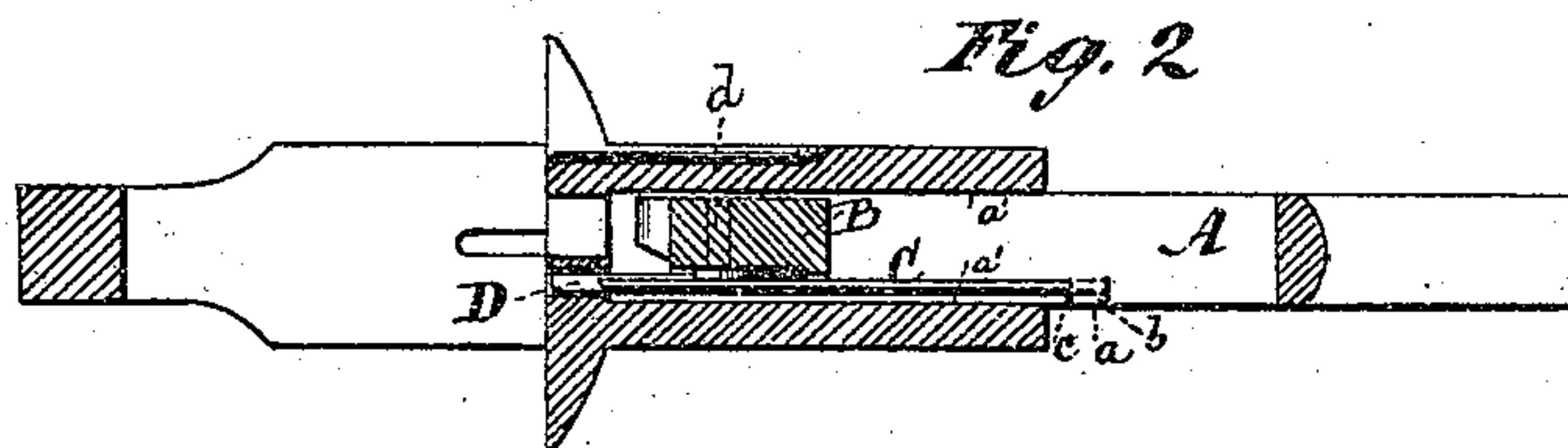
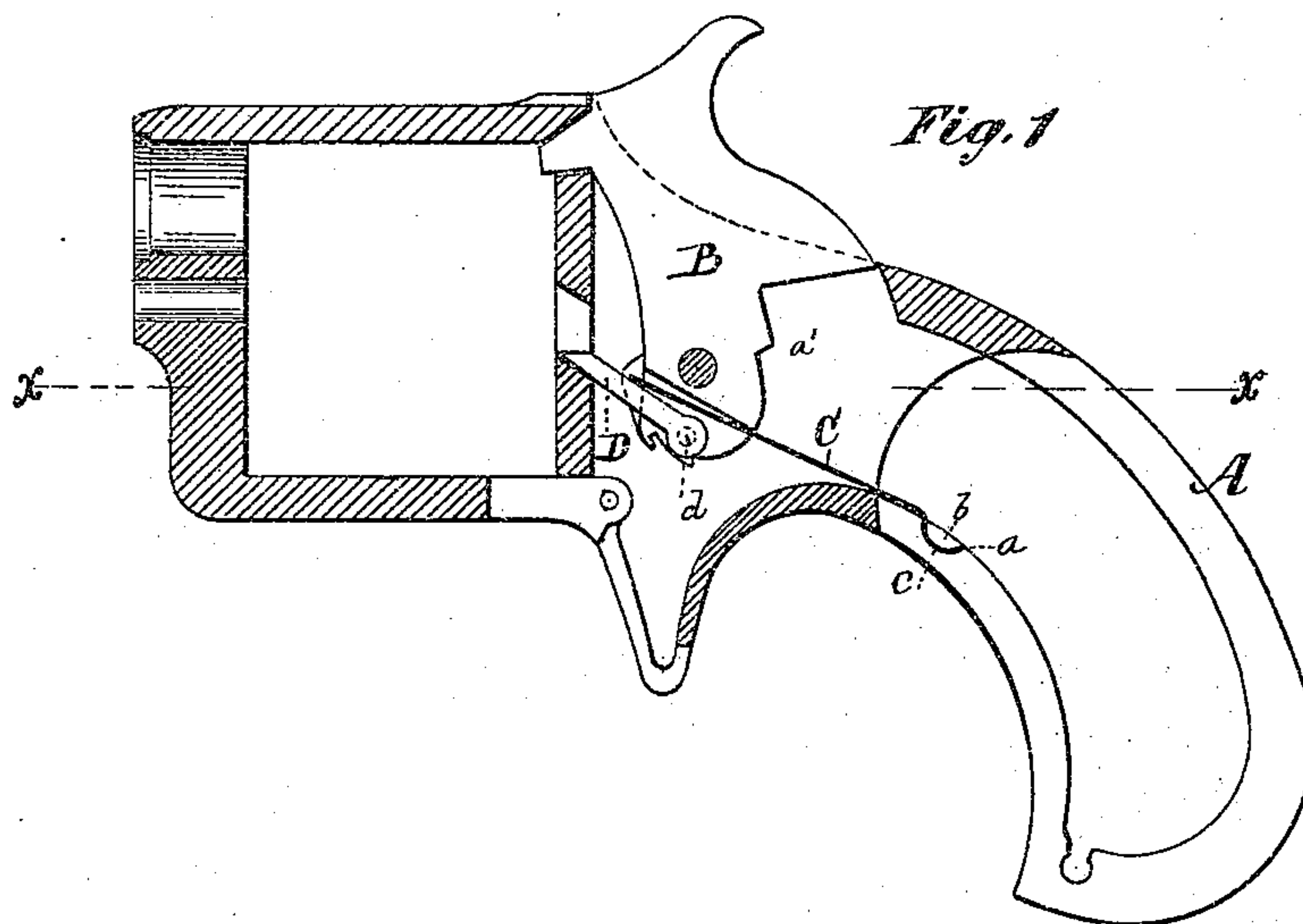


W. A. RICHARDSON.

ATTACHING SPRING OF FIRE-ARM.

No. 177,887.

Patented May 23, 1876.



Witnesses:
Michael Ryan
Fred Warner

Wm A Richardson
by his Attorneys
Brown & Allen

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UNITED STATES PATENT OFFICE.

WILLIAM A. RICHARDSON, OF WORCESTER, MASSACHUSETTS, ASSIGNOR OF
ONE-HALF HIS RIGHT TO GILBERT H. HARRINGTON, OF SAME PLACE.

IMPROVEMENT IN ATTACHING SPRINGS OF FIRE-ARMS.

Specification forming part of Letters Patent No. 177,887, dated May 23, 1876; application filed
April 11, 1876.

To all whom it may concern:

Be it known that I, WILLIAM A. RICHARDSON, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain Improvements in Fire-Arms; and that the following is a full, clear, and exact description of the same.

The first part of my invention relates to the springs employed in the lock mechanism of fire-arms; and it consists in a novel mode of attaching a spring, whereby it is readily inserted in place and securely held against displacement in any direction, without the use of a screw, rivet, or similar fastening, and may be easily removed or replaced when necessary.

The first part of the invention is applicable to any of the springs used in fire-arms, but is here shown as applied to the dog which gives motion to the cylinder.

The accompanying drawing illustrates a mode of carrying out my invention. Figure 1 is a longitudinal sectional view of a portion of a revolving fire-arm embodying my improvements. Fig. 2 is a horizontal section taken in the line *x x* of Fig. 1. Fig. 3 is a detail view of the dog. Fig. 4 is a detail view hereinafter referred to.

The frame A is of the usual or any suitable construction, and the hammer B is hung in the ordinary manner. In the lower part of the frame A, in rear of the trigger-seat, is a recess, *a*, forming an arc of a circle. This recess is made with a circular mill or other suitable tool, by cutting into the metal of the frame in a direction parallel with the axis of the hammer, so as to form an arc-shaped groove, leaving above said groove a projecting piece of solid metal, *b*, of segmental shape in its cross-section. The spring C is made of an elastic steel strip or flattened wire, and is straight, except near its rear end, where it is bent into an arc shape, corresponding with that of the recess *a*. The spring is inserted

from toward the rear portion of the frame, so that its front end will pass under the hammer-pivot and bear against the dog carried by the hammer and keep it engaged with the ratchet of the cylinder. The spring is attached to the frame by inserting the arc-shaped portion *c* in the correspondingly-shaped recess *a*; and, in consequence of this arc shape, the spring is securely held in position and effectually prevented from becoming displaced, either longitudinally or upward and downward, while the bottom of the groove or recess on one side and the stock-plate on the other side prevent the possibility of lateral displacement.

If the spring should become broken, or its removal for any reason should be desired, it may be withdrawn from the recess by taking off the stock-plate.

I am aware that a spring has been attached to a seat without a screw or rivet by means of a dovetail projection fitting in a groove or notch of corresponding shape; but such mode of attachment necessitates a particular construction of the spring and involves more time, labor, expense, and waste of material than in my invention, in which the spring is of simple construction, and is only slightly changed in form, in order to provide for its attachment, and this change is effected by bending, and does not involve either waste or addition of material.

What I claim as new, and desire to secure by Letters Patent, is—

As an improvement in the securing of springs in fire-arms, an arc-shaped recess in the frame, in combination with an arc-shaped curve in the spring, whereby the latter is securely attached and held in place, substantially as herein described.

WM. A. RICHARDSON.

Witnesses:

GEO. E. SMITH,
S. B. I. GODDARD.