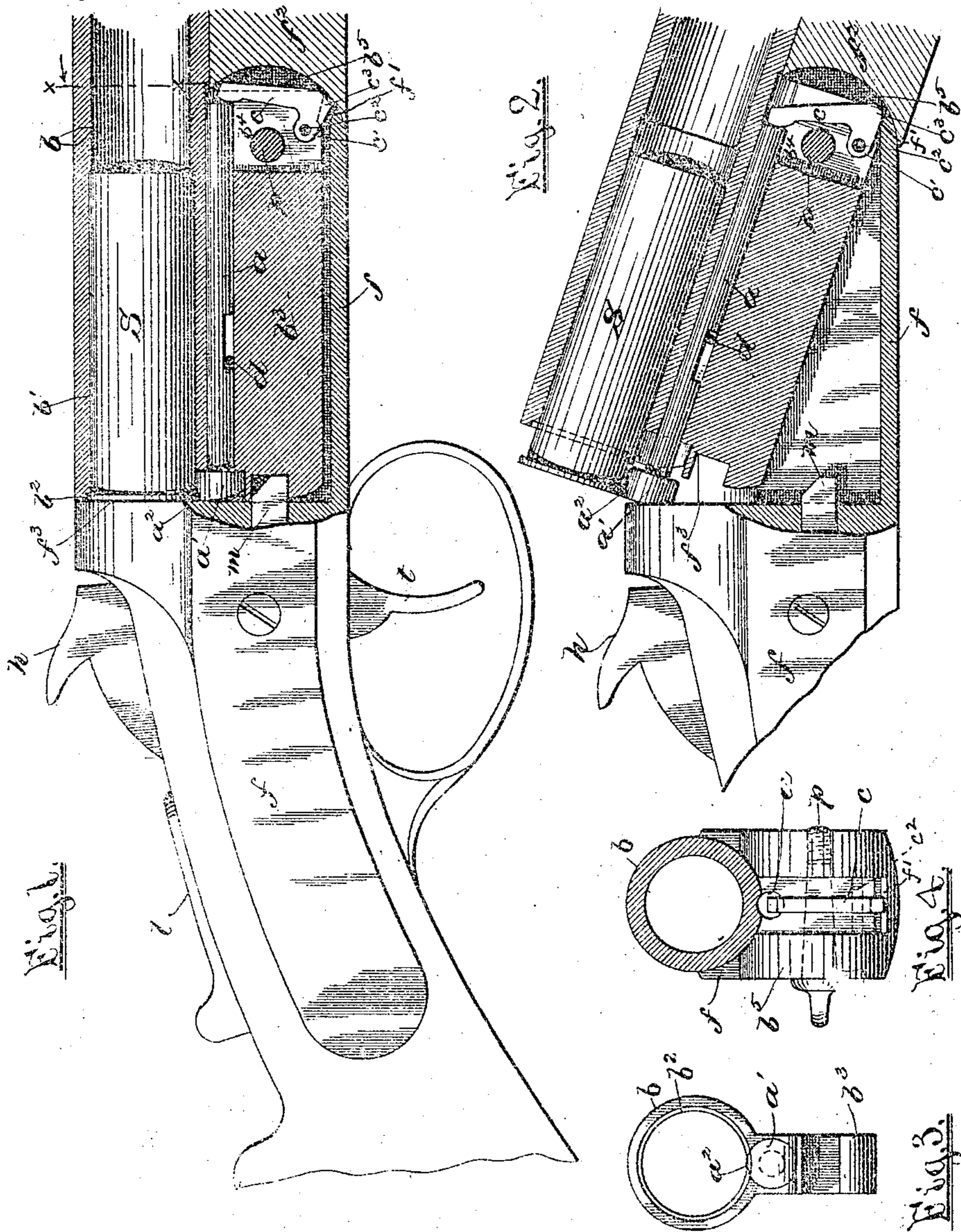


(No Model.)

W. H. DAVENPORT.
SHELL EXTRACTOR FOR BREAKDOWN GUNS.

No. 565,605.

Patented Aug. 11, 1896.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM H. DAVENPORT, OF NORWICH, CONNECTICUT.

SHELL-EXTRACTOR FOR BREAKDOWN GUNS

SPECIFICATION forming part of Letters Patent No. 565,605, dated August 11, 1896.

Application filed November 29, 1895. Serial No. 579,544. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DAVENPORT, a citizen of the United States, residing at Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Shell-Extractors for Breakdown Guns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to shell-extracting devices for shotguns of the breakdown type; and it consists, essentially, of a non-resilient extractor-rod properly slidably mounted in the barrel-lug, having its rear end adapted to engage the rim of the shell, an L-shaped lever located in the forward part of the barrel-lug, having its lower arm pivoted to the lug and having the upper free end of the lever in practically continuous engagement with the forward end of said extractor-rod, arranged whereby the act of breaking down or opening the gun brings the bent portion of said lever into engagement with the adjacent part of the frame, thereby forcing the upper part of the lever; together with the extractor-rod, rearwardly and at the same time forcing the shell from its seat. The reversal of the operation, that is, closing the gun, causes the frame to engage the rear end of the rod and force the latter back to its normal position, all as will be more fully hereinafter set forth and claimed.

The object I have in view is to produce an efficient positive-action shell-extracting device, the parts composing it being comparatively inexpensive and not liable to become inoperative.

In the accompanying sheet of drawings, Figure 1 is a side elevation, in partial section, of a breakdown gun embodying my improvement, the parts being in the normal position. Fig. 2 is a similar view, the barrel being tilted, showing the extractor as in use. Fig. 3 is a view of the rear end of the barrel and extractor; and Fig. 4 is a transverse sectional

view of the barrel, taken on line *xx* of Fig. 1 and showing the forward end of the frame.

My improvement is well adapted to breakdown shotguns provided with any well-known locking and firing means. Therefore I make no claim herewith to such parts.

In the drawings, *b* indicates the barrel; *f*, the frame member, secured to the breech-stock; *h*, the hammer; *t*, the trigger; *l*, the top-snap lever through which the locking-bolt *m* is operated; *b*³, the lug secured to or integral with the barrel; *p*, a removable pin or screw-key passing through the forward part of the frame and lug and forming a pivot on which the barrel is capable of being tilted, and *f*² the fore-wood secured to the barrel and fitted to the semicircular end *b*⁵ of the frame.

The forward part of the barrel-lug *b*³ is slotted vertically, as at *b*⁴, to receive the L-shaped extractor-operating lever *c*. (See also Fig. 4.) The short arm *c*¹ of this lever is pivoted at its outer end to the lower part of said slotted portion by means of a pin *c*². The other arm of the lever extends vertically, its free end being adapted to frictionally engage the forward end of the extractor-rod *a*, soon to be described.

The heel or knee portion *c*³ of the lever *c* is arranged to extend below the barrel-lug, so that when the barrel is being tilted from the normal position the said heel portion will thereby contact with the adjacent surface *f*¹ of the frame *f*, thus forcing the upper part of the lever rearwardly. It will be seen that the lever and corresponding portion of the lug *b*³ do not extend outwardly or beyond the curved surface *b*⁵ of the frame. The said extractor-rod *a* is, as drawn, simply a round rod fitted to slide endwise in a corresponding hole formed longitudinally in the upper part of the barrel-lug. In order to prevent the rod from turning and at the same time to limit its endwise movement, it is slotted on its under side and provided with a stop-pin *d*, fixed in the lug, substantially as usual. The rear end of the rod is provided with a round head *a*¹, the lug being counterbored to receive it, as clearly shown. The upper side of the head *a*¹ is cut away to form a seat *a*²

and being practically a continuation of the counterbore b^2 , formed in the end of the barrel for the reception of the rim portion of the shell s , and concentric with the bore of the barrel. (See Fig. 3.)

It is obvious from the foregoing description that after withdrawing the bolt m the act of tilting the barrel, as in opening the gun, will cause the heel of the lever c to engage the surface f' of the stationary frame f , thereby at the same time positively swinging the free arm of the lever rearwardly and forcing the rod a in the same direction, such movement of the rod also forcing the shell from the barrel a corresponding distance. (See Fig. 2.) I may further state that the form and relation of the said parts c^3 of the lever, f' of the frame, and a' of the rod a are such that the slidable extractor is interposed between and practically in engagement with the vertical face f^3 of the frame and the rear vertical face of the lever-arm c at all times while the gun is being opened and closed. In closing the gun the face of the head a' slides downward against the frame-face f^3 , thereby forcing the extractor to its seat. The several parts are shown in Fig. 1 in the normal position, as when the gun is fully closed. Thus it will

be seen that the device is positive in its action, both in opening and closing the gun. No springs whatever are employed, and it is comparatively inexpensive to make and not liable to become inoperative.

I claim as my invention—

In a breakdown gun, provided with a barrel-lug, the frame, and the usual adjunctive devices, the combination of the endwise-movable extractor-rod a seated in said barrel-lug, said rod having an enlarged round head portion a' concentric therewith fitted in a correspondingly-shaped seat counterbored in the rear end of the lug, and the extractor-lever c pivotally mounted in the forward end of said lug, having its free end adapted to engage the forward end of said rod a , the heel c^3 of said lever being in engagement with the forward part of the said gun-frame, substantially as hereinbefore described and for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM H. DAVENPORT.

Witnesses:

GEO. H. REMINGTON,
REMINGTON SHERMAN.