

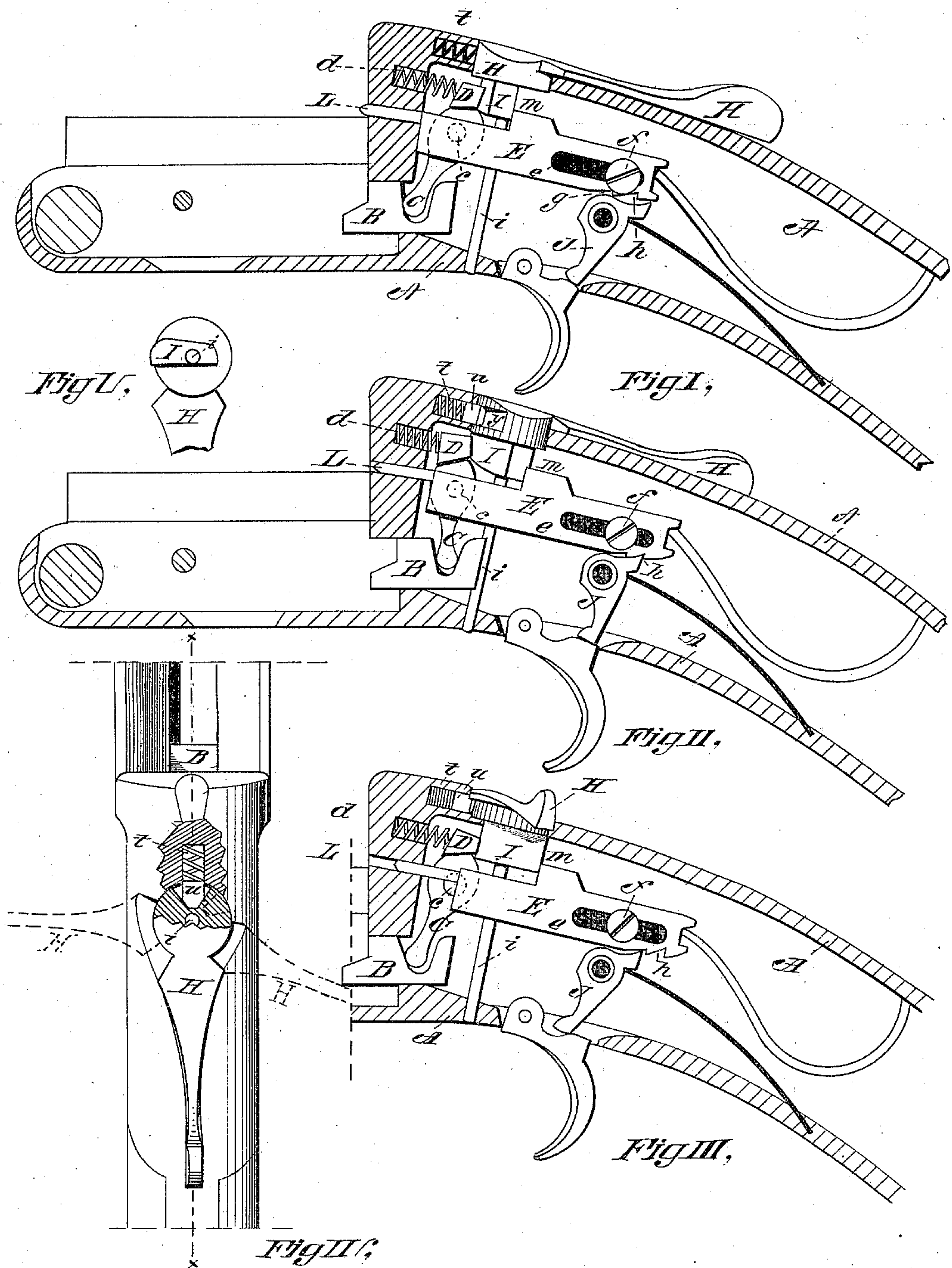
(No Model.)

A. HYDE.

FIRE ARM.

No. 326,986.

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Witnesses,
G. W. Smithies.
E. T. Ramsay

Inventor,
Andrew Hyde,
By R. F. Hyde.
att'y,

UNITED STATES PATENT OFFICE.

ANDREW HYDE, OF HATFIELD, MASSACHUSETTS.

FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 326,986, dated September 29, 1885.

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To all whom it may concern:

Be it known that I, ANDREW HYDE, a citizen of the United States, residing at Hatfield, in the county of Hampshire and State of Massachusetts, have invented a new and useful Improvement in Fire-Arms, of which the following is a specification.

My invention belongs to that class of fire-arms in which a top-lever "action" is used in connection with a striker contained within the receiver; and the first part of my invention consists in the combination, with a bolt-actuating lever and internal striker, of a hand-lever adapted to be swung from the outside of the receiver to, in that action, bring the striker to a half-cock and move the bolt to permit the gun to be broken open.

The second part consists in the combination, with a bolt-actuating lever and internal striker, of a hand-lever adapted to be swung from the outside of the receiver to, in one direction of its swing and in the same motion, bring the striker to a half-cock and move the locking-bolt, and adapted to, upon being swung in the reverse direction from its normal position, bring the striker successively to a half-cock and full-cock, or from a half-cock to a full-cock.

The third part consists in the combination, with a bolt-actuating lever and internal striker, of a hand-action lever adapted to be swung to bring the striker to a full-cock and adapted to be farther swung to form a "safety" catch to the striker and an external indicator.

The fourth part consists of spring-actuating means for returning the hand-lever to its normal position from either side to which it may be swung; and

The fifth part consists of a novel arrangement and construction of the trigger, dog, and half-cock notch in the striker, whereby when the striker is at a half-cock power applied to the trigger does not act in a direction capable of breaking off the metal forming the notch, and so releasing the striker.

My invention is fully illustrated in the accompanying drawings, in which Figure I is a vertical section through the receiver of a gun having my improvements, upon the dotted line *xx* of Fig. IV, and showing the parts in the position taken at the time of firing. Fig. II is the same section, showing the striker

brought to a half-cock and the locking-bolt in the act of being withdrawn. Fig. III shows substantially the same section, with the striker brought past the full-cock to a safety position. Fig. IV is a partial sectional plan view showing the means for returning and holding the action-lever, and Fig. V is a detail view of one end of the action-lever reversed.

B is a locking-bolt operatively connected to one end of a lever, C, pivoted at *c*, provided with a cam-block, D, at its end opposite the bolt B, and having a distending-spring, *d*, and operating by its vibration upon its pivot *c* to reciprocate the bolt B to and from a locking position.

E is a striker provided with a firing-point, L, upon one end and a mainspring to act upon the other, and held to reciprocate in a straight line by the firing-point L bearing in a corresponding hole in the breech-wall of the receiver, and by a pin, *f*, received through a slot, *e*, coinciding with the direction of its movement. The striker E is also provided with a cam-block, *m*, upon its upper side, and with a half-cock notch, *h*, and full-cock notch *g* upon its lower side.

J is a spring-actuated dog adapted to bear upon the lower side of the striker E, and adapted also to be in operative contact with the trigger.

H is a top-action lever pivoted at *i* and adapted to be swung by the hand to one side to cause a cam inwardly projecting to come against block D of lever C to reciprocate the bolt B, and adapted to be in turn acted on, by means of the spring-distended head D, to be returned to the position shown in Fig. IV. So much of this device is old. But in order to cause the swing of the lever H, in releasing the bolt B, to also bring the striker E to a half-cock, I interpose a cam-head, I, upon the lever between the block D of lever C and a cam-block, *m*, upon the striker, so that in the same motion of releasing the bolt B the striker is moved to a half-cock, as shown in Fig. II.

The full-cocking of the striker is effected by swinging the top lever in one direction and the half-cocking by a movement in the opposite direction from the central or locked position. When the top lever is swung to throw the longer cam into engagement with the striker, the shorter cam does not move the

bolt-locking apparatus far enough to fully withdraw the bolt, and therefore the barrels remain locked.

In this device, as in a gun with hammers, a deliberate act is required in cocking, and the gun is absolutely safe at the time of opening or closing a loaded barrel.

The cam I is adapted to, upon a movement in the direction shown in Fig. III, bear against the block *m* of the striker to move it to a full cock, as shown in Fig. III. Said cam I is of the configuration as seen in Figs. III and V, so as to clear block D in this full-cocking movement, to thereby leave the gun bolted during said motion. The cam I is further adapted to be further swung from its full-cocking position to be on a dead-center with pivot *i*, to thereby securely hold the striker against any action of the mainspring to throw it, as seen in Fig. III, and an outside shoulder on lever H is adapted to come against a corresponding shoulder above the receiver and in its path, as seen in Fig. IV, to determine this safety position of the lever, and permit it to be swung thereto without care. The cam I is, from its configuration, as shown, adapted to be swung in the direction of full-cocking the striker to bring it from a fired position, as shown in Fig. I, to a half-cock, or continuously to a full-cock, without in the movement disturbing the bolt B, which is of advantage where misfires have occurred, and at other times.

In order that the lever H may be returned to the position shown in Fig. IV upon being released by the hand from half or full cocking the striker, I form a V-shaped opening, *y*, in the periphery of the head concentric to the hinge *i*, and in a bore in the receiver, and opposite the mouth of opening *y*, when the lever is in the position seen in Fig. IV, I place a spring, *t*, having a head, *u*, adapted to operate in connection with either face of opening *y* to bear against one or the other face as the lever H is swung in one or the other direction. The action, consequently, of said spring is to return and hold the lever H in place, as shown in Figs. I and IV.

The opening *y* is relatively arranged with lever H and spring *t* to cause the lever, when swung into the "safety" position, (seen in Fig. III, and indicated in dotted lines, Fig. IV,) to force the head *u* entirely out of opening *y*, to cause said head to rest upon the periphery of the lever adjacent to the mouth of opening *y*, so that the spring catch no longer operates to return the lever H, but so that a slight movement of the free end of lever H by the hand permits the head *u* to once more enter opening *y* and the spring once more to act.

Upon striker E the half-cock notch *h* is shown deeper than the full-cock one, *g*, which, when the dog J is engaged therewith, as seen in Fig. II, permits the lower end of the dog to rest upon the trigger in such a position as to bring it upon a dead-center with the direction of any pull exerted upon the trigger, the result of which is that any force brought upon the trigger acts directly upon the stud forming the hinge for the dog, and upon the pin *f* guiding the striker, and there is little possibility of accidentally releasing the striker.

Without departing from the spirit of my invention, the striker may be hinged to be swung to a half or full cock by the movement of lever H.

Now, having described my invention, what I claim is—

1. In combination, in a concealed hammer gun, a pivoted action-lever, cam projections connected thereto at opposite sides of the pivot and of unequal length, and the striker placed in line of movement of the cams, so that a movement of the lever in one direction may half-cock, and in the other direction full-cock the piece, substantially as described.

2. The combination, with a pivoted bolt-operating lever and the striker of a concealed-hammer gun having a projection in rear of said lever, of a top-action lever having a double cam projection within the frame between said hammer projection and bolt-lever, positioned to engage with hammer and lever, substantially as described.

3. In a concealed-hammer gun, the combination of a sliding striker having a projection thereon, a pivoted bolt-actuating lever, and a spring bearing against the same, and a top lever having two cam projections of unequal purchase within the frame, extending between the bolt-lever and the projection on the striker, whereby the oscillation of the action-lever in one direction will move the striker to half-cock position without unlocking the bolt, while a movement in the other direction will cock the piece and unlock the bolt, as set forth.

4. In a concealed-hammer gun, the combination, with the striker having a projection therefrom, and a bolt-actuating lever positioned in front of said projection, of a top-action lever pivoted on a line between the striker and bolt-lever, having a double cam projection, which when turned lies in a straight line between the striker projection and the bolt-lever, as set forth.

ANDREW HYDE.

Witnesses:

DAVID HILL,
J. ARTHUR WAINWRIGHT.