

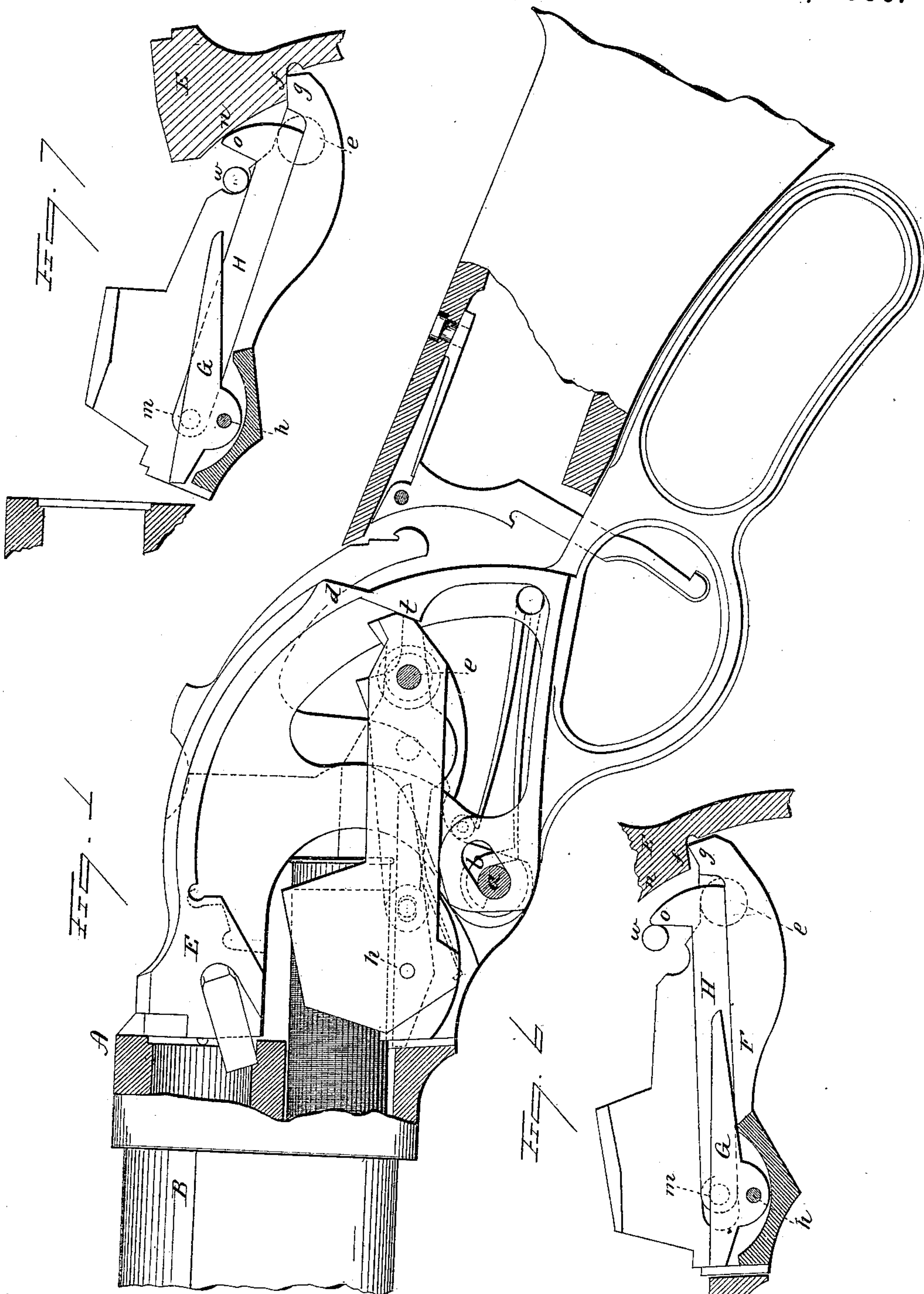
(No Model.)

W. MASON.  
MAGAZINE FIRE ARM.

2 Sheets—Sheet 1.

No. 354,329.

Patented Dec. 14, 1886.



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Fred C. Calk

Wm. Mason.  
By Atty. Inventor.  
Chas. E. Calk.

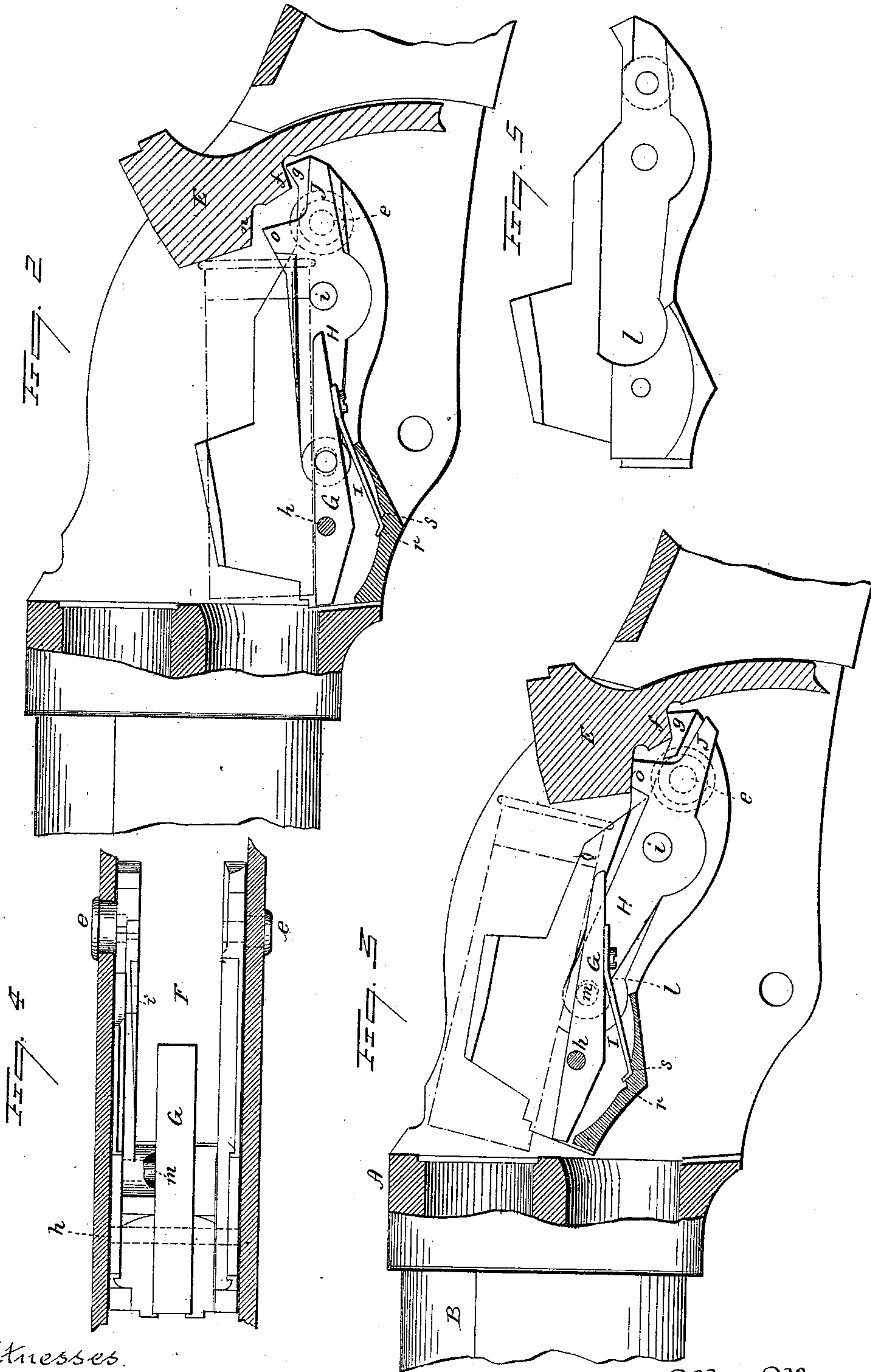
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Chas. E. Cook



# UNITED STATES PATENT OFFICE.

WILLIAM MASON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE  
WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

## MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 354,329, dated December 14, 1886.

Application filed May 3, 1886. Serial No. 200,940. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM MASON, of New Haven, in the county of New Haven and State of Connecticut, have invented new Improvements in Magazine Fire-Arms; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a sectional side view showing the parts in the closed or normal position; Fig. 2, a sectional side view showing the breech-piece just engaging the carrier; Fig. 3, same as Fig. 2, showing the breech-piece in its extreme open position and the carrier in its raised position; Fig. 4, a horizontal longitudinal section through the receiver, showing a top view of the carrier; Fig. 5, an inside view of the carrier, showing the recess in which the lever H is arranged; Figs. 6 and 7, modifications in the connection between the lever G and the breech-piece, showing the carrier respectively in the down and up position.

This invention relates to an improvement in that class of magazine fire-arms in which the magazine is arranged beneath the barrel, and in which the carrier for the transfer of the cartridge is hung at its rear end, and so as to swing up and down in a recess in the receiver, and particularly to that class of carrier in which a device is employed to raise the rear end of the cartridge faster than or to a higher point than that naturally given by the rise of the carrier, and whereby the cartridge will be brought more nearly into line with the barrel forward of the front face of the open breech-piece, the object of the invention being a simple and effective device for raising the rear end of the cartridge in advance of the carrier; and it consists in the construction, as hereinafter described, and particularly recited in the claims.

A represents the receiver, to the forward end of which the barrel B is attached, and beneath it the magazine, opening into the receiver at the rear in the usual manner.

E represents the breech-piece, which in this illustration is hung in the receiver below upon a pivot, *a*, and so as to swing backward and

downward in opening, and the particular breech-piece here shown is that of the Browning arm, described in Letters Patent of the United States No. 336,287, one of the peculiar characteristics of this breech-piece being a slot, *b*, in the breech piece at the pivot, inclined upward and backward from the pivot when the breech-piece is in the closed position, and so that in the first part of the opening movement of the breech-piece the rear part of the breech-piece falls, and so as to disengage the locking-shoulder *d* on the breech-piece from the corresponding abutment in the receiver; but the invention is not to be understood as limited to any particular class of breech-piece.

F is the carrier, hung at the rear upon pivots *e*, each side the receiver, and so as to swing up and down in the recess in the carrier. In its down position (seen in Fig. 1) it is in a plane, so that the rear cartridge in the magazine may pass freely onto the carrier, and in substantially the usual manner.

As here represented, the carrier is raised by means of a shoulder, *f*, on the breech-piece, adapted to strike a corresponding projection, *g*, on the carrier in rear of its pivot, and so that as the breech-piece approaches its open position, as seen in Fig. 2, the shoulder *f*, bearing upon the projection *g*, will, in the completion of the rear movement of the breech-piece, turn the carrier to its up position, as seen in Fig. 3.

In the bottom of the carrier, and near its forward end, a lever, G, is hung upon a pivot, *h*, the pivot being parallel with the axis upon which the carrier turns, and so that the lever may swing up and down in a plane parallel with the path of the carrier.

In the carrier, and, as here represented, upon the right-hand side, a lever, H, is hung upon a pivot, *i*, forward of the pivot upon which the carrier is hung, the carrier being constructed with a recess, *l*, in which the said lever may work. This lever extends forward from the pivot, and is hung to the lever G by means of a stud, *m*, extending from the lever G into a slot in the end of the lever H, the stud or pivot *m* being in rear of the pivot *h*, upon which the lever G is hung.



The breech-piece is constructed with a second shoulder, *n*, adapted to engage a corresponding projection, *o*, on the lever H in rear of its pivot; but the relation of the shoulders *f* and *n* on the breech-piece to the projection *g* on the carrier and *o* on the lever H are such, as seen in Figs. 2 and 3, that the shoulder *n* cannot engage the projection *o* on the lever H until after the shoulder *f* makes its engagement with the projection *g* on the carrier; but after such engagement by the shoulder *f* on the breech-piece, as seen in Fig. 2, a continued movement of the breech-piece turns the carrier, together with the levers H and G, upward, until the shoulder *n* on the breech-piece will strike the projection *o* on the lever H, and this projection *o* on the lever H being forward of the projection *g* on the carrier, and the pivot *i* of the lever H being forward of the pivot *e* of the carrier, it follows that the shoulder *n*, as the breech-piece continues its opening movement, will advance upon the projection *o* on the lever H somewhat faster than the movement of the rear end of the carrier. Consequently the rear end of the lever H will be depressed as the carrier rises, as seen in Fig. 3, and this depression of the rear end of the lever H causes the forward end to rise, and because of the connection of such forward end with the lever G in rear of its pivot the rear end of the lever G correspondingly rises, and being in the bottom of the carrier raises the rear end of the cartridge accordingly, and as clearly seen in Fig. 3—that is to say, in the completion of the movement of the breech-piece after it engages with the carrier, the levers G and H, with the carrier, are turned from the position shown of said parts in Fig. 2 to that shown in Fig. 3, and in which position the rear end of the cartridge is raised so as to be properly met by the advancing face of the breech-piece and readily transferred to its proper position in the barrel.

To hold the lever G in either its up or down position, I provide it with a spring, I, upon its under side, which works upon a corresponding surface in the carrier, in which are two notches, *r* *s*, respectively, one forward of the other. When in the down position, as seen in Fig. 1, the nose of the spring rests in the forward notch, *r*; but as the lever is turned in moving to the position seen in Fig. 3 the nose of the spring is drawn rearward from the notch *r*, and as the lever G reaches its extreme up position the nose of the spring falls into the rear notch, *s*, as seen in Fig. 3. Then, in order to return the lever G as the carrier descends, the breech-piece is constructed with a shoulder, *t*, which is adapted to strike an arm, J, on the rear end of the lever H as the breech-piece approaches its closed position, and as seen in Fig. 1, and which will raise the rear arm of the lever H and correspondingly turn the lever G to the position indicated in Figs. 1 and 2. The inside of the carrier, showing the recess in which the lever H is arranged, is seen in Fig. 5, which shows the recess *l*. The recess

extends through the rear end of the lever, as at *u*, and through this recess the arm J of the lever H extends into the path of the shoulder on the breech-piece.

While I prefer to employ the spring I to hold the lever G in its two positions, for the reason that when in its up position it insures the retention of the cartridge in its raised position while the breech-piece advances, so that the cartridge will be surely entered into the barrel before the lever can be misplaced, the spring may be dispensed with, and dependence had upon the friction of the parts to retain their proper position.

Instead of imparting to the lever H a swinging movement, it may be arranged to move longitudinally, as represented in Figs. 6 and 7. In this case the carrier is constructed with a longitudinal groove, into which the lever or slide H, or connection between the breech-piece and lever G, is arranged, and so as to move longitudinally. The forward end of the slide H is connected with the lever G by a pivot, *m*, above the pivot *h*, upon which the lever G is hung.

When in the down position, the lever G has the same relation to the breech-piece as hereinbefore described, and as seen in Fig. 6; but as the breech-piece approaches its open position the shoulder *f*, engaging the projection *g* on the carrier, as before, turns the carrier upward, and then, as the breech-piece completes its opening movement, a cam-like surface, *n*, on the breech-piece, corresponding to the shoulder *n*, first described, strikes the rear end, *o*, of the lever H, and because of the cam-like action will force the lever forward, as from the position in Fig. 6 to that seen in Fig. 7, and the forward end of the lever H, being connected to the lever G above its pivot, imparts a corresponding upward movement to the rear end of the lever, and as clearly seen in Fig. 7.

To insure the return of the lever G as the carrier descends, a stud, *w*, projects inward from the wall of the receiver forward of the projection *o* of the lever H, and so that said projection, striking the stud or shoulder *w*, will be caused to move rearward from the position seen in Fig. 7 to that in Fig. 6, and correspondingly return the lever G.

In both the cases which I have described there is the same eccentric connection between the lever G and the device between it and the breech-piece, and it is because of this eccentric connection that the movement of the lever or connection between said lever G and the breech-piece that the rising movement is imparted to the lever G under the rising movement of the carrier.

It will be evident from the foregoing that this connection may be of various shapes. By the term "lever," therefore, I wish to be understood as embracing any equivalent device, which being eccentrically connected at its forward end with the lever G, its rear end is adapted to receive a movement from and un-



der the last part of the opening movement of the breech-piece.

I claim—

1. In a magazine fire-arm in which the magazine is arranged beneath the barrel and opens into the receiver at the rear, the combination therewith of a breech-piece hung in said receiver, and adapted to swing backward and downward in opening, a carrier hung upon a pivot at the rear and arranged to swing up and down therein for the transfer of cartridges, a lever, G, in the bottom of the carrier and hung upon a pivot therein near the forward end of the carrier, a lever, H, arranged in said carrier and so as to move up and down therewith, the forward end of the said lever eccentrically connected to the said lever G and its rear end, o, in the path of the corresponding portion, n, on the breech-piece during the last part of the opening movement of the breech-piece, substantially as described, and whereby during the said last part of the opening movement of the breech-piece and ascent of the carrier the said lever G is turned upward to raise the rear end of the cartridge.

2. In a magazine fire-arm having the magazine arranged beneath the barrel and opening into the receiver at the rear, the combination therewith of a breech-piece, a carrier hung in the receiver and adapted to swing upward and downward for the transfer of a cartridge, the lever G, hung in said carrier near its forward end and extending backward, the lever H, hung in the said carrier forward of its pivot, and extending forward eccentrically hung to said lever G, and the breech-piece constructed with a bearing surface, n, adapted to engage a corresponding surface, o, on said lever H in rear of its pivot during the last part of the opening movement of the said breech-piece, substantially as described.

3. In a magazine fire-arm in which the magazine is arranged beneath the barrel and opens into the receiver at the rear, the combination therewith of a breech-piece hung in the receiver and adapted to spring backward and downward in opening, a carrier hung in the said receiver and adapted to swing upward and downward for the transfer of a cartridge, the lever G, hung near the forward end of the carrier and extending rearward, a lever, H, hung upon a pivot in the carrier forward of the pivot of the carrier, and extending forward is eccentrically connected to the said lever G,

the said carrier constructed with an extension, g, and the breech-piece with a corresponding shoulder, f, adapted to engage the said extension of the carrier as the breech-piece approaches its opening movement, the lever H, constructed with a projection, o, and the breech-piece with a corresponding shoulder, n, adapted to engage said projection o during the last part of the opening movement of the breech-piece, substantially as described.

4. In a magazine fire-arm in which the magazine is arranged beneath the barrel and opens into the receiver at the rear, the combination therewith of a breech-piece hung in the receiver to swing backward and downward in opening, the carrier hung in the receiver and adapted to swing up and down in the transfer of a cartridge, the lever G, hung upon a pivot near the forward end of the carrier, a lever, H, hung in the carrier forward of the pivot of the carrier, and extending forward is eccentrically connected to the said lever G, the said lever constructed with the projections o and J in rear of its pivot, and the breech-piece constructed with a shoulder, n, adapted to engage said projection o during the last part of its opening movement, and the said breech-piece also constructed with a bearing-surface, t, adapted to engage the projection J as the breech-piece approaches its closed position, substantially as described.

5. In a magazine fire-arm in which the magazine is arranged beneath the barrel and opens into the receiver at the rear, the combination therewith of a breech-piece adapted to open and close the rear end of the barrel, a carrier hung in the receiver and adapted to swing up and down in the transfer of a cartridge, the lever G, hung in the receiver near its forward end and extending rearward, the lever H, hung in the carrier upon a pivot forward of the pivot of the carrier, and extending forward is eccentrically connected to the said lever G, the said lever H constructed with a projection, o, and the breech-piece with a corresponding bearing surface, n, adapted to engage the said projection o as the breech-piece approaches its open position, and a spring, I, on said lever G, substantially as described.

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Witnesses:

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