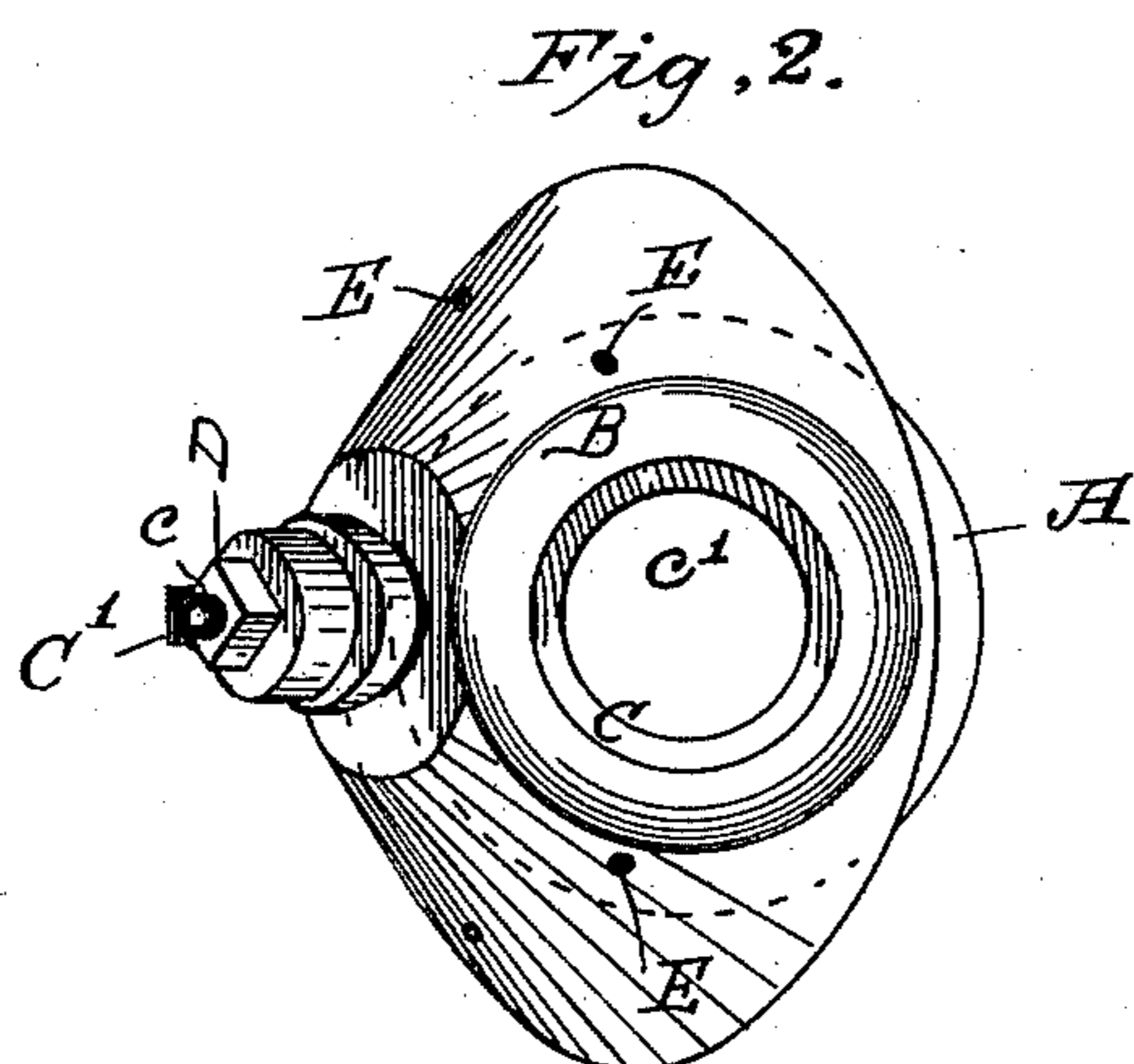
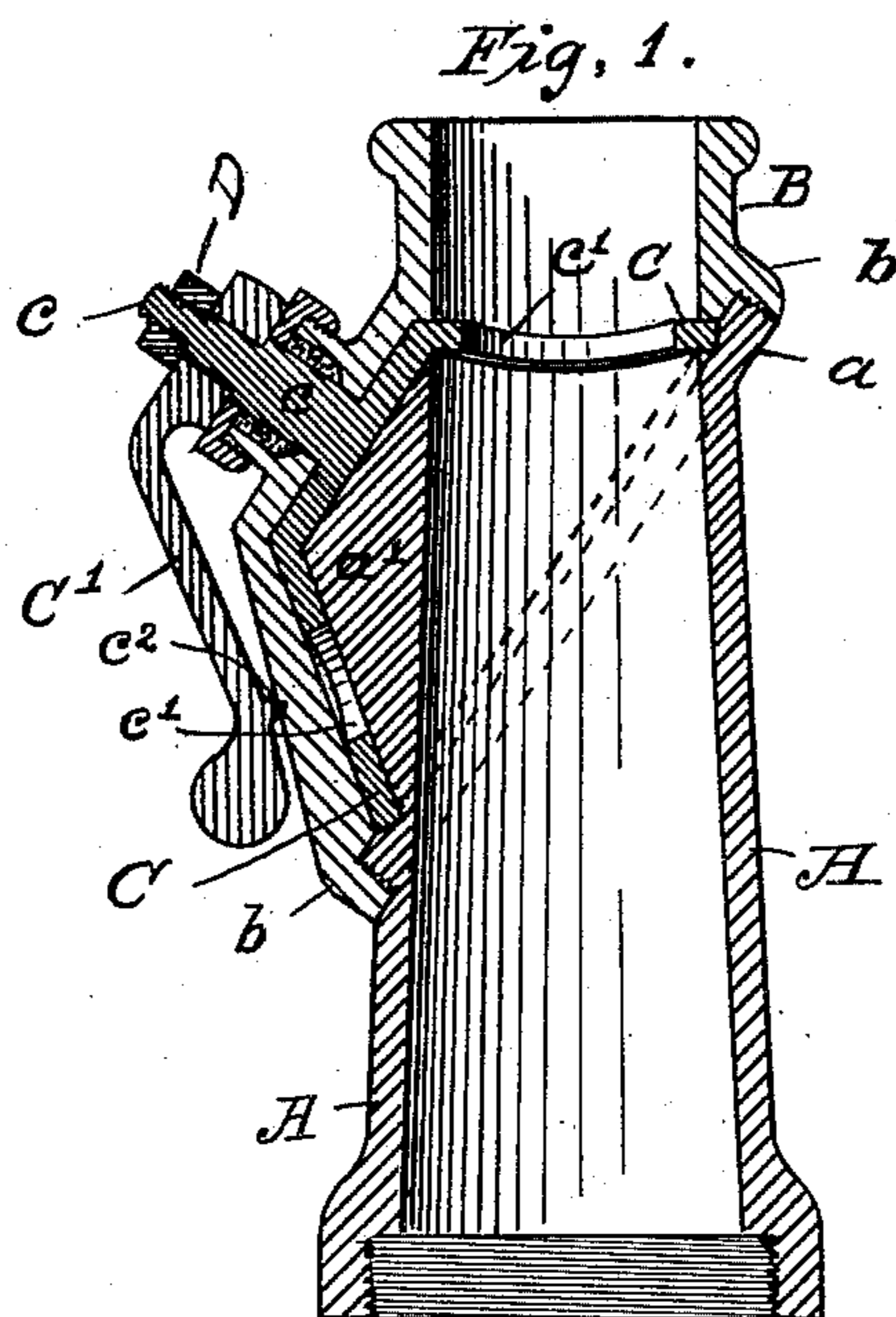


(No Model.)

N. P. STEVENS  
HOSE NOZZLE.

No. 463,081.

Patented Nov. 10, 1891.



## Witnesses

W.B. Howe

Escroff

Inventor

Nathan P. Stevens  
By his Attorney J. B. Thurston

# UNITED STATES PATENT OFFICE.

NATHAN P. STEVENS, OF CONCORD, NEW HAMPSHIRE.

## HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 463,081, dated November 10, 1891.

Application filed June 15, 1891. Serial No. 396,319. (No model.)

*To all whom it may concern:*

Be it known that I, NATHAN P. STEVENS, a citizen of the United States, residing at Concord, in the county of Merrimac and State of New Hampshire, have invented certain new and useful Improvements in Hose-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 devices for changing or readily regulating the quantity of water discharged from a hose-nozzle from a smaller to a larger stream, and vice versa.

The invention consists, essentially, in a pan-shaped rotary valve mounted at an angle within a nozzle, and provided with various-sized perforations in its flaring sides, arranged to pass in a rotative course through and across the discharge-orifice of said nozzle, by which the discharge is regulated or entirely cut off.

The invention will be fully set forth in the following specification and claims, and clearly illustrated in the accompanying drawings, forming a part thereof, of which—

Figure 1 is a longitudinal section of a hose-nozzle having my improved valve and its operating mechanism attached. Fig. 2 is an end elevation of the same.

Similar reference-letters designate like parts.

My improved nozzle is made in two sections A B, the part A being provided with an interior thread at its larger end for coupling with an end of hose. The two sections A B are joined by means of their respective flanges *a b*, the former being threaded within the latter. The annular flange *a* is formed on a plane oblique to the base of the portion A, and the flange *b* is of a corresponding angle with the plane of the tip of the section B, and when the two are connected their interior may present an uninterrupted uniform bore from end to end, or the section A may be tapering and the section B of uniform diameter, as shown. In either case, in this improved construction, water meets with no obstruction while being discharged through the nozzle, except that of the valve C, which may be turned so as to entirely close the discharge-orifice, or may de-

liver streams of various size, at the pleasure of an operator. This valve C is of a form approximating a truncated cone, and is mounted within the section B by means of a stud *c*, to which is attached a crank or handle C' for conveniently rotating said valve.

The flaring sides of the valve are perforated, as may be desired, with holes *c'*, from one as large as the bore of the nozzle to a hole of one-half-inch diameter or less, a blank space being left sufficient to entirely shut the discharge-orifice of said nozzle. This construction presents striking advantages—*i. e.*, by using a pan-shaped valve placed at an angle with the nozzle and by extending the metal of the section A up under the valve, as at *a'*, a clean bore is maintained throughout said nozzle, with no obstruction except a portion of the flaring side of said valve, and the maximum reductions are effected, while preserving the minimum size and weight of nozzle. The stud *c* may be squared at the point on which the handle or lever C' is fitted and secured by a nut D, threaded to the projecting end of said stud.

Indentations E may be formed in the outer surface of the valve-housing of the part B, at the proper point to receive a projection *c<sup>2</sup>* of the valve-lever C', to stop either of the perforations *c'* of the valve C when in line with the bore of the nozzle.

It will be seen that the part *a'* of section A, which is extended upwardly from the lowermost point of shoulder *a*, is of conical shape, as clearly illustrated in Fig. 1, and that the surface of section B, which registers therewith, is of similar form, a space being left between the two metals to form a socket for the valve. When the valve is in position, the truncated portion will lie between the upper inclined portions of extension *a'* and the corresponding portion of section B, while a part of the flaring side of the valve will project into the bore on a plane horizontal with the oblique dividing line of the nozzle, the remaining surface of the flaring side being confined in the socket between the lower inclined surface of the extended cone-shaped lug *a'* and the corresponding surface of section B. By this construction it is obvious that the portion of the valve extending into the bore

is necessarily on a horizontal plane, thereby offering the least possible obstruction to the outflowing water when one of the apertures C' is brought into alignment with the outlet-opening.

5 Having described my improvements, what I claim as new is—

1. A hose-nozzle formed in two sections separable on a line oblique with either end, one  
10 of said sections having a cone-shaped socket, with its flaring edge terminating at said oblique dividing-line and the other having a corresponding projection of slightly smaller dimension, and a rotary valve of approximate  
15 truncated-cone form, provided with perforations of varying size in its flaring sides, mounted between the said nozzle-sections, a stud or spindle extending from said valve through a bearing formed in one of said nozzle-sections,  
20 and a suitable operating-lever mounted upon

said valve-spindle, substantially for the purpose set forth.

2. A hose-nozzle formed in two parts, separable on a line oblique with either end, the two sections having conical projections at corresponding points with a space therebetween, and a rotary valve of a form approximating a truncated cone, said valve arranged in the space formed between the conical extensions and having a portion of its flaring side projecting into the bore on a plane horizontal  
30 with the oblique dividing-line, said flaring side provided with a series of openings of varying size, substantially as set forth.

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

NATHAN P. STEVENS.

Witnesses:

J. B. THURSTON,  
J. E. FERNALD.