(No Model.)

D. GROVE.

PORTABLE SHOWER BATH.

No. 426,798. Patented Apr. 29, 1890.

FIG: 1.

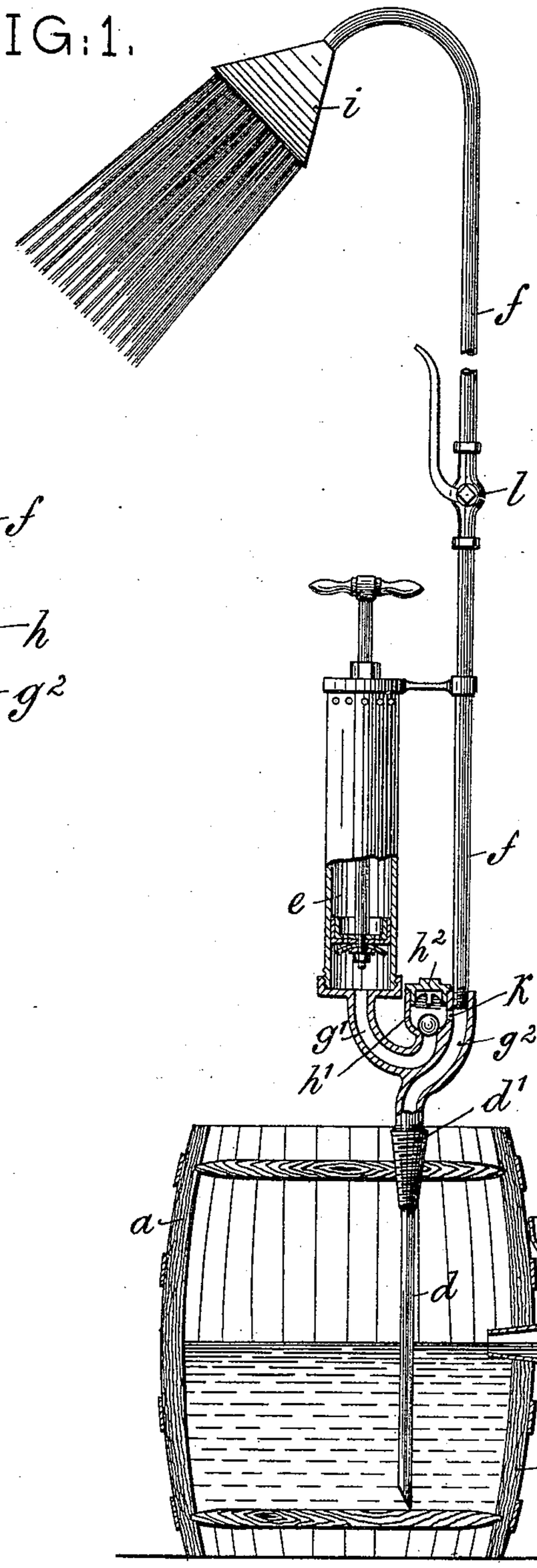


FIG: 2.

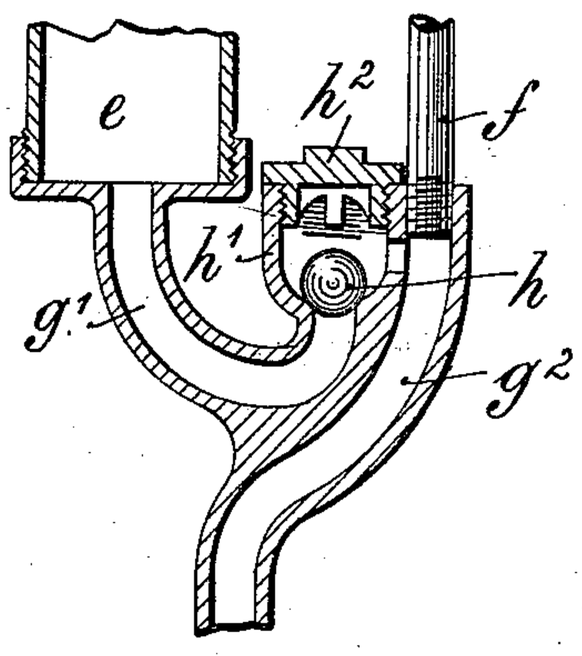
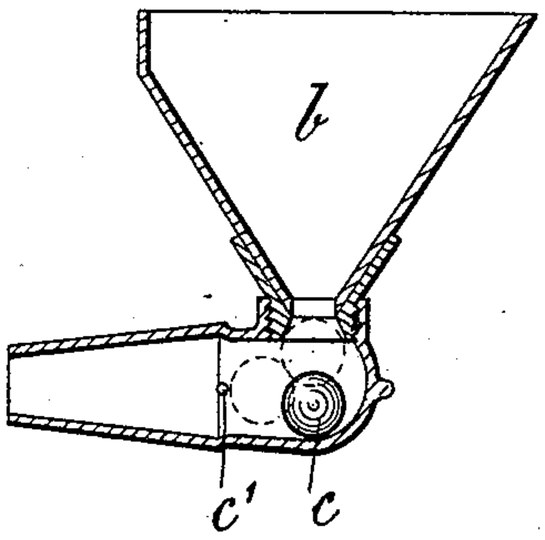


FIG: 3.



Witnesses:
Adelbert
E. L. Richards

Inventor:
David Grove.
By Richards & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

DAVID GROVE, OF BERLIN, GERMANY.

PORTABLE SHOWER-BATH.

SPECIFICATION forming part of Letters Patent No. 426,798, dated April 29, 1890.

Application filed June 4, 1889. Renewed March 10, 1890. Serial No. 343,360. (No model.)

To all whom it may concern:

Be it known that I, DAVID GROVE, of the city of Berlin, Germany, have invented a certain new and useful Portable Shower-Bath, of which the following is a specification.

My invention relates to the construction of a portable shower-bath which is characterized by the simplicity and cheapness of its construction, the readiness with which the said apparatus can be operated, and the small space required for storing the same, so that my improved portable shower-bath is most admirably adapted for general use for families, public, military, factory, and other baths where only a comparatively small space is available, and where simplicity of construction is necessary in order to prevent expense of erection and maintenance.

The apparatus can be readily placed in any ordinary room, and can be set in operation by the person desiring to bathe.

In the accompanying drawings, Figure 1 represents my improved portable shower-bath, partly in section and partly in elevation. Figs. 2 and 3 represent detail views of the same.

a is a water-reservoir, consisting, preferably, of an ordinary beer or other barrel, into the bung-hole of which a funnel-like filling device *b*, with ball-valve *c*, is driven or screwed, and by means of which cold or warm water can be filled into the barrel up to the bung-hole, when the water in the barrel will force the ball-valve *c* outward, thus producing an air-tight closure of the barrel, and thus preventing air and water from escaping from the same at this point. A tube *d*, for feeding in the air and pressing the water to the rose *i*, is inserted in the tap-hole, and is provided with a threaded conical stuffing-box *d'*, so as to be air-tight. This conical stuffing-box is preferably cast of one piece with the casting containing the air and water ways g' g^2, the ball-valve *h*, and stopper h^2. The airway g' is connected to the air-pump *e*, and the water-way g^2 to the tube *f*, leading to the rose *i*. The ball-valve *h* is arranged to play in its casing *h'* between the two ways—*id est*, the air-way g' and water-way g^2—the valve-casing being closed by the screw-stopper h^2, and is in connection with the water-way g^2 by means of the boring *k*. The tube *f*, leading to the rose, is provided with an appropriate cock *l*, in order to enable the supply of water to the rose *i* to be turned on or off, as may be desired.

The operation of the apparatus is as follows: When the requisite quantity of warm or cold water has been filled into the reservoir *a* through the funnel *b*, the ball-valve *c*, which up to this time has been kept in contact with the stop pin or pins *c'*, is pressed onto its seat, so as to produce an air-tight closure. The air-pump *e* is now operated and the air sucked in by the same, driven through the airway g', the valve-casing *h'*, the opening or port *k*, the water-way g^2, and tube *d* into the reservoir *a*, when the piston is pressed down, so that the free space above the water in the reservoir *a* will gradually become filled with compressed air. As soon as the pressure of the air in this reservoir is sufficient the cock *l* may be turned on and the water in the reservoir will be compelled, by the pressure of air above the same, to ascend in the tube *d*, pass through the water-way g^2, through the tube *f*, up the rose *i*, and to issue from the same in the form of spray. Although the water sinks in the reservoir, the ball-valve *c* will not leave its seat, as the pressure of air in the valve is greater than that of the atmosphere. The valve *h* may also be kept pressed firmly against the seat until the water in the said reservoir is exhausted.

Instead of forming the ways g' g^2 in one casting, the same may be composed of tubes connected in suitable manner to the valve-casing and the outer parts of the apparatus.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, what I claim is—

A portable shower-bath having a water-reservoir *a*, a funnel *b*, an automatic ball-valve *c*, fitted thereto and adapted to supply a limited quantity of water to the reservoir, an air-feeding and water-pressure tube *d*, with a conical bushing *d'* inserted in said reservoir and connected by a guideway g^2 with tube *f* for

conducting water to the rose *i*, said tube *f* having a cock *l*, in combination with an air-pump *e*, and a casting *g*, comprising airways *g'* g^2, the ball-valve *h*, and a stopper h^2, all arranged and adapted to operate substantially as and for the purposes set forth in the foregoing specification and shown in the drawings.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

DAVID GROVE.

Witnesses:

ANTHONY STEFFEN,

FRED J. DOWNING.