

(No Model.)

R. T. TORKELOSON.
BREECH LOADING GUN.

No. 452,126.

Patented May 12, 1891.

Fig. 1,

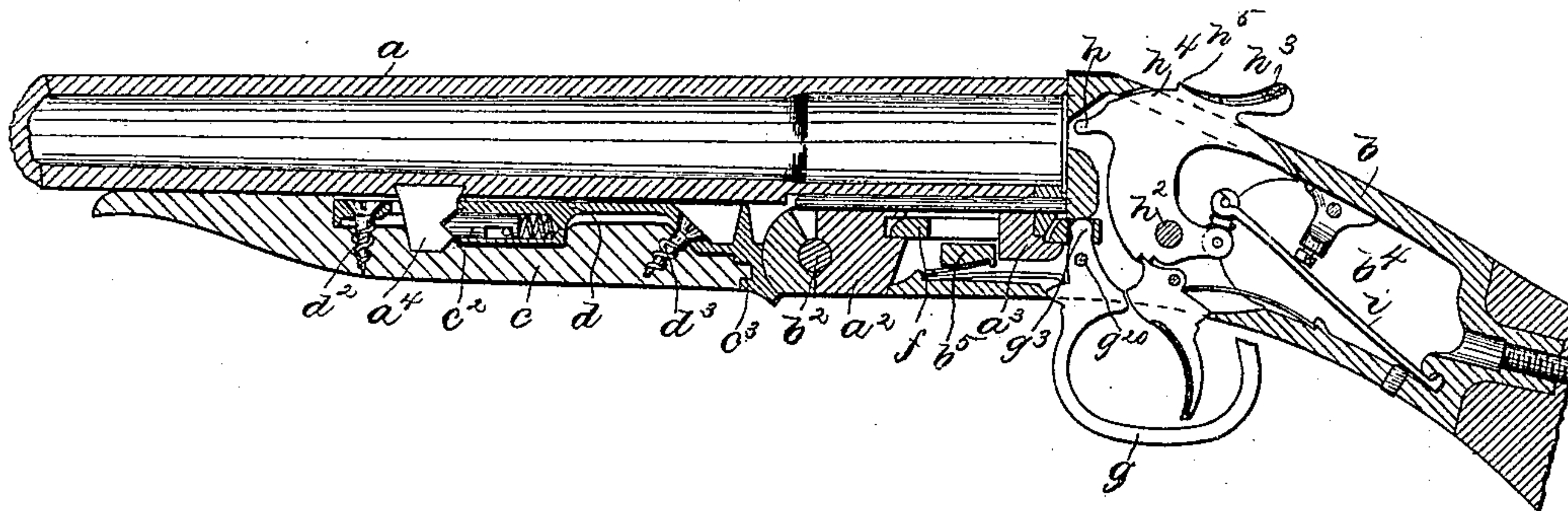


Fig. 3.

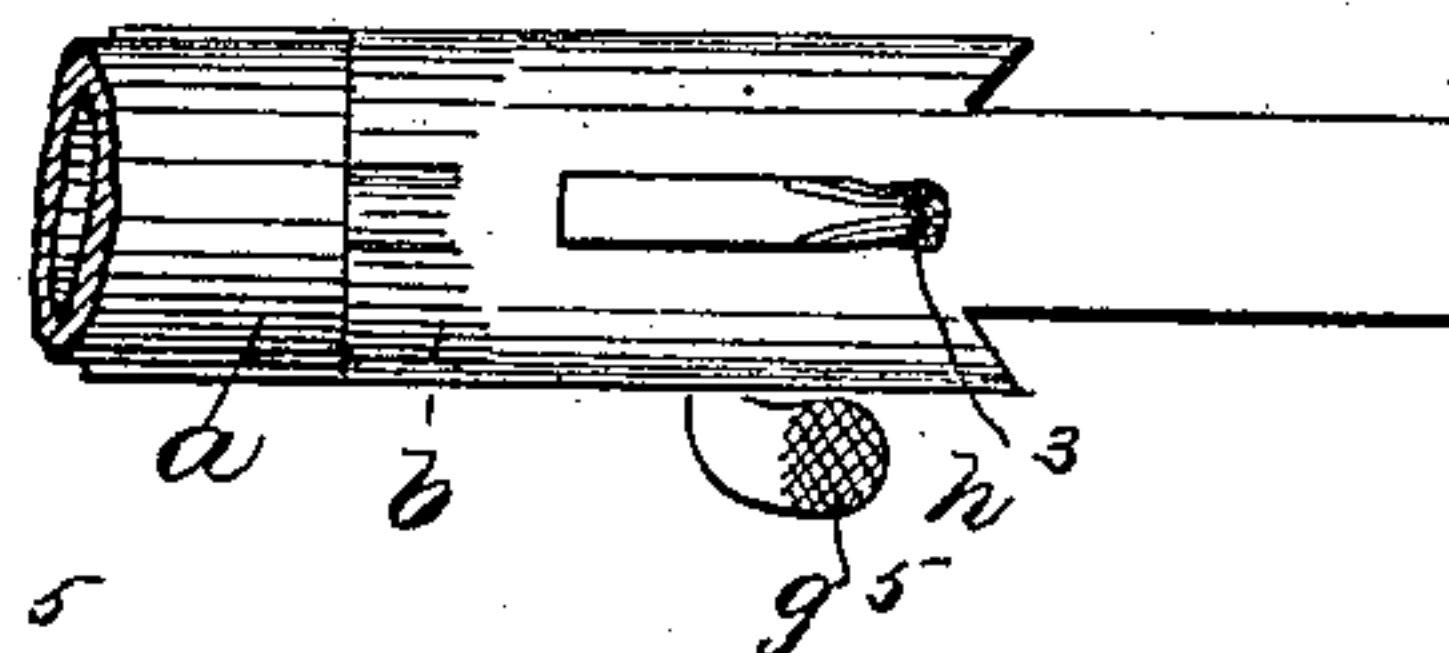


Fig. 2.

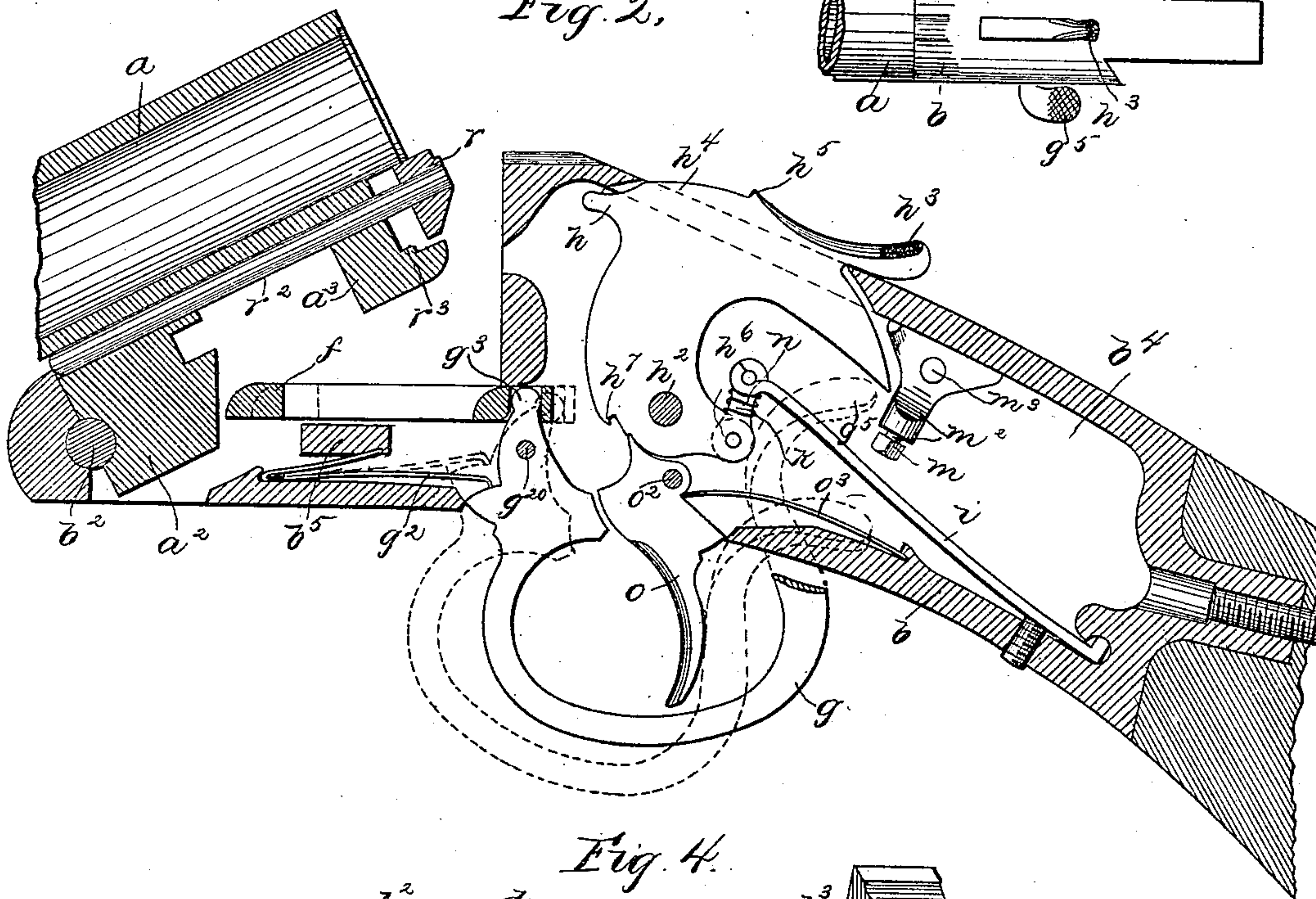
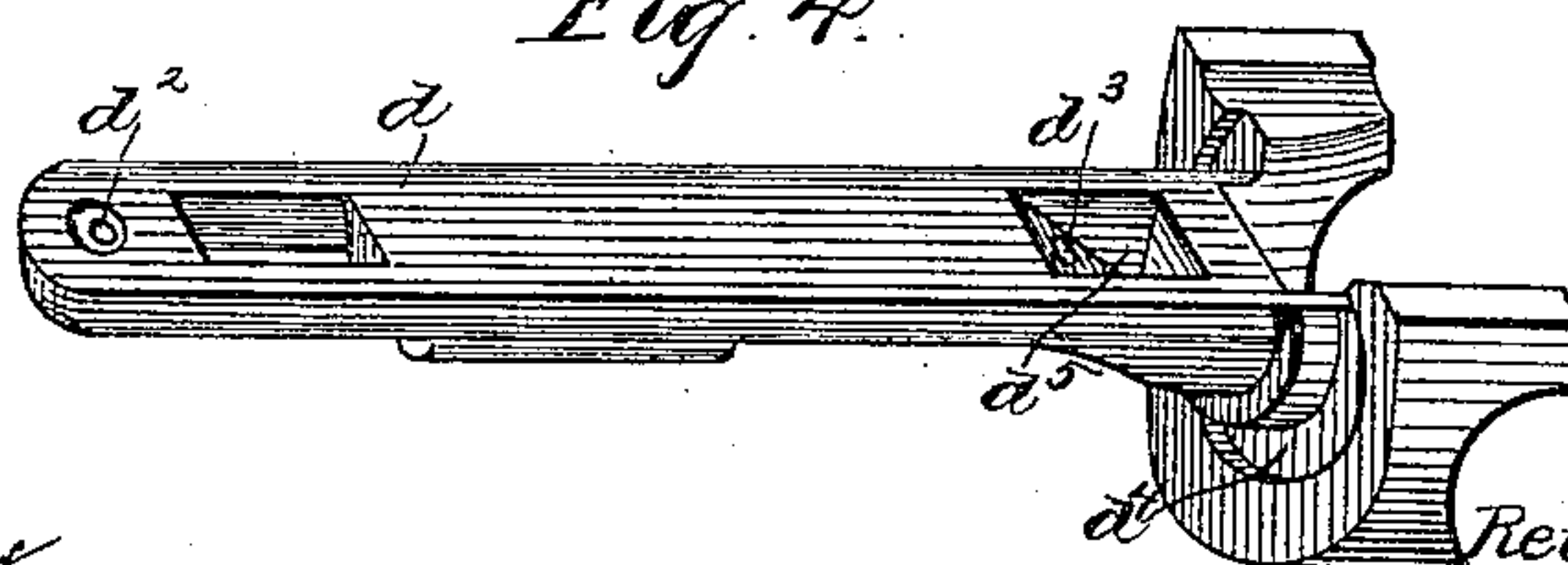


Fig. 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

REINHARD T. TORKELOSON, OF HATFIELD, MASSACHUSETTS.

BREECH-LOADING GUN.

SPECIFICATION forming part of Letters Patent No. 452,126, dated May 12, 1891.

Application filed May 6, 1890. Serial No. 350,782. (No model.)

To all whom it may concern:

Be it known that I, REINHARD T. TORKELOSON, of Hatfield, county of Hampshire, State of Massachusetts, have invented an Improvement in Fire-Arms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relating to fire-arms is shown embodied in a single-barrel breech-loading shotgun, although it is equally applicable to double-barrel guns.

The invention relates, mainly, to the hammer mechanism and to the construction of the fore-end and guard-spring. The hammer is mainly inclosed within the frame-work, but is provided with a handle or thumb-piece projecting through a slot in the frame-work, by which the hammer is cocked, the hammer-piece substantially fitting and closing the slot at all times. The hammer is connected with the mainspring by a link having a loose connection at one end that permits the hammer to advance after the mainspring has been arrested by a stop, and a light spring interposed between the hammer and mainspring causes the hammer to rebound or return to the half-cocked position after the blow has been struck to explode the cartridge.

Figure 1 is a longitudinal section of a gun embodying this invention with the parts in normal position, the barrel being closed and the hammer at half-cock; Fig. 2, a longitudinal section on a larger scale, showing the barrel-breech in open position and the hammer at full-cock, the barrel-locking mechanism being shown in full lines in normal position and in dotted lines in proper position for unlocking the barrel to open the breech; Fig. 3, a plan view of the breech-frame and hammer, and Fig. 4 a perspective view of the iron portion of the fore-end.

The barrel *a* is provided with the usual lugs *a*² *a*³, working in the main breech-frame *b*, the said lug *a*² engaging with and turning upon a pivot-pin *b*² in the fore part of the breech-frame, with which the said lug *a*² is retained in engagement in the usual manner by the fore-end *c*, attached to the barrel. The said fore-end is retained in position on the barrel by the usual spring-bolt *c*², engaging with a lug *a*⁴ on the barrel, said spring-bolt

working in a metallic frame-piece *d*, (see Fig. 4,) fastened in the wooden portion of the fore-end by screws *d*² *d*³. The wooden portion *c* of the fore-end is provided with an annular tongue or projection *c*³, fitting in a corresponding annular groove *d*⁴ in the metal portion *d*, (see Fig. 4,) and the screw *d*³ is set at an inclination to the length of the fore-end, thus tending to draw the wood rearward on the metal portion, so as to bring the tongue *c*³ snugly into its groove, thereby making a more secure connection between the wood and metallic portions of the fore-end than in the construction usually adopted.

The fore-end *d* is made with a pocket or recess *d*⁵ to receive the head of the screw *d*³, said recess having an inclined portion, in which the head of the screw bears. As shown in this instance, the lugs *a*² *a*³ on the gun-barrel are engaged by a sliding-bolt *f*, operated by the trigger-guard *g*, pivoted at *g*²⁰, and acted upon by a spring *g*², tending to retain it normally in position to retain the bolt *f*, engaged with the lugs *a*² *a*³, the said bolt having an opening or recess, through which the lug *a*³ passes.

The trigger-guard is provided with a projection *g*³, working in a slot in the bolt *f*, by which the said bolt is withdrawn when the rear end of the trigger-arm, provided with the thumb-piece *g*⁵, is depressed from the full to the dotted line position, Fig. 2, and by which the bolt is thrown forward by the action of the spring *g*² when the pressure is removed from the thumb-piece *g*⁵, the said spring permitting the bolt to yield when the barrel is closed and throwing the bolt forward as soon as the lugs *a*² *a*³ have passed below it.

The barrel is provided with a shell-retractor *r*, operated by engagement of its shank *r*² with the forward end of the breech-frame piece, as will be readily understood from Figs. 1 and 2. The head portion *r* of the retractor, which when in normal position, is unclosed, rests upon a shoulder *r*³, formed on the locking-lug *a*³ of the barrel, thus firmly supporting the said retractor when the charge is exploded. By this construction the extractor-head can be made longer than when not so supported without weakening the cartridge-chamber.

The hammer *h*, pivoted at *h*², works in a recess or chamber *b*⁴ in the breech-frame piece,

which at all times completely incloses the striking end of the hammer, and is provided with a slot or opening, through which the thumb-piece or handle h^3 of the hammer projects, said thumb-piece projecting from a portion h^4 of the hammer, which is concentric with its pivot, so that the said hammer practically fills and closes the slot in the breech-frame piece in all positions of the hammer, although permitting the handle h^3 to work in said slot, thus producing a very desirable construction and finish for the firing mechanism of the gun.

The concave curvature of the thumb-piece h^3 is preferably continued beyond the point where it would meet the groove h^4 of the hammer, and terminates at its forward end in a shoulder h^5 , which, without making an objectionable projection, constitutes an efficient indicator to show at once to the eye whether the hammer is cocked or not.

The hammer is shown as striking directly upon the cartridge to explode the same, although it is obvious that substantially the same construction of hammer and frame-work might be employed when an interposed firing-pin is used.

The hammer is acted upon by a mainspring i , inclosed in the chamber b^4 and connected with a projecting arm h^6 of the hammer by a link k , having pivot-pins engaging said hammer-arm and a suitable seat formed in the end of said mainspring in such manner that the end of the hammer-arm may approach the end of the mainspring when the latter is arrested by a stop m at the end of the movement by which it has caused the hammer to strike its blow. The said stop m is adjustable, being shown as a screw fitted closely in a socket-piece m^2 , fastened by a pin m^3 in the breech-frame piece, and the said stop is set to arrest the mainspring before it has impelled the hammer far enough to explode the cartridge; but after the spring has thus been arrested in the act of throwing the hammer the latter continues to move by its momentum, and thus strikes the blow upon the cartridge, the link k in this movement rising slightly in the fork or notch at the end of the mainspring in which its pivot-pin is seated. A light spring n , interposed between the end of the mainspring and the hammer-arm, tends to throw the hammer-arm h^6 back after the momentum of the hammer has been arrested by striking the cartridge, and the mainspring-stop m is so set that when the spring n is expanded it will carry the hammer back to half-cocked position, or so that its first notch h^7 will engage with the trigger as soon as that is released after the gun has been fired.

The trigger o may be of usual construction, being pivoted at o^2 and acted upon by a spring o^3 , that retains it in engagement with the notches of the hammer until pulled by the operator. The spring g^3 , that acts upon the trigger-guard, is a double-leaved or V-shaped spring, one arm of which presses against a shoulder on the trigger-guard, and

the other arm of which is supported against a cross-piece or bridge b^5 in the frame-work, which stands just at the front of the lug a^3 of the gun-barrel and affords additional security in the fastening for the barrel.

I claim—

1. The combination, with the hammer, of the mainspring connected therewith, the stop limiting movement of the said mainspring in throwing the hammer, the link connected with said hammer and mainspring, as described, to permit independent advance of the hammer after the mainspring is arrested, and the light spring on said link for causing the hammer to rebound after its independent movement, substantially as described.

2. The fore-end of a gun, comprising a wooden portion c , having an annular projecting tongue c^3 and a metal portion having a corresponding groove, and the fastening d^3 , inclined to the length of the said fore-end, substantially as and for the purpose described.

3. The combination of a barrel provided with a fastening-lug of a breech-frame piece and sliding bolt therein, the pivoted trigger-guard engaged with said bolt, the spring acting on the said trigger-guard, and the bridge b^5 in said breech-frame piece co-operating with said spring and fastening-lugs, substantially as described.

4. The combination of the breech-frame piece of the gun, provided with a slot at the rear of but not extending to the barrel, with a hammer pivoted in said frame-piece and provided with a handle or projection extending through said slot in the said frame-piece, and an indicating-shoulder in front of said handle, the hammer having a portion curved concentrically with its pivot at the rear of said handle, and a curved portion in front of the indicating portion, said curved portions respectively filling and closing the slot in the frame-piece when the hammer is down and cocked, substantially as described.

5. The combination of the wooden portion c of the fore-end with the metallic portion d , provided with a pocket or recess d^5 , having an inclined portion provided with a screw-hole, said iron and wooden portions being fastened together by an inclined screw having its head seated on the inclined face of said recess, substantially as described.

6. The combination of a barrel provided with a fastening-lug with the breech-frame piece and sliding bolt therein, the pivoted trigger-guard engaged with said bolt, and the double-leaved or V-shaped actuating-spring g^2 for said trigger-guard, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

REINHARD T. TORKELOSON.

Witnesses:

F. T. CRAIG,

THOS. F. BOWKER.