(No Model.)

C. SMITH.

NOZZLE.

No. 552,011. Patented Dec. 24, 1895.

Fig. 2.

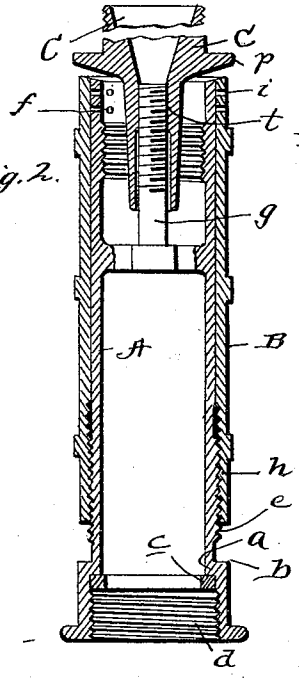


Fig. 1.

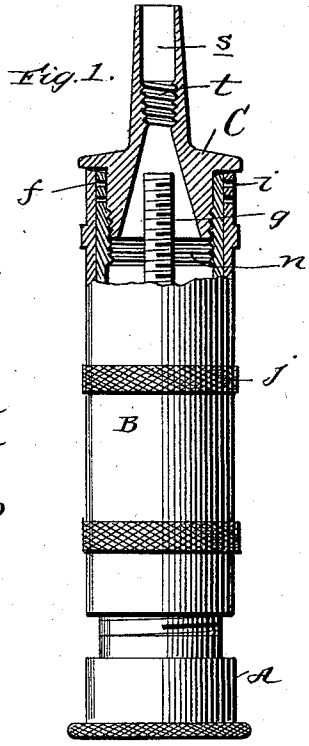


Fig. 3.

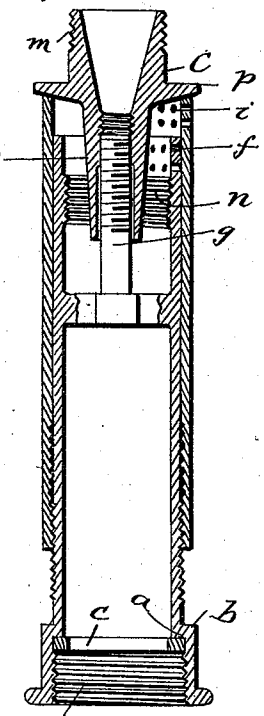


Fig. 4.

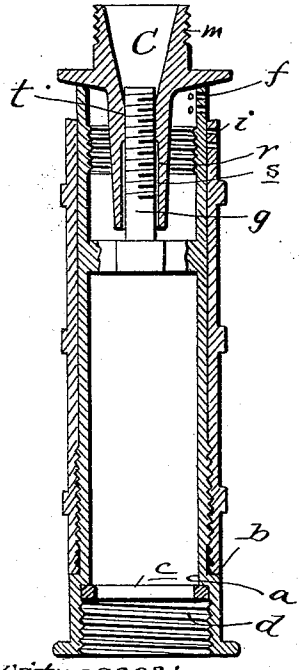


Fig. 5.

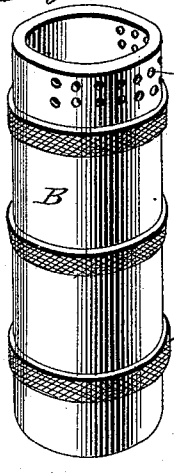


Fig. 6.

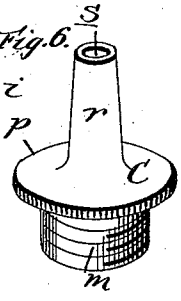
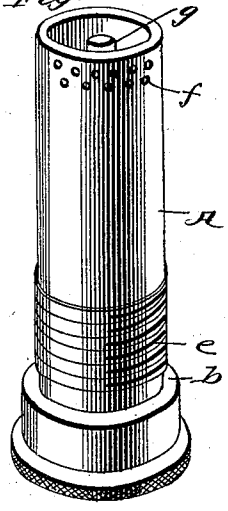


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES SMITH, OF LA PORTE, INDIANA.

NOZZLE.

SPECIFICATION forming part of Letters Patent No. 552,011, dated December 24, 1895.

Application filed August 20, 1895. Serial No. 559,954. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SMITH, a citizen of the United States, residing at La Porte, in the county of La Porte and State of Indiana, have invented certain new and useful Improvements in Nozzles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in nozzles; and it has for its general object to provide a cheap and simple nozzle designed for use in conjunction with a hose or sprinkling device, and one which with slight adjustment may be made to throw a solid stream, a full circular spray, a half-circular spray, or a quarter-spray, as desired.

Other objects and advantages of the invention will be fully understood from the following description and claims when taken in connection with the annexed drawings, in which—

Figure 1 is an elevation, partly in section, of my improved nozzle with the parts in position for throwing a solid compact stream. Fig. 2 is a longitudinal section with the parts in position to throw a full circular spray. Fig. 3 is a similar view with the parts in position to throw a half or approximately half circular spray. Fig. 4 is a view similar to Figs. 2 and 3, with the parts in position to throw a quarter or approximately quarter circular spray; and Figs. 5, 6, and 7 are perspective views of the several parts forming the nozzle.

Referring by letter to said drawings, A indicates the tubular base-section of my improved nozzle, which is, by preference, cast or otherwise formed in one piece, as illustrated. This base-section A is reduced in diameter at an intermediate point of its length to form the interior shoulder *a* and the exterior shoulder *b*, and it is provided below the shoulder *a* with a washer *c* and with interior threads *d*, for the connection of a hose or the pipe of a sprinkling-stand, and is also provided above the shoulder *b* with exterior threads *e* for the connection of the outer adjustable sleeve presently to be described. Said base-section A is further provided adjacent to its upper end with a series of perforations *f*, which extend about one-fourth the distance around it and are designed for a purpose presently described, and in the interior of said section is arranged the fixed integral threaded stem *g*, which extends upward almost to the upper end of the section, as shown.

B indicates the outer adjustable sleeve-section which is provided with interior threads *h* to engage the threads *e* of the section A, and is further provided with the series of apertures *i*, adjacent to its upper end, which extend about half-way around it, as shown, and preferably with the milled ribs *j*, by which it may be readily grasped and turned, and C indicates the cap of the nozzle. This cap C is exteriorly threaded, as indicated by *m*, to engage the interior threads *n* of the base-section A, and it is provided with the flange *p*, the reduced portion *r*, and the bore *s*, which latter is threaded, as indicated by *t*, to engage the threaded stem *g* of the base-section A.

In using my improved nozzle when it is desired to throw a solid compact stream the outer sleeve-section B is adjusted so that its upper end will be flush with that of base-section A, and the cap-section C is screwed into engagement with the said base-section sufficiently far to press its flange *p* tight against the upper ends of sections A B, as shown in Fig. 1. With the parts in this position it will be seen that the water will pass from the hose or the pipe of the sprinkling device through the bore of the cap C in a solid stream.

When it is desired to use the nozzle for throwing a full circular stream in a direction at right angles to the length of the nozzle, the position of the cap C is inverted, as shown in Fig. 2, and it is screwed down upon the stem *g* until its flange *p* rests about the distance illustrated above the sections A B. This will afford an escape for the water between the flange *p* and the ends of the sections A B, and it will consequently be thrown in a circular sheet or spray. When a half or approximately half circular spray is desired, the sleeve-section B is screwed up on the section A, and the cap-section C in its inverted position is screwed down until its flange bears tightly upon the upper end of the section B, as shown in Fig. 3. With the parts in this position it will be observed that the only escape for the water is through the apertures *i*

of section B, and consequently the water will be thrown in a semicircular spray in the direction desired.

When a quarter-circular spray is desired, the parts are adjusted to the positions shown in Fig. 4, when the only escape for the water will be through the apertures *f* of section A, and consequently the water will be discharged in a quarter-circular spray.

It will be appreciated from the foregoing that my improved nozzle may be made very cheaply, as it embodies but three parts, and it will also be appreciated that the nozzle may be quickly and easily adjusted to discharge in the four different ways described and may therefore be used to advantage either upon a hose or the pipe of a sprinkling-stand.

I have in some respects specifically described the construction and relative arrangement of the parts of my improved nozzle in order to impart a full, clear, and exact understanding of the same; but I do not desire to be understood as confining myself to such construction and arrangement, as such changes or modifications may be made in practice as fairly fall within the scope of my invention.

Having described my invention, what I claim is—

1. A nozzle comprising a base section having exterior threads *e*, interior threads *n*, and a central threaded stem *g*, and also having apertures *f*, adjacent to its upper end, an outer sleeve section surrounding the base section and having interior threads adapted to engage the threads *e*, of said base section and also having a series of apertures *i*, adjacent to its upper end, and an invertible cap-section having exterior threads to engage the threads *n*, of the base section and an interiorly threaded bore to engage the stem *g*, and also having a flange or shoulder *p*, and a reduced portion *r*, substantially as and for the purpose set forth.

2. A nozzle comprising a base section having a series of apertures *f*, adjacent to its upper end, an outer sleeve section surrounding the base section and having a series of apertures *i*, adjacent to its upper end, and an invertible cap section having a flange or shoulder *p*, and a reduced portion *r*, the said base, sleeve and cap sections being adjustably connected together by means, substantially as specified.

3. A nozzle comprising a base section having a central threaded stem *g*, and also interior threads *n*, and an invertible cap section having exterior threads to engage the threads *n*, of the base section and an interiorly threaded bore to engage the stem *g*, and also having a flange or shoulder *p*, and a reduced portion *r*, substantially as specified.

4. A nozzle comprising a base section having a central threaded stem *g*, and also having interior threads and a series of apertures *f*, adjacent to its upper end, and an invertible cap section having exterior threads to engage the threads *n*, of the base section and an interiorly threaded bore to engage the stem *g*, and also having a flange or shoulder *p*, and a reduced portion *r*, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES SMITH.

Witnesses:

CHARLES F. MCCLUNG,

HENRY SWARTZ.