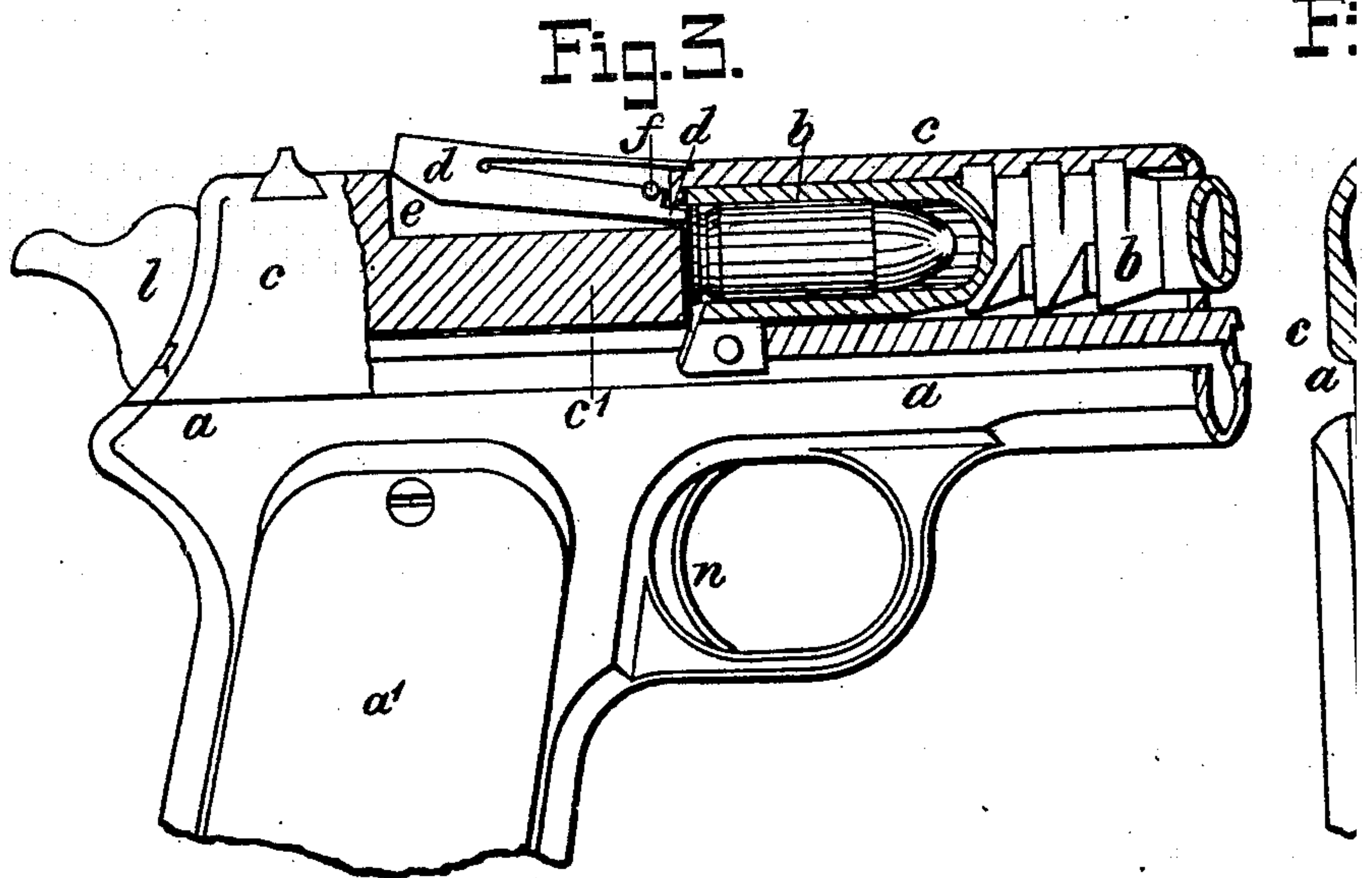
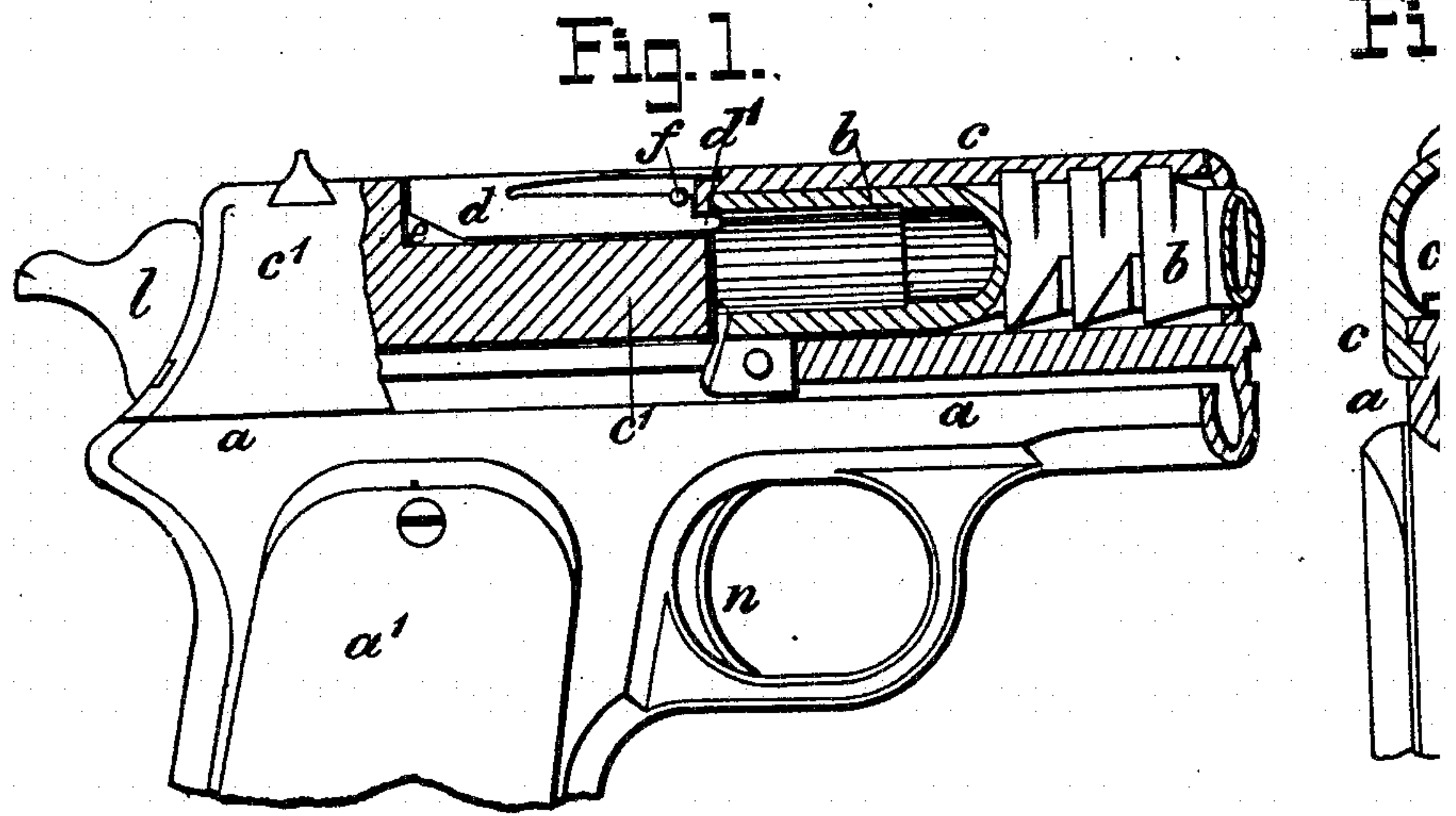


No. 891,498.

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J. J. PEARD.
INDICATOR FOR FIREARMS.
APPLICATION FILED NOV. 14, 1907.



Witnesses.
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Inventor
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UNITED STATES PATENT OFFICE.

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INDICATOR FOR FIREARMS.

No. 891,438.

Specification of Letters Patent.

Patented June 23, 1908.

Application filed November 14, 1907. Serial No. 402,133.

To all whom it may concern:

Be it known that I, JAMES J. PEARD, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Indicator for Firearms, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

10 This invention relates to indicators for breech-loading firearms, the main object being to provide a positive and reliable device for indicating whether the chamber of the barrel is empty and, therefore, requires to be charged with a cartridge before the arm is in the condition to be fired, or whether a cartridge is contained in the chamber of the barrel, and the arm is prepared to be fired, requiring only the operation of the firing-
20 mechanism.

Another object of the invention is to provide a chamber-indicator which shall be simple and inexpensive in construction, and the indicating positions of which shall be readily distinguishable by a touch, as well as at a glance, so as to constitute a reliable indicator of the condition of the chamber, in the dark as well as in the light.

30 These objects are attained by a device of very simple and practical construction, positive and reliable in use and not liable to get out of order.

On account of the great rapidity of the operations of the breech-mechanism in automatic smallarms, it being such that the eye cannot follow them, a reliable chamber-indicator is of especial advantage with and well adapted for use in this class of firearms. In the accompanying drawings I have, therefore, chosen to illustrate the application of my invention to an automatic magazine-pistol; but the invention may also be applied, as I would have it understood, to other classes of breech-loading firearms.

45 In the accompanying drawings, representing an embodiment of the invention, Figure 1 is a right-hand side elevation of the rear portion of a well-known automatic pistol, partly in longitudinal section on the line 1—1 of Fig. 2, showing the chamber of the barrel empty and the indicator in the lowered position. Fig. 2 is a front view of the same, partly in a vertical transverse section through the frame and the breech-slide at a

point some distance forward of the breech-bolt, with the barrel removed and the indicator in the lowered position. Fig. 3 is a side elevation similar to Fig. 1, but showing a cartridge in the chamber of the barrel, and the indicator raised and projecting above the top of the breech-slide. Fig. 4 is a front view, partly in vertical transverse section, similar to Fig. 2, but with the indicator in the raised position.

Similar letters refer to similar parts throughout the several views.

In the pistol represented in the drawings the barrel *b* is supported upon the frame *a*, and on top of the frame the breech-slide *c* is fitted to slide rearward and forward, the sides of the breech-slide overlapping the frame, interlocking longitudinal ribs and grooves on slide and frame holding the breech-slide to the frame and guiding it thereon. The rear part of the breech-slide *c* forms the breech-bolt *c'*, adapted to close the chamber of the barrel, and the forward portion of the breech-slide *c* extends in semi-tubular form and incloses the barrel.

On firing a shot the breech-slide and the barrel recoil together, then the barrel becomes disengaged from the breech-slide and the rearward movement of the barrel is arrested, while the breech-slide continues to recoil, thus opening the breech, after which the breech-slide is returned forward and interlocked with the barrel, thus closing the breech.

The frame and the breech-slide in rear of the barrel form the receiver and an opening is provided for the ejection of the cartridge shells, and any suitable firing, extracting and ejecting mechanisms of well-known construction may be combined with the receiver and the breech-bolt. The frame has the grip or handle *a'* below the receiver, and the hammer *h* and other parts of the firing-mechanism are fitted in the frame in rear of the grip, while the trigger *n* is located in front of the grip. Cartridges may be supplied by one of the usual feeding-devices or magazines for holding a number of cartridges and for presenting the cartridges in succession in front of the breech-bolt when the same is in the open rear position, so that by the forward closing movement of the breech-bolt the cartridge is transferred to the chamber of the barrel.

All the parts thus far referred to are of the

same construction and mode of operation as those of the well-known Colt automatic pistol, and forming no part of the present invention require no further description or illustration herein, except so far as certain features will be referred to hereinafter. Moreover, as will be obvious, these parts may be replaced by other parts of usual or suitable construction.

10 When a pistol is carried with the expectation that its use will be required, for offense or defense, and that the occasion for its use may arise suddenly at very short notice, it is important, in order that the pistol be ready
15 for instant use, to have it charged and placed in a condition in which it requires for effective use nothing but the grasping, aiming, and firing by pulling the trigger. An automatic pistol, such as that described and represented, requires, in order to be thus prepared, that it be supplied with a loaded magazine, and that a cartridge be inserted into the chamber of the barrel and the hammer be
20 cocked; the arm is then ready for firing a number of shots in rapid succession, requiring only a pull of the trigger for each shot. The first and most important requirement, therefore, in this class of firearms, as well as in hand-operated ones, for making them
25 ready for firing, is that a cartridge be contained in the chamber of the barrel; but with the breech-slide forward in firing position, in which it covers the barrel, while the breech-bolt closes the breech of the barrel, it is not
30 possible to ascertain if the chamber of the barrel contains a cartridge or not, except by drawing the breech-slide to the rear far enough to permit the inspection of the chamber. This, however, would require time and mental
35 effort, which cannot be spared when the instant use of the arm is vital.

To remove all uncertainty as to the charged or empty condition of the chamber of the barrel, the indicator forming the subject of the present invention is provided.
45 This indicator, in the form shown in the drawings, consists in the spring-actuated lever d seated in a narrow radial groove e cut from the outside through the top of the breech-slide parallel to the axis, into the breech-bolt c^1 , at its forward end and at a
50 suitable angle to the vertical plane through its axis, so as not to interfere with the extractor, firing-pin or other parts carried by the breech-bolt, Figs. 2 and 4. The depth of this groove is such that the bottom of the groove corresponds with and forms a continuation of the lower edge of a small horizontal hole e^1 bored through the face of the
55 breech-bolt c^1 , so as to enter into the groove e and form a forward extension of the same, communicating, when the breech-bolt is in the forward closed position, with the chamber of the barrel. The hole e^1 in the face of
60 the breech-bolt is located at some distance

radially from the center of the breech-bolt, and is of a diameter to be entirely on the inside of the wall of the barrel surrounding the chamber. The indicator d is loosely fitted in the groove e and has at its lower forward end a cylindrical projection d^1 which
70 corresponds with the hole in the breech-bolt, and, when the indicator is seated in the groove, the projection d^1 loosely extends through the hole and projects forward some distance beyond the face of the breech-bolt.
75 A transverse pin f , located a short distance in rear of the face of the breech-bolt, secures the indicator d in its seat and serves as a pivot for the indicator on which the same may freely turn. Above the pin f the indicator is divided into two parts by a horizontal cut running from the front some distance rearward into it, and the portion above
80 the cut extending forward to the same length as the projection d^1 , has been thinned so as to form an integral flat spring, the forward end of which rests upon the breech-bolt in a shallow forward extension of the groove e .
85 The tension of this spring, exerted forward of the pivot-pin f , serves to yieldingly hold the indicator d down in its seat in the breech-bolt, in which position the top of the indicator is in its whole length flush with the top surface of the breech-slide c , see Figs. 1 and
90 2. If, however, pressure is exerted from the front against the projection d^1 of the indicator d , the spring yields and the indicator is turned upon the pivot-pin f as a fulcrum, so that the rear end of the indicator is raised
95 out of its seat in the breech-bolt.

On account of the location of the pivot-pin so near the forward end of the indicator, and of the much greater length of the portion in rear of the pivot, a slight rearward movement
100 of the projection d^1 causes a much greater movement of the rear end of the indicator, by which the same is raised so as to project a considerable distance above the top of the breech-slide, see Figs. 3 and 4.
105

From the foregoing description of the construction, the operation of the indicator will be readily understood. If the breech-slide is moved forward when the chamber of the barrel is empty, the forward projection d^1
110 of the indicator d does not encounter any resistance, and the indicator is, by the tension of its spring, kept in its lowered position in the breech-slide, flush with the top of the same, and not perceptible from the rear or
115 side of the pistol. If, however, a cartridge is contained in the chamber of the barrel, when the breech-slide is moved forward, the projection d^1 of the indicator will be brought into contact with the base of the cartridge,
120 and when the breech is closed, the cartridge will force the projection rearward into the breech-bolt, thereby the indicator will be turned on its pivot until the rear portion of the indicator projects above the top of the
125 130

breech-slide in a position and to a degree which make it readily perceptible at a glance as well as to the touch.

The location of the indicator is such that while the projection is certain to encounter the base of a cartridge in the chamber, it cannot contact with the primer of the same.

It will be understood that the use of the indicator is not confined to the combined breech-slide and breech-bolt of an automatic pistol, and that it may be applied to any other kind of breech-loading fire-arms having a breech-closing means the closing movement of which is adapted to actuate the indicator when a cartridge is present in the chamber of the barrel, without departing from the spirit of the invention.

It will also be understood that various changes may be made in the construction and arrangement of the details without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent is:

1. In a breech-loading firearm, the combination of a chamber to receive a cartridge for firing, a breech-closing means, and an indicator yieldingly supported in the breech-closing means and having a part located radially within the cartridge-chamber and adapted for contact with the rear face of a cartridge in the chamber, whereby the indicator is moved to indicate the presence of a cartridge in the chamber.

2. In a breech-loading firearm, the combination of a chamber to receive a cartridge for firing, a breech-closing means, and an indicator yieldingly supported in the breech-closing means and having a projection located radially within the cartridge-chamber and adapted for contact with the rear face of a cartridge-head in the chamber out of line with the primer, whereby the indicator is moved to indicate the presence of a cartridge in the chamber.

3. In a breech-loading firearm, the combination of a chamber to receive a cartridge for firing, a breech-bolt, and an indicator yieldingly supported in the breech-bolt and having a part located radially within said chamber and adapted for contact with the rear face of a cartridge in the chamber, whereby the indicator is moved to indicate the presence of a cartridge in the chamber.

4. In a breech-loading firearm, the combination of a barrel having a chamber to receive a cartridge for firing, a breech-closing

means, and an indicator yieldingly supported in the breech-closing means and having a part located radially inside of the chamber in the barrel and adapted for contact with the rear face of a cartridge in the chamber whereby the indicator is moved to indicate the presence of a cartridge in the chamber.

5. In a breech-loading firearm, the combination of a barrel having a chamber to receive a cartridge for firing, a breech-bolt and an indicator yieldingly supported in the breech-bolt and having a part located radially inside of said chamber and adapted for contact with the rear face of a cartridge in the chamber, whereby the indicator is moved to indicate the presence of a cartridge in the chamber.

6. In a breech-loading firearm, the combination of a frame, a barrel having a cartridge-chamber, a breech-slide covering the barrel, and an indicator yieldingly supported in the breech-slide and having a part located radially within said chamber and adapted for contact with the rear face of a cartridge in the chamber, whereby the indicator is moved to indicate the presence of a cartridge in the chamber.

7. In a breech-loading firearm, the combination of a frame, a barrel having a cartridge-chamber, a breech-slide comprising a breech-bolt and covering the barrel, and an indicator yieldingly mounted in the breech-bolt and having a projection extending through an aperture in the face of the breech-bolt for contact with a cartridge in the chamber of the barrel, whereby the indicator is moved to indicate the presence of a cartridge in the chamber.

8. In a breech-loading firearm, the combination of a frame, a barrel having a cartridge-chamber, a breech-slide comprising a breech-bolt and covering the barrel, and an indicator mounted in the breech-bolt and having a projection extending through an aperture in the face of the breech-bolt for contact with a cartridge in the chamber of the barrel, whereby the indicator is moved to indicate the presence of a cartridge in the chamber, and means for yieldingly holding down the indicator within the breech-bolt.

This specification signed and witnessed this 6th day of November, A. D. 1907.

JAMES J. PEARD

In the presence of—

A. L. ULRICH,
K. POWERS.