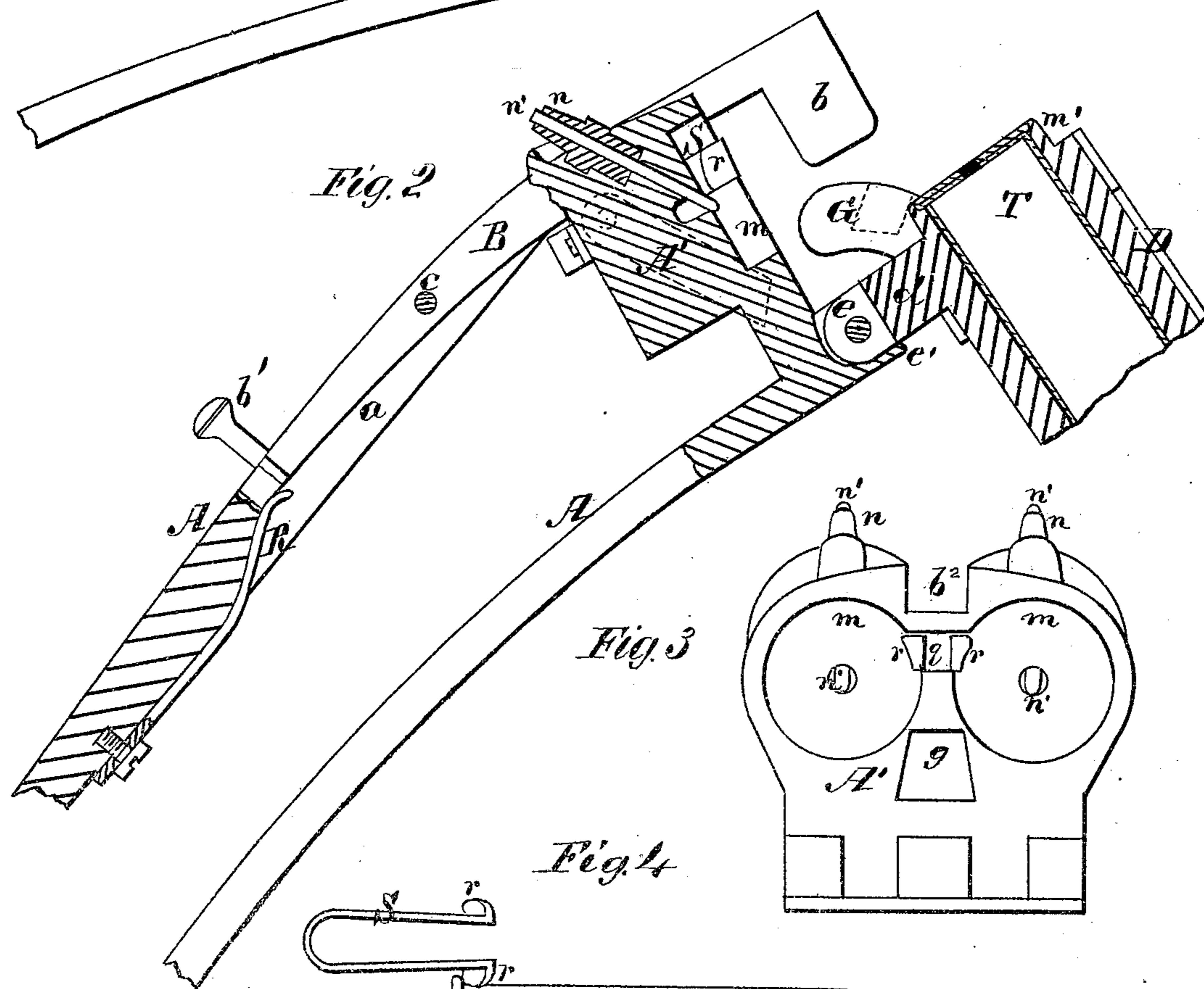
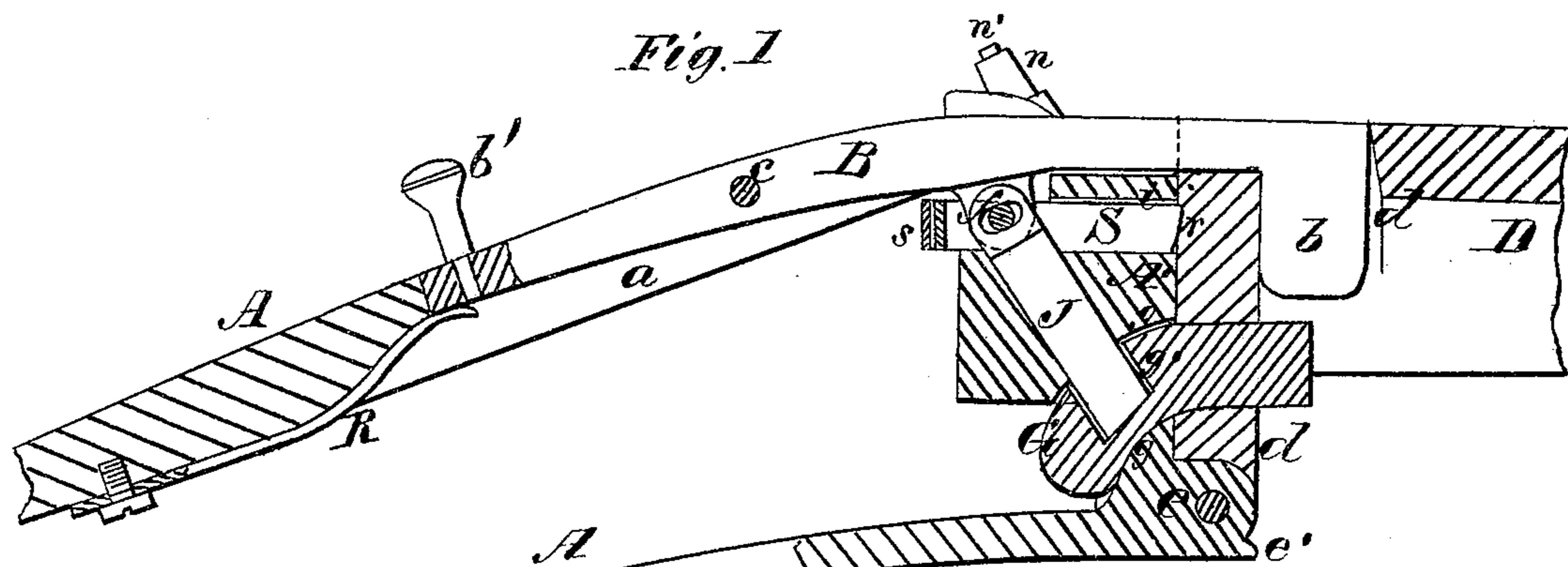


H. A. CASTLE.
Breech-Loading Fire-Arms.

No. 144,190.

Patented Nov. 4, 1873.



Witnesses.
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IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 144,190, dated November 4, 1873; application filed August 28, 1873.

To all whom it may concern:

Be it known that I, H. A. CASTLE, of Ilion, in the county of Herkimer and State of New York, have invented a new and Improved Breech-Loading Shot-Gun; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a section taken longitudinally and centrally through my double-barrel shot-gun, showing the breech closed. Fig. 2 is a section taken longitudinally through one of the barrels and the frame, showing the breech open. Fig. 3 is an end view of the frame with the locking-lever removed. Fig. 4 is a view in detail, showing the shape of the cartridge-extractor, and one of its hooks engaging with the flange of a cartridge-shell.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on breech-loading shot-guns, wherein I employ a locking-lever, which engages with the breech of the barrels forward of their rear ends, and to which a locking-pin is pivoted, that engages with a hook on the breech of the barrels below their axes. I also connect the barrels to the frame of the arm by means of a broad hinge, and form annular tenons at the rear ends of the barrels, which are received into corresponding recesses formed into the recoil-block. I also employ spring-hooks of peculiar shape, which will draw out the cartridge-shells in the act of exposing the breech of the barrels, all as will be hereinafter explained.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawings, A represents the frame of the gun, consisting of a strong recoil-shield, on which two bars or tangs are formed to receive the stock. The upper bar or tang, as well as the recoil-shield, are slotted at *a* to receive a thumb-lever, B, having a right-angular locking-tongue, *b*, formed on one end, and a thumb-button, *b'*, applied to its rear end, as shown in Figs. 1 and 2. This lever B is pivoted at *c*, and it is held down in place flush with the top surface of the frame

by means of a spring, R. On opposite sides of the lever B are the nipples *n n* for receiving the blows of the hammer, and through these nipples pass the firing-pins *n'*, the lower ends of which are received in holes made into the recoil-shield in the center of circular recesses *m* formed in this shield. These circular recesses are intended for receiving annular tenons or flanges *m'*, which surround concentrically the rear ends of the bores of the barrels, as shown in Fig. 2. Below the circular recesses *m* is a broad extension, on which perforated hinging-lugs are formed, which lugs are at right angles to the vertical face of the shield A'. It is to these lugs that corresponding perforated lugs on the barrels are connected by a pivot, *e*, which pivot hinges the barrels to the lower part of the frame, as clearly shown in the drawings. A hole is made obliquely through the recoil-shield A' for receiving a locking-pin, J, which is connected, by a pivot and slot, *f*, to lugs on the bottom of the thumb-lever B, as shown in Fig. 1. This locking-pin is so arranged with reference to a hook or segment, G, on the rear ends of a hinging extension on the lower side of the breech of the barrels, that when the breech is closed, or, in other words, when the barrels are brought into position for firing the piece, the lower forward end of the pin J is received in a hole made into the said segment G, as shown in Fig. 1. This segment G is rigidly secured to the hinging extension of the barrels, and its curve is concentric to the axis *e*, so that when the barrels are moved into a position for firing the arm this segment will enter a slot, *g*, and receive the pin J, as shown in Fig. 1. At the same time that the pin J enters the segment G the tongue *b* on the front end of thumb-lever will enter a recess, *d*, made between the barrels D in front of their rear ends, as shown in Fig. 1.

By this construction it will be seen that the barrels are locked firmly to the recoil-shield of frame A by a fastening, *b*, above the axes of the barrels, and also by fastenings J G below the axes of the barrels. These two fastenings firmly and safely secure the barrels to the frame, and are both simultaneously released by depressing the rear end of the thumb-lever B. The lower end of the tongue on the thumb-lever B is rounded, so that, in the act of bring-

ing the barrels from the position shown in Fig. 2 to that of Fig. 1, the tongue *b* will automatically spring into its recess *d*, and lock the barrels in place for firing the arm. Just below the groove *b*² a slot, *g*, is made longitudinally through the recoil-shield *A'*, into which slot a U-shaped spring-retractor, *S*, is applied, the connected ends of which abut against a strap, *s*, fastened to the back of the recoil-shield. The pin *J* plays through the rear end of the spring-extractor *S*, which is hooked, as shown at *r r*, Fig. 4, which hooks encroach slightly upon the recess *m m*; and when the breech is closed, as in Fig. 1, the hooks are received into notches made through the annular tenons *m'*, and catch over the flanges at the butts of the cartridge-cases. In the act of opening the breech the extracting-hooks *r r* draw back the shells *T*, and leave them loose and sufficiently exposed to be readily withdrawn by the fingers. The hooks present concave beveled surfaces, and their hooking ends are slightly rounded and inclined, so as to readily spring upon the cartridge-flanges in closing the breech, and to leave these flanges with equal facility when the shells have been loosened and drawn out of the bores of the barrels.

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

1. The spring thumb-lever *B*, pivoted to the

top of the stock at *c*, extended forward of the recoil-shield *A'*, and terminated in the locking-tongue *b*, which enters the recess *d*, in combination with barrels hinged at *e* to the frame of the arm, and with the curved or segmental-shaped socketed piece *G*, and the slotted pivoted pin *J*, the piece *G* being attached to the barrels and passed through a curved slot, *g*, and the pin to the thumb-lever *B*, and passed through the recoil-plate *A'* into the socket *g'*, all substantially as herein described, and for the purpose set forth.

2. The U-shaped spring-extractor *S* with hooked ends *r*, constructed to take hold of two cartridges at the same time, and adapted to be inserted through the breech and held in place, substantially in the manner described.

3. The combination of the U-shaped spring-extractor *S r*, passed through the recoil-plate *A'*, pin *J*, and strap *s*, the pin *J* serving to prevent the extractor moving too far forward when the barrels are thrown down on their hinge, and the strap preventing it moving too far back when the barrels are thrown up against the breech or recoil-plate, substantially as described.

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Witnesses:

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