

(No Model.)

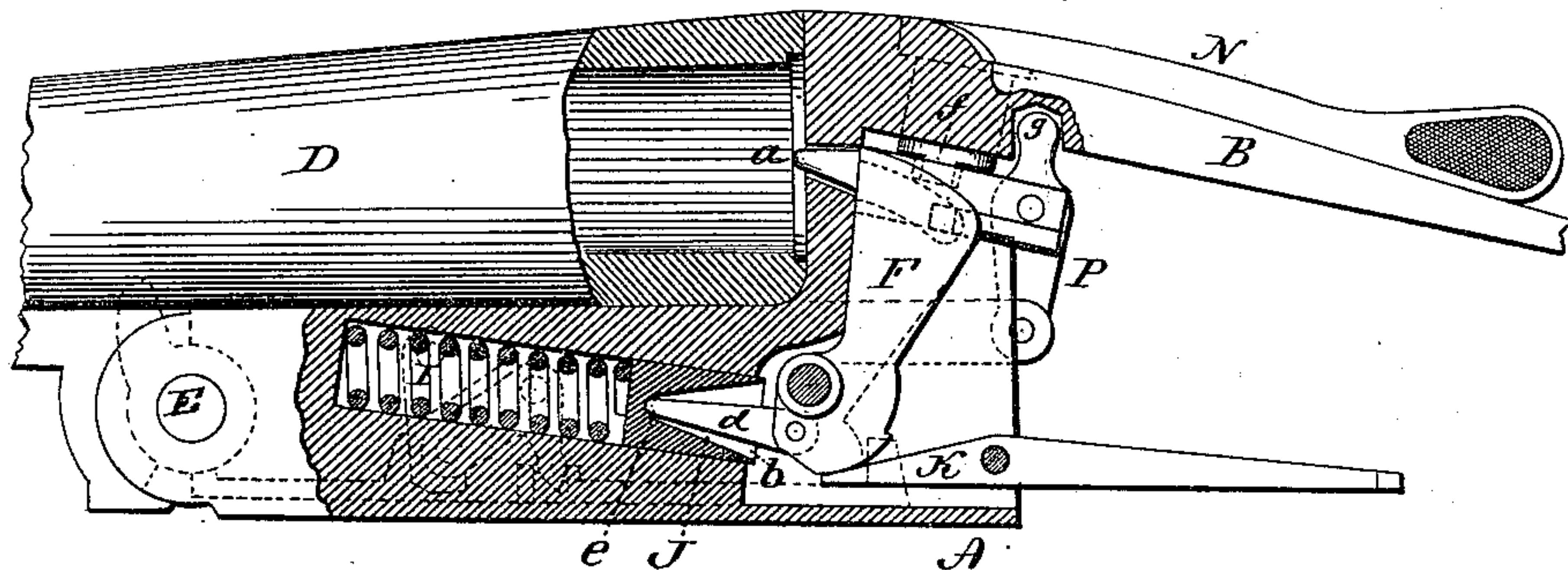
C. A. KING.

BREECH LOADING FIRE ARM.

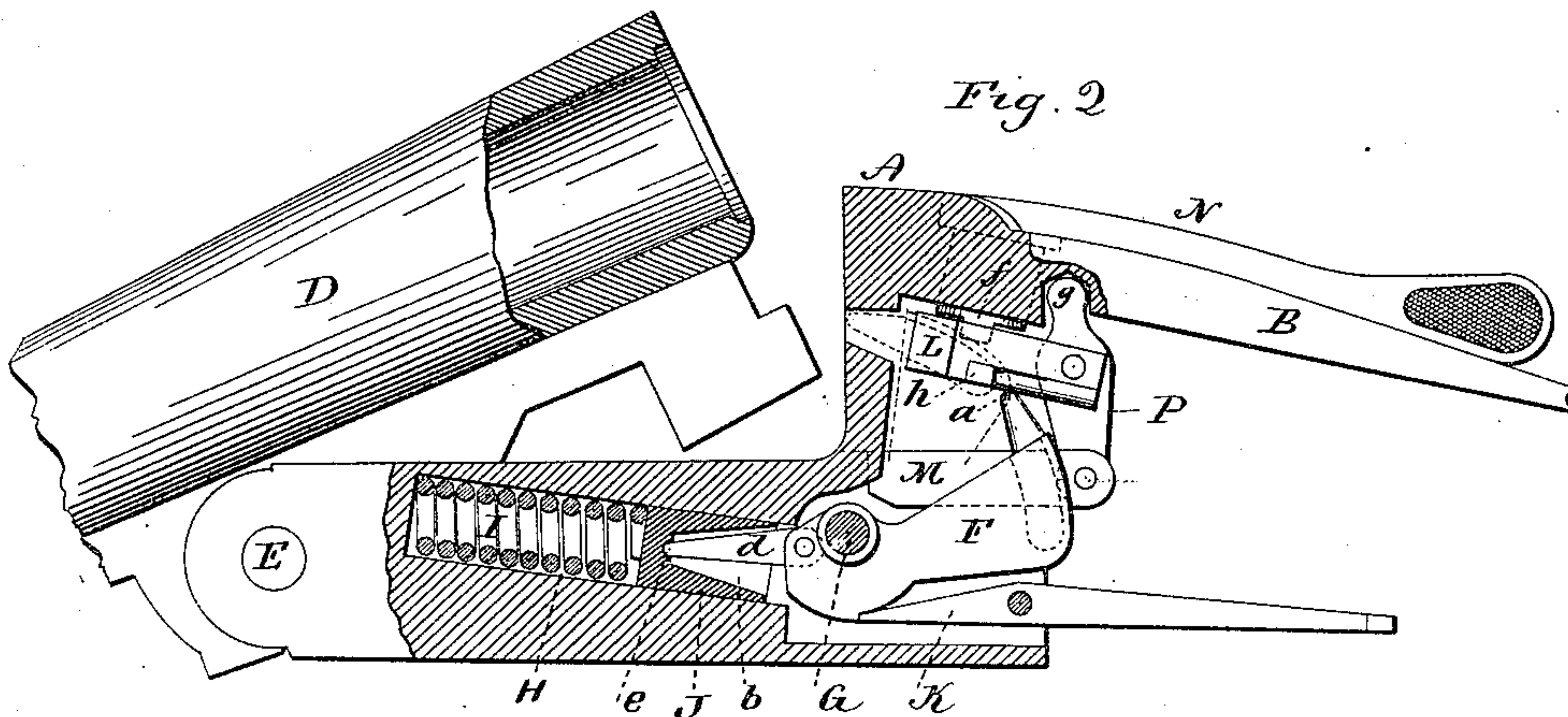
No. 368,401.

Patented Aug. 16, 1887.

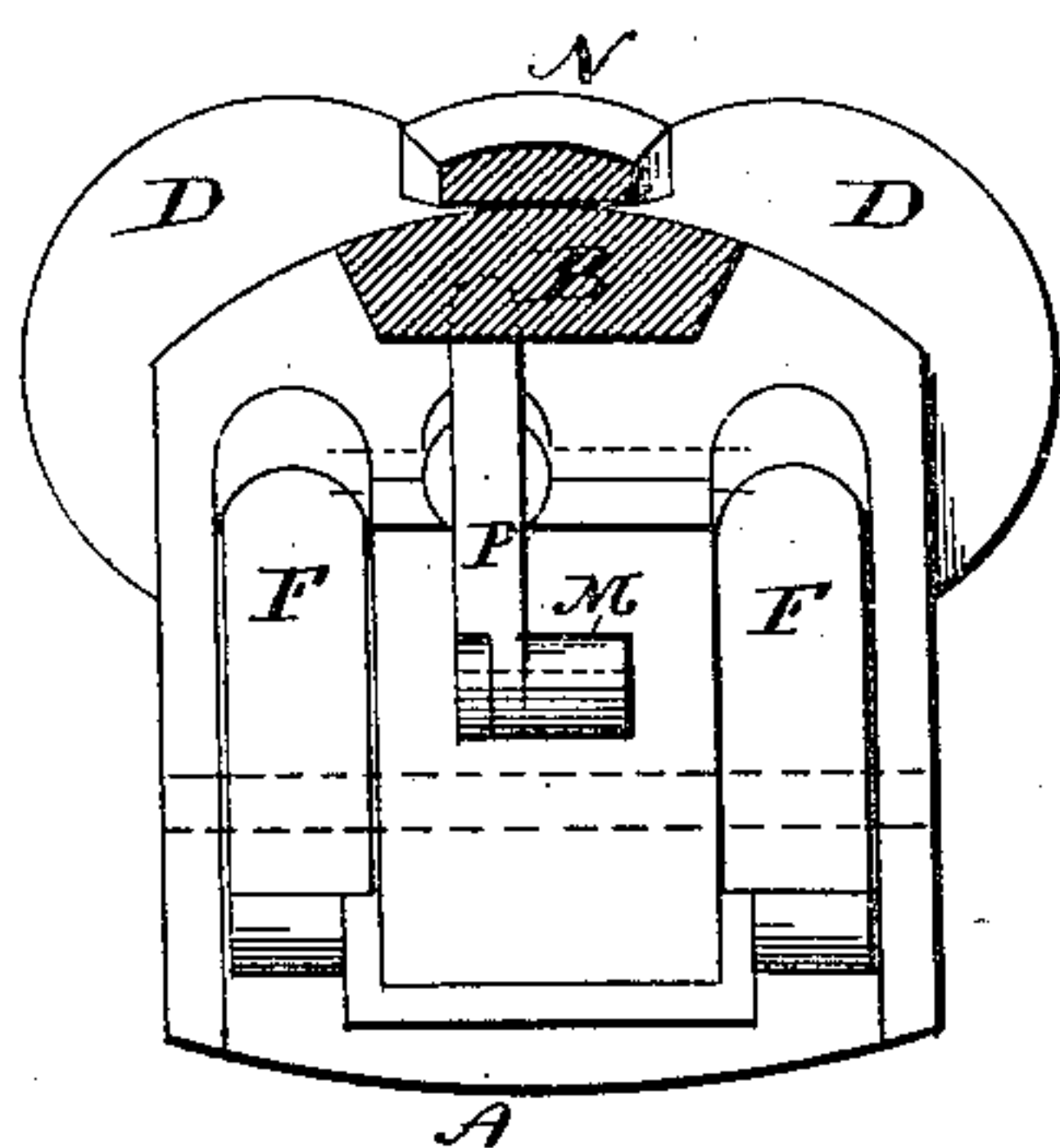
*Fig. 1*



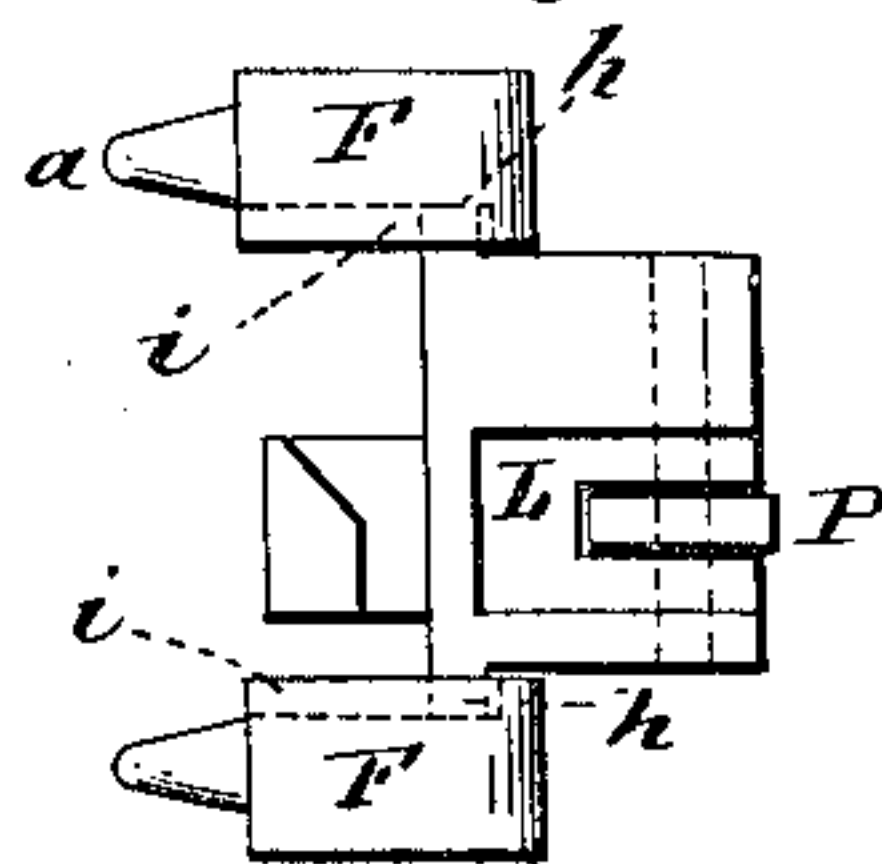
*Fig. 2*



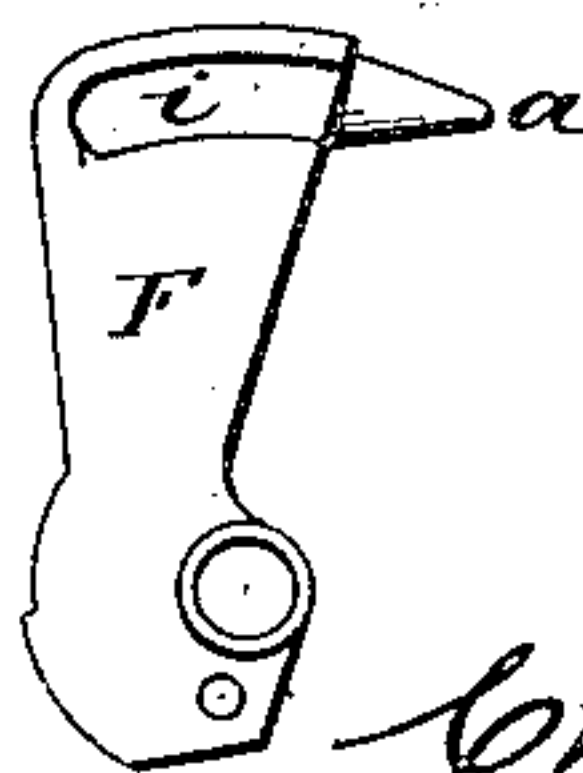
*Fig. 3*



*Fig. 4*



*Fig. 5.*



*Fig. 6*



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 368,401, dated August 16, 1887.

Application filed April 15, 1887. Serial No. 234,887. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. KING, of Meriden, in the county of New Haven and State of Connecticut, have invented a new  
5 Improvement in Breech-Loading 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 descrip-  
10 tion of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a longitudinal section cutting through one of the barrels and the spring-  
15 chamber, showing a side view of the hammer with the parts in the closed or normal position; Fig. 2, the same section as that of Fig. 1, but showing the parts in the open position; Fig. 3, a transverse section through the frame  
20 in rear of the hammers, looking forward; Fig. 4, a top view of the slide L and hammers; Fig. 5, an inside view of one of the hammers; Fig. 6, a modification in the construction of the retracting-shoulder on the hammer.

25 This invention relates to an improvement in that class of breech-loading fire-arms in which the barrel is hung to the fore end, and so as to be tilted up at the breech in opening, and commonly called "breakdown arms," and  
30 particularly to that class in which the hammer is concealed within the frame, commonly called "hammerless guns." In this class of guns two barrels are usually employed.

In a patent granted to me January 18, 1887,  
35 No. 356,321, the springs for the hammers are in the form of a helical or spiral spring arranged in a recess forward of the hammer and adapted to take a bearing upon the hammer below its pivot. In that patent a follower is  
40 arranged between the end of the spring and the bearing-point on the hammer, the bearing-point of the hammer being at the extreme rear end of the follower. The result of such arrangement of follower is, that in throwing  
45 the hammer to full-cock its bearing end tends to tilt the follower in its recess to such an extent as to create undue friction between the follower and the walls of the recess in which it

works, which friction interferes materially with the opening and cocking operation.

In some cases a connecting-rod has been in-  
50 troduced between the hammer and the rear end of the follower. While this to some extent avoids the difficulty, the friction is still so great as to interfere materially with the  
55 proper working of the arm.

The object of my invention is, primarily, to overcome this difficulty; and it has for its ob-  
ject, also, to retract the hammer before the opening movement of the barrel commences, 60  
so that the nose of the hammer may be withdrawn from the primer during the unlocking movement preparatory to opening the barrel.

A represents the frame, of usual form, ter-  
minating at its rear end in the upper tang, B, 65  
and from its forward lower end the usual fore end, C, extends, to which the barrels D are hinged upon a pivot, E, in the usual manner, and so that the breech swings upward and for-  
ward in opening. 70

F F represent the two hammers, Figs. 3 and 4, hung upon a pivot, G, and so as to stand entirely within the frame, the nose *a* of the hammer being adapted to pass through the usual aperture in the rear of the frame to strike  
75 the primer on the cartridge.

In the fore end a substantially longitudinal recess, H, is formed in axial line below the pivot of the hammer, the recess opening at the rear, forward of the hammer. Into this recess 80  
the helical mainspring I is introduced, so as to take a bearing at the forward end of the recess, and into the same recess, and so as to bear upon the rear end of the spring, the follower J is introduced. This follower is of a diame- 85  
ter corresponding to the diameter of the spring recess or chamber, and so as to move freely therein, guided by the walls of the chamber in its forward and backward movement, as from the position in Fig. 1 to that seen in Fig. 2 90  
and return. The follower is of length to take an extended bearing in the recess. In the fol-  
lower is a recess, *b*, opening from the rear end forward. This recess should extend nearly to  
95 the forward end of the follower.

Hung to the hammer, below its pivot, is a



strut, *d*, which extends forward into the recess *b*, its forward end being seated in the forward end of the recess *b*, as at *e*, and so that the bearing between the follower and the strut is near the forward end of the follower.

The force of the mainspring is applied to the hammer through the strut *d*, as seen in Fig. 1, where the hammer is shown in the closed position. As the hammer is thrown rearward, the strut turns upon its seat in the follower until it arrives at the opening position, as seen in Fig. 2. In this movement, because the strut takes its bearing so far forward in the follower, the transverse or tilting strain upon the follower is avoided, the pressure of the strut being but slightly out of the axial line of the follower; hence the friction between the hammer, follower, and the recess in which the follower moves, to which I have before referred, is avoided, and the manipulation of the arm is greatly facilitated.

In Fig. 1, I illustrate in broken lines mechanism for cocking the hammer, substantially such as shown in my patent before referred to, but which constitutes no part of my present invention, further than to say that as the barrels are tilted—as from the position seen in Fig. 1 to that seen in Fig. 2—the hammer is brought to the full-cock position and engaged by the sear *K*, from which it is released by the trigger in the usual manner, the trigger not shown.

The strut rests in its seat in the forward end of the recess *J* in the follower, and it is held there by the power of the spring forcing the follower backward against the strut, and requires no pivot to make connection between the follower and the strut. A pivot may, however, be introduced, should it be thought desirable; but in any case the recess in rear of the seat or bearing of the forward end of the strut upon the follower must be opened, so as to allow vertical free play of the strut in the opening and closing movement of the hammer.

*L* represents the slide, arranged in rear of the barrels, and through which the locking-bolt *M* is actuated. The slide *L* is thrown backward and forward by an eccentric-pin, *f*, on a lever, *N*, arranged to swing horizontally upon the upper tang in a common and well-known manner for locking devices of this class of arms.

In the slide at its rear end a lever, *P*, is hung, one arm extending upward and taking a seat in the tang, as at *g*, for its fulcrum. The other arm extends downward and is hung to the rear end of the bolt *M*, so that as the lever *N* is turned to one side it will throw the slide *L* rearward, as seen in Fig. 2, and withdraw the bolt from its engagement with the barrels, leaving the barrels free to be tilted in the usual manner, and so that when the barrels are closed and the lever *N* brought to its home position the bolt *M* will be thrown forward to lock the barrel.

On each side of the slide *L* is a lateral projection, *h*, which extends into a corresponding groove, *i*, in the respective arms, the groove opening from the forward side of the body of the hammer. The position of these lateral projections *h* with relation to the grooves in the hammers is such that when the hammers are in their extreme forward position and the barrel locked the hammers will stand free from the projections, as seen in Fig. 1; but when the slide *L* is drawn rearward to unlock the barrels the lateral projections *h* strike the rear end of the grooves *i* in the hammer and draw the hammers backward so far as to clear the nose of the hammer from the cartridge or rear end of the barrel, as indicated in broken lines, Fig. 2, and the projections then stand to prevent the hammers from reaching their extreme forward position until the slide shall have been again forced forward, so that if the barrels be closed and the lever *N* be not returned to lock the barrels then it will be impossible for the hammers to reach the cartridges in the barrel. While, therefore, serving as a retracting device for the hammers, these lateral projections *h* also serve as a stop to prevent accidental discharge.

While I prefer to construct the hammers with grooves, to form a shoulder against which the projections *h* from the slide may bear, it will be understood that any shoulder or projection on the hammer which stands in the path of the said projections as the slide is moved rearward will answer the purpose—such, for illustration, as a stud projecting from the inside of the hammer, as seen in Fig. 6.

It will be understood that the peculiar construction of the follower and the strut-connection with the hammer is applicable to single barrels as well as double barrels, which I have illustrated.

I claim—

1. In a breech-loading fire-arm in which the barrel is hung forward to be tilted up at the breech in opening, the combination therewith of a hammer hung in the frame at the rear of the barrel, a longitudinal recess in the frame forward of the hammer and in line below the pivot of the hammer, a helical spring in said recess, a follower in said recess and resting against the rear end of said spring, the said follower constructed with a recess from its rear end inward, and a strut hung by its rear end to the hammer below its pivot and extending into the recess in the follower, the forward end of the strut taking a seat at the forward end of the recess and near the forward end of the follower, substantially as described.

2. In a breech-loading fire-arm in which the barrels are hung forward to be tilted up at the breech in opening, the combination therewith of hammers hung in the frame at the rear of the barrel, a slide, *L*, in the frame in rear of the barrel, a lever, *N*, hung upon the frame,



and so as to swing in a horizontal plane, the  
said lever constructed with an eccentric-pin  
adapted to engage said slide and impart to it  
a longitudinal movement according to the  
5 swinging movement of said lever, the said  
slide constructed with lateral projections *h*,  
and the hammers provided with correspond-  
ing shoulders, *i*, the said shoulders *i* being en-

gaged by the said projections *h*, whereby the  
striking-nose of the hammer is withdrawn 10  
from contact with the cartridge, substantially  
as and for the purpose described.

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Witnesses:

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