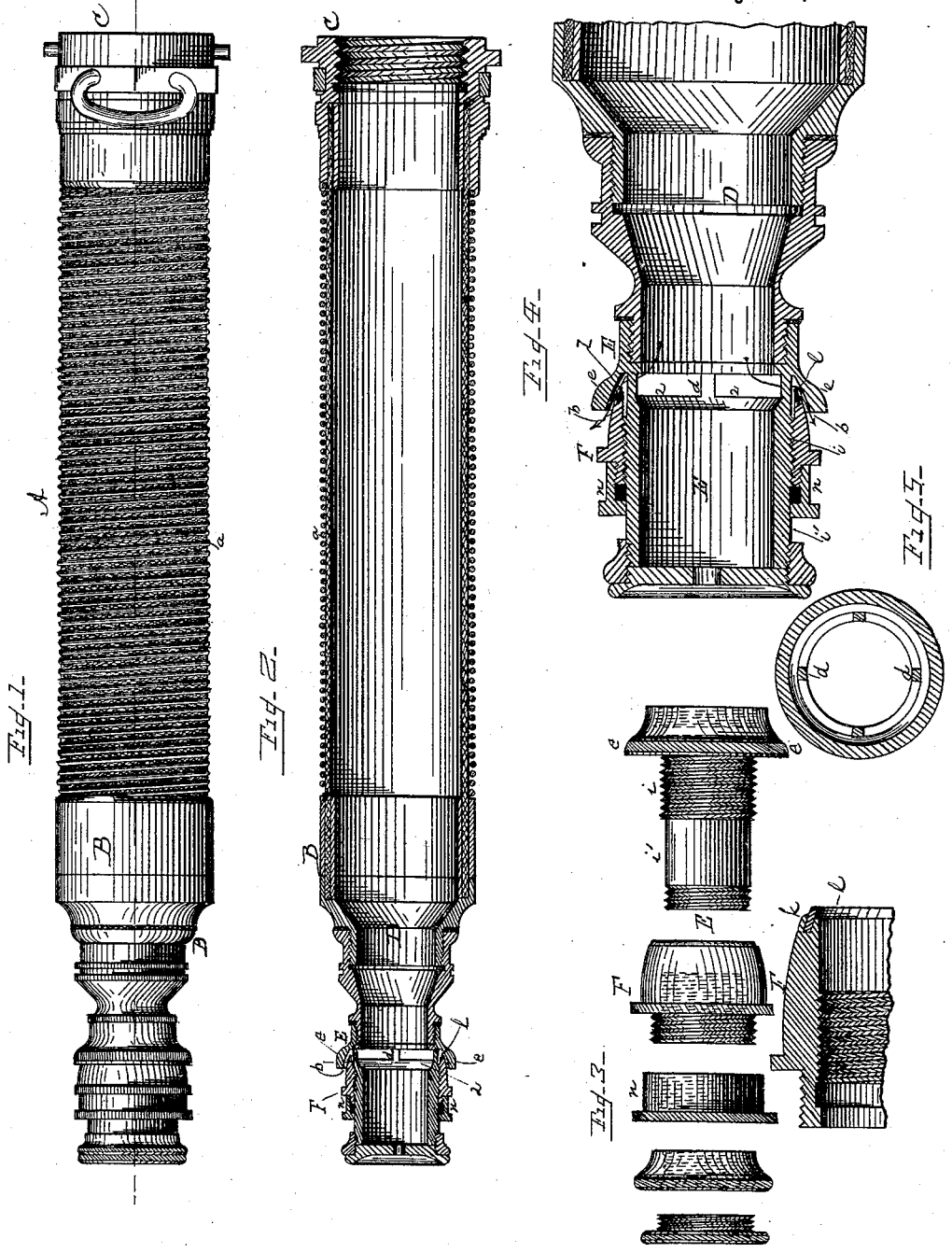
(No Model.)

2 Sheets—Sheet 1.

C. CALLAHAN.

HOSE PIPE AND NOZZLE.

No. 345,570. Patented July 13, 1886.



Witnesses.
G. A. Tadbouschmidt
Frank W. Pickell

Inventor.
Cornelius Callahan
by R. K. Evans Atty

(No Model.) 2 Sheets—Sheet 2.

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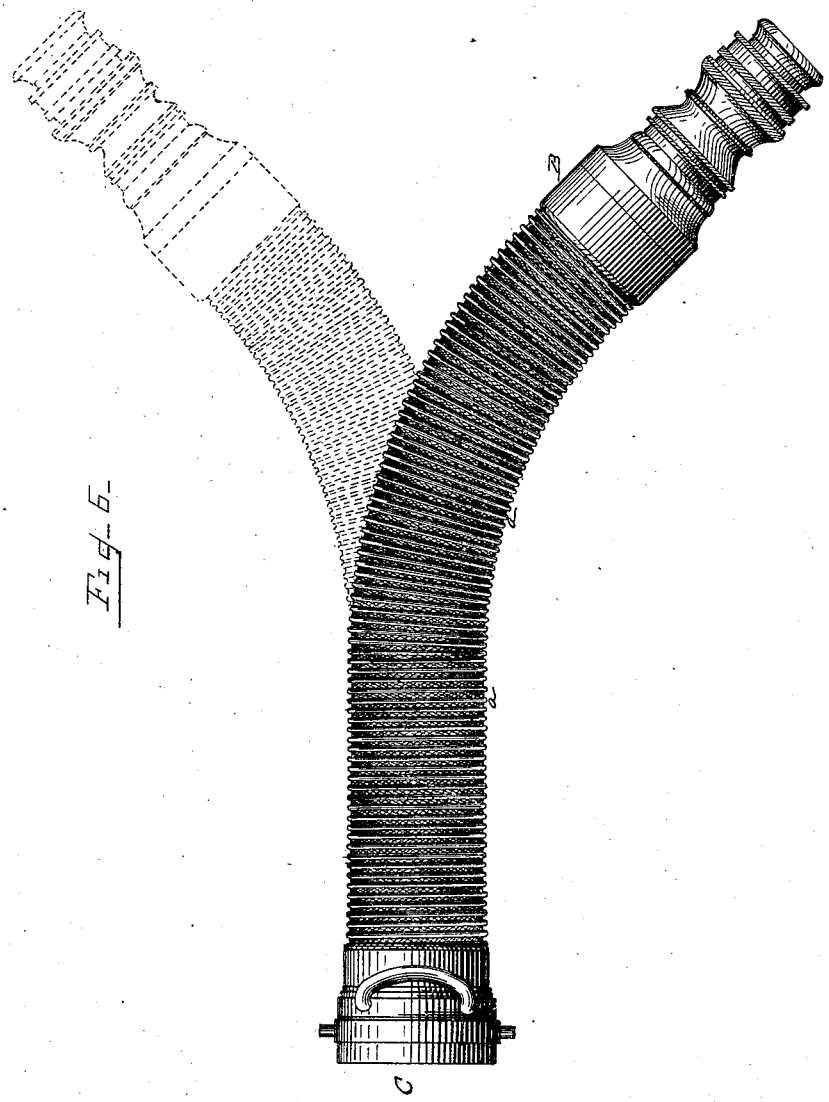

Fig. 6.

Witnesses.
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UNITED STATES PATENT OFFICE.

CORNELIUS CALLAHAN, OF CHELSEA, MASSACHUSETTS.

HOSE PIPE AND NOZZLE.

SPECIFICATION forming part of Letters Patent No. 345,570, dated July 13, 1886.

Application filed February 18, 1886. Serial No. 192,328. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS CALLAHAN, of Chelsea, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Hose Pipe and Nozzle; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of my improved hose pipe and nozzle. Fig. 2 is a longitudinal section of the same. Fig. 3 shows the parts separated. Figs. 4, 5, and 6 are details to be referred to.

The object of my invention is to provide a hose-pipe which may be bent to change the direction of a stream through an arc of ninety degrees, and yet not have the hose-pipe collapse or in any way reduce the diameter of the stream; and my invention has also for its object to provide a hose-pipe with a nozzle which will project a film or sheet of water which shall be interposed between the pipeman and the fire, and protect him from the heat and smoke.

To this end my invention consists of a flexible hose-pipe provided with the proper couplings and spirally wound on the outside with a wire in a direction opposite to the thread in the butt-coupling, and the ends of the wire fastened in the couplings with the fabric.

My invention also consists in the details of construction of the nozzle, as will be hereinafter fully described, and specifically pointed out in the claims.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is a flexible-fabric hose-pipe, provided, as is usual in such cases, with a nozzle-coupling, B, and a butt-coupling, C. Around the outside of the flexible fabric is spirally wound a wire, *a*, of brass or other elastic material. This spiral wire is wound in a direction opposite to that of the direction of the thread in the butt-coupling C, so that the manipulation of the hose-pipe will not tend to loosen the coils of the wire by any torsional strains on the flexible fabric. The coils of the wire *a* are laid so that the distance between each succeeding coil shall be about equal to the diameter of the wire used. This spacing or location of the coils compensates for the changing of position of the coils as the pipe is bent, the coils separating on the outside curve as the hose-pipe is bent, and closing up together on the inside curve. The ends of the coiled wire are secured under each one of the couplings B and C at the same time that said couplings are fixed permanently to the fabric.

On the end of the coupling B is secured in the usual manner the reducer D, and this is tapped at its end to receive a removable spraying-section, E, which has an interrupted wall, producing a substantially circular opening or spraying-outlet, *b*, the short studs *d d* supporting the divided wall of the spraying-section. Interiorly, immediately before the opening or outlet *b*, the dimension of the pipe is contracted slightly, as seen at 2. A beveled flange, *e*, surrounds the opening or spraying-outlet *b*, and serves to give the escaping sheet or film of water a direction forward from the pipeman. The section E is tapped at *i*, and has a portion of its exterior surface smooth, as seen at *i'*. A movable sleeve, F, threaded exteriorly to fit screw *i*, moves back and forth on the screw *i* and smooth surface *i'*, and has at one end a projecting flange, *k*, into the edge of which is fitted a leather packing, *l*, designed to be screwed down against the flange *e*, to partially or wholly close the opening *b* and cut off to a greater or less extent the spray or film. The opposite end of the sleeve F is provided with a stuffing-box and packing-ring, *n*, whereby all leakage is avoided. The extreme end of section E is tapped to receive any desired form of reducing mechanism, or any appliance that may be found to be desirable. It will be observed that this sprayer fits on the pipe by using the reducer, and fits on the end of the shut-off.

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

1. A flexible hose-pipe provided with a spi-

ral wire wound exteriorly, and having its ends clamped beneath and in combination with the couplings B C, substantially as set forth.

2. A flexible hose-pipe provided with an exterior spiral wire wound in an opposite pitch to the thread of the screw in the butt-coupling, in combination with said coupling C, substantially as described.

3. The hose-pipe and reducer, in combination with the spraying-section E, having circular outlet *b*, and the moving sleeve F, provided with the packing and flange *l k* and stuffing-box and packing-ring *n*, all constructed, arranged, and operated substantially as set forth.

CORNELIUS CALLAHAN.

Witnesses:

AUGUSTUS A. WILDER,

CHARLES W. REICKER.