

*Patented Mar. 15, 1870.*



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# United States Patent Office.

WILLIAM CURRAN, OF ST. LOUIS, MISSOURI.

Letters Patent No. 100,867, dated March 15, 1870.

## IMPROVEMENT IN DEPURATORS.

The Schedule referred to in these Letters Patent and making part of the same.

### To all whom it may concern:

Be it known that I, WILLIAM CURRAN, of St. Louis, in the county of St. Louis, and State of Missouri, have made certain new and useful Improvements in Depurators; and I do hereby declare the following to be a full and true description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

This invention relates to the vessels and apparatus used for medicinal purposes, in which the patient is partially enveloped, and from which the air is then partially exhausted; and the nature of this invention relates more especially to the manner of operating the water-supply to the interior of the depurator-vessel, and to the location and arrangement of pipes for bathing and ablution purposes.

To enable those herein skilled to make and use my said improved apparatus, I will now more fully describe the same, referring to the accompanying—

Figure 1 as a vertical sectional elevation; to

Figure 2 as a plan, with part of the lid removed;

Figures 3 and 4, as enlarged detail views of the lid-joint.

I construct my said apparatus, in its main body and lid, usually of zinc, copper, or similar metal, forming the body A with a suitable floor, upon which stools, heating-vessels, and other things may rest.

To said body A, I join the lid B, similarly formed, and connected by the hinges C.

When the lid is rested upon the body in proper connection, the flanches *a* and *b*, upon the body and lid, respectively, are in direct pressure upon each other, the pressure being increased and regulated by the hinged screw-clamps D.

In the lid B is a head-orifice, having a projecting flange, B'.

About this a proper hood, E, is spread, the hood being gathered and secured to an air-tight joint, under the upper bead of the said flange, by a cord or rubber band.

The patient sits within the vessel A B, usually upon a proper stool, his head projecting through the head-opening, and enveloping all excepting the face by the hood E. This hood, which is usually of rubber, comes well forward upon the forehead, and closes under the chin; thus, when the air is partially exhausting within, giving the tightening pressure of the exterior air upon the top of the skull principally.

The air is partially exhausted by a proper air-pump attaching to the pipe F, this entering the vessel A.

In order to form an air-tight joint between the body A and lid B, I have arranged a rubber or other elastic band G, which is sprung about the vertical or nearly vertical outer edge of the flange *a*, and lies flat upon the upper surface of said flange, as more plainly shown in fig. 4.

The flange *b* of the lid is pressed down upon this rubber band by the screw-clamps D to a tight fit.

In case the vessel is very large, and there are inequalities in the flange surfaces *a* and *b*, then I deem

it preferable to use, in connection with the band G, the rubber or other elastic tubing G', secured to said band by rubber, cement, or by any other means. The tubing G' then offers a large surface for compression, and in flattening-fills to a close joint the inequalities of surface otherwise likely to occur.

In the treatment by the vacuum process, the capillary pores are opened, and the skin breathes out its impurities freely. In order to make the cleansing operation thus produced more efficacious, I introduce a water-bath, in the manner following:

To the vessel A, I connect the pipes H and H'—one for hot, the other for cold water—joining by the pipe I with said vessel A. To regulate the admixture of hot and cold water, said pipes H and H' have proper cocks. Within the vessel A said pipe I connects with a hose, K, which has a proper nozzle and stop-cock, controlled by the patient, who is thus enabled to direct and regulate the stream upon his body.

In order to cause the bath to reach the spine, and thus apply to the part where said application is most effective and beneficial in nervous disorders, I arrange the vertical pipe L at the rear part of said vessel A, and within it. Said pipe has perforations at proper height, so that the jets of water will reach the spine of the patient.

It is evident that the water or other fluid thus introduced may be medicated, to obtain medicinal virtue and effect, and that, as it enters the inner chamber, owing to the decreased pressure therein, a large volume of fluid is vaporized, and thus a vapor bath of great power is achieved; and, moreover, the application of such a bath, at the time when the pores of the body are opened by the vacuum, is opportune to produce beneficial effects of a high virtue, and this not only because the fluid acts to cleanse the skin itself, in lavatory action, but also because the fluid absorbs the gases and vapors exhaled by the body.

In the bottom of the vessel A there is waste-pipe M, to discharge the water when proper.

When it is advisable, I use a hot-air bath, by using heating-lamps or similar devices within the vessel A B, the needed supply of air being then admitted by the valve N, on the outside of the vessel A.

A proper orifice may be made at the hood E, or the hood may be entirely removed, to give the required draught to the lamp-flame.

Various medicines may thus be vaporized, at the discretion of the physician or other operator.

Having thus fully described my said invention,

What I claim is—

1. So arranging the water or fluid-pipe or pipes as to be controlled by the patient within the apparatus, substantially as set forth.

2. The vertical pipe L, arranged with perforations so placed as to give jets of fluid against the spine region of the patient, substantially as set forth.

Witnesses:

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