

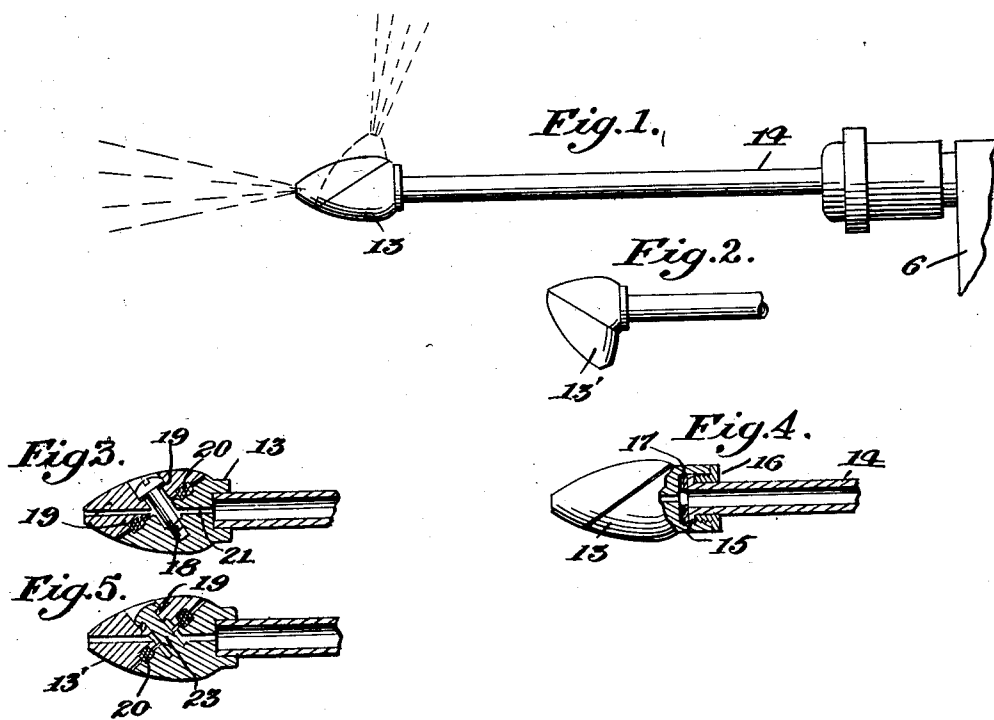
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SPRAY HEAD

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SPRAY HEAD

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8 Claims. (Cl. 299—73)

This invention relates to spray heads of the rotary type embodying improvements that render such heads particularly adapted for use with atomizing units whereby to impart a greater flexibility to such units.

The main object of the invention is to provide a spray head or nozzle that is simple in design, ornamental in appearance and economical in manufacture.

A further object is to provide a spray head that is easily adjustable, as desired, to afford a maximum variation of the angle of discharge of the fluid spray therefrom.

The spray head herein disclosed is adapted to atomizers in general but, more particularly, to dental sprays or hygienators. In the dental art, it is desirable to provide a spray device which is effective to reach and treat all portions of the teeth. When using conventional types of spray heads now on the market, it is difficult to secure this desired result. By the use of the flexible type of heads according to the present disclosure, it is possible to reach every portion of the teeth by merely turning the adjustable heads to a position where the spray may be directed on the desired tooth area.

In the accompanying drawing which discloses modifications of an improved spray head—

Fig. 1 shows a bullet type of spray head;

Fig. 2 shows the spray head of Fig. 1 in its extreme adjusted position;

Figs. 3 and 4 are enlarged sectional views of the head shown in Fig. 1; and

Fig. 5 is a view in section of a modification.

Referring to the drawing, Figs. 1 to 5 show a "bullet" type of spray head. This head 13 is preferably arranged to rotate on a tube 14, the end of which is flanged at 15. A screw gland member 16 engages the flange 15 and forces same against a sealing washer 17. The head 13 is split on a bevel in a manner to allow the outer or top element 13' to revolve around a screw 18 which serves to retain the portions assembled. Two sealing gaskets, 19 and 20, are provided to prevent fluid leaks. The passage 21 for liquid is drilled through both portions of the head and a small space 22 is provided around the screw 18 to allow for passage of fluid.

As shown in Fig. 1, the tip 13' may be rotated to vary the angle of spray about 120 degrees above a horizontal plane. In Fig. 3, the head 13 is shown as fixed upon the tube 14. In order to turn the spray downward, the entire spray unit must be revolved or inverted. In the form shown in Fig. 4, the entire head may be revolved around

tube 14 because the gasket and gland structure will permit such rotation of the head alone, in a manner to allow projection of the spray in a downward direction through an angular variation of about 120 degrees.

In Fig. 5 is shown a preferred form of attachment of the tip 13' to the head. A pin 23 is cast integral with the inner portion of the head and this pin is beaded over or spun down to engage the gasket 19 with sufficient pressure to permit rotation of the tip 13'.

In the operation of the spray device shown, the rotary head may be adjusted at any desired angle according to the location of the surface area to be treated. Any additional adjustment necessary may be obtained by rotating the head 13 on the tube 14 in Fig. 4. By these simple adjustments, the spray may easily be directed onto either side, top, rear or front portion of a tooth.

I claim:

1. A spray device comprising a spray tube, a conical tipped spray head secured to the end of the tube, a passage for fluid extending axially through said head, said head being divided into two portions along a plane extending at an angle of substantially less than 90 degrees to the axis of the head, and means for securing said portions together in a manner to permit the outer end portion to rotate upon the other portion.

2. In a spray device as set forth in claim 1, means for securing the spray head to the tube in a manner to permit the head to rotate on the tube.

3. A spray nozzle comprising a conical shaped end portion and a base portion, a passage for fluid extending axially through both portions, the base portion terminating in a face extending at an angle of substantially less than 90 degrees to the axis of the nozzle, the conical end portion being mounted on the terminal face of the base portion, and means to secure said portions together in a manner to permit relative rotation therebetween.

4. A spray nozzle comprising a conical tip portion and a base portion, each portion terminating at one end in a face extending at an angle of substantially less than 90 degrees to the axis of the nozzle, a fluid passage extending axially through each portion, said portions being rotatably secured together with said faces in contact whereby the passage in the tip portion may be positioned at various angles to the passage in the base portion.

5. A spray nozzle as set forth in claim 4, wherein the means for securing the portions together

comprises a pin extending from one portion and through an opening provided in the other portion, the other portion being rotatable around the pin.

6. A spray nozzle comprising a conical tip portion and a base portion, each portion terminating at one end in a face extending at an angle of substantially less than 90 degrees to the axis of the nozzle, a fluid passage extending axially through each portion, a pivot pin secured to and extending from the terminal face of one portion, the other portion having an opening for receiving said pin, said other portion being rotatable through 360 degrees around the pin, one portion being provided with a recess adjacent said pin, the fluid passage in each portion being in communication at one end with said recess to provide a continuous passage for fluid through the nozzle.

7. A spray head for a dispensing device, said head being divided into two portions along a plane extending at an angle of substantially less than 90° to the axis of the head, a passage for fluid extending axially through said portions, and means for securing said portions together in a manner to permit the outer end portion to rotate upon the other portion.

8. A spray head as set forth in claim 7, wherein the means for securing the two portions comprises a pivot pin extending at a right angle to the plane dividing the head, a recess in each portion adjacent said pin, said recesses being contiguous to form a fluid passage around the pin, the fluid passages in each portion communicating with a respective recess to form a continuous fluid passage through said head.

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