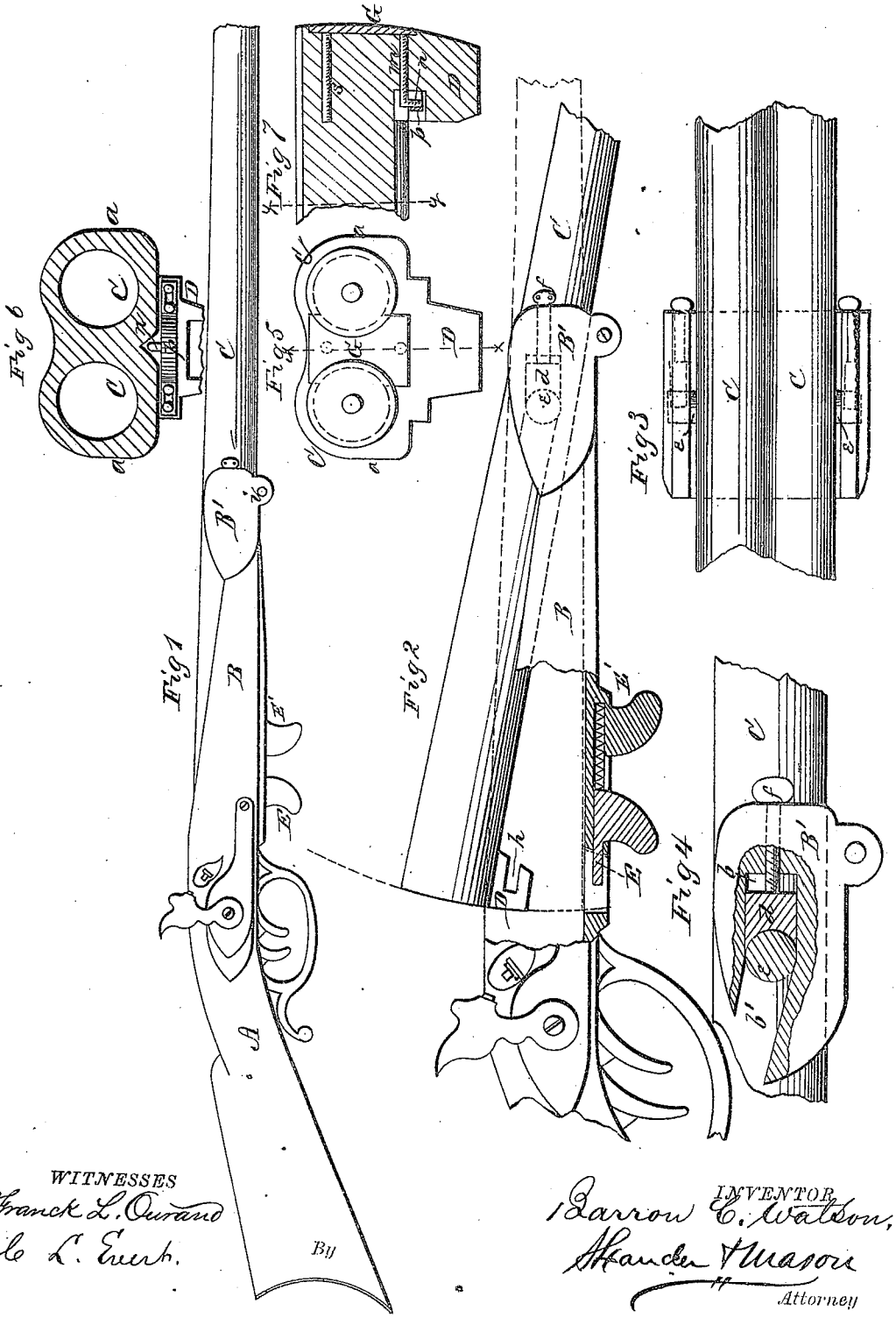
B. C. WATSON.

Breech-Loading Fire-Arm.

No. 161,307. Patented March 23, 1875.



WITNESSES

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UNITED STATES PATENT OFFICE.

BARRON C. WATSON, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS RIGHT TO LEON FURNISS, OF SAME PLACE.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **161,307**, dated Macrh 23, 1875; application filed March 10, 1875.

To all whom it may concern:

Be it known that I, BARRON C. WATSON, of New York, in the county of New York and in the State of New York, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

My invention relates to that class of double and single barreled shot-guns or rifles and small arms generally which are hinged in such a manner as to tilt the barrels sufficiently to insert the cartridges at the breech; and the nature of my invention consists in the construction and arrangement of the case in which the inner ends of the barrels are held, and in the method of hinging and holding the barrels in position. My invention further consists in the construction of an extractor for removing the cartridge-shells, all as hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view of a gun embodying my invention. Fig. 2 is an enlarged side view, part in section, showing the barrels tilted ready for loading. Fig. 3 is a plan view of the outer end of the stock-case. Fig. 4 is a longitudinal section through one of the bearings. Fig. 5 is a view of the breech end of the barrels. Fig. 6 is a section through the line *y y* of Fig. 7; and Fig. 7 is a section through the line *x x* of Fig. 5.

A represents the stock of a gun provided at its front end with a metallic case, B, to extend about one-third the length of the barrels from the breech. C C are the barrels, made in the usual manner, and having outer sides made almost straight or square, as shown at *a a* in Fig. 6, to fit closely the inner straight sides of the case B. The outer end of the case B forms a lip or wing, B′, on each side, on the inner side of which is a horizontal groove, *b*, with an inclined extension, *b′*, running upward and rearward, as shown in Fig. 4. In each groove *b* is placed a bearing-block, *d*, rounded upon its rear side, and held at the front by means of a set-screw, *f*, passed through the front edge of the lip B′. The barrels C are provided with trunnions *e e*, which are passed from the rear into the slots *b′*, and down into the slots *b* against the rounded sides of the bearing-blocks *d d*. The trunnions *e e* are located in the center of the barrels vertically, and about or a little less than one-third of the length from the breech, so that when the gun is fired there will be no tendency of jumping upward, the trunnions being in a horizontal plane drawn through the centers of the barrels. In case of wear of the parts so that the barrels would not fit tightly at the breech, the defect is easily remedied by simply screwing up the set-screws *f*, so as to move the bearing-blocks *d* backward in their grooves until the breech gets tight. In like manner, if the breech gets too tight from the expansion of the metal by rapid firing the set-screws *f* can be slightly loosened, thereby easing the parts.

At the breech end of the barrels C, on the under side, is a projection, D, provided with a slot, *h*. When the barrels are in position for firing, the lower end of the projection D fits in a hole in the bottom of the case B, and a spring-slide, E, enters the slot *h*, to lock the barrels, as shown. By pushing the slide E forward the barrels will be tilted by the weight of that portion in front of the trunnions. I may arrange a spring in connection with, or in front of, the trigger-guard, to act on the end of the projection D and start the barrels. Through the lower portions of the lips B′, at the front end, passes a rod, *i*, which acts as a stop for the downward movement of the front ends of the barrels, and holds them in such a manner that their rear ends will be just far enough above the breech to admit of the removal of the cartridge-shells and insertion of new cartridges. When the barrels are in this position their straight sides *a* are still in contact with the walls of the case B, and the case forms bearings for the barrels, preventing any lateral motion. The case B also forms a protection for the hand and arm in case of any

explosion, as the only direction in which the pieces of the bursting barrels can fly is upward, the bottom and sides being protected by the case B. By taking out the pin *i* the barrels may be removed for cleaning.

In the rear ends of the barrels C is arranged a cartridge-extracting plate, G, in any of the known and usual ways, said extractor being, near its upper end, provided with a guide-pin, S. From the lower end of the extractor G a rod, *m*, projects through a hole in the projection or lump D; and the inner end of this rod is bent, as shown at *n*, into a recess formed in the rear part of said projection or lump. *p* is an elliptic spring arranged below the barrels, as shown, and bearing against the bent part *n* on the rod *m*, to force the extractor outward.

By this arrangement the spring is cheaply and readily applied to the barrels, and can be applied to any of the barrels already made.

This invention may be applied to a single barrel as well as to a double barrel.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a breech-loading fire-arm, of the barrel or barrels, having trunnions on a line with the center of the barrel or barrels, and a case or frame, having adjustable bearings, substantially as and for the purposes herein set forth.

2. The extracting-plate G, rod *m n*, and elliptic spring *p*, arranged and combined for operation, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of February, 1875.

BARRON C. WATSON.

Witnesses:
H. A. HALL,
C. L. EVERT.