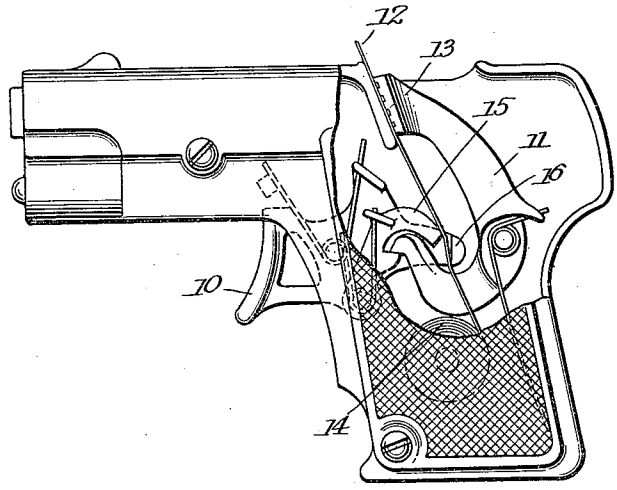
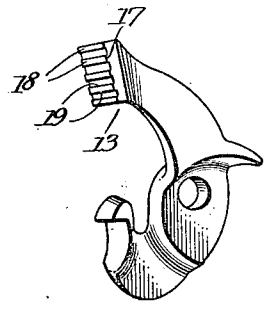
April 12, 1932. E. S. PEAKE 1,853,834

TOY FIREARM

Filed Aug. 28, 1931

Fig. 1.





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UNITED STATES PATENT OFFICE

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TOY FIREARM

Application filed August 28, 1931. Serial No. 559,999.

The present invention relates to pistols, cannons and other toy fire arms wherein a continuous roll of caps is employed which are automatically fed to exploding position.

In my copending application Serial No. 478,713, filed August 29, 1930, there is disclosed a mechanism for feeding and exploding the caps in which upon actuation of the trigger, the caps are successively fed to an anvil and exploded by the hammer and I have found that with such a construction, it is necessary where the trigger is operated at a high rate or speed, to overcome any possibility of a cap sticking to the anvil and thereby retarding the successive feed of caps.

The usual cap strip comprises two pieces of thin paper carrying the fulminate and where an ordinary flat anvil and flat hammer were employed, the force of the explosion tended to cause the cap strip to adhere to the anvil.

I overcome this condition by providing the hammer with shallow corrugations with the edges of the furrows and ridges, however, sharply angled, so that the hammer will penetrate the layer and thus as the hammer is retracted upon actuation of the trigger, the frictional contact between the strip and the hammer will cause the strip to be drawn upwardly at the same time as the feeding mechanism acts to propel another cap into position.

It will be understood that when a cap is exploded, the explosive force will cause the layers of cap material to enter the corrugated portion of the hammer, so that a very strong frictional connection is obtained between the cap strip and the hammer which, as stated, assists the feed of the cap strip upon each retraction of the hammer, and no matter how frequent or rapid the trigger be actuated, there is no possibility of the feed jamming or of the caps sticking to the anvil.

In the drawings:

Figure 1 is a side elevation partly broken away showing the construction of actuated mechanism set forth in my aforesaid application and also illustrating in end elevation the contour of the hammer.

Figure 2 is a perspective view of the hammer showing the striking face.

Referring to Figure 1, the trigger is indicated at 10 and the hammer at 11. The anvil is shown at 12 and the striking face of the hammer at 13. The cap strip is indicated at 14 and passes between two gripping members 15 and 16, which, upon operation of the trigger, grip the cap strip and move a cap successively into firing position on the anvil. It will be understood that at the same time as the trigger is retracted and the cap strip propelled toward the anvil, that the hammer is likewise retracted.

The striking face of the hammer as shown is provided with a plurality of transverse corrugations 17. These corrugations may be of any desired depth, but I preferably make them relatively shallow. The faces of the ridges constituting the striking face of the hammer are flattened as at 18, while the edges of the ridges and corrugations are sharp as shown at 19. The purpose of having the flat faces 18 is to insure that the cap will be exploded, while in making the ridges and corrugations with sharp edges 19, the corrugations will be forced into the cap material.

It will be understood that the cap strip is usually formed of two thin strips of soft paper which are pasted together, so that when the striking face of the hammer of the present invention engages such laminated strip, it will penetrate the strip. The force of the explosion will likewise cause the paper to expand somewhat, into the corrugated portions, so that a very firm frictional contact is obtained between the strip and the striking face and any possibility of the cap sticking to the anvil as where a flat face hammer and anvil are provided, is eliminated.

It will, therefore, be seen that when the trigger is retracted after the explosion of a cap to simultaneously retract the hammer and feed another cap into position, the frictional contact of the exploded cap portion of the strip with the hammer will cause that portion to be drawn away from the anvil and upwardly simultaneously with the movement of the gripping members 15 and 16 to feed the strip to the anvil. Thus all possibility of jamming of the cap strip is overcome and

the trigger can be actuated with great rapidity and without fear of sticking.

It will be understood that instead of having the corrugations transversely of the hammer face, they may be arranged longitudinally thereof, but I prefer to have the corrugated area extend across the face of the hammer.

What I claim is:

1. An automatic fire arm having an anvil, a hammer, a trigger, and means operable by actuation of the trigger for propelling a cap strip in position to be exploded on the anvil by the hammer, said hammer having a striking face formed with shallow corrugations, the ridges of which are adapted to penetrate into the fabric of the cap strip and the furrows to receive the cap strip expanded upon explosion by the hammer, to frictionally engage the cap strip and move it away from the anvil after each explosion of a cap and upon retraction of the hammer, said movement of the cap strip from the anvil being coincident with the feeding of the cap strip by said propelling means to the anvil.

2. An automatic fire arm having an anvil, a hammer, a trigger, and means operable by actuation of the trigger for automatically feeding successively caps of a strip into position to be exploded on the anvil by the hammer, said hammer having a corrugated striking area extending across the face of the hammer, the striking portions of the area being flat with the ridges of the corrugations formed with sharp edges to bite into the fabric of the cap strip and frictionally engage the cap strip to move it away from the anvil after explosion of a cap and upon retraction of the hammer, said movement of the cap strip from the anvil being coincident with the operation of the feeding means for feeding a cap of the strip successively to the anvil.

3. An automatic fire arm having an anvil, a hammer, a trigger, and means operable by actuation of the trigger for propelling a cap strip in position to be exploded on the anvil by the hammer, said hammer having a striking face formed with shallow corrugations, the edges of the ridges of which are adapted to penetrate the fabric of the cap strip and the furrows to receive the cap strip expanded upon explosion by the hammer, to frictionally engage the cap strip and move it away from the anvil after each explosion of a cap and upon retraction of the hammer.

4. An automatic fire arm having an anvil, a hammer, a trigger, and means operable by actuation of the trigger for propelling a cap strip in position to be exploded on the anvil by the hammer, said hammer having a striking face formed with shallow, transversely extending corrugations, the ridges of which are adapted to bite into the fabric of the cap strip and the furrows to receive the cap strip expanded upon explosion by the hammer, to frictionally engage the cap strip and move it away from the anvil after each explosion of a cap and upon retraction of the hammer.

In testimony whereof I affix my signature.

EDWARD S. PEAKE.