

K. DUCKWORTH.
 SPRAY NOZZLE.
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1,290,526.

Patented Jan. 7, 1919.

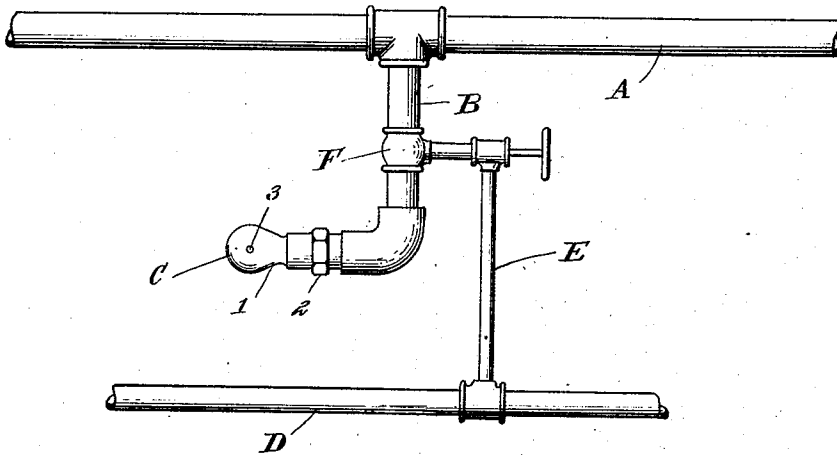


Fig. 1

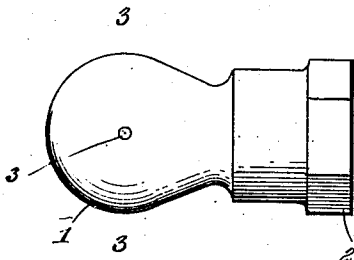


Fig. 2

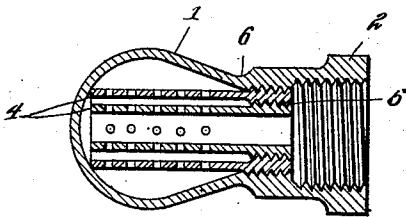


Fig. 3

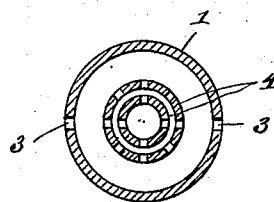


Fig. 4

WITNESSES
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KAY DUCKWORTH, OF PROVIDENCE, RHODE ISLAND.

SPRAY-NOZZLE.

1,290,526.

Specification of Letters Patent.

Patented Jan. 7, 1919.

Application filed January 23, 1918. Serial No. 213,365.

To all whom it may concern:

Be it known that I, KAY DUCKWORTH, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in Spray-
Nozzles, of which the following is a specification.

This invention relates to new and useful improvements in spraying nozzles for use on air moistening systems, and the principal object of the invention is to provide means whereby the compressed air coming from the spray nozzles is always supplied with the proper amount of moisture, which is controlled by a valve in the water pipe.

Another object of the invention is to provide a sprinkler head with a number of tubes or cylinders therein and provided with perforations through which the water and air must pass to reach the outlet of the sprinkler head, said tubes being located one within the other and spaced apart.

Another object of the invention is to provide a device of this character which is simple and durable in construction, reliable and efficient in operation and one which can be manufactured and placed upon the market at a minimum cost.

The invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a view showing the application of my invention to an air moistening system.

Fig. 2 is an elevation of the sprinkler head.

Fig. 3 is a longitudinal section thereof.

Fig. 4 is a cross section on the line 3—3 of Fig. 2.

As shown in these drawings A indicates the air supply pipe which is located adjacent the ceiling of the factory or other room

in which the air is to be moistened. This pipe is supplied with a plurality of downwardly projecting pipes B to which the nozzles C are connected. D indicates the water supply pipe connected with the pipes B by the branches E. My invention resides in the construction of the nozzle C and as shown in the drawing the said nozzle consists of a head 1 which consists of the base 2 having the screw threads therein for placing the sprinkler head onto the pipe B. It will be understood of course, that other means may be used for attaching said head to the pipe. The other end of said head is made in the form of a bulb, the sides of which are provided with the outlet holes 3. Two of said holes are shown in the drawings, and said holes being diametrically located. The interior of said head is provided with screw threads as shown, and within said head I locate a number of perforated tubes or cylinders 4, the lower end of the outermost cylinder being screw threaded to engage the screw threads in the head. The inner tube is provided with a screw threaded base as at 5 which engages internal screw threads on the lower end of the outer cylinder. As will be seen the cylinders or tubes extend from the restricted part 6 of the head to the extreme end thereof so that the water and air entering said head must pass through the perforations in the tubes before reaching the outlets in the head. Thus the water and air is effectually divided into a great number of small streams and a whirling motion imparted thereto. By making the tubes removable the same can be easily cleaned as can also the interior of the sprinkler head. It will also be seen that the tubes are concentrically arranged in respect to each other and to the head.

By my invention the air as it leaves the two openings in the nozzle will carry the proper proportion of moisture, which is controlled by the valve F in the pipe E.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make slight changes in the construction and in the combination and arrangement of the

several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

1. A device of the class described comprising a head having a pair of diametrically arranged openings, and a pair of concentrically arranged cylinders in said head having perforations therein.

2. A device of the class described comprising a head having a pair of diametrically arranged openings, a pair of concentrically arranged cylinders in said head having perforations therein, and means for removably holding said cylinders in position.

In testimony whereof I affix my signature.

KAY DUCKWORTH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."