

S. VAN ETTEN.

Improvement in Apparatus for Applying Medicines to the Ear.

No. 127,123.

Patented May 21, 1872.

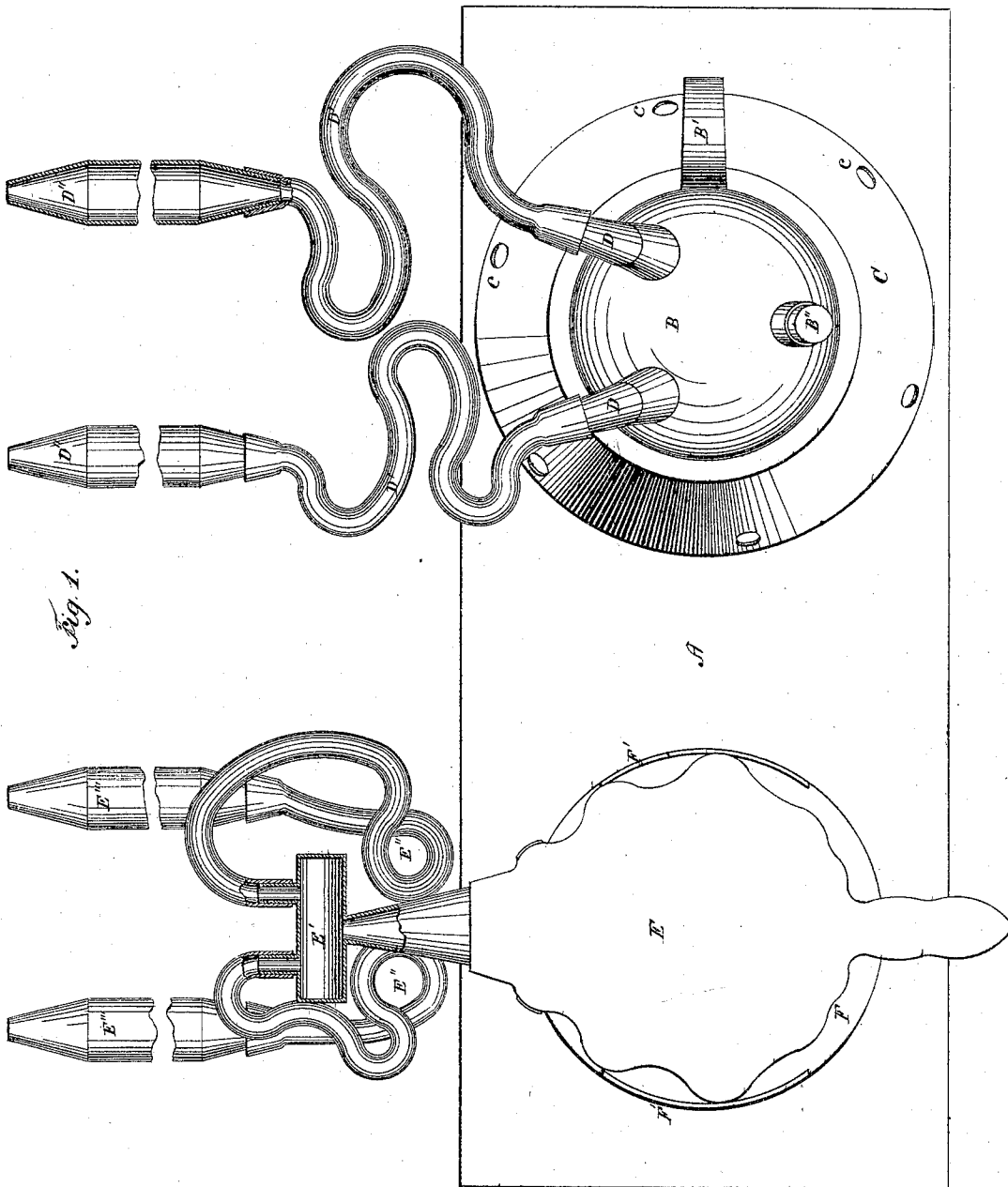


Fig. 1.

Witnesses.
W. B. Cudlipp
H. H. Shrockmorton.

Inventor.
Simon Van Etten,
By Wells W. Leggett,
Attorney.

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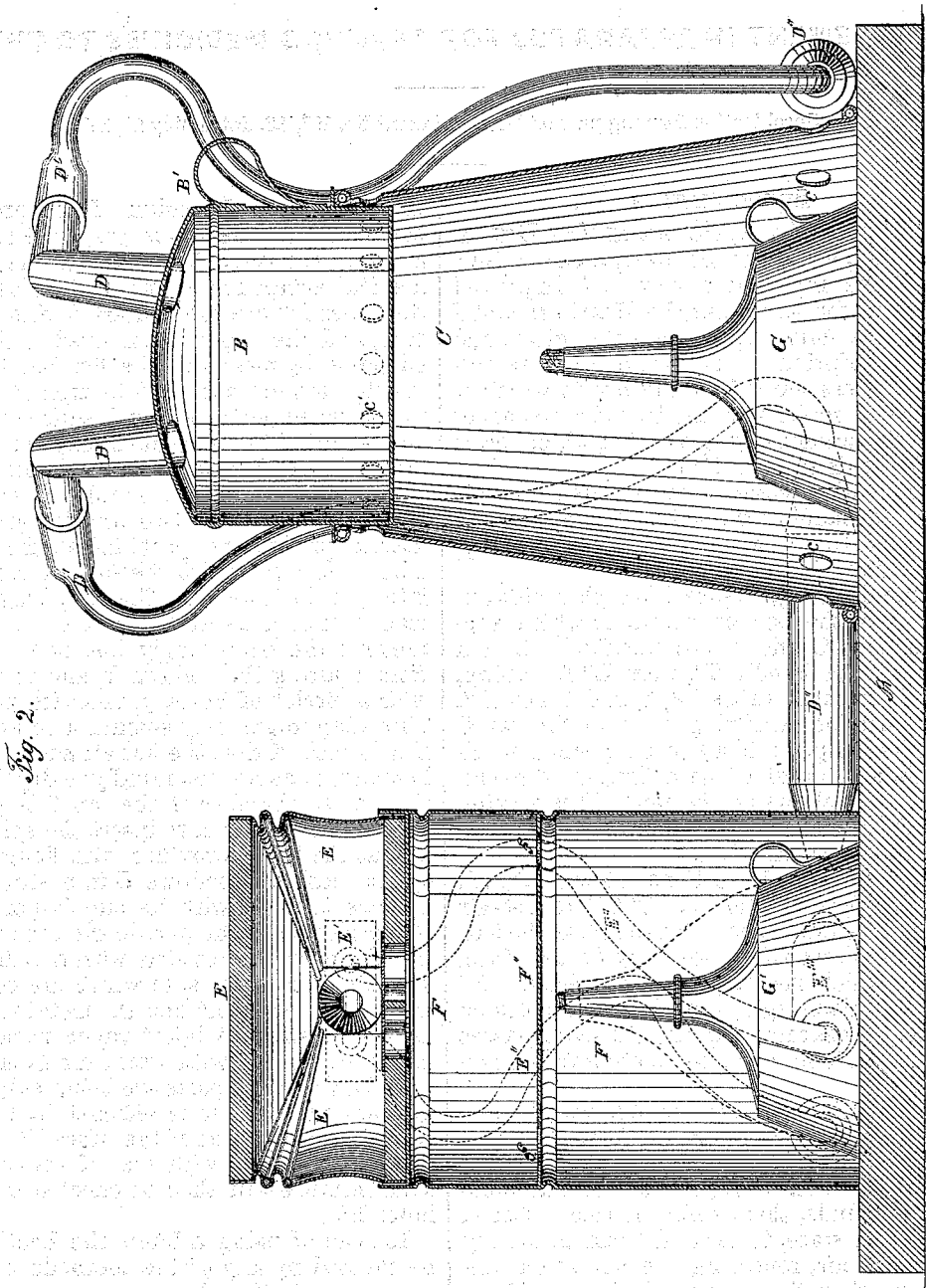


Fig. 2.

Witnesses:

W. A. Cuddeph

H. H. Shuckmorton.

Inventor

Simon Van Etten

By M. W. Leggett.

UNITED STATES PATENT OFFICE.

SIMON VAN ETEN, OF CORNING, NEW YORK.

IMPROVEMENT IN APPARATUS FOR APPLYING MEDICINES TO THE EAR.

Specification forming part of Letters Patent No. 127,123, dated May 21, 1872.

SPECIFICATION.

Be it known that I, Dr. SIMON VAN ETEN, of Corning, county of Steuben, State of New York, have invented a new and Improved Apparatus for Restoring the Hearing; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing which forms a part of this specification.

My invention relates to apparatus for sweating and expanding the affected parts successively until they assume their natural, healthy, and sensitive proportions.

In the drawing, Figure 1 is a plan view, in which A is the bed or board, to which supporting-cans C and F are attached. B is a receiver, with handle B', port B'' for filling, tubes D, flexible tubes D', metal tubes D''. c are holes for admitting air into the can C to feed a lamp. F is a can supporting a bellows, E, and provided with flanges F' for retaining the bellows on the can. E' is a cylindrical distributor. E'' are flexible tubes; E''', metal tubes, or ear-tubes.

Fig. 2, Sheet 2, is sectional view of Fig. 1, Sheet 1. G G' are lamps. C' C' are hot-air and smoke-efflux holes. The can F, at the left, has a hole in its side, shown by dotted lines, through which the lamp can be inserted. F'' is a metal diaphragm, provided with holes on a circle, f f, near its periphery. Hot air passes through the hole in the top plate into the bellows E.

My invention consists as follows: I have found that by softening the typanum and other contiguous parts of the ear-drum with steam from water or vapor from certain medical compounds, then, while in this softened and pliable state, to expand them gradually with warm air, repeating the operation successively, that the hearing is largely if not entirely restored, in cases that have theretofore been regarded as beyond hope of restoration. I therefore form a can of tin or other material, C, into which I insert a spirit-lamp, G. This can is provided at bottom and top with holes c c' for influx of oxygen to feed

the flame, and for efflux of the products of combustion. The top is prepared to receive a closed receiver, B, into which the water or medical compound is inserted. The ends of the tubes D'' are then inserted closely in the ears, and the vapor is conveyed to the affected parts by means of the flexible tubes D'. If cold air were now used to expand the parts the softened portions would suffer congestion on account of the consequent exposure; therefore, to furnish a warm air for this purpose I provide as follows: I take a can, F, of metal, divided into two apartments by the diaphragm F'', and provided at the top with a hole through which the hot air can escape into the bellows E. The diaphragm F'' is made continuous about its center, so as to prevent the exceedingly hot point of flame from injuring the bellows E, and is provided with a circle of holes, f, near its periphery. This diaphragm may sustain a cup of water, if it is desired that the hot air shall be slightly moist, so as not too rapidly to dry the parts. The lower chamber of the can F is provided with a hole in which to insert the spirit-lamp, and at the top is provided with flanges F' F', which retain the bellows E in position. This bellows is made with its supply-port on the under side, over the port in the top of the can F. Its nose is provided with a cylinder, E', which has two ports, to which are connected the flexible tubes E'' and the metal tubes E'''. If it is desired to inject vapor from the receiver B, diluted with warm air from the bellows E, while the parts are being subjected to gradual pressure, it is effected by taking off from the bellows one of the tubes E'', and connecting this port with one of the tubes D'. This mixture will then be effected in the cylinder E'.

Instead of using a lamp, the heating may be effected by any of the methods known in the arts, and all of the parts may be varied, as regards shape and material, as may be suggested by the use to which the machine is put. Neither is the apparatus confined in its use to the ears alone, but may be used with the nose in treating catarrh, &c.; and the ear may be treated from the inside through the nostrils.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The apparatus for restoring the hearing, herein described, composed of can C, receiver B', flexible tubes D', metallic tubes D'', and lamp G, in connection with the can F, bellows E, distributing-cylinder E', flexible tubes E'',

metallic tubes E''', and lamp G', when the parts are all constructed, arranged, and operate substantially as set forth and shown.

SIMON VAN ETTEN.

Witnesses:

WELLS W. LEGGETT,

EDM. F. BROWN.