

(No Model.)

E. O. C. ORD, Jr., & J. A. KRESS.

RANGE FINDER FOR RIFLES.

No. 277,922.

Patented May 22, 1883.

Fig:1.

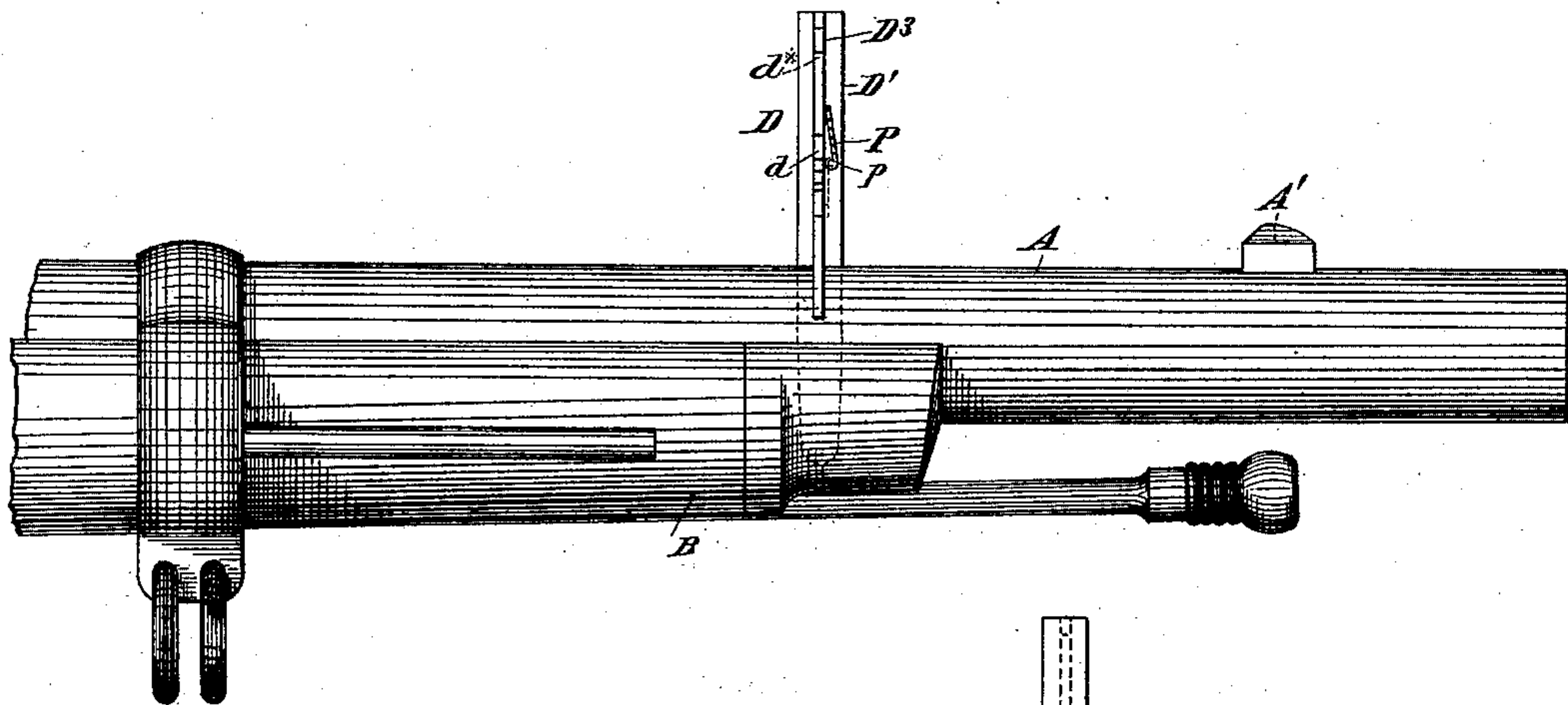


Fig:2.

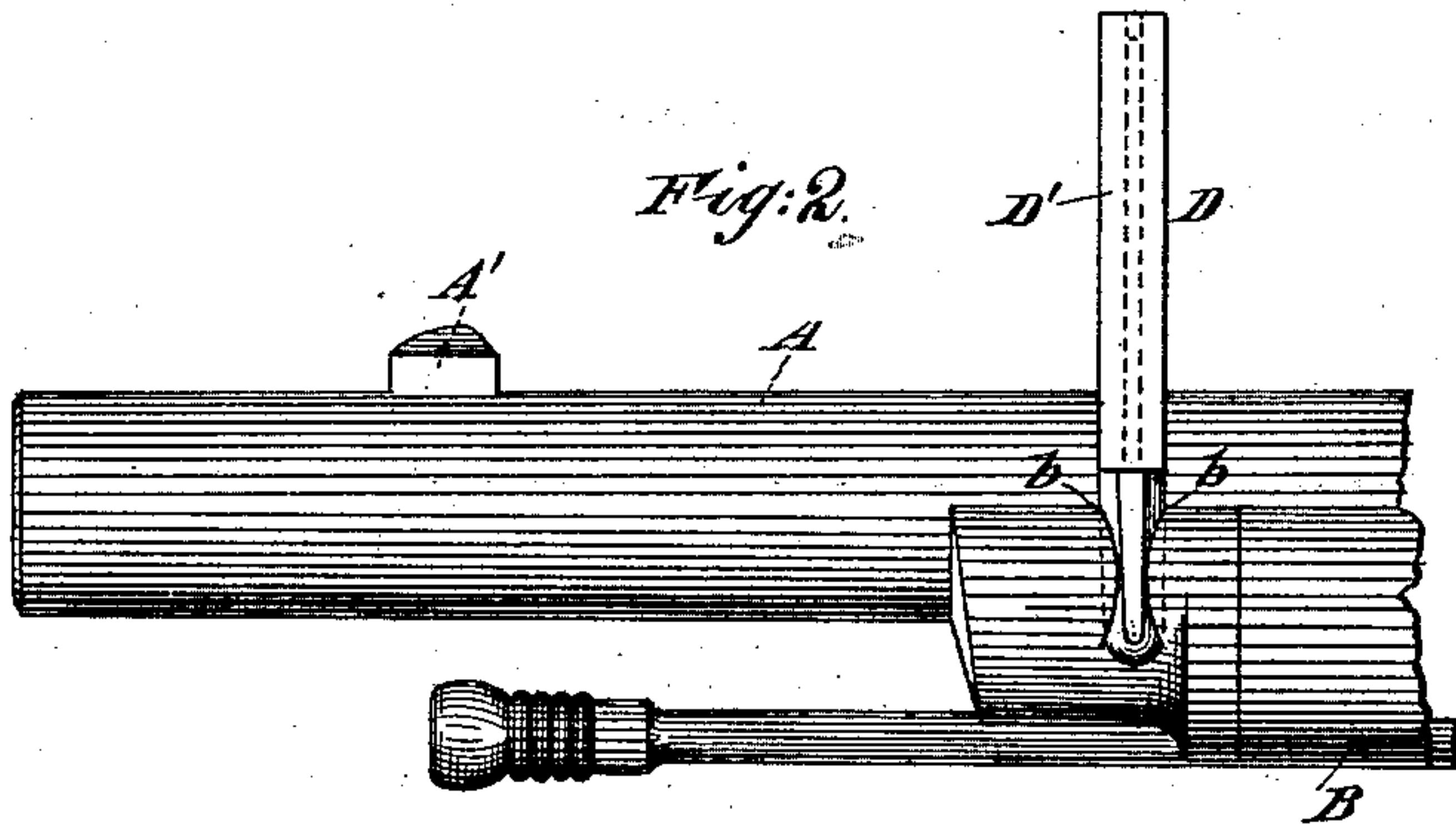
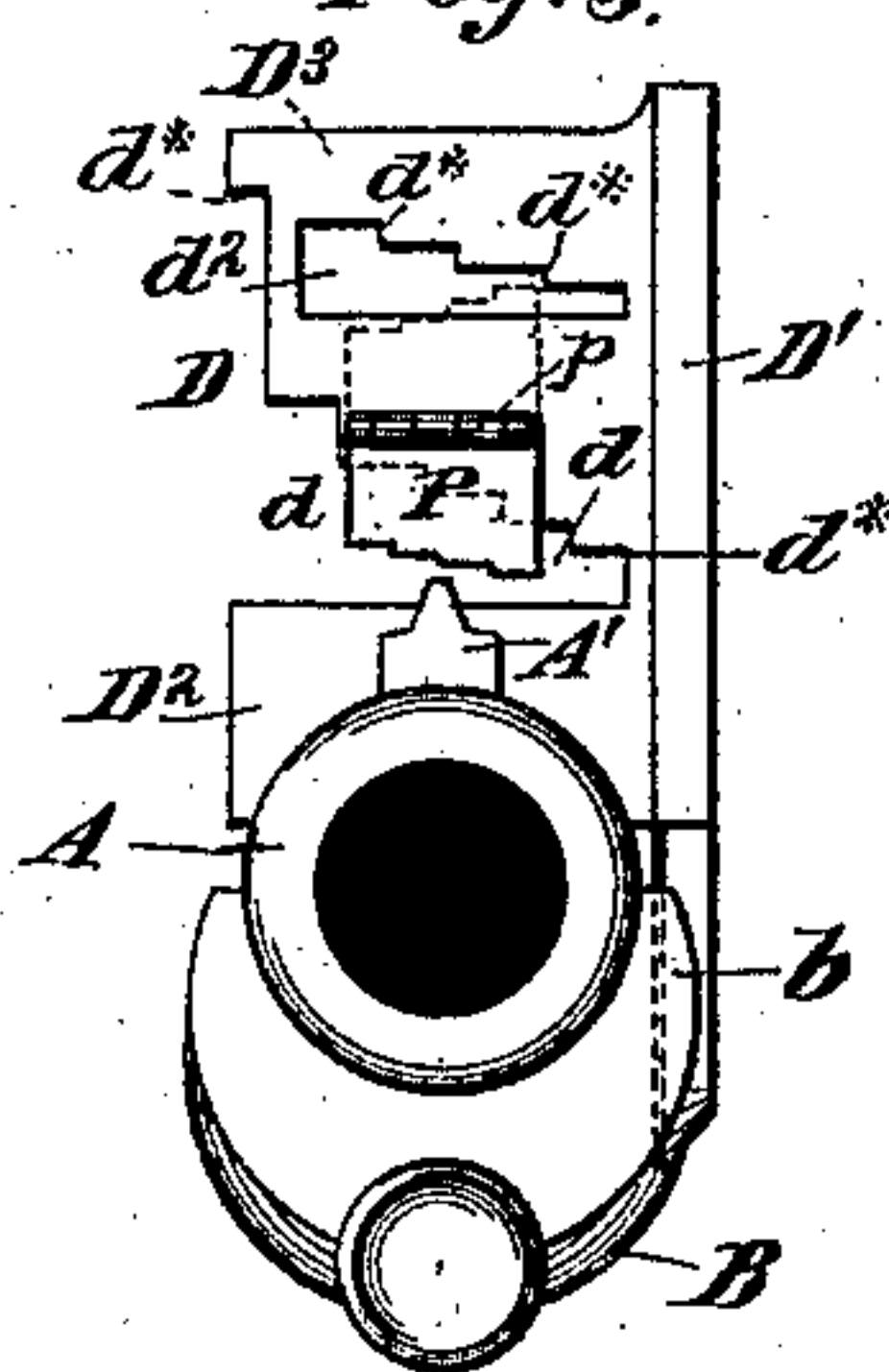


Fig:3.



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# UNITED STATES PATENT OFFICE.

EDWARD O. C. ORD, JR., AND JOHN A. KRESS, OF THE UNITED STATES ARMY.

## RANGE-FINDER FOR RIFLES.

SPECIFICATION forming part of Letters Patent No. 277,922, dated May 22, 1883.

Application filed August 26, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, EDWARD O. C. ORD, Jr., and JOHN A. KRESS, of the United States Army, stationed at present at San Antonio, Bexar county, in the State of Texas, have invented certain new and useful Improvements relating to Rifles and Long-Range Arms, of which the following is a specification.

We have devised a range-finder adapted for ready application to a rifle by producing a simple dovetailed groove in the stock or stock-tip, near the front end. The range-finder is formed with offsets to indicate for certain arbitrarily fixed distances, so that the approximate distance of an object of the height of six feet, or whatever other height the range-finder is adapted for, may be determined instantly by sighting along the piece. The aperture through which the objects are observed allows the muzzle-sight to be clearly seen. Our device does not therefore interfere at all with the use of the sights. In the use of the arm fitted with our range-finder the piece is leveled and moved to one side or the other until the object is seen through the proper notch or offset of the range-finder. This at once determines the approximate distance, and the rear sight, near the breech of the piece, may be then instantly adjusted for that range and the piece again leveled and discharged.

The accompanying drawings form a part of this specification, and represent what we consider the best means of carrying out the invention.

Figure 1 is a side view, and Fig. 2 is a view from the opposite side. Fig. 3 is an end view.

The figures show the novel parts, with so much of the ordinary parts as is necessary to indicate their relations thereto.

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

A is the barrel; A', the front sight or muzzle-sight, and adapted to serve with the ordinary rear sight.

B is the stock, formed partly of metal, as usual. Near the front the stock or stock-tip is provided with a dovetailed groove, b, which is vertical when the piece is leveled for use.

D is our range-finder, certain portions be-

ing indicated by additional marks, as D' D<sup>2</sup>, &c., when necessary.

D' is an upright or post having its base formed into a dovetailed tenon adapted to match tightly and firmly in the groove b

D<sup>2</sup> is a stop extending out from the post D', and adapted to match fairly on the upper surface of the barrel A.

D<sup>3</sup> is a considerable plate extending from the upper portion of the post D' in the same plane as the stop D<sup>2</sup>. The space d between the stop D<sup>2</sup> and the plate D<sup>3</sup> is open.

When the piece is brought to the shoulder, and the eye is in its ordinary position near the breech, a distant object may be conveniently sighted through this space. The space is wider on one side than on the other. The breadth is diminished not gradually but by offsets. The latter are marked d\*. The proportions are carefully determined. For ordinary military purposes, assuming six feet as the average height of a soldier with his hat, the first notch or offset is made of such height that a man, as seen through the range-finder, will just fill the first notch at a hundred yards distance. The second notch is made of such height that the same man will just fill it at two hundred yards, and the third at three hundred yards, and so on up to five or six hundred yards. For other than military purposes the same notches may serve, with a mental allowance by the hunter for the size of the animal; or the range-finder may be especially adapted for the height of a buffalo, beaver, or other animal. For long-range shooting we provide another orifice at a higher level. It is marked d<sup>2</sup>. Its upper edge is equipped with notches or offsets for long range, which may reach to a thousand yards or more. The notches forming the upper edge of this orifice are marked, the same as the others, d\*.

For convenient sighting we employ in some cases an adjustable piece, P, turning on an axis, p, and equipped with a spring to make a sufficiently stiff joint to hold it up or down, as may be required. Its edge is formed with offsets carefully determined, like the others, but adapted for long ranges, up to ten hundred or fifteen hundred yards. When it is turned up



it is of no effect. When it is turned down it partially covers the space  $d$ . It presents its notched edge sufficiently below the other notched edge to serve for a further range of distances. It is particularly useful on arms which are provided with telescopes. The telescope does not require shifting in position. It may, in the ordinary position, serve, with little trouble or mental labor, to determine with approximate accuracy the distance of the game. If the object is near, the range-finder is employed with the hinged piece P turned up out of use. If it is distant, it is used with the hinged piece P turned down. In either case the telescope may be made available—first, in moving the piece to the right or left to bring the object into the proper offset to determine the range, and then, with or without altering the rear sight, the sights are brought into range and the piece discharged. The telescope may be available for both operations, determining the distance and the sighting for the discharge.

It will be understood that when the object is at intermediate distances the height of the man or other object will appear intermediate between certain notches or offsets. In such case judgment must be exercised in adjusting the sights, and some allowance must be made in finally shooting, as will be readily understood.

Modifications may be made in the details.

We can use parts without the whole. We can dispense with the orifice  $d^2$  when the adjustable piece P is employed. We can dispense with the adjustable piece P. The plate  $D^3$  may be joined to the stop  $D^2$ , so that the space  $d$  will be entirely inclosed with metal. Such a construction, by adding to the strength, may be preferred in cases where the device is liable to be very roughly used. Generally the range-finder will be removed from the piece and carefully protected in the pocket, except at the long intervals, when it is required for use.

We claim as our invention—

The range-finder described, composed of the tenon  $D'$ , stop  $D^2$ , and plate  $D^3$ , having the space  $d$ , with its edge  $d^*$  formed in offsets adapted to serve in combination with a rifle, A B, having a groove or socket,  $b$ , substantially as herein specified.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

E. O. C. ORD, JR.  
JOHN A. KRESS.

Witnesses to the signature of E. O. C. Ord, Jr.:

W. W. LAMBERT,  
J. G. BALLANCE.

Witnesses to the signature of John A. Kress:

J. B. RAWLINGS,  
JOHN J. STEVENS.