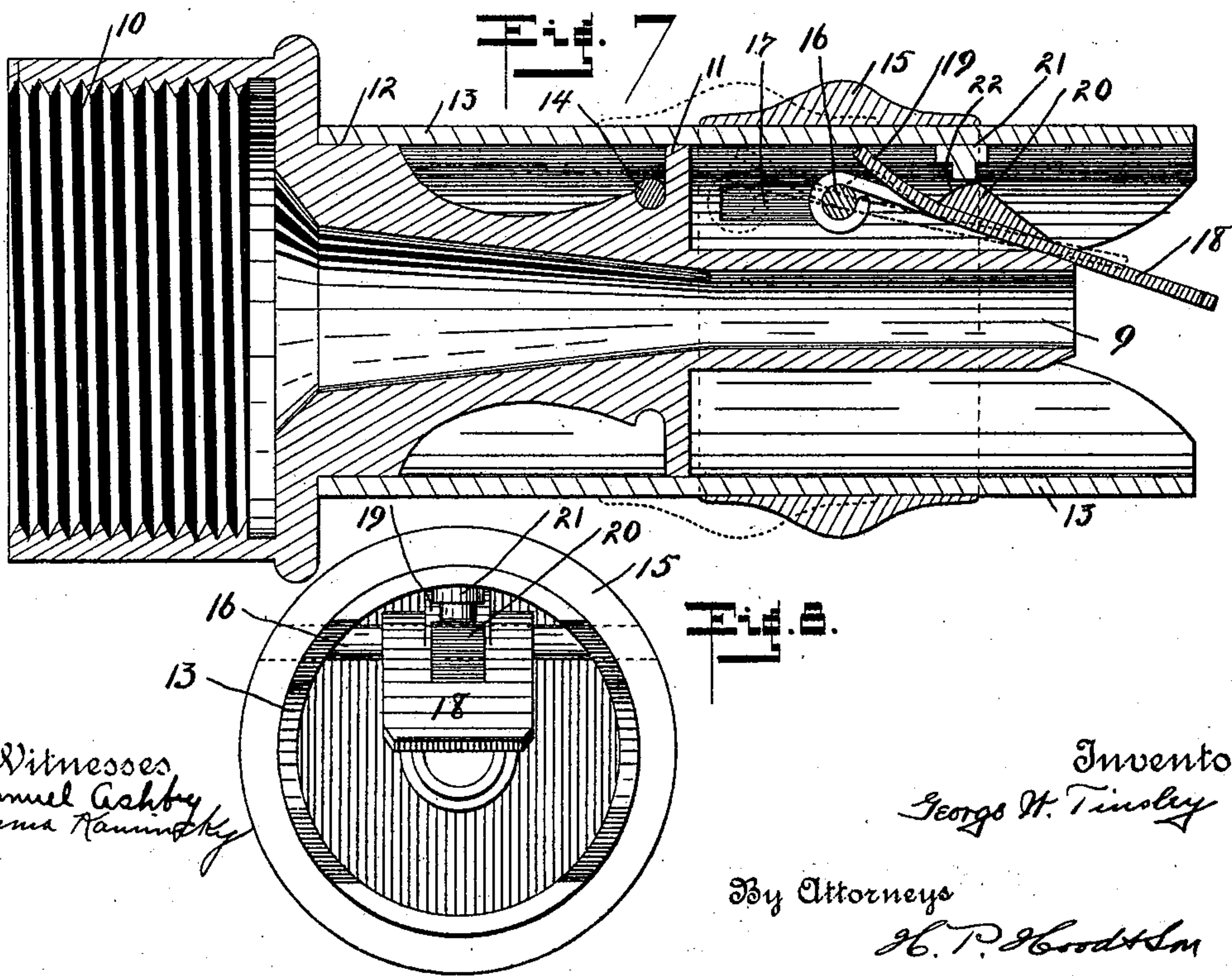
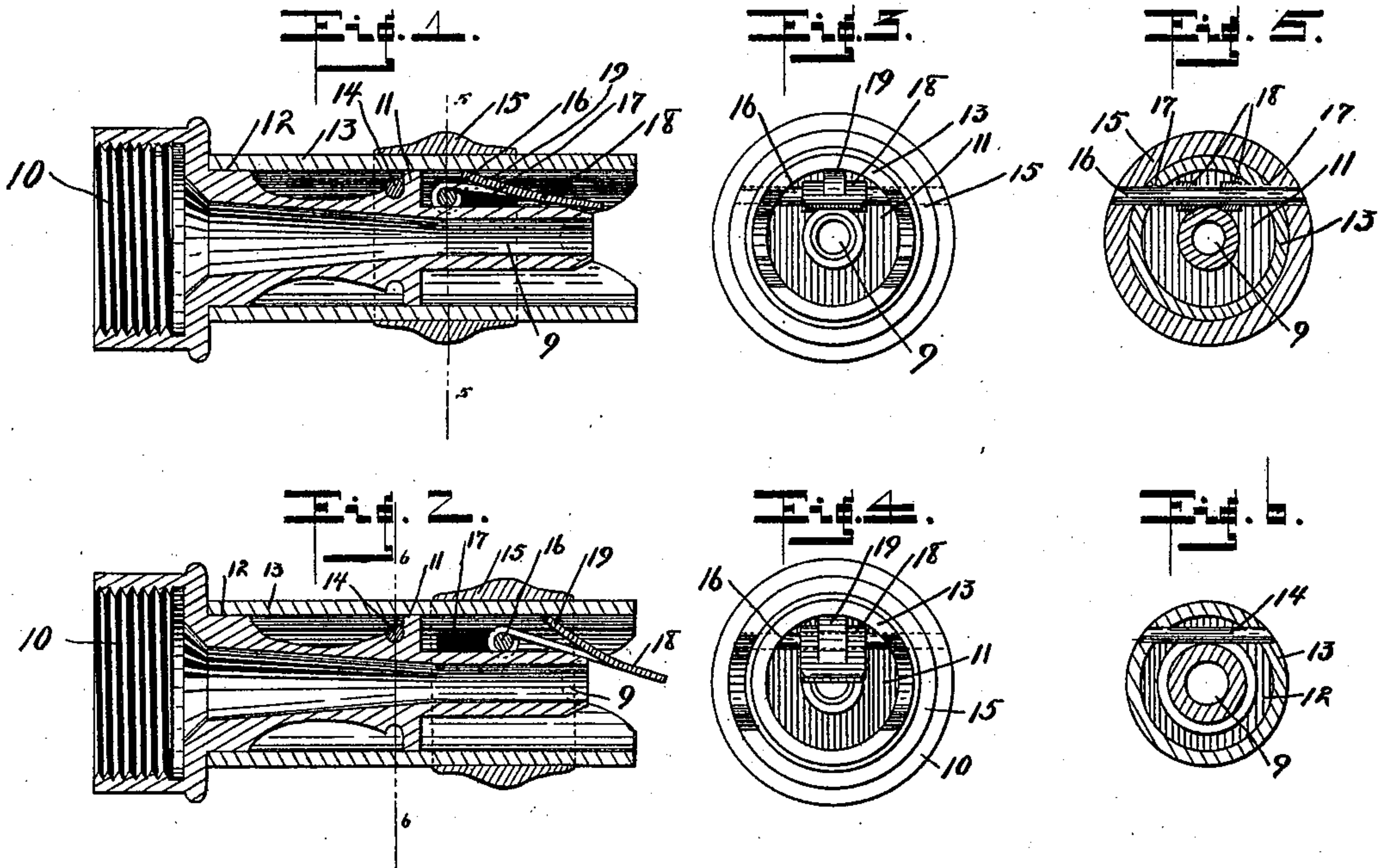


(No Model.)

G. W. TINSLEY.
HOSE NOZZLE.

No. 587,344.

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Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. TINSLEY, OF COLUMBUS, INDIANA.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 587,344, dated August 3, 1897.

Application filed March 13, 1897. Serial No. 627,287. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. TINSLEY, a citizen of the United States, residing at Columbus, in the county of Bartholomew and State of Indiana, have invented a new and useful Hose-Nozzle, of which the following is a specification.

My invention relates to an improvement in hose-nozzles.

The object of my improvement is to produce a nozzle by means of which a solid stream of water may be easily and quickly changed into a spray or fan-shaped stream and by means of which the said fan-shaped stream may be caused to lie in any desired plane.

The accompanying drawings illustrate my invention.

Figure 1 is a central longitudinal section of one form of my invention. Fig. 2 is a similar view showing the parts in position to form a spray or fan-shaped stream. Fig. 3 is an end elevation with the parts in the position shown in Fig. 1. Fig. 4 is an end elevation with the parts in the position shown in Fig. 2. Fig. 5 is a section on line 5 5 of Fig. 1. Fig. 6 is a section on line 6 6 of Fig. 2. Fig. 7 is a central longitudinal section of a construction particularly adapted to nozzles throwing a large stream. Fig. 8 is an end elevation of the construction shown in Fig. 7.

In the drawings, 9 indicates a nozzle provided with a head 10, by means of which it may be secured to a hose and also provided with a collar 11 and a bearing 12. Rotatively mounted upon collar 11 and bearing 12 is a tubular casing 13, the said casing being held in longitudinal position by means of a pin 14, which passes immediately to the rear of collar 11. Mounted upon casing 13 and longitudinally movable thereon is a collar 15, the said collar being held in position by means of a pin 16, which passes through slots 17, formed through the casing 13. Pivotally mounted upon pin 16, within casing 13, is a finger 18. Finger 18 is held in contact with the outer end of nozzle 9 by means of a suitable spring 19, in the drawings said spring being shown as formed integral with the finger and the free end thereof engaging casing 13. Finger 18 is of such length that when collar 15 is advanced into the position shown in Figs. 2 and

7 the free end of said finger will lie partially across the nozzle-orifice at an angle to the axis thereof, and when said collar is moved back into the position shown in Fig. 1 and in dotted lines in Fig. 7 the free end of the finger will lie clear of the nozzle-orifice. In the smaller sizes of nozzles spring 19 may be made sufficiently strong to withstand the pressure caused by the deflection of the stream, but in the larger sizes it is advisable that means be provided for positively holding the finger in position when it has been advanced into the path of the stream. For this purpose I provide finger 18 with a lug 20, which when the finger is advanced into the path of the stream will pass under a lug 21, carried by casing 13, the said lug 20 being provided with a shoulder 22 of such form as to prevent either a sliding or pivotal movement of the finger to be caused by the force of the stream. By this means the finger is rigidly held in its advanced position, the operation of the holding means being entirely automatic and in no manner preventing the quick withdrawal of the finger.

In operation, with the parts in the position shown in Fig. 1 and in dotted lines in Fig. 7, finger 18 is withdrawn from the path of the stream, so that a solid stream may be thrown. In case a thin and broad or fan-shaped stream is desired the operator slides collar 15 along casing 13, and this movement through pin 16 causes finger 18 to be advanced, spring 19 operating at the same time to throw the forward end of the finger angularly across the path of the stream, thus deflecting and spreading the said stream. As finger 18 is advanced lug 20 moves under lug 21 until shoulder 22 reaches a position in which it is engaged by said lug 21. By this means the finger is positively held in position against the action of the stream, but is at the same time perfectly free to be withdrawn by shifting collar 15. In case the operator desires to change the plane of the deflected or fan-shaped stream he rotates casing 13 about the nozzle, carrying with it finger 18, so that by this means, which is under easy and perfect control, the stream may be caused to lie in any desired plane, thus making it possible to throw a thin flat stream in a horizontal plane to cover a large

area or to quickly change said stream so that it may pass into a narrow space formed by two walls.

I am aware that it is not new to provide a
5 pivoted finger which may be thrown into the path of the stream; but in prior devices the means for operating the finger have been slow and awkward in manipulation and no means have been provided to shift the plane of the
10 stream except by twisting the hose. Such an operation with a large hose is practically impossible, while with the construction above described the plane of the stream may be easily, quickly, and accurately changed. It
15 is also possible to so regulate the position of the finger that any desired flattening of the stream may be produced.

I claim as my invention—

20 1. A nozzle, a casing rotatively mounted around said nozzle, a finger mounted within said casing and rotating therewith, and means for throwing said finger across the nozzle-orifice.

25 2. A nozzle, a casing rotatively mounted around the nozzle, a finger pivotally mounted in said casing and longitudinally movable therein, means for moving said finger within the casing, and means for throwing said finger across the nozzle.

30 3. A nozzle, a casing rotatively mounted around the nozzle, a finger pivotally mounted in said casing and longitudinally movable therein, means for moving said finger within the casing, and a spring for throwing said finger across the nozzle as said finger is moved
35 forward in the casing.

4. A nozzle, a pivoted finger longitudinally movable with relation to said nozzle, and means for throwing said finger across the nozzle-orifice by a longitudinal movement of said
40 finger.

5. A nozzle, a pivoted finger longitudinally

movable with relation to the nozzle, means for throwing said finger across the nozzle-orifice by a longitudinal movement of said finger, 45 and means for rotating said finger about the nozzle.

6. A nozzle, a pivoted finger longitudinally movable with relation to the nozzle, means for throwing said finger across the nozzle-orifice 50 by a longitudinal movement of said finger, and means for holding said finger in position across the nozzle-orifice.

7. A nozzle, a pivoted finger longitudinally movable with relation to the nozzle, means for 55 throwing said finger across the nozzle-orifice by a longitudinal movement of said finger, means for holding said finger in said position, and means for rotating said finger about the nozzle. 60

8. A nozzle, a casing surrounding said nozzle, a finger pivotally mounted in said casing and longitudinally movable therein, means for moving said finger within the casing and thereby throwing the said finger across the 65 nozzle-orifice, and cooperating means carried by said finger and casing whereby, when the finger is thrown across the nozzle-orifice the said means will operate to hold said finger in said position. 70

9. A nozzle, a casing rotatively mounted around said nozzle, a finger pivotally mounted in said casing and longitudinally movable therein, means for moving said finger within the casing and thereby throwing the said finger 75 across the nozzle-orifice, and cooperating means carried by said finger and casing whereby, when the finger is thrown across the nozzle-orifice the said means will operate to hold said finger in said position.

GEORGE W. TINSLEY.

Witnesses:

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