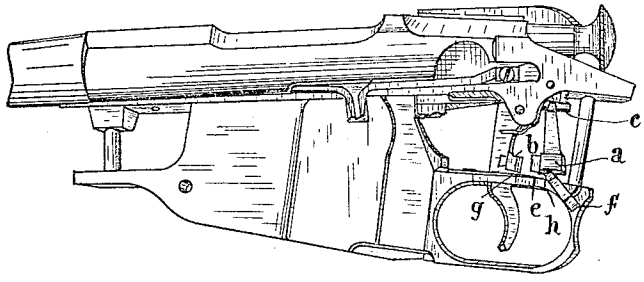
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AUTOMATIC LOCKING DEVICE FOR FIREARMS.

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1,212,012. Specification of Letters Patent. Patented Jan. 9, 1917.

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To all whom it may concern:

Be it known that I, NICOLAI BULGAKOW, engineer, a subject of the Czar of Russia, residing at Yurief, Jurjew, Russia, have invented certain new and useful Improvements in Automatic Locking Devices for Firearms, of which the following is a specification.

It is only possible to insure hitting the target with firearms when they are held exactly vertical, that is to say not turned to one side. When this is so the line of sight and the trajectory of the projectile coincide. With any lateral inclination or what is termed tilting of the weapon the trajectory and the line of sight diverge and this takes place to an increasing extent, the more pronounced the tilting when firing.

As the tilting or lateral inclination of the weapon on firing is the main source of all wide shots, the military authorities place great importance to making soldiers hold firearms in the correct position. With this object many hours are spent daily in practice and hitherto the soldier has been tested by means of a mirror device as to whether he is holding his rifle correctly. As however the mirror apparatus does not render it possible to control large bodies of men, but on the contrary renders individual treatment necessary and moreover can only be carried out during target firing and not during sharp shooting, much time and ammunition are wasted before the soldier has acquired the correct manipulation and holding of his weapon.

The object of the present invention is to provide a firearm which can only be fired when it is correctly held thereby insuring the target being hit. With any lateral deflection, the weapon is locked against firing so that the marksman is obliged to hold the weapon correctly. This object is attained by means of an automatic locking device constituted by a coöperation of the trigger with a pendulous body arranged in proximity to it and which when the weapon is held obliquely turned to one side, comes in the path of the trigger so that it cannot be pulled to the extent necessary for firing. In order however that the locking device may not constitute an impediment to quick firing the invention also provides for the arrangement of a stop rendering the locking device inoperative when required.

An embodiment of the invention is illustrated by way of example in the accompanying drawing, in which the figure is a fragmentary side view of the breech mechanism of a rifle showing the invention applied thereto, portions of the showing being illustrated in section to bring out interior arrangement of parts.

Behind the trigger a pendulous body *a* is suspended from a double hinge *c* so that it is capable of displacement in the direction of the axis of the barrel and in a lateral direction. On the lower end of the pendulous body a projection *e* is directed toward the trigger. On the back of the trigger another projection *b* is provided and in it, directed toward the projection *e*, is a fork or channel *g* into which the projection *e* is able to penetrate.

It is to be noted that the pivot or axis of the trigger *d* constitutes the axis for up and down movement of the carrier member *c* supporting the pendulum *a*, and in turn the pendulum *a* is adapted to swing on the carrier member *c* as its axis. By reason of the utilization of the pivot as an axis common to the trigger and to the carrier member *c* an especial advantage is obtained. This advantage is incident to the fact that a very small amount of space is available adjacent to the trigger in which to provide an automatic locking means such as this invention but by my utilization of the common pivot for the trigger and carrier member *c* I am enabled to employ the control means described without any necessity of reconstructing the breech mechanism in a special manner to accommodate for the employment of the present improvements.

The operation of this relatively simple device is as follows:—If the weapon is in the correct position, the fork *g* and the projection *e* are located in the same plane so that it is possible to pull the trigger to the necessary extent for firing as in this movement the projection *e* is able to enter the fork *g*. If, however the weapon is held obliquely so that the pendulous body *a* leaves its normal position, the projection *e* and the channel *g* in the projection *b* are no longer located in the same plane. If with the parts in this position the trigger is pulled for the purpose of firing, the solid portion of the projection *b* strikes against the edge of the projection *e* and as the latter is only able to yield to a limited extent, owing to its movement being restricted by a suitable stop, the trigger can-

not be pulled sufficiently to fire the weapon. Consequently the marksman is first of all obliged to hold his weapon in the correct position before he can fire it.

In order to put the locking device temporarily out of action, a stop lever *f* is arranged on the trigger bow and when this lever is rotated, a tongue *h* protrudes from the upper portion of the bow and enters a depression in the pendulous body *a* which is then positively held in the normal position. It will of course be understood that with the parts in this position, the projection *e* will always enter the channel *g* when the trigger is pulled, as the locking device has been rendered inoperative.

It is advantageous to fit the projection *b* to the trigger by means of a dove tail connection, so that it can readily be brought into its exact position by hammering and there secured.

The device can be applied to all types of firearm, being adaptable to any construction because as already stated, the construction illustrated in the drawing, is given by way of example only.

Many modifications are possible but do not in any way affect the principle of the invention which resides in the fact that if a firearm is held obliquely, a pendulous or the like body automatically blocks the path of the trigger so that it cannot be pulled sufficiently to fire the weapon.

What I claim is:

1. In a firearm, the combination of a trigger and its pivoted axis, a pendulous body arranged behind the trigger and coöperative therewith to prevent firing of the weapon by the trigger when the firearm is not in a predetermined vertical position, and a member supported by the pivotal axis of the trigger for pivotal movement and having pivotal connection with the said body.

2. In a firearm, the combination of a trigger, and a double hinged pendulous body arranged behind the trigger to prevent pulling of the latter when the firearm is not in a correct vertical position, said body being formed with a knife-like projection, and the trigger having a forked projection with which said first-mentioned projection is engageable to establish coöperation between said parts.

3. In a firearm, the combination of a trigger, and a double hinged pendulous body arranged behind the trigger to prevent pulling of the latter when the firearm is not in a correct vertical position, said body being formed with a knife-like projection, the trigger having a forked projection with which said first-mentioned projection is engageable to establish coöperation between said parts, and means adjustably supporting said knife-like projection.

4. In a firearm, the combination of a pivoted trigger and its axis, and a pendulous body arranged behind the trigger and coöperative therewith to prevent firing of the weapon by the trigger when the firearm is not in a predetermined vertical position, a carrier member mounted on the pivotal axis of the trigger for pivotal movement, said pendulous body being pivotally supported on the carrier member as an axis.

In testimony whereof I have affixed my signature.

NICOLAI BULGAKOW.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."