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Patented Dec. 24, 1901.

F. D. JAMES.
ILLUMINATOR FOR FIREARMS.

(Application filed Mar. 11, 1901.)

(No Model.)

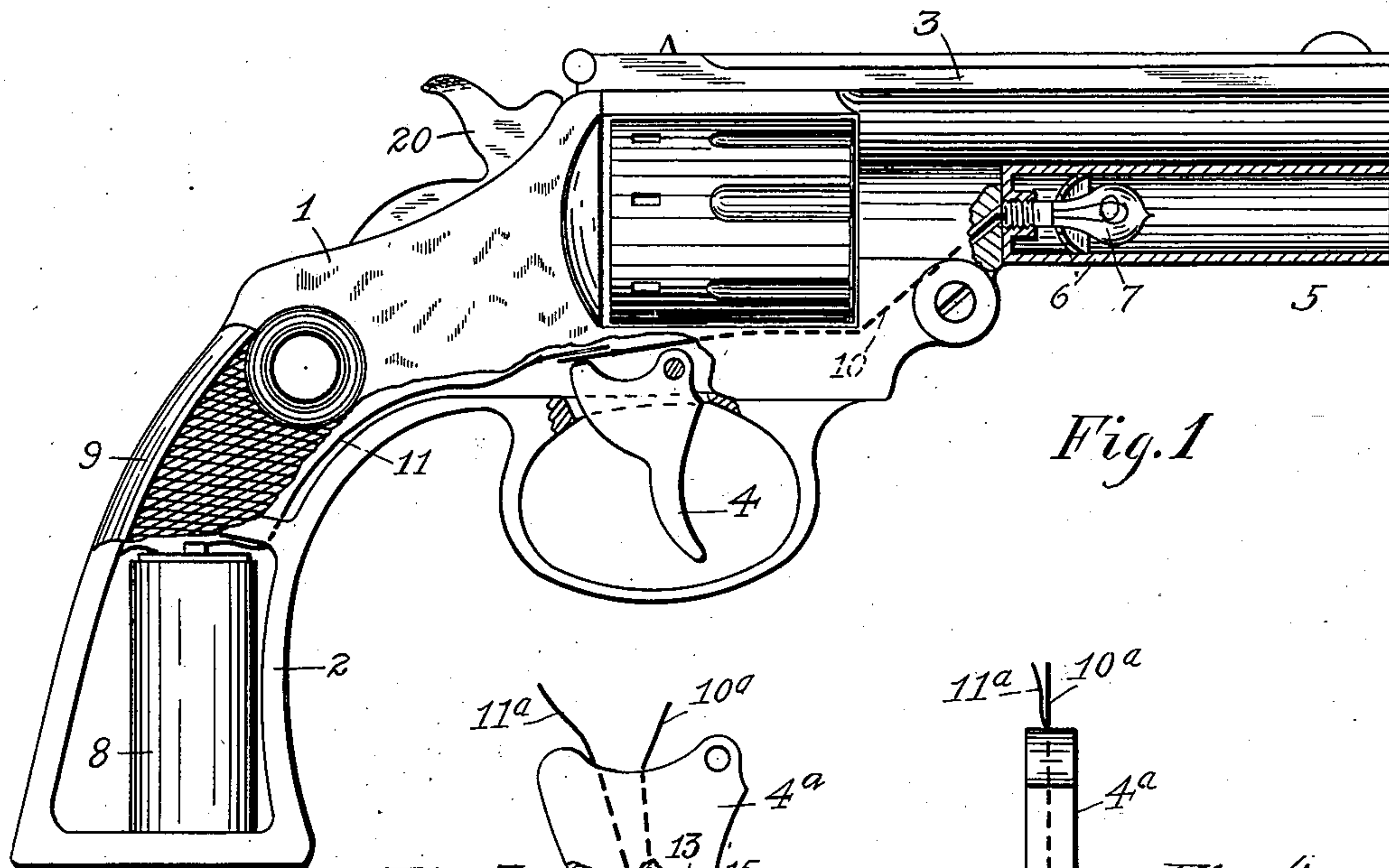


Fig. 1

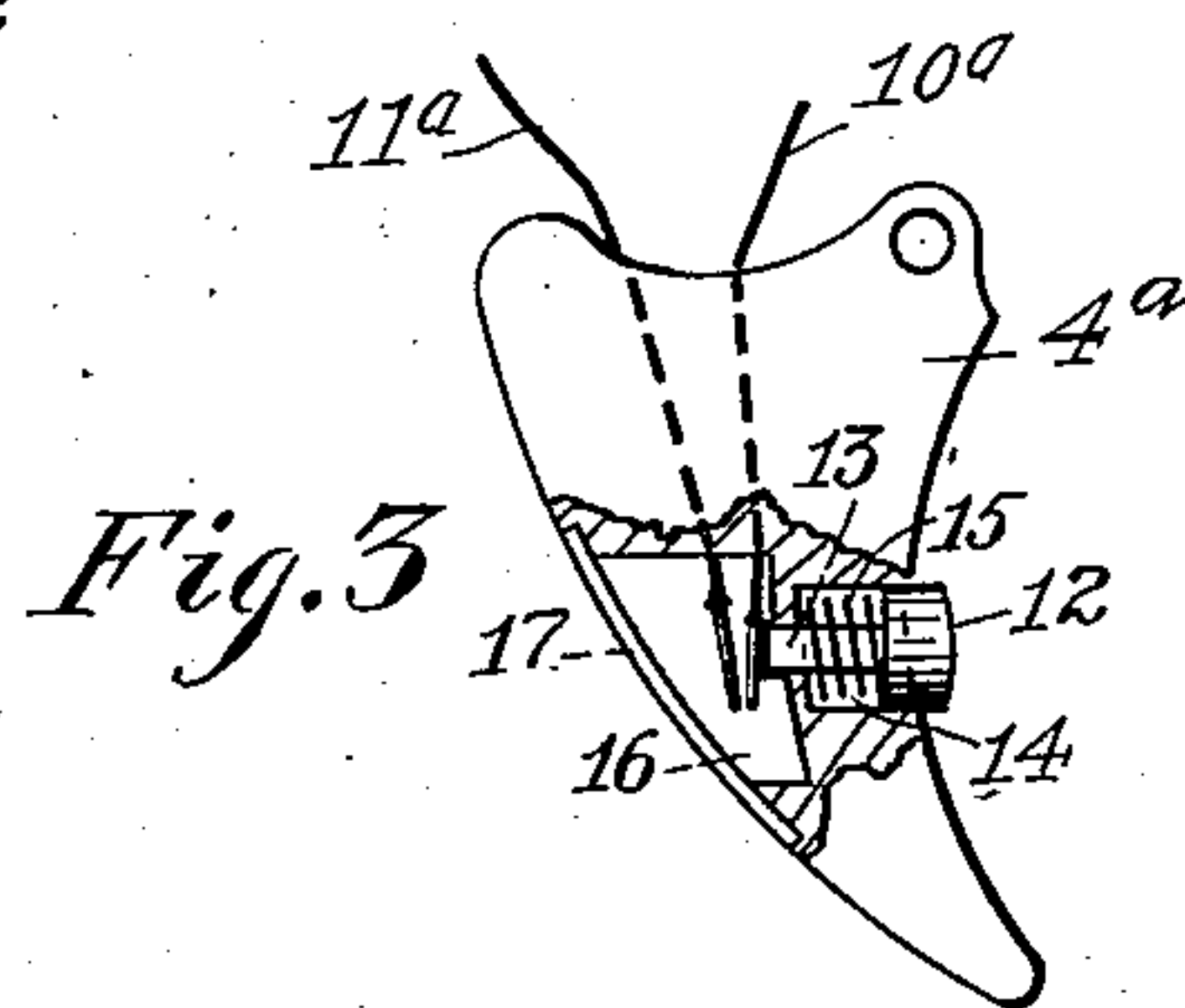


Fig. 3

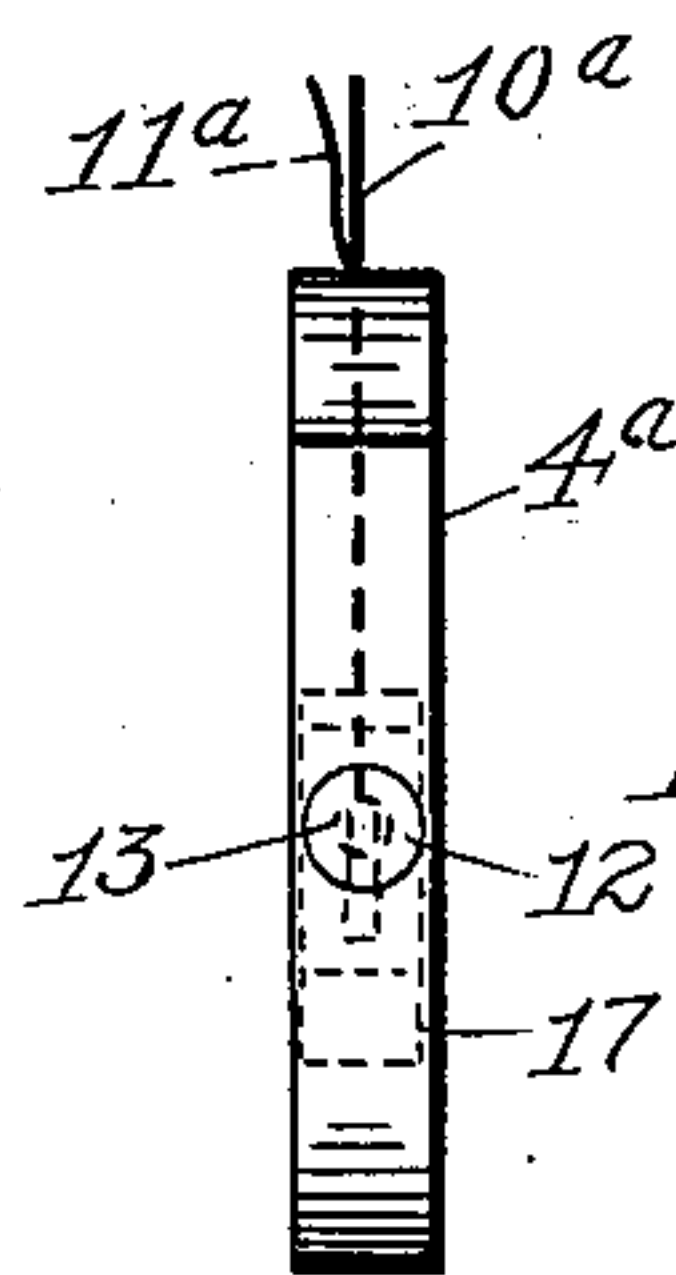


Fig. 4

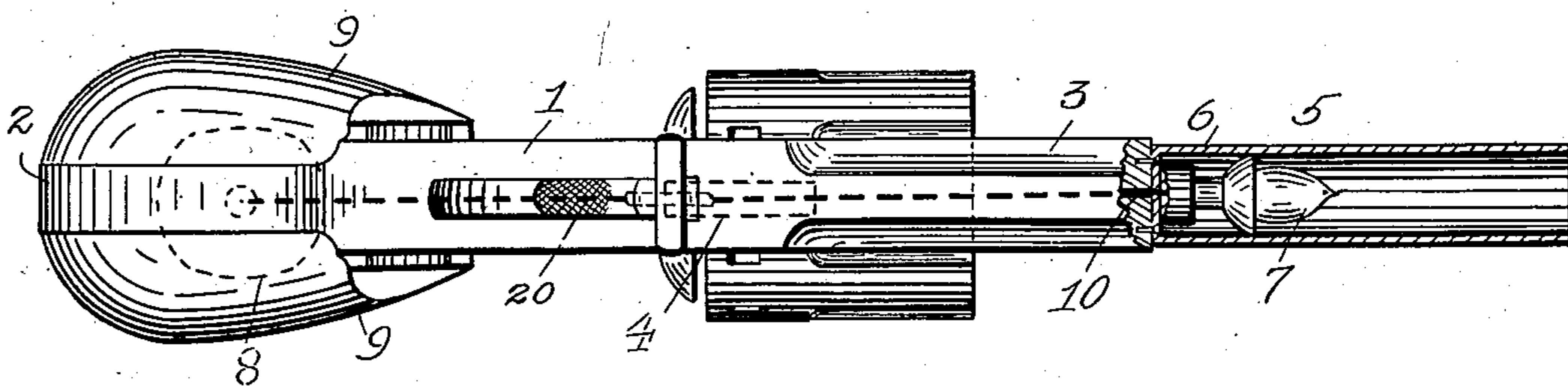


Fig. 2

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ILLUMINATOR FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 689,547, dated December 24, 1901.

Application filed March 11, 1901. Serial No. 50,687. (No model.)

To all whom it may concern:

Be it known that I, FRANK D. JAMES, a citizen of the United States of America, and a resident of Seattle, King county, Washington, have invented certain new and useful Improvements in Illuminators for Firearms, of which the following is a specification.

My invention relates to improvements in illuminators which operate conjunctively with firearms as an auxiliary aid thereto, and among numerous objects attained thereby and which are readily comprehended from the accompanying drawings and following specification is the perfect control of the energizing medium of the illuminator at critical moments and positive extinguishment thereof simultaneously with the discharge of the arm and preferred structural features incidental to the embodiment of the objects.

With reference to the drawings mentioned and included as a portion of this specification, Figure 1 is a side elevation of a revolver and illuminator, indicated in broken section and embodying my invention. Fig. 2 is a plan view of the same with portions broken away; and Figs. 3 and 4, side and edge views, respectively, of a trigger detached and modified to include means whereby the illuminator is operated independently of the action of the trigger.

Like characters of reference designate corresponding parts throughout the several views.

Before proceeding to set up any preferred embodiment of this invention the utility thereof with relation to an illuminator for firearms will be comprehensively set forth, and in furtherance thereof it should be understood that the structural features include any means by which a primary movement of a pull-off, as the trigger-finger when lying in operative relation to the trigger of the arm, will induce the auxiliary aid or illuminator to act, thereby rendering the said aid operative without additional effort, delay in aiming, or disalignment of the arm pending action, and, furthermore, rendering the arm operative in the ordinary and customary manner without requiring an unnatural grip or distraction of thought, as would be attendant in operating means worked by other members of the hand

simultaneously with or independently of the movement of the pull off.

As now considered, the invention is embodied in a small-arm, as a revolver, having an illuminator of any ordinary or preferred form fixed thereto in any suitable manner; but the style or form of the arm is immaterial, and the fixing of the illuminator thereto is a matter of convenience, inasmuch as the invention comprehends any style of percussion firearm necessitating a pull-off to put it into action and any form of an illuminator adapted for conjunctive cooperation with the primary action of the pull-off.

In the preferred embodiment the firearm consists of a revolver of the ordinary type, comprising a frame 1, handle 2, barrel 3, a trigger 4, and other usual and ordinary parts. Related to the arm is an illuminator, as consisting of a reflector-tube 6 and intermittently-operative means for illuminating, including an ordinary electric lamp 7 and an energizer or accumulator 8 in the form of a battery of any suitable or ordinary construction. The illuminator 5 as now included is conveniently fixed beneath the barrel 3, with the reflector-tube extending parallel thereto, so as to cast the reflected rays forwardly of the arm and preferably in direct alinement therewith, so as to flood the field of action with light when the lamp 7 is energized. For convenience the battery 8 is placed within the handle 2 of the arm at the base of the butt, Fig. 1, and may be constructed of suitable form to fit between the detachable side pieces 9 thereof without requiring modifications in constructing the arm. The lamp 7 is suitably fixed at the base of the reflector-tube, with one terminal connected to the adjacent metallic portions of the arm, and one pole of the battery is also connected to adjacent metallic portions, while the opposite terminal and pole of the lamp and battery are included in a suitable open electrical connection insulated from the metallic portions of the arm. This connection consists in the present instance of insulated wires 10 and 11, extending from one terminal of the lamp and from one pole of the battery, respectively, to separated points adjacent the position of the trigger of the piece.

To effect an illumination, the circuit between the battery and lamp is conveniently closed by primary action of a pull-off or the trigger-finger when lying in operative relation to the trigger 4 and is preferably accomplished by a slight movement of said trigger to effect a connection of the wires 10 and 11, Fig. 1, or the said connection may be effected by providing a suitable contrivance, likewise operated by the primary movement of the pull-off or trigger-finger, but leaving the said trigger in action, Figs. 3 and 4. As now considered, this contrivance is preferably mounted on the trigger and comprises a suitable push-button, as 12, operatively mounted in the face of the trigger at a point where the trigger-finger normally plays in operating the arm and has a suitable projection therefrom, so that primary movement of the finger will first depress the button and complete the circuit to cause an illumination prior to perceptible movement of the trigger.

The push-button 12 is conveniently provided with a stem 13 and is operatively mounted in a suitable recess, as 14, formed in the trigger, with the stem projecting rearwardly, and a coiled spring, as 15, under the head of the button serves to return it to normal position after each operation. The wires 10^a and 11^a are brought into operative relation to the end of said stem in any convenient manner, as through suitable ways conveniently formed in the trigger, and the ends thereof lie in a suitable recess, as 16, formed in the rear edge of the trigger, which recess is closed by a suitable removable cover 17. One of the wires, as 11^a, is preferably fixed to the stem 13 by a suitable insulated connection, while the second wire is so positioned as to be contacted by the first when the button is depressed, and thereby render it possible to produce a continuous or flashing light without movement of the trigger. When desired to close the circuit by movements of the trigger, one of the wires, as 10^a, is fixed thereto by a suitable insulated connection, and the second wire, as 11^a, is conveniently set so as to be contacted by the first as the trigger is moved, and thereby render it possible to obtain a continuous light by holding the trigger in a slightly-retracted position or a flashing light by moving the trigger reciprocally.

It will be understood that the free ends of

the wires 10 and 11 are conveniently provided with suitable electrodes of any ordinary or desirable construction, which render the connection by contact more positive than would the bare ends of the wires if left in their usual form.

The firearm thus produced operates substantially as follows: Granting an emergency at night, the arm is grasped in the usual manner, with the trigger-finger resting in the guard, and is pointed in the supposed direction of attack. Slight pressure is then applied to the trigger, with a resultant flash from the illuminator, which exposes the field of operation, followed by the usual full movement of said finger, if desired to discharge the piece. As the piece is fired the trigger returns, as usual, to normal position, and consequently separates the electrodes on the wires and insures the instant extinguishment of the light, and the operator is thus protected by the darkness.

Obviously an illuminator and firearm placed at separate points can be cooperatively connected in a manner substantially equal to the disclosure and other means than the trigger-finger employed to effect operative movement of the means for energizing the illuminator and to simultaneously place the piece under operative control of the means for effecting said movement.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination of a firearm, the trigger thereof, an illuminator, an electrical energizer and a push-button controlling the operation of said energizer and cooperatively associated with said trigger.

2. The combination of a firearm, a trigger mechanism, an illuminator, a push-button to control the energizing of said illuminator, operatively associated with said trigger mechanism during the primary movement thereof, and means associated with said mechanism to extinguish the illuminator by action thereof following said primary movement.

Signed by me at Seattle, King county, Washington, this 6th day of February, 1901.

FRANK D. JAMES.

Witnesses:

W. PARRY SMITH,
D. A. MARSHALL.