April 13, 1926. 1,580,854

H. PIESSENS

TOY GUN

Filed Dec. 26, 1925

FIG. I.

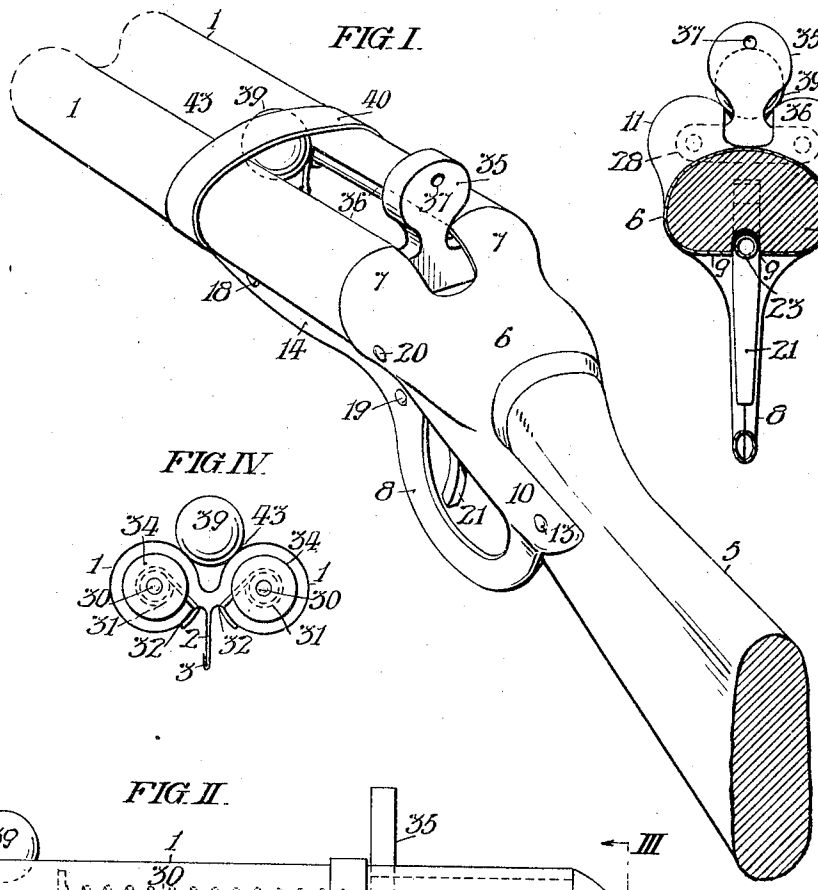
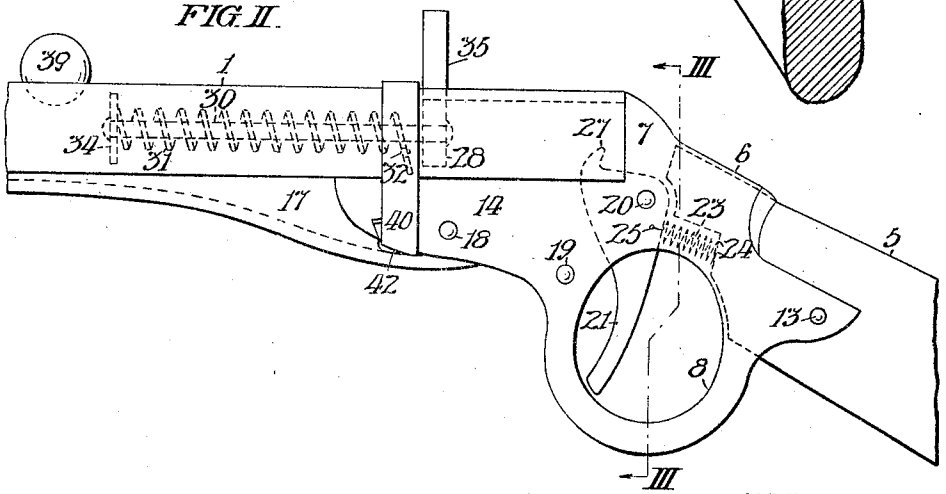


FIG. III.

FIG. IV.

FIG. II.



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HENRY PIESSENS, OF PHILADELPHIA, PENNSYLVANIA.

TOY GUN.

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To all whom it may concern:

Be it known that I, HENRY PIESSENS, a citizen of Belgium, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Toy Guns, whereof the following is a specification, reference being had to the accompanying drawings.

My invention is of the type including a spring adapted to be compressed, temporarily engaged with a trigger when compressed, and released to strike a projectile when the trigger is pulled.

My improvements are particularly applicable to provide, at minimum cost, what appears to be a double-barreled shotgun, but which is capable of discharging three projectiles simultaneously, in respectively different trajectories being provided with resilient means connected with the barrels and adapted to temporarily detain a ball or other projectile in a groove between them, in position to be projected, by the means also adapted to discharge projectiles from said barrels.

In the form of my invention hereinafter described, both barrels of the gun are formed, with a projectile groove between them, from a single piece of sheet metal, the edges of which are brought together and clinched, one over the other, to form a double, vertically pendent, flange between and beneath the barrels. The stock may be formed of wood, and another single piece of sheet metal forms a breeching and trigger guard having its front end fixed on the pendent flange of the barrels and having its rear end fixed on said stock.

My invention includes the various novel features of construction and arrangement hereinafter more definitely specified.

In the drawings; Fig. I is a fragmentary perspective view of a double-barreled gun, conveniently embodying by invention.

Fig. II is a side elevation of the structure shown in Fig. I.

Fig. III is a transverse sectional view of the breeching, trigger guard, etc., taken on the line III, III in Fig. II.

Fig. IV is a transverse sectional view of the barrels, as seen from the left hand side of Fig. II.

In said figures; the double barrels 1, 1 are formed of a single pieces of sheet metal bent to oppositely counterpart substantially cylindriform configuration at opposite sides of the gun and having its edges extending parallel with each other and forming the double flange 2; said edges being clinched together, one extending over the other at 3.

Said barrel structure is connected with the wooden stock 5 by means of the single piece of metal 6 which forms the gun breech 7, trigger guard 8, trigger guides 9, and stock housing 10, in unitary relation.

As best shown in Fig. III; the metal plate 6 is provided with upwardly flared flanges 11 adapted to cover the rear end openings of said barrels 1 when the upper portion of said plate is bent to substantially semi-cylindrical form to fit the enlargement 12 on the stock 5, and said trigger guard 8 is formed of oppositely counterpart and complementary members which are pressed to substantially semicircular form. Said stock housing 10 is bent to curved form to fit said stock and rigidly connected therewith by the rivet 13. Said breeching plate 6 includes oppositely counterpart forwardly extending barrel brace flanges 14, the lower and forward edges of which bear upon opposite sides of said barrel flange 2 but the upper edges thereof are held in spaced relation with said flange by filling pieces 17 upon opposite sides of said flange, so that the edges of said brace flanges bear upon the curved under surface of the respective barrels; which are rigidly connected with said breeching plate 6 by the two rivets 18 and 19 extending transversely therethrough.

Said breeching plate 6 is further rigidly connected with said stock 5 by the rivet 20 which extends through the stock enlargement 12 and forms a pivot for the trigger 21. Said trigger is arranged to be pressed forwardly, at its lower end, by the spiral, compression, spring 23 which has its rear end seated in the recess 24 in said stock enlargement 12 and has its front end extending transversely through the hole 25 in said trigger, to retain said spring in cooperative relation with the trigger.

Said trigger 21 has the upwardly projecting hook 27 at its forward end, preferably slightly undercut at the rear thereof, and adapted to detachably engage beneath the cross bar 28. Said cross bar is rigidly connected with two similar spring plungers 30, which extend in respective coaxial relation with the two barrels and are riveted or otherwise secured in said cross bar at their

rear ends. Said plungers are encircled by respective helical springs 31 which are of the compression type, having their rear ends extending downwardly through openings 32 in said barrels so as to hold their rear ends substantially stationary in the barrels. However, the forward ends of said springs 31 abut against heads 34 on the respective plungers 30 which are conveniently formed of metal washers in which said plungers are riveted, and are arranged to discharge respective projectiles.

Said cross bar 28 has, in unitary relation therewith, an upwardly extending hammer projection 35 which extends through the slot 36 between said barrels 1 and has the peep-sight opening 37 through it. Said springs 31 are thus arranged to forcibly thrust said cross bar 28 forward whenever said bar is released from said trigger hook 27; and the forward movement of said cross bar is limited by the extent of said slot. Immediately in front of the forward end of said slot; I provide means to detachably temporarily detain a projectile 39 which may be a ball of the character termed a marble, or otherwise. Such means conveniently includes a piece of elastic webbing 40 which is wrapped around the barrels 1 and has its ends drawn through the slot 42 in said flange 2. Said webbing is so far resilient as to securely hold the projectile beneath it, in the groove 43 between said barrels, and in line with said hammer, until forcibly struck by the latter when released by the trigger; whereupon, the projectile is automatically released from its resilient detent 40 and discharged as indicated in Fig. II.

Although I have found it convenient to form the resilient means for temporarily detaining the projectile, of ordinary elastic webbing, including strands of rubber secured in a textile fabric; a band of spring metal of substantially the same shape may be employed for that purpose.

I do not desire to limit myself to the precise details of construction and arrangement herein set forth, as various modifications may be made therein without departing from the essential features of my invention, as defined in the appended claims.

I claim:

1. In a toy gun, the combination with a single piece of sheet metal folded to form substantially cylindriform barrels with their axes in parallel relation, and with the opposite edges of said metal pending in a double flange between and beneath said barrels and clinched together, one over the other; of a wooden stock, having an enlargement at the forward end thereof; a breeching plate, including a single piece of sheet metal bent to substantially semicylindrical form over the enlargement of said stock and having upwardly flared flanges forming closures for the respective barrels, and having rearwardly extending portions forming a stock housing, and downwardly extending portions forming a trigger guard, and portions extending transversely beneath the stock forming trigger guides, and forwardly extending barrel brace flanges fitted to said double flange intermediate of the barrels; means rigidly connecting said breeching plate with said barrels and stock, including rivets extending transversely therethrough; a trigger pivoted upon one of the rivets extending through said breeching plate and stock, and having an upwardly projecting hook at the front end thereof; a spiral spring fitted in a recess in said stock enlargement, above said trigger guides on said breeching plate, and cooperatively connected with said trigger, arranged to thrust the lower end of the latter forwardly; a cross bar extending transversely in said barrels and having an upwardly extending hammer projection fitted to reciprocate in a slot between said barrels; said hammer projection having a peep-sight opening therethrough; a pair of spring plungers rigidly connected with said cross bar and having respective heads at the forward ends thereof, and fitted in respective coaxial relation with said barrels; and two helical compression springs respectively encircling said plungers, having their front ends bearing against the plunger heads, and having their rear ends fixed in relation to said barrels by extension through respective holes in the barrel plate; whereby said cross bar may be retracted to compress the springs encircling said plungers until said springs are held under compression by the hook on said trigger engaging said cross bar; resilient means arranged to temporarily detain a projectile in stationary position with respect to said barrels, including a piece of elastic webbing encircling said barrels and having its opposite ends extending transversely in a slot in the flange pending from said barrels; said webbing being adapted to be stretched upwardly to receive and detain a projectile beneath it in the groove between said barrels and in position to be struck and discharged by the hammer on said cross bar when the latter is released by the operator pulling the trigger.

2. In a toy gun, the combination with a single piece of sheet metal folded to form substantially cylindriform barrels with their axes in parallel relation, and with the opposite edges of said metal pending in a double flange between and beneath said barrels; of a stock, a breeching plate, including a single piece of sheet metal bent over said stock and having upwardly flared flanges forming closures for the respective barrels, and having rearwardly extending portions forming a stock housing, and downwardly

extending portions forming a trigger guard, and portions extending transversely beneath the stock forming trigger guides, and forwardly extending barrel brace flanges fitted to said double flange intermediate of the barrels; means rigidly connecting said breeching plate with said barrels and stock, including rivets extending transversely therethrough; a trigger pivoted upon one of said rivets and having an upwardly projecting hook at the front end thereof; a spiral spring fitted in a recess in said stock and cooperatively connected with said trigger, arranged to thrust the lower end of the latter forwardly; a cross bar extending transversely in said barrels and having an upwardly extending hammer projection fitted to reciprocate in a slot between said barrels; a pair of spring plungers rigidly connected with said cross bar and having respective heads at the forward ends thereof, and fitted in respective coaxial relation with said barrels; and two helical compression springs respectively encircling said plungers, having their front ends bearing against the plunger heads, and having their rear ends fixed in relation to said barrels; whereby said cross bar may be retracted to compress the springs encircling said plungers until said springs are held under compression by the hook on said trigger engaging said cross bar; resilient means arranged to temporarily detain a projectile in stationary position with respect to said barrels, arranged to detain a projectile in the groove between said barrels and in position to be struck and discharged by the hammer on said cross bar when the latter is released by the operator pulling the trigger.

3. In a toy gun, the combination with a single piece of sheet metal folded to form two barrels with their axes in parallel relation, and a groove between them at their tops, and with the opposite edges of said metal pending in a double flange between and beneath said barrels; of a wooden stock; a breeching plate, including a single piece of sheet metal bent over said stock, and forming closures for the breeches of the respective barrels, and forming a stock housing, and downwardly extending portions forming a trigger guard, and portions extending transversely beneath the stock forming trigger guides, and forwardly extending barrel brace flanges fitted to said double flange intermediate of the barrels; means rigidly connecting said breeching plate with said barrels and stock, extending transversely therethrough; a trigger pivoted in said breeching plate and stock, and having an upwardly projecting hook at the front end thereof; a spring arranged to thrust the lower end of said spring forwardly; a cross bar extending transversely in said barrels and having an upwardly extending hammer projection fitted to reciprocate between said barrels; a pair of spring plungers rigidly connected with said cross bar and extending in respective coaxial relation with said barrels; and two helical compression springs respectively encircling said plungers, having their front ends bearing against the plunger heads, and having their rear ends fixed in relation to said barrels; whereby said cross bar may be retracted to compress the springs encircling said plungers until said springs are held under compression by the hook on said trigger engaging said cross bar; and resilient means, connected with said barrels, arranged to temporarily detain a projectile in stationary position with respect to said barrels, in position to be struck and discharged by the hammer on said cross bar when the latter is released by the operator pulling the trigger.

4. In a toy gun, the combination with a single piece of sheet metal folded to form two barrels with their axes in parallel relation; of a stock, having an enlargement at the forward end thereof; a breeching plate, including a single piece of sheet metal bent to fit over said stock and the rear ends of the respective barrels, and forming a trigger guard; means rigidly connecting said breeching plate with said barrels and stock, including rivets extending transversely therethrough, a trigger pivoted upon one of said rivets and having an upwardly projecting hook at the front end thereof; a spring fitted in said stock and cooperatively connected with said trigger, arranged to thrust the lower end of the latter forwardly; a cross bar extending transversely in said barrels and having an upwardly extending hammer projection fitted to reciprocate between said barrels; a pair of spring plungers rigidly connected with said cross bar and having respective heads at the forward ends thereof, and fitted in respective coaxial relation with the barrels; helical compression springs respectively encircling said plungers, having their front ends bearing against the plunger heads, and having their ends fixed in relation to said barrels; whereby said cross bar may be retracted to compress the springs encircling said plungers until said springs are held under compression by the hook on said trigger engaging said cross bar; resilient means, connected with said barrels, arranged to temporarily detain a projectile in stationary position with respect to said barrels, in position to be struck and discharged by the hammer on said cross bar when the latter is released by the operator pulling the trigger.

5. In a toy gun, the combination with a stock; of means adapted to simultaneously discharge three projectiles in parallel trajectories, including a single piece of metal bent to form two barrels with a projectile

groove between them; a cross bar extending transversely in said barrels and across said groove; plungers in the respective barrels having heads at the forward ends thereof adapted to strike projectiles, two compression springs respectively encircling said plungers and fixed in said barrels at their rear ends, and a spring pressed trigger having means arranged to engage said cross bar with said springs in compressed position, and to release said cross bar to release said springs.

6. In a toy gun, the combination with a stock; of means for simultaneously discharging three projectiles in parallel trajectories, including sheet metal bent to form two barrels with a projectile groove between them, a cross bar extending transversely in said barrels and across said groove; plungers in the respective barrels adapted to strike projectiles, two compression springs respectively encircling said plungers and fixed in said barrels at their rear ends, and a spring pressed trigger having means arranged to engage said cross bar with said springs in compressed position, and to release said cross bar to discharge the gun.

7. In a toy gun, the combination with means forming three parallel channels for projectiles; of means adapted to simultaneously discharge three projectiles in said channels, including a cross bar common to the three channels; two plungers rigidly connected with said cross bar in respective alinement with the outer channels and a hammer projection on said cross bar in alinement with the intermediate channel; compression springs respectively encircling said plungers, and a spring pressed trigger having means arranged to engage said cross bar with said springs in compressed position, and to release said cross bar to release said springs.

8. In a toy gun, the combination with a stock; of means forming three parallel channels for projectiles, including a single piece of sheet metal bent to form two barrels with a groove between them; a breeching plate, including a single piece of sheet metal bent to form closures for the breeches of the respective barrels, a stock housing, a trigger guard, trigger guides, and flanges fitted to engage said barrels; a cross bar extending in said barrel and across said groove; spring means arranged to move said cross bar, when released, to discharge projectiles from said barrels and groove; and a spring pressed trigger fitted in said breeching plate between said trigger guides arranged to engage said cross bar in retracted position and to release the same.

9. In a toy gun, the combination with a stock; of a barrel connected with said stock forming a channel for a projectile; a spring pressed cross bar arranged to strike a projectile; a spring pressed trigger movable to alternately detain and release said cross bar; and means arranged to temporarily detain a projectile in stationary position with respect to said barrel, including a resilient band, connected with said barrel and extending over said channel; said band being adapted to be stretched upwardly to receive and detain a projectile beneath it, in position to be struck.

In testimony whereof, I have hereunto signed my name at Philadelphia, Pennsylvania, this 21st day of December, 1925.

HENRY PIESSENS.