

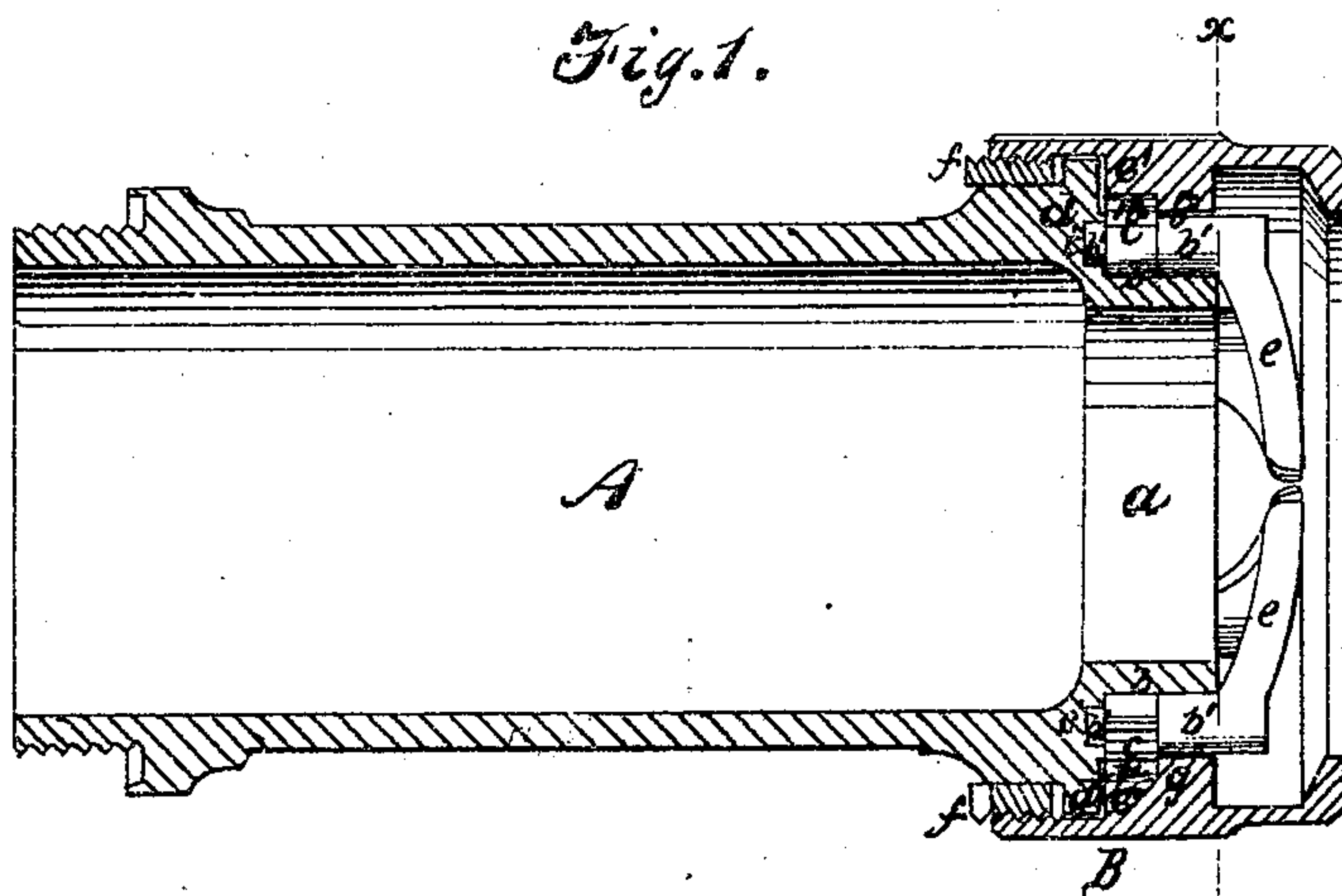
*Curtis & Harris.*

*Nozzle for Hose.*

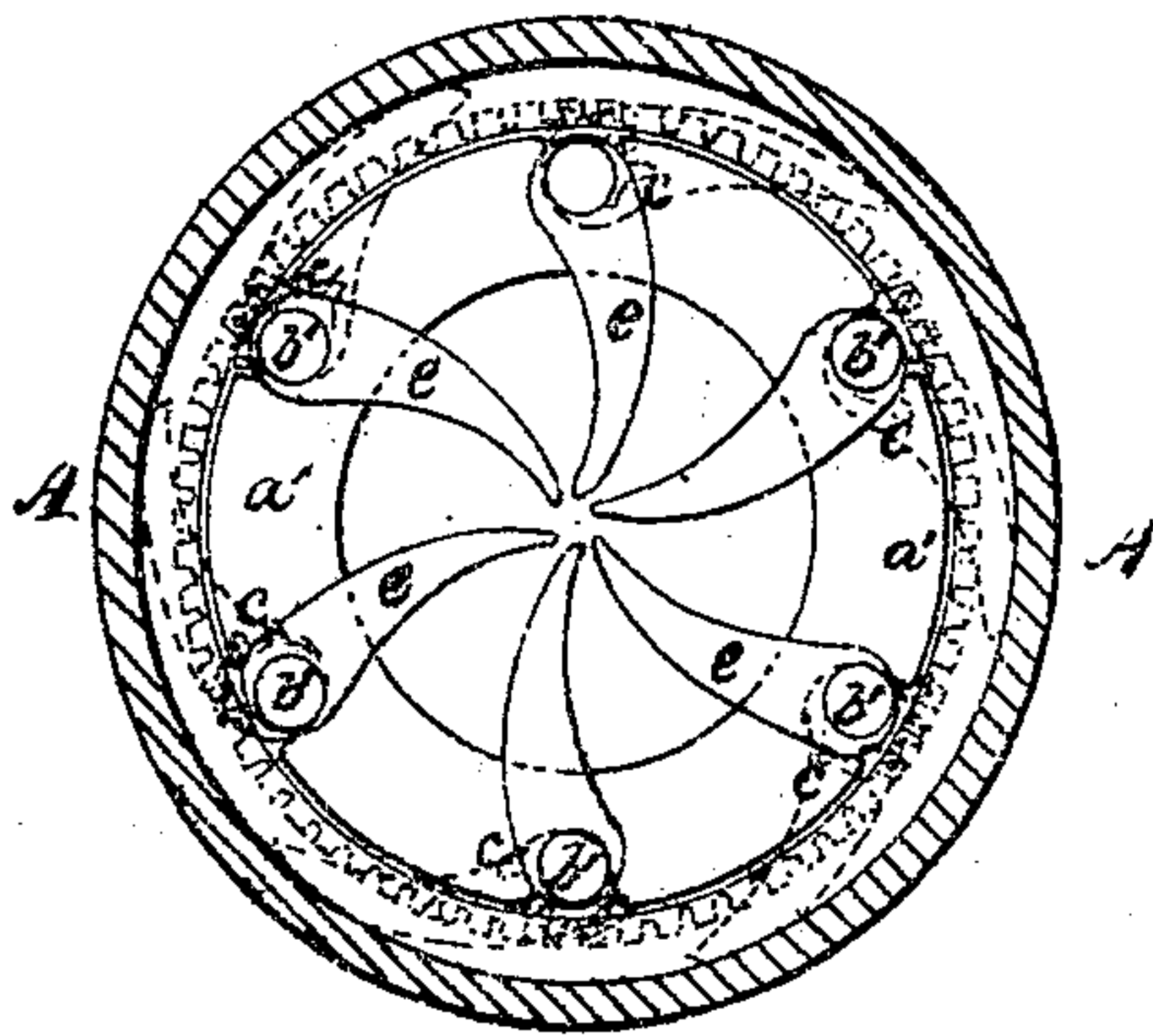
*Nº 72372*

*Patented Dec. 17, 1867.*

*Fig. 1.*



*Fig. 2.*



*Witnesses:*

*A. Keller.*

*J. M. Coombes.*

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# United States Patent Office.

MOSELY S. CURTIS AND GEORGE W. HARRIS, OF NEW YORK, N. Y.

*Letters Patent No. 72,372, dated December 17, 1867.*

## IMPROVEMENT IN NOZZLES FOR HOSE.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, MOSELY S. CURTIS and GEORGE W. HARRIS, both of the city, county, and State of New York, have invented certain new and useful Improvements in Spray-Nozzles for Hose; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a portion of this specification, in which—

Figure 1 is a central longitudinal section of a nozzle constructed according to our invention.

Figure 2 is a transverse section of the same, taken in the line *xx* of fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

The object of this invention is to enable a hose-nozzle to be employed for throwing a sprayed or divided stream as required, for instance, in extinguishing a fire within a room, or in washing windows, and other similar operations, without preventing the said nozzle from being used when desired for throwing an unbroken stream in the ordinary manner.

The invention consists in a nozzle constructed with a series of pivoted tongues or spurs, so arranged and operated that they may be turned inward, over the orifice of the nozzle, to divide the stream issuing therefrom, or be turned away from the said orifice to permit the egress unbroken of the aforesaid stream, thereby securing the result mentioned, by means of a novel combination of parts whereby the tongues aforesaid may be operated with very great facility.

To enable others to understand the construction and operation of our invention, we will proceed to describe it, with reference to the drawings.

A indicates the cylindrical body of the nozzle, which may be attached to the hose in any suitable manner, and the outer end of which may have its orifice, *a*, slightly less than the interior of the main length thereof. This part of the body, A, is also diminished exteriorly, and is formed with a circumferential groove at about the point *b*, and which is designed to receive the toothed sectors *c*, as hereinafter fully set forth. Back of the groove just mentioned is an external circumferential flange, *d*. That portion of the body A immediately forward of the groove, just hereinbefore described, constitutes as it were a peripheral flange, shown at *a'*, in fig. 2, and in which are formed notches or recesses, which receive and form bearings for the outer ends of stems *b'*, the inner ends of which work in sockets *c'*, situated as shown at fig. 1, the said stems being provided at their central parts with the toothed sectors *c*, working within the hereinbefore-mentioned groove, as just set forth. The outer extremities of the stems *b'* have provided upon them tongues or spurs *e*, situated nearly or quite at right angles to the said stems, and made preferably of curved form, as shown in fig. 2, with their inner edges made more or less sharp. B represents a shell, fitted upon the forward end of the body A, and furnished with a shoulder, *e'*, which rests against the front side of the flange *d*, the said shell being retained in position by an annular nut, *f*, screwed into the inner portion thereof, behind the flange, as shown in fig. 1. The shell B has an internal annular rib, *g*, which being in front of the sector *c*, effectually prevents the same from passing out of their places, and is also provided with an internal annular rack, as shown at *m*, which gears into the toothed sectors. When it is desired to divide the stream issuing from the nozzle, the shell B, being loose upon the body, it is turned partially around in one direction, whereupon the annular rack *m*, acting simultaneously upon the toothed sectors, turns the stems *b'*, to turn or bring inward the tongues *e*, over the orifice *a*, of the nozzle, and in a position radial from the axis of the nozzle, as shown in the drawings, so that as the stream issues from the aforesaid orifice it will be divided by the said tongue, and thus brought into a condition more or less resembling that of spray. When it is desired to permit the stream to pass unbroken from the nozzle, the shell B is turned in an opposite direction, to turn back the sectors *c*, and consequently the tongues *e*, thus bringing the latter into the position shown in red outline in fig. 2, wholly away from the orifice *a*, thus permitting the uninterrupted passage of the stream from the said orifice.

What we claim as our invention, and desire to secure by Letters Patent, is—

The tongues *e*, stems *b'*, and toothed sectors *c*, in combination with the body A, and the annular rack *m*, of the shell B, substantially as and for the purpose specified.

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GEO. W. HARRIS.

Witnesses:

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