(No Model.)

C. R. ROBINSON.

SHUT-OFF NOZZLE.

No. 463,779. Patented Nov. 24, 1891.

Fig. 1.

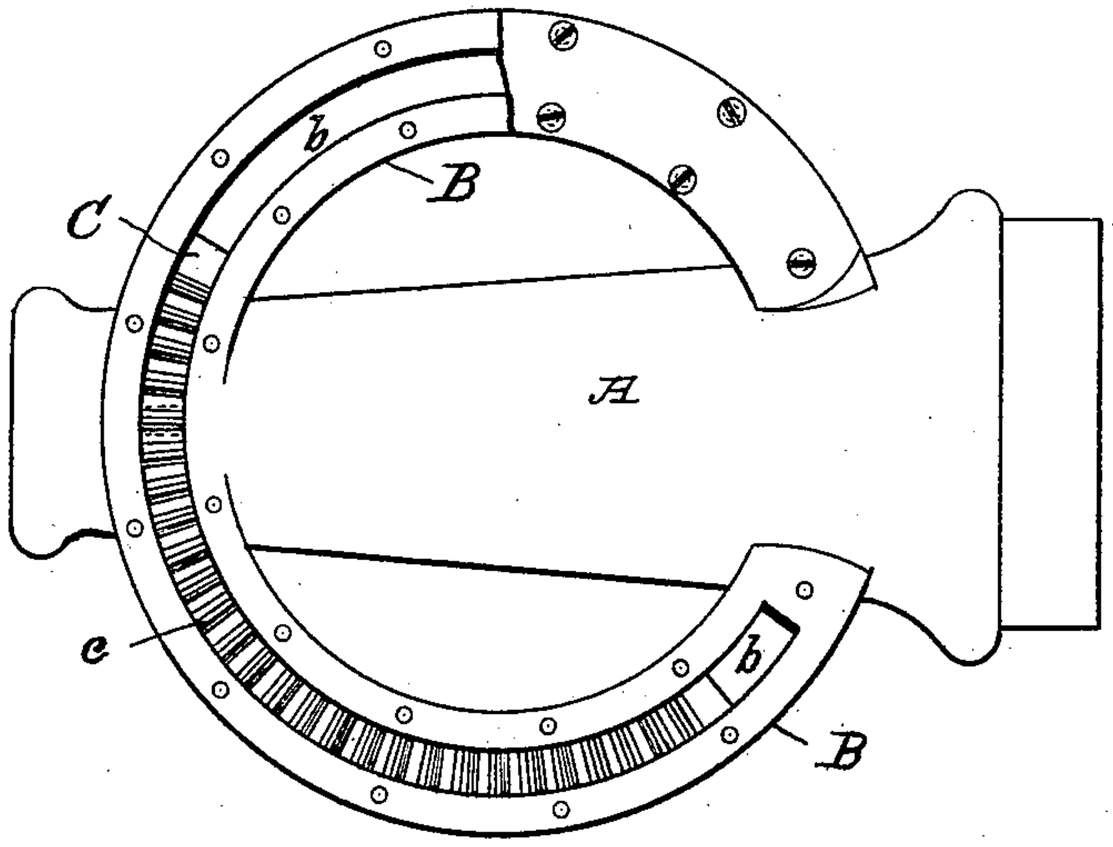


Fig. 2.

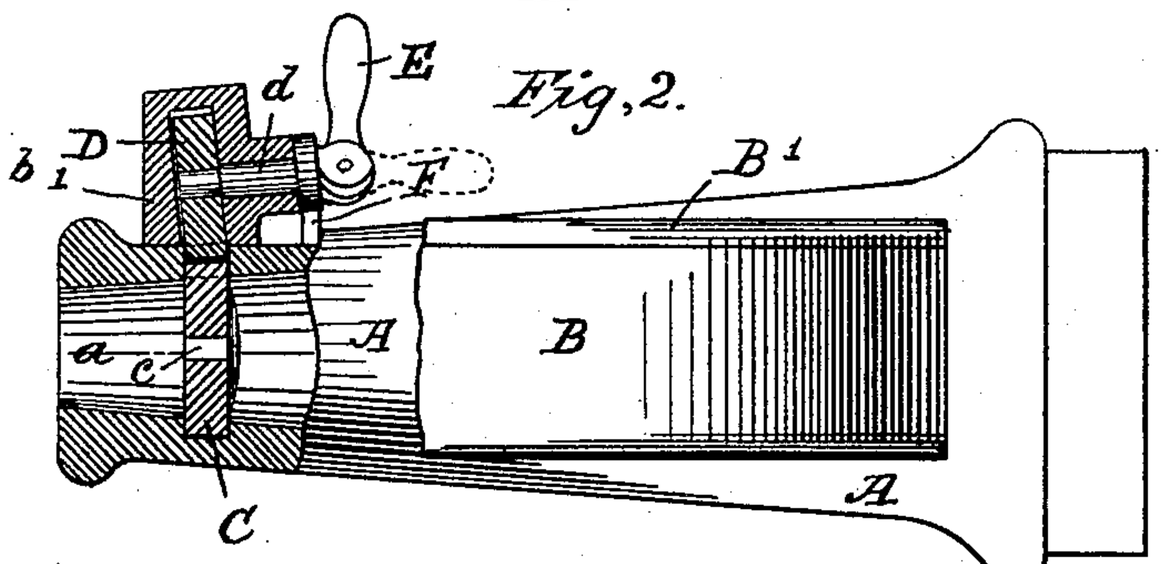


Fig. 4.

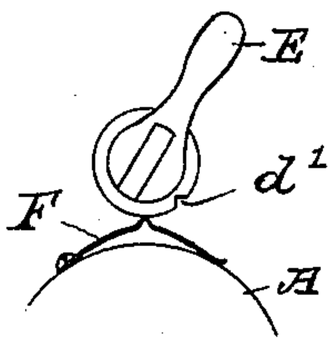
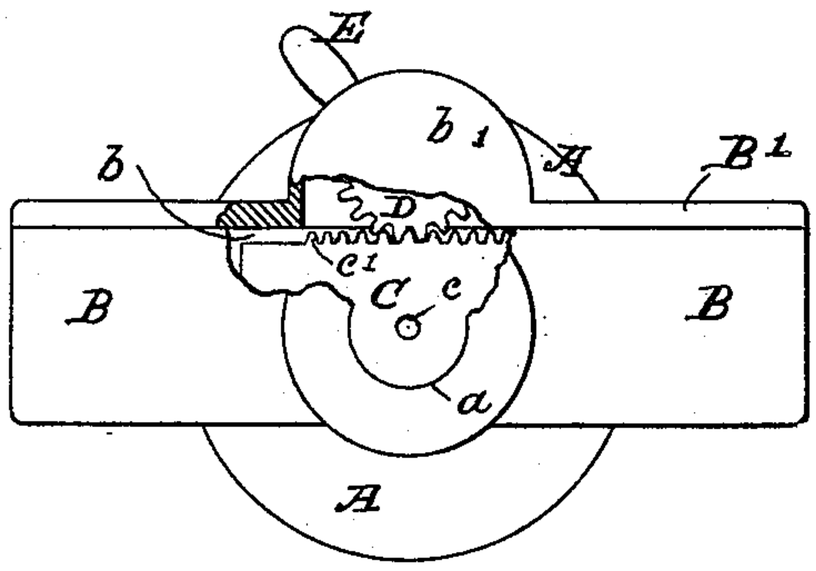


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

CYRUS R. ROBINSON, OF EAST CONCORD, NEW HAMPSHIRE.

SHUT-OFF NOZZLE.

SPECIFICATION forming part of Letters Patent No. 463,779, dated November 24, 1891.

Application filed April 21, 1891. Serial No. 389,752. (No model.)

To all whom it may concern:

Be it known that I, CYRUS R. ROBINSON, a citizen of the United States, residing at East Concord, in the county of Merrimac and State of New Hampshire, have invented certain new and useful Improvements in Shut-Off Nozzles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a class of hose-nozzles designed to throw streams of various size; and the invention consists in providing a nozzle with a slot or passage crosswise thereof and fitting therein a reciprocating bar, which is perforated with various-sized openings, all of which will be fully set forth in the following specification and clearly illustrated in the accompanying drawings, forming a part of the same, in which—

Figure 1 represents a broken plan view of my improved nozzle, Fig. 2 being a broken sectional elevation of same. Fig. 3 is an end sectional elevation. Fig. 4 is a detached view of a portion of the operating device.

Similar letters designate like parts throughout the several views.

A represents the nozzle, having a tapered bore *a* and integral handles B, one at either side. These handles are in the form of a circle, through which the nozzle appears to pass; but, as before stated, the nozzle A and its handles B B are cast whole or in one piece, and the parts B are chambered out, as at *b*, said core or chamber extending from the rear end of each handle and terminating in the bore *a* near the top of the nozzle.

The core or chamber *b* is fitted with a curved slide C of sufficient length to reach from the rear terminus on either side to a point just beyond the bore *a* of the nozzle. The slide C is perforated with holes *c* of various diameters, from one corresponding with the bore of said nozzle to a very small hole—say, for instance, one-quarter inch or less—and sufficient metal is left at one end to cover the bore *a* of the nozzle A and act as a "shut-off" for same.

The chambered handles B may be formed straight and at nearly a right angle with the nozzle, in which case a straight perforated slide would be substituted for the curved slide C; but for common use I prefer the curved construction herein shown, as it affords greater strength and is less liable to get knocked out of shape by being banged around. Any convenient method for moving the slide C so as to bring either of the openings *c* in line with the bore *a* of the nozzle may be used. In the drawings I show for this purpose teeth *c'* upon one edge of the slide C, and a pinion D, meshing therein, carried on a spindle *d*, mounted in a bearing *b'*, formed on the cap B', which closes the chamber *b* of the curved handles B B. The spindle *d* is provided at its end with a pivoted lever E, by which it may be turned half a revolution at each movement, said lever being turned back in a horizontal course in order to further rotate the spindle in the same direction. If found desirable to provide means for indicating to a certainty to an operator when either of the perforations *c* of the slide C are in line with the bore *a* of the nozzle A, a flange on the spindle *d* may be notched, as at *d'*, with which a spring-catch F, mounted upon either the nozzle or the cap B', will engage. A nozzle of this description is very useful in connection with the fire apparatus of harbor-boats, as well as in the general fire department, where very frequently the firemen are delayed in their operations at a slight fire in some dwelling where but little water is required while they change nozzles, so as to supply a smaller stream, my improved nozzle supplying a stream from the largest to the smallest.

Having described my improvements, what I claim is—

1. In a shut-off nozzle, the chambered handles and a perforated slide fitting therein and passing through the bore or water-passage of said nozzle for shutting off or changing the size of stream.

2. In a shut-off nozzle, the chambered handles, a perforated slide fitting therein and adapted to pass through the bore or water-passage, and suitable operating mechanism whereby the slide may be moved for discharging streams of various size.

In testimony whereof I affix my signature in presence of two witnesses.

CYRUS R. ROBINSON.

Witnesses:

J. B. THURSTON,

NATHL. E. MARTIN.