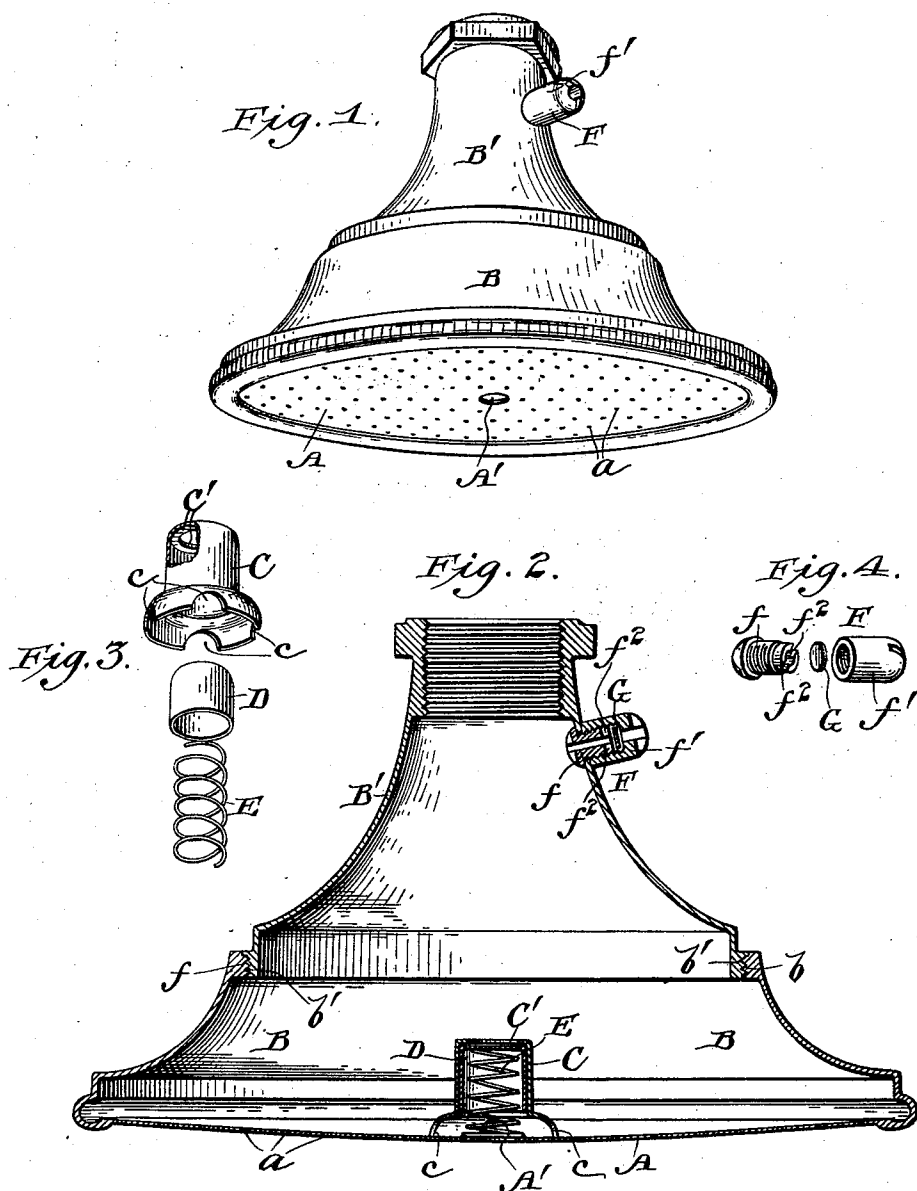


(No Model.)

W. & J. BOEKEL.  
OVERHEAD SHOWER.

No. 588,262.

Patented Aug. 17, 1897.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM BOEKEL AND JULIUS BOEKEL, OF PHILADELPHIA, PENNSYLVANIA.

## OVERHEAD SHOWER.

SPECIFICATION forming part of Letters Patent No. 588,262, dated August 17, 1897.

Application filed June 18, 1896. Serial No. 596,012. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM BOEKEL and JULIUS BOEKEL, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Overhead Showers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to overhead showers having a central drain-hole in the bottom and an air-inlet above; and it consists in the construction and combination of parts hereinafter set forth and claimed.

Heretofore such devices, known in the trade as "overhead showers," have generally been made with tubular outlets of a larger size or with perforations of a sufficiently large size to permit the water to run off through them even when the pressure in the pipes is cut off.

We desire to use much finer streams than will be supplied through such large holes, the effect on the bather being more pleasant and irritating and the action of the shower corresponding with the effect of a needle-bath if applied to the surface of the human body; but when very fine holes are used the water will not pass through them unless under pressure. When the flow is cut off above, the water will remain in the hollow rose of the shower and will corrode more or less the interior thereof. Consequently the next use of the shower will spray the bather with water containing oxids of copper or other metal and tainted, perhaps, by long standing. Of course this retention of water in the rose is also injurious to the latter.

The chief object of this invention is to obviate the above defect by providing automatic means for letting the air into the interior of the rose as soon as the pressure is cut off and also for letting out the water from the rose independently of the spray-holes, as hereinafter set forth.

To this end the said invention consists in the construction and combination of parts hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 represents a perspective view of a rose for showering embodying our invention. Fig. 2

represents a vertical central section through the same on a plane passing longitudinally through the air-inlet. Fig. 3 represents a detail view of the parts of the water-outlet, and Fig. 4 represents a similar view of the parts of the air-inlet.

A designates the bottom plate of a large hollow rose for showering. Said plate is provided with a central hole A' and a great number of minute perforations *a*. It is preferably milled at the edge, as shown, and practically integral with the flaring main part B of the body of the said rose. The upper part B of the said body is bell-shaped and detachably fastened to the said lower part B by screw-threads *bb*, formed in low annular flanges on their meeting edges, in order that the two parts may fit smoothly and firmly together. Externally they appear integral with a graceful ornamental shape. When the said lower part is removed by unscrewing, its interior is made very accessible for cleansing by reason of the very large opening in its top. After cleansing it is easily screwed to the upper part again. These parts thus constructed and made detachable we do not claim as new.

The hole A' communicates with the interior of a hollow valve-casing C; the lower part of which is slightly enlarged and soldered at its edge to the inner face of plate A. Openings *c* in this enlarged lower part allow any water left in the rose to run out when air is admitted to the interior of the said rose and the water-outlet valve is open.

D designates the said valve, which is preferably cup-shaped, as shown, and slides up and down within the said valve-casing, being upheld by a spring E and limited in its upward motion by an annular flange C at the top of the said casing. When the said valve is forced down against the resistance of the said spring on the said plate by the pressure of the water, it closes the outlet through the hole A'.

In a side opening of the upper part B of the rose is fitted an air-inlet tube F, which is also a seat and casing for a disk valve G. This air-inlet tube and valve-seat consists of two parts *ff*, screwed telescopically together and binding the wall of the rose between them. The inner and smaller part *f* is also soldered or otherwise securely fastened to said wall.

The tube or valve-seat as a whole has a cylindrical form with conoidal closed ends, each end having a central hole. The inner end of the part *f* has lateral air-passages *f*, through which the air, passing around the edges of the disk-valve *G* when said valve is in its inner position, is permitted to flow into the rose. When said disk valve is in its outer position, it closes the air-inlet passage.

The operation is as follows: So long as the pressure from the pipes continues both the air-inlet and the water-outlet *A* are closed. When the pressure ends, the water-outlet valve *D* is raised by its spring, opening the said outlet, and simultaneously the air-inlet valve is forced inward by the atmospheric pressure, and the air passes around the said valve to and through the lateral passages *f*, thence through the inner end of the tube or valve-seat *F* into the hollow rose, where it acts on the water to neutralize the atmospheric pressure from below and permit it to flow off easily and completely.

A rose-shower constructed as above described will easily be kept in condition for use and without injury by corrosion. The air-inlet disk valve must not fit its cylindrical casing so tightly as to prevent the passage of air around it when forced back from the closed outer end of said tube seat or casing.

The detachability of the two parts of the rose-body permits the main lower part *B* to be used unchanged with water-pipes of different sizes, since the upper part *B* may easily be unscrewed and another one substituted which will fit said lower part equally well, but will have its upper screw-threads *b* adapted to a pipe of greater or less diameter.

The screw-threaded attachment of the part *f* to the part *f* of the air-valve casing permits the latter, it being external to the rose, to be conveniently removed at any time for cleansing the small holes and inspecting the valve and valve-seat.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A rose-nozzle having an outlet in its bottom, in combination with a casing surrounding the outlet within the said nozzle and having side openings on a level with the bottom plate, a valve within the said casing arranged to receive the pressure of the water and operating to close the said openings when depressed, and a spring arranged to lift the said valve and uncover the said openings when the pressure ceases, the said valve and casing being wholly within the body of the rose-nozzle and operating to drain the interior thereof down to the bottom plate substantially as set forth.

2. A rose-nozzle having an outlet in its bottom, in combination with an automatic air-inlet valve, a valve for the said outlet, a casing surrounding the said outlet and having side openings on a level with the bottom plate and a spring arranged to lift the said valve and uncover the said openings when the pressure of the water ceases substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

WM. BOEKEL.  
JULIUS BOEKEL.

Witnesses:

WM. HAAR,  
CARL F. LAUBER.