O. Stone,

Vapor Bath.

No. 50,641. Patented Oct. 24, 1865.

Fig: 1.

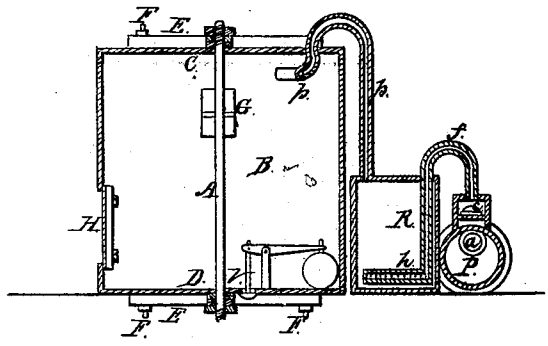
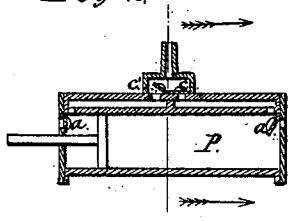


Fig: 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

OTHNIEL STONE, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN TREATING DISEASES BY CONDENSED AIR.

Specification forming part of Letters Patent No. **50,641**, dated October 24, 1865.

To all whom it may concern:

Be it known that I, OTHNIEL STONE, of Rochester in the county of Monroe and State of New York, have invented a new and useful Condensed Atmospheric Bath; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical section of my invention, showing the construction of the internal parts and the relative arrangement of the parts. Fig. 2 is a longitudinal section of the air-pump P.

Similar letters of reference indicate corresponding parts in both figures.

The nature of this invention consists in the employment of a condensed atmospheric bath for the treatment of diseases; and it is applied or worked by means of a large iron tank, into which the patients are placed, and a double-acting air-pump, and a purifier, through which the air is forced before entering the bath.

To enable others to make and use my invention, I will describe its construction and operation.

The bath-chamber B should be made of heavy boiler-iron, so as to sustain a pressure of two or three atmospheres. It may be made of any desired size and from six to seven feet high.

The top and bottom plates, C and D, if made flat, as shown in the drawings, may be strengthened by cross-beams E and rods F and a heavy central rod or bolt, A; or the heads C and D may be made spherical, which would avoid the necessity of such supports.

The windows G are composed of very heavy plate-glass, and there may be a sufficient number to admit a proper amount of light.

The door H is hung inside, and is made to close air-tight by means of a band of rubber or other suitable packing.

The end of the pipe *p* should be turned so as to discharge nearly or quite horizontally and tangentially toward the wall of the chamber. This produces a rotary current tending downward and thereby a thorough and perfect circulation of the inflowing current.

The safety-valve V, which is placed in the bottom or floor, may be regulated by a weighted beam, as shown in the drawings, in the ordinary way, or by means of a spring.

The pressure must always be raised sufficiently to overcome the valve, and as the vitiated air always settles to the floor it is only such that escapes, thereby securing a constant change of the air in the bath-chamber.

The purifier R is also made of boiler-iron three or four feet high and one and one-half to three feet diameter. This is supplied with a few pounds of carbonate of lime, sulphate of lime, or any other chemical having similar absorbent properties in solution, the water filling about one-fourth of the purifier.

The pipe *f*, leading from the air-pump, should reach nearly to the bottom of the purifier and extend horizontally to the opposite side, as seen in Fig. 1. The arm *h* of the pipe, the outer end of which is closed, is provided with two rows of perforations opening diagonally toward the bottom of the purifier, one row opening each way. The condensed air entering through these openings causes a constant and perfect agitation of the fluid.

I prefer a double-acting air-pump as a matter of economy, especially in regard to time in filling the bath. The one I have is very similar to an ordinary steam-cylinder, but having an inlet air-valve in each head (marked *a*) and the escape-valves *c*, as shown, instead of the ordinary slide-valve used in the steam-chest.

If desirable, and it would doubtless be more practical, the ordinary puppet-valve may be substituted for these valves.

The pump may be worked by a steam-engine or other suitable power.

The patients to be treated enter the bath-chamber B through the door H, where they may stand or sit or lie down, as the chamber may be furnished with chairs, a table, a couch, or other conveniences, so that the time may be spent by the patients while occupying the bath either asleep, reading, or writing, &c., or at some kind of work, or in conversation if two or more are receiving treatment at the same time.

The patients may occupy the bath from one to six hours, or even more, at a time, and several times a day.

The density of the air in the bath should generally be about two atmospheres, though some patients may require more and others less. This is regulated by changing the ball on the lever of the valve V.

There may be an ordinary plug-cock provided

in the top of chamber P to pour the water through into it, and a cock at the bottom to draw it off, as it is necessary to renew the solution once or twice a week.

By means of the condensed air entering the purifier P through the perforated arm *h* the water and whatever may be in solution with it is kept in a perfect state of agitation or spray constantly, and the air passing through it while in that condition is perfectly purified.

The pipes *p* and *f* may be attached to the parts by means of flanges and bolts in the ordinary way of connecting such pipes.

It will be seen that this treatment operates through the lungs directly upon the blood, cleansing and purifying it, and is intended to be applied in the treatment of almost every sort or kind of disease that human flesh is heir to. The impurities thrown off from the system of the patients by the exhalations of course settle to the floor; hence the object of placing the safety or escape valve V in the bottom of the chamber instead of at any other point. This prevents the possibility of the air in the bath from becoming fetid or impure during any length of time the patients may remain in it.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The employment or use of a condensed atmospheric bath for the purpose of curing or treating diseases, as set forth.

2. The purifier R, constructed, arranged, and operating in combination with the bath, substantially in the manner shown and for the purposes specified.

3. The employment or use of a variable escape-valve in combination with the condensed atmospheric bath chamber, substantially as, and for the purposes set forth.

4. The arrangement of the escape-valve V in or near the bottom of the bath-chamber, as shown, and for the purposes herein described.

OTHNIEL STONE.

Witnesses:

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