

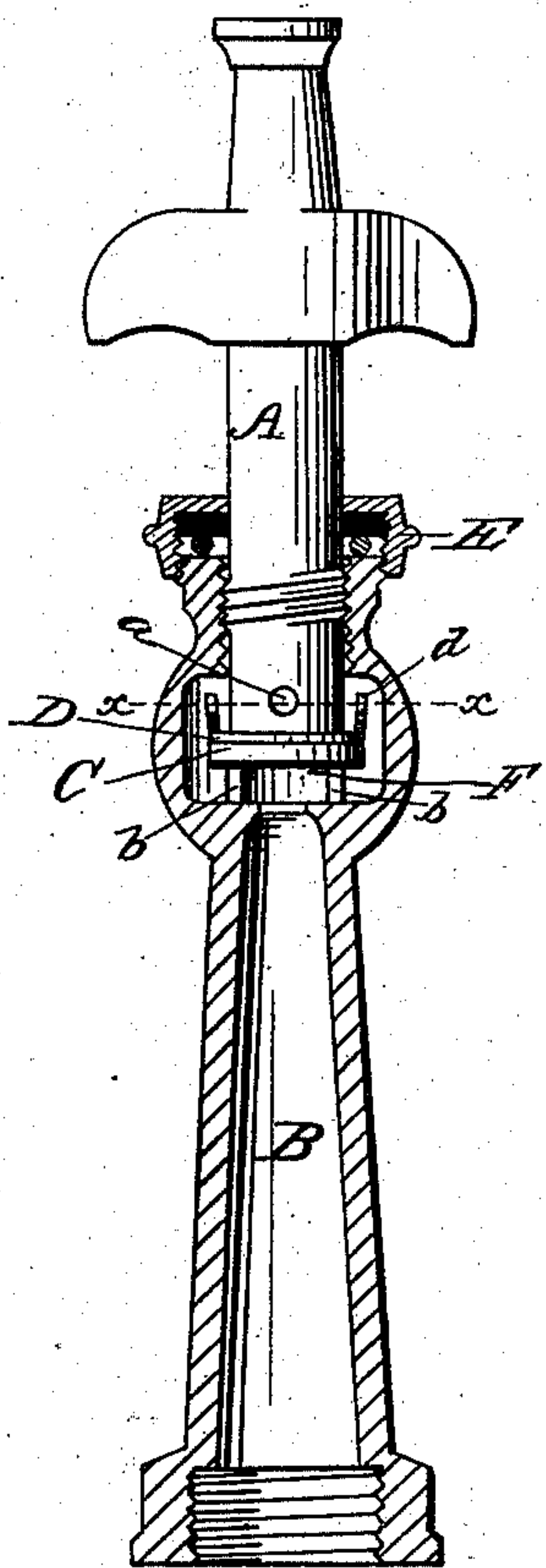
(No Model.)

J. H. JOHNSON & F. A. HOYER.  
Hose Nozzle.

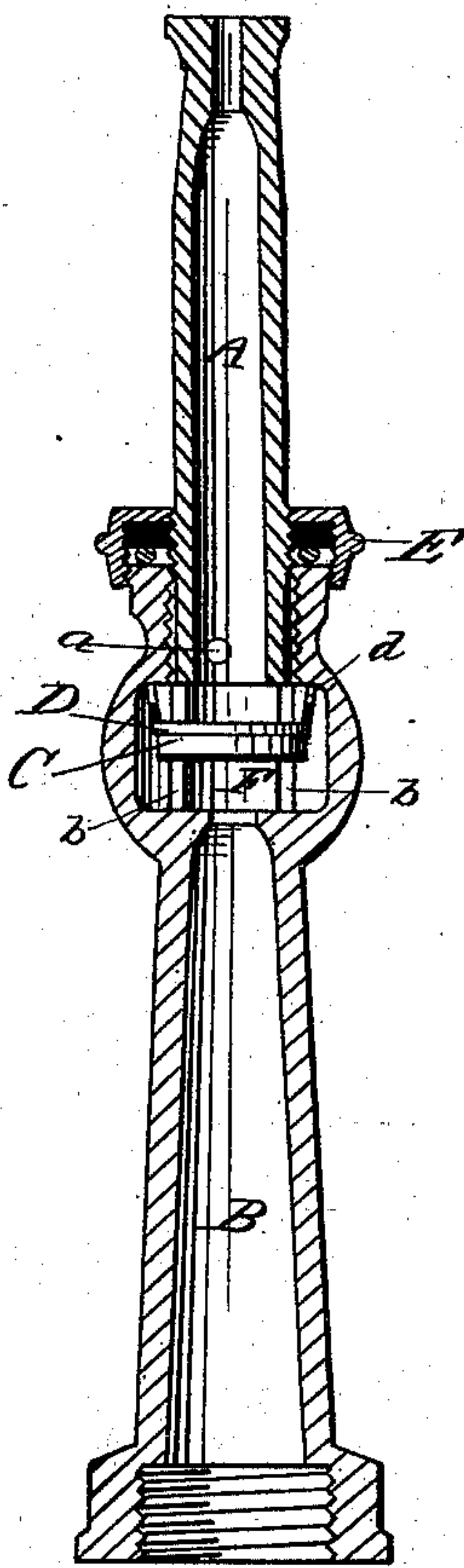
No. 237,386.

Patented Feb. 8, 1881.

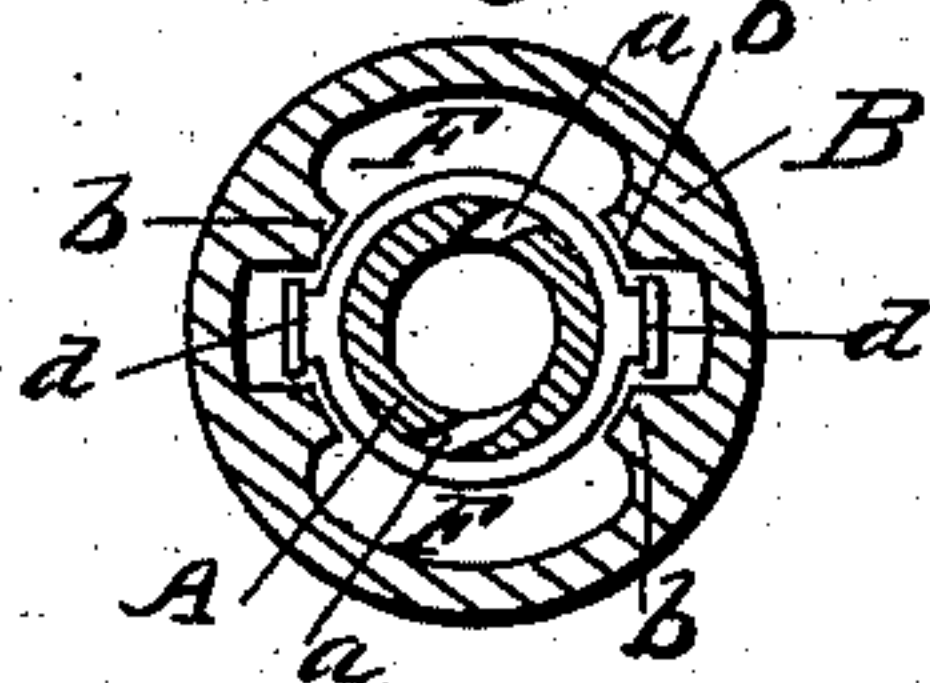
*Fig. 1.*



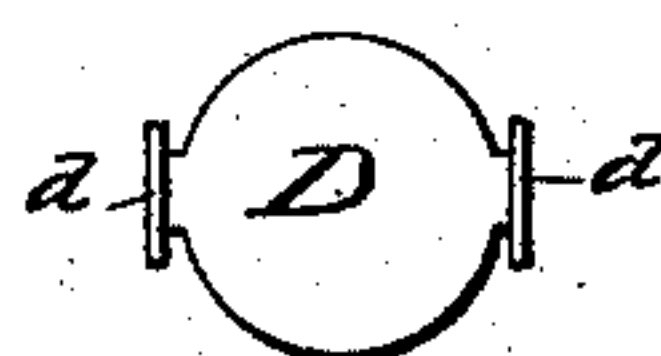
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

JOHN H. JOHNSON AND FREDRICH A. HOYER, OF CHICAGO, ILLINOIS.

## HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 237,386, dated February 8, 1881.

Application filed June 2, 1880. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN H. JOHNSON and FREDRICH A. HOYER, of the city of Chicago, in the county of Cook and State of Illinois, have made certain new and useful Improvements in Hoze-Nozzles, of which the following is the specification.

The nature and object of our invention is to construct a hose-nozzle that will throw a solid stream or a spray, at the will of the operator, without the use of the ordinary cross-plug and plug-seat.

Figures 1 and 2 are longitudinal sectional views of our hose-nozzle, Fig. 1 showing the position of the different parts of the nozzle when a spray is thrown, and Fig. 2 shows the position of the same when a solid stream is thrown. Fig. 3 is a sectional view through lines *xx* of Fig. 1, and Fig. 4 is a view of the valve used for the purposes hereinafter shown.

Similar letters of reference refer to similar parts in the different drawings.

A is the discharge end of the pipe provided with wings or arms, as shown in the drawings, for the purpose of turning it. B is the main barrel of the nozzle. The discharge end of the pipe is made to fit within the end of the main barrel by means of the screw, as shown in Fig. 1.

D is the valve placed within the main barrel of the nozzle. This valve has lugs *dd* extending from it and directly opposite to each other, and, also, they are bent forward. This valve D, with its lugs, is placed within the enlargement of the main bore in the part B of the nozzle, and directly at the end of the discharge end of the nozzle, as shown in Figs. 1 and 2. The lugs *dd* extend between the ribs *bb*, as shown in Fig. 3. These ribs serve the purpose of keeping the valve D in position. Between these ribs are open spaces at F F, Fig. 3, through which the water passes. C is the packing located at the under side of the valve D. E is the ordinary cap-nut with packing on the inside for the purpose of making a water-tight joint.

The operation of our invention is as follows: Water is admitted through the main bore in

B. It presses against the packing C and valve D, and as the discharge end of the pipe is unscrewed the water presses the valve D against the end of the part A, as shown in Fig. 1, and so long as the valve D is firmly pressed against the end of part A no water can pass through this end. It passes through the spaces F F, Fig. 3, between the ribs, around the valve, and through the holes *aa*, which are made directly opposite to each other near the end of part A. All the water passing through the holes *aa* is discharged at the end of the nozzle in spray form. On unscrewing or withdrawing the part A from the part B still further the lugs *dd* on the valve D strike against the shoulder in the enlarged hole of the part B, which prevents any further movement in that direction of the valve; and on the part A being withdrawn a little more the holes *aa* are closed, the hole in the end of part A is opened, and the water entering therein is discharged at the end of the nozzle in solid stream form.

It will be observed that the holes *aa* in the part A of the nozzle are for the purpose of forming the spray, and also that the water passes around the valve D and through the openings F F, between the ribs *bb*. These ribs serve the purpose of guides for the valve D, and keep it in position.

We claim as follows:

1. The combination of the valve D, having the forward-projecting lugs *dd*, with the part B, having the ribs *bb*, and part A, having the ports *aa*, all constructed substantially as shown, and for the purpose described.

2. The combination of the valve D, having the forward-projecting lugs *dd*, with the ribs *bb* in the part B, having the open spaces F F between the ribs, arranged and constructed substantially as shown, and for the purpose described.

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FREDRICH A. HOYER.

Witnesses:

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