A. FYRBERG.

FIREARM.

APPLICATION FILED APR. 29, 1908.

935,102. Patented Sept. 28, 1909.

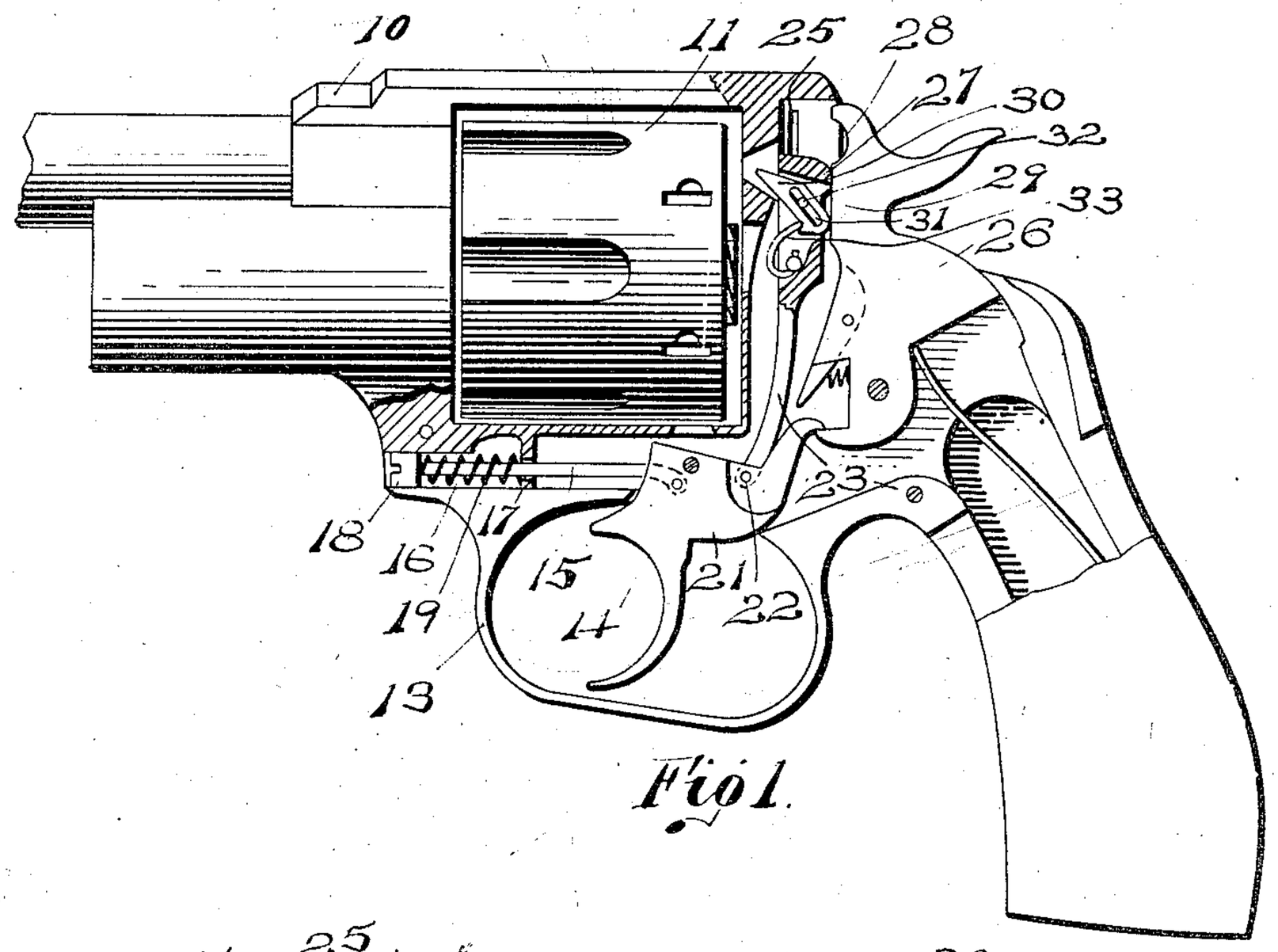

Fig 1.

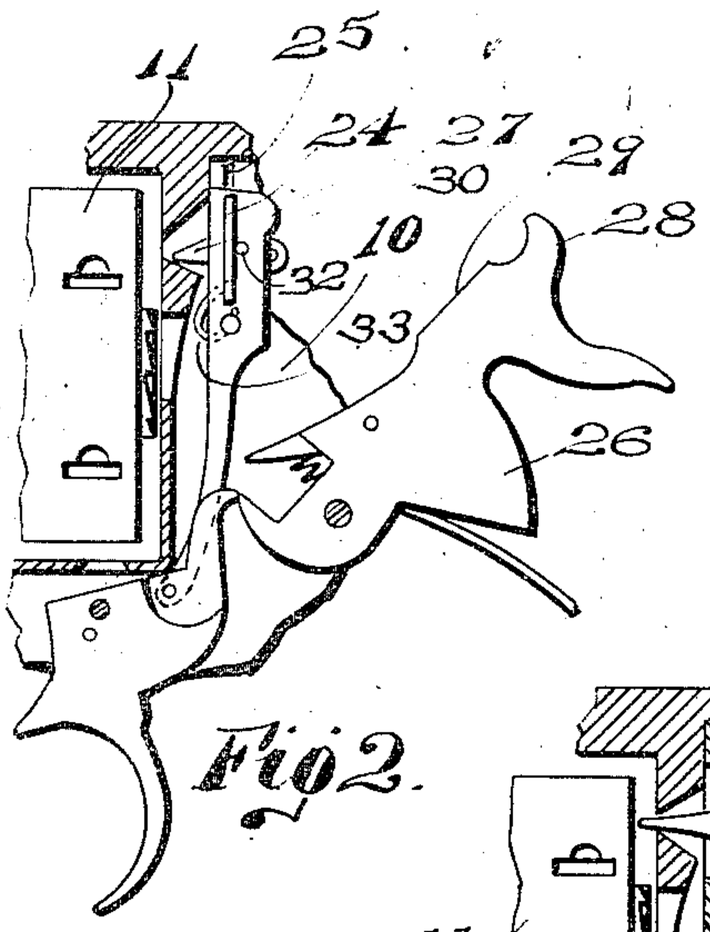

Fig 2.

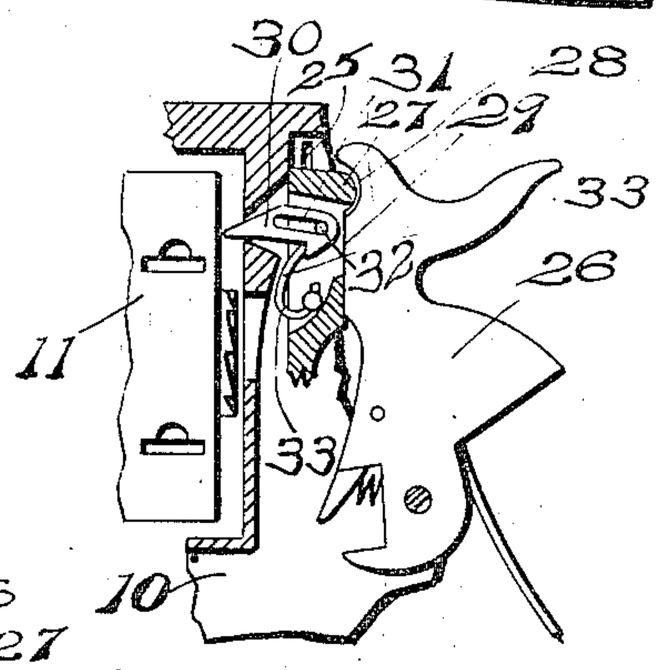

Fig 3.

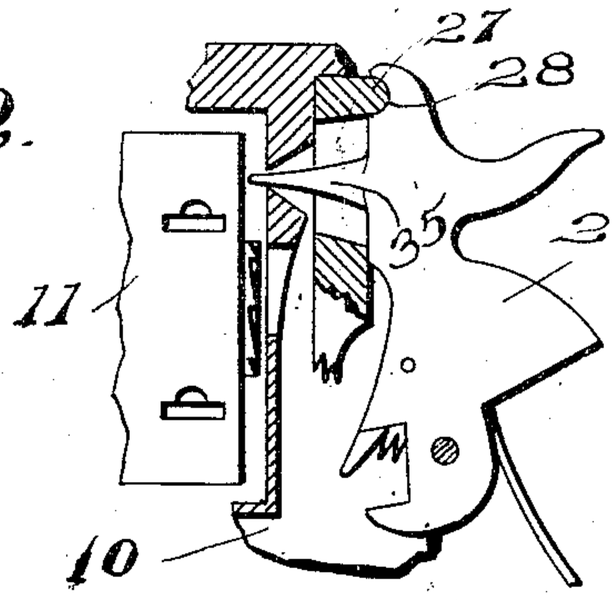

Fig 4.

Witnesses
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UNITED STATES PATENT OFFICE.

ANDREW FYRBERG, OF HOPKINTON, MASSACHUSETTS.

FIREARM.

935,102. Specification of Letters Patent. **Patented Sept. 28, 1909.**

Application filed April 29, 1908. Serial No. 429,907.

To all whom it may concern:

Be it known that I, ANDREW FYRBERG, a citizen of the United States, residing at Hopkinton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Firearm, of which the following is a specification.

This invention relates to a firearm.

The principal objects thereof are to provide an improved safety for effectively preventing the firing-pin from being actuated to fire the arm whenever the hammer is accidentally or otherwise caused to swing down away from any position except that in which it is fully cocked or ready for repeated firing; to provide for simultaneously moving the firing pin itself, in one form of the invention, so that the firing of the arm will be prevented in two different ways; also to simplify the construction and operation of the safety and to provide an improved location and arrangement of trigger spring.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings which show certain forms in which the invention may be carried out, and in which—

Figure 1 is a side elevation of a revolver with one form of the invention applied thereto, parts being shown in section, and in safe position; Fig. 2 is a similar view showing how the parts appear when the hammer is cocked; Fig. 3 is a similar view showing the position of the parts when the arm is fired; and Fig. 4 is a view similar to Fig. 3 showing a modification.

It is to be understood that while the invention is illustrated as applied to a revolver, it can be applied to many other styles of firearms. In the first three figures of the drawings, the invention is illustrated as applied to a revolver having a frame 10 of ordinary construction provided with a swinging cylinder 11, the operation of which will not be referred to herein as it constitutes no part of this invention. The frame is provided with a trigger guard 13 of any ordinary or convenient construction, and the trigger 14 is mounted thereon in the usual position. The trigger is operated to return it to its normal position by means which can conveniently be located in the frame and guard under the cylinder and forward of the trigger so as to secure a direct pull on the trigger, and so as to provide for convenient adjustment from the front of the frame. This is shown as comprising a rod 15 pivotally connected with the trigger below the pivot on which the latter swings, and projecting forward into a cylindrical opening 16 in the trigger guard or frame. It is shown as in the former. The guard is provided with a partition 17 having a perforation through which the rod slides, and the rod is provided with screw-threads and with an adjustment nut 18 on the end thereof which can be reached from the outer end of said opening 16. Between the nut and the partition is located a spring 19 which obviously tends to pull the trigger forward. This is a simple and convenient arrangement, giving a direct pull on the trigger and permitting adjustment in a most convenient and simple manner. It is so located that it takes up no room which can be used for any other purpose, and does not add to the weight of the firearm.

On the trigger is located a projection 21 provided with a pin or screw 22 by which a frame 23 is pivotally connected with the trigger so as to be operated positively thereby in both directions. This frame is provided with a pair of longitudinal guides 24 adapted to engage in ways 25 on the frame so that as the trigger is swung back and forth the frame will be caused to reciprocate vertically in front of the hammer 26. This frame constitutes a safety, and for that purpose the hammer and trigger are provided with means whereby when the hammer is brought up against the safety from any position except that in which it is cocked, it will be held back from firing position. This means is shown as comprising a projection 27 on the safety and a notch 28 on the hammer. The parts are so proportioned that when the trigger is brought back to a position in which it will first cock the hammer and then slip by to allow it to swing down to firing position, the safety will be in its highest position in which the projection registers with the notch as shown in Fig. 3. At this time, of course, the hammer can descend and its flat surface 29 will engage the firing pin 30 and fire the arm. If, however, the hammer is brought back either by means of the trigger or by a direct pull on the hammer, to any position short of that in which it is cocked, and then allowed to swing back toward the safety, the safety will not be raised to its firing position, but will be

kept below that position by the trigger, so that the surface 29 of the hammer will engage the projection 27 and prevent the discharge of the arm. These features of the invention are substantially the same in all the figures illustrated in the drawings.

In the first three figures an additional safety arrangement is provided which consists in pivoting the firing-pin itself on the safety. This is done by providing the firing pin with a longitudinal slot 31 and the safety with a pin 32 passing through this slot. A spring 33 is also provided for assisting in manipulating the firing pin in an obvious manner. It will be readily understood that the lowering of the safety will swing the firing pin down as indicated in Fig. 1, so that it will be entirely out of position for firing, and thus another means is provided for preventing the discharge of the firearm.

In the form of the invention shown in Fig. 4, the last mentioned feature is not employed, as the firing pin consists of a projection 35 integral with the hammer. In this case the safety is provided with a long slot 36 for the reception of the firing pin. Otherwise it works substantially the same as in the other case. It will be seen that this invention involves the provision of means whereby the accidental discharge of the firearm is rendered impossible preferably in two independent ways, and with a mechanism which is exceedingly simple, inexpensive and light; also that even when constructed in the simpler form shown in Fig. 4, the accidental discharge of the arm is perfectly impossible, and that the trigger spring is greatly improved and simplified, and has direct and positive control of the safety.

While I have illustrated and described certain forms in which the invention may be embodied, I am aware that many modifications may be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited in all respects to the details of construction shown, but

What I do claim is:—

1. In a firearm, the combination with the frame, trigger-guard, and trigger, said trigger guard having an opening extending inwardly from its forward end, of a rod pivotally connected with said trigger and extending forward into said opening, a spring on the rod, an adjustable device for connecting the end of said spring with the rod, and means for holding the opposite end of the spring.

2. In a firearm, the combination with a hammer, of a safety in front of the hammer, a firing-pin movably supported on the safety and adapted to slide longitudinally thereon when struck by the hammer, and means for moving the safety into position for permitting firing at all times except when the hammer is in fully cocked position.

3. In a firearm, the combination with the frame a trigger and hammer, of a rectilinearly sliding safety located in front of the hammer, said hammer and safety having a projection and depression adapted to register when the arm is fired, said trigger having means for moving the safety into such position that the depression and projection will be out of registration when the trigger is in any position except that in which the hammer is fully cocked, and means on the frame independent of the hammer for guiding the safety to move vertically and for preventing the safety from swinging toward the hammer.

4. In a firearm, the combination with the frame a hammer having a notch therein, of a rectilinearly sliding safety in ffont of the hammer having a projection adapted to fit said notch, means for moving the safety into position with its projection oût of registration with the notch at all times except when the hammer is in fully cocked position, and means on the frame independent of the hammer for guiding the safety to move vertically and for preventing the safety from swinging toward the hammer.

5. In a firearm, the combination with a hammer having a notch therein, of a sliding safety in front of the hammer having a projection adapted to fit said notch, means for moving the safety into position out of registration with the notch at all times except when the hammer is in fully cocked position, and a firing pin movably mounted on said safety.

6. In a firearm, the combination with a hammer having a notch therein, of a sliding safety in front of the hammer having a projection adapted to fit said notch, means for moving the safety into position out of registration with the notch at all times except when the hammer is in fully cocked position, and a firing pin pivotally mounted on the safety and adapted to slide longitudinally thereon when struck by the hammer.

7. In a firearm, the combination with a hammer, of a sliding safety in front of the hammer, means for moving the safety, and a firing pin movably supported by the safety, whereby it is withdrawn from firing position when the safety is moved into safe position.

8. In a fire-arm, the combination of a safety, a separate relatively movable firing pin, and means for moving the safety to safe position and simultaneously withdrawing the firing pin from firing position.

9. In a fire-arm, the combination of a movable safety, and a firing pin movably mounted thereon.

10. In a fire-arm, the combination of a

movable safety, and a firing pin mounted thereon and capable of moving transversely to the direction of motion of the safety.

11. In a fire-arm, the combination with a safety, of a firing pin movably mounted thereon, and means whereby the firing pin is moved away from firing position in one direction when the safety is moved to safe position in another direction.

12. In a firearm, the combination with a movable safety, and an independently movable firing-pin, of means for simultaneously moving the firing pin from firing position, and moving the safety to safe position in another direction.

13. In a firearm, the combination of a sliding safety, and a firing pin having a longitudinal slot therein, said safety having a pin projecting through said slot, whereby when the safety is withdrawn from firing position, the firing pin also will be swung away from firing position.

14. In a firearm, the combination of a sliding member, and a firing pin having a longitudinal slot therein, said member having a pin projecting through said slot, whereby when the member is withdrawn the firing pin will be swung away from firing position.

15. In a firearm, the combination of a slidable pivoted firing pin, a trigger, and means operated by the trigger for withdrawing the firing pin from firing position.

16. In a firearm, the combination of a slidable member, and a firing-pin movably mounted thereon, and supported solely thereby whereby said pin can be swung out of firing-position.

17. A fire-arm, having a movable member, and a firing pin pivotally and longitudinally movable thereon, and supported solely thereby.

18. A fire-arm having a reciprocable member, and a firing-pin pivotally mounted thereon, reciprocable transversely to the direction of motion of said reciprocable member and supported solely thereby.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

ANDREW FYRBERG.

Witnesses:
LOUIS W. SOUTHGATE,
C. FORREST WESSON.