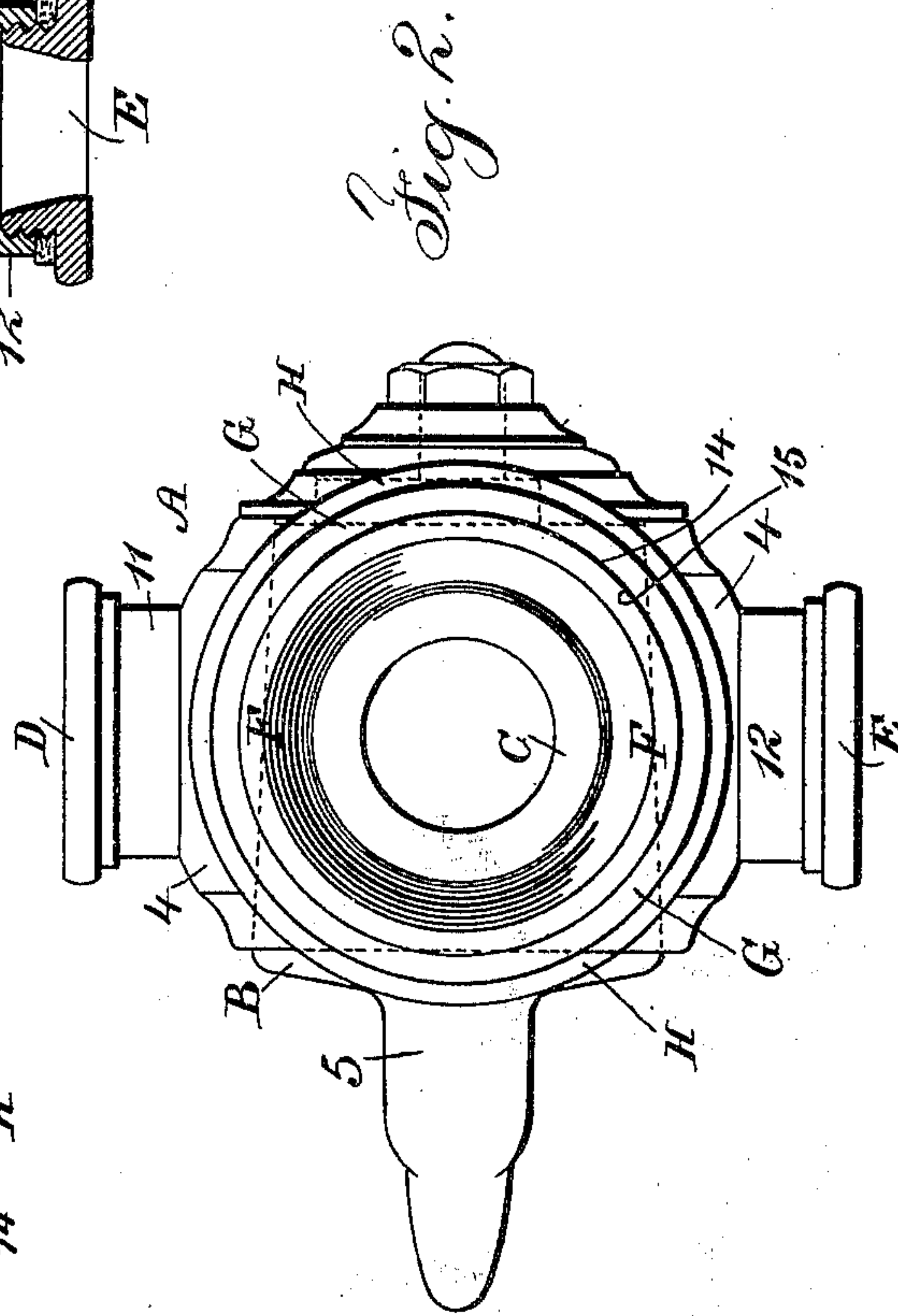
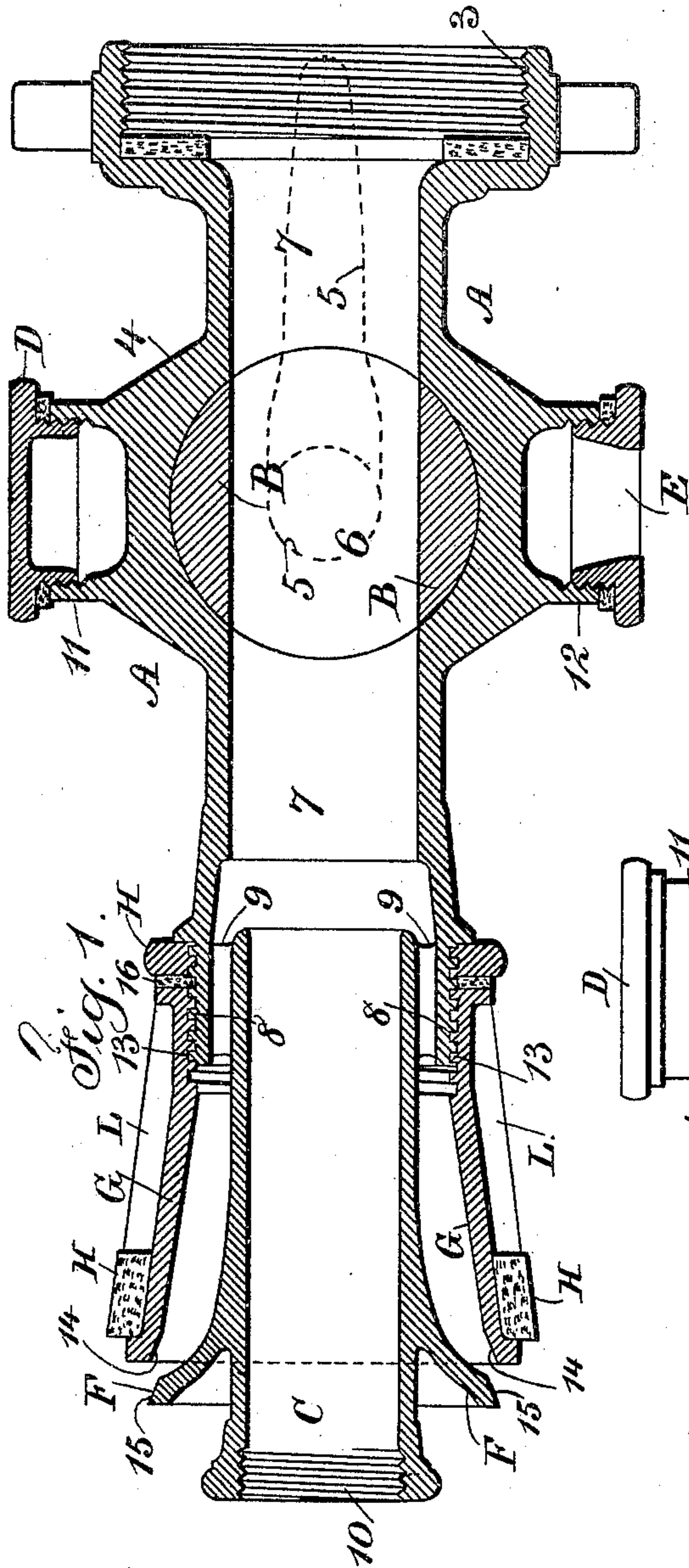


(No Model.)

R. WISE.
HOSE NOZZLE.

No. 604,554.

Patented May 24, 1898.



Witnesses

Chas. H. Smith

J. Staib

Inventor

Robert Wise

per Lemuel W. Serrell
Atty

UNITED STATES PATENT OFFICE.

ROBERT WISE, OF NEW YORK, N. Y.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 604,554, dated May 24, 1898.

Application filed November 18, 1895. Serial No. 569,290. (No model.)

To all whom it may concern:

Be it known that I, ROBERT WISE, a citizen of the United States, residing at the city of New York, in the county and State of New York, have invented an Improvement in Hose-
5 Nozzles, of which the following is a specification.

The object of this invention is to allow for throwing a straight stream and for projecting
10 an annular spray to drive back smoke and heat in case of fire, the improvement being available either as a nozzle for fire-hose or as a sprinkler for agricultural or horticultural purposes.

15 The special feature of the present invention relates to the means for turning on or shutting off the annular spray during the time that the straight stream may be in use, so as not to have to stop or shut off the straight
20 stream in turning on or off the spray or in adjusting the spread or force of such spray.

In the drawings, Figure 1 is a longitudinal section of the improved hose-nozzle, and Fig. 2 is an end view of the same.

25 The nozzle is made with a body A in one piece, comprising the screw-thread or coupling 3, by which the nozzle is connected with or disconnected from the hose, and the barrel 4 of the body receives the plug B of the cock, and this is provided with a handle 5, by which
30 it may be turned. This cock is of ordinary construction and through it is a straight waterway 6, coinciding with the bore 7 of the body of the nozzle, and the screw-thread portion 8 is at the forward end of the nozzle-body.

35 The jet-nozzle C may be formed in one piece with the body A or otherwise connected to the same, there being arms 9 between the jet-nozzle C and the body A near the screw-thread 8, and it is advantageous to make the opening or bore of the jet-nozzle C slightly smaller than the bore 7 of the body A, and at the outer
40 end of the jet-nozzle is an enlargement with a screw-thread 10, adapted to receive a blind cap D when the straight stream is not to be used or to receive a reducer E for throwing a smaller stream when desired. This blind cap and reducer are well known in nozzles heretofore constructed, and in order to prevent such blind cap or reducer being lost pro-
50 jections 11 and 12 in the form of internally-threaded rings are provided at opposite sides

of the nozzle, preferably upon the sides of the barrel 4.

The special feature of the present invention 55 applies to the conical flange F, which is a fixture around the jet-nozzle C, and the adjustable bell G, having a screw-thread at 13, screwing upon the screw-thread 8, so as to be adjustable longitudinally of the nozzle, and between the edge 14 of the bell and the edge 15 of the conical flange F the water can be allowed to issue to a greater or less extent as the bell G may be adjusted to open or close such space, and it is advantageous to make 60 use of a lock-nut H and flexible washer 16 to prevent leakage between screw-threads 13 and 8 and also to hold the parts reliably in the position to which they may be adjusted.

It will now be understood that the water 70 can be entirely shut off between 14 and 15 by simply adjusting the bell G, so that the water can be allowed to issue with any desired force by adjusting such bell regardless of the stream which may be issuing from the jet-
75 nozzle C, and in this manner a fireman is able to direct the jet from the nozzle C upon the fire, or should the smoke or flame suddenly be blown toward him he can instantly drive the same back by opening the annular
80 spray with such a force as to not only protect himself from such flame but drive back the heat and smoke.

Should it become necessary in the final extinguishment of fires to make use of the annular spray for wetting walls and extinguish-
85 ing small fires without the use of the powerful jet from the nozzle C, the water can be stopped by turning the plug B and the blind cap D screwed upon the end of the jet-nozzle and
90 the spray only used from the annular space between the edges 14 and 15 when the plug B is turned.

A band of rubber around the nozzle is advantageously employed, as shown at H', to 95 lessen the risk of injury to the edges of the bell by concussion, and ribs at L upon the exterior of such bell facilitate the handling of the bell in rotating the same to vary the spray that is thrown from the nozzle. 100

In consequence of the peculiar shape of the edges 14 and 15 the spray or annular stream may be contracted and directed forward when the edges are near each other, or the annular

stream may be spread and broadened when the bell is screwed back to increase the volume of such stream, the curvature of the inner surface of the flange F throwing the water
5 outward.

I claim as my invention—

1. The hose-pipe nozzle having a body with a shut-off cock and a coupling portion at its rear end screw-threaded at its forward end,
10 a jet-nozzle extending forward of the body and having a flange around it, the body, shut-off cock, coupling portion, jet-nozzle and flange being permanently and rigidly connected, in combination with a bell screw-
15 threaded at its rear end to fit the screw-thread upon the body and adapted to vary the annular opening between its front end and the flange by screwing it forward or backward, substantially as set forth.

20 2. The hose-pipe nozzle having a body with

a shut-off cock and a coupling portion at its rear end screw-threaded at its forward end, a jet-nozzle extending forward of the body and having a flange around it, the body, shut-off cock, coupling portion, jet-nozzle and
25 flange being permanently and rigidly connected, in combination with a bell screw-threaded at its rear end to fit the screw-thread upon the body and adapted to vary the annular opening between its front end and the
30 flange by screwing it forward or backward, a lock-nut and washer adjacent to the rear end of the adjustable bell, substantially as set forth.

Signed by me this 16th day of November, 35
1895.

ROBERT WISE.

Witnesses:

GEO. T. PINCKNEY,
S. T. HAVILAND.