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MAGAZINE CATCH MEANS INCLUDING A TRIGGER SAFETY

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Fig. 1

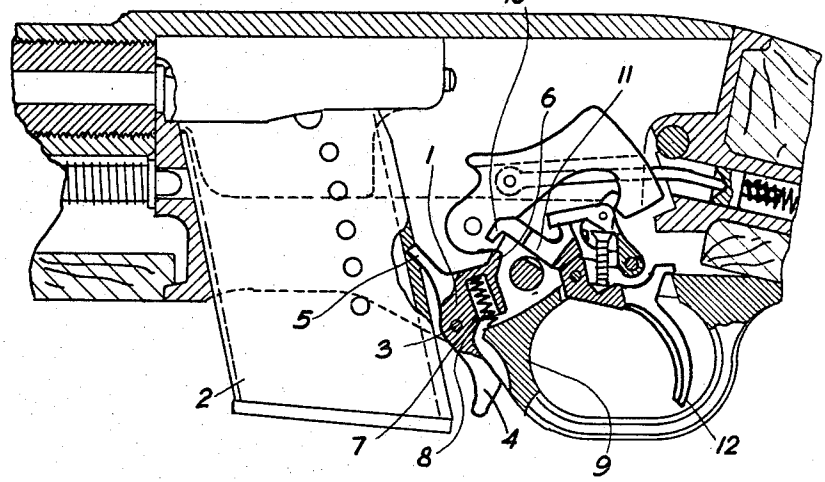
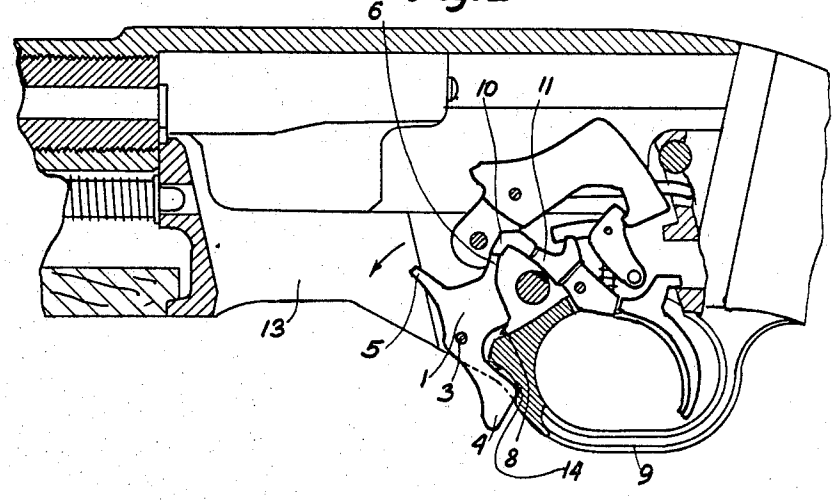


Fig. 2



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MAGAZINE CATCH MEANS INCLUDING A TRIGGER SAFETY

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5 Claims. (Cl. 42—70)

ABSTRACT OF THE DISCLOSURE

A firearm adapted to removably accommodate a magazine which is retained in the firearm by way of a catch lever which acts as a retainer for retaining the magazine in the firearm. This catch lever is capable of being turned to a position which will release the magazine for removal from the firearm, and the catch lever has projection which engages a trigger lever to prevent turning of the latter when the magazine is removed from the firearm, a spring acting on the retaining lever to turn it to the position where it will prevent turning of the trigger lever when the magazine is removed. The trigger guard itself coacts with the retaining lever to limit the turning thereof by the spring so as to locate the safety projection of the retaining lever in engagement with the trigger lever when the magazine is removed.

Background of the invention

The present invention relates to firearms.

In particular, the present invention relates to relatively small-bore automatic hunting and sporting rifles provided with magazines which can be removably connected to the firearm and which are releasably held in position by suitable retaining levers.

It is known to provide firearms of this type with magazine locking mechanisms which automatically lock the trigger mechanism against the operation when the cartridge magazine is removed. However, with all of the conventional known constructions a separate lock mechanism is required for coacting with the trigger mechanism to prevent actuation thereof when the magazine is removed. The result is that a considerable amount of space is required for this separate lock mechanism and in addition the structure is rendered more complex than is desirable by this lock mechanism which prevents firing when the magazine is removed.

Summary of the invention

Thus, it is a primary object of the present invention to provide a structure which will avoid the above drawbacks.

In particular, it is an object of the invention to provide a structure which will prevent actuation of the trigger when the magazine is removed and which at the same time does not require a separate mechanism to be provided for this purpose.

In particular, it is an object of the present invention to provide a structure which is incorporated with the magazine retaining lever to coact with the trigger lever to prevent turning of the latter when the magazine is removed from the housing.

Thus, in accordance with the present invention the magazine retaining lever has a rear safety projection which becomes situated against the trigger lever to prevent turning thereof when the magazine is removed from the housing of the rifle in which it is normally accommodated. Upon return of the magazine to the housing the retaining lever automatically coacts with the magazine to retain the latter in its operative position with respect to the rifle while at

the same time the safety projection of the retaining lever is displaced with respect to the trigger lever releasing the latter for turning movement. Thus, the retaining lever or catch of the invention is provided with a safety projection which is located opposite a lug of the trigger to coact with the latter in the above-described manner.

The advantages derived from the structure of the invention resides in the fact that the retaining catch of the magazine itself is used also for locking the trigger mechanism against operation when the magazine is removed from the firearm, this catch holding the magazine in its operative position in the fiirearm when the magazine is introduced into the latter. In this manner a considerable simplification of the firearm mechanism is brought about, the possibility of functional failure is reduced, the cost of production is decreased and the entire structure becomes more rugged.

Brief description of the drawing

The invention is illustrated by way of example in the accompanying drawings which form part of this application and in which:

FIG. 1 is a longitudinal sectional side elevation of one possible structure according to the present invention; and

FIG. 2 shows the structure of FIG. 1 with the magazine of FIG. 1 removed.

Description of a preferred embodiment

Referring now to the drawings, it will be seen that the structure includes a magazine-retaining catch lever **1** supported for turning movement by a stationary pivot **3** and coacting with a notch at the rear of the magazine **2**, so as maintain the latter in its operative position in the firearm. The retaining or catch lever **1** is provided with an arm **4** capable of being engaged by the operator so that the lever **1** can be turned in a clockwise direction about the pivot **3**, as viewed in FIG. 1, to release the magazine **2** for removal from the firearm. The lever **1** has at its upper forward end a pawl or tooth **5** which engages into the notch of the magazine for retaining the latter in the firearm.

In addition, in accordance with the invention, the lever **1** is provided with an upper rear safety projection **6** and the lever **1** is formed with a bore **7** having a bottom open end. A spring **8** is situated in the bore **7** extending through the bottom open end thereof and pressing against the trigger guard **9** as well as the upper end of the bore **7** so as to urge the lever **1** to turn in a counterclockwise direction about the pivot **3**, as viewed in the drawing. Thus, when the parts have the position shown in FIG. 2 the spring **8** will urge the arm **4** of the lever **1** into engagement with the surface **14** of the trigger guard **9**.

The trigger member **12** is supported for turning movement by stationary pivot pin and has an upper forward portion **11** terminating in a projection **10**, and this projection or lug **10** is engaged by the safety projection **6** of the lever **1** when the latter is in the position of FIG. 2. Thus, when the magazine is out of the firearm, as shown in FIG. 2, the projection **6** coacts with the projection **10** to prevent turning of the trigger member.

When the magazine **2** is returned to the firearm, the magazine coacts with the pawl or tooth **5** so as to turn the lever **1** in opposition to the spring **8** in a clockwise direction, displacing the safety projection **6** away from the lug **10** so that the trigger member **12** can now be turned. At the same time it will be noted that the arm **4** is displaced forwardly from the surface **14** of the trigger guard **9**. Now when the operator turns the trigger **12** the projection or lug **10** can move freely with respect to the projection **6**.

When the magazine is removed from the opening **13** provided to accommodate the magazine, the spring **8** acts

to turn the lever **1** in the direction of the arrow shown in FIG. 2, thus displacing the pawl or tooth **5** into the magazine chamber **13** and at the same time causing the arm **4** to press against the surface **14** of the guard **9**. The safety projection **6** will now be shifted beneath the lug **10** of the trigger member **12** so that the latter is maintained against turning movement, and thus if it should happen that a cartridge remains in the firing chamber after removal of the magazine, nevertheless the trigger cannot be turned and the piece cannot be fired.

What is claimed is:

1. In a firearm, releasable catch means for releasably retaining a magazine in the firearm, a trigger turnable from a given rest position in order to fire the firearm, and a projection carried by said releasable catch means and situated in engagement with the trigger when the latter is in said rest position thereof and a magazine is out of the firearm to prevent turning of said trigger so that if a cartridge is located in the firing chamber after the magazine is removed the trigger cannot be turned while at the same time the releasable catch means which retains the magazine in the firearm functions also as a safety lock to prevent actuation of the trigger when the magazine is removed.

2. The combination of claim **1** and wherein said releasable catch means includes a lever which is pivotally supported and has an upper catch end for engaging a magazine to releasable retain the latter in the firearm, said lever having a rear upper end portion which engages a forward end of the trigger only when the magazine is removed from the firearm.

3. The combination of claim **2** and wherein a spring acts on said lever to turn said rear upper projection thereof into its position blocking turning of the trigger.

4. The combination of claim **3** and wherein said trigger has at its forward end a projection engaged by said rear projection of said lever when the latter is acted upon by the spring upon removal of a magazine.

5. The combination of claim **4** and wherein a trigger guard coacts with said lever to limit turning thereof by said spring to a location where said rear upper projection of said lever coacts with said trigger to prevent turning thereof when the magazine is removed from the firearm.

No references cited.

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