



(86) Date de dépôt PCT/PCT Filing Date: 2000/01/25
(87) Date publication PCT/PCT Publication Date: 2000/08/03
(45) Date de délivrance/Issue Date: 2004/08/24
(85) Entrée phase nationale/National Entry: 2001/07/27
(86) N° demande PCT/PCT Application No.: EP 2000/000551
(87) N° publication PCT/PCT Publication No.: 2000/045107
(30) Priorité/Priority: 1999/01/28 (199 03 327.7) DE

(51) Cl.Int.⁷/Int.Cl.⁷ F41A 3/26, F41A 15/14, F41A 35/06

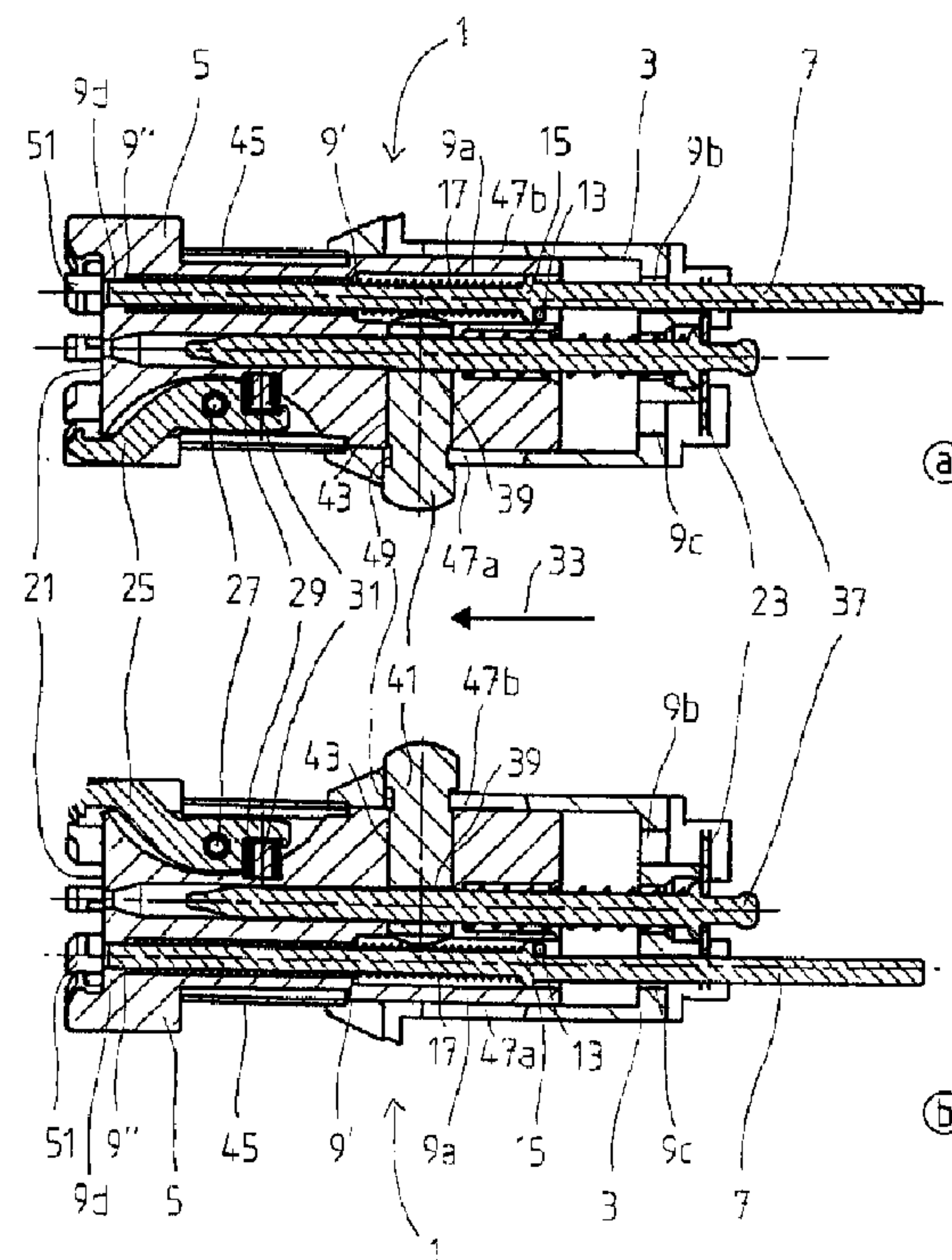
(72) Inventeurs/Inventors:
MURELLO, JOHANNES, DE;
WELDLE, HELMUT, DE

(73) Propriétaire/Owner:
HECKLER & KOCH GMBH, DE

(74) Agent: RIDOUT & MAYBEE LLP

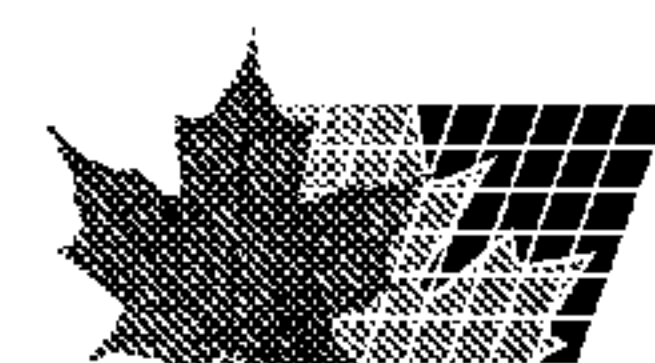
(54) Titre : CULASSE POUR ARME A FEU DE POING

(54) Title: LOCKING DEVICE FOR A HAND GUN



(57) Abrégé/Abstract:

The invention relates to a locking device which can be mounted in a hand gun and which comprises a lock (1) that is moveably arranged in a housing in the longitudinal direction of the weapon and that consists of a lock carrier (3) and of a lock head (5) which is embodied in such a way that it can be mounted in the weapon in at least two different positions. The locking device also comprises an extractor (25) which is laterally fixed to the lock head (5) and entrains a cartridge case when the lock (1) is removed, whereby the cartridge case is situated in the barrel. The inventive device further comprises a trigger (7) that is integrated into the locking device. The trigger (7) removes the cartridge case from the lock (1) after said cartridge case has been extracted from the barrel. The locking device is characterised in that the lock carrier is provided with at least two longitudinal holes (47a, 47b) which serve as connecting links and in that the lock head is provided with a pin (41) which engages with one longitudinal hole (47a, 47b) according to the mounting position of the lock head.



**PCT**WELTORGANISATION FÜR GEISTIGES EIGENTUM
Internationales BüroINTERNATIONALE ANMELDUNG VERÖFFENTLICHT NACH DEM VERTRAG ÜBER DIE
INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES PATENTWESENS (PCT)(51) Internationale Patentklassifikation ⁷ :

F41A 3/26, 15/14, 35/06

A1

(11) Internationale Veröffentlichungsnummer: **WO 00/45107**(43) Internationales
Veröffentlichungsdatum:

3. August 2000 (03.08.00)

(21) Internationales Aktenzeichen: PCT/EP00/00551

(22) Internationales Anmeldedatum: 25. Januar 2000 (25.01.00)

(30) Prioritätsdaten:

199 03 327.7

28. Januar 1999 (28.01.99)

DE

(71) Anmelder (für alle Bestimmungsstaaten ausser US): HECK-
LER & KOCH GMBH [DE/DE]; Alte Steige 7, D-78727
Oberndorf/Neckar (DE).

(72) Erfinder; und

(75) Erfinder/Anmelder (nur für US): MURELLO, Johannes
[DE/DE]; Eckhofstrasse 35, D-78628 Rottweil (DE).
WELDLE, Helmut [DE/DE]; Steigweg 27, D-78727
Oberndorf (DE).(74) Anwälte: VON SAMSON-HIMMELSTJERNA, Friedrich, R.
usw.; Widenmayerstrasse 5, D-80538 München (DE).(81) Bestimmungsstaaten: CA, KR, US, ZA, europäisches Patent
(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT,
LU, MC, NL, PT, SE).

Veröffentlicht

Mit internationalem Recherchenbericht.

(54) Title: LOCKING DEVICE FOR A HAND GUN

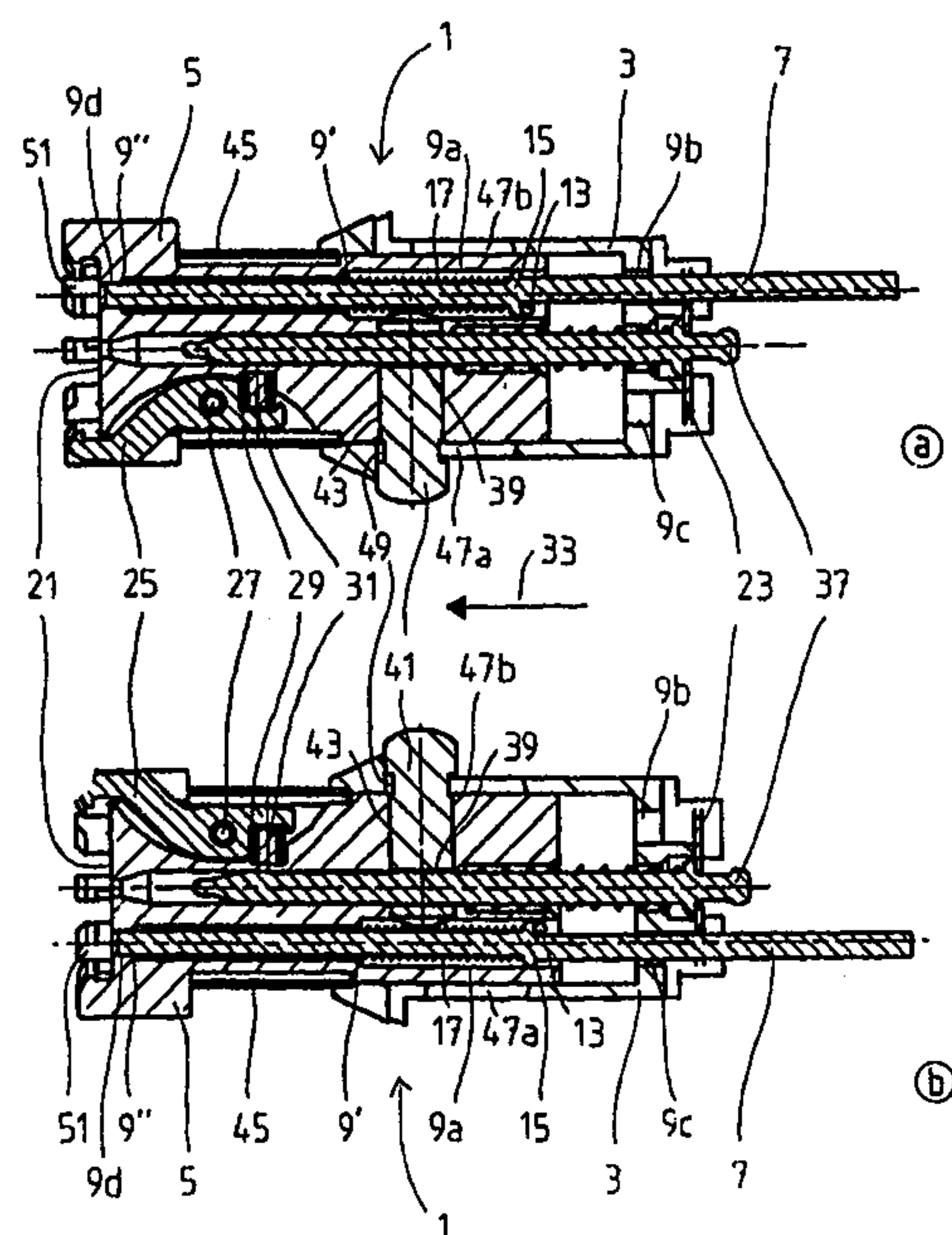
(54) Bezeichnung: VERSCHLUSSVORRICHTUNG FÜR EINE HANDFEUERWAFFE

(57) Abstract

The invention relates to a locking device which can be mounted in a hand gun and which comprises a lock (1) that is moveably arranged in a housing in the longitudinal direction of the weapon and that consists of a lock carrier (3) and of a lock head (5) which is embodied in such a way that it can be mounted in the weapon in at least two different positions. The locking device also comprises an extractor (25) which is laterally fixed to the lock head (5) and entrains a cartridge case when the lock (1) is removed, whereby the cartridge case is situated in the barrel. The inventive device further comprises a trigger (7) that is integrated into the locking device. The trigger (7) removes the cartridge case from the lock (1) after said cartridge case has been extracted from the barrel. The locking device is characterised in that the lock carrier is provided with at least two longitudinal holes (47a, 47b) which serve as connecting links and in that the lock head is provided with a pin (41) which engages with one longitudinal hole (47a, 47b) according to the mounting position of the lock head.

(57) Zusammenfassung

Die Erfindung betrifft eine Verschlussvorrichtung für den Einbau in eine Handfeuerwaffe mit: a) einem Verschluss (1), der in einem Waffengehäuse in Längsrichtung der Waffe beweglich angeordnet und aus einem Verschlussträger (3) und einem Verschlusskopf (5) zusammengesetzt ist, wobei der Verschlusskopf (5) derart ausgestaltet ist, daß er wahlweise in wenigstens zwei Lagen in die Waffe einbaubar ist; b) einem Auszieher (25), der seitlich am Verschlusskopf (5) befestigt ist und beim Zurückfahren des Verschlusses (1) eine im Lauf befindliche Patronenhülse mitnimmt; c) einem in die Verschlussvorrichtung integrierten Ausstoßer (7), der die Patronenhülse nach dem Herausziehen aus dem Lauf aus dem Verschluss (1) entfernt, dadurch gekennzeichnet; daß d) der Verschlussträger wenigstens zwei als Kulissenführungen dienende Langlöcher (47a, 47b) aufweist, und e) der Verschlusskopf einen Stift (41) aufweist, der abhängig von der Einbaulage des Verschlusskopfes in jeweils ein bestimmtes Langloch (47a; 47b) eingreift.



AMENDED PAGES

Bolt Assembly for a Small Arm

The invention concerns a bolt assembly for incorporation into a small arm according to the preamble of Claim 1.

Such a bolt assembly is known from FR-A-2 215 600. Bolt assemblies are also known in which the bolt head has a radial pin that engages in a slider that serves as curved guide (see, for example, DE-A-32 44 315 D2).

A similar bolt assembly is also known from CH-A-580 269. After shooting, the bolt assembly travels rearward and a claw-like extractor on the bolt surface extracts the empty cartridge casing from the barrel. Casing ejection is then produced by the ejector, which strikes against the cartridge casing bottom during return of the bolt assembly. The cartridge is tilted laterally by this and ejected through an opening in the weapon housing. The position of the bolt assembly can be varied for right or left ejection.

In simply configured automatic weapons, for example, in the Soviet assault rifle AK-47 (Kalaschnikov), casing ejection is produced through a protrusion fixed on the housing, against which the bottom of the cartridge casing strikes during return of the bolt assembly.

The ejection process just described can also be produced manually by the shooter. This is necessary, for example, when a cartridge does not fire during the shooting process and is not automatically ejected. The shooter must then reload by hand, whereupon the still live cartridge ... [end of text].

being struck on the right arm by the ejected cartridge casings. This represents a significant burden for the shooter and makes left-handed use of such a weapon problematical.

In small arms in the so-called bullpup design, the magazine and bolt assembly are positioned behind instead of in front of the trigger. The casing ejector arranged above the magazine is therefore situated next to or right in front of the face when the weapon is aimed. Ejected casings in a right-handed weapon would therefore fly directly against the head or into the face of a left-handed shooter. Firing with the left hand is therefore extremely hazardous in a bullpup that ejects to the right, if not impossible, since the shooter cannot properly aim the weapon, but is forced to keep the weapon forward, away from the body.

The problems just described make it clear why left-handers in military service are forced to relearn the use of the right hand in right-handed weapons. Because of the desired standardization of equipment, no other weapons are often available. Weapons for left-handed use, however, can significantly improve security of firing and safe handling of the weapon among left-handers.

Weapons have already long been known that have a casing ejector arranged in the center, so that the casings are ejected upward. An example of this is the US M1 Garand semiautomatic rifle. This type of cartridge ejector permits firing of the weapon from both shoulders. However, a shortcoming in this arrangement is that the shooter can easily be struck on the head by the ejected cartridges, for example, when shooting "from the hip", or when individual casings are ejected incorrectly, i.e., obliquely to the rear. For weapons in the bullpup design, a center cartridge ejector is unsuitable, since the casings, as described above, are ejected at the site at which the shooter positions his head against the weapon for aiming.

Small arms are also known that permit conversion from right to left ejection and vice versa: for example, the French assault rifle FAMAS, a bullpup design, in which the extractor claw can be alternately mounted on two sites on the bolt surface, so that the empty casings are ejected to the right or left. The weapon housing has ejection shafts on both sides, in which the one not being used is covered by a cheek protector. Another example is the Austrian bullpup rifle Steyr AUG, in which, as in the FAMAS, the extraction claw can be mounted on both sides.

In the bolt mechanism mentioned in the introduction (CH 580 269 A5), a conversion between right and left ejection is produced by the fact that the bolt head is switched from one incorporation position to the other.

In addition, another bolt assembly is known from DE-GM 18 58 576, in which an ejector is accommodated, in addition to the extractor.

Moreover, a bolt assembly constructed from a bolt carrier and bolt head is known from DE 28 12 732 B2, in which the bolt head has a radial pin that engages in a slot of the bolt carrier that serves as slot guide.

The underlying task of the present invention is to further simplify conversion of casing ejection between right and left ejection.

This task is solved with the object of Claim 1, in that, in a bolt mechanism with the features of the preamble of Claim 1, the bolt carrier has at least two elongated holes serving as slot guides and the bolt head has a pin that engages in a specific elongated hole, depending on the incorporation position of the bolt head.

The bolt head is therefore secured in its corresponding incorporation position by the pin. By simple loosening of the pin from its engagement in the elongated hole, the bolt head can then be switched from one incorporation position to the other. Because of this, owing to integration of the extractor and ejector in the bolt head, the direction of casing ejection is changed accordingly. Additional working steps are not required, since the extractor and ejector remain on the bolt assembly or bolt head in their mutual relative position and are converted with it. Casing ejection in combat therefore cannot be converted from right to left "on the fly". However, the conversion time is significantly shortened. In addition, no replacement parts are required, but naturally can be additionally provided.

The pin is then arranged movable in the corresponding elongated hole so that it can follow the curve of the elongated hole when the bolt carrier and head are pushed against each other. The elongated hole, hereafter also called a slot, is preferably designed arc-shaped and, with particular preference, so that the bolt head guided over the pin during forward and return movement of the bolt assembly or bolt carrier is initially rotated in the peripheral direction and only then does bolt movement follow. Rotation of the bolt head then serves for locking and unlocking of the bolt assembly. This functions as follows: during forward movement of the bolt assembly, a new cartridge is fed from the magazine and pushed by the bolt head into the cartridge chamber (i.e., the part of the barrel that accommodates the cartridge). The bolt head then lies on the cartridge chamber or bottom of the cartridge and stops while the bolt assembly or bolt carrier travels forward further a bit. The bolt assembly and bolt head are pushed in this manner against each other and the pin then travels from front to rear within the arc-shaped elongated hole. The pin is then pushed in the peripheral direction of the bolt assembly so that the bolt head is correspondingly rotated. Because of this, the bolt assembly is locked, i.e., movement of the bolt head rearward is blocked. This is caused, for example, by the fact that locking pegs on the bolt head engage into a matching counterpiece on the cartridge chamber by rotation. After firing of the cartridge, the bolt assembly or bolt carrier travels back and rotates the bolt head in the described manner in the peripheral direction, but this time in the opposite direction, so that the bolt assembly is

unlocked again. Finally, the pin reaches the front end of this slot and is carried along rearward by the bolt assembly (and with it, the bolt head). By the time-delayed opening of the cartridge chamber, it is guaranteed that the bolt assembly remains closed until the shot has left the barrel and the gas pressure has diminished.

The feature according to the invention of providing two incorporation positions for the bolt head is particularly advantageous when dust flaps are placed on the two ejection openings (a small arm with a convertible casing ejection generally has two ejection openings), which are opened by the bolt assembly or bolt head for casing ejection. This occurs by a protrusion on the bolt head that strikes against a tab on the dust flap during return of the bolt assembly and, in so doing, flips it open. In this case, the protrusion can be designed so that, depending on the position in which the bolt head is incorporated, the "correct" dust flap is opened (i.e., the dust flap that lies in the direction of casing ejection). This type of arrangement is described in another patent of the applicant entitled "Arrangement for opening the dust flaps of a small arm" (German Patent No. 199 03 326 C1), which has the same filing date as the present invention.

As an alternative to conversion of the bolt head, it is also conceivable to convert casing ejection by replacing the bolt head. In this case, a bolt head is accordingly made available for right ejection and one for left ejection.

Advantageous embodiments of the invention are mentioned in the subclaims. Claims 2 to 5 essentially concern the bolt assembly, Claims 6 to 9 essentially the ejector.

In an advantageous embodiment (according to Claim 2), the bolt carrier is essentially designed as a can-like hollow element, into which the bolt head can be introduced. Conversion of the bolt head is then possible in particularly simple fashion. In a preferred embodiment, the bolt carrier and bolt head are designed so that the bolt head can be rotated within the bolt carrier around its center axis running in the longitudinal direction of the weapon. The incorporation position of the bolt head is freely selectable on this account.

According to the invention, the incorporation position of the bolt head is stipulated by the pin. The bolt head, for this purpose, preferably (according to Claim 3) has a transverse hole, into which the pin can be introduced. The pin (according to Claim 4) preferably has a retaining hole, through which a firing pin that passes in the longitudinal direction through the bolt assembly or bolt head is guided. During incorporation, the pin is first inserted into the transverse hole and the firing pin guided through the retaining hole. The pin is therefore held by the firing pin in its position. As an alternative, it is also possible to secure the pin by the ejector, in which case this passes through the pin (instead of the firing pin).

It is possible with the above arrangement to initially introduce the bolt head into the bolt carrier, and then introduce the pin from the outside through an opening of the bolt carrier

into the transverse hole. Because of this, the bolt head can be simply anchored in the bolt carrier. A corresponding number of elongated holes are provided on the bolt carrier for more than two incorporation positions of the bolt head.

In a preferred embodiment (according to Claim 5), the bolt carrier has two diametrically opposite elongated holes or slots.

The embodiments described here refer to the combination of a pin with one or two slots. The bolt mechanism can likewise also be designed so that two or more pins (in combination with a corresponding number of slots) simultaneously secure the position of the bolt head or guide its movement.

The extractor is positioned laterally on the bolt surface, the so-called "percussion base" and secures the cartridge or cartridge casing generally only on one side. The front end of the extractor is preferably designed claw-like, so that the edge of the casing bottom is grasped by the extractor claw from beneath. After firing of the cartridge (or during manual reloading), the bolt assembly or bolt head travels back and extracts the cartridge casing from the barrel with the extractor claw. The ejector then strikes against the casing bottom so that the casing, which is still grasped on one side by the ejector claw, is tilted by it to the side. Because of the tilting movement, the cartridge casing is finally released from the grip of the extractor claw and flies laterally out of the housing. In order for the ejector to be able to easily "tilt out" the casing from the one-sided clamping by the ejector claw and thus eject the casing laterally, it is advantageous if the contact point of the ejector is arranged, if possible, on the side opposite the holding point of the extractor and the center of gravity of the cartridge casing. On the other hand, if these points lie on the same side, there is a hazard that the cartridge casing will be pushed more strongly forward (and less to the side) by the kinetic energy of the ejector from the grip of the extractor claw. The casing could then easily hang up in the weapon housing and cause jamming. The ejector is therefore (according to Claim 6) arranged on the percussion base essentially diametrically opposite the extractor and preferably so that the center of a cartridge lying against the percussion base lies on an imaginary line between the extractor and ejector. This also explains why it is advantageous for conversion of casing ejection to also convert the ejector, in addition to the extractor.

In a preferred embodiment (according to Claim 7), the ejector is designed as a striker and set up to pass through the bolt assembly or bolt head in the longitudinal direction. When the bolt assembly is locked, the striker (according to Claim 8) is arranged so that the front end of the striker is lowered into the bolt assembly or bolt head, i.e., it is situated behind the percussion base, whereas its rear end preferably protrudes above the bolt assembly or bolt head rearward. During return of the bolt assembly or bolt head, the striker comes in contact with its rear end on a stop fixed to the housing so that it stops. The bolt assembly travels farther back so that the front end of the striker emerges forward from the bolt assembly or

bolt head and strikes against the bottom of a cartridge casing situated in the bolt assembly or bolt head. The cartridge casing is ejected by this in the manner described above.

The rear end of the striker protrudes preferably rearward above the bolt assembly or bolt head during return of the bolt assembly, as described above. Because of this, the stop can be arranged behind the region exposed to the bolt movement. In this case, a simple shoulder in the weapon housing or the front end of the shoulder support can serve as stop. On the other hand, if the striker does not protrude rearward, the stop must be designed so that, during return of the bolt assembly, it passes through it or the bolt head.

After casing ejection, the bolt assembly again travels forward and reloads a new cartridge. In principle, it is conceivable to allow the striker to protrude forward above the percussion base until the striker, with its front end, encounters the cartridge being loaded and is pushed back to its initial position by it. However, it is much more advantageous for reloading as free as possible of disorders if the front end of the striker is retracted before the bolt assembly or bolt head. The striker is therefore (according to Claim 9) preferably loaded rearward by a spring, by which it is reliably pushed back into the bolt assembly or bolt head as soon as the bolt assembly travels forward. Movement of the striker is limited rearward by a stop, so that the striker is moved rearward by the force of the spring no farther than its initial position and remains there.

The invention is now further explained by means of a practical example. In the enclosed schematic drawing:

- Fig. 1a shows a sectional view of the top of a bolt mechanism according to the invention with a bolt head in its incorporation position;
- Fig. 1b shows a depiction corresponding to Fig. 1a with the bolt head in another incorporation position;
- Fig. 2 shows a sectional view (not to scale) of a side view of the bolt carrier from Fig. 1;
- Fig. 3 shows a rear view of the bolt assembly from Fig. 1a.

Fig. 1 shows a bolt assembly 1 assembled from a bolt carrier 3 and a bolt head 5. A striker-like ejector 7 is mounted to move in the through holes 9a and 9d, its rear end passing through the recess 9b or 9c. Movement of the ejector 7 is limited forward by a shoulder-like constriction 9' of through hole 9a and rearward by a cylindrical pin 13. The ejector 7 has a stop edge 15, with which it hangs up on the constriction 9' and cylindrical pin 13. A spring 17 is supported with its front end against a shoulder 9'' (between the through holes 9a and 9d), while the rear end of stop edge 15 of ejector 7 presses against cylindrical pin 13.

In this manner, the ejector 7 is held in its initial position, in which its front end lies behind percussion base 21 and its rear end protrudes rearward over bolt carrier 3. The ejector 7 is designed cylindrical and has a flattening on its outer surface behind stop edge 15 (see also Fig. 3). In this manner, the stop edge 15 covers the cylindrical pin 13 in space-saving fashion.

An extractor claw 25 is arranged opposite the ejector 7 and fastened to pivot on bolt head 5 via a bearing 27. A spring 29 presses the front end of extractor claw 25 against bolt head 5. In the present example, the spring 29 sits on a pin 31 that additionally increases the spring force and is made of plastic, for example. During the loading process, the bolt assembly 1 is moved forward, as indicated by arrow 33. The bottom of a cartridge not shown here is then forced against percussion base 21. The extractor claw 25 is sloped at its tip so that it initially is forced to the side when the edge of the cartridge bottom passes by it. The extractor claw 25 then "snaps" in, i.e., engages behind the cartridge edge by the pressure of spring 29. The cartridge is therefore held by the extractor claw 25 as soon as the cartridge bottom lies against percussion base 21. After firing (or during manual reloading), the bolt head 5 is moved rearward. The extractor claw 25 carries the cartridge casing with it and extracts it from the barrel. The rear end of the ejector 7 then encounters a stop in the weapon housing (not shown). The ejector 7 then stops, while the bolt head 5 continues to move rearward. Because of this, the front end of ejector 7 protrudes from the through hole 9d, strikes against the cartridge bottom, tilts the cartridge casing laterally from "clamping" by the extractor claw 25 and spins it laterally out. The extractor claw 25 and ejector 7 are arranged in Fig. 1a so that the cartridge casing is ejected to the left (downward in the drawing). In Fig. 1b, casing ejection occurs in the other direction. Conversion of extractor claw 25 and ejector 7 from its position in Fig. 1a to that of Fig. 1b and vice versa occurs by converting the bolt head 5. For this purpose, the safety plate 23 is initially removed so that the firing pin 37 can be pulled from a retaining hole 39 of a pin 41. The pin 41 is then pulled from a transverse hole 43 accommodating it. The bolt head 5, together with ejector 7 and extraction claw 25, is now taken from the bolt carrier 3 and reinserted into the bolt carrier 3 in the opposite incorporation position. The pin 41 is then pushed back into transverse hole 43 and secured by firing pin 37. The safety plate 23 is finally remounted.

Fig. 2 shows a sectional view of the bolt carrier 3 from the side without the bolt head 5. On its top, the bolt carrier 3 is connected to an extension (not shown here), through which the bolt carrier 3 can be moved in the longitudinal direction of the weapon.

A slot 47a and 47b is situated on both sides of the bolt carrier 3. Depending on whether casing ejection is set up for the left or right, the pin 41 protrudes on the left or right side of the bolt carrier and passes through the slot 47a or 47b. The pin 41 has a die-sinking 49, into which the edge of the slot 47a or 47b engages. The die-sinking 49 serves to lengthen the locking path, but is not absolutely necessary.

When the weapon is ready to fire, the bolt assembly 1 is locked, i.e., the locking pegs 51 of the bolt head 5 engage behind a matching counterpiece rigidly connected to the cartridge chamber (not shown here). The pin 41 is then situated on the rear end of slot 47a or 47b. After firing, the bolt carrier 3 initially moves rearward. Because of the arc-like curve of slots 47a, 47b, the bolt head 5 is rotated via pin 41 so that the bolt assembly 1 is unlocked again. The pin 41 finally reaches the front end of slot 47a, 47b (positioned as shown in Fig. 1) and the bolt head 5 is carried rearward with the bolt carrier 3. A sleeve 45 prevents the bolt carrier 3 and bolt head 5, during forward and return movement, from displacement relative to each other and unintentional rotation of the bolt head 5 on this account. For locking of bolt assembly 1, the sleeve 45 is compressed so that the bolt head 5 can be rotated again by the slot guide.

Fig. 3 shows a rear view of bolt assembly 1. The recesses 9b and 9c are lengthened in the peripheral direction so that the ejector 7 can follow the peripheral rotation of the bolt head 5 during locking and unlocking of the bolt assembly. In this manner, it is ensured that the rotational movement of bolt head 5 is not hampered by the integrated ejector 7.

Patent Claims

1. Bolt mechanism for incorporation in a small arm, with:
 - a) a bolt assembly (1), which is arranged to move in a weapon housing in the longitudinal direction of the weapon and is assembled from a bolt carrier (3) and a bolt head (5), in which the bolt head (5) is configured so that it can be alternately introduced into at least two positions in the weapon,
 - b) an extractor (25), which is fastened laterally on the bolt head (5) and seizes a cartridge casing situated in the barrel during return of the bolt assembly (1),
 - c) an ejector (7) integrated in the bolt mechanism, which removes the cartridge casing from the bolt assembly (1) after extraction from the barrel,
 characterized by the fact that
 - d) the bolt carrier has at least two elongated holes (47a, 47b) serving as slot guides and
 - e) the bolt head has a pin (41), which engages in a specific elongated hole (47a, 47b), depending on the incorporation position of the bolt head.
2. Bolt mechanism according to Claim 1, in which the bolt carrier (3) is designed as an essentially can-like hollow element and the bolt head (5) is designed as an element that can be introduced into this hollow element.
3. Bolt mechanism according to Claim 1 or 2, in which the bolt head (5) has a transverse hole (43), into which the pin (41) can be introduced.
4. Bolt mechanism according to one of the preceding claims, in which the pin (41) has a retaining hole (39), through which a firing pin (37) that passes through the bolt assembly (1) and bolt head (5) in the longitudinal direction is guided.
5. Bolt mechanism according to one of the preceding claims, in which the bolt carrier (3) has two diametrically opposite elongated holes (47a, 47b).
6. Bolt mechanism according to one of the preceding claims, in which the ejector (7) is arranged on the percussion base (21) essentially diametrically opposite extractor (25) and preferably so that the center of the cartridge casing lying on the percussion base (21) lies on an imaginary line between extractor (25) and ejector (7).
7. Bolt mechanism according to one of the preceding claims, in which the ejector (7) is designed as a striker that passes through bolt assembly (1) or bolt head (5) in the longitudinal direction, which encounters a stop with its rear end during return of bolt assembly (1) and, in so doing, pushes with its front end against a cartridge casing situated in bolt assembly (1) or bolt head (5).

8. Bolt mechanism according to Claim 7, in which the striker in the locked bolt assembly (1) is arranged so that its front end is retracted into bolt assembly (1) or bolt head (5) and its rear end preferably extends rearward above bolt assembly (1) or bolt head (5).
9. Bolt mechanism according to Claim 7 or 8, in which the striker is loaded rearward by a spring (17) against a stop.

503518

1/2

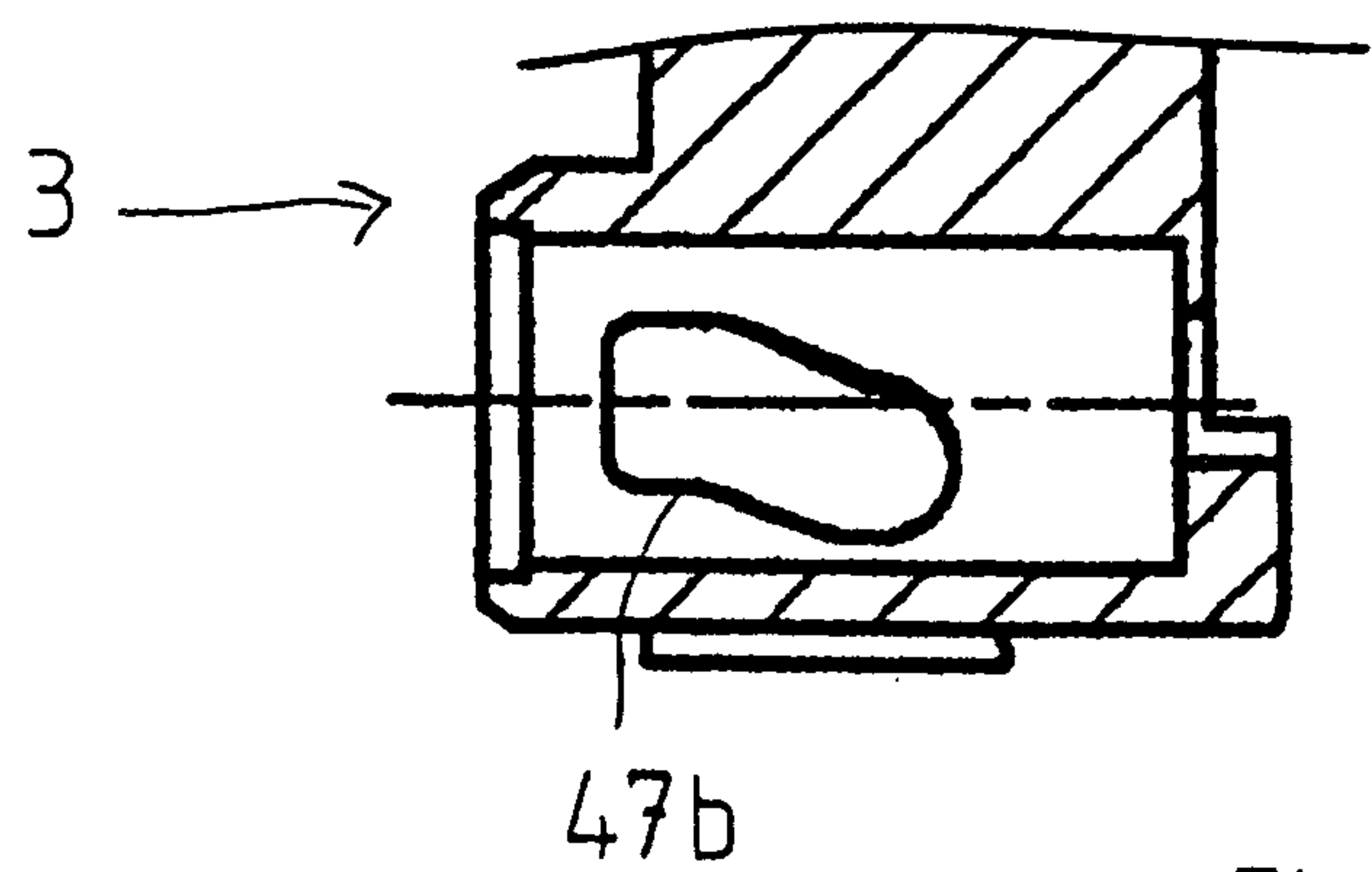


Fig. 2

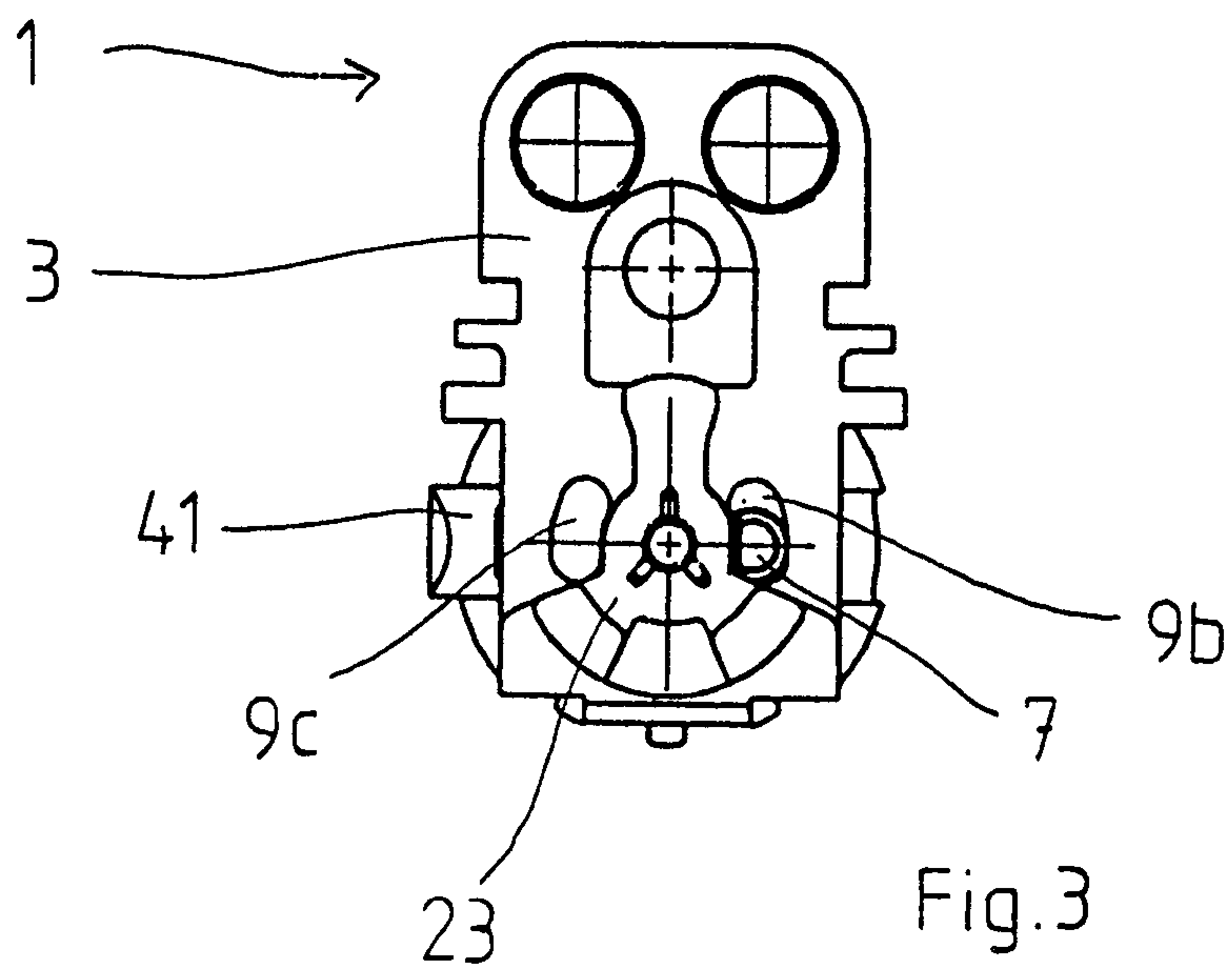


Fig. 3

ERSATZBLATT (REGEL 26)

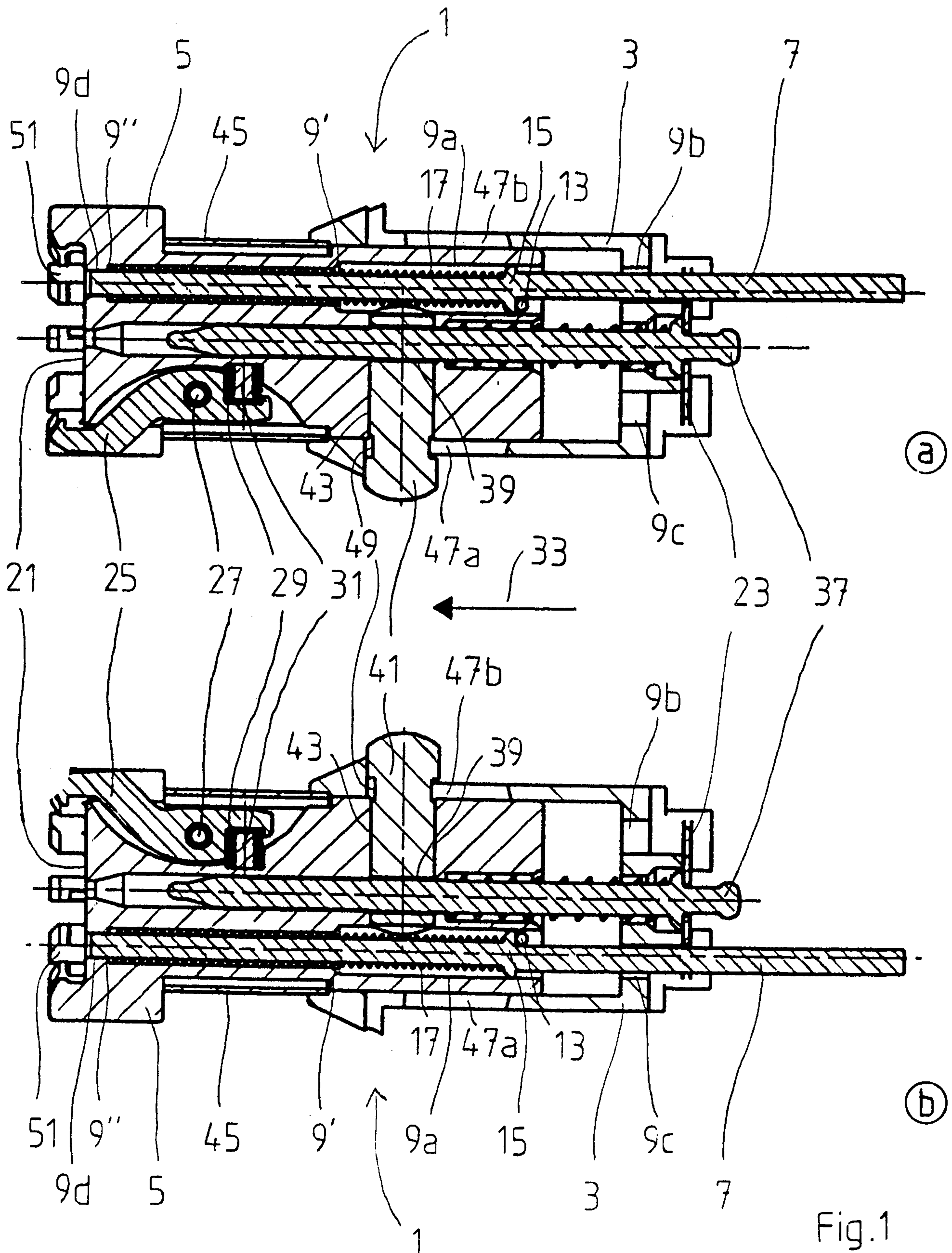


Fig.1

