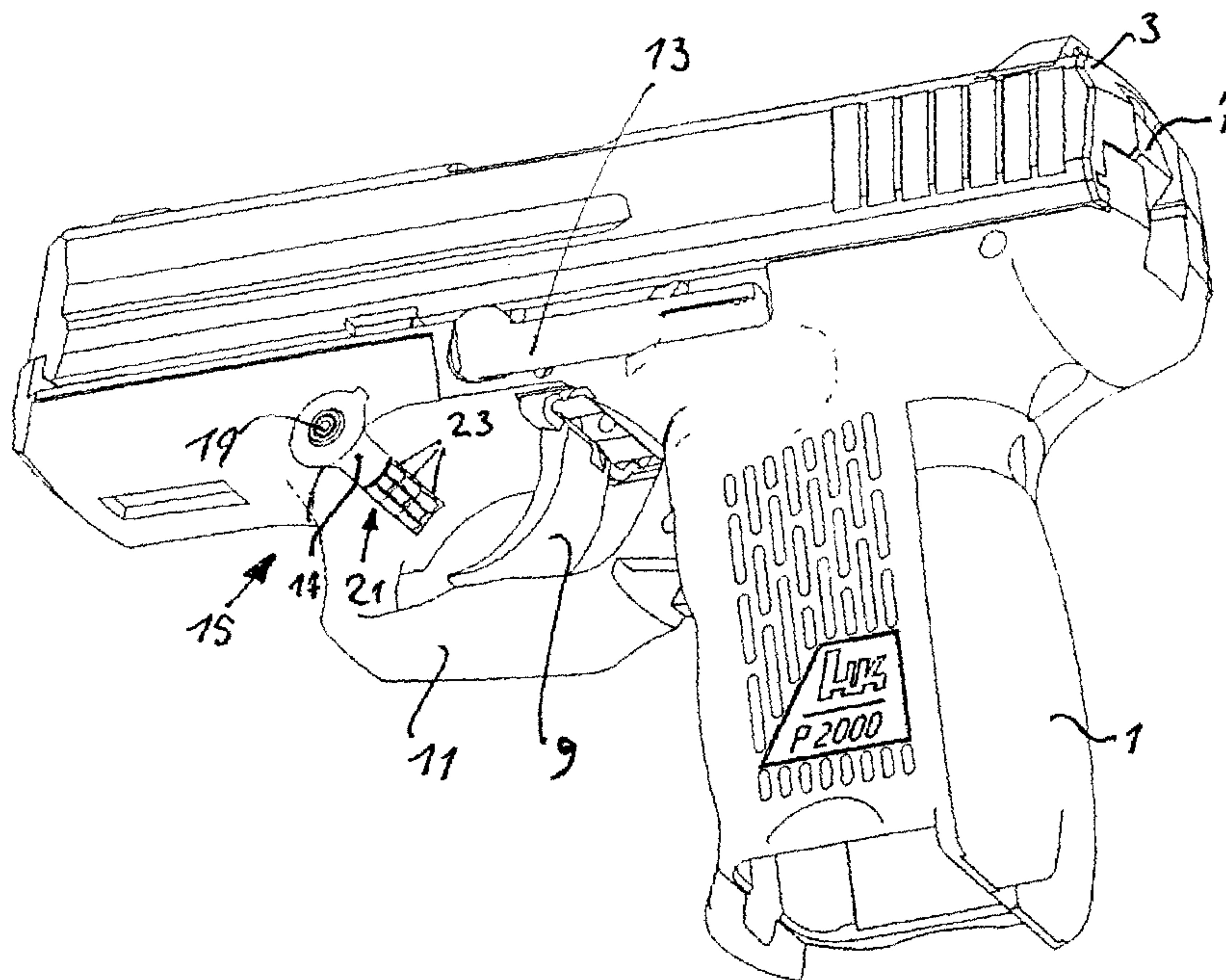




(86) Date de dépôt PCT/PCT Filing Date: 2001/10/23
 (87) Date publication PCT/PCT Publication Date: 2002/05/02
 (45) Date de délivrance/Issue Date: 2004/12/28
 (85) Entrée phase nationale/National Entry: 2002/06/19
 (86) N° demande PCT/PCT Application No.: EP 2001/012252
 (87) N° publication PCT/PCT Publication No.: 2002/035171
 (30) Priorité/Priority: 2000/10/23 (100 52 466.4) DE

(51) Cl.Int.⁷/Int.Cl.⁷ F41A 17/04
 (72) Inventeurs/Inventors:
 FLUHR, NORBERT, DE;
 BANTLE, JOHANNES-AUGUST, DE
 (73) Propriétaire/Owner:
 HECKLER & KOCH GMBH, DE
 (74) Agent: RIDOUT & MAYBEE LLP

(54) Titre : ARME DE POING
 (54) Title: HANDGUN



(57) **Abrégé/Abstract:**

The invention relates to a hand-held firearm with a trigger (9), which is partially surrounded by a trigger guard (11), a trigger bar standing in a work connection with this, and a combination lock (17) with number dials (23) rotatable around an axis (19), which [lock] cooperates with an extension (25) of the bar or an intermediate part engaging in this, and only permits a movement of the bar triggering a shot if it (17) is open. In order to accommodate the combination lock (17) in the weapon, particularly a self-loading pistol, discreetly and without disfiguring the weapon, the axis of the lock (19) is, in accordance with the invention, positioned horizontally and transversely to the longitudinal axis of the weapon. The combination lock (17) is accommodated in front of the trigger (9), in the transition (15) between the trigger guard (11) and the casing or the pistol grip (1), respectively. The combination lock aperture (21), through which the numerals of the number dials (23) are visible and adjustable, is preferably oriented towards the trigger (9) and is not, as the result, evident at first glance. The combination lock (17) is preferably connected with a pressure safety device (19); the coding is preferably changeable.

Summary:

The invention relates to a hand-held firearm with a trigger (9), which is partially surrounded by a trigger guard (11), a trigger bar standing in a work connection with this, and a combination lock (17) with number dials (23) rotatable around an axis (19), which [lock] cooperates with an extension (25) of the bar or an intermediate part engaging in this, and only permits a movement of the bar triggering a shot if it (17) is open.

In order to accommodate the combination lock (17) in the weapon, particularly a self-loading pistol, discreetly and without disfiguring the weapon, the axis of the lock (19) is, in accordance with the invention, positioned horizontally and transversely to the longitudinal axis of the weapon. The combination lock (17) is accommodated in front of the trigger (9), in the transition (15) between the trigger guard (11) and the casing or the pistol grip (1), respectively. The combination lock aperture (21), through which the numerals of the number dials (23) are visible and adjustable, is preferably oriented towards the trigger (9) and is not, as the result, evident at first glance.

The combination lock (17) is preferably connected with a pressure safety device (19); the coding is preferably changeable.

(Fig. 3).

Hand-held firearm

The invention relates to a hand-held firearm, with:

- A trigger, which is partially surrounded by a trigger guard;
- A trigger bar in working connection with this, and:
- A combination lock with a number dial rotatable around an axis, which [dial] cooperates with an extension of the bar or an intermediate part engaging in this, and only permits a movement of the bar permitting the triggering of a shot if the combination lock is open (introductory portion of claim 1).

All positional designations that are used in this text relate to a weapon in the normal position of use, thus with the barrel horizontal, and are considered from the viewpoint of the person who is shooting. If a person shooting holds a self-loading pistol with his right hand, for example, then his index finger lies to the right, and his thumb lies to the left. The weapon is then pointing "forward".

A hand-held firearm of the type stated above is known from US 3 735 519. This publication depicts a conventional machine pistol in which a combination lock with vertical axis is positioned above the trigger and in front of the same, closely behind the shaft of the magazine. This combination lock has three number dials which are coaxial, positioned one above the other, and rotatable, such as is already known from a simple combination lock for briefcases, for example. A recess, on the base of which sections of the three number dials are visible and can be rotated by means of the finger, is located in the left side of the weapon casing. In one specific, unchangeable relative position of the three (numeral-bearing) number dials, a lever, which remains set in every other position of the lock, is movable to the rear. This lever is connected with the bar ("sear"), which is movable when the lever is released, but not when the lever is fixed, however.

The lever, and thereby also the bar and the trigger as well, can only be moved if a certain identifying number (PIN) is set by means of the number dial. The weapon can, therefore, only be fired in this position of the number dial.

When the weapon is uncocked, the person shooting can very easily check, if its closure is located in the most forward position, whether the combination lock is blocked or open by pulling the trigger. If the trigger moves markedly to the rear upon pulling with the finger, then the combination lock is open and the weapon can be used. The combination lock can, however, also be blocked when the weapon is cocked (the closure is located to the rear). If the person shooting now wants to ascertain whether the loaded weapon is ready to be fired or not, then he must check the setting of the numbers. That is to say, if he were to pull on the trigger and the lock were open, then a shot would be fired. Such checking is not actually possible in darkness or in the event of a lack of time.

One older machine pistol of the type indicated has a relatively great amount of free space available in the casing. In modern weapons, this no longer the case. A combination lock of the type depicted can not be accommodated, particularly in a modern self-loading pistol, without the pistol grip of this weapon having to be changed in an entirely essential and inconvenient manner.

It is also necessary for customers who want to acquire a weapon to like the weapon. This principle is also applicable for military and law enforcement personnel who are entrusted with the procurement of new weapons. A safety device which disfigures the weapon is, therefore, an unusually great obstacle to sales and can not, for that reason, be accepted.

In safety devices, furthermore, it is necessary that these not be too clearly obvious. A lawbreaker or other opponent who seizes a weapon in a scuffle and wishes to use this immediately should not, as much as possible, be aware of the safety lock.

On the other hand, the known safety lock with rotatable number dials has a whole series of advantages in comparison with all electronic safety devices, since it does not need any battery and is still completely ready to use, even after decades without any maintenance.

Safety locks with keys are also known. After the loss of the key, however, a weapon equipped and secured with such a lock is useless, at least for the moment.

There are also locks with several pushbutton keys which are to be punched in or depressed in order to release the weapon. One such self-loading pistol, known from the US 5 946 841, is equipped with four pushbutton keys which are positioned, in a clearly visible manner, in the extension of a pistol grip under the slide support unit. There are, in any event, only a total of 16 setting possibilities; thus, a mischievous little boy who sneaks the weapon from his grandfather in order to show it off to his playmates could decode the lock combination within a few minutes.

It has also already been proposed to equip handguns with rotatable number dials. The latter are, however, positioned either in areas where they come into immediate contact with the hand holding the weapon during shooting (US 5 743 039), and can thus be adjusted in an undesirable manner, or else require a considerable widening of the pistol grip of the weapon (as can be inferred from US 5 930 930).

Incidentally, the need to produce a weapon, particularly a handgun, which can not be used if it falls into the wrong hands, at least in the short-term, has already existed for decades. In particular, the last stated case, in which children unintentionally come upon a weapon and play around with it, often ends tragically. If, however, a burglar steals a weapon, for example, and a mechanic can then work on it in complete peace in a workshop, then it will undoubtedly become usable again in every case, regardless of how intricate the safety devices used were.

The invention should improve the known weapons stated above.

Proceeding from the basis of this problem, the task which primarily forms the basis for the invention is that of further developing a hand-held firearm of the type stated above in such a manner that its combination lock, which consists of coaxial rotatable number dials, makes possible a secure handling of the hand-held firearm, and is inconspicuous and does not unreasonably disfigure the weapon.

The invention is, in particular, directed at a self-loading pistol in which a combination lock of the type stated above is easily accessible, but is positioned discreetly and without impairing its appearance, however. An economical production is to be striven for.

There is understood here by "combination lock" a device with at least one rotatable number dial which has a number of symbols distributed over its circumference, which are referred to here, for the sake of simplicity, as "numerals", but which can also be logos or the like. The number dial, or every [number dial], is, for the purpose of release, rotated far enough, by means of a finger or a pointed object (such as of a ballpoint pen, for example), until the numeral or group of numerals corresponding to the coding is located at a certain point, and is thereby preferably visible through an aperture. Catch units facilitate the correct setting of the number dial(s).

The above task is solved, in accordance with the invention, through the fact that:

- The axis of the number dials proceeds horizontally and transversely to the longitudinal axis of the weapon; and:
- The combination lock is accommodated in front of the trigger within the transition between the trigger guard and the casing (claim 1).

In a whole series of firearms, a pressure safety device, such as a safety bolt, for example, which passes horizontally through the transition between the trigger guard and the casing in the transverse direction and projects over the right side or the side of the transition, depending on whether or it has been secured or not, is attached at this point. This transition must only be slightly expanded for the invention in order to accommodate the combination lock -- rather than a known safety bolt --, the diameter of which, in any event, exceeds that of the safety bolt.

In a self-loading pistol, the impression of a bulky transition can be reduced still further through a deeper positioning of the lower edge of the forward part of the pistol grip, in comparison with a conventional self-loading pistol, so that the observer does not have the feeling that something as bulky as a combination lock is concealed within this part of the weapon.

The combination lock can have any desired number of number dials, and each number dial can have any number of numerals, within reason. The more numerals that are present, however, the greater is the diameter of the combination lock, and the more number dials are present, the longer the combination lock is. In order to not allow the quantity of possible combinations of the setting to be too small, at least three number dials are preferably to be provided. In accordance with the invention, a compromise has been chosen which consists of three number dials (claim 2), each with 10 numerals (claim 3). The number of combinations arising from this is large enough to keep the possibility of working out the combination by playing around low. Any number between 000 and 999 can be chosen as a combination. If the combination lock can be set by the user himself, he can set it to a number between 000 and 999 which he can easily reproduce again if he should forget it, such as the last three digits of his personal identity number, for example.

The number dials can be substantially exposed. A marking then designates the point at which the combination is to be set. Preferably, however, only a relatively small aperture, through which the combination is visible and can be adjusted, such as by means of the fingernail or a pointed object, is provided.

The combination to be set could be visible in an aperture of the transition oriented towards the front, which would have the advantage of easy visibility and adjustability. In accordance with the invention, however, it is particularly advantageous to place the aperture inside the trigger guard in such a manner that it points to the rear and is oriented towards the trigger (claim 4).

This not only has the advantage that the user does not have to look in the direction of the muzzle upon considering and setting the combination of the lock, but also the further advantage that the combination of numbers can not be set upon rummaging around in the pocket in which the weapon is carried; it is, in particular, also an advantage that the combination of numbers is only visible at a discreet and inconspicuous point, so that the casual observer will not, as a rule, even note that it is a weapon with a safety lock.

One of the main disadvantages of the known machine pistol with a combination lock stated above is the fact that the person shooting can -- in the event of darkness, for example -- only determine whether the combination lock is blocked or will fire a shot by pulling the trigger. From this basis, the invention provides an indication by means of which the user can determine the condition of the combination lock (blocked or open) (claim 5). By means of this indication, such as a signaling pin, for example, the person shooting can determine the condition of the combination lock even if he has no possibility of convincing himself whether the correct combination has now been set or not by glancing at it. The readiness of the weapon to be fired can consequently be checked safely, even in the dark.

Preferably (claim 6), a safety device (such as an operating lever, an activating button, or the like) is provided, the position of which (safety on, or ready to fire) can be sensed by the operator, as is normally the case. The combination lock does not now immediately release the trigger bar or an intermediate part, but the safety device, which can only be moved out of safety if the combination lock, is open instead. The safety device, for its part, now releases the operation of the weapon. If the safety device is now at "fire", then the combination lock must necessarily be open now. If the safety device is at "secure" and can not be moved into the "fire" position, then the combination lock is blocked. If the person shooting wants to determine the condition of the combination lock, then he only needs to operate the safety device, which he can safely do.

If the user is about to lose the weapon in a street scuffle, then he can still possibly move the safety device into the "secure" position, so that the weapon can not then be immediately fired. An activation element which, upon securing, adjusts the counting mechanism so that the weapon can not be moved to safety-off before the combination of numbers of the counting mechanism has been set again first, is preferably connected with the safety device.

The safety device is preferably configured as a pressure safety device which is, for its part, formed from the axis of the combination lock (claim 7). A pressure safety device at the point of the transition is already known per se. The secured pressure safety device, however, can only be pressed if the combination of the combination lock has been set. If the pressure safety device has been pressed in and therefore has the safety removed, then the combination lock blocks, so that it can not be adjusted. Even if the number dials should be acted on, such as by the trigger finger of the user, for example, they can not be adjusted, so that the weapon remains reliably ready to fire.

That is to say, it is not only important that the weapon in accordance with the invention not be used by an unauthorized person but, rather, it is just as important that it remain reliably usable in the event of an emergency. This essential characteristic is guaranteed by the further development in accordance with the invention.

In a modern self-loading pistol, incidentally, a safety device at this point is extremely unusual so that, even if an opponent does seize the weapon in a street scuffle, he can not discover the pressure safety device without a prior careful examination of the weapon.

The combination lock of the known machine pistol stated above has a fixed coding. If the weapon is ever temporarily entrusted to another person for use or resold as a used weapon, however, then the danger exists that the combination of numbers will become known to many persons. Moreover, only a combination of numbers which can only be remembered with difficulty and can not be reconstructed in the event of being forgotten, is present.

In order to help with this defect, the invention proposes, in a further configuration of the invention (claim 8), a combination lock, the coding of which can be adjusted. Such numerical locks are known (such as in briefcases) and can, for example, be set after opening by pressing on the axis for any new combination of numerals. If the axis brought into its operating position again, then the combination lock remains set on the new combination of numerals. This can only be changed by a renewed pressing on the axis.

This setting possibility is also preferred in the invention (claim 9) and, in particular, the axis of the combination lock is designed as a pressure safety device. This axis closes, in each of its end positions, quite snugly with the outside surface of the casing or pistol grip of the weapon, as is usual in a pressure safety device. By means of a tool, however, such as a cartridge, for example, the axis can be pressed beyond the one end position with the combination lock opened, into the casing or pistol grip and up to a setting position, and the adjustment can be carried out by rotating the number dials.

The combination lock of the weapon can consequently be individually set for every user, who can then select a combination of numerals which is known to him and which is also not forgotten after the passage of years. That is to say, it is essential that the combination of numerals not be recorded, such as on a card that is stored on the weapon, for example: because, in such a case, an unauthorized person could, upon stealing the weapon, also obtain the combination of numerals at the same time.

It is, consequently, also possible that after transferring the weapon to another person, for instance, that this person can set an identification number known only to himself.

The combination lock in accordance with the invention preferably has a disassembly prevention device which makes at least an unintentional disassembly of the combination lock impossible (claim 10). As a general rule, a damaging of the casing or pistol grip should be anticipated if an attempt is made to break out the combination lock.

The combination lock is consequently secured against removal.

If the casing or pistol grip is made from plastic, the disassembly prevention device cooperates with a reinforcement of metal, preferably of steel or hard metal, which is set in the plastic. Thus, the surface pressures that appear upon a forcible breaking into the combination lock are conveyed onto a large surface, so that the plastic can withstand these stresses (claim 11).

In accordance with one additional configuration, the weapon can neither be disassembled, nor opened or reloaded, when the combination lock is not open (claim 12). The bar or its extension thereby passes through the transverse bolt, for example, which, in the Colt-Browning construction, must be removed before disassembling the weapon, so that this transverse bolt can only be removed if the trigger has been pulled. This is only possible, in turn, if the combination lock has been opened. In this way, an unauthorized person is prevented from being able to remove essential parts (barrel, lock) even though the combination lock has been secured.

The hand-held firearm in accordance with the invention can, for example, be a self-loading pistol, such as one with a plastic pistol grip and/or one that has a hammer lock with double movement (double-action hammer lock).

In such a weapon, the trigger is, when the weapon is on safety, connected solidly with the hammer -- that is to say, upon pulling back the hammer, the trigger must also be moved to the rear. If this is impeded by the combination lock, then the hammer can also not be moved backwards. This has the result that the lock is also not opened, and the weapon can (in the case of a self-loading pistol of the Colt-Browning construction) not be disassembled. The weapon secured with the combination lock can not, therefore, be reloaded. It can, therefore, also not be loaded by an unauthorized person in secret, which could, for example, then lead to an accident if the authorized person -- being convinced that the weapon is not loaded -- were to carry out a pulling motion after removing the safety of the combination lock, for example. Incidentally, the most essential parts, the barrel and the lock, can also not be removed.

The invention will now be illustrated in further detail by means of examples of implementation. The schematic diagrams attached hereto depict the following:

- Fig. 1: A lateral view of a pistol in accordance with the invention, viewed from the left;
- Fig. 2: A side view of the pistol of Fig. 1, viewed from the right;
- Fig. 3: An oblique view of the pistol of Fig. 1 and 2, viewed from the bottom left and rear;
- Fig. 4: A partially cut-away view of the pistol of Fig. 1 to 3, viewed from the right, whereby the extension of the trigger bar is depicted with the combination lock in the "secure" position;
- Fig. 5: A partially cut-away view of the pistol of Fig. 1 to 3, viewed from the right, whereby the extension of the trigger bar is depicted with the combination lock in the "safety off" position;

- Fig. 6: A partially cut-away view of the pistol of Fig. 1 to 3, viewed from the right, whereby the extension of the trigger bar is depicted with the combination lock in the "safety off" position and with the trigger pulled;
- Fig. 7: A section through the transition between the trigger guard and the pistol grip and through the combination lock, in the "secure" position;
- Fig. 8: A section analogous to Fig. 7, with the combination lock in the "safety off" position; and:
- Fig. 9: A section analogous to Fig. 7, with the combination lock in the position for setting the combination.

Fig. 1 to 3 represent the first view of a conventional self-loading pistol in accordance with the Colt-Browning principle, with a pistol grip (1) of plastic, reinforced by steel inlays, a lock or slide support unit (3), and a barrel (5). A trigger guard (11) which, at its forward upper end, passes over into the pistol grip (1) by way of a transition (15), is formed as a single piece with the pistol grip (1). The pistol has a hammer (7) and a trigger (9) which, in the safety-on condition of the weapon (Fig. 1 to 3), is in active connection with the hammer (7) -- that is to say, if the relaxed hammer (7) moves to the rear, then the trigger (9) must also obligatorily move backwards. Furthermore, a lock catching lever is provided with a penetrating shaft on each side of the pistol (for the comfortable operation, both right-handed as well as left-handed); this construction assembly is designated as a whole as (13).

An overall cylindrical, horizontal, transversely-proceeding combination lock (17) that proceeds through the transition (15) is new and, therefore, unusual. This combination lock has three coaxial numeral- or number dials (23). The transition (15) has an aperture (21) oriented towards the trigger (9), through which [aperture] a combination set by the number dials (23) is visible and adjustable. The axis of the combination lock (17) is formed as a pushbutton safety unit (19).

The pushbutton safety unit (19) is visible on both sides of the pistol (Fig. 1 and 2). If it projects over the left side (Fig. 1), over the left surface of the transition (15) and, on the right side (Fig. 2), seals in an essentially snug manner with the right surface of the transition (15), then the weapon is secured and the combination lock (17) can have any position of the number dials (23) that is desired. This position of the combination lock (17) is depicted in Fig. 7.

If the pushbutton safety unit (19) is pressed in on the left side until it closes quite snugly with the left surface of the transition (15), then it projects, on the right side of the pistol, over the right surface of the transition (15) and the weapon is on safety-off. This position of the combination lock (17) is depicted in Fig. 8. The specifically desired position of the pushbutton safety unit (19) can be felt with the index finger (the trigger finger), regardless of whether the user of the pistol holds it with his right hand or his left.

If the pushbutton safety unit (19) is pressed from the right side, by means of a cartridge tip or other implement, beyond the secured position (but in a set combination of numbers, however) and into an end position, then the combination of the number dials (23) can be changed through the aperture (21). This position of the combination lock (17) is depicted in Fig. 9. If the pushbutton safety unit is again brought into one of the operating positions (Fig. 7 or 8), then the new combination remains valid until the renewed setting.

Fig. 3 shows that the number dials (23) are not visible to the casual observer. The numerals are placed on the external circumference of the number dials (23) and are oriented in such a direction that, upon setting a combination (if the numerals have to be considered, and thereby naturally stand upright), the muzzle of the weapon points away from the user.

The pushbutton (19) additionally has, near its right end, in the interior of the transition (15), a recess or transverse groove (27) which, when the pushbutton (19) is pushed to the right, flows into a longitudinal groove that is formed in the pistol grip (1). An extension of the bar (25), which is connected with the trigger (Fig. 4 to 6), proceeds in this longitudinal groove.

This extension of the bar (25) extends from the rear and top to front and bottom, as well as transversely to the pushbutton (19), and ends, with trigger (9) not activated and hammer (7) relaxed, precisely behind the pushbutton (19) (Fig. 4 and 5). If the pushbutton safety unit or the pushbutton (19) is in the "secure" position (Fig. 7), then the extension of the bar (25) pushes, upon the attempt to activate the trigger (9), against the pushbutton (19), so that the trigger can not be moved to the rear. The relaxed hammer (7), however, can also not be moved, and this blocks the lock, so that this can also not be moved.

The lateral axis of the locking catch device (13) also has a transverse groove (no numerical reference), through which the extension of the bar (25) passes. If the trigger (9) is not pulled, then the extension of the bar (25) accordingly blocks the movement of the said lateral axis in its longitudinal direction so that the pistol can not be disassembled.

If the pushbutton (19) is moved into the position of Fig. 8 ("safety off"), then the recess (27) is positioned in front of the forward end of the extension of the bar (25) (Fig. 5). The trigger (9) can now be pulled (Fig. 6), because the extension of the bar (25) can move into the recess (27). At the same time, the extension of the bar (25) moves further behind, out from the transverse groove of the lateral axis of the locking catch device (13), so that it can now be removed, and the pistol can then be further disassembled.

The combination lock (17) depicted in Figures 7 to 9 can be seen in the cut-away transition (15), and is considered from the front. The right side of Fig. 7 to 9 corresponds to the left side of the weapon, since this is viewed from the rear, and therefore from the viewpoint of the person shooting (the muzzle points to the front).

The combination lock (17) has the pushbutton (19) as an axis. Proceeding from the end with the recess (27), three successively-following number dials (23) are positioned on this axis. These have a ring-like outside rim, which has the numerals 0 to 9 on its external side. An axially parallel blind boring open to the transverse groove (27), which [boring] accommodates one catching spring and one catching ball, is located in this outside rim. The outside rim is extended radially towards the interior by ten teeth (35), between which a specific distance is present.

One catching plate (31) is fixed, in a non-rotating manner, opposite to the catching balls, each of which has ten engagement borings in a rim-like configuration. If a number dial is rotated, then it engages every 36°, whereby one numeral is visible on each aperture (21) (in Fig. 7 to 9, this is behind the plane of depiction and thus not visible).

The end section of the pushbutton in which the transverse groove (27) is provided has a non-circular cross-section so that the pushbutton can not rotate, and the transverse groove (27) is always oriented towards the extension of the bar (25).

Three slide bars (33) which have the shape of cylinder liners, on the external side of which a projection is provided along approximately two thirds of a generating line, are provided on a tapered, central, cylindrical section of the pushbutton. The teeth of the internal tothing are seated loosely on each of the cylinder liners. In the operating positions of Fig. 7 and 8, the projection penetrates the intermediary space between two teeth (35) of the corresponding internal tothing.

The locking disks (31) are, with their external circumference in the accommodating boring, centered in the transition (17) and have an inner boring which passes through the said cylinder liner section of the slide bar (33). A recess, which is so dimensioned that it passes through the projection of the slide bar (33) if this corresponding slide bar (33) is located in the suitable rotational position, proceeds out from this inner boring.

An end liner (41) positioned opposite the transverse groove (27), which [end liner] has two annular grooves (37) and a shoulder oriented towards the number dials (23), is slid up over the cylindrical end of the pushbutton or of the axis. The accommodating boring for the combination lock (17) is closed to the outside by means of a sealing liner (43), which [liner] has a penetrating transverse boring. A compression spring, radially internally a catching ball and radially externally the body of a lock, is located in this [boring]. A short blind boring, which aligns with the penetrating transverse boring, is located in the transition. This blind boring forms, together with the body of the lock and the spring, a disassembly prevention device (29), whereby the body of the lock is, after the assembly, seated partially in the penetrating transverse boring and partially in the blind boring, and consequently prevents the disassembly.

The catching ball just noted can settle into one of the annular grooves (37), which are positioned in such a manner that the pushbutton is engaged in the secured position (Fig. 7) and in the safety off position (Fig. 8). The shoulder is a little bit distanced from the internally-positioned annular groove, so that the pushbutton can move still further beyond the safety position, until the shoulder almost catches opposite the catching ball again (Fig. 9). Note that the boring of the sealing liner (43) has a section with a smaller diameter than that of the shoulder, so that the shoulder can not be pressed outwardly.

An end plate (39) is located between the first number dial (23) and the adjoining body of the lock (43). This has an inner boring and a recess -- as well as the catching disks (31). All of the recesses of the catching plate (31) and of the end disk (39) are oriented with one another.

If the number dials (23) occupy any positions, then the projections of the slide bar (33) specifically desired are displaced, opposite to the adjacent recess, either angularly or in the circumferential direction, as the case may be, so that the pushbutton projecting out on the left side of the pistol can not be pressed down. This position is depicted in Fig. 7, and corresponds to the secured position.

If the number dials (23) are now rotated long enough until they allow the numerical combination that has been set to be seen in the aperture (21), then all projections align with the corresponding recesses in the catching disks (31) so that the pushbutton can be pressed -- the safety-off position of Fig. 8 has been reached. The rotation of the slide bar (33) is now made impossible, because its projections each engage in the corresponding recess of the adjacent catching disk (31). Corresponding to this, the number dials (23) can now also not rotate.

If the axis or the pushbutton is again moved into the safety position of Fig. 7 and beyond it (Fig. 8, 9), then the projections of the slide bar (33) not only proceed out from the recesses of the catching disks (31), but also out from the internal tothing (teeth [35]) of the corresponding number dial (23). At the same time, the projections proceed into the recess of the specifically corresponding adjacent catching disk (31) or of the end plate (39). The slide bars (33) are now non-rotatable, but the number dials (23) can be rotated as desired, however. If a new combination is now set, and thus visible in the aperture (21), then the pushbutton is pushed in again until it engages in one of the two annular grooves (Fig. 7 or Fig. 8). Every projection of each slide bar (33) enters into the corresponding internal tothing (teeth [35]) of the corresponding number dial (23) again, so that these are non-rotatably connected with one another in a new angular position.

Claims:

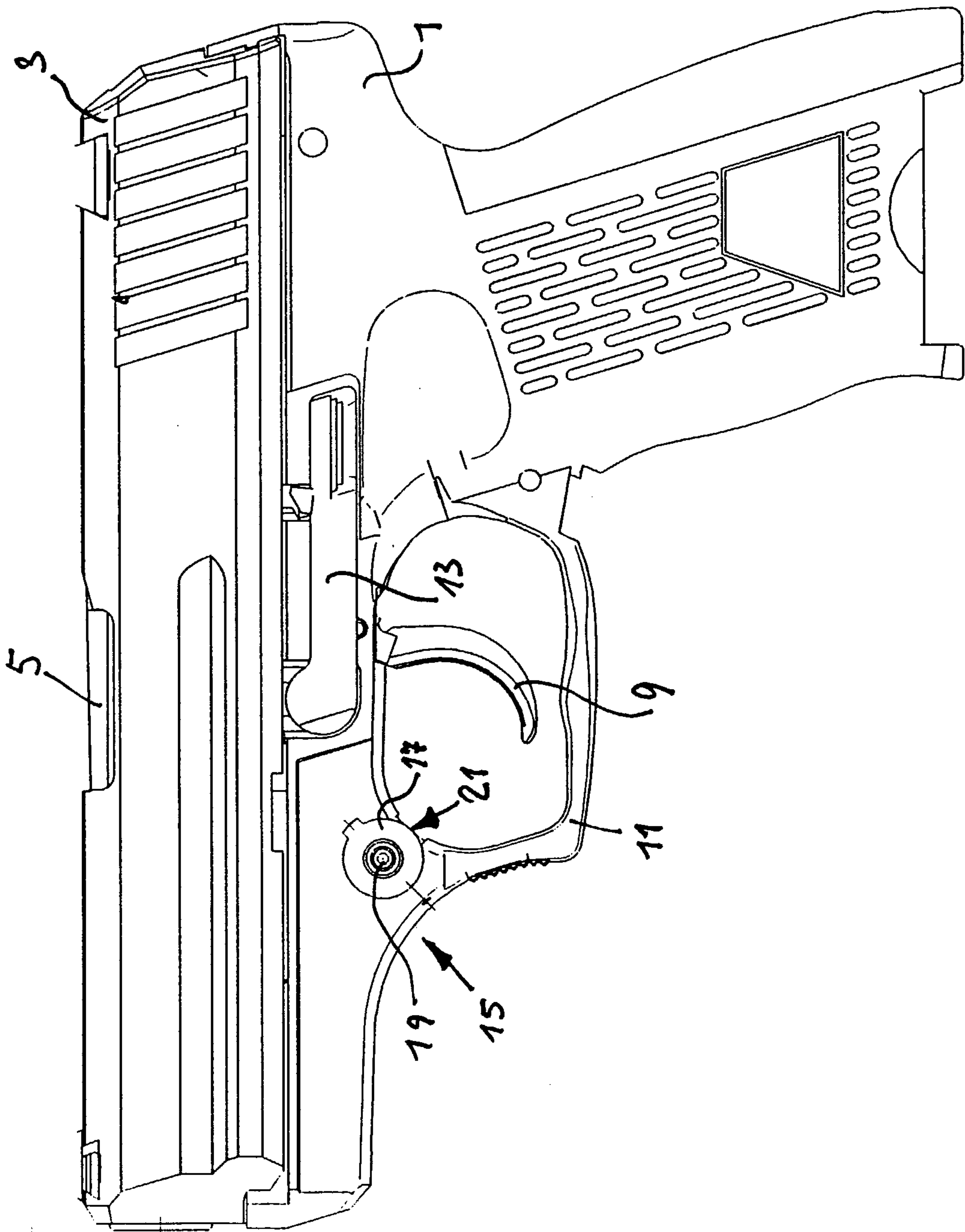
1. A hand-held firearm with a casing or pistol grip (1), and:
 - A trigger (9), which is partially surrounded by a trigger guard (11);
 - A trigger bar in working connection with this; as well as:
 - A combination lock (17) with a number dial (23) rotatable around an axis (19), which [dial] cooperates with a bar extension (25) or an intermediate part engaging in the trigger bar, and only permits a movement of the trigger bar permitting the triggering of a shot if the combination lock (17) is open;

Characterized in that:

- The axis proceeds horizontally and transversely to the longitudinal axis of the hand-held weapon, and:
 - The combination lock (17) is accommodated in front of the trigger (9) in the transition (15) between the trigger guard (11) and the casing or pistol grip (1).
2. A hand-held firearm in accordance with claim 1, characterized in that, the combination lock (17) has at least three number dials (23).
 3. A hand-held firearm in accordance with claim 1 or 2, characterized in that, every number dial (23) bears ten numerals.
 4. A hand-held firearm in accordance with one of the claims 1 to 3, characterized in that, on the transition (15) inside the trigger guard (11), positioned opposite the trigger (9), it has an aperture (21) for observing and activating the number dials (23).
 5. A hand-held firearm in accordance with one of the claims 1 to 4, characterized in that, a device for indicating the condition of the combination lock (17) is provided.
 6. A hand-held firearm in accordance with claim 5, characterized in that, the device for indicating is a sensitive safety device with a release- and a safety position, which [device] inhibits or releases the movement of the extension (25) of the bar or of the intermediate part which is necessary for the firing and, for its part, can only be moved into the release position if the combination lock (17) is open.
 7. A hand-held firearm in accordance with claim 6, characterized in that, the safety device is a pressure safety device which is formed by the axis of the combination lock (17).

8. A hand-held firearm in accordance with one of the claims 1 to 7, one of the preceding claims, characterized in that, the coding of the combination lock (17) can be adjusted.
9. A hand-held firearm in accordance claim 8, characterized in that, the coding can be set by pressing the axis beyond one of the end positions.
10. A hand-held firearm in accordance with one of the claims 1 to 9, characterized in that, the combination lock (17) has a disassembly prevention device (29).
11. A hand-held firearm in accordance with claim 10, characterized in that, the disassembly prevention device (29) is connected with a metallic reinforcement which is set in the casing or pistol grip (1) of plastic.
12. A hand-held firearm in accordance with one of the claims 1 to 11, characterized in that, it can not be opened and/or disassembled when the combination lock (17) is blocked.

Fig. 1



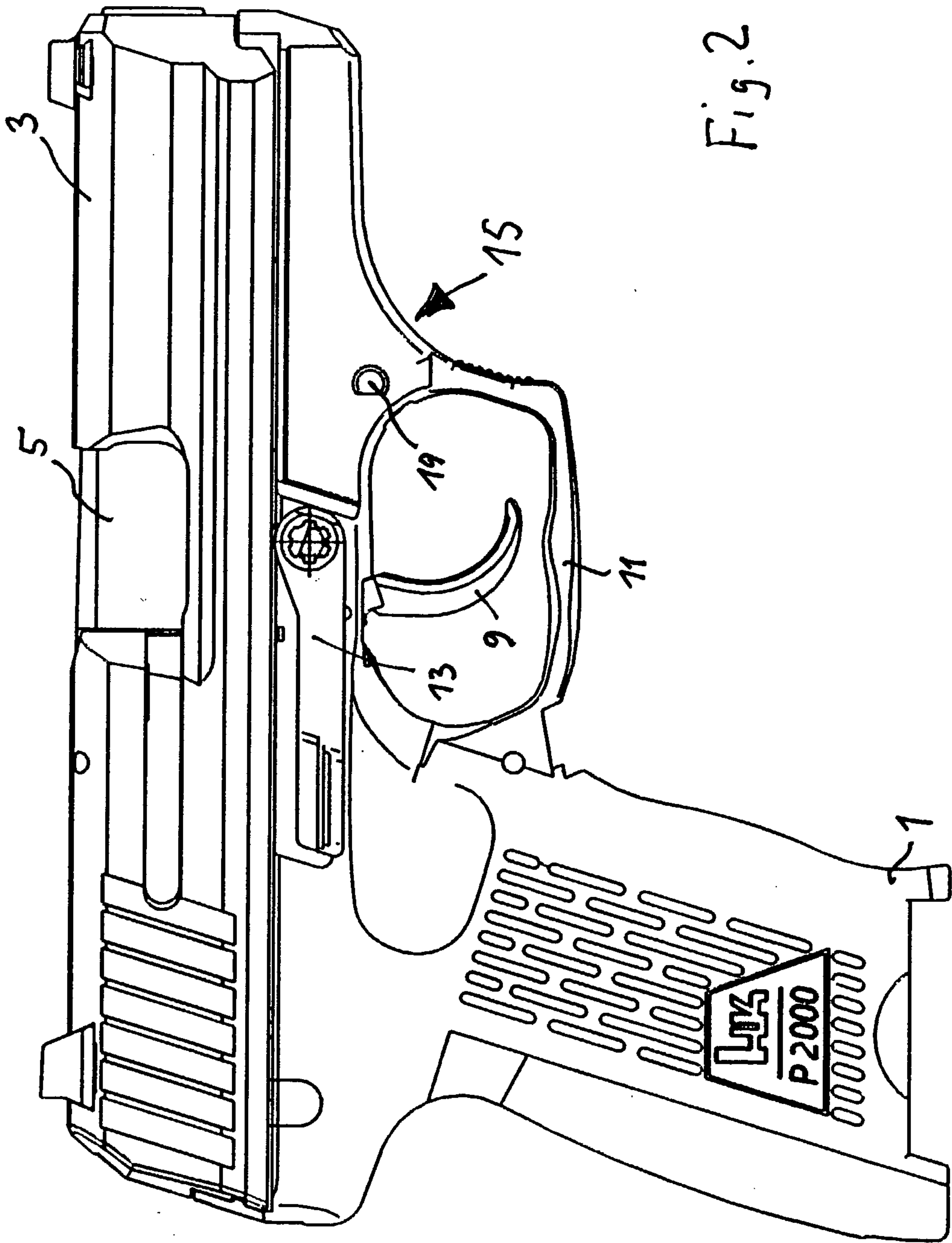


Fig. 2

Fig. 3

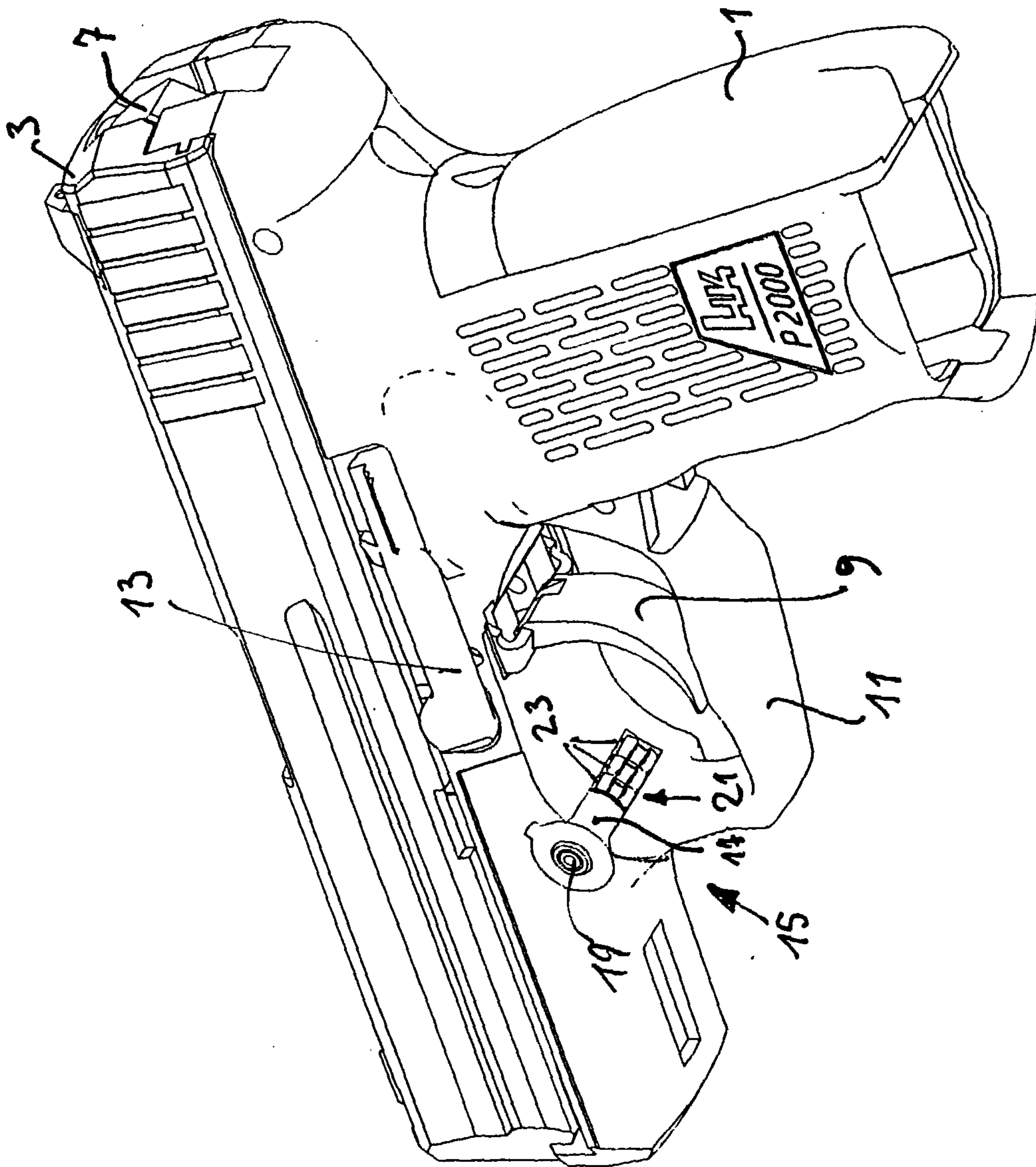


Fig. 4

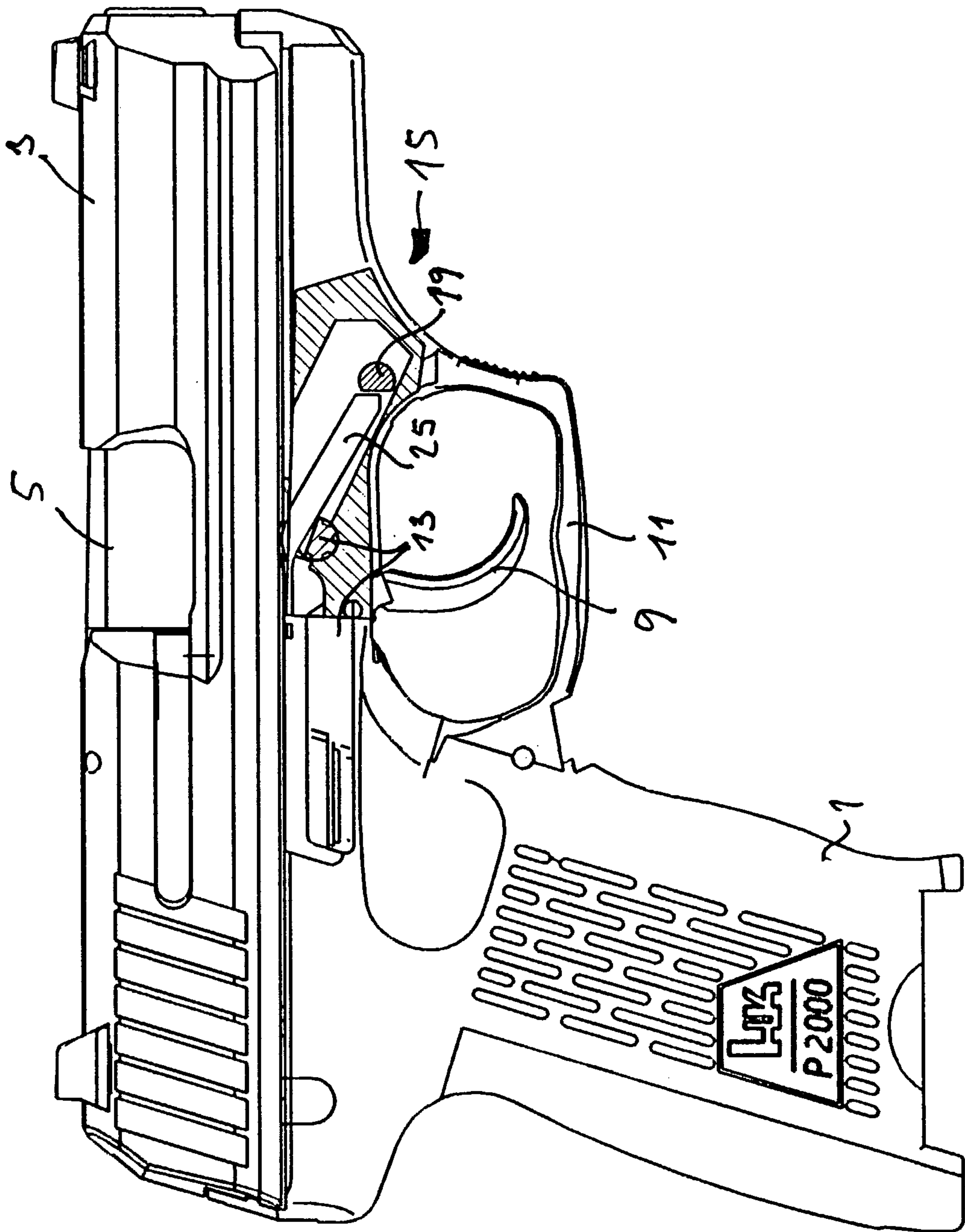


Fig. 5

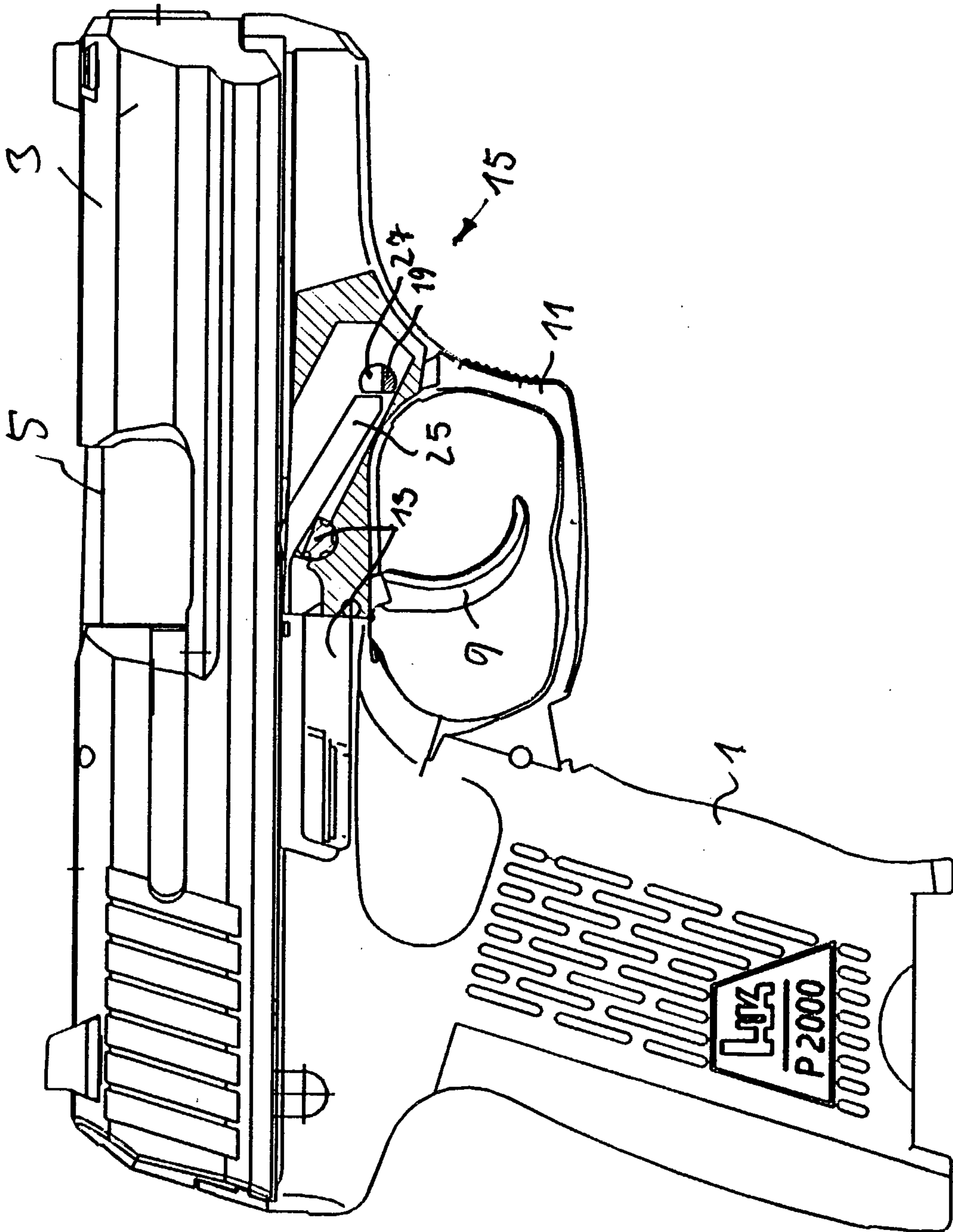
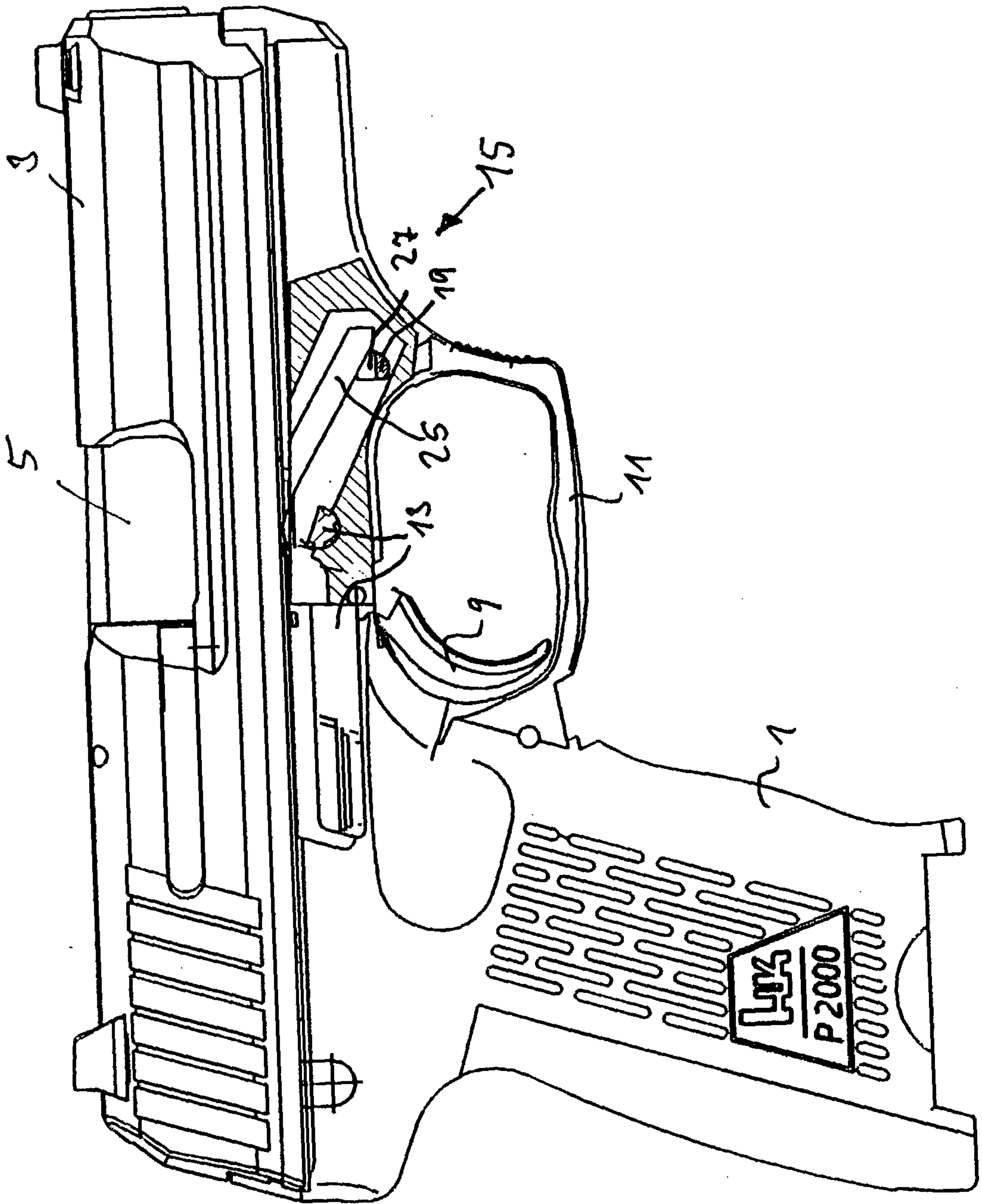


Fig. 6



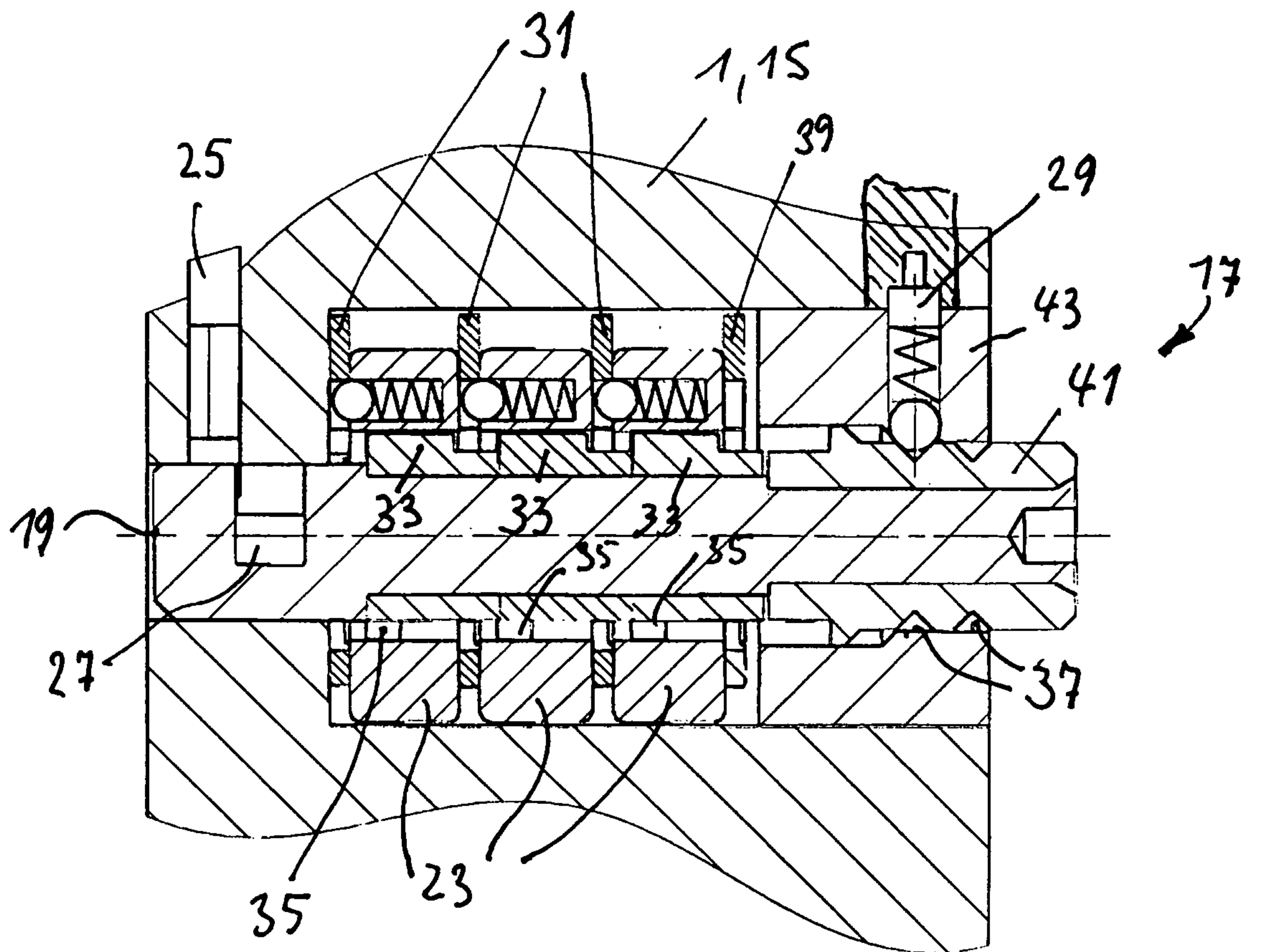
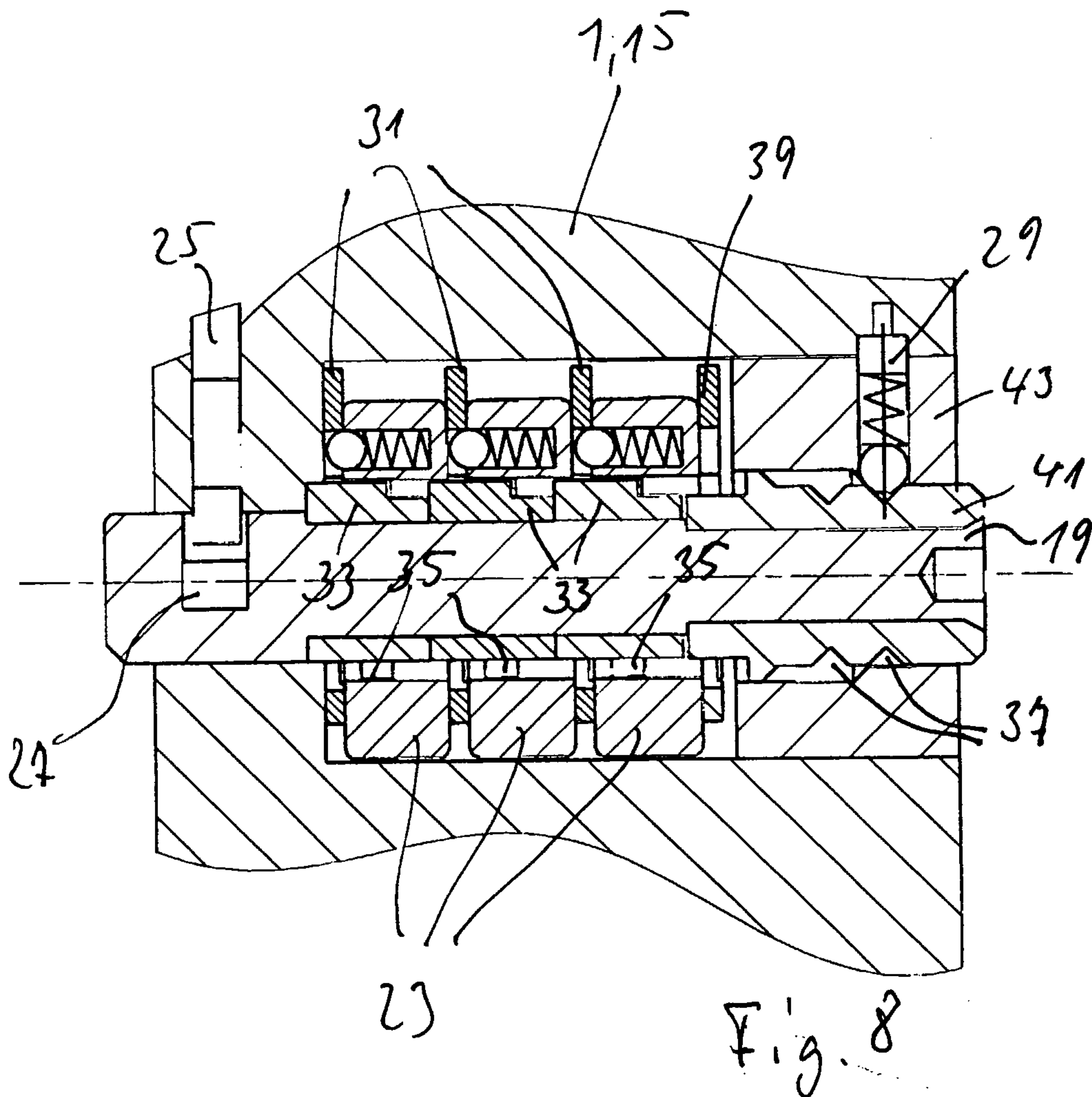


Fig. 7



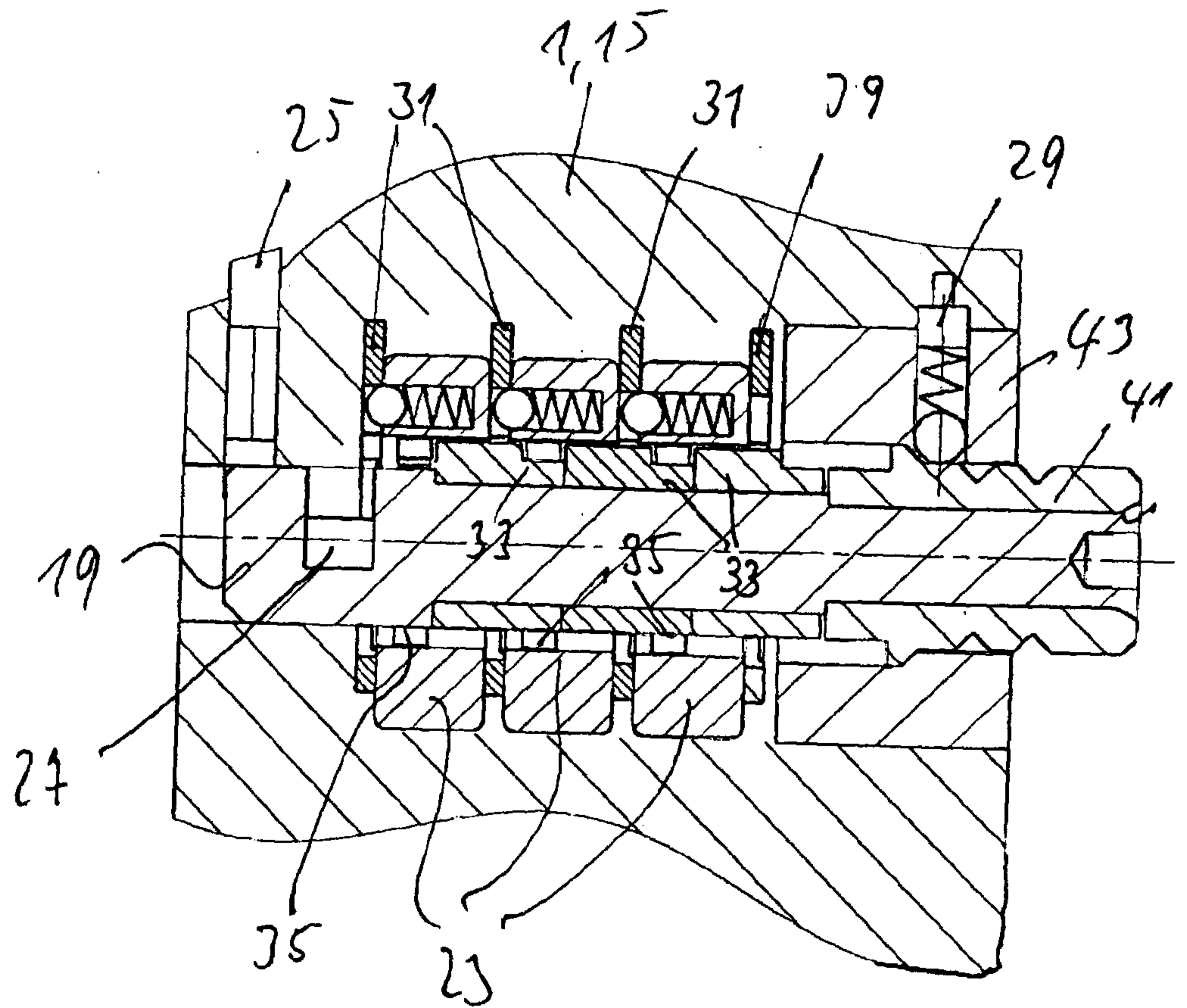


Fig. 9

