

GEORGE W. SCHOFIELD.

Improvement in Combined Band Punch and Screw Drivers.

No. 122,286.

Patented Dec. 26, 1871.

FIG. 1

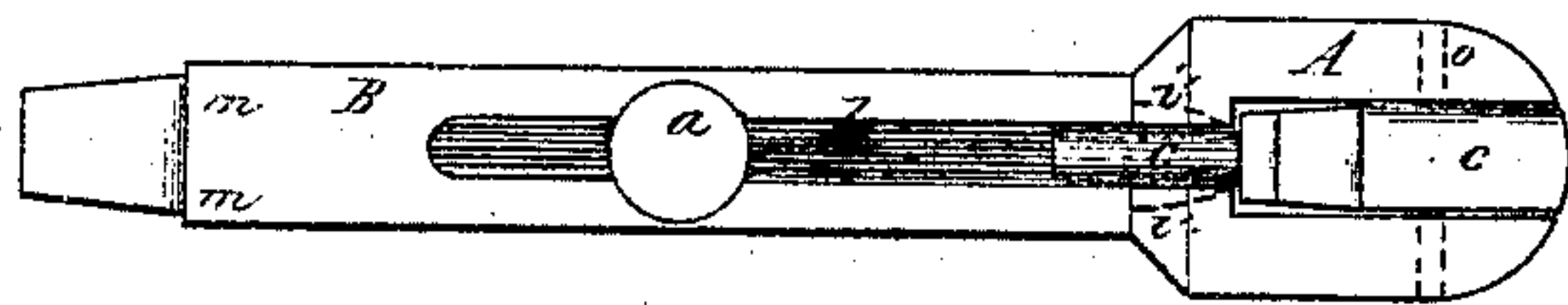


FIG. 2

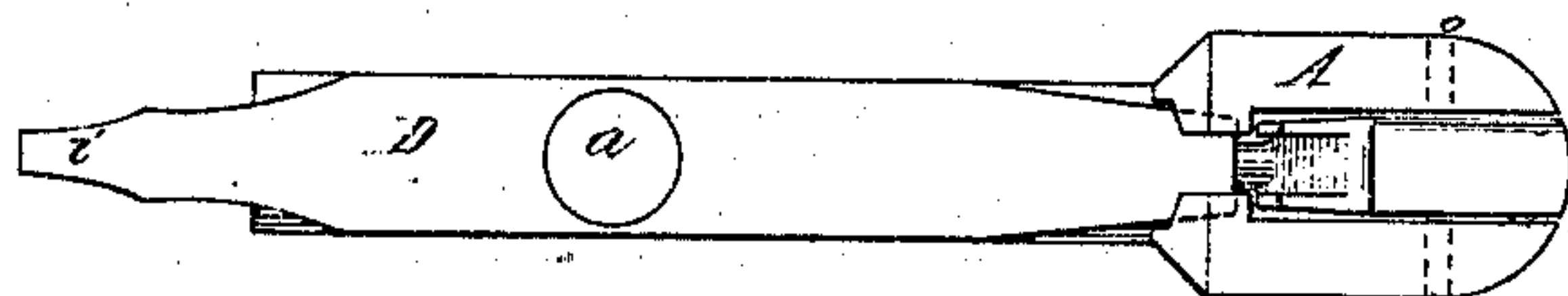


FIG. 3

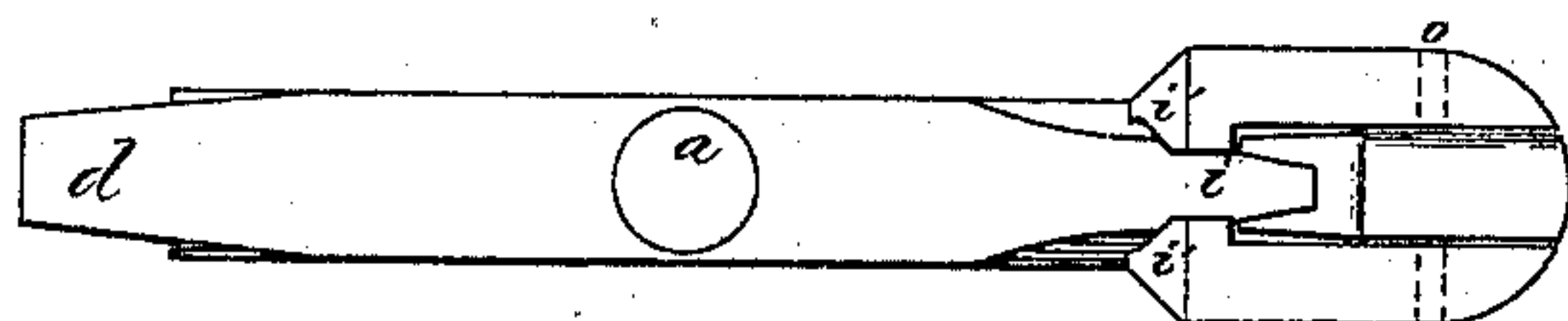


FIG. 4

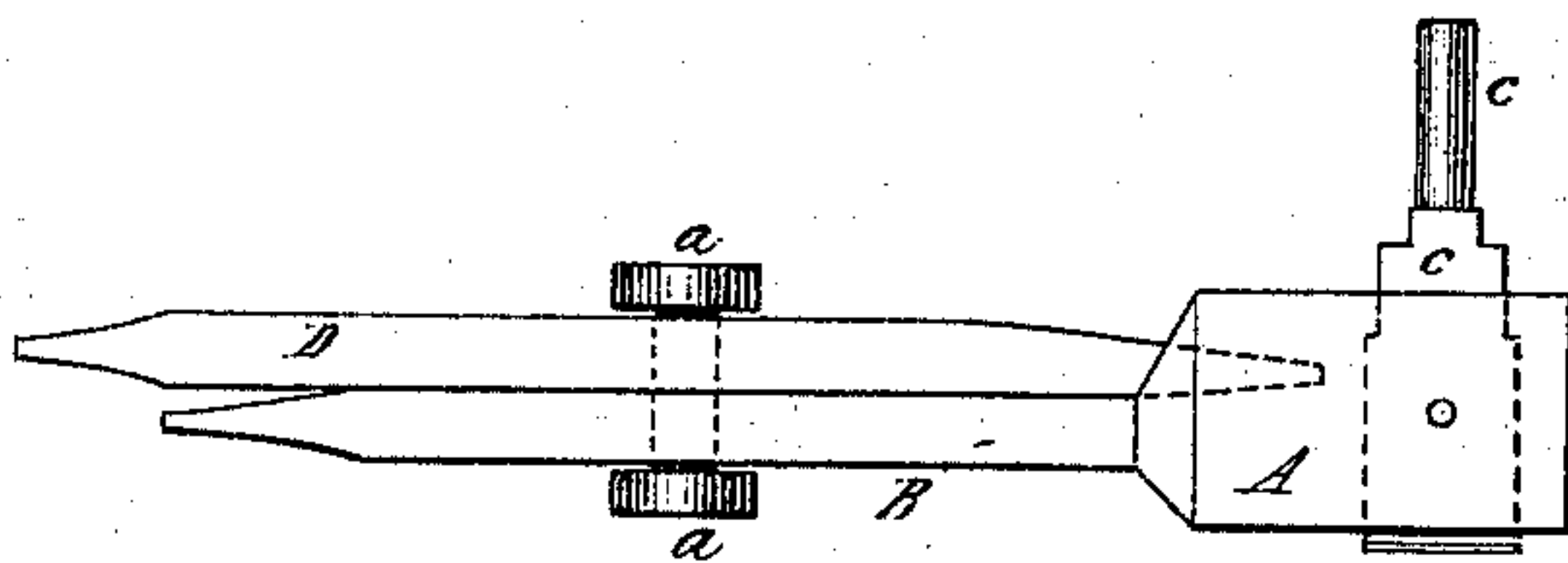
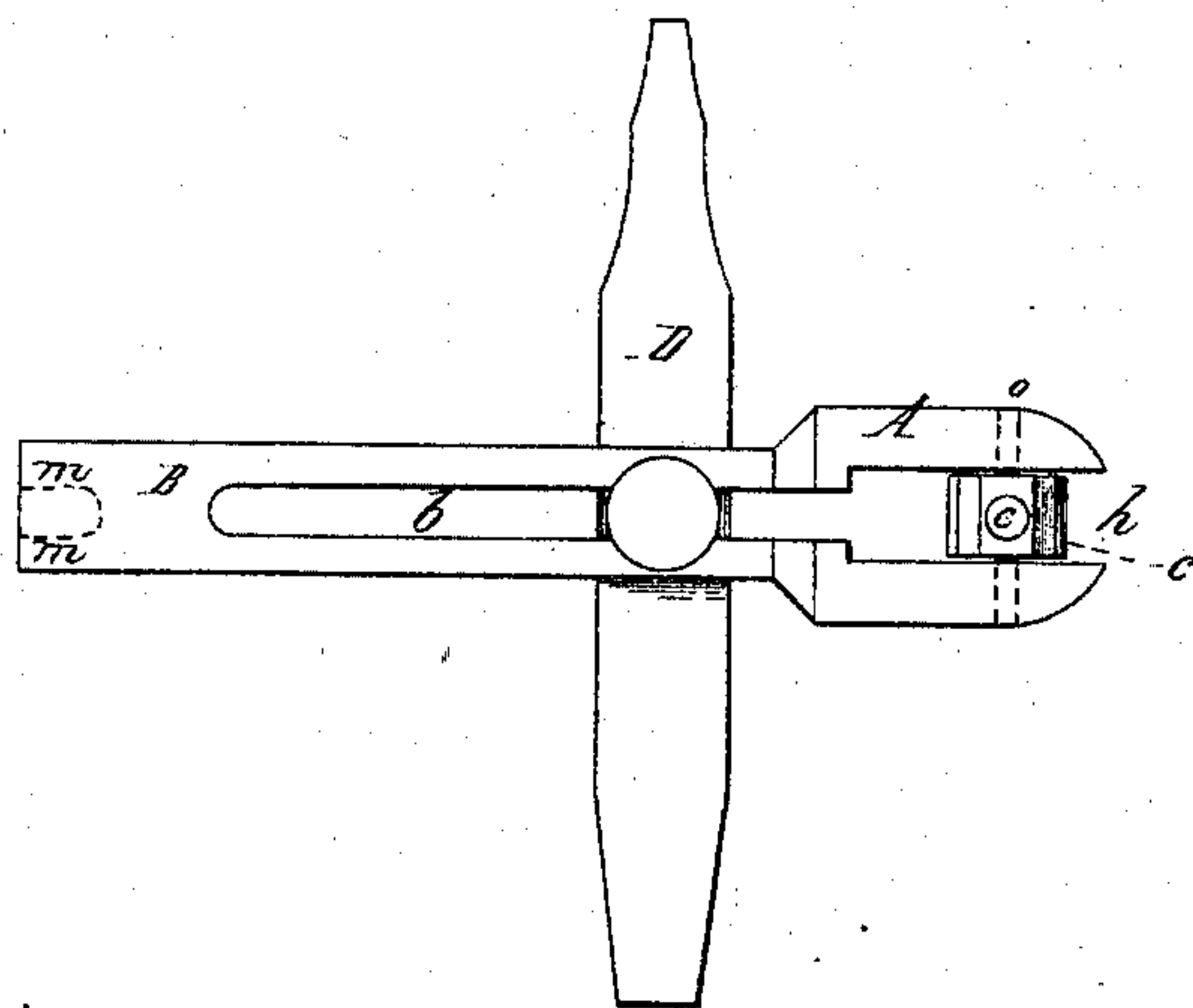


FIG. 5



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UNITED STATES PATENT OFFICE.

GEORGE W. SCHOFIELD, OF THE UNITED STATES ARMY.

IMPROVEMENT IN COMBINED BAND-PUNCHES AND SCREW-DRIVERS.

Specification forming part of Letters Patent No. 122,286, dated December 26, 1871.

To all whom it may concern:

Be it known that I, GEORGE W. SCHOFIELD, of the United States Army, have invented a new and useful Improvement in Screw-Drivers for Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification and to the letters of reference marked thereon.

Figure 1 is a view of one side of the driver as arranged to use one end of the reversible blade. Fig. 2 is a view of the other side arranged to use the other end of the reversible blade. Fig. 3 is a view of the other side. Fig. 4 is a view of the edge of the same, and shows the band-spring and tumbler-punches turned out in the position for using. Fig. 5 is a side view, showing the two blades open.

My invention relates to a screw-driver for fire-arms; and consists of a handle having a blade which has a longitudinal slot therein, and its end formed as a single or two-pointed driver, or notched as for a "main-spring clamp." A second blade, sharpened at each end and having a rivet firmly secured thereto, is secured to the main blade by means of the rivet, which is free to slide in said slot in a longitudinal direction, and a recess is cut in the handle, by means of which either end of the reversible blade is presented ready for use, and is so secured while in use by the reverse end being held in said recess. In that portion of the slot which passes through the handle a piece is pivoted, one end of which is a pin with a shoulder, so arranged that when turned out perpendicular to the axis of the slot, it can be used as a "band-spring punch," or as a "tumbler-punch," or as both of these; and when so turned out the slotted end of the handle may be used as a "main-spring clamp," or as a "nut-wrench."

That others skilled in the art may be able to make and use my invention, I will proceed to describe the same.

In the drawing, A represents the handle, having thereon the blade B, through both of which runs the slot *b*, in which is pivoted the punch *c*. A second blade has a rivet, *a*, secured firmly therein, and which passes through the slot *b* in the main blade, and is prevented from falling out or becoming detached by the large head upon each end, and this rivet is of a proper size to al-

low it to move freely in said slot. The secondary or reversible blade D has one end, *d*, made sharp and of a width proper for turning an ordinary screw, and the other end, *i*, is made tapering and either square or cylindrical, with its extreme end properly sharpened for turning smaller screws. The square or cylindrical part is for separating parts which screw together and are provided with holes through which it may be passed, and then used as a lever or crank. The handle A has a recess, shown by the dotted lines *i' i'*, made therein by grooving the slot *b*, and of such shape and width that its widest part may receive and firmly hold the wide end of the reversible blade *d* and its narrowest part the narrow end *i* of said blade. The punch *cc*, Figs. 1 and 4, has a thickness equal to the width of the slot which passes through the handle for its body, while the end which projects when turned out for use, as in Fig. 4, has a square or octagonal part nearest the handle, and terminates in a cylindrical pin; these two parts form the two punches. The punch is secured in its position in the handle slot by a rivet, *o*, on which it pivots, and which rivet serves at the same time to prevent the sides of the handle from springing apart. When the punch is turned out for use the cavity *h*, Fig. 5, left open in the end of the handle, may be used as a main-spring clamp or as a nut-wrench. The dotted lines *m m*, Figs. 1 and 5, serve to show a form in which the end of the main blade B may be made so as to be used as a main-spring clamp, nut-wrench, or two-pointed screw-driver.

The operation of my device is as follows: If an ordinary-sized screw is to be turned the blade is arranged with the small end *i* resting in the recess *i' i'*, as shown in Figs. 1 and 3; or if the main blade B is formed at its end as a plain point for driving ordinary screws, that may be used for the larger class of screws by fixing the blade D, as in Fig. 5; but if it is desired to manipulate a small screw, the blade D is forced along the blade B until the end *i* is entirely withdrawn from the recess *i' i'*, and the blade D is then turned on its pivot *a*, and forced back along the blade B until the wide end *d* enters the wider part of the recess *i' i'*. The small end *i* may then be used to turn the screw. The end of the main blade B, when formed with a recess or cavity as shown by the dotted lines *m m*, may be used as a main-spring vise or clamp to manipulate main

springs in taking them out or putting them in, or for a driver with two prongs; or for a nut-wrench; or for such other like purposes as may be desirable; and when in use for any such purposes the instrument is arranged as shown in Fig. 5.

This instrument forms a very useful tool to accompany any of the fire-arms now made and used, and is particularly adapted to use in all cases where it is desirable to disconnect the several parts of a fire-arm or to assemble them.

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

The combination of the handle A and the blade B thereon, both slotted, the recess *v' v'*, the blade D, and pivot *a*, with the double punch *c c*, all substantially as and for the purpose described.

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Witnesses:

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