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COMPLETE SPECIFICATION.

Improvements in Automatic Revolvers.

A communication by HALVARD FOLKESTAD LANDSTAD, of 2, Kort Adlersgade, Christiania, in the Kingdom of Norway, Mechanical Engineer.

I, GEORGE CECIL DYMOND, M.I.M.E., of the Firm of W. P. Thompson & Co., Agents for Foreign Patent Solicitors, 6, Lord Street, Liverpool, and 6, Bank Street, Manchester, both in the County of Lancaster, 118, New Street, Birmingham, in the County of Warwick, and 322, High Holborn, in the County of Middlesex, Patent Agent, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

In a revolver the following features are desirable:—

1. That the magazine be arranged for quick-loading so as to enable the operator to constantly keep the revolver in his right hand, while loading with his left.
2. That the hammer can be constantly held at full cock without being secured, affording, however, the same safety against accidental discharge as is obtained by securing means so as to avoid loss of time by releasing before the first shot can be discharged and to avoid the necessity of cocking at the beginning of the fire.
3. That the revolver can be used as a single loader while the magazine is filled.
4. That the empty cartridges be ejected automatically at each shot.
5. That the pull be easy and pleasant the hammer being at the same time cocked automatically.
6. That the mechanism be locked automatically after the last shot from the magazine, thus warning the operator, that new cartridges must be put in. Furthermore the elements of the mechanism ought to allow of their being easily assembled, the connection being therefore preferably not effected by screws; whilst the construction ought otherwise to be so simple as to allow of cheap manufacturing.

All these advantages are embodied in the present invention, which has for its object to construct a revolver in which the mechanism is operated automatically by means of the recoil, and which is peculiar by having a cylinder with only two chambers each of which communicates in turn with a magazine arranged within the stock or butt of the revolver.

In the accompanying drawings:—

Figure 1 is a longitudinal sectional elevation of a revolver embodying the present invention.

Figure 2 is a section along the line A—A Figure 1, and

Figure 3 is a cross section of the cylinder.

Figure 4 is a side view of the revolver, the mechanism being shown in dotted lines and the hammer in the cocked position.

Figure 5 also shows a side view of the revolver with the breech block and hammer in the rearward position, an empty cartridge being ejected.

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1 is the barrel, 2 the cylinder containing only two chambers, 3, placed diametrically opposite to each other and revolving, on the pulling of the trigger, through 180° under the influence of a suitable mechanism connected with the trigger 4. The upper chamber of the cylinder corresponds with the barrel, and the lower one with a magazine 6 arranged within the butt 5. The breech block 7 is seated in suitable guides as to be thrown to the rear by the recoil, thereby causing the hammer to be cocked, and on the following forward movement under the influence of the recoil springs, 8, 9, it takes a cartridge from the magazine into the lower chamber. The breech block is provided with a guiding rod 11 placed parallel to the barrel and serving at the same time as the arbor for the cylinder, and one recoil spring is mounted around this rod in front of the drum, the other recoil spring being mounted on a tenon at the rear of the breech block and having abutment against the breech piece 12, formed by the breech covering 13. The hammer 14 is lodged within the breech block and surrounded by the main spring 15. A spring extractor 16 is mounted on the top of the breech block, the securing means of the same serving at the same time to hold the hammer and main spring fairly home.

The sears 17 and 18 by means of which the hammer is kept on full cock, and also released on the pulling of the trigger, are lodged in the compartment 19, Figure 2, and suitably secured to the covering 13 so as to be dismounted in common with the same. The said sears 17 and 18, by which the hammer is operated are capable of swinging a little, the former being pivoted at 19 and the latter at 20. The second sear 17, which is nearer to the hammer, is provided with a nose 22 bevelled on its upper part, which is adapted to engage a stud 23 on the hammer in the cocked position of the same as shown in Figure 4. Fitted into the same sear is also a spring, which has abutment downwardly on the adjacent first sear 18 and constantly acts to press the second sear 17 upwards, thereby causing the nose 22 to engage the stud 23 on the hammer. The spring will act on the sear 18 in such a way, as to constantly press the front end, which is directly acted upon by the trigger into its lowermost position. Projecting upwards from and fitted into the rear end of the sear 18 is a spring 24, the oscillation of which is limited by a part of the piece 18 as shown in Figure 4. It is provided with a hook 25 capable of catching over the rear corner of the sear 17 and acts by pulling down the same to release the hammer, when the trigger engages the front end of the sear 18, the movement of which is stopped, however, by the end striking against a stop 38. The hook 25 of the spring 24 is adapted to catch over the sharp edge of the sear 17, when the forward end of the sear 18 is out of engagement with the trigger. Moreover the spring 24 is provided with an upward projecting part 27 adapted to be acted upon by the stud 23 of the hammer, whereby the spring on the hammer being thrown to the rear by the recoil will be forced backwards so as to allow the sear 17 to turn up, and by means of the nose 22 prevent the hammer from being uncocked, until the trigger is pulled. The upward turn of the sear 17 is limited by a rib 36 projecting from the breech covering.

It will be seen from the above description, that the hammer will be cocked automatically at each shot, and that the breech block after recoiling will fly forwards once more. During this movement, the descending projection 29, the rear part of which inclines upwards will engage behind the uppermost cartridge in the magazine and force it into the lower chamber of the cylinder.

31 is the follower of the magazine 32 the cartridge lifter and 33 a spring acting to raise the same.

From Figure 4 it will be seen, that the trigger will have to travel some distance before striking with its projection 34 the sear 18, and during this part of the movement the cylinder is revolved. The trigger guard 35 is formed as is shown in Figures 4 and 5 as a trigger spring.

At the discharge, the breech block will recoil to the rear as stated above, and the extractor being in engagement with the flange of the cartridge will drag

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the same along with it out of the chamber, and on the breech block arriving in its extreme rearward position, the empty cartridge is ejected by striking with the lower part of its flange against a stud on the breech casing (Figure 5). The breech block then flies forward under the action of the two recoil springs, there-  
 5 by cocking the hammer. The projection 29 on the under side of the breech block once more engages the uppermost cartridge in the magazine and forces it into the lower chamber of the cylinder. Because of this arrangement the hammer when at full cock, will be in line with an empty chamber, so that any secur-  
 ing means are not required.

10 The trigger will only have to revolve the cylinder through half a turn at each shot, which causes no considerable resistance. The loaded chamber being then brought in line with the barrel, the projection 34 of the trigger will strike the sear 18 and release the hammer thereby discharging the shot.

15 When the breech block has been thrown to the rear by the discharge of the last cartridge from the magazine, a spring stop projecting from the latter, which is normally forced aside by the cartridge, will act to prevent the forward movement of the breech block, thus providing for the operator a warning apparatus. The breech block is not allowed to move forward again, until the magazine has been filled with new cartridges,

20 The quickloading of the magazine is effected through an aperture uppermost in the left side of the stock or butt, said aperture being closed by the covering 13.

When the revolver is to be used as a single loader the magazine is locked; a short pull at the trigger then causes a reduced revolution of the cylinder,  
 25 whereby the lower chamber is moved to the left so much as to allow another cartridge to be put directly into the cylinder.

If the revolver be loaded and it is desired to uncock the hammer, this may be effected by pressing on the lug 36, whereby the stud 23 of the hammer will be released from the nose 22. If the hammer be desired to be cocked once more  
 30 this is effected by forcing the breech block to the rear, until the stud 23 engages behind the nose 22.

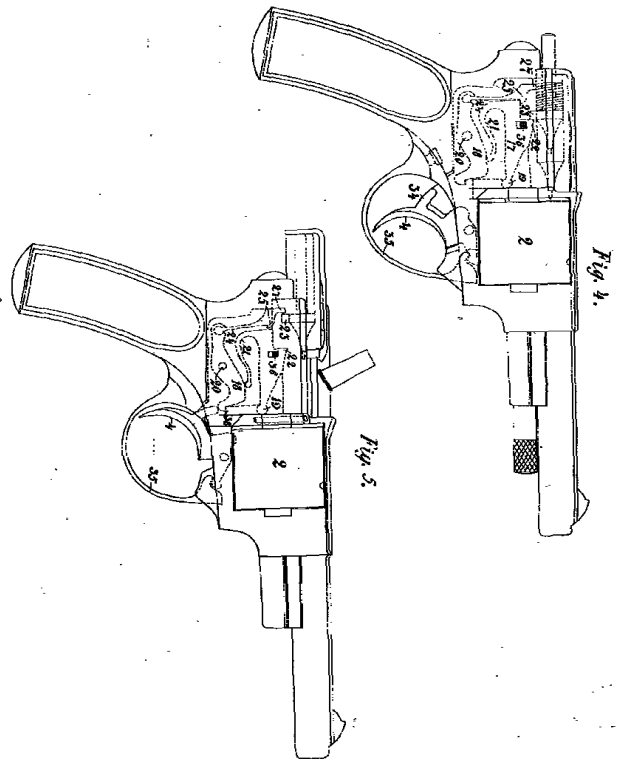
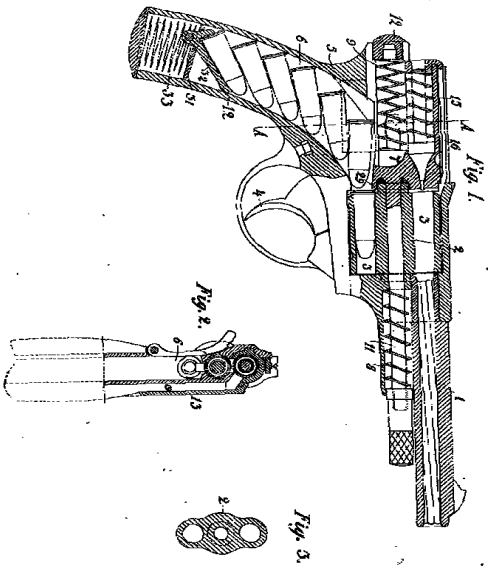
Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, as communicated  
 35 to me by my foreign correspondent, I declare that what I claim is:—

An automatic revolver having a cylinder with two chambers, the lower one of which communicates with a magazine provided within the butt, and the cartridges being translated from the magazine into the chamber by means of a projection formed on the under side of the breech block, said projection on the  
 40 forward movement of the breech block, which is thrown to the rear by the recoil, engaging and taking along with it the uppermost cartridge in the magazine, and the hammer being cocked at the same time whereas on the pulling of the trigger the lower and loaded chamber of the cylinder is previously turned upwards, after which the hammer is released, substantially as hereinbefore  
 45 described.

Dated this 9th day of November 1899.

WM. P. THOMPSON & Co.,  
 Agents.

SHEET 1



[This Drawing is a reproduction of the Original on a reduced scale.]

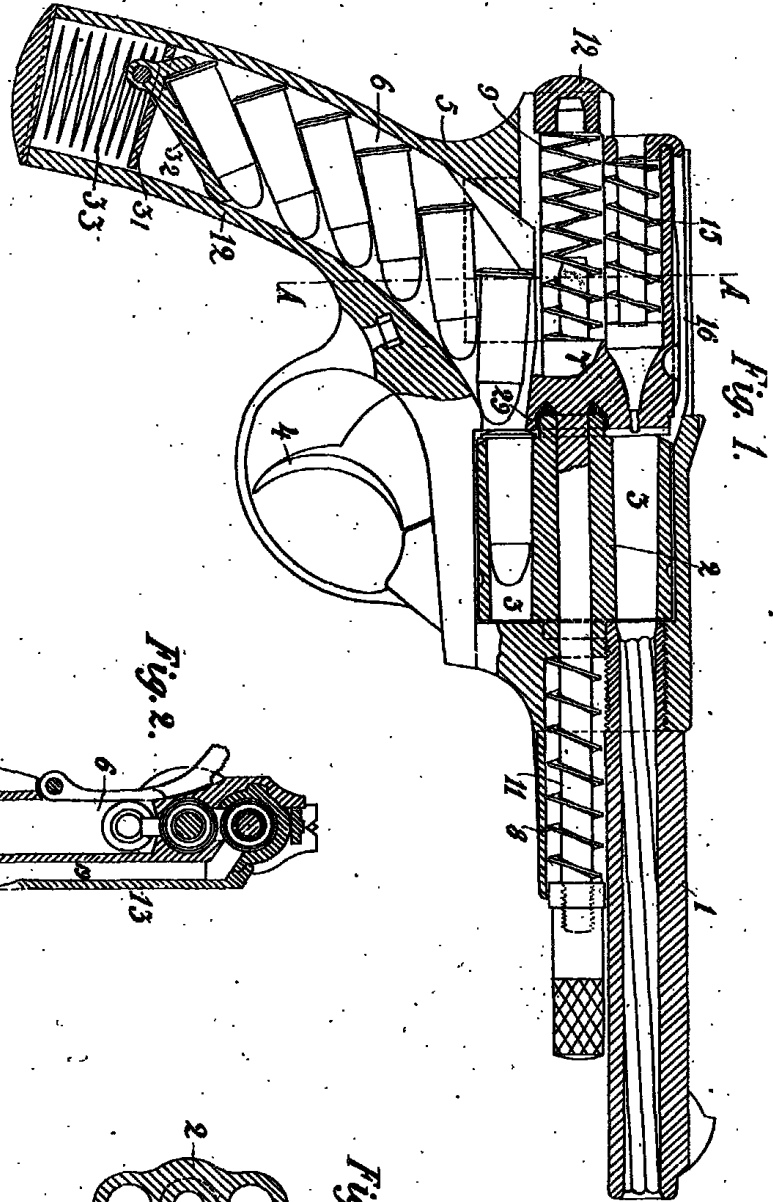


Fig. 1.

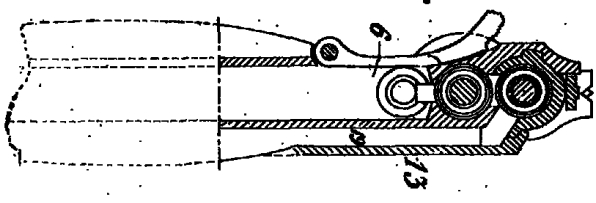


Fig. 2.

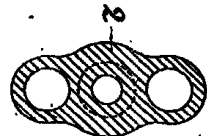


Fig. 3.

[This Drawing is a reproduction of the Original on a reduced scale]

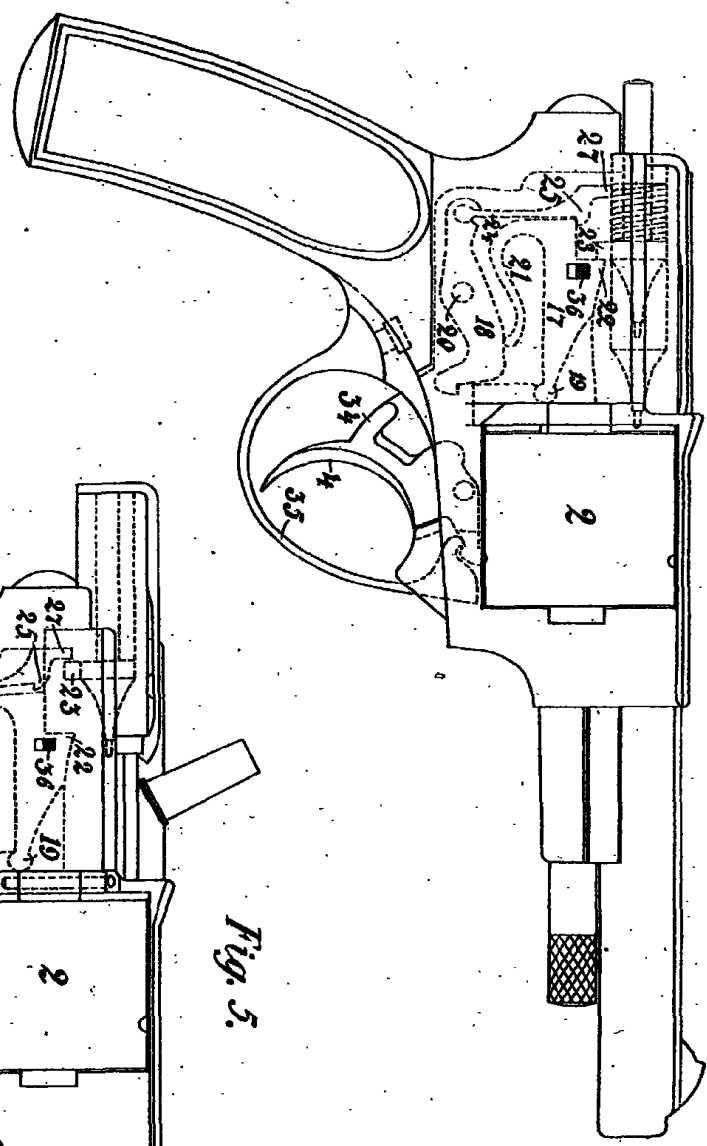


Fig. 4.

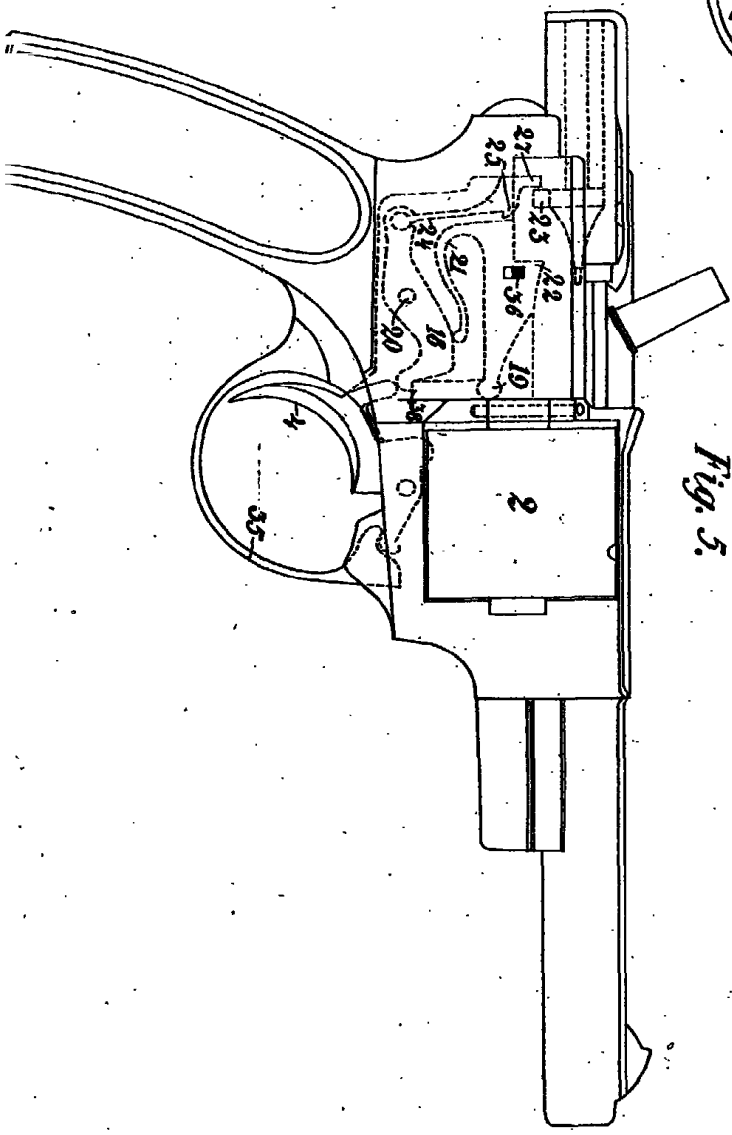


Fig. 5.