United States Patent [19]

Vesamaa

[11] **3,816,950**

[45] **June 18, 1974**

[54] **SELF-LOCKING COCKING PIN IN FIREARMS WITH CLOSURE BY ROTATION**

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[52] **U.S. Cl.** **42/16**
[51] **Int. Cl.** **F41c 11/00**
[58] **Field of Search** 42/16

[56] **References Cited**

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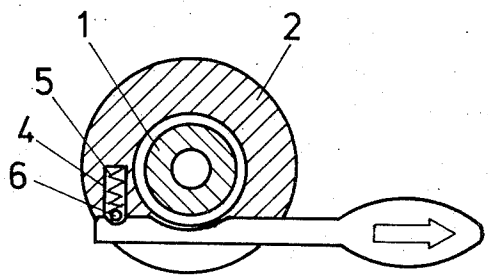
Assistant Examiner—C. T. Jordan
Attorney, Agent, or Firm—Richards & Geier

[57] **ABSTRACT**

A firearm has a self-locking cocking pin. The bolt of the firearm has a closed position and an open position, and is closed by rotation. When the bolt is in the closed position, its guiding cylinder enters an incision of the cocking pin and locks the cocking pin so that it cannot be removed by pulling.

3 Claims, 5 Drawing Figures



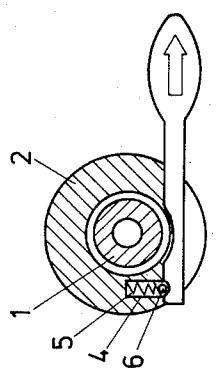


FIG. 2

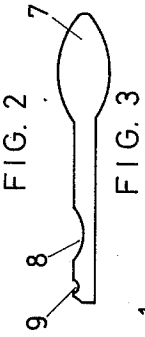


FIG. 3

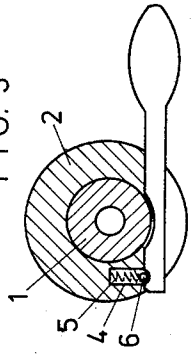


FIG. 5

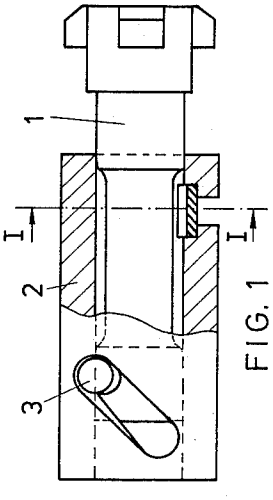


FIG. 1

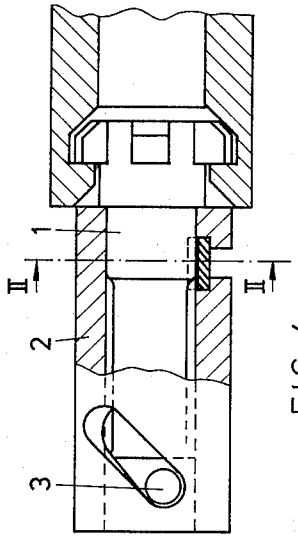


FIG. 4

SELF-LOCKING COCKING PIN IN FIREARMS WITH CLOSURE BY ROTATION

The present invention concerns a self-locking cocking pin for use in firearms with closure by rotation.

In firearms with closure by rotation known in prior art, the locking of the cocking pin has been accomplished by means of a spring stop or equivalent. A drawback of such designs has been that, as a result of wear and slackening of the spring, the cocking pin may come loose and fall out by effect of even minor causes. In a battle situation, e.g., during an attack by storm, shrubs or twigs may foul the cocking pin, which then in the case of slackened locking will come loose and fall out, whereby the firearm, such as a storming rifle, is rendered inactive.

Accordingly, the aim of the invention is to provide a cocking pin locking action which is such that the cocking pin cannot be removed by withdrawing it, when the bolt of the firearm is closed.

This aim is achieved by means of a design as specified in the claims following below, and which is mainly characterized in that with the bolt in its closed position the guiding cylinder of the bolt has entered an incision of the cocking pin, with the consequence that the cocking pin cannot be removed by withdrawal.

The invention is described in detail by reference to the attached drawing, the figures of which present an embodiment of the invention.

FIG. 1 shows in elevational view, partly sectioned, the bolt of a firearm with closure by rotation according to the invention, in the unlocked position.

FIG. 2 shows the cross section along line I—I in FIG. 1.

FIG. 3 shows, separately, the cocking pin according to the invention.

FIG. 4 shows in elevational view, partly sectioned, the bolt of a firearm with closure by rotation according to the invention, in the locked position.

FIG. 5 shows the cross section along line II—II in FIG. 4.

In FIGS. 1 and 4, the guiding cylinder of the bolt has been indicated by the reference numeral 1 and the bolt mantle by the numeral 2. Numeral 3 indicates a pin rotatably movable in its groove and through which the striking pin (not depicted) located in the central bore of the bolt moves.

The ball stop device visible in FIGS. 2 and 5, comprising the spring 5 and ball 6, has been indicated with reference numeral 4.

In FIG. 3, the incision, with rounded bottom, in the cocking pin 7 has been indicated by reference numeral 8. Furthermore, the cocking pin has a V-shaped notch 9 for the ball stop device 4.

With the bolt in the position of FIG. 1, the cocking pin 7 is only held by the ball stop device 4. In this instance the guiding cylinder 1 has not entered the rounded-bottom incision 8 of the cocking pin 7, and it is therefore possible to remove the cocking pin 7 from the opened bolt by pulling (FIG. 2), e.g., when dismantling the bolt.

When the bolt is in the position of FIG. 4, the guiding cylinder 1 of the bolt has entered the rounded-bottom incision 8 of the cocking pin, whereby the cocking pin 7 has been locked so that it cannot be removed by pulling (FIG. 5). Even if the spring 5 of the ball stop device 4 should suffer wear and slacken in use, this has no effect on the locking of the cocking pin 7 when the bolt is in the closed position.

By means of the design described, the aim set for the invention has been achieved in a remarkably simple and reliable way. Of course, the invention is not confined to the embodiment presented, which may in fact be modified within the scope of the claims.

I claim:

1. A self-locking cocking pin in a firearm having a bolt with a guiding cylinder, said bolt having a closed position and an open position and being closed by rotation, said cocking pin having an incision, said guiding cylinder entering said incision when the bolt is in the closed position to lock the cocking pin so that it cannot be removed by pulling.

2. A cocking pin according to claim 1, wherein the firearm has ball stop means adapted to engage the cocking pin, the cocking pin being removable by pulling while being engaged by said ball stop means when the bolt is in its open position and its guiding cylinder has moved out of said incision.

3. A cocking pin according to claim 1, wherein said incision has a rounded bottom and a radius which is substantially equal to that of the guiding cylinder.

* * * * *

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,816,950 Dated June 18, 1974

Inventor(s) Erkki Vesamaa

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

On the cover sheet insert -- [73] Assignee: Valmet Oy, Helsinki, Finland --; same cover sheet insert -- [30] Foreign Application Priority Data

-- Finland 156/73 January 23, 1973 --.

Signed and sealed this 5th day of November 1974.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents

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