H. B. MORRISON.

NOZZLE FOR HOSE AND WATER DISCHARGE PIPES.

No. 36,688. Patented Oct. 14, 1862.

Fig. 1

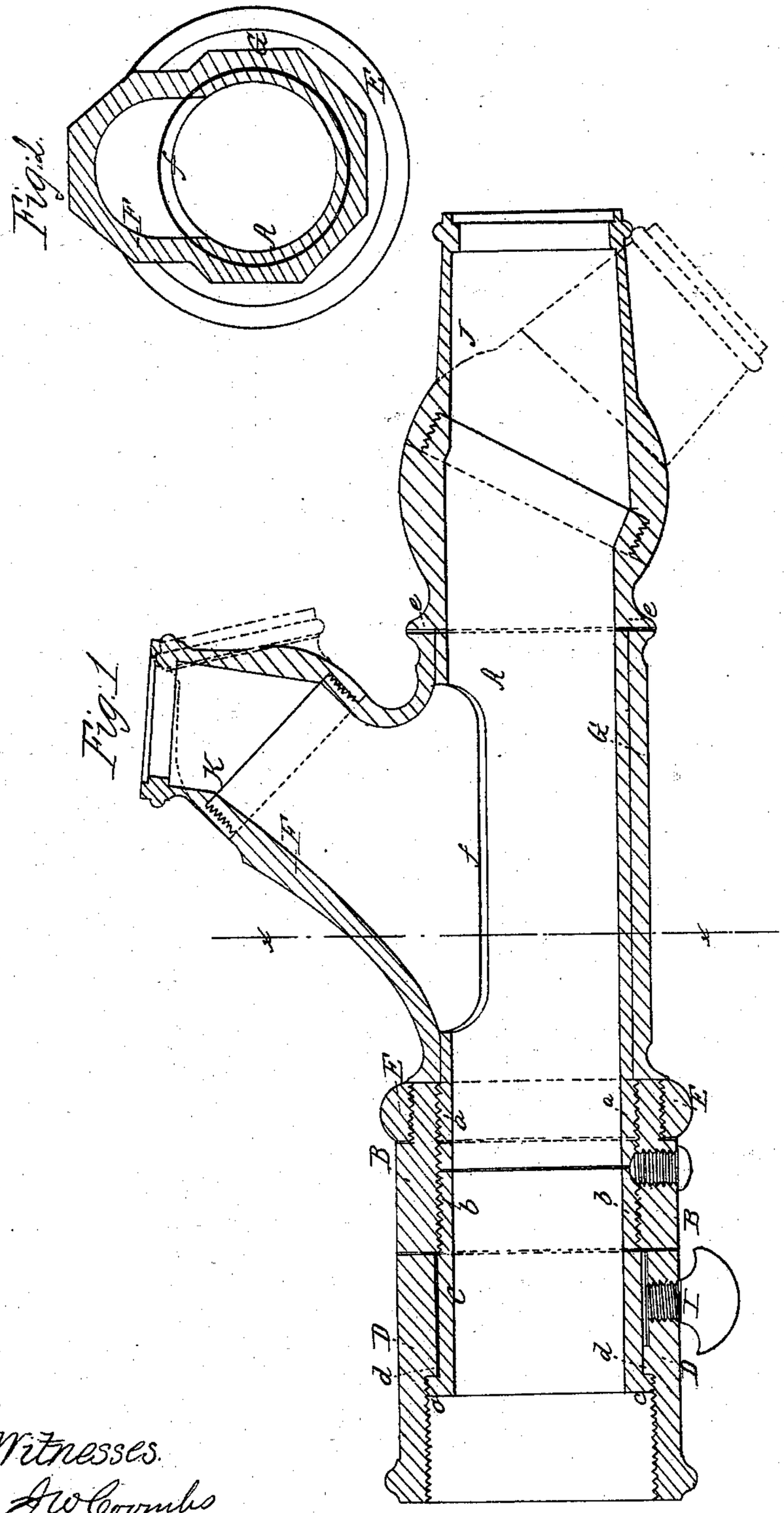

Fig. 2.

Witnesses.

J. W. Coombs

G. W. Reed

Inventor.

H. B. Morrison

per Munn & Co

attorneys

UNITED STATES PATENT OFFICE.

H. B. MORRISON, OF MOUNT MORRIS, ASSIGNOR TO C. H. MORRISON, OF LE ROY, NEW YORK.

IMPROVEMENT IN NOZZLES FOR HOSE AND PIPES.

Specification forming part of Letters Patent No. **36,688**, dated October 14, 1862.

To all whom it may concern:

Be it known that I, H. B. MORRISON, of Mount Morris, in the county of Livingston and State of New York, have invented a new and Improved Nozzle for Hose and Water-Discharge Pipes; and I 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 part of this specification, in which—

Figure 1 is a longitudinal central section of my invention; Fig. 2, a transverse section of the same, taken in the line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a nozzle for hose and water-discharge pipes which will be capable of directing the stream of water in various directions, and also capable of discharging either one or two streams, as may be desired.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a straight nozzle of slightly taper form, and provided at its inner end with an external screw, *a*, on which a nut, B, is screwed; and C is a thimble, which is provided at one end with an external screw, *b*, on which the nut B is also screwed, said nut connecting the thimble with the nozzle, as shown clearly in Fig. 1. The thimble C is provided at its outer end with a flange, *c*, which projects from it at right angles, and on the thimble a sleeve, D, is fitted and retained in proper position by the flange *c*, which abuts against a shoulder, *d*, within the sleeve. The sleeve D is fitted loosely on the thimble, and abuts against the nut B, and on the latter there is fitted a nut, E, as shown in Fig. 1.

F represents a curved nozzle, which is connected with a sleeve, G, placed loosely on the straight nozzle A. The outer end of the sleeve G abuts against a shoulder, *e*, on the straight nozzle, and the inner end of said sleeve abuts against the nut E. By turning or screwing up the nut E the sleeve G may be prevented from urning. The straight nozzle A is provided with an opening, *f*, which affords a communication between the straight nozzle and the curved one when the sleeve G is so turned as to cause the curved nozzle to register or be in line with the opening *f*, and by turning the sleeve G so as to throw the curved nozzle F out of line with the opening *f* the communication between the two nozzles is cut off. Thus it will be seen that water may be discharged from both of the nozzles simultaneously when required, or from the straight one only.

H is a screw which passes through the nut B into the thimble C and nozzle A, and prevents the thimble and nozzle A from being casually disconnected.

I is a thumb-screw by which the sleeve D is prevented, when necessary, from turning, and the rotation of the nozzle A also prevented.

The nozzles A F are provided, respectively, with tips J K, which are secured obliquely on the nozzles, as shown in Fig. 1. By turning these tips J K the direction of the streams may be varied from a straight line with the nozzle to a line quite angular therewith. This will be understood by referring to the different positions of the tips shown in red outline.

In case the device may be applied to a fire-engine hose and used at a time when a great heat is radiated from a burning building, so great that the person holding the nozzle cannot approach closely to the building if the straight nozzle A be only used, the operator, by simply unscrewing nut E a trifle and turning the sleeve G so as to bring the curved nozzle F in line with the opening *f*, and then screwing up the nut E, so as to secure the sleeve G in such position on the nozzle A, and then, by unscrewing the thumb-screw I, the operator may, by turning the nozzle A, discharge a direct stream upon the fire, and at the same time throw a stream from nozzle F in a complete circle all around in front of him, so as to cool the air and admit of the operator approaching within a convenient distance to direct the straight stream from nozzle A upon the fire. If the fire is confined within an apartment of a building, a window thereof may be raised to admit of the insertion of the nozzle, and a straight stream may be thrown into the apartment from A, and a stream from F thrown all around against the partitions and reaching all parts of the room, and by turning the tips J K one-quarter of a revolution two revolv-

ing cross-streams may be thrown into the apartment, so as to completely deluge the same, every corner and obscure spot being reached by them. In throwing but one stream from A, and turning its tip J one-half of a revolution, the stream can be thrown at right angles up between partitions, clapboards, and plastering, and also between the ceiling and floors. In fact, there is no place which cannot be reached by the stream. The operator can stand by a window within a building, and direct the stream against the outside of a building, can also stand on the roof and throw water down the sides of the building, and through the scuttle against the under side of the roof.

The invention may be used to great advantage on steamboats, as, by cutting a hole through the deck for the insertion of the nozzle, water can be thrown in every direction. It may also be used to advantage on force-pumps in factories.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The revolving or adjustable tips J K, applied to the nozzles A F of hose or water-pipes, as and for the purpose set forth.

2. The arrangement of the nuts B E, thimble C, and sleeve D, when used in combination with the nozzles A F and sleeve G, to operate as and for the purpose herein described.

H. B. MORRISON.

Witnesses:
W. R. WELLS,
WM. HARDING.