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M. LANDBERG

FACE SPRAYING DEVICE

Filed Nov. 15, 1926

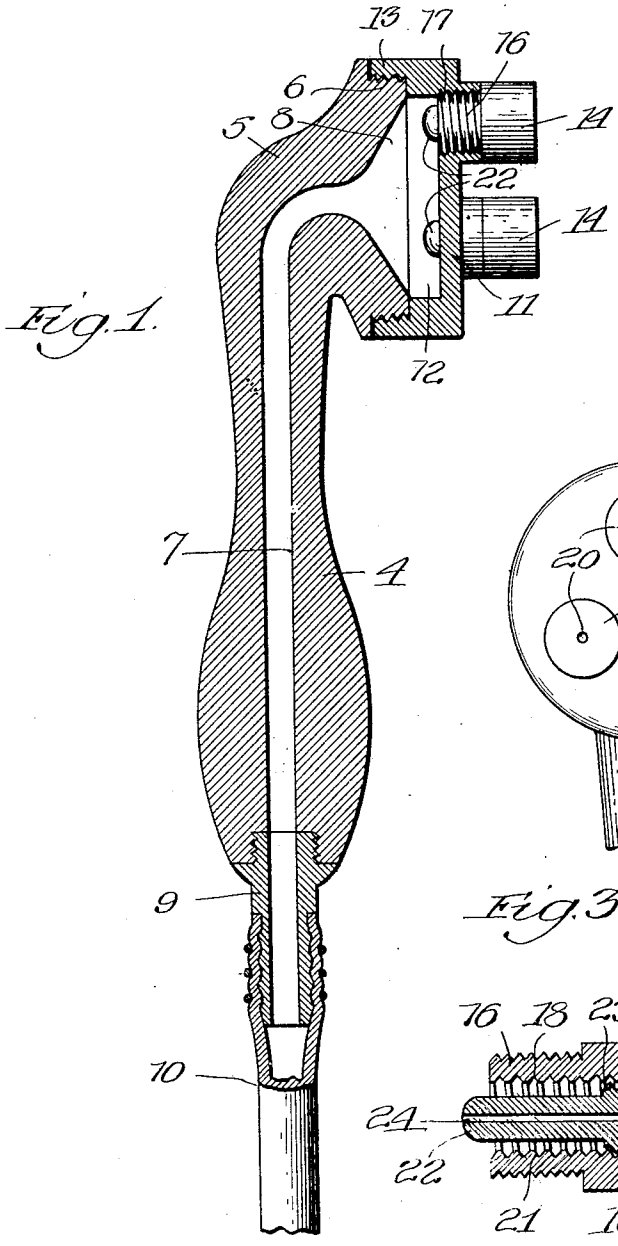


Fig. 1.

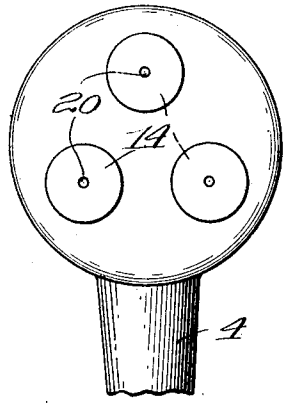


Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

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FACE-SPRAYING DEVICE.

Application filed November 15, 1926. Serial No. 148,570.

My invention relates to a spray nozzle for use, more particularly, as a part of a device for projecting against the face of a person, a mist-like spray to produce the same general advantageous effects resulting from the subjection of the face to natural rain or mist and also produce, to a mild degree, a massaging effect upon the face; and my primary object is to provide a novel, simple and inexpensive construction of nozzle especially adapted for producing a mist-like spray and particularly for the purpose above stated.

Referring to the accompanying drawing:—

Figure 1 is a view in vertical sectional elevation of an implement embodying my invention. Figure 2 is a view in elevation of the upper portion of the implement viewing it from the right hand side of Fig. 1; and Figure 3, an enlarged view in longitudinal sectional elevation of one of the plurality of spray nozzles with which the implement of the preceding figures is equipped.

The particular illustrated embodiment of my invention, which is in the form of an implement adapted to be readily grasped and manipulated by the operator, comprises a handle portion 4 terminating at its upper end in an outwardly flared, laterally disposed, portion 5 shown as externally screw threaded, as represented at 6. The member 4 contains a passage 7 extending lengthwise therethrough and opening laterally at a flaring portion 8 thereof, through the side of the portion 5, the lower end of the member 4 being equipped with a tubular fitting 9 adapted for connection with one end of a flexible hose line 10, as for example by telescoping the latter therewith, the hose 10 leading from any suitable source of water under pressure to be sprayed against the face of the person.

The device also comprises a disk-like member 11 recessed as indicated at 12 and having an annular flange 13 which is internally screw threaded and screws upon the thread 6 of the member 4, the disk 11 and portion 5 forming a chambered head into which the water supplied through the pipe 10 passes.

The disk 11 is equipped with a plurality of my improved spray-producing devices, shown as three in number, but the number of which may be varied as desired, which are provided for the purpose of causing the water supplied to the device to be projected therefrom in the form of a mist-like spray against the face of the person to be treated.

The spray devices referred to are represented at 14, and are of the same construction, each comprising a nozzle head 15 having a reduced externally threaded portion 16 at which it is adapted to screw into a threaded opening 17 in the disk 11. The head 15 contains a recess 18 extending longitudinally thereof and centrally therein, the forward wall of this recess being of general conical form as represented at 19 and communicating at its apex portion with an outlet 20 in the head 14 this outlet being concentric with the wall of the recess 18 and greatly restricted relative thereto, the wall of the recess 18 to the rear of the tapered portion 19 thereof, being screw threaded as represented at 21.

The spray device also comprises a member 22 which is provided preferably only at its forward end, with screw threads as represented at 23 and which are of triangular shape in cross section at which the member 22 screws into the internally threaded portion of the recess 18, the rear end of the member 22 being preferably of reduced diameter as illustrated. The internal diameter of the threaded portion 18 and the external diameter of the threaded portion 23 are so proportioned that the threads 23 loosely fit the threads 21, thereby affording a spiral passage therebetween around the member 22.

In the operation of the device the water supplied from the pipe 10 discharges from the chambered head into the recess 18 of each spray head 14 and thence passes through the spiral course referred to in the spray heads, discharging against the tapered wall portion 19 along which the water travels in a gradually contracting spiral until it reaches the outlet 20 through which it discharges with a swirling motion resulting in the breaking up of the stream into comparatively fine mist-like spray, closely simulating fine rain or mist, it being preferred that a relatively fine stream of water be simultaneously projected through the member 22 and into and through the outlet 20 for commingling with the water swirled as stated, this being effected in the particular construction shown by providing a straight-way passage 24 centrally entirely through each member 22 which, it will be

understood, opens into the chamber supplied with water from the pipe 10.

It will be understood from the foregoing that by providing the implement of the general form shown in Fig. 1, the user may readily and conveniently grasp and manipulate the device to cause the mist-like spray to be projected against the face, the provision of the plurality of spray devices, arranged as shown, causing the sprayed liquid from each nozzle to intercept and produce a relatively dense mass of spray.

It will also be understood that by making the spray devices as shown and described they may be very economically produced and operate to effect the desired breaking up of the water into the desired relatively fine mist-like spray.

While I have illustrated and described a particular embodiment of my invention, I do not wish to be understood as intending to limit it thereto as the same may be variously modified and altered without departing from the spirit of my invention.

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

1. A spray nozzle comprising a casing having an inlet and an outlet and an internal spiral groove therebetween, and a member in said casing having an externally threaded portion the thread of which is of triangular shape in cross-section, said member loosely engaging at its threaded portion with the grooved portion of said casing and containing a passage therethrough opening at one end to the inlet of said casing and at its other end in communication with the outlet of said casing.

2. A spray nozzle comprising a casing having an inlet and a centrally disposed outlet, said casing containing an internal spiral groove between said inlet and outlet, and a member in said casing having an externally threaded portion the thread of which is of triangular shape in cross-section, said member loosely engaging at its threaded portion with the grooved portion of said casing, said member containing a passage therethrough which opens at one end through the inlet of said casing and at its other end communicates, and aligns, with the outlet of said casing.

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