

(No Model.)

E. G. DORCHESTER.
BREECH LOADING FIRE ARM.

No. 305,160.

Patented Sept. 16, 1884.

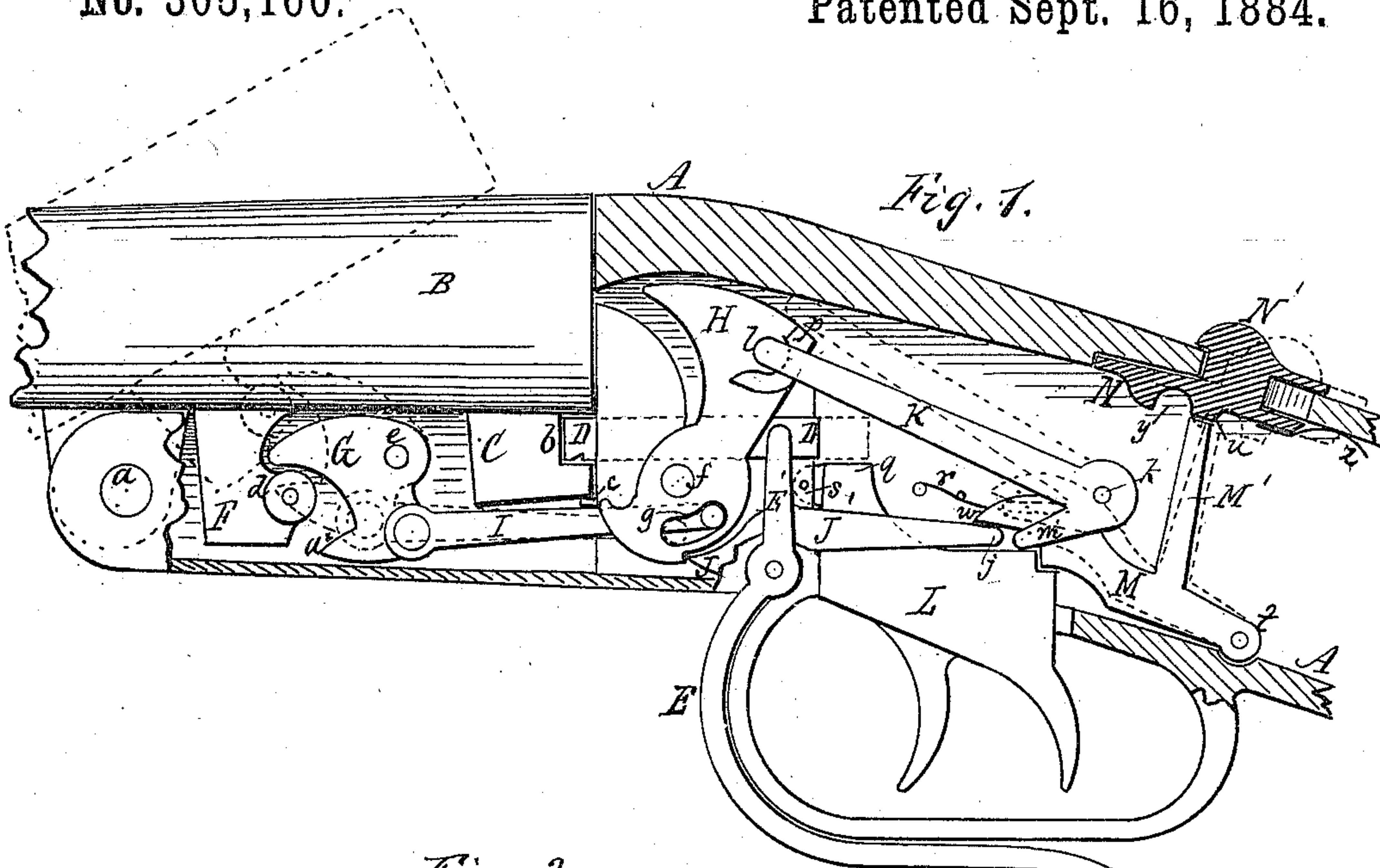


Fig. 2.

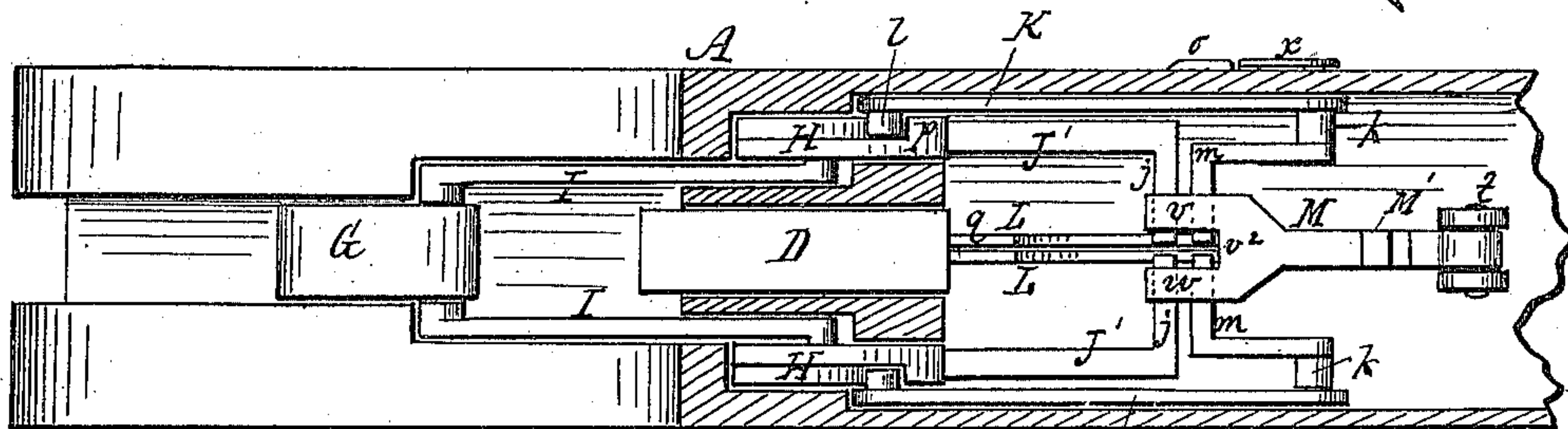


Fig. 6.

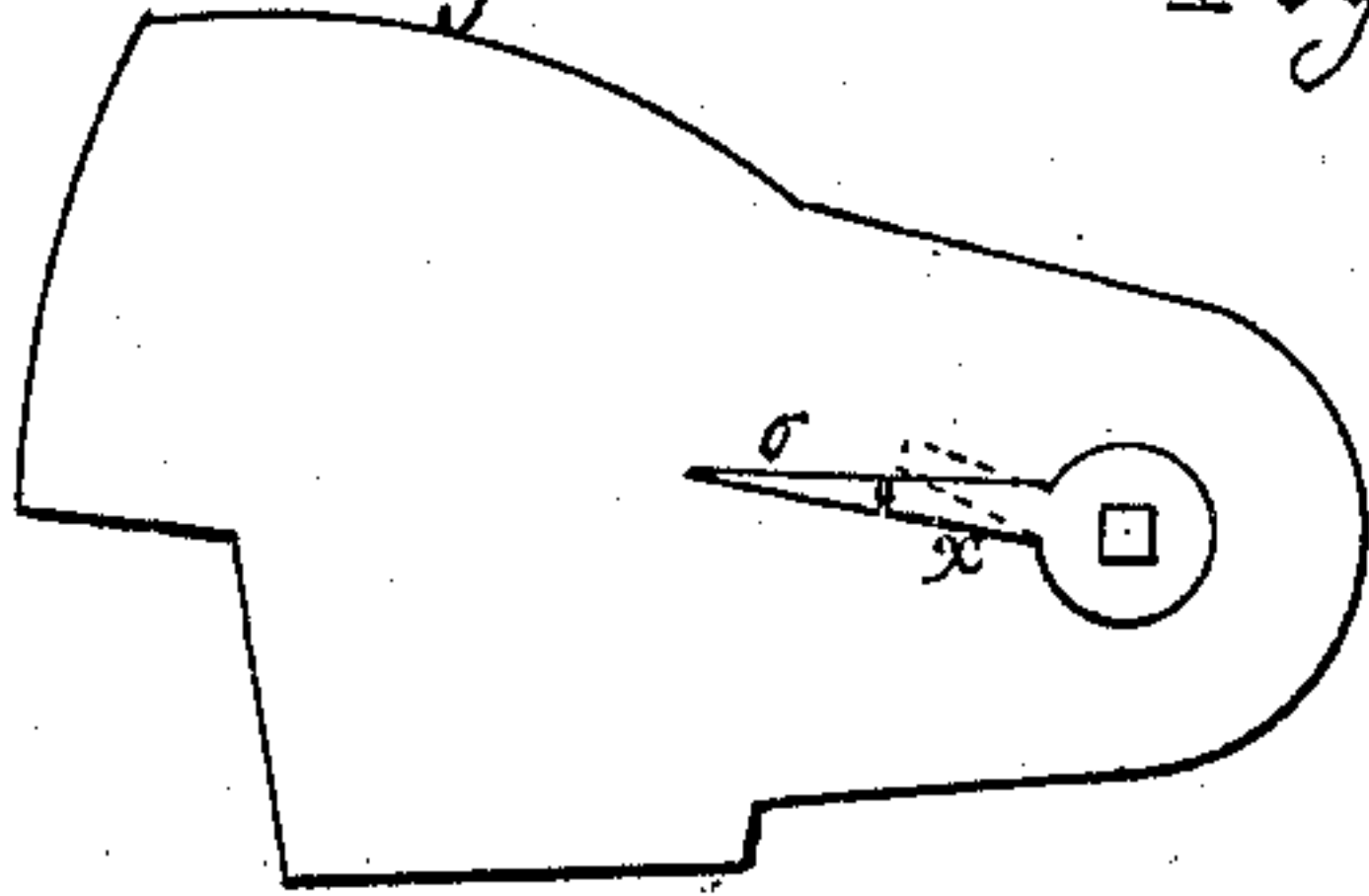


Fig. 3.

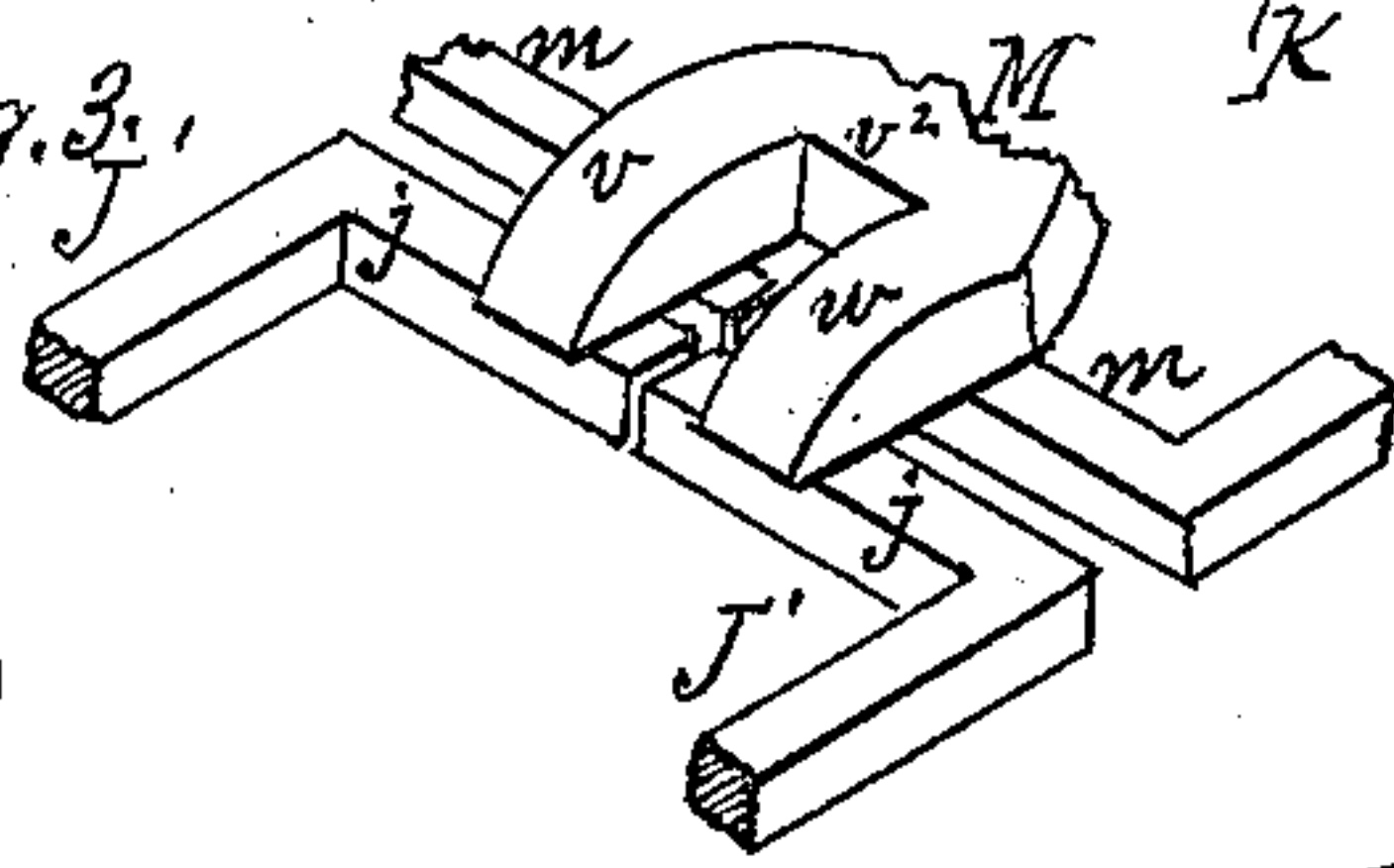
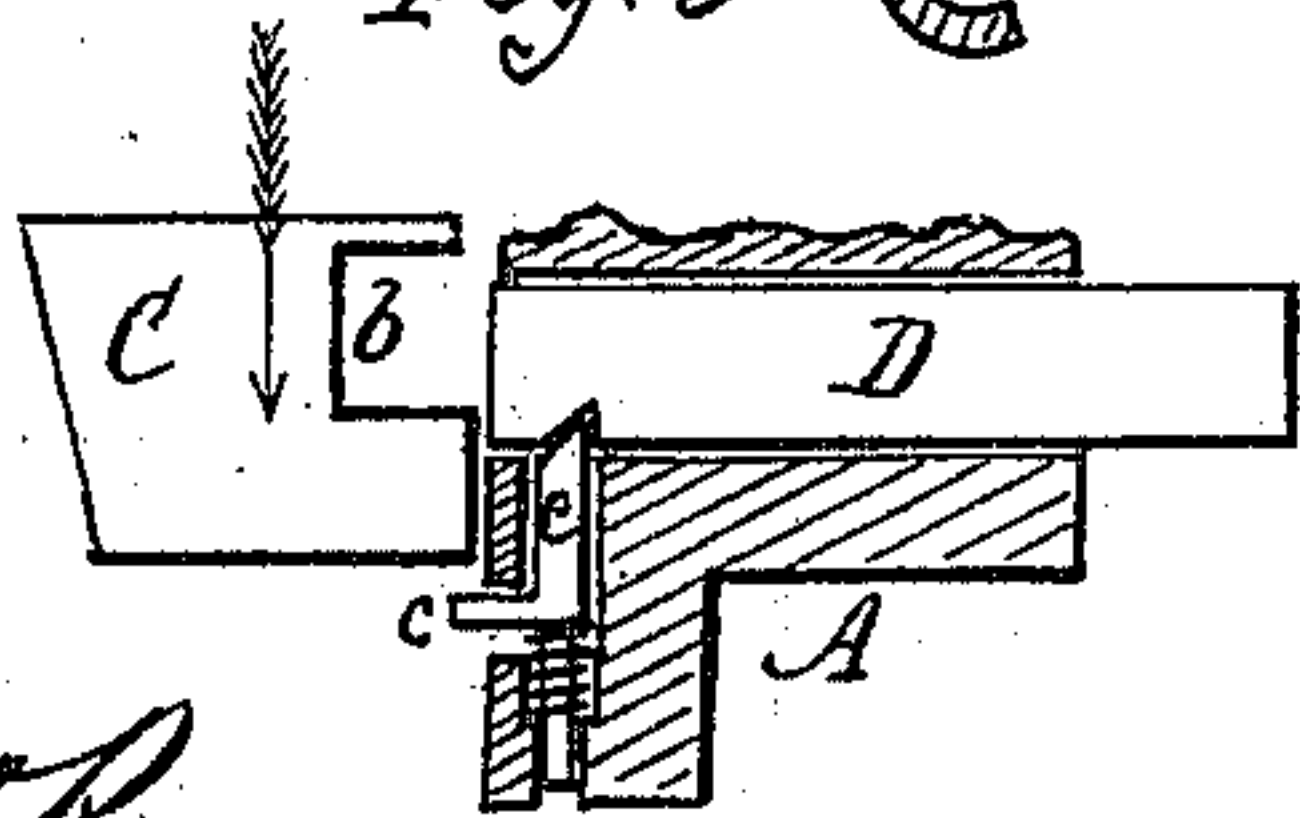


Fig. 4.



Fig. 5.



Attest,

Wm. J. Clark
John H. Hopkins.

Inventor.
Edward G. Dorchester,
per R. F. Osgood
att'y.

UNITED STATES PATENT OFFICE.

EDWARD G. DORCHESTER, OF GENEVA, NEW YORK.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 305,160, dated September 16, 1884.

Application filed April 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. DORCHESTER, of Geneva, in the county of Ontario and State of New York, have invented a certain new and useful Improvement in Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of a gun showing my improvement, the exterior casing being removed and a portion being shown in section. Fig. 2 is a plan of the working parts. Figs. 3, 4, 5, and 6 are detail views.

My improvement relates to the locks of breech-loading guns; and it consists in the construction and arrangement of parts hereinafter described and more definitely claimed.

In the drawings, A shows the breech-piece of an ordinary double-barreled gun.

B B are the barrels, hinged at *a* to the breech-piece, so as to turn up and down at the rear in the ordinary way.

C is the usual lug at the rear of the barrels, having a slot, *b*, into which strikes the sliding-bolt D for locking the barrels down. The bolt D is operated by any suitable means, that shown in the drawings being an exterior arm, E, having an elbow, E', that enters the slot of the bolt.

c is a spring-pin for catching and holding the bolt back while the barrels are raised.

F is a lug on the under side of the barrels, and *d* is a small roller pivoted at its rear end.

G is a hook-shaped cam turning on pivot *e*, the hook end projecting over the roller when the barrels are closed. In raising the barrels to open the gun the roller strikes the hook and turns the cam, as indicated by the dotted lines, Fig. 1. If desired, the roller may be dispensed with and the end of the lug do the same work.

H is the hammer, of which one is used on each side, as in all double-barreled guns. The hammer turns on a pivot, *f*, and is provided at its lower end, below the pivot, with a slot, *g*.

I is a link pivoted at one end to the bottom of the cam G, the opposite end having a pin which passes through the slot *g* of the hammer. When the barrels are raised at the rear to open the gun, as before described, the turning of cam G draws on link I and the latter

draws on the hammer and cocks the same.

When the barrels are lowered again and the gun closed ready for firing, the pin at the rear end of the links moves back in slot *g*, leaving the hammer cocked. In this gun the hammers always remain cocked ready for use. The hammer is operated by the ordinary spring, *h*.

J is the sear or dog for holding the hammer cocked, the same being pivoted at *i* and engaging with a notch of the hammer as usual. It is provided with a long arm, J', which extends back and is provided with a right angled elbow, *j*, that extends to the center line of the gun.

K is a safety-arm pivoted at *k* at its rear end, and provided at its front end with a right angled pin or lug, *l*, that rests loosely in an opened side socket, *p*, of the hammer H. At the rear end it also has a crank-projection, *m*, that extends inward to the center of the gun along side of the crank end *j* of the dog J. It also has the axis *k*, extending out through the side of the gun, to which axis is attached a pointer, *x*, that turns with the arm and operates in connection with a stationary index or mark, *o*, Fig. 6. The safety-arm is forced down so that its pin *l* will rest in the socket *p* of the hammer by means of a spring, *r*. When the safety-arm is so engaged with the hammer, the latter cannot drop till the pin of the safety-arm rises out of the open socket of the hammer by the means hereinafter described.

L is one of the triggers of the gun, the same being pivoted at *s*. The top edge of the trigger rests directly under the two crank ends *j m* of the dog and the safety-arm, and when the trigger is raised it first raises the crank-arm *m* of the safety-arm K, which raises the pin *l* from the open socket *p*, and then it raises the crank *j*, which frees the dog J from the hammer, allowing the latter to fall, thus discharging the gun. The trigger has also at its front upper end a raised shoulder, *q*, which, when the trigger is lowered, comes just below the bottom of the sliding-bolt D, that locks the barrels down. When the bolt D is slid back to disengage the barrels, it slides back over the shoulder *q* of the trigger, and locks the latter down, so that it cannot be raised to discharge the gun or to free the hammer.

M is an arm pivoted at *t*, and which I denominate the "trigger-bolt." Its head has

offsets or projections $v w$, which cover the two crank ends $j m$ of the dog and safety-arm; also, a shoulder, v^2 , which covers the rear top edge of the trigger.

5 M' is an upright arm of the trigger-bolt, which engages with a notch, y , of a slide, N , in the upper side of the gun. This slide has attached to it, outside of the gun, a thumb-piece, N' , by which it is operated. It has also
10 a spring or equivalent device, z , which holds it in proper position at different adjustments. By moving the slide forward the trigger-bolt M will be depressed or thrown down, so as to rest closely over the two cranks $j m$ and the
15 rear end of the trigger, and hold them in place, so that they cannot be raised, and consequently the gun cannot be discharged. When in this position a stud, u , on the under side of the slide N strikes over the top of the
20 arm M' and locks it down. When the slide is thrown back, the stud u slides away from the arm, the latter falls into the notch y , and is drawn back with the slide, thus raising the trigger-bolt M , freeing the trigger and the
25 two cranks $j m$ and allowing the gun to be discharged when the trigger is raised.

a^2 is a toe or projection on the cam G , resting below the roller d , and against which the lug F strikes in the down movement for resetting the cam.

30 The object in locking the trigger by the sliding bolt D when drawn back is to prevent the striking of the hammers when the barrels are opened. The object of the trigger-bolt M is to lock all the parts in carrying the gun and when the barrels are closed, in which case, of course, the sliding bolt D is thrown in and does not hold the trigger. When the trigger-bolt is locked down, there is no possibility of
40 danger, although the gun is cocked. It has a treble security, first, by the locking of the trigger, so that it cannot be raised; second, the locking of the sear or dog that holds the hammer, and, third, the engagement of the
45 safety-arm with the hammer, as before de-

scribed. The object of the safety-arm is to prevent accidental discharge. By simply sliding the finger-piece N back the gun is ready for firing.

The object of the pointer x is to indicate 50 upon the outside of the gun that the gun is all right and in safe condition. When in line with the mark o , it shows that the safety-arm is engaged with the hammer, and holds it in place. If out of line with the mark it shows 55 that the safety-arm is not in engagement.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a breech-loading fire-arm, the combination of the lug F , provided with the roller d , 60 the cam G , resting above the roller, the link I , pivoted to the cam and extending to the hammer, and the hammer H , provided with a slot, g , in which the end of the link rests, as shown and described, and for the purpose specified. 65

2. In a breech-loading fire-arm, the combination of the trigger L , provided with the raised shoulder q , and the bolt D , for locking the gun, said bolt resting over and locking the trigger down when retracted to unlock the 70 gun, as herein shown and described.

3. In a breech-loading fire-arm, the combination of the hammer H , provided with the open socket p , the swinging safety-arm K , hooking upon the hammer-socket, and provided with a crank projection, m , the sear J , 75 provided with a crank projection, j , the trigger-bolt M , resting on the crank projections of the safety-arm and sear, the trigger, and the slide N , provided with a locking-stud, u , for 80 the trigger-bolt M , all substantially as and for the purpose herein specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

E. G. DORCHESTER.

Witnesses:

R. F. OSGOOD,
P. A. COSTICH.