No. 669,087. Patented Mar. 5, 1901.

J. C. HOYT.

DEVICE FOR APPLYING HOT AIR TO PARTS OF THE BODY.

(Application filed May 25, 1900.)

(No Model.)

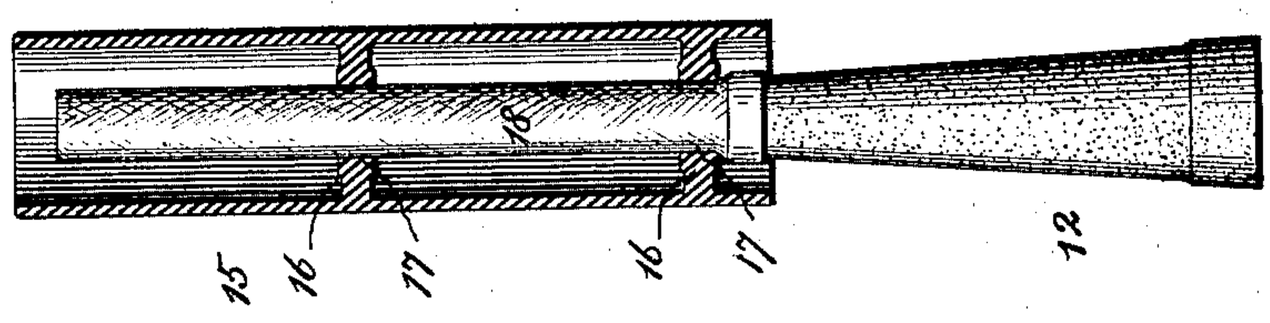

Fig. 2.

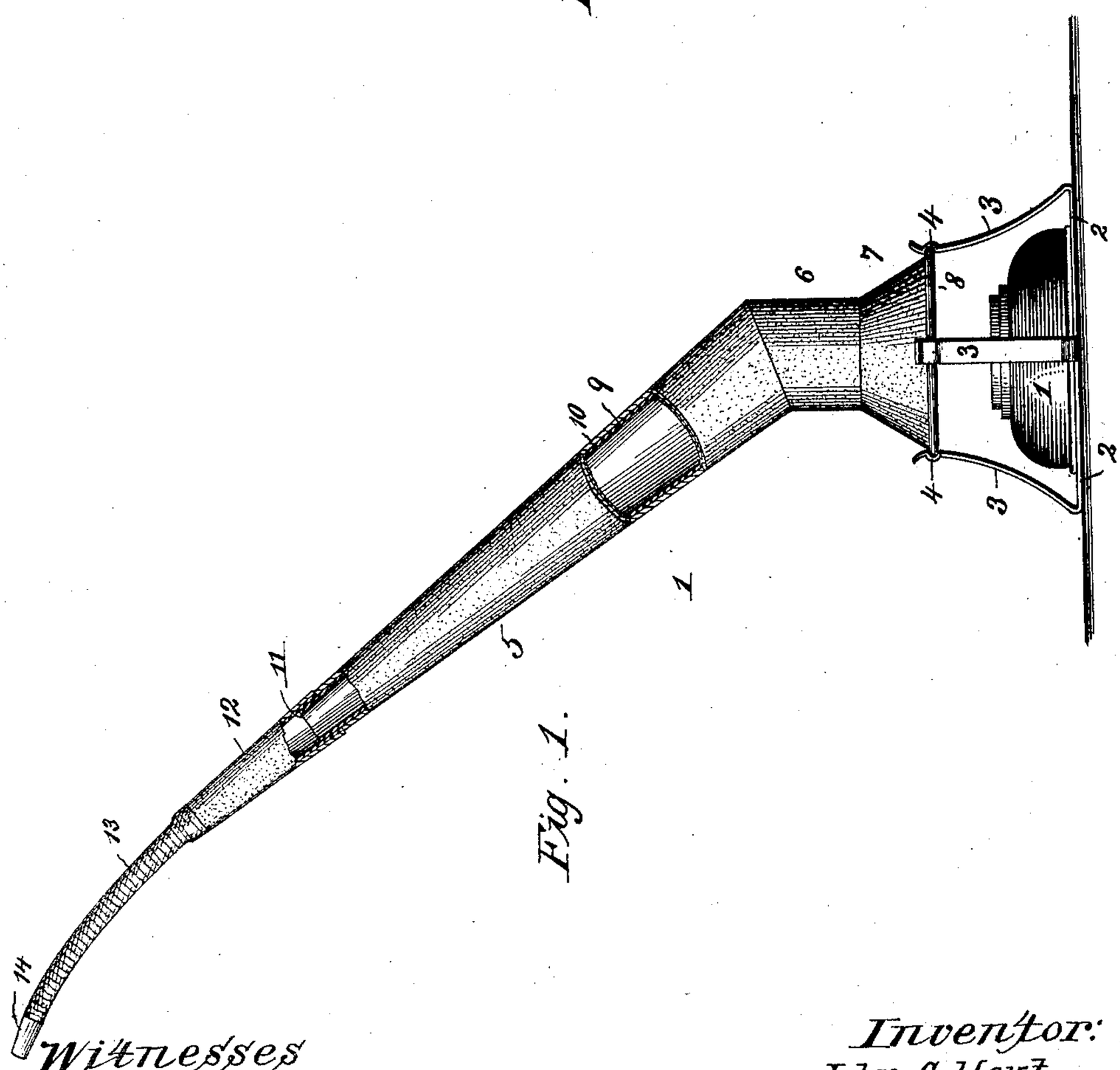

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

JOHN CLINTON HOYT, OF RICHMOND, MISSOURI.

DEVICE FOR APPLYING HOT AIR TO PARTS OF THE BODY.

SPECIFICATION forming part of Letters Patent No. 669,087, dated March 5, 1901.

Application filed May 25, 1900. Serial No. 17,937. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLINTON HOYT, a citizen of the United States, residing at Richmond, Ray county, Missouri, have invented a new and useful Device for Applying Hot Air to Parts of the Body, of which the following is a specification.

My invention relates to devices for making local applications of hot air to external or internal parts of the body; and my object is to provide a device of this character which is efficient in operation, is of light weight for convenience of handling, and possesses the desirable features of simplicity and cheapness of construction.

The invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 represents a side elevation, partly in section, of a device embodying my invention. Fig. 2 is a vertical longitudinal section, enlarged, of the nozzle of the device and the large protecting-tube, having a telescopic relation with the flexible tube of the nozzle.

Referring to the drawings, 1 designates a heating device, preferably a burner for alcohol because of the latter being chemically pure and adapted for inhalation purposes. Said burner is preferably mounted on a base comprising a series of radiating arms 2, terminating in upwardly and inwardly projecting spring arms or catches 3, bent to form grooves 4 near their upper ends.

The flue of the heating device is of substantially conical form, and while it may be perfectly straight I prefer that it shall extend generally at an angle of thirty-five degrees from the vertical, (indicated by reference-numeral 5,) with its lower end bent to form a vertically-depending portion 6, terminating in a flaring or bell mouth 7, stiffened, by preference, at its lower edge by a bead 8, this bead being adapted to engage the grooves of spring-arms 3, which latter thus serve to support the flue in substantially the position shown. This flue, with its large open mouth and contracted upper discharge end, is constructed, preferably, of tin or other sheet metal, as at 9, provided with a covering of asbestos, as at 10, or other material which is a non-conductor of heat, and serves not only to confine the volume of heat and insure its passage up through the flue, but also permits the operator to handle the device without danger of being burned. The upper end of the flue projects a short distance beyond the upper end of the asbestos covering, as at 11, and fitting thereon is a removable nozzle 12; of the same construction as the flue, said removable nozzle terminating in a flexible tube 13, which may for some purposes be provided with an antiseptic tip 14, as hereinafter referred to.

In practice to accompany each flue there may be a plurality of nozzles 12 of varying diameter at their contracted ends and carrying flexible tubes 13 of different diameters also, the larger tubes to be for the purpose of spraying hot air against an external part of the body—against a knee, for instance, to drive out a rheumatic pain or against one's face to drive out pain or start the perspiration, purifying the complexion by sweating out the impurities. Another size will be used, preferably, for insertion in the mouth for lung treatment, another for inhalation through the nose or for internal application of hot air through the ear, and another for treatment of an internal part of the body, such as an abscess, in which case it may be preferable to provide the flexible tube employed with an antiseptic tip, as hereinbefore stated. For large cavities, where a high degree of heat may be needed, I provide an outer tube 15 to eliminate chance of burning the walls of the cavity. This tube, constructed, preferably, of vulcanized rubber, is formed with cross-pieces 16, having central bearing-holes 17, in which a flexible tube 18 telescopically fits, so that the patient sitting upon a chair, if desired, and after the protecting-tube is inserted properly in the cavity can at first introduce the end of the flexible tube only a short way into the tube 15 and then as danger of being burned decreases gradually slide such flexible tube up through the bearing-holes into the protecting-tube and nearer the part being treated, the preferred manner of accomplishing this being by grasping the flue and moving the device as a whole nearer to

the operator. By this arrangement it will be seen that the protecting-tube not only protects the patient from being burned, but provides an annular space leading from the part treated to the external air through which the dead air, accompanied by the water or other impurities thrown off under the treatment, may escape.

While I have described and shown a particular type of alcohol-burner, it is to be understood that I do not restrict myself to any special type of burner nor to any means of supporting the flue 1 upon and over the burner.

The hot air passing from the burner up through the flue creates a suction which tends to the rapid and forceful passage of the hot air up through the flue, and this tendency toward rapid motion is increased as expansion takes place and as the heat becomes more intense; also, by the tapering form and contracted upper or discharge end of the flue, which serves to concentrate and therefore expel the hot air with greater force than would otherwise take place.

From the above description it will be apparent that I have produced a device of the character described which embodies the features of advantage enumerated as desirable in the statement of invention, and while I have illustrated and described the preferred embodiment of the invention I wish it to be understood that various changes in the form, proportion, and detail construction of the parts may be made without departing from the spirit and scope or sacrificing any of the advantages of the invention.

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

1. A device of the character described, consisting of a sheet-metal tube of conical form with its lower or receiving end of large diameter and its discharge or upper end of relatively small diameter, an asbestos covering for said tube, and a nozzle for said tube, consisting of a sheet-metal portion, an asbestos covering therefor, and a flexible portion, substantially as described.

2. A device of the character described, comprising a heating device, a conical flue arranged above the heating device and having a large lower end or mouth, and a contracted upper end or nozzle, and a protecting-tube surrounding and fitting telescopically upon the discharge end or nozzle, said protecting-tube being of considerably larger diameter than said nozzle and providing a conduit or escape-passage for dead air, water and impurities thrown off by the body, substantially as described.

3. A device of the character described, comprising a heating device, a conical flue supported above the same, and provided with a large lower end or mouth and a removable upper end or nozzle, having a flexible-tube terminal, and a protecting-tube provided with cross-pieces having openings fitting slidingly upon the flexible tube, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

JOHN CLINTON HOYT.

Witnesses:
H. C. RODGERS,
G. Y. THORPE.