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(54) **Reversible magazine latch system for pistols.**

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Description

The invention relates to pistols and to a reversible magazine latch system for a pistol, having a grip portion, in which there is provided a cavity for a magazione, said system comprising a latch seat disposed in said pistol, a magazine latch assembly adapted for disposition in and retention by said seat, and a magazine adapted to be engaged by said latch assembly, said seat comprising an opening extending through said pistol and adapted to receive said latch assembly at either end of said opening and retain said latch assembly therein, said magazine having two lateral slots, a selected one of said slots being accessible to said latch assembly when said magazine is disposed in said cavity, said magazine latch assembly comprising a body portion having a first head portion on a first end thereof and a chamber therein, a second head portion at a second end of said body portion, a movable latch portion, and detent means extending from said latch portion to engage said selected one of said magazine slots. Such a system is known from GB—A—2 006 404 (= US—A—4 236 337).

In the field of automatic firearms, and particularly pistols, it is common for the grip portion of the pistol to define a cavity for a magazine, and it is known to employ latches for locking and unlocking the magazine in the cavity. Among the known latches, there is a sliding type, which is seated and guided transversely, with respect to the cavity receiving the magazine, so as to engage a slot provided on a surface of the magazine. Generally, sliding latches have a unidirectional and irreversible use, in that they may be used either from left to right only, in the case of pistols adapted for right-handed individuals, or from right to left only, in the case of pistols adapted for left-handed individuals. Such limitation is an inconvenience when pistols are used by persons with the opposite hand.

GB—A—2 006 404 (= US—A—4 236 337) sought to remedy the problem by providing a reversible sliding magazine latch for pistols. However, removal and insertion of the '337 latch device require placing the device at an oblique angle relative to the latch seats, which can cause some difficulty in realizing the benefits of the invention, in that the device is awkward to remove.

An object of the invention is to provide a reversible latch system for a pistol in which the latch assembly is easily reversed.

Another object of the invention is to provide a reversible latch system in which the latch assembly can be inserted into and removed from the latch seat substantially axially of the latch seat.

According to the invention, the latch system defined in the first paragraph of this specification is characterized in that said second head portion is threadingly connected to said body portion to secure the body portion in the pistol in that said latch portion is movably disposed in said chamber, and in that said detent means extends through an opening in said body portion to engage the selected slot.

The above and other features of the invention, including various novel details of construction and combinations of parts, will now be more particularly described with reference to the accompanying drawings and pointed out in the claims.

For a better understanding of the invention, and to show how the same way be carried into effect, reference will now be made, by way of example, to the accompanying drawings, in which:

Fig. 1 is a side elevational view of a portion of a pistol showing an illustrative disposition of the invention;

Fig. 2 is a sectional view of the invention, taken along line II—II of Fig. 1;

Fig. 3 is a sectional view illustrative of an embodiment of the invention, taken along line III—III of Fig. 1; and Fig. 4 is a sectional view taken along line IV—IV of Fig. 3, but showing elements of the invention in an alternative position.

Referring to the drawings, it will be seen that the illustration system is adapted for use in conjunction with a pistol 2 having a grip portion 4 in which there is provided a cavity 6 for a magazine 8.

The magazine 8 is provided with two lateral slots 10, 12; one on each side of the magazine. The slots 10, 12 are adapted to receive a latch means, as will be fully described herein below. The magazine 8 comprises spaced side walls 14, 16, a rounded front wall 18, a back wall 20, a base portion 22, and an internal follower 24, biased by a spring 26. The magazine is adapted to retain a plurality of cartridges and facilitates feeding of the cartridges into a cartridge chamber in the barrel of the pistol.

The grip portion 4 of the pistol 2 is provided with a latch seat 28 having first and second enlarged areas 30, 32 at either end thereof, respectively. The latch seat 28 is adapted to receive a magazine latch assembly 34. The magazine latch assembly 34 includes a generally tubular body portion 36 having at a first end thereof a first head portion 38 having a slot 40 therein. At a second end thereof, the body portion 36 is provided with internal threads 42 adapted to receive a threaded stem portion 44 of a second head portion 46 adapted to be received by the first enlarged area 30.

The body portion 36 and the stem portion 44, when threadedly connected, define a chamber 48 in which is disposed a latch portion 50. A shank 52 extends from a first end 53 of the latch portion 50 and through an axial opening 54 in the stem portion 44 of the second head portion 46, the shank 52 having a lock button 56 on a free end thereof. At a second end 57 of the latch portion 50, a coil spring 58 is disposed between the latch portion 50 and an internal end wall 60 of the body portion 36, to bias the lock button 56 outwardly, as shown in Fig. 2.

A forward wall 62 of the body portion 36 is provided with a slot 64 in which is disposed a free end of a pin 66 mounted in the latch portion 50, the slot 64 and pin 66 allowing limited movement of the latch portion 50 in the chamber 48.

Opposite the slot 64 there is an opening 68 in the body portion 36 adapted to receive the aforementioned magazine forward wall 18. The latch portion 50 includes a concave contour 70 generally complementary to the magazine wall 18 but including a detent means 72 adapted to engage one of the magazine slots 10, 12.

Referring to Fig. 2, it will be seen that in the illustrated position, the lock button 56 is biased to an outward position by the coil spring 58 and that the detent 72 is disposed in the magazine slot 12 to securely lock the magazine 8 in the cavity 6 of the grip portion 4 of the pistol 2.

To release the magazine 8, an operator depresses the lock button 56, against the bias of the spring 58, causing the latch portion 50 to move in the chamber 48, with the pin 66 moving in the slot 64 until the pin abuts an end of the slot, at which point the detent means 72 will be removed from the slot 12 (Fig. 3) permitting withdrawal of the magazine 8 from the cavity 6. After insertion of a new magazine, the operator releases the lock button 56, permitting the detent means 72 to be moved by the spring 58 into engagement with the magazine slot 12.

To change the latch assembly from a right-hand orientation, wherein the lock button is on the left (Fig. 1) to a left hand orientation, wherein the lock button is on the right, an operator depresses the lock button 56 to release the magazine 8, and then releases the lock button 56 and separates the body portion 36 from the stem portion 44, by turning the first head portion 38, as by insertion of a coin, or the like, in the groove 40 and disengaging the threaded portions of the body portion 36 and the stem portion 44. After separation of the threaded elements 36, 44 the latch portion 50 and the second head portion 46 are withdrawn from the latch assembly seat 28 by way of the first enlarged area 30, and the body portion 36, and the spring 58, are withdrawn from the latch seat by way of the second enlarged area 32. The positions of the second hand portion 46 and the latch portion 50, on the one hand, and the body portion 36, on the other hand, are exchanged, such that the lock button is on the right hand side, and the first head portion 38 on the left side, for left hand orientation. The threaded elements 36, 44 are threadedly engaged and the assembly is complete, with the head portion 38 disposed in the enlarged area 30 of the latch seat 28 and the second head portion 46 disposed in the second enlarged area 32 of the latch seat, and with the detent means 72 in position for engagement with the magazine slot 10.

Thus, the magazine latch assembly may be easily and quickly exchanged between left and right-hand orientation.

Claims

1. A reversible magazine latch system for a pistol (2) having a grip portion (4), in which there is provided a cavity (6) for a magazine (8), said system comprising a latch seat (28) disposed in said pistol (2), a magazine latch assembly (34) adapted for disposition in and retention by said seat (28), and a magazine (8) adapted to be engaged by said latch assembly (34), said seat (28) comprising an opening extending through said pistol (2) and adapted to receive said latch assembly (34) at either end of said opening and retain said latch assembly therein, said magazine (8) having two lateral slots (10, 12), a selected one of said slots being accessible to said latch assembly (34) when said magazine (8) is disposed in said cavity (6), said magazine latch assembly (34) comprising a body portion (36) having a first head portion (38) on a first end thereof and a chamber (48) therein, a second head portion (46) at a second end of said body portion, a movable latch portion (50), and detent means (72) extending from said latch portion (50) to engage said selected one of said magazine slots (10, 12), characterized in that said second head portion (46) is threadingly connected to said body portion (36) to secure the body portion (36) in the pistol (2), in that said latch portion (50) is movably disposed in said chamber (48), and in that said detent means (72) extends through an opening in said body portion (36) to engage the selected slot.

2. A system in accordance with claim 1 in which said chamber (48) is defined by said body portion (36) and said second head portion (46).

3. A system in accordance with claim 2 in which a shank (52) extends from said latch portion (50) through an opening in said second head portion (46) and has on an end thereof a lock button (56).

4. A system in accordance with claim 3 including a spring (58) disposed in said chamber (48) and biasing said button (56) in a direction outward from said latch assembly (34).

5. A system in accordance with claim 4 in which said latch portion (50) includes a surface having a contour generally complementary to a forward wall (18) of said magazine (8) but having said detent means (72) extending therefrom for said engagement with said selected one of said magazine slots (10, 12).

6. A system in accordance with claim 5 in which said lock button (56) is movable against the bias of said spring (58) in a direction axially of said opening to move said latch portion (50) in said chamber (48) to remove said detent means (72) from said slot (10 or 12), whereby to release said magazine (8).

7. A pistol characterized by a reversible magazine latch system according to any one of the preceding claims.

Patentansprüche

1. Reversierbares Magazinverriegelungssystem für eine Pistole (2), die ein Griffteil (4) aufweist, in

welchem ein Hohlraum (6) für ein Magazin (8) vorgesehen ist, wobei das System einen Riegelsitz (28), der in der Pistole (2) angeordnet ist, eine Magazinverriegelungsanordnung (34) zur Anordnung in und Sicherung durch den Riegelsitz (28), und ein Magazin (8) aufweist, das mit der Magazinverriegelungsanordnung in Eingriff bringbar ist, wobei der Sitz (28) eine Öffnung aufweist, die sich durch die Pistole (2) erstreckt und die zur Aufnahme der Verriegelungsanordnung (34) an beiden Seiten der Öffnung und zum Halten der Verriegelungsanordnung darin vorgesehen ist, wobei das Magazin (8) zwei seitliche Schlitze (10, 12) aufweist, von denen ein ausgewählter Schlitz zugänglich für die Verriegelungsanordnung (34) ist, wenn das Magazin (8) im Hohlraum (6) angeordnet ist, wobei die Magazinverriegelungsanordnung (34) ein Gehäuseteil (36) mit einem ersten Kopfteil (38) an einem ersten Ende und mit einer darin angeordneten Kammer (48), mit einem zweiten Kopfteil am anderen Ende des Gehäuseteiles, mit einem bewegbaren Riegelteil (50) und mit einer Arretiereinrichtung (72) aufweist, die sich vom Riegelteil (50) aus erstreckt, um mit dem ausgewählten der Magazinschlitze (10, 12) in Eingriff zu gelangen, dadurch gekennzeichnet, daß der zweite Kopfteil (46) mittels Gewinde mit dem Gehäuseteil (36) verbunden ist, um das Gehäuseteil (36) in der Pistole (2) festzulegen, daß das Riegelteil (50) beweglich in der Kammer (48) angeordnet ist und daß die Arretiereinrichtung (72) sich durch eine Öffnung im Gehäuseteil (36) erstreckt, um mit dem ausgewählten Schlitz in Eingriff zu gelangen.

2. System nach Anspruch 1, bei dem die Kammer (48) im Gehäuseteil (36) und dem zweiten Kopfteil (46) vorgesehen ist.

3. System nach Anspruch 2, bei dem sich ein Schaft (52) vom Riegelteil (50) durch eine Öffnung im zweiten Kopfteil (46) erstreckt und an einem Ende einen Riegelknopf (56) aufweist.

4. System nach Anspruch 3, das eine Feder (58) aufweist, die in der Kammer (48) angeordnet ist und die den Riegrelknopf (56) in einer von der Verriegelungsanordnung (34) aus nach außen gerichteten Richtung vorspannt.

5. System nach Anspruch 4, bei dem das Riegelteil (50) eine Fläche mit einer im wesentlichen komplementär zu einer vorderen Wand (18) des Magazins (8) ausgebildeten Kontur aufweist, die jedoch die Arretiereinrichtung (72) aufweist, die sich von dort aus für den Eingriff mit einem der ausgewählten Magazinschlitze (10, 12) erstreckt.

6. System nach Anspruch 5, bei dem der Riegelknopf (56) gegen die Kraft der Feder (58) in einer Richtung axial zur Öffnung bewegbar ist, um das Riegelteil (50) in der Kammer (48) zu bewegen, um die Arretiereinrichtung (72) aus dem Schlitz (10 oder 12) zu entfernen, wodurch das Magazin (8) freigegeben wird.

7. Pistole, gekennzeichnet durch ein reversierbares Magazinverriegelungssystem nach einem der vorhergehenden Ansprüche.

Revendications

1. Système à verrou réversible de magasin destiné à un pistolet (2) ayant une poignée (4), dans lequel un cavité (6) est destinée à contenir un magasin (8), le système comprenant un siège de verrou (28) placé dans le pistolet (2), un ensemble à verrou de magasin (34) destiné à se loger dans le siège (28) et y être retenu, et un magasin (8) destiné à coopérer avec l'ensemble à verrou (34), le siège (28) ayant une ouverture traversant le pistolet (2) et destinée à loger l'ensemble à verrou (34) à l'une ou l'autre extrémité de l'ouverture et à retenir l'ensemble à verrou à l'intérieur, le magasin (8) ayant deux fentes latérales (10, 12), une fente choisie étant accessible par l'ensemble à verrou (34) lorsque le magasin (8) est disposé dans la cavité (6), l'ensemble à verrou de magasin (34) comprenant une partie de corps (36) ayant une première partie de tête (38) à une première extrémité et une chambre (48) à l'intérieur, une seconde partie de tête (46) à une seconde extrémité de la partie de corps, une partie mobile de verrou (50), et un dispositif d'encliquetage (72) dépassant de la partie de verrou (50) afin qu'il coopère avec une fente choisie (10, 12) du magasin, caractérisé en ce que la seconde partie de tête (46) coopère par vissage avec la partie de corps (36) afin que la partie de corps (36) soit fixée dans le pistolet (2), en ce que la partie de verrou (50) est disposée afin qu'elle soit mobile dans la chambre (48), et en ce que le dispositif d'encliquetage (72) passe par une ouverture formée dans la partie de corps (36) afin qu'il soit au contact de la fente choisie.

2. Système selon la revendication 1, dans lequel la chambre (48) est délimitée par la partie de corps (36) et la seconde partie de tête (46).

3. Système selon la revendication 2, dans lequel un axe (52) dépasse de la partie de verrou (50) et passe par une ouverture de la seconde partie de tête (46) et a, à une extrémité, un bouton de blocage (56).

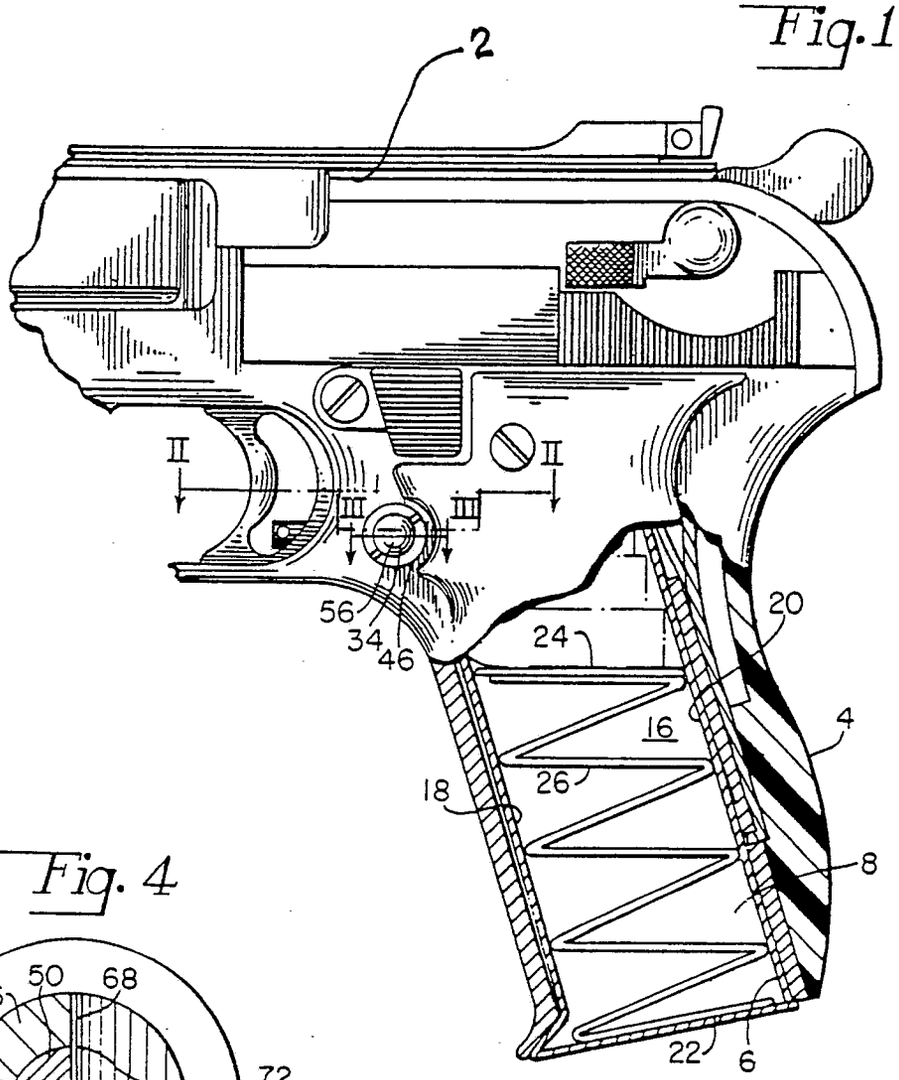
4. Système selon la revendication 3, comprenant un ressort (58) placé dans la chambre (48) et destiné à rappeler le bouton (56) vers l'extérieur depuis l'ensemble à verrou (34).

5. Système selon la revendication 4, dans lequel la partie de verrou (50) a une surface ayant un profil complémentaire de façon générale d'une paroi avant (18) du magasin (8) mais ayant le dispositif d'encliquetage (72) qui en dépasse afin qu'il coopère avec la fente choisie parmi les fentes (10, 12) du magasin.

6. Système selon la revendication 5, dans lequel le bouton de blocage (56) est mobile malgré la force de rappel du ressort (58) en direction axiale de l'ouverture afin que la partie de verrou (50) soit déplacée dans la chambre (48) et permette la sortie du dispositif d'encliquetage (72) de la fente (10 ou 12), si bien que le magasin (8) est libéré.

7. Pistolet, caractérisé par un système à verrou réversible de magasin selon l'une quelconque des revendications précédentes.

Fig. 1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II
II
III
III
56
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26
18
8
22
6

Fig. 4

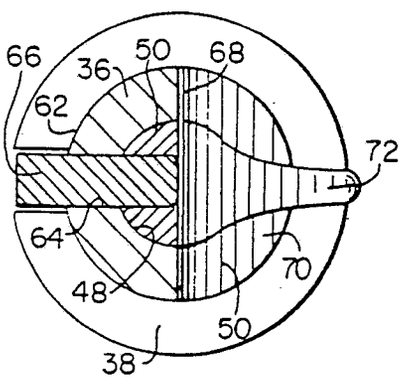
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Fig. 2

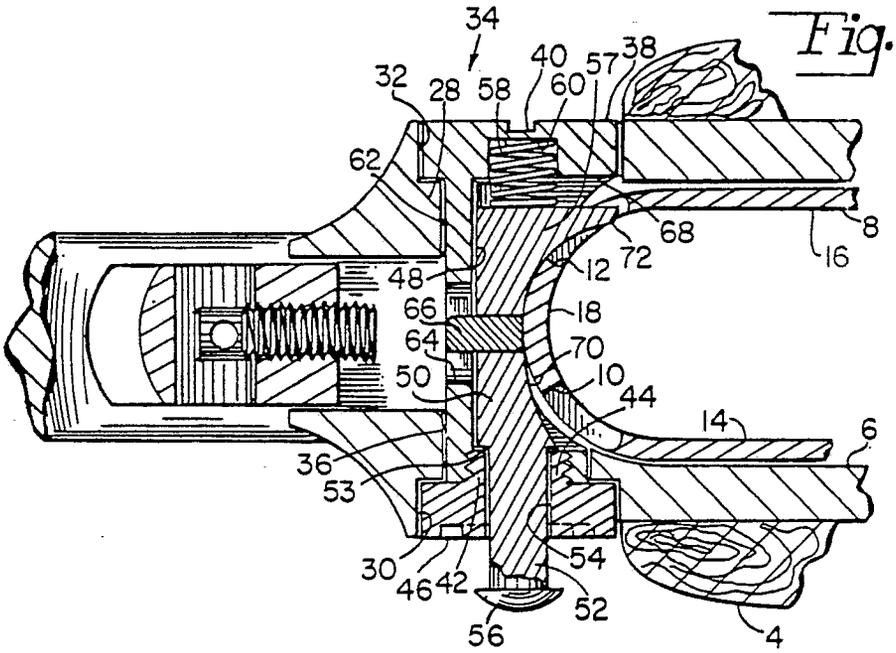
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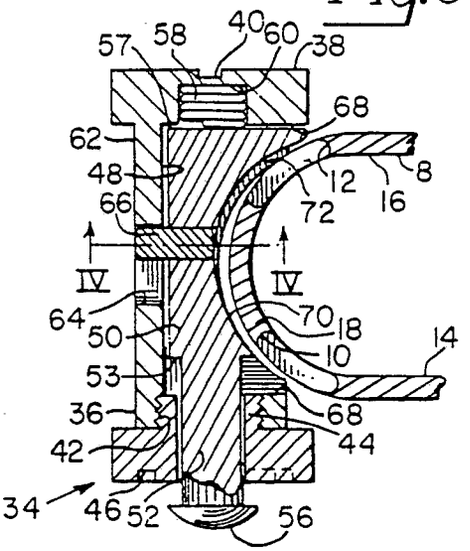
Fig. 3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