

J. H. KINEALY.
 SPRAY HEAD.
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949,360.

Patented Feb. 15, 1910.

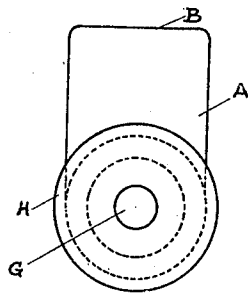


FIG. 1.

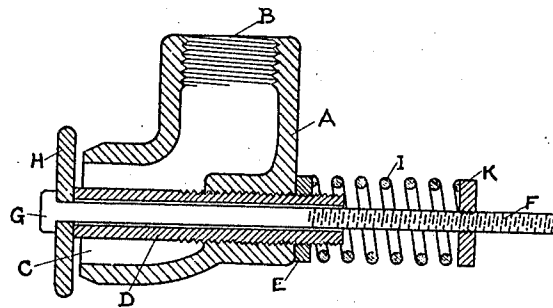


FIG. 2.

WITNESSES:

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JOHN H. KINEALY, OF FERGUSON, MISSOURI.

SPRAY-HEAD.

949,360.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN H. KINEALY, a citizen of the United States, residing at Ferguson, in the county of St. Louis and State of Missouri, have invented a new and useful Improvement in Spray-Heads, of which the following is a full, clear, and exact specification, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to that type of spray heads used in connection with air purifying and air washing apparatus. In these apparatus it is necessary to use the same water over and over again, and as the water becomes dirty through the dirt taken from the air there is great danger of the spray head becoming clogged and stopped by the dirt, in which case the spray head is unable to do its work properly and the apparatus becomes inefficient.

The object of my invention is to provide a spray head that will properly spray the water and at the same time be provided with means whereby the spray head may be flushed with water so as to wash out any dirt that may accumulate in it, thus keeping the head always in good working order.

My invention is fully shown in the accompanying drawings where similar letters are used to designate similar parts.

Figure 1 shows a front view of the spray head; and Fig. 2 shows a view of a vertical section taken through the center of Fig. 1.

Referring to the figures, A is a body having an inlet B and an outlet C.

D is a tube which screws into the body A and projects forward toward the outlet C. This tube may be made to project as far forward and beyond the outlet C as desired by screwing it in or out of the body A. This tube is preferably placed in the body A so as to be concentric with the outlet C, and it is provided with a lock-nut E by means of which it may be locked in any desired position after having been set.

F is a rod, of smaller diameter than the inside diameter of the tube D, which passes inside of the tube and is movable in it. This rod is provided with a head G at the end next to the outlet C and with a nut K which engages with threads cut on the end beyond the body A.

H is a spray plate having at its center a hole through which the rod F passes. This spray plate is held on the rod F between the

head G and the end of the tube D, and its shape is such that when thus held there is an opening between it and the end of the outlet C for the passage of water.

I is a spring, confined between the lock-nut E and the nut K, which retains the rod F in place against the pressure of the water on the spray plate H. By adjusting the tube D the circular opening between the end of the outlet C and the spray plate H may be made as small or large as desired, so as to convert the water issuing from the outlet into a fine sheet and spray; and by adjusting the nut K the force exerted by the spring I may be varied as desired.

The operation of the spray head is as follows: The tube D having been adjusted so as to hold the spray plate H at the desired distance from the end of the outlet C, the nut K is then adjusted so that the spring I will exert just sufficient force to hold the rod F in place against the pressure of the water exerted on the spray plate H. The water is then allowed to pass through the spray head and out the outlet C. As it passes through the outlet it comes in contact with the spray plate and is made to assume the form of a sheet of greater or less thickness. This sheet breaks up into a spray at a greater or less distance from the spray head. The thickness of the sheet and the distance from the head that it begins to break up into a spray is determined by the pressure of the water in the spray head and the distance of the spray plate H from the end of the outlet C. When it is desired to flush the head, pressure is brought to bear on the end of the rod F so as to compress the spring I. The head G then moves away from the outlet C and the pressure of the water forces the spray plate H along the rod against the head G, thus increasing the opening between the spray plate and the end of the outlet C, so that the water leaves the outlet in a larger volume than before and flushes or carries with it any dirt that may have collected in the spray head or in the opening between the spray plate and the end of the outlet. When the pressure on the rod F is removed the spring I expands and acting on the nut K forces the rod back into its original position, and thus brings the spray plate to its original position. The action of the spring is such that after every flushing the spray plate is always brought to exactly the same position relative to the outlet C.

This insures that the spray produced by the spray head will always be the same after flushing that it was before.

What I claim as new and desire to secure by Letters Patent, is:

1. A spray head comprising a body having an inlet and an outlet, a tube projecting through the body beyond said outlet, a rod passing through said tube, said tube and rod being adapted to move one relative to the other, a spray plate in front of said outlet and adapted to be moved away from said outlet by the movement of said rod and tube relative to one another, and means whereby said rod and tube are maintained in their relative positions against the pressure on the spray plate, substantially as described.

2. A spray head comprising a body having an inlet and an outlet, a tube passing through said body toward the outlet, a rod movable in said tube, a spray plate on said rod in front of the outlet, and means whereby the rod is maintained in place against the pressure on the spray plate, substantially as described.

3. A spray head comprising a body having an inlet and an outlet, a tube projecting through the body beyond the outlet, a rod movable in said tube, a spray plate on the rod in front of the outlet, and means whereby the rod is maintained in place against the pressure of the water on the spray plate, substantially as described.

4. A spray head comprising a body having an inlet and an outlet, an adjustable tube projecting through the body toward the outlet, a rod movable in said tube, a spray plate on the rod in front of the outlet, and means whereby the rod is maintained in place against the pressure of the water on the spray plate, substantially as described.

5. A spray head comprising a body having an inlet and an outlet, an adjustable tube concentric with the outlet and projecting through the body beyond the outlet, a rod movable in said tube, a spray plate on the rod in front of the outlet, and means whereby the rod is maintained in place against the pressure of the water on the spray plate, substantially as described.

6. A spray head comprising a body having an inlet and an outlet, a tube screwed into the body concentric with the outlet and projecting through the body beyond the outlet, a rod movable in said tube and provided with a head on the end next to the outlet, a spray plate movable on the rod in front of the outlet, and a spring adapted to hold the rod in place against the pressure of the water on the spray plate, substantially as described.

7. A spray head comprising a body having an inlet and an outlet, a tube screwed into the body concentric with the outlet and projecting through the body beyond the outlet, a lock-nut on the tube, a rod movable in said tube and provided with a head on the end next to the outlet, a circular spray plate having an opening at the center through which the rod passes so as to hold said spray plate between the tube and the head of the rod, a coil spring on that part of the rod which projects from the tube beyond the body, and a nut on the rod for regulating the pressure of the spring, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN H. KINEALY.

Witnesses:

ELLA JUNE,

THERESA SUEME.