

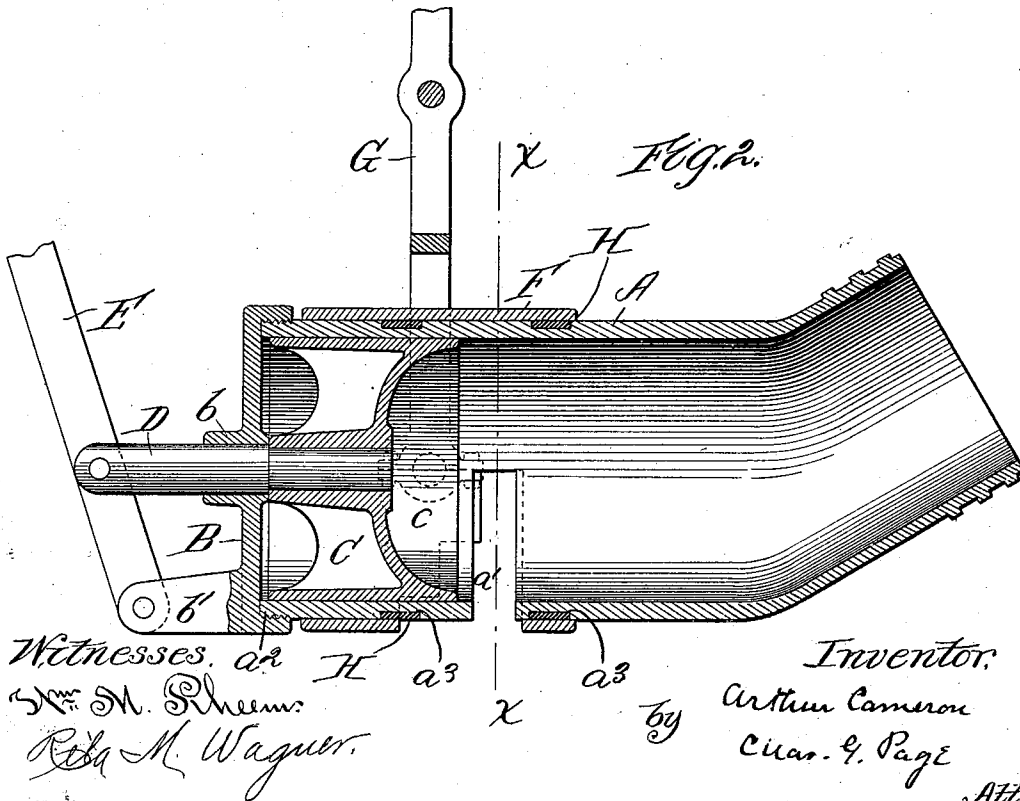
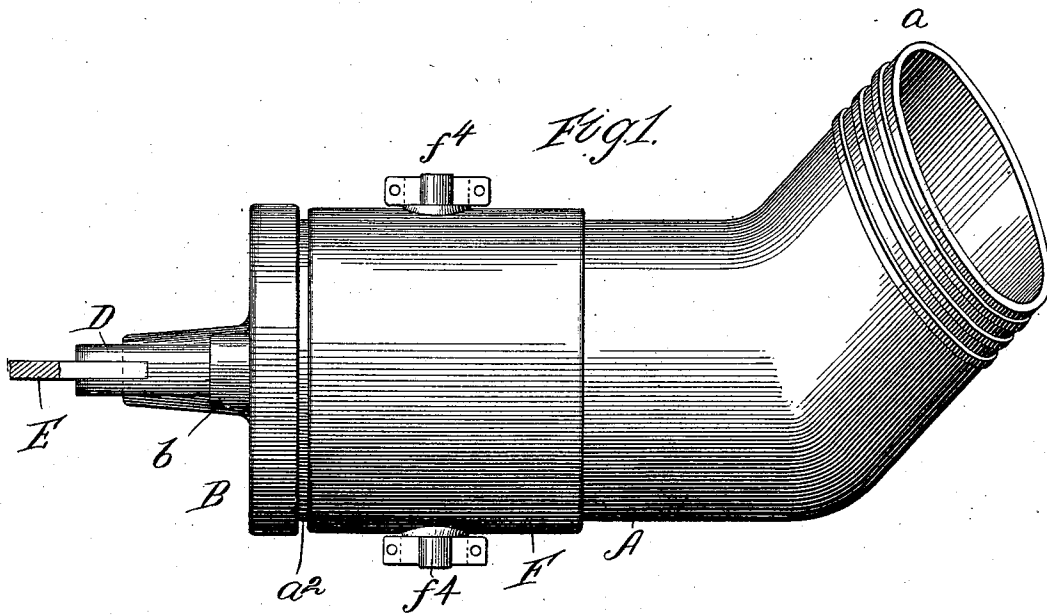
(No Model.)

2 Sheets—Sheet 1.

A. CAMERON.
STREET SPRINKLER.

No. 536,600.

Patented Apr. 2, 1895.



Witnesses,
Wm. M. Pheasant
R. M. Wagner.

Inventor,
Arthur Cameron
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Atty.

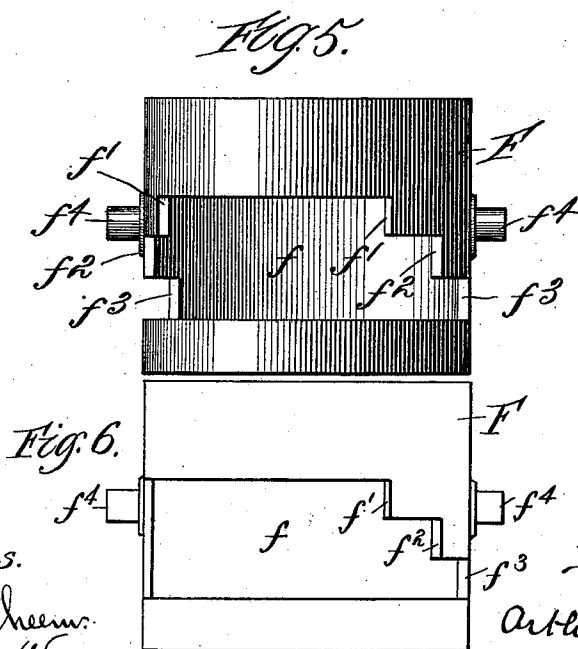
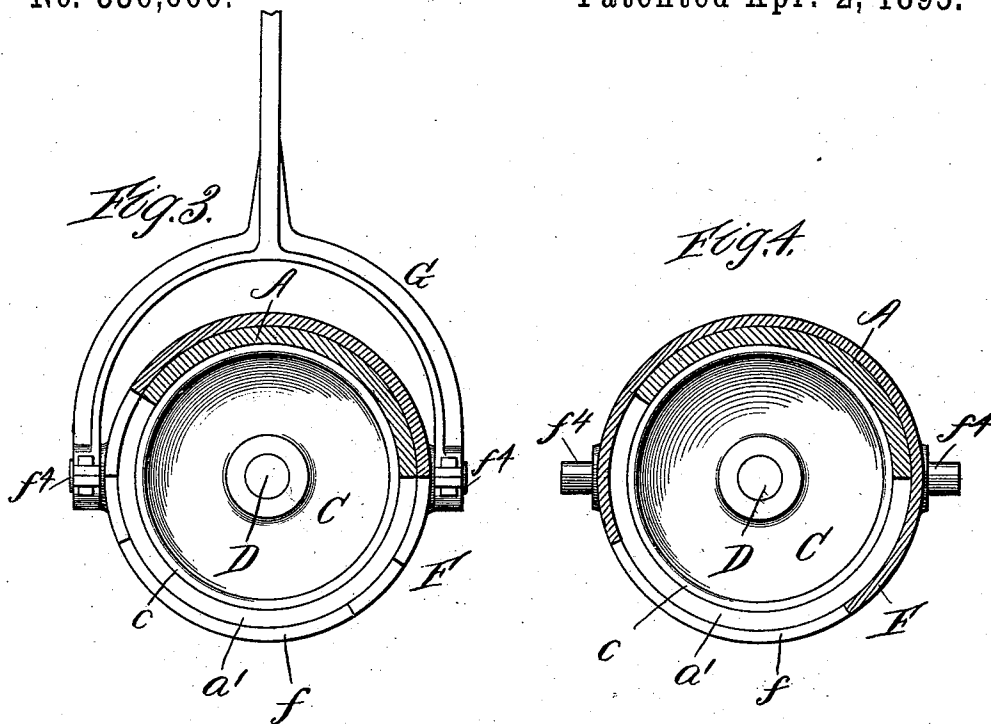
(No Model.)

2 Sheets—Sheet 2.

A. CAMERON.
STREET SPRINKLER.

No. 536,600.

Patented Apr. 2, 1895.



Witnesses.

Wm. M. Schenck.
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Inventor.

Arthur Cameron
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UNITED STATES PATENT OFFICE.

ARTHUR CAMERON, OF CHICAGO, ILLINOIS, ASSIGNOR TO FREDERICK C. AUSTIN, OF SAME PLACE.

STREET-SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 536,600, dated April 2, 1895.

Application filed March 27, 1894. Serial No. 505,266. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR CAMERON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Street-Sprinklers, of which the following is a specification.

My invention relates to nozzles for street sprinklers, and sprinklers generally, but is particularly adapted for the former.

In a sprinkler nozzle characterized by my invention, the nozzle is closed at one end and back of such closed end it is provided with a side discharge opening which is formed through and arranged to extend partially around the nozzle. In conjunction therewith, I provide a valve device which can be adjusted so as to either vary the thickness of the sheet of water discharged, or cut off the discharge altogether. I also provide a second valve device which can be adjusted to vary the length of the discharge opening and hence vary the width of the sheet of water issuing from the same. The two valve devices are conveniently under the control of an attendant, and can be adjusted with reference to the desired quantity of the discharge and character of the same. In a street sprinkler for example, one or more of these nozzles may be employed, it being preferable to provide two, so that one may be at each rear corner of the cart or vehicle, whereon the tank is mounted.

In the accompanying drawings,—Figure 1 represents in side elevation, a sprinkler nozzle embodying my invention. Fig. 2 is a section taken longitudinally through the same. Fig. 3 is a cross section on line $x-x$ in Fig. 2, the outer valve being in position to open the side discharge opening a' to its fullest extent. Fig. 4 is a like view with the opening a' contracted in length and lever G omitted. Fig. 5 shows the sleeve adapted to form the outer valve device. Fig. 6 is a view similar to Fig. 5, showing the transverse slot stepped or graduated at one end only.

It is understood that the nozzle A can be connected in any suitable way with the tank of a street or like sprinkler, and that the pipe forming such nozzle can have its end a ex-

tended or adapted for coupling with any suitable pipe section, as may be desired.

The discharge outlet a' consists of a part annular slot formed through the pipe or nozzle A so as to provide for a side or lateral discharge, it being seen that the end a^2 of the pipe or nozzle is closed by an end cap B , and hence, that when the nozzle is supplied with water under pressure, a lateral discharge of water in sheet form will take place from the discharge outlet a' .

In order either entirely to close the discharge outlet, or to vary the width of the same so as to vary the thickness of the sheet of water discharged, I provide a piston valve C , which is arranged within the nozzle and adapted for adjustment to an extent to either close the discharge opening or vary the same in width. This valve is conveniently provided with a stem D which extends through a stuffing box or bearing b in the end cap B , and engages an operating lever E . The cap B is also conveniently provided with a bearing b' for said lever which latter can be operated so as to adjust the valve and thereby cause the cylindric end portion c of said valve to close over so much of the discharge slot a' as may be desired. The cap B can be screwed upon the end of the pipe or nozzle A , thus rendering it easy to introduce the valve within the nozzle, and also rendering it easy to remove the same. The discharge slot a' can also be varied or adjusted in length so as to vary the width of the sheet of water discharged therefrom. To such end I provide a valve device, which can be adjusted for the purpose of adjusting the length of the discharge slot, independently of any adjustment on the part of the valve C for varying the width of slot, in which way the width and thickness of the sheet of water discharged from the nozzle can be regulated at will.

The valve-device which I have shown for thus regulating the length of the discharge opening, consists of a sleeve F which is provided with a graduated opening f (best shown in Fig. 5) and adjustably arranged upon the pipe or nozzle A . The graduated opening shown is in effect a series of part annular slots

of different lengths, the ends of such slots being shown at f' , f^2 , f^3 , respectively, whereby, by adjusting the sleeve along the nozzle the length of discharge opening a' can be determined by the length of slot of the sleeve in register therewith. The arrangement shown however, involves as hereinafter set forth a single opening which at different points varies in width transversely to the length of the sleeve, thereby providing the sleeve with a graduated opening for varying the length of the discharge opening in the head or nozzle. For example, should the sleeve be adjusted so as to bring the portion of its opening between walls f , f , over the discharge slot, the length of the latter will be limited to the distance between said end walls f' , f' , while on the other hand, should the sleeve be adjusted so as to bring the portion of its opening between walls f^3 , f^3 , over the discharge slot, the latter will have a greater length of discharge area. This is further illustrated in Fig. 4 wherein the sleeve is in position to considerably contract in length the discharge area of the discharge opening a' . As a means for adjusting this outer valve or regulating device, it is provided with lugs or journals f^4 for the prongs of a forked adjusting lever G arranged to straddle the sleeve. To prevent leakage I also provide annular packing rings H between the sleeve and nozzle, it being preferable to provide the nozzle with a couple of peripherally arranged annular seats a^3 positioned respectively at opposite sides of the discharge opening a' and adapted to receive the packing rings. No matter therefore to what extent the sleeve may be adjusted along the nozzle, these packings will always be in place to prevent leakage.

In Fig. 6 the transverse slot f has the steps f' , f^2 , and f^3 at one end only. This arrangement I find particularly desirable where I provide a wheeled street sprinkler with two nozzles projecting respectively from opposite sides of the tank, and in such case the gradu-

ated or stepped portion of the sleeve can be arranged for contracting or closing the discharge opening at the side of the sprinkler, that is to say, at the side which will be nearest the sidewalk when running along a street. When therefore, the sprinkler passes close to the sidewalk, the fan-shaped discharge of water can be contracted or cut off at the aforesaid side so as to avoid throwing water upon the sidewalk.

For certain purposes, the steps or graduations can be altogether omitted, and while I regard the same as matters of special improvement, I do not for the broader purposes of my invention limit myself to such arrangement.

What I claim as my invention is—

1. The combination in a sprinkler of the nozzle having a transversely arranged oblong discharge opening, and a valve device adapted for varying the length of said discharge opening and to such end having a graduated opening for registering with and determining the length of the discharge opening, according to the adjustment of the valve device substantially as described.

2. The combination with the nozzle having a transverse discharge opening, of a sleeve arranged for adjustment upon the nozzle and having a graduated opening for varying the length of the discharge opening, substantially as described.

3. The combination with the nozzle having a side discharge opening, of the sleeve adjustably arranged on the nozzle and having a graduated opening for regulating the length of the discharge opening in the nozzle, and a lever engaging said sleeve, substantially as described.

ARTHUR CAMERON.

Witnesses:

RETA M. WAGNER,
THOS. G. CHAPMAN.