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REVOLVER RIFLE

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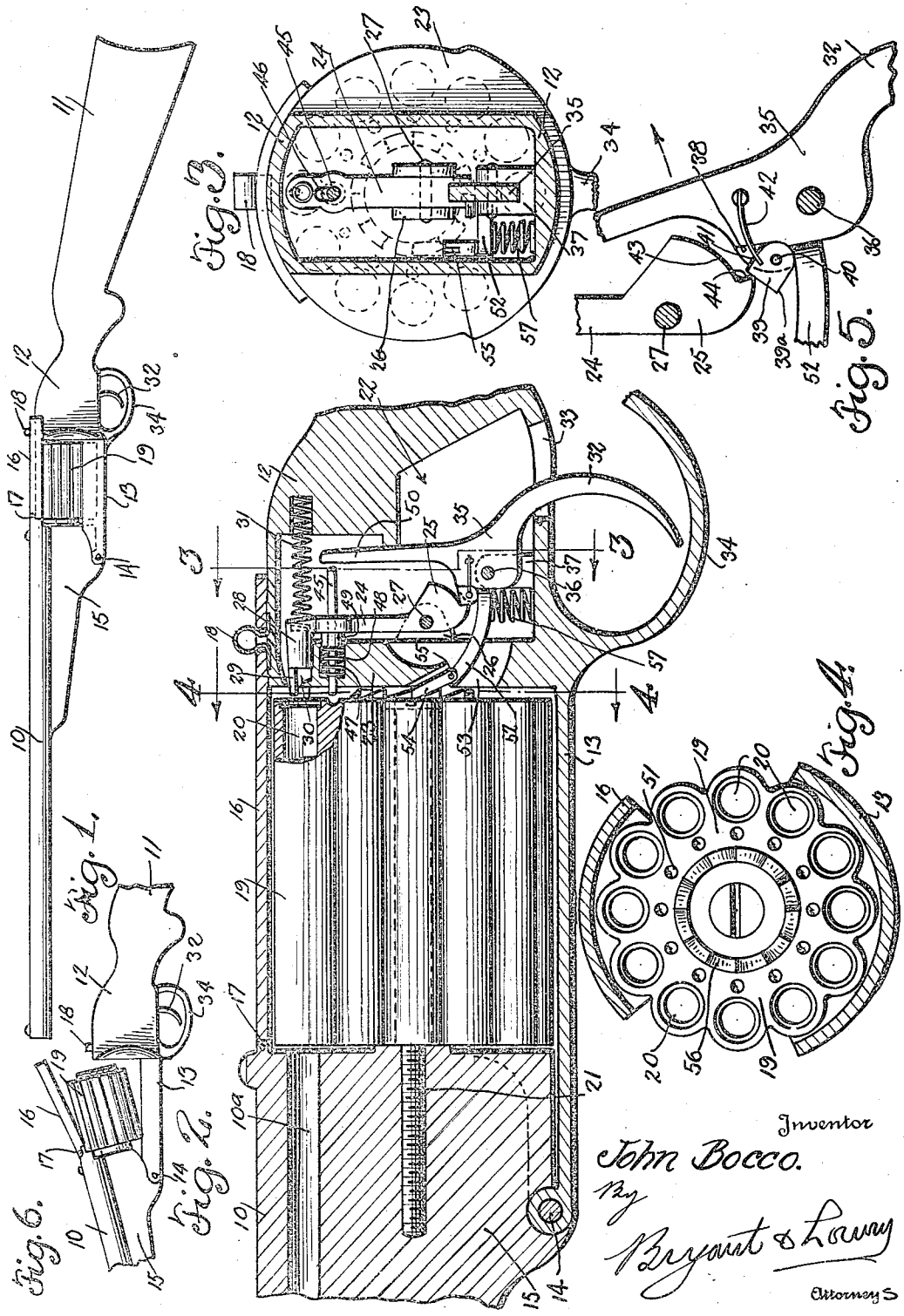

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REVOLVER RIFLE

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This invention relates to certain new and useful improvements in revolver rifles.

The primary object of the invention is to provide a revolver rifle wherein the cartridge magazine is in the form of a revolving chamber having cartridge receiving bores therein that are successively brought into registry with the bore of the gun of the rifle barrel during rotation of the revolver chamber, such movement being effected by devices operated by the trigger mechanism of the rifle.

It is a further object of the invention to provide an interchangeable revolving magazine for a rifle for the firing of bullets or shells of different gage and different numbers.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing:—

Figure 1 is a side elevational view of a revolver rifle constructed in accordance with the present invention;

Figure 2 is an enlarged fragmentary longitudinal sectional view showing the breech mechanism and revolving cartridge chamber;

Figure 3 is a cross-sectional view taken on line 3—3 of Figure 2;

Figure 4 is a cross-sectional view taken on line 4—4 of Figure 2, showing the revolving cartridge chamber in end elevation;

Figure 5 is a fragmentary side elevational view of a part of the trigger mechanism and firing hammer with the latter illustrated in firing position; and

Figure 6 is a fragmentary side elevational view showing the gun broken for re-charging or interchanging the revolver chamber.

Referring more in detail to the accompanying drawing, there is illustrated a revolver rifle comprising a barrel 10, a stock 11 and intermediate breech mechanism including a breech frame 12 that carries a forwardly extending lower tang 13 that is hingedly mounted as at 14 at its forward end to the depending barrel plate rib 15, while the connection between the barrel 10 and upper side of the breech frame 12 includes an upper tang 16 hingedly connected at its forward end as at 17 to the adjacent end of the barrel 10 while the rear end of the hinged tang 16 is provided with an opening that is received on the spring catch 18 rising from the upper wall of the breech frame 12 as shown in Figure 2. The tang connections 13 and 16 between the breech frame and barrel provide an open sided chamber in which a revolving cartridge magazine is mounted.

A cartridge magazine is mounted in the open space between the barrel and breech frame and includes a cylindrical revolving chamber 19 having an annular series of longitudinal cartridge receiving bores 20, the revolving chamber being carried by an axial screw 21 that is anchored in the barrel rib 15, rotation of the cartridge chamber 19 causing the cartridge bores 20 therein to successively register with the barrel bore 10*a*.

The breech frame 12 is provided with an inner chamber 22 that houses the trigger and firing mechanism as well as devices for arresting revolving movements of the chamber 19 and also for revolving said chamber. The front end of the chamber 22 in the breech frame is closed by a partition wall 23 and said partition wall is provided with openings through which operating devices for the revolving chamber 19 extend. The firing mechanism includes a hammer arm 24 having the lower end portion 25 thereof pivotally mounted between spaced lugs 26 projecting rearwardly from the partition wall 23 by means of the pivot pin 27, the upper end of the hammer arm 24 carrying a hammer head 28 provided with a firing pin 29 that projects through an opening 30 in the partition wall 23 in line with one of the bores 20 of the revolving chamber 19. The hammer head 28 is normally tensioned in a direction toward the revolving chamber by means of the coil spring 31 interposed between the breech frame 12 and rear side of the hammer head.

The trigger 32 mounted within the breech chamber 22 extends downwardly through the

openings 33 in the bottom wall of the breech chamber with the projecting end thereof confined within the trigger guard 34, the intermediate plate portion 35 of the trigger being pivotally mounted upon the pin 26 carried by upstanding lugs 37 upon the bottom wall of the breech chamber with the plate portion located between said lugs. The plate portion 35 of the trigger 32 at the forward side thereof is bifurcated or recessed to provide a bottom abutment wall 38 and a lug 39 pivotally mounted within said recess upon the pin 40 has an abutment side wall 41 normally engaged with the abutment wall 38 of the trigger plate portion under influence of the leaf spring 42. The lower side of the lower end portion 25 of the hammer arm is provided with an arcuate face 43 terminating at one end in an abutment shoulder 44 that is normally engaged with the corner portion 39*a* of the pivoted lug 39, as shown in Figure 2.

Means is provided to prevent rotation of the revolver chamber 19 during the firing of the gun and includes a pin 45 extending longitudinally of the breech frame chamber 22 adjacent its upper end, the pin 45 sliding through slotted opening 46 in the upper end of the hammer arm 24 for passing through an opening in the partition wall 23 that is enlarged at its rear side as at 47 to house a tensioned spring 48 engaged with a collar 49 surrounding the pin 45 and fixed thereto with the collar engaged with the hammer arm 24 for normally holding the pin 25 in retracted position. The plate portion 35 of the trigger 32 carries an upwardly extending arm 50 which engages the rear end of the pin 45 to project the same forwardly through the opening in the partition wall 23 against the tension of the spring 48 with the forwardly projecting end of the pin 45 received in a socket 51 in the rear end wall of the revolving chamber 19, a socket 51 being associated with each cartridge bore 20 as illustrated in Figure 4.

Means is provided to effect rotation of the revolving chamber 19 to aline the next succeeding chamber bore 20 with the barrel bore 10*a* and includes an upwardly curved arm 52 projecting forwardly of the trigger plate portion 35 and through an opening 53 in the partition wall 23 with a pawl 54 pivotally mounted as at 55 upon the forward end of the arm 52, the pawl 54 working over the annular ratchet face 56 formed on the rear end of the revolving chamber 19. The trigger spring 57 is engaged with the lower side of the arm 52 for normally holding the trigger 32 in its forward position and the trigger arm 50 in its rear position as shown in Figure 2. The arm 52 is laterally offset relative to the trigger plate portion 35 as shown in Figure 3 to cause the pawl 54 carried thereby to engage one side of the ratchet ring 56.

When the trigger 32 is operated, the trigger arm extension 50 first engages the pin 45 to project the forward end thereof into a socket 51 for holding the revolving chamber against rotary movement, continued movement of the trigger causing the lug 39 carried thereby to have its shoulder 39*a* engage the abutment shoulder 44 upon the lower end 25 of the hammer for moving the hammer arm 24 against the tension of the spring 31, continued movements of the trigger causing the shoulders 39*a* and 44 to be disengaged with the spring 31 forcibly throwing the hammer 28 in a forward direction and causing the firing pin 29 to strike the head of a cartridge in the bore 20 of the revolving chamber 19. During this movement, the arm 52 is swung downwardly to cause the pawl 54 to ratchet over the ratchet ring 56 and be engaged with the next succeeding ratchet tooth thereof so that when pressure on the trigger 32 is relieved, the spring 57 which returns the trigger 32 to operative position also raises the arm 52 to cause the pawl 54 to rotate the revolving chamber 19 to position the next succeeding cartridge bore 20 in alignment with the barrel bore 10*a*. Also, during retraction of the trigger 32, the lug 39 moves upon its pivot pin 40 to escape the edge of the abutment shoulder 44, the lug being tensioned by the spring 42 as shown in Figure 5, the spring returning the lug 39 to its operative position, limited by the contact shoulders 38 and 41.

It is to be understood that the revolving chamber 19 is of an interchangeable character to permit the substitution of chambers having different sized bores for cartridges or shells and that said chamber may have any number of bores formed therein as may be desired. The gun is illustrated in Figure 6 in broken position to permit removal of cartridges or for the interchange of a revolving chamber if desired.

While there is herein shown and described the preferred embodiment of the invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

I claim:—

1. In a revolver rifle, a break-down rifle comprising a barrel and stock, a bottom tang carried by the stock and hinged to the barrel and a top tang hinged to the barrel and detachably engaged with the stock providing an open chamber between the stock and barrel and breech mechanism including a revolving cartridge chamber disposed in the aforesaid chamber and carried by the barrel and firing and trigger mechanism carried by the stock.

2. In a revolving rifle, a barrel, a stock having a breech mechanism chamber therein closed by a forward wall, a revolving car-

tridge chamber carried by the barrer forwardly of the wall, said mechanism chamber housing a pivoted trigger, a hammer operated by the trigger, a movement arrester for the cartridge chamber operated by the trigger, means carried by the trigger for rotating the revolving chamber and said wall having openings therein forming communication between the revolving chamber and associated parts of the breech mechanism, an escapement connection between the hammer and trigger permitting resetting of the trigger and operation of the chamber, the rotating means for the revolving chamber including a circular rack on the rear end of the chamber, an arm carried by the trigger projecting through the forward wall and a pawl on the forward end of the arm engageable with the circular rack and operative to escape the rack when the trigger is pulled and to engage the rack and rotate the chamber when the trigger moves to reset position.

3. In a revolving rifle, a barrel, a stock having a breech mechanism chamber therein closed by a forward wall, a revolving cartridge chamber carried by the barrel forwardly of the wall, said mechanism chamber housing a pivoted trigger, a hammer operated by the trigger, a movement arrester for the cartridge chamber operated by the trigger, means carried by the trigger for rotating the revolving chamber and said wall having openings therein forming communication between the revolving chamber and associated parts of the breech mechanism, an escapement connection between the hammer and trigger permitting resetting of the trigger and operation of the hammer, said movement arrester including a tensioned pin extending through the wall, the rear end of the revolving chamber having sockets therein to successively receive the pin to aline a bore in the revolving chamber with the revolver barrel and an arm extension on the trigger for operating the pin in advance of the operating release of the hammer, the rotating means for the revolving chamber including a circular rack on the rear end of the chamber, an arm carried by the trigger projecting through the forward wall and a pawl on the forward end of the arm engageable with the circular rack and operative to escape the rack when the trigger is pulled and to engage the rack and rotate the chamber when the trigger moves to reset position.

In testimony whereof I affix my signature.

JOHN BOCCO.