

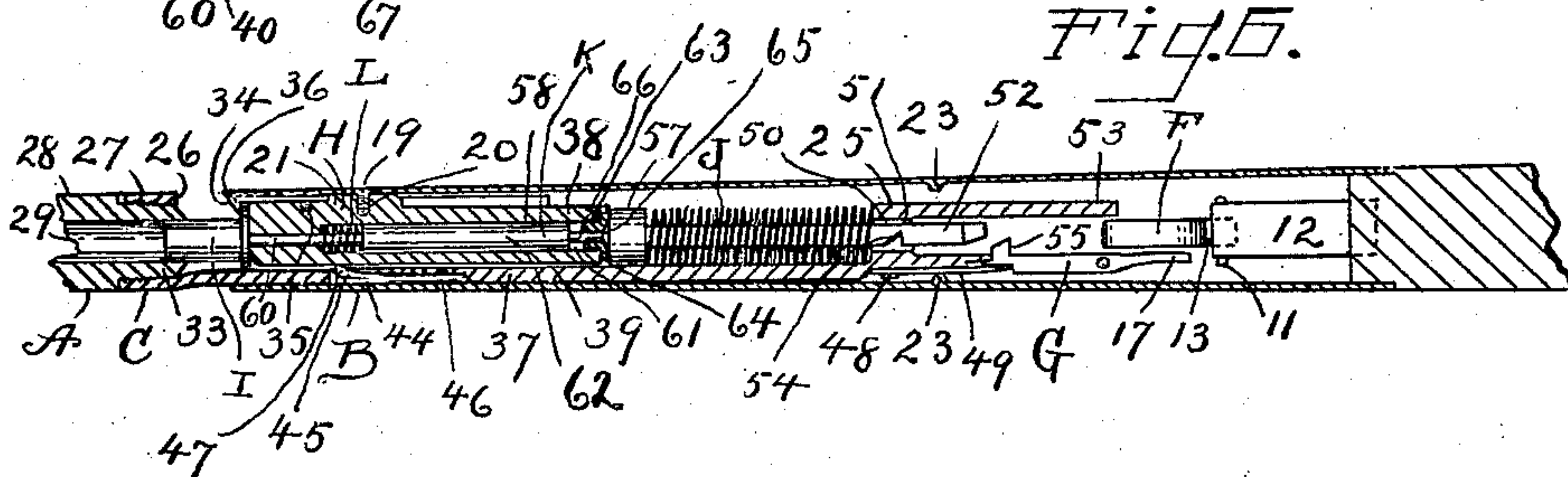
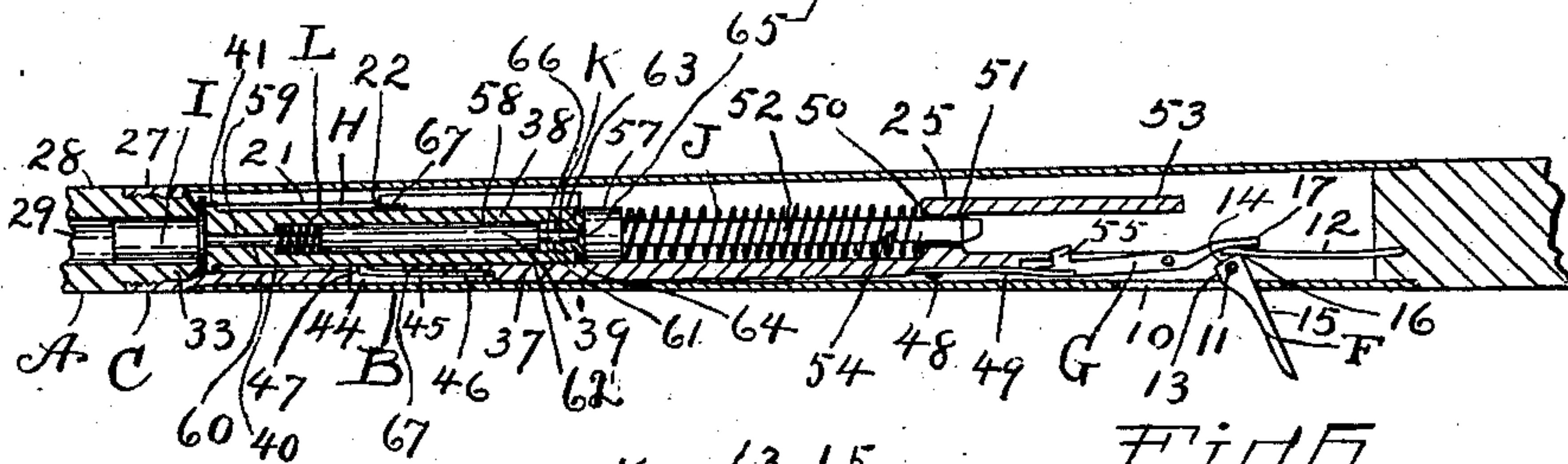
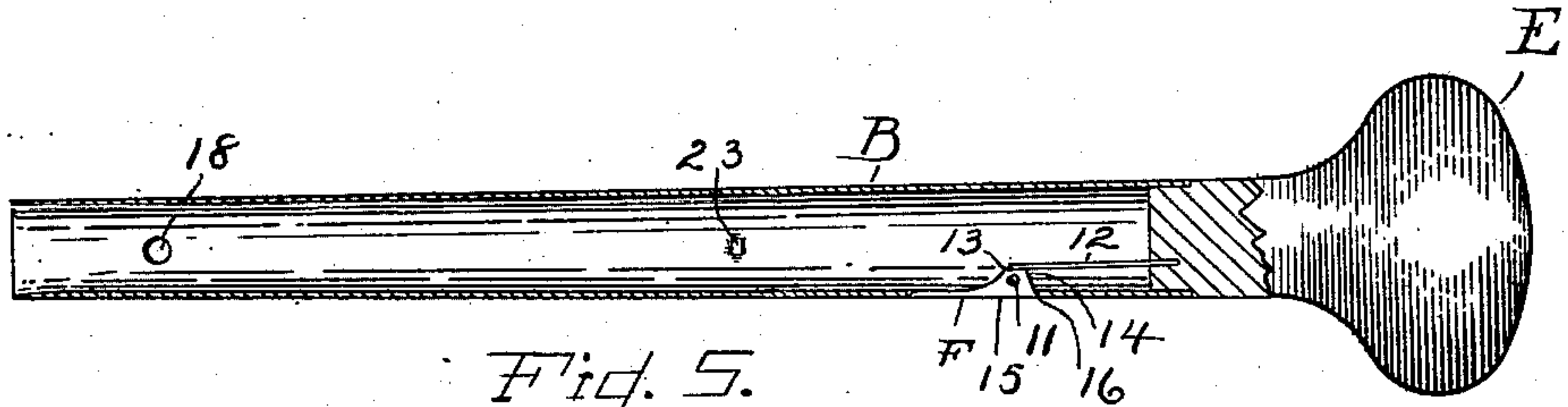
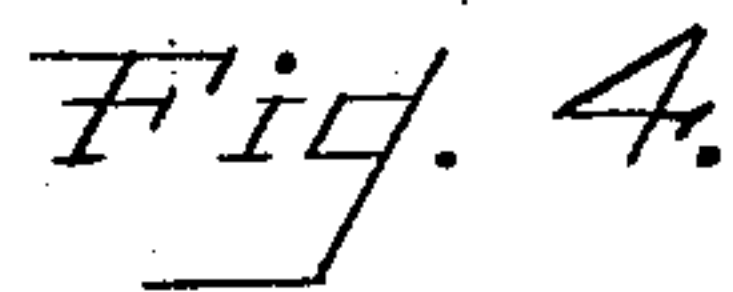
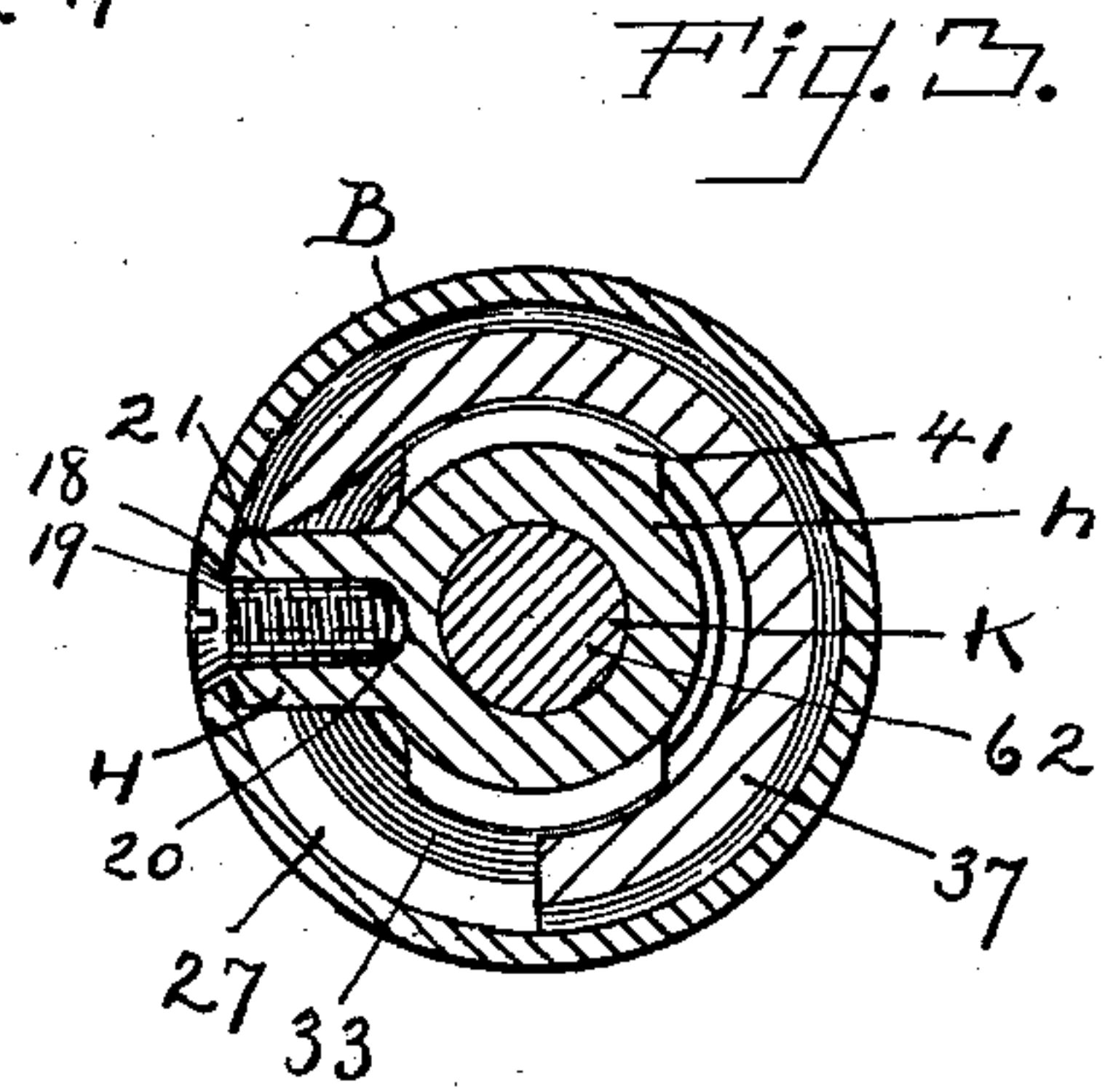
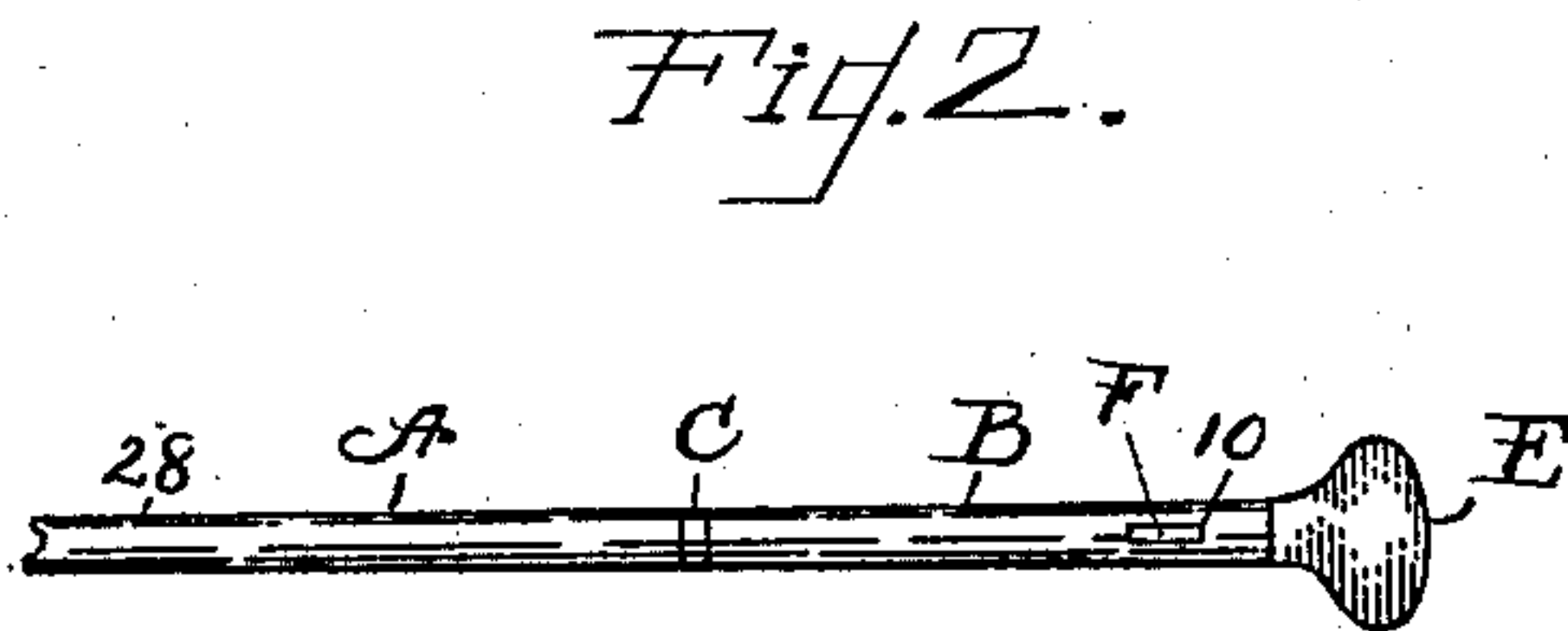
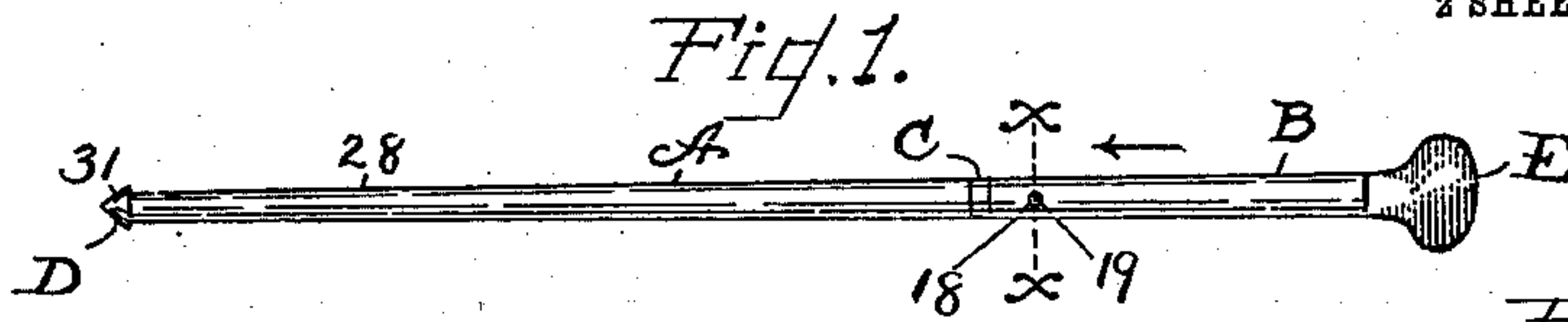
H. TARVARDIAN.  
CANE RIFLE.

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969,672.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.



WITNESSES:  
S. H. Clarke.  
M. L. Lockwood.

INVENTOR.  
Harakim Tarvardian.  
By Louis O. Schmidt.  
Att'y.





# UNITED STATES PATENT OFFICE.

HAVAKIM TARVARDIAN, OF NEW BRITAIN, CONNECTICUT.

CANE-RIFLE.

969,672.

Specification of Letters Patent.

Patented Sept. 6, 1910.

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*To all whom it may concern:*

Be it known that I, HAVAKIM TARVARDIAN, a citizen of Persia, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Cane-Rifles, of which the following is a specification.

My invention relates to improvements in cane rifles and the objects of my improvements are simplicity and economy in construction and convenience and efficiency in use.

In the accompanying drawing:—Figure 1 is a side elevation of my cane rifle. Fig. 2 is a similar view of the same, in part broken out, turned 90 degrees from the position shown in Fig. 1. Fig. 3 is a sectional view on the line  $x\ x$  of Fig. 1, on an enlarged scale. Fig. 4 is a longitudinal sectional view of the handle turned 180 degrees from the position shown in Fig. 1, on a reduced scale. Fig. 5 is a similar view, in part broken out, of my invention with the parts in position just after discharge. Fig. 6 is a similar view, in part broken out, with the parts in an intermediate position, showing the shell held by the extractor. Fig. 7 is a similar view with the parts in position for loading. Fig. 8 is a similar view, ready for discharge. Fig. 9 is a top view of the body member in one of the intermediate positions, the handle being shown in dotted lines. Fig. 10 is a similar view of the same, showing another intermediate position. Fig. 11 is a part sectional and part broken out view of the barrel end.

My cane rifle when assembled, and all parts are home and in normal position comprises in exterior appearance a barrel member A at one end, a handle member B at the other end and an intermediate body member C. The extreme outer end of the barrel member A may be provided with a tip D shown at the left in Fig. 1, and the extreme outer end of the handle member B may be provided with a head E, shown at the right in the same figure.

The handle member B comprises generally a cylindrical shell and has near the upper end a slot 10 in which is embedded a trigger F, which is exposed to view from the outside and which is internally pivoted to the handle on a pin 11 near its upper end and is held in the said slot by the pressure of a flat spring 12 in an ordinary manner by the

said spring bearing against a flattened side 13 adjacent the said pin 11, and which may be opened out to a laterally extended or cocked position and retained in such position also in an ordinary manner by the said spring 12 bearing against a suitable flattened surface 14, the angular relation of the flattened surfaces 13 and 14 corresponding to the angular degree of opening of the said trigger in the cocked position. The junction of the said cocking surface 14 and the front wall 15 of the trigger F unite to form a corner 16 adapted to push inwardly the spring 12 and the firing end 17 of the sear G and thereby effect the release of the firing mechanism to be hereinafter described. The said handle member B has near the lower end a hole 18 adapted to receive the head of a screw 19 which screw serves as a means for removably connecting the said handle member B to a carriage or breech bolt H by means of a screw hole 20 in an upwardly projecting rib 21 on the same, and which serves indirectly as means of holding together the handle B and the body C when assembled in normal position, involving the said rib 21 in abutment with a laterally extending overhanging shoulder 22 on an upwardly projecting extension 37 of the said body C. Direct means of resisting any tendency to longitudinal separation of the said handle member B and the body C when united and in normal relative position comprise inwardly projecting lugs 23 on said handle B in abutment with corresponding outwardly projecting lugs 24 on said body C, the latter being provided on a further upward extension 25 of the said body C. The said lugs 24 and 23 are adapted to be brought into engagement by a relative rotary motion of the said handle and body after the same have been brought together longitudinally to the normal limit, which is determined by the lower end of handle B coming into abutment with a shoulder 26 on the lower part or base 27 of the said body C. The said base 27 is annular in formation and is internally threaded to receive the upper end of the barrel member A as will be hereinafter described.

The barrel member A comprises a generally cylindrical barrel 28 having the bore 29 and at the lower end the said tip D hinged to the barrel end by a hinge joint and adapted to be held either in position



over the end of the bore 29 or clear of the same to one side by a spring 30 in any ordinary manner. As shown the same comprises a pointed or conical tip 31 for the extreme lower portion having the base overhanging the barrel end, and a neck 32 adapted to enter within the bore 29. The upper end of the barrel member A has an upwardly extending neck 33, which is externally threaded to enter into the said internally threaded base 27 of the body C. The extreme upper end of the said neck 33 is tapered off conically to provide clearance for the engagement of a shell extractor 34, mounted by its upper end on the said rib 21 by a screw 35, and comprising essentially a flat spring having at the lower end an engaging tooth 36, adapted to be brought into engagement with the lower or inward face of the head of the shell I when the mechanism is assembled and closed in normal position. The said body member C comprises the said annular base 27, the exterior of which corresponds and is flush with the exterior of the barrel member A on one side and the handle member B on the other side so as to suggest essentially one continuous, and generally cylindrical, or slightly tapered body. Extending upwardly from said base 27 is the said lower or intermediate extension 37, generally comprising an interrupted cylindrical shell, of exterior diameter such as to easily permit free longitudinal motion within the shell of the handle B and having a cylindrical bore the upper part 39 of which fits over the cylindrical body 38 of the said carriage H and the lower part 40 of which fits over the generally annular outwardly extending rib or shoulder 41 on the lower end of said carriage H. The division between the bore 39 or upper bore and the bore 40 is marked by the shoulder 67 a little above the said overhanging shoulder 22. The said lower extension 37 has a slot 43 extending longitudinally and permitting longitudinal motion of the said rib 21 and the carriage H, and is provided at the lower end with a lateral jog or recess 42 permitting the said rib 21 being brought into engagement with the said shoulder 22. On the side opposed to the said slot 43 the said lower extension 37 is slotted at 44 and has mounted at the upper end of the said slot a flat spring 45 by a screw 46, the said spring extending downwardly through the said slot, and pressing generally against the said body 38 of said carriage H by its lower end, which lower end is provided with a tooth 47. The shoulder 41 is cut away in the line of contact of the tooth 47 and the body 38 is cut away on a taper so that the spring 45 assists in the final upward movement of the carriage H when being brought back or upward to the position for loading. The lower

butt end of the said spring 45 coöperates with the said extractor 34 in throwing out the shell I by stopping the lower edge of the same before the extractor has finished its upward movement, resulting in a lateral throw of the shell outwardly through the loading and unloading space in the said lower extension formed by the said jog or recess 42 combined with the lower portion of the guide slot 43.

The upper extension 25 of the body C comprises a generally flat plate like structure, having a forked upper end in which is pivotally mounted the said sear G and below which is mounted by a screw 48 a spring 49 adapted in an ordinary manner to hold the said sear G in engaging or locking position. Intermediate the length of the said upper extension 25 is an inwardly extending lug 50 provided with a guide hole 51 which fits a square hammer rod 52 and which lug is provided with an upwardly extending guide 53, for guiding the said rod 52 in its upward movement so as to insure the notch 54 in the same engaging with the tooth 55 on the said sear G.

The lower end 56 of the hammer rod 52 is reduced in size and screw threaded, and adapted to receive the annular head 57. A spring J surrounds the rod 52 and has its ends in abutment respectively with the said head 57 and shoulder 50, and is adapted to be held under restraint when the said notch 54 is in engagement with the said tooth 55 and to push the head 57 downward when the said head and shoulder are disengaged as by operating the sear G by means of the trigger F, so that the hammer rod 52 may strike a hammer blow to the firing pin K and through the same to the cartridge in an ordinary manner. The said carriage 38 is axially pierced by a bore 58, the lower portion 59 of which is of small diameter to fit the lower reduced portion 60 of said firing pin K the intermediate portion 61 being enlarged, to receive an enlarged body part 62 of the said firing pin and to house a spring L surrounding the said reduced portion 60 of the firing pin and tending to lift the firing pin, the extreme upper end 63 being closed by the internally bored screw plug 64, the bore 65 of which fits the reduced upper end 66 of the firing pin, the lower end of which screw plug limits the upward movement of the firing pin so that the said upper end 66 of the same will project upwardly the desired amount to produce proper results in firing. The lower end of the lower reduced portion 60 of the firing pin K is normally held flush with the lower end of the carriage H by the action of the spring L.

The carriage H has upward movement along the body member C so as to cock the firing mechanism by raising upward the head 57 by means of the screw plug 64 in



abutment therewith until the said notch 54 and tooth 55 come into engaging position.

With the handle member B attached to the carriage H by means of the screw 19, assuming the parts in normal position just after firing, a counter clockwise movement disengages the rib 21 from the shoulder 22 so as to permit of upward movement of the carriage, disengages the trigger F from the sear G and an upward movement extracts the shell and cocks the mechanism so as to permit of reloading by the insertion of another cartridge. A reverse movement of the handle and carriage brings the mechanism again into position ready for firing.

When it is not desired to use the implement as a fire arm, the trigger F may be pushed over into its slot 10 and the tip D may be closed over the end of the barrel member A.

When the handle member B is disconnected from the carriage H by removing the screw 19 the said carriage may be removed from the body member C downwardly through the base 27.

I claim as my invention:—

1. In a cane rifle a body member having a base and a lower extension on said base, a carriage adapted to move up and down in said extension, a shoulder on the lower end of said carriage adapted to engage with a shoulder on said extension so as to limit the upward movement of said carriage, a spring bearing against the back of said body and producing frictional resistance to movement of the same, a beveled lower corner on said carriage adapted to coact with said spring to assist in the final upward movement of the same, and a tooth on the lower end of said spring adapted to engage with the lower end of said body so as to hold the same in the limiting upward position.

2. In a cane rifle a body having a lower extension and a carriage adapted to reciprocate in said lower extension, a rib on said carriage adapted to engage with a shoulder on said extension to hold the same in its lowermost position, a shoulder on said carriage adapted to engage with a shoulder on said extension so as to limit the upward motion of the same, a spring adapted to produce frictional resistance to such reciprocation, a beveled edge on said carriage adapted to coact with said spring so as to assist in the final upward motion of said carriage, an extractor attached to said carriage, and the end of said spring adapted to cooperate

with the said extractor in throwing out the shell during the said upward motion.

3. In a cane rifle firing mechanism, cocking mechanism for the same, releasing mechanism for the same, a handle member, the said handle member having a limited rotary motion and a limited reciprocal motion, adapted to be locked against reciprocal motion and in its lowermost position when rotated to the limit of said rotary motion in one direction, adapted to be unlocked and reciprocated to the limit when rotated to the limit in the reverse direction, having a trigger adapted to be brought into position for firing when so locked against reciprocal motion, and adapted to cock the firing mechanism when so unlocked and reciprocated, the said firing mechanism comprising a firing pin and a spring actuated hammer adapted to strike a hammer blow to the same, the said cocking mechanism comprising a carriage attached to said handle member and adapted to lift said hammer against said spring to permit of the engagement of a notch and tooth, the said releasing mechanism comprising a lever on said handle member adapted to disengage said notch and tooth.

4. In a cane rifle, a body member attached to the barrel, a breech bolt and a handle member, the said handle member attached to the said breech bolt, and slidable on the body member, a spring actuated firing pin housed in the said breech bolt, a spring actuated hammer mounted on the said body member, the said breech bolt adapted to be operated to cock said hammer, and a trigger mounted on the handle member and adapted to release the said hammer.

5. In a cane rifle, a body member attached to the barrel, a breech bolt and a handle member, the said handle member attached to the said breech bolt and slidable on the said body member, the said body member adapted to receive the said breech bolt and permit of a relative reciprocal motion and rotary motion, shoulders and lugs on said body member and breech bolt in engagement when in position for firing and cooperating lugs on the said breech bolt and handle member and also in engagement when in position for firing.

HAVAKIM TARVARDIAN.

Witnesses:

SHEFFIELD H. CLARKE,  
NEWTON L. LOCKWOOD.