt-action firearms. More particularly, the present invention provides certain improvements in double barrel bolt action repeating firearms.

[0002] A double barrel bolt action firearm is described in Canadian Patent No. 2,080,712 dated September 12, 2002. That patent shows a double barreled repeating firearm with a number of important technical innovations. Included among the innovations in CA 2,080,712 is a bolt assembly comprising a bolt body having a pair of forwardly extending parallel breach bolts extending therefrom. The bolt body also houses a firing pin assembly with a pair of firing pins concentric with the breach bolts and a cocking piece assembly with a pair of cocking pieces, one for each firing pin. Since the bolt body has a pair of breach bolts extending therefrom, one for each barrel of the firearm, the bolt body cannot be rotated in a manner similar to a bolt of a typical bolt action firearm. It is therefore provided with a collar that is fixed relative to the longitudinal axis of the bolt body, but rotatable relative to the bolt body. The collar has locking means, such as lugs or interrupted threads formed on its external surface that are co-operable with complementary locking means formed in the receiver of the fire arm. The collar is provided with a handle, so that the collar can be rotated to an unlocked position, and the bolt assembly withdrawn to eject spent cartridges, and begin to cycle fresh cartridges into the firing chamber, and withdraw and cock the firing pins. It will be understood that the bolt assembly of the double barrel bolt action firearm described in CA 2,080,712 is substantially rectangular, because of the parallel pair of bolts, and it is fairly heavy. Therefore, when it is withdrawn, there exists a need to keep the bolt steady, and properly aligned with the receiver.

[0003] In CA 2,080,712, the Applicant (who is also the current Applicant), stated in the paragraph linking pages 7 and 8 that a bolt body constructed in one piece with a breach bolts is considered superior to a bolt assembly with separate breach bolts that attach to the bolt body. This was stated to be possible, but that it would increase manufacturing costs.

[0004] A further area of improvement of the present invention concerns the bolt body and cocking pieces. In CA 2,080,712, the bolt body includes a front piece to which the breach bolts are attached. Extending rearwardly from the front piece are a spaced pair of body members, between which are positioned the cocking pieces. The cocking pieces slide beside each other, and each is captive in a dovetail groove of one of the pair of body members. This type of sliding connection between the cocking pieces and the bolt body is expensive to produce, and requires that the parts be machined to very fine tolerances.

[0005] The present invention addresses the forgoing drawbacks of the firearm described in CA 2,080,712. In

particular, the present invention provides an external bolt guide/rest at the rear of the receiver, preferably slotted to accommodate rearward travel of the bolt body as it is withdrawn and maintain the alignment of the bolt body with the receiver. By doing so, the breach bolts maintain alignment with the cartridge chambers and barrel bores.

[0006] The present invention also provides a bolt body, preferably manufactured as a single piece with the breach bolts, that accommodates a pair of cocking pieces that fit together side by side to form a cruciform structure that fits into, and slides within, horizontal and vertical slots in the bolt body, eliminating the need for machined dovetail joints in the cocking pieces and bolt body. Moreover, the cocking pieces are substantially longer than the travel of same so that as the cartridge in each barrel of the firearm is discharged, there is no chance of the cocking pieces jamming.

[0007] In a broad aspect, then, the present invention relates to a bolt body for a double barreled bolt action rifle comprising: a pair of forwardly extending breach bolts; a central body portion, from which said breach bolts extend; and a rear portion of the bolt body, housing a pair of cocking pieces; wherein said rear portion has intersecting vertical and horizontal slots formed therein, defining a cruciform track in which said cocking pieces can travel, each said cocking piece having a vertical portion accommodated in said vertical slot and a horizontal portion in said horizontal slot.

[0008] In drawings that illustrate the present invention by way of example.

Fig. 1 is an exploded view of the bolt assembly and receiver of a firearm embodying the improvements of the present invention.

Fig. 2 is an assembled view of the bolt assembly and receiver shown in Fig. 1.

[0009] Referring now to Fig. 1, the bolt assembly 1 of the present invention comprises a bolt body 2, preferably integrally machined with a pair of parallel, forwardly extending breach bolts 3. Extending rearwardly from the front of the bolt body is the rear portion 4 of the bolt body. The rear portion has intersecting horizontal 5 and vertical 6 slots, into which a cruciform shaped cocking piece assembly is slid.

[0010] The cocking piece assembly consists of right 8 and left 9 cocking pieces, each of which has a firing pin 10 extending therefrom. Each of the right and left cocking pieces has a horizontal arm 11 that can be slid in the horizontal slot 5 of the bolt body. Each of the right and left cocking pieces has an upper 12 and a lower 13 portion that extends above and below, respectively, the horizontal arms 11, so that when the two cocking pieces are side-by-side, the upper 12 and lower 13 portions of the respective cocking pieces respectively together define upper and lower arms of the cruciform cocking piece assembly. The upper and lower arms travel in the vertical

slot of the bolt body.

[0011] The bolt assembly 1 also comprises a collar 14 with a handle 15, for withdrawing and locking the bolt assembly in the receiver. The collar fits over the rearward, slotted portion of the bolt body, and is held in place by an end piece 16 that is fastened to the bolt body. A cap 17 may be provided over the end piece, to help dirt and debris from fouling the firing pins.

[0012] The firing pins are accommodated in bores extending through the breach bolts. Each firing pin is fastened to, and extends forwardly of, a cocking piece. Between the cocking piece and the front portion of the bolt body, around each firing pin, is a firing pin spring.

[0013] At the rearward end of each cocking piece, extending laterally outwardly therefrom so that it extends out of the horizontal slot in the bolt body is a short cam follower that will rest against a cam formed on each side of the rear edge of the collar, so that when the collar is rotated, the firing pins are withdrawn to a cocked position by the pressure of the cams against the cam followers. After the bolt body is fully withdrawn and then moved forward to a locked position, the lower edges of the cocking pieces will each catch a sear 18 of a trigger, resulting in the cocking of the firearm (both barrels). The trigger assembly is conventional.

[0014] It will be observed that as each trigger is pulled, the cocking piece, and therefore the firing pin, for only one barrel is released. According to the improvement of the present invention then, the cocking pieces are quiet long, to avoid any tilting or jamming as they slide past each other.

[0015] The present invention also provides an external bolt guide/rest 19, which may be integral with the receiver 20 or may be separate piece, for attachment to the stock, aligned to the receiver. This guide is elongated and concave, with a squared groove 24 running its length, and it is aligned with the receiver so that when the bolt assembly is extracted to cock the firearm and cycle in new cartridges, a squared ridge 21 on the end piece, and the lower arms of the cocking pieces will slide in the groove.

[0016] Moreover, a guide piece 22 may be provided in the bolt body 2, between the cocking piece assembly 7 and the front portion of the bolt body, in the vertical slot 6 of the bolt body. Guide piece 22 extends below bolt body 2, into a squared groove 23 in receiver 20. Groove 23 in receiver 20 is aligned with groove 24 in guide 19.

Claims

1. A double barreled bolt action rifle with a receiver (20) having a bolt body (2) therein, said bolt body (2) having a central body portion from which a pair of forwardly extending breach bolts (3) extend, a rear portion (4) of the bolt body housing a pair of cocking pieces (8, 9), said rear portion (4) having intersecting vertical and horizontal slots (5, 6) formed therein, defining a cruciform track in which said cock-

ing pieces can travel, each said cocking piece having upper and lower vertical portions (12, 13) accommodated in said vertical slot (5) and a horizontal portion (11) in said horizontal slot (6),

the vertical portions (12, 13) of said cocking pieces (8, 9) facing each other, and being accommodated side by side in said vertical slot (5) of the rear portion (4) of said bolt body (2),

characterized in that said lower vertical portions (13) of said cocking pieces (8, 9) define lower arms and a bolt guide (19) is provided aligned to said receiver (20), said bolt guide (19) having a groove (24) formed therein, in which the lower arms of said cocking pieces (8, 9) in said bolt body can slide.

2. A double barreled bolt action rifle as described in claim 1, further **characterized in that** said breach bolts (3), central body portion and rear portion (4) thereof are integral with one another.
3. A double barreled bolt action rifle as described in claim 1, in which a guide piece (22) is provided between said cocking pieces (8, 9) and said central body portions, extending below the bolt body into a groove (23) in the receiver aligned with the groove (24) in the guide (19).
4. A double barreled bolt action rifle as described in claim 1, wherein said bolt body (2) is provided with an end piece (16) having a ridge (21) that slides in said groove (24) in said bolt guide (19).

Patentansprüche

1. Doppelläufiges Gewehr mit Zylinderverschluss mit einem Verschlussgehäuse (20), das darin einen Verschlusszylinder (2) aufweist, wobei der Verschlusszylinder (2) einen zentralen Zylinderabschnitt aufweist, von dem sich ein Paar von sich nach vorne erstreckenden Teilverschlusszylindern (3) erstreckt, mit einem hinteren Abschnitt (4) des Verschlusszylinders (2), der ein Paar von Schösschen (8, 9) aufweist, wobei der hintere Abschnitt (4) darin ausgebildete einander schneidende vertikale und horizontale Schlitz (5, 6) aufweist, die einen kreuzförmigen Pfad definieren, in dem sich die Schösschen bewegen können, wobei die Schösschen jeweils in dem vertikalen Schlitz (5) aufgenommene obere und untere vertikale Abschnitte (12, 13) und einen in dem horizontalen Schlitz (6) aufgenommenen horizontalen Abschnitt (11) aufweisen, wobei die vertikalen Abschnitte (12, 13) der Schösschen (8, 9) einander gegenüberliegen und nebeneinander in dem vertikalen Schlitz (5) des hinteren Abschnitts (4) des Verschlusszylinders (2) aufgenommen sind, **dadurch gekennzeichnet,**

- dass** die unteren vertikalen Abschnitte (13) der Schlösschen (8, 9) untere Arme definieren und eine mit dem Verschlussgehäuse (20) fluchtende Verschlussführung (19) vorgesehen ist, wobei die Verschlussführung (19) eine darin ausgebildete Nut (24) aufweist, in der die unteren Arme der Schlösschen (8, 9) in dem Verschlusszylinder gleiten können.
2. Doppelläufiges Gewehr mit Zylinderverschluss nach Anspruch 1, **dadurch gekennzeichnet,** **dass** die Teilverschlusszylinder (3), der zentrale Zylinderabschnitt und der hintere Abschnitt (4) einstückig ausgebildet sind.
3. Doppelläufiges Gewehr mit Zylinderverschluss nach Anspruch 1, wobei ein Führungsstück (22) zwischen den Schlösschen (8, 9) und den zentralen Zylinderabschnitten vorgesehen ist, das sich unterhalb des Verschlusszylinders in eine Nut (23) in dem Verschlussgehäuse erstreckt, die mit der Nut (24) in der Führung (19) fluchtet.
4. Doppelläufiges Gewehr mit Zylinderverschluss nach Anspruch 1, wobei der Verschlusszylinder (2) mit einem Endstück (16) versehen ist, das einen Rand (21) aufweist, der in der Nut (24) in der Verschlussführung (19) gleitet.
- nière alignée par rapport audit boîtier de culasse (20), ledit guide de verrou (19) présentant une fente (24) formée dans celui-ci, dans laquelle les bras inférieurs desdites pièces d'armement (8, 9) dans ledit corps de verrou peuvent glisser.
2. Fusil à verrou à double canon selon la revendication 1, **caractérisé en ce que** lesdits verrous de culasse partiales (3), ladite partie de corps centrale et ladite partie arrière (4) de celui-ci sont intégrés l'un à l'autre.
3. Fusil à verrou à double canon selon la revendication 1, dans lequel une pièce de guidage (22) est prévue entre lesdites pièces d'armement (8, 9) et lesdites parties de corps centrales, s'étendant au-dessous du corps de verrou dans une fente (23) dans le boîtier de culasse alignée par rapport à la fente (24) dans le guide (19).
4. Fusil à verrou à double canon selon la revendication 1, dans lequel ledit corps de verrou (2) est pourvu d'un embout (16) présentant une crête (21) qui glisse dans ladite fente (24) dans ledit guide de verrou (19).

Revendications

1. Fusil à verrou à double canon comprenant un boîtier de culasse (20) comportant un corps de verrou (2) dans celui-ci, ledit corps de verrou (2) présentant une partie de corps centrale à partir de laquelle s'étend une paire de verrous de culasse partiales (3) s'étendant vers l'avant, une partie arrière (4) du corps de verrou logeant une paire de pièces d'armement (8, 9), ladite partie arrière (4) présentant des fentes (5, 6) verticales et horizontales se croisant qui sont formées dans celle-ci et définissent une voie cruciforme dans laquelle les pièces d'armement peuvent se déplacer, chacune desdites pièces d'armement présentant des parties verticales (12, 13) supérieures et inférieures logées dans ladite fente verticale (5) et une partie horizontale (11) dans ladite fente horizontale (6), les parties verticales (12, 13) desdites pièces d'armement (8, 9) se faisant face et étant logées côté à côté dans ladite fente verticale (5) de la partie arrière (4) dudit corps de verrou (2), **caractérisé en ce que** lesdites parties verticales inférieures (13) desdites pièces d'armement (8, 9) définissent des bras inférieurs et un guide de verrou (19) est prévu de ma-

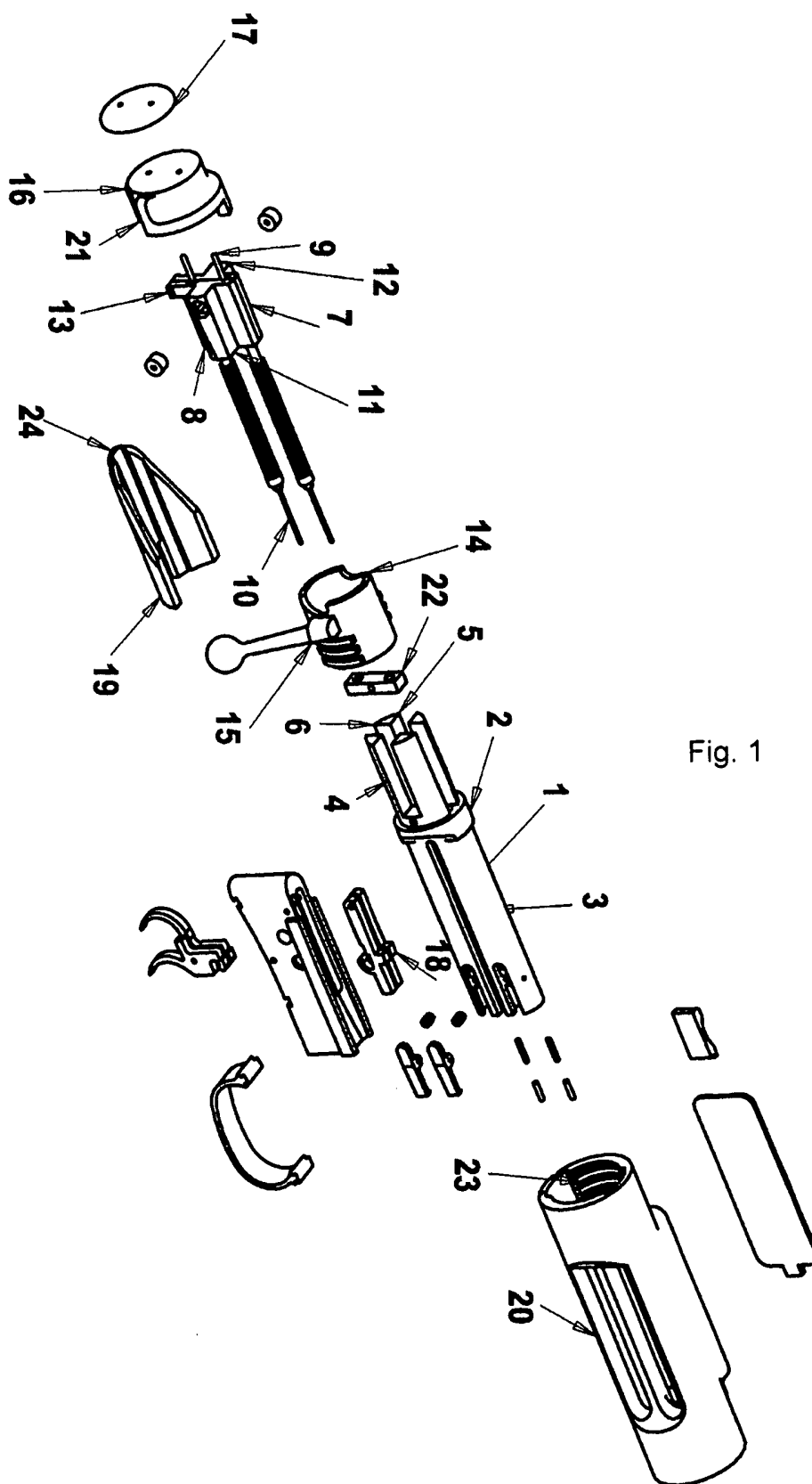


Fig. 1

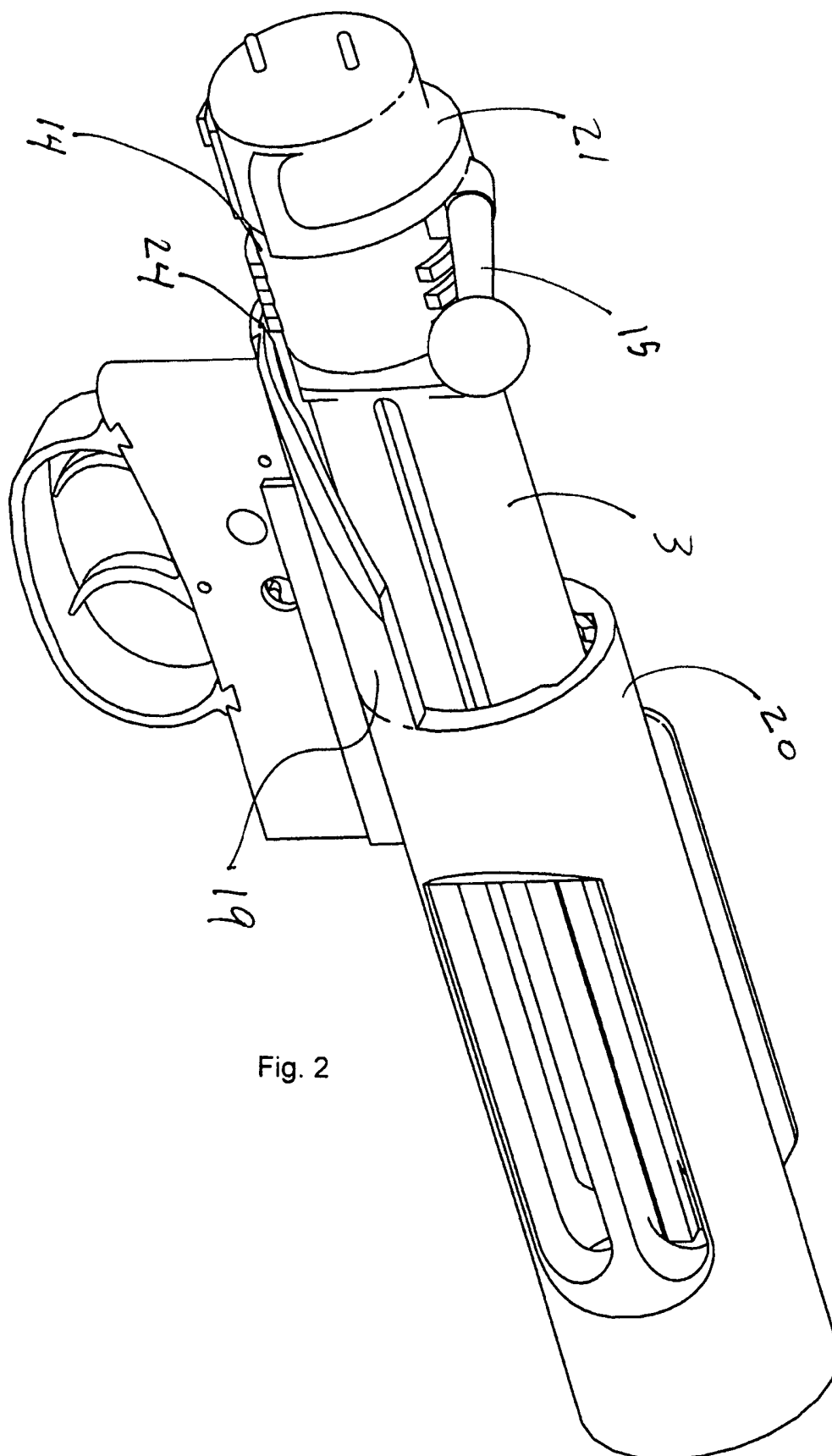


Fig. 2

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- CA 2080712 [0002] [0003] [0004] [0005]

KÉTCSÖVŰ, ZÁRTDUGATTYÚS PUSKA

SZABADALMI IGÉNYPONTOK

1. Kétcsövű, töltényűrel ellátott zárt dugattyús puska, ahol a töltényűr (20) závarzattal (2) van ellátva, továbbá a závarzatnak (2) középső testrésze van, amelyből egy pár réselt zárdugattyú (3) nyúlik előre,

továbbá a závarzat hátsó részében (4) egy pár ütőszeg (8, 9) van elrendezve, és a hátsó rész (4) egymást átmetsző függőleges és vízszintes részekkel (5, 6) van kiképezve, amelyek kereszt alakú pályát határoznak meg, amelyben az ütőszegek mozoghatnak, és mindkét ütőszegnek felső és alsó függőleges része (12, 13) van, amelyek a függőleges résben (5) és a vízszintes rés (6) vízszintes részében (11) vannak elrendezve,

továbbá az ütőszegek (8, 9) függőleges részei (12, 13) egymás felé néznek, és egymás mellett, az említett závarzat (2) hátsó részének (4) függőleges részében (5) vannak elrendezve,

azzal jellemezve, hogy az ütőszegek (8, 9) alsó függőleges részei (13) alsó kart határoznak meg, és

závarzatvezető (12) van elrendezve a töltényűrel (20) egyvonalban, ahol az említett závarzatvezető (19) horonnyal (24) van kialakítva, amelyben az ütőszegek (8, 9) alsó karjai a závarzatban elcsúszhatnak.

2. Az 1. igénypont szerinti kétcsövű, zárdugattyús puska, **azzal jellemezve**, hogy a réselt zárdugattyúk (3), valamint annak középső és hátsó része (4) egymással egy darabból van kiképezve.

3. Az 1. igénypont szerinti kétcsövű, zárdugattyús puska, ahol az ütőszegek (8, 9), valamint a központi testrészek között vezetőelem (22) van elrendezve, amely a test alá, a töltényűrben a vezetőelem (19) hornyával (24) egyvonalban kialakított horonyba (23) illeszkedik.

4. Az 1. igénypont szerinti kétcsövű, zárdugattyús puska, ahol a závarzat (2) végdarabbal (16) van ellátva, amelyen závarzatvezetőben (19) kialakított horonyban (24) elcsúszó borda (24) van kiképezve.