

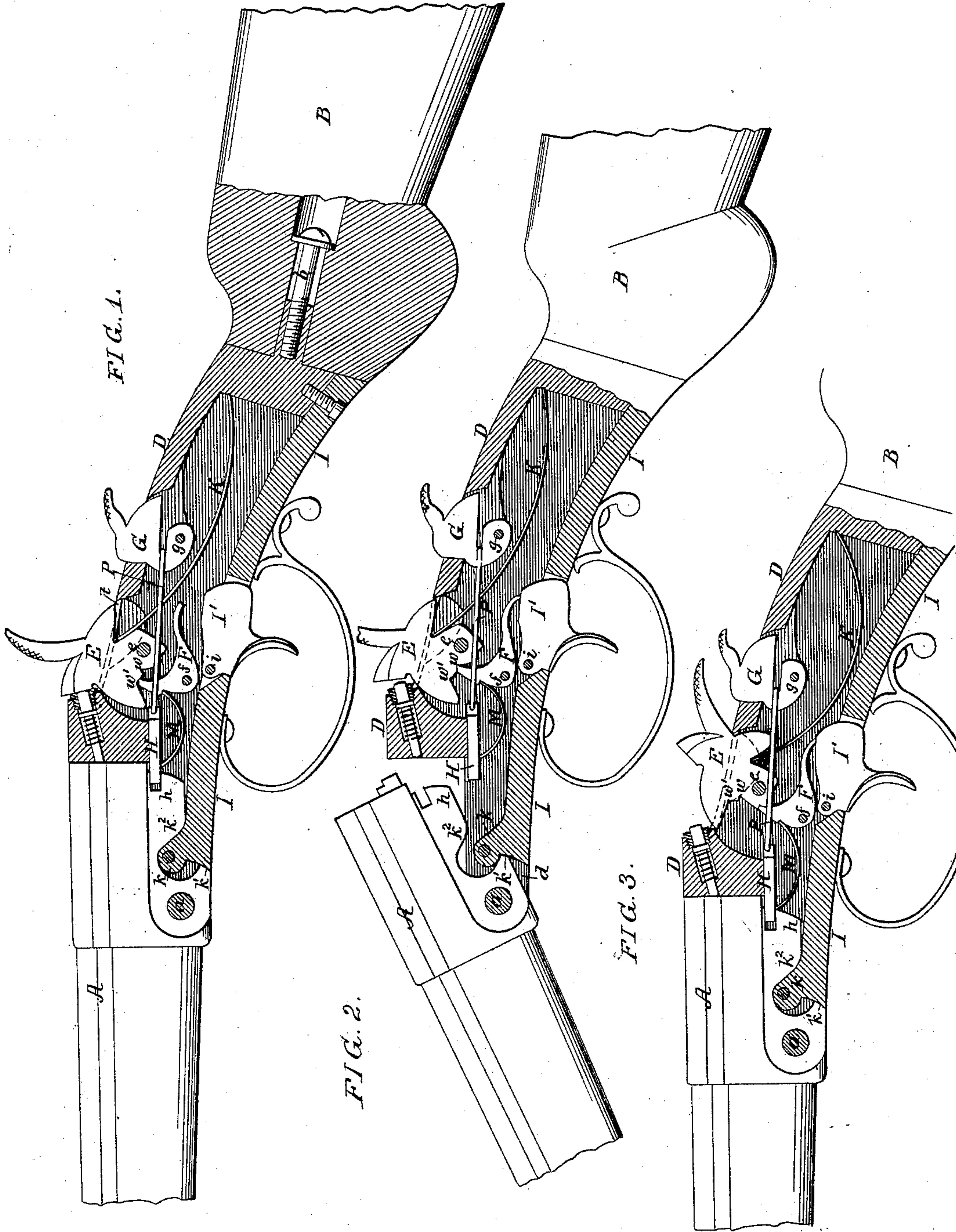
(No Model.)

2 Sheets—Sheet 1.

T. M. WALLIS.
BREECH LOADING FIRE ARM.

No. 301,021.

Patented June 24, 1884.



Witnesses
John McElayton.
James J. Tobin

Inventor:—
Thomas M. Wallis
by his Attys.
Howson and Co.

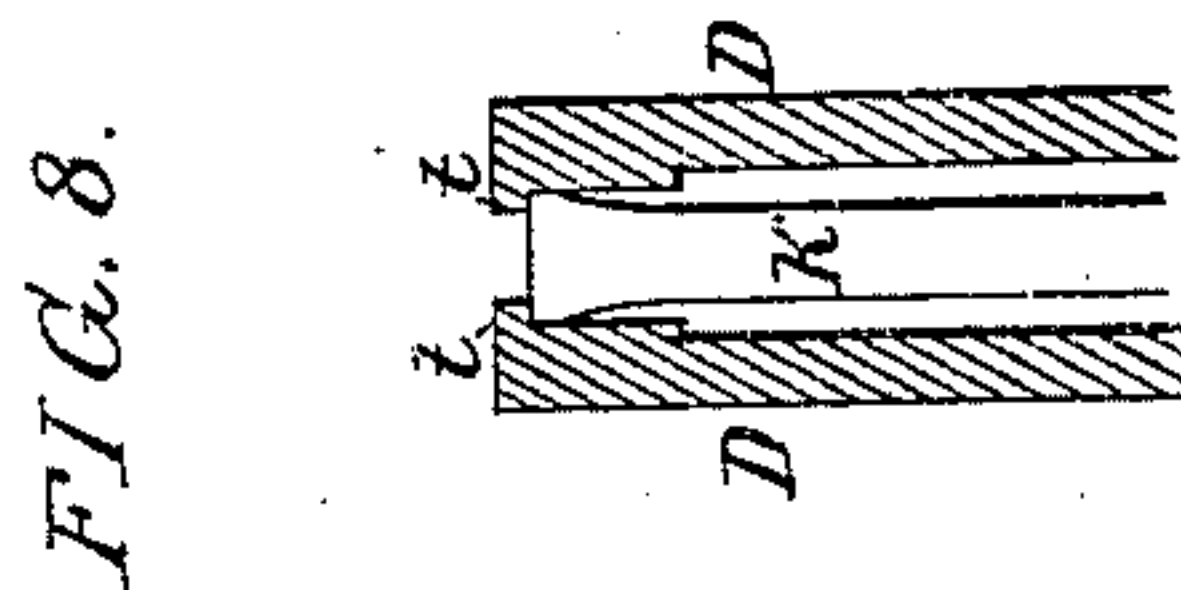
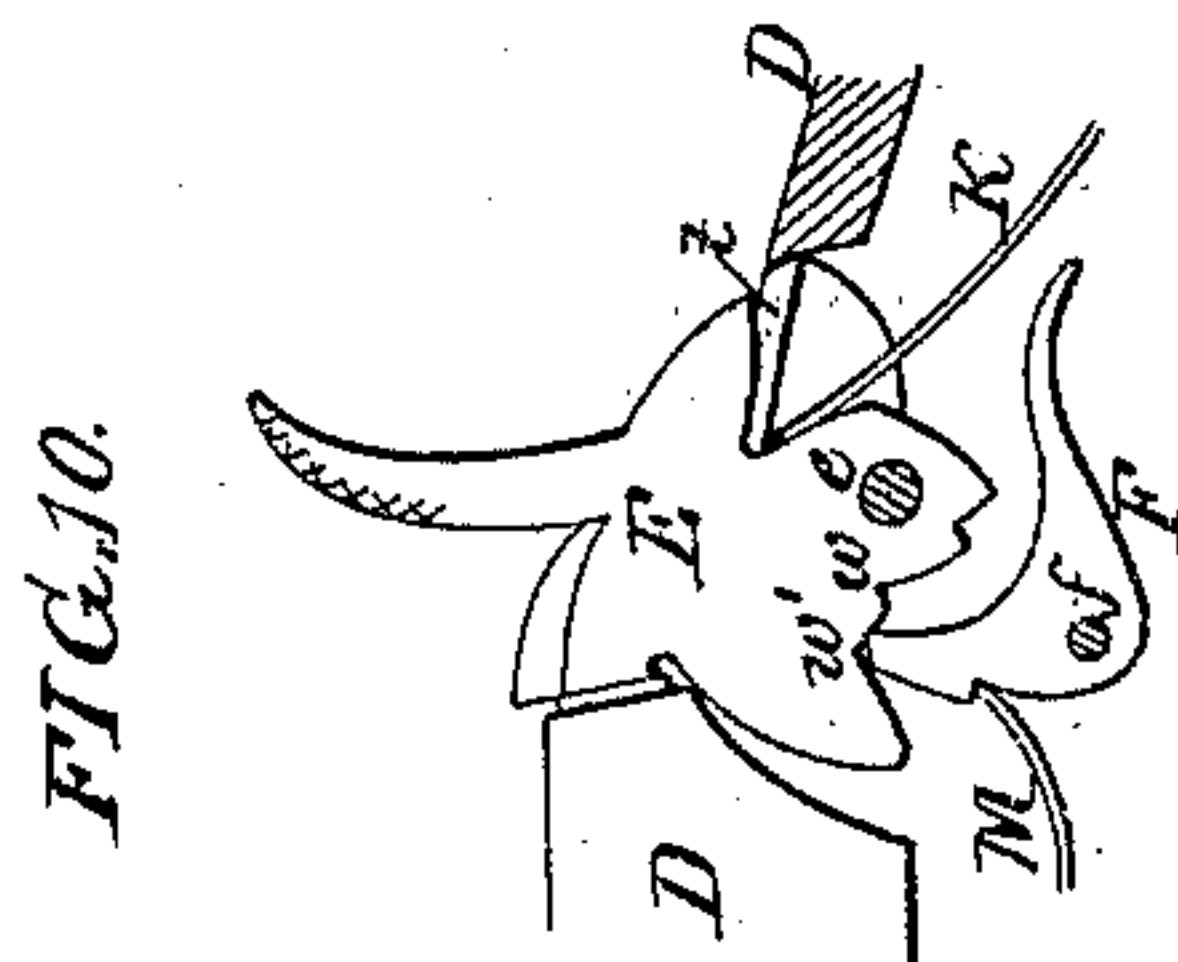
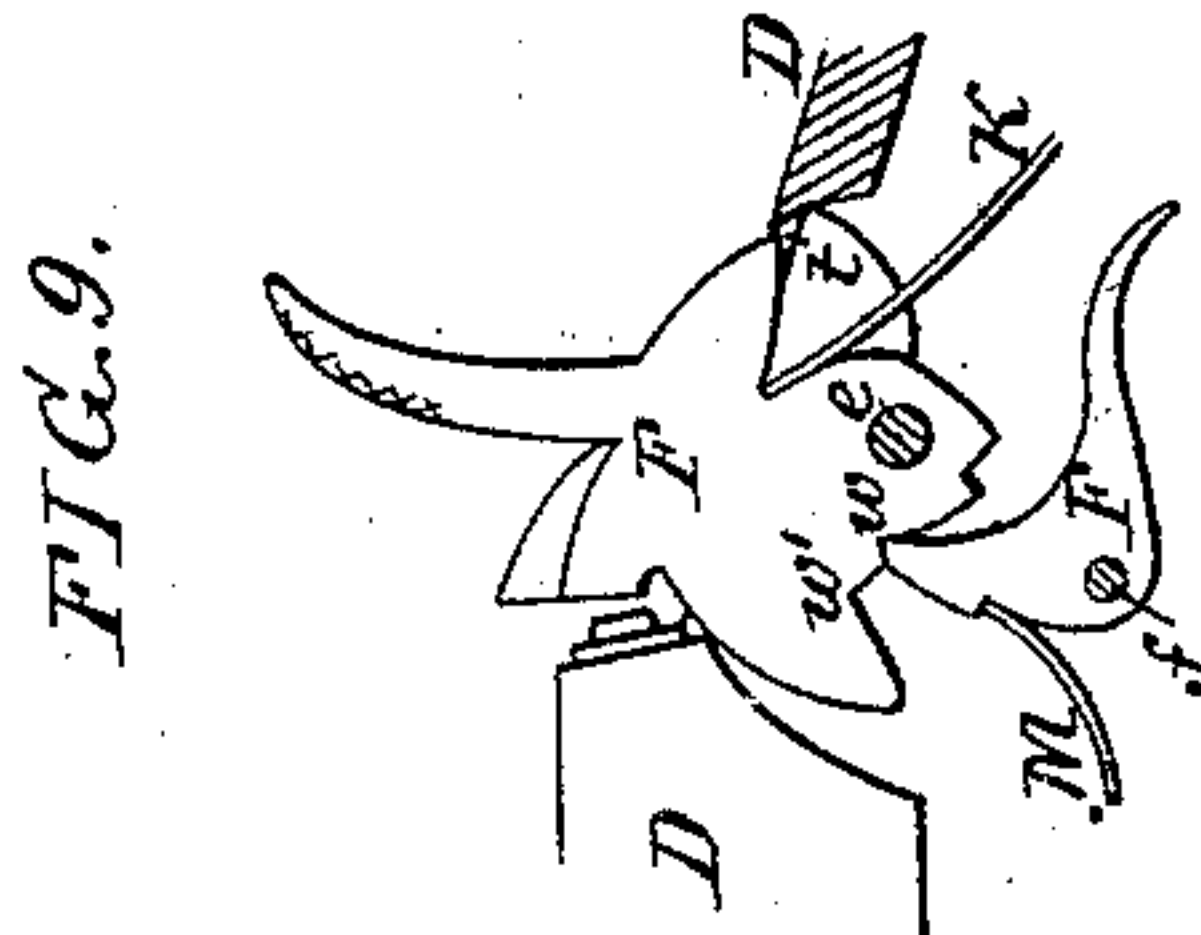
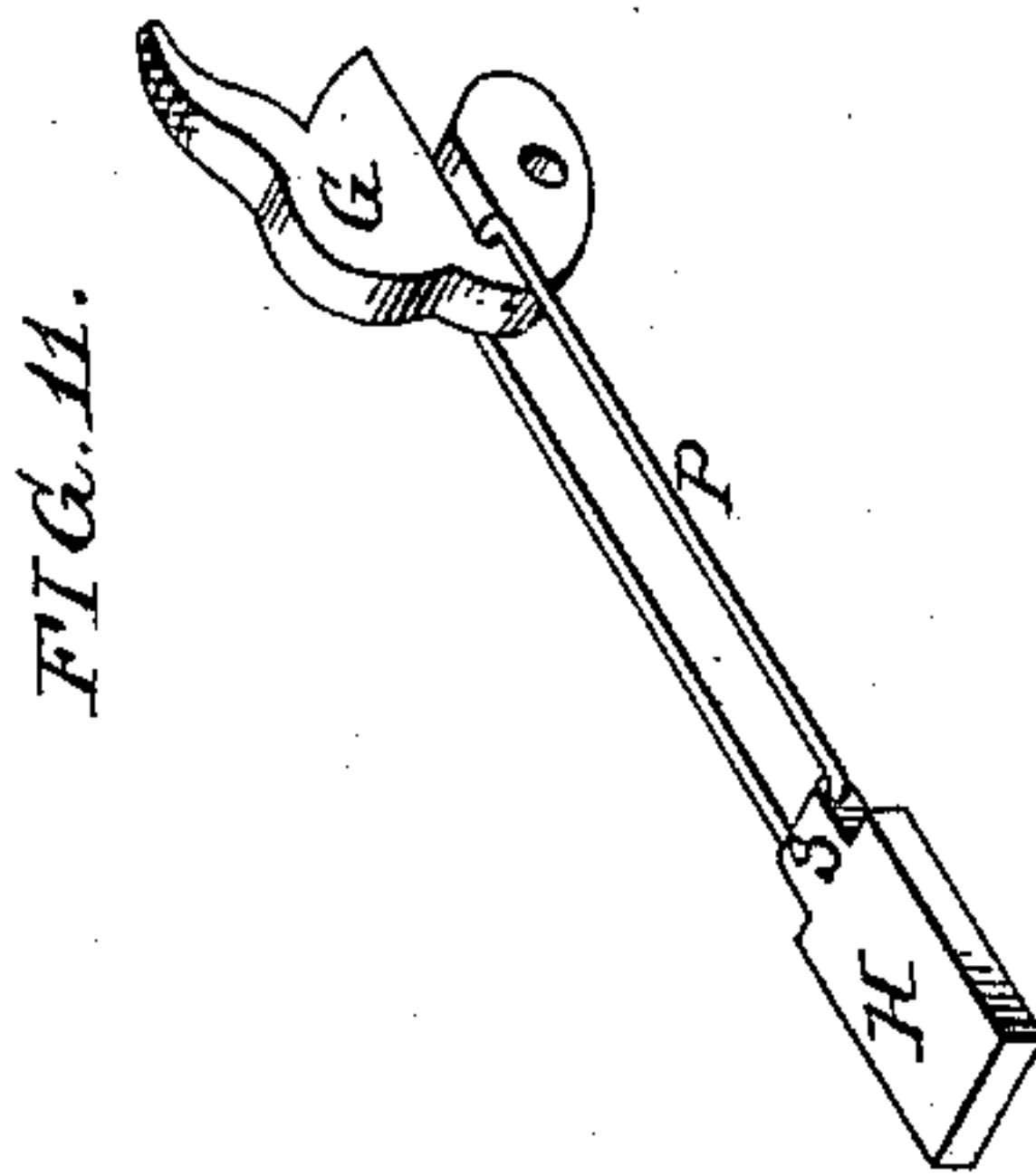
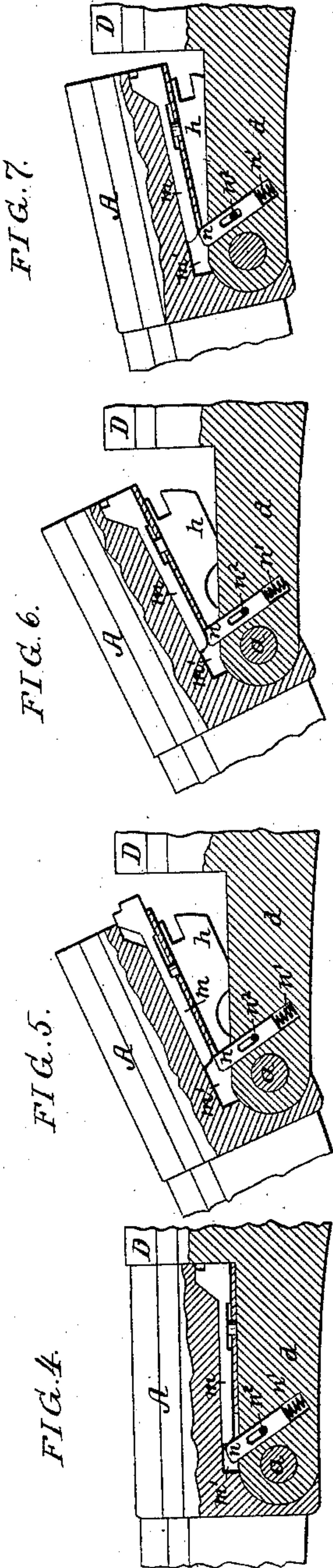
(No Model.)

2 Sheets—Sheet 2.

T. M. WALLIS.
BREECH LOADING FIRE ARM.

No. 301,021.

Patented June 24, 1884.



Witnesses
John M. Clayton.
James F. Tobin.

Inventor
Thomas M. Wallis
by his Attys:
Howson and Sons

UNITED STATES PATENT OFFICE.

THOMAS M. WALLIS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
WILLIAM WURFFLEIN, OF SAME PLACE.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 301,021, dated June 24, 1884.

Application filed March 17, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS M. WALLIS, a subject of the Queen of Great Britain and Ireland, and a resident of Philadelphia, Pennsylvania, United States of America, have invented certain Improvements in Breech-Loading Fire-Arms, of which the following is a specification.

My invention consists of certain improvements in the hammer and trigger mechanism of the gun, in the devices for locking and releasing the barrel, and in the cartridge-shell ejector, the character of these improvements and the objects of the same being too fully set forth hereinafter to need detailed preliminary explanation.

In the accompanying drawings, Figure 1 is a longitudinal section of part of the gun, showing the barrel locked and the hammer down; Fig. 2, the same with the barrel unlocked and elevated and the hammer at half-cock; Fig. 3, a view with the hammer at full-cock; Figs. 4, 5, 6, and 7, (Sheet 2,) views illustrating the action of the ejector; Figs. 8, 9, and 10, views illustrating the action of the rebounding hammer, and Fig. 11 a perspective view of the device for retracting the bolt which locks the barrel.

A is the barrel, B the stock, and D the lock or frame of the gun, said frame being secured to the stock by a bolt, *b*, and having at the front end arms, *d*, carrying the transverse pin or bolt *a*, to which the barrel is hung. The body of the frame D is furnished with other transverse pins, *e*, *f*, and *g*, to which are hung, respectively, the hammer E, the trigger-lever F, and the lever G, which operates the locking-bolt H, the latter being adapted to a notched block, *h*, on the under side of the barrel, as usual, and being suitably guided in recesses in the opposite side plates of the frame. The bottom of the frame is closed by a trigger-plate, I, which carries the pivot-pin *i* of the trigger I', and has at the front end a block, *k*, which serves, by contact with a projection *k'* on the block *h* of the barrel, to limit the opening movement of said barrel, as shown in Fig. 2, another projection, *k''*, finding a seat on the block *k* when the rear end of the barrel is depressed and locked, as shown in Figs. 1

and 3. The ejector-rod *m* is adapted to an opening, *m'*, in the rear end of the barrel, the rear end of said rod having the usual enlarged and grooved head forming part of the end of the bore of the barrel, and in an opening in one of the arms *d* of the lock is guided a pin, *n*, which is acted on by a spring, *n'*, and is slotted for the reception of a pin, *n''*, whereby its movement is limited.

The action of this device is illustrated in Figs. 4, 5, 6, and 7. When the barrel is down, the ejector-rod *m* is forward to its full extent, and the upper end of the pin *n* projects in advance of the front end of the rod, as shown in Fig. 4. When the barrel is opened by turning the same on the pivot-pin *a*, the rear end of the barrel is elevated and swung forward, carrying with it the ejector-rod, which is consequently thrust rearward by the pin *n*, as shown in Fig. 5; but by the time the rear end of the barrel has reached the limit of its upward movement the ejector-rod has been elevated above the pin *n*, and can be thrust forward, as shown in Fig. 6, so as not to interfere with the insertion of a fresh cartridge into the barrel. As the rear end of the barrel is brought down, the pin *n* is depressed, as shown in Fig. 7, until the front end of the ejector-rod passes in advance of the same, when, under the influence of the spring *n'*, it resumes the position shown in Fig. 4. By this means the introduction of the cartridge into the barrel can be effected while said barrel is fully open, whereas when the movement of the ejector is definitely controlled in both directions the barrel must be partially closed in order to retract the ejector before the cartridge can be inserted. The hammer E is acted upon by a spring, K, and a spring, M, acts upon both the locking-bolt H and trigger-lever F. The spring K has an enlarged front end, which comes into contact with shoulders *t t* on the frame, as shown in Fig. 8, when the hammer has reached the position of half-cock, as shown in Fig. 9, so that the movement of the hammer forward from this position to that shown in Fig. 10 is due to momentum, and not to the direct action of the spring, the latter being retained by said shoulders *t*. The hammer has, in advance of

the first notch *w*, a cam-surface, *w'*, and when the hammer has been fully depressed, as shown in Fig. 10, the trigger-lever acts upon this cam-surface to effect the rebounding of the hammer to the position of half-cock. (Represented in Fig. 9.) The connection between the locking-bolt H and the lever G is effected by a link, P, the rear end of which fits into a recess in the lever, the front end of the link being split and the two ends sprung into openings in opposite sides of a projection, *s*, on the bolt, as shown in Fig. 11. This provides a simple but effective connection of the two parts, and does not interfere with the free working of the hammer and trigger mechanism. In fact, my invention has been designed, generally, with the view of employing in the gun as few parts as possible, which parts are of the simplest and cheapest character, and not liable to be injured or put out of order by rough handling of the gun. The arm G, being in the rear of the hammer, is in convenient position for manipulation when it is desired to unlock the barrel, and is not as liable as a side catch to be accidentally struck and moved so as to withdraw the locking-bolt. The slot in the lever G permits the locking-bolt H to be thrust back by the block *h* when the barrel is closed without affecting the lever G.

I claim as my invention—

1. The combination of the frame D, the barrel A, pivoted thereto, and having a notched block, *h*, the sliding bolt H, the pivoted lever G, and the connecting-link P, adapted to a slot in the lever, as set forth.

2. The combination of the sliding locking-bolt H and trigger-lever F with the spring M, common to both, as specified.

3. The combination of the pivoted barrel A, having a sliding ejector-rod, *m*, with the fixed frame D, having a yielding push-pin, *n*, located as described in respect to the ejector-rod and the pivot of the barrel, whereby as said barrel is opened the ejector will first be thrust outward by, and will then pass from under the control of, the push-pin, as set forth.

4. The combination of the hammer and hammer-spring acting directly thereon, with the frame D, having shoulders *t*, which by contact with the upper end of the spring arrest the same before the hammer reaches the limit of its downward movement, as specified.

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

T. M. WALLIS.

Witnesses:

JOHN E. PARKER,
HARRY SMITH.