

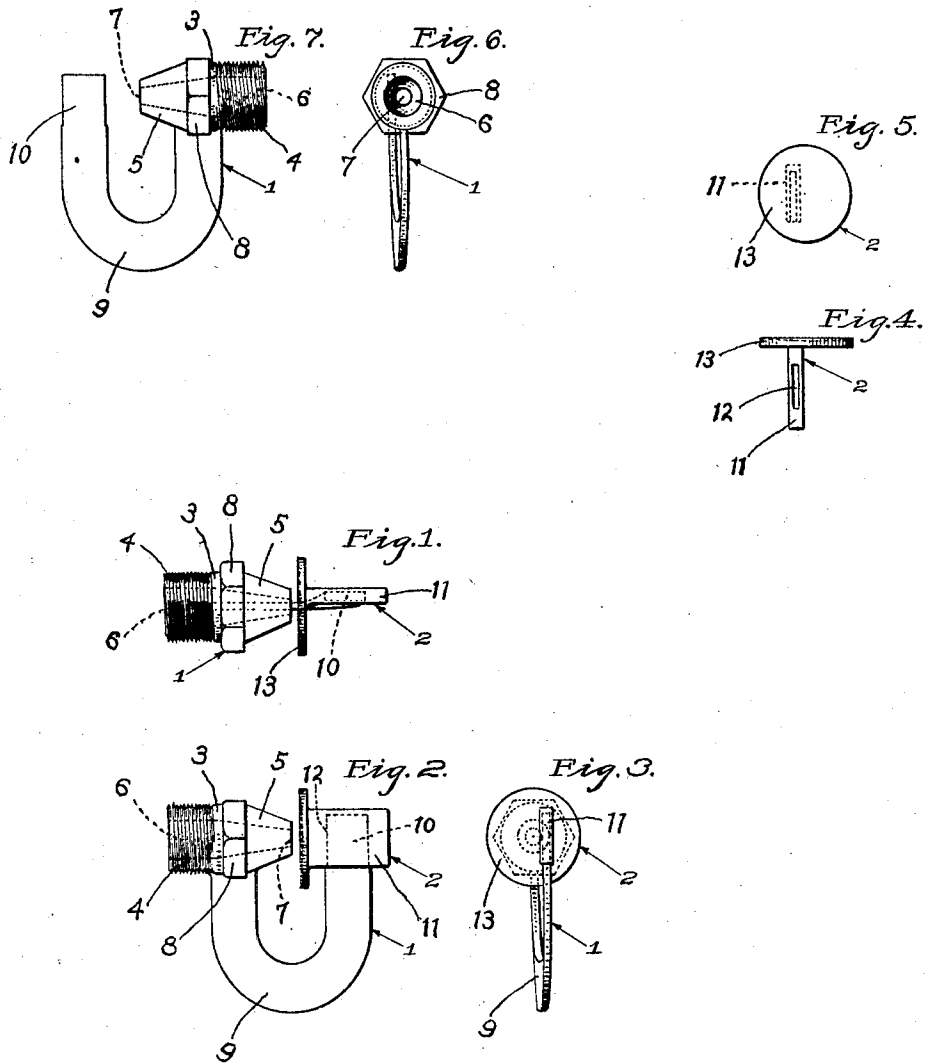
A. C. MILLER AND E. H. PERRY.

SPRAY HEAD.

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1,401,176.

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UNITED STATES PATENT OFFICE.

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SPRAY-HEAD.

1,401,176.

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To all whom it may concern:

Be it known that we, ARTHUR C. MILLER and EDWIN H. PERRY, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Spray-Heads, of which the following is a specification.

The invention relates to spray heads employed to produce a screen or spray from a stream of flowing water or other liquid, and more particularly to spray heads used in washing air in connection with ventilating and heating systems.

In air washing devices the same water is commonly used in continuous circulation, and by reason of the dust and other impurities which it extracts from the air, it soon becomes very dirty. Under this condition the necessarily small orifice employed in the spraying head frequently becomes clogged with the accumulated sediment, seriously curtailing its effective operation.

The principal object of our invention is to provide a spray head of which the parts may be readily disassembled to give access to and facilitate cleaning the orifice, and so constructed that the tendency of the parts to corrode under the attack of the impurities in the water is reduced to a minimum.

A further object is to provide a simple and durable construction which is very efficient in operation and which may be cheaply manufactured.

The construction and arrangement of our invention more fully appears in the following description and is illustrated in the accompanying drawings of which Figures 1, 2 and 3 are respectively top, side and front views of our device assembled. Figs. 4 and 5 are detail views of the spray plate. Figs. 6 and 7 are respectively rear and side views of the spray nozzle and supporting yoke for the spray plate.

Referring to the figures, the numeral 1 indicates generally a fixed spray nozzle and supporting yoke, and the numeral 2 indicates a detachable spray plate. The nozzle comprises a nipple 3 having one end externally screw threaded as at 4 for attachment to a water supply line and having its other end tapered in the form of a truncated cone 5. The nipple 3 has a passage 6 through its center which is convergingly

tapered to form a discharge orifice 7 at the center of the end of the cone shaped portion 5. The nipple 3 preferably carries a shoulder 8 having its outer periphery suitably shaped for turning the device in its engagement with a supply line.

A depending yoke or U-shaped member 9 has one arm fixed to the nipple 3 and the other arm carrying an upstanding tongue 10 positioned forwardly of the nozzle orifice. The tongue 10 is offset laterally from axial alinement with the orifice 7, so that a cleaning tool may be inserted directly into the orifice. A cross member 11 is carried by the yoke 9, having a downwardly opening recess 12 receiving the tongue 10 with a snug sliding fit. A disk-like spray plate 13 is fixed to the cross member 11, and so positioned thereon that it is perpendicular to and centrally alined with the axis of the discharge orifice 7, being spaced therefrom a short distance. The face of the spray plate 13 which is presented to the orifice 7 preferably is slightly concave in contour.

In operation, the stream of water flowing through the nipple 3 is forced under pressure from the orifice 7, and striking the spray plate 13 is deflected in a sheet or spray radially in all directions.

It will here be seen that the recess 12 formed in the cross member 11 is protected from the down fall of water and sediment by reason of its opening downwardly only, and that thereby the liability of corrosion of the joint of the member 11 and yoke 9 is reduced to a minimum. The removal of the spray plate and supporting cross member from the yoke is facilitated by our employment of a simple sliding attachment, and when so removed the orifice 7 is accessible for the direct insertion of a cleaning tool.

It will be evident also that by our arrangement the several members other than the nipple may be formed from sheet stock by simple operations, thereby effecting a low cost of manufacture.

We claim as our invention:

1. A device of the class described having, in combination, a nozzle having a discharge orifice, a support fixed to the nozzle and having a tongue positioned before said nozzle, the portion of said tongue adjacent said nozzle being offset from axial alinement with the orifice, and a spray plate de-

tachably supported on said tongue and arranged in spaced transverse relation to said orifice.

2. A device of the class described having, in combination, a nozzle having a discharge orifice, a support on the nozzle having a protruding end disposed in spaced relation to said orifice and eccentric thereto, and spray producing means mounted on the support having slidably detachable engagement therewith to be removed transversely of the axis of said nozzle.

3. A spray head having, in combination, a nozzle adapted to be attached to a source of liquid supply and having a discharge orifice, a U-shaped member having one arm secured to said nozzle and the other arm extending outwardly from said orifice, a tongue carried by said latter arm and so positioned laterally to the axis of said orifice, and a spray producing member having a recess adapted to slidably receive said tongue and support said member thereby.

4. In a spray head having a discharge

nozzle, the combination of a support mounted on the nozzle, a tongue carried by the support having its free end positioned to one side of the orifice of said discharge nozzle, an element having a recess removably embracing said tongue, and a spray plate secured to said element, said spray plate being positioned before said nozzle.

5. In a spray head having a nozzle and a discharge orifice therethrough, a U-shaped support having one arm secured to said nozzle, a tongue carried on the other arm of said support and extending forwardly of said nozzle, said tongue being offset to permit free access to said orifice, an element having a recess receiving said tongue in detachable engagement, and a plate secured to said element having a curved surface spaced from said orifice in transverse centrally aligned relation to the axis of said orifice.

In testimony whereof we have hereunto set our hands.

ARTHUR C. MILLER.
EDWIN H. PERRY.