

F. TIESING & C. GERNER.

Improvement in Breech-Loading Fire-Arms.

No. 114,230.

Patented April 25, 1871.

Fig. 1.

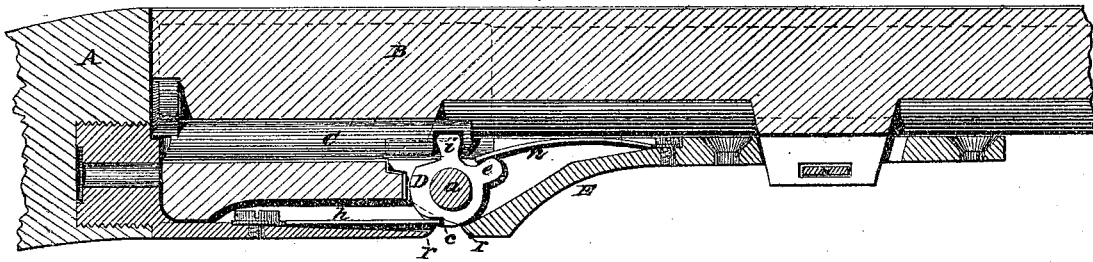


Fig. 2.

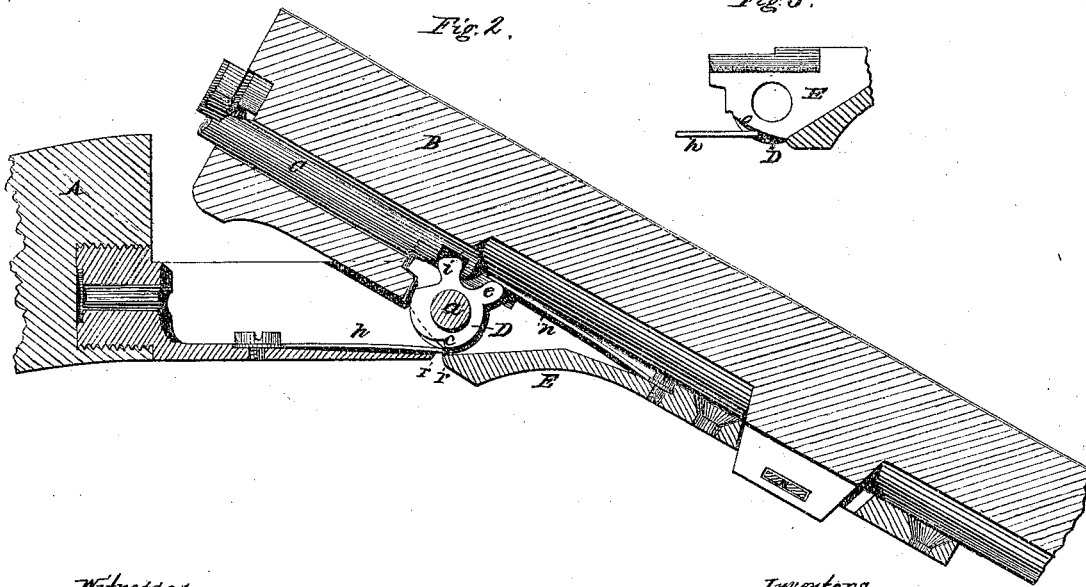
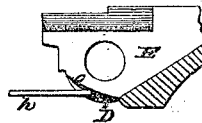


Fig. 3.



Witnesses.

Harry King
Phil. T. Dodge

Inventors.

Frank Tiesing &
C. Gerner
by Dodge & Munn.

UNITED STATES PATENT OFFICE.

FRANK TIESING AND CHARLES GERNER, OF NEW HAVEN, CONNECTICUT,
ASSIGNORS TO ELI WHITNEY, OF SAME PLACE.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 114,230, dated April 25, 1871.

To all whom it may concern:

Be it known that we, FRANK TIESING and CHARLES GERNER, of New Haven, in the county of New Haven and State of Connecticut, have invented certain Improvements in Breech-Loading Fire-Arms, of which the following is a specification, reference being had to the accompanying drawing.

Our invention relates to breech-loading guns; and it consists in a novel arrangement of devices for operating the extractor, whereby the same is made to partially expel the cartridge-shells by tipping the barrel or barrels, and then returning the extractor to its place again, all as hereinafter more fully explained.

It further consists in beveling the shoulders of the joint in the frame, so as not to pinch the hand in opening the breech.

Figure 1 is a longitudinal section, with the barrels in position for firing. Fig. 2 is a similar view, showing the barrels tipped and the extractor shoved out. Fig. 3 is a view of a portion shown more in detail.

The general construction of the gun is the same as that patented to Whitney, Gerner & Tiesing, in which the barrels B are secured to an arm or frame, E, projecting from the front of the breech A at its lower side, and in which arm there is a joint, to permit the barrels to tip up at the breech in a manner well known, and as represented in Fig. 2.

In Figs. 1 and 2, *a* represents the pivot-pin of this joint, and C is the stem of the extractor. This stem C fits in a hole bored for it in a lug secured to the under side of the barrels, at the center, and it extends forward to the joint, as represented in Figs. 1 and 2, it having a recess or notch cut in its under side, near its end, as shown in the drawing.

In the center of the frame E, at the joint, is located a plate, D, which is mounted loosely on the joint-pin *a*, this plate having a projection or arm, *i*, on its upper edge, which fits into the notch in the extractor-stem C. It also has on its front edge another arm or projection, *e*, upon which bears a spring, *n*, secured to the front part of the frame E. On its rear face, at its lower edge, it also has a notch cut,

so as to form a shoulder, against which the end of a spring-pawl, *h*, bears, this pawl *h* being secured to the rear part of the frame E, as shown in Figs. 1 and 2.

The rear end of the front part of the frame E has its under side cut on an incline or bevel, as represented at *o*, Fig. 3, and by dotted lines in Figs. 1 and 2, this incline, at its lower or front end, coming out flush with or a little beyond the extreme edge of the plate D, so that as the barrels, with the front part of the frame E, are thrown down, this incline will bear upon the pawl *h*, and disengage it from the shoulder *c* of the plate D, as represented in Fig. 2, the pawl *h* being wider than the plate D is thick, so as to protrude at each side, and permit the inclines *o* to hit it as the barrels are tipped.

It will be observed that the shoulders *r* of the frame E, where the joint is made, are each beveled off, as shown in Figs. 1 and 2, so that when the breech is opened they will not catch and pinch a portion of the hand, as is sometimes done by guns of this class.

It is obvious that these improvements may be applied to either single or double barreled guns.

With the parts thus constructed and arranged, the operation is as follows: The gun having been fired with the barrels in the position represented in Fig. 1, the barrels are released or unlocked from the breech A, when they tip forward to the position shown in Fig. 2. The pawl *h*, being then in the notch *c*, holds the plate D, and prevents it from turning on the pin *a*, and as it is thus held, with its arm *i* in the notch of the stem C, it forces the extractor out, as represented in Fig. 2, as the barrels tip forward.

As the barrels and front part of the frame move, the incline *o* forces the pawl *h* off from the shoulder *c*, which is thus released, when, at once, the spring *n*, pressing on the arm *e*, causes the plate D to rotate slightly on the pin *a*, and thereby draw the extractor back again to its original position.

As the barrels are again closed, the plate D is moved backward, and just before the barrels are closed the pawl *h* again springs into

the notch *c*, the inclines *o* having been moved forward out of its way by the closing of the barrels.

In this way we produce an automatic movement of the extractor by the use of devices that are simple, strong, and not liable to get out of order, and which insure the return of the extractor to its seat after having expelled the shells, ready for reloading the gun.

Having thus described our invention, what we claim is—

1. The plate *D*, connected to the extractor-stem *C* by the arm *i*, and having the arm *e*,

with spring *n*, acting thereon, and the shoulder *c*, in combination with the spring-pawl *h* and the inclines *o* on the frame, all constructed and operating substantially as described.

2. The joint of the frame *E*, having its opposing shoulders *r* beveled, substantially as described, to prevent pinching the hand when opening the breech.

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CHARLES GERNER.

Witnesses:

WILSON H. CLARK,
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