R. FROMMER.

FIREARM.

APPLICATION FILED JAN. 10, 1911.

989,242. Patented Apr. 11, 1911.

Fig. 1.

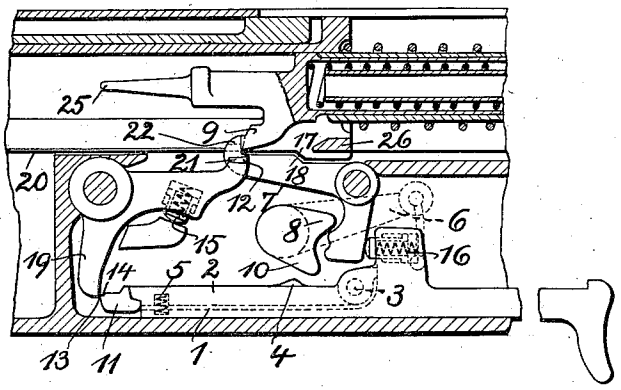


Fig. 2.

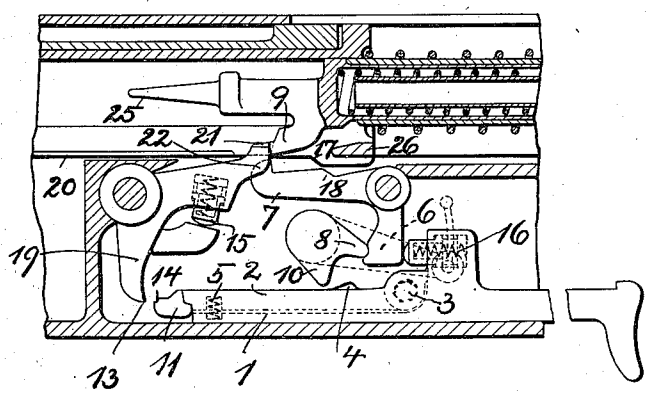


Fig. 3.

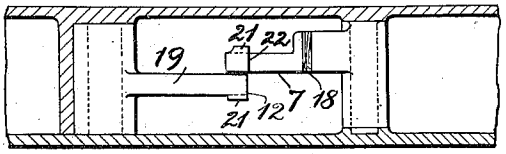
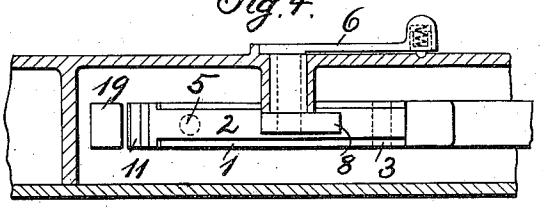


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

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FIREARM.

989,242. Specification of Letters Patent. Patented Apr. 11, 1911.

Original application filed November 5, 1907, Serial No. 400,815. Divided and this application filed January 10, 1911. Serial No. 601,850.

To all whom it may concern:

Be it known that I, RUDOLF FROMMER, a subject of the King of Hungary, residing at Budapest, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Firearms, of which the following is a specification.

My invention relates to a trigger-device for fire-arms, such as described in my application for patent filed November 5th, 1907, Ser. No. 400815, of which this is a division. The trigger-device is so constructed, that either a single shot can be fired or the firing continued as long as the pressure on the trigger is maintained.

The trigger-device, as shown in the accompanying drawing, is adapted for fire-arms, in which the trigger is operated by the exertion of pressure on a knob or the like, there being provided a slidable trigger-arm, provided with a cam-face in combination with a setting-lever, having a projection adapted to engage with said cam-face, so as to retract the trigger-arm, thereby causing the sear to be released upon each forward movement of the trigger-arm. In combination with the trigger-device, a safety-device is provided, which prevents firing, except when the breech-bolt is completely closed. This safety-device, however, does not form any part of my present invention.

In the drawings: Figure 1 shows the trigger-device set for continuous firing; Fig. 2 shows the trigger-device set for single firing; Fig. 3 is a plan view of the sear and tumbler, showing a portion of the frame in section, and Fig. 4 is a plan view of the trigger-arm and the setting-lever, a portion of the frame being shown in section.

The firing-pin 25 is provided with a projection 9, in front of which projection lies the nose 21 of the sear 1. The tumbler 7 is controlled by a spring 16, in such a way, that its nose 22 is forced also in front of the projection 9 of the firing pin. The two noses 12 and 22 are arranged side by side, (see Fig. 3), so that the firing pin may be held by the two noses simultaneously.

The trigger consists of a slidable trigger-arm 1, which is provided with a tongue 2, adapted to swing about a pivot 3 and provided with a cam surface 4. The tongue 2 is forced upward by a spring 5 and can be pressed slightly downward against the pressure of said spring. If the gun shall be set for single firing, the setting-lever 6 is brought into the position shown in Fig. 2. By this movement of the lever 6, the nose 22 at the end of the tumbler is withdrawn from in front of the projection 9 of the firing pin 25. This movement of the tumbler is effected by a projection 8, extending from the pivot of the setting-lever 6. At the same time, a projection 10 of the setting-lever is moved into the path of the cam-surface 4 on the tongue 2 of the trigger-arm 1. When, therefore, the latter is pushed forward for the purpose of firing a shot, the sear 19 is turned by the projection 11 about its pivot, so that the nose 12 on the sear is withdrawn from in front of the projection 9 of the firing pin 25, and a shot is fired. During the movement of the trigger-arm 1, the tongue 2 is slightly depressed by the projection 10, which passes over the cam-surface 4. In this way, the edge 13 of the sear 19 is permitted to spring back from the edge 14 of the projection 11 at the moment, when the nose 12 of the sear 19 has released the firing-pin 25. The sear is then moved again by its spring 15 to its position of rest, in which it is ready to catch the firing pin, as shown in Fig. 2. Now, when the trigger-arm 1 is pulled back, the edge 14 is also moved back and the projection 11 is slightly moved downward, the tongue 2 being moved about its pivot 3. The sear 19 will hold the firing-pin in the position shown in Fig. 2, as long as the trigger-arm is not pushed forward again.

If the gun shall be set for continuous firing, the setting-lever 6 is turned into the position shown in Fig. 1, in which position the projections 8 and 10 of the lever are both thrown out of engagement with the tumbler 7 and the cam-surface 4. The tumbler is moved by its spring 16 into the position shown in Fig. 1, in which the nose 22 will lie in front of the projection 9 of the firing-pin 25. The tumbler 7 is automatically brought into connection by the cam-surface 17 of the breech-bolt 26, which cam-surface engages a corresponding cam-surface 18 on the tumbler. When the trigger-arm 1 is moved forward, toward the left in Fig. 1, the tongue will not be depressed by the projection 10 of the setting-lever 6, since the cam-surface 4 will pass clear of said projection. The edge 14 on the projection 11 of the tongue will, therefore, not be moved out of the way of

the edge 13 of the seat 19, so that the latter remains disengaged, and the firing, therefore, will automatically continue, as long as the pressure on the trigger arm is maintained, the nose 12 of the sear 19 being held out of engagement with the projection 9 of the firing-pin 25.

In combination with the trigger-device, there is further provided a safety-means, whereby firing will be prevented, except when the breech-bolt 26 is completely closed. To this end, the bottom edge of the breech-bolt 26 is provided with two longitudinal ribs 20 (Figs. 1 and 2), which ribs cooperate with two small laterally projecting ledges 21, or the like, of the nose 12 of the sear 19 and the nose 22 of the tumbler 7. When the noses of the sear and tumbler lie in front of the projection 9 of the firing-pin 25, the ledges 21 are situated above the ribs 20 and thus the noses 12 and 22 are prevented from being withdrawn from in front of the projection 9 of the firing-pin. The ribs 20 are interrupted at the point where the noses 12 and 22 are situated, when the breech-bolt is closed, so that the noses at this point can be withdrawn. In this way, neither the sear nor the tumbler can release the firing-pin, unless the breech-bolt is completely closed. In order that the sear and tumbler, after a shot has been fired, can regain their original positions to intercept the firing pin on the forward movement of the latter with the breech-bolt, the ribs 20 are also recessed at their extreme rear ends, so that when the breech-bolt returns to its rear or open position, the said recesses in the ribs 20 will lie over the noses 12 and 22, permitting them to be returned by their springs to their positions, in which they can engage the projection 9 of the firing-pin 25.

I claim:—

Trigger-device, comprising in combination with a breech-bolt, a firing-pin, a sear, a tumbler, a slidable trigger-arm provided with a cam-face, a setting-lever having a projection adapted to engage with said cam-face, so as to depress the said trigger-arm and cause the release of the said sear upon each forward movement of the said trigger-arm.

In testimony whereof I affix my signature in presence of two witnesses.

RUDOLF FROMMER.

Witnesses:
FÜLÖP SCHÖN,
EDMUND FLAVA.