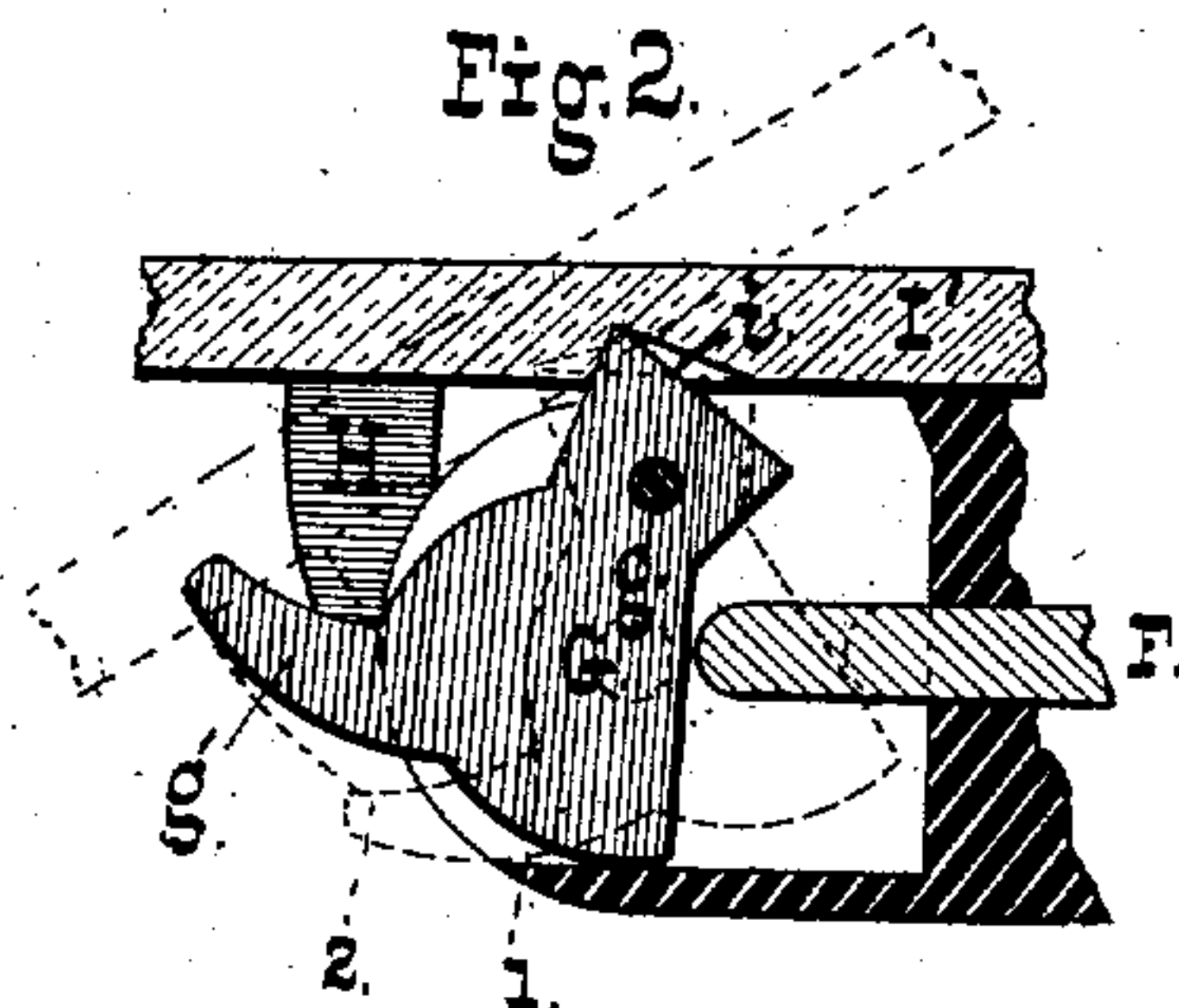
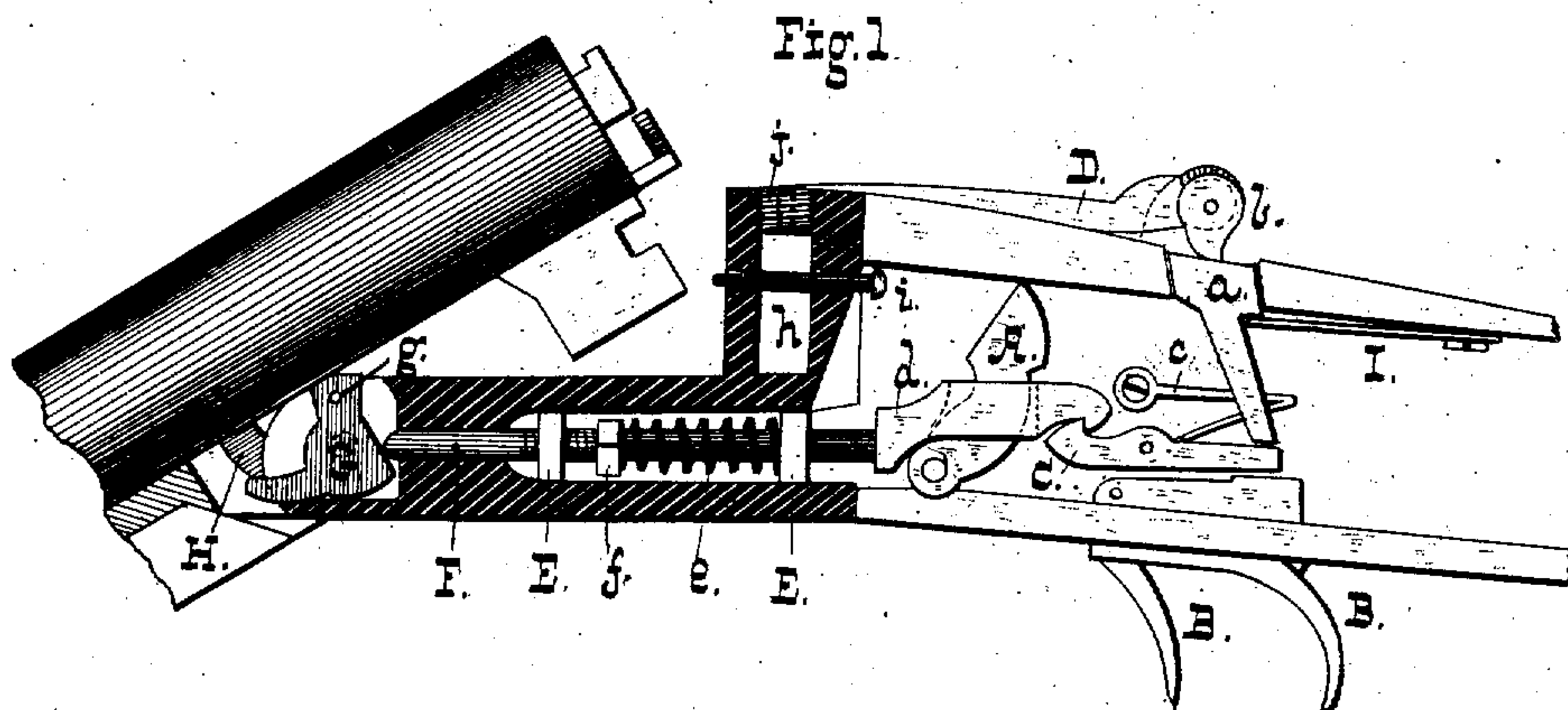


(No Model.)

C. W. SNEIDER.
BREECH LOADING FIRE ARM.

No. 257,097.

Patented Apr. 25, 1882.



WITNESSES.

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CHARLES W. SNEIDER, OF BALTIMORE, MARYLAND.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 257,097, dated April 25, 1882.

Application filed July 7, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. SNEIDER, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of that portion of the weapon to which my invention relates; and Fig. 2 is a similar view, on an enlarged scale, of the cocking-lever and its immediate connections.

My present invention relates to breech-loading fire-arms in general, and in particular to that class of the same known as "hammerless" guns, in which the strikers are pivoted on the inside of the lock-plates; and it consists in certain features of construction of the cocking mechanism, as hereinafter set forth and claimed.

The lock shown in the accompanying drawings is in all essential respects the same as that shown and described in my patent of May 4, 1880, No. 227,135, as is also the safety-catch. Describing here briefly the parts, A is the hammer, pivoted to the lock-plate and passing through a slot in the end *d* of the push-bolt F. This bolt passes freely through bearings E E, and around it is coiled, between the rear bearing and a nut, *f*, the spiral mainspring *e*.

C is the sear, having a notch in its forward end that engages with a similar notch in the end of the bolt F when the latter is pushed back, cocking the weapon. Sear-springs *c* subserve the usual functions, as do the triggers B. In the end of the top lever, or, in the case of a different breech-action, in the top strap, is pivoted a cam, *b*, which depresses the bar *a* upon the sears and locks the piece at full-cock. A spring, I, serves to lift the bar when the cam is rotated, so as to release it. These parts and their operation are similar, as stated, to those of my patented lock, except in two minor particulars. Instead of pivoting the hammer in the part *d*, I simply pass it through a slot in the latter, which slot is made long enough to give a slight play to the hammer and allow it to rebound from the firing-pin. The push-bolt F in the present case is made to bear directly upon the cocking cam

or lever instead of upon an intermediate bar, as shown in the patent above referred to.

Before proceeding to a description of the features embodying my present improvement it may be well to state briefly the objects sought to be attained.

In hammerless guns of the class to which my invention relates—namely, such as are cocked in the act of opening the breech—a difficulty has been encountered arising from the fact that the leverage is practically constant, while the tension of the springs increases greatly as they are compressed, rendering it somewhat difficult to cock the locks. This difficulty I obviate by the use of a cam or bent lever in which the power-arm increases as the spring is compressed, whereby the resistance is made constant, and the gun is cocked without an increase of the effort requisite to start the barrels from the breech. I further arrange the cocking-cam in such manner that it is retracted as the breech is closed, and the fall of the hammer is absolutely unimpeded—a most important feature in this class of weapons in which the hammer is necessarily short and the arc through which it falls is short.

In the front of the breech I pivot at *g* a cam, G, (of course in double guns there are two, one for each lock,) having an extended arm, *g'*. The pivot *g* is above the breech-pivot upon which the barrel turns. To the barrel is secured a lug, H, which, when the breech is closed, rests on the arm *g* at its inner end, as shown in heavy lines, Fig. 2. As the barrel is tilted to open the breech the lug traverses the arm *g'* from 1 to 2 until, when the lock is full-cocked, it occupies the position shown in Fig. 1 and in dotted lines in Fig. 2.

It is obvious that the leverage constantly increases during the stroke, equalizing the resistance. The push-rod F also during the stroke encounters the rear face of the cam at a gradually-increasing distance from the pivot; but the shape of the cam and arrangement of pivots are such that the increase of leverage is much less than that on the other side of the cam.

In the lower side of the barrel I' is a recess, *i*, the front face of which, as the breech is closed, encounters the top of the cam (see Fig. 2) and returns the cam to the position shown, permitting the unobstructed forward motion of the

bolt F when the trigger is retracted to fire the weapon.

Referring, now, to the other important feature of my device, I would state that in hammerless guns great annoyance has been occasioned by the fouling and corrosion of the lock, due to escape of gases from the explosion through the firing-pin hole and into the lock. A stuffing-box around the pin or a packing would be apt to be dangerous as possibly jamming the pin and causing the accidental discharge of the weapon as the breech is closed. I obviate the difficulty by making in the breech a gas-chamber, *h*, opening freely to the air, through which chamber the firing-pin passes. The chamber is closed by a perforated plug or screw, *j*, serving to strengthen the breech-shell.

Any gas which leaks past the front bearing of the pin distributes itself in the chamber, and does not pass through the rear bearing into the lock.

While I have described the lock as being cocked by and in the act of opening the breech, I do not confine myself thereto, as a separate cocking-lever may be used to actuate the cam.

I am aware that it is not broadly new to chamber the breech around the firing-pin in order to provide for the escape of gas, and such I do not claim.

Having thus described my invention, what

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

1. In a so-called "hammerless" gun, a cam pivoted in the breech and adapted to cock the lock, in combination with a lug integral with or attached to the barrel, which said lug as the breech is opened traverses an arm of the cam in a direction away from its pivot, whereby the leverage gradually increases with the tension of the spring, as set forth.

2. In combination with the lock of a so-called "hammerless" gun, a cam pivoted in the breech and adapted to cock the lock, and having a projection against which the barrel abuts as the breech is closed, whereby the forward motion of the striker-bolt is unimpeded, as set forth.

3. In a so-called "hammerless" gun, a breech-piece chambered about the firing-pin, the said chamber having a lateral opening, in which is inserted a perforated plug, whereby any gases which leak into said chamber through the front opening for the pin are afforded a free vent to the air and their entrance through the rear bearing into the lock-cavity is prevented, as set forth.

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Witnesses:

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