No. 758,719. PATENTED MAY 3, 1904.

J. W. SWINDELL.

INHALER AND RESPIRATOR.

APPLICATION FILED FEB. 28, 1903.

NO MODEL.

Fig. 3.

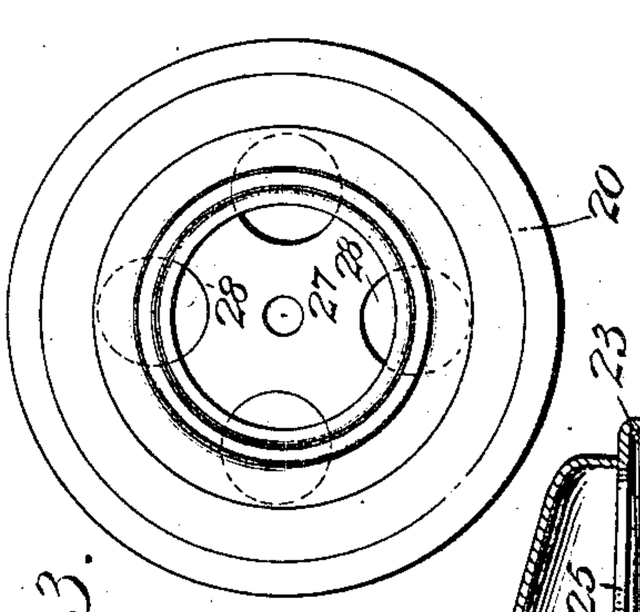

Fig. 2.

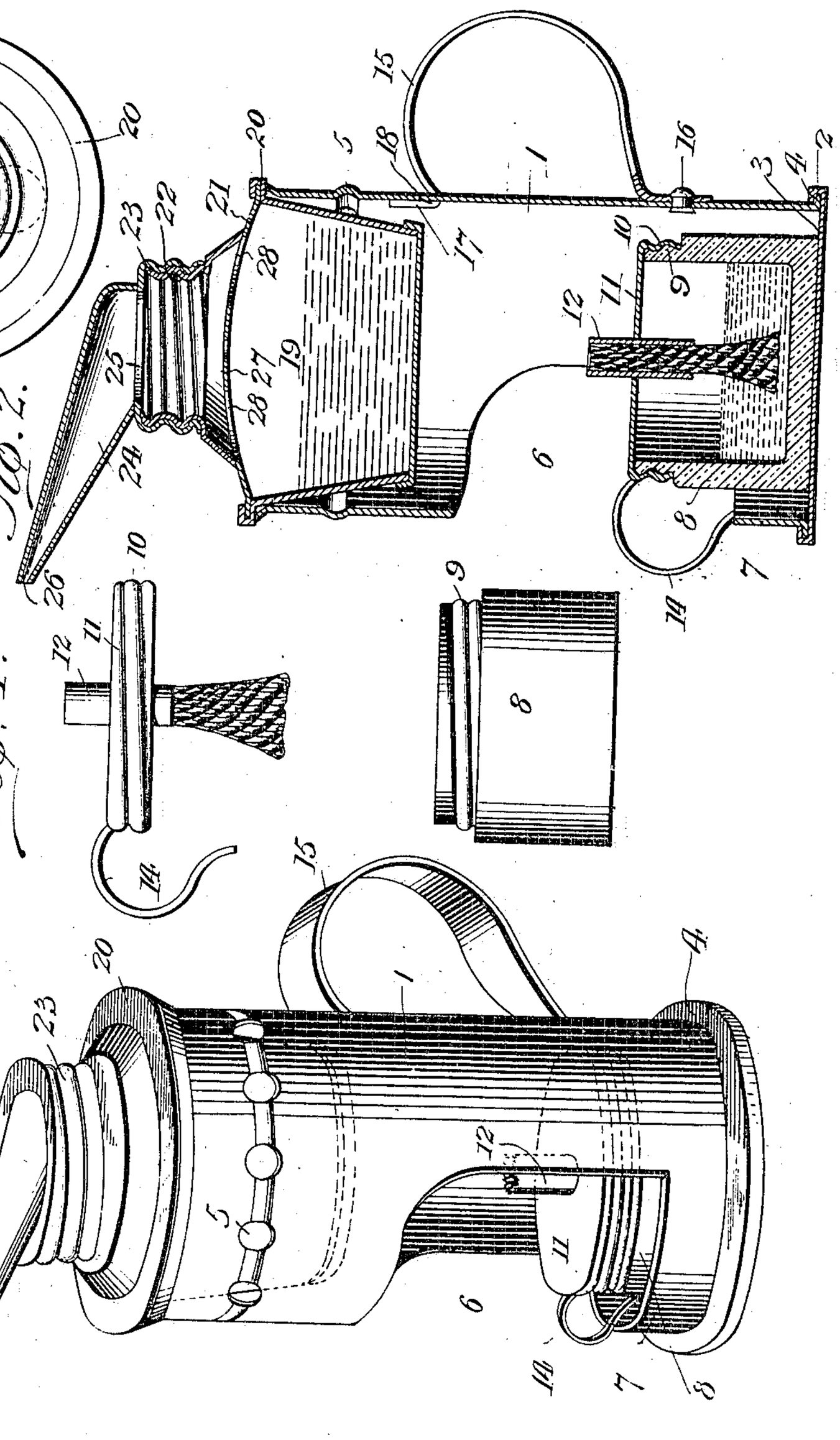

Fig. 4.

Fig. 1.

Witnesses
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No. 758,719. Patented May 3, 1904.

UNITED STATES PATENT OFFICE.

JOHN W. SWINDELL, OF GREENVILLE, TEXAS.

INHALER AND RESPIRATOR.

SPECIFICATION forming part of Letters Patent No. 758,719, dated May 3, 1904.

Application filed February 28, 1903. Serial No. 145,599. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. SWINDELL, a citizen of the United States, residing at Greenville, in the county of Hunt and State of Texas, have invented a new and useful Inhaler, of which the following is a specification.

This invention relates to that class of devices which are principally used for the purpose of vaporizing and medicating liquids for inhaling, disinfecting, and other purposes; and it has for its object to provide an inhaling or atomizing device which shall be simple in construction, durable, and effective in operation. Devices of this class as heretofore constructed have usually been more or less complicated and difficult to handle properly. They have also been more or less liable to get out of order. By my present invention I aim to produce a device which shall not only be inexpensive, but which shall be so simple and compact as to be capable of being successfully manipulated by any unskilled person.

With these and other ends in view my invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a device constructed in accordance with the principles of my invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a top plan view of the generating vessel with the cover removed. Fig. 4 is a side elevation of the lamp, showing also the cover detached from the same.

Corresponding parts in the several figures are indicated by similar numerals of reference.

1 designates a cylindrical stand provided at its lower edge with an outturned flange 2 to receive the bottom 3, which is provided at its peripheral edge with a flange 4, clenched over the bottom flange 2. The stand 1 is provided near its upper end with a circumferential series of perforations 5, and it has in its front side an opening 6, disposed, preferably, at a distance of from one-half to one inch above the bottom, so that a rim 7 shall be left below said opening 6. The latter is for the admission of the lamp, which consists of a vessel 8, of glass or other suitable material, screw-threaded at its upper edge, as shown at 9, to be engaged by the correspondingly screw-threaded flange 10 of the cover 11, which is provided with a wick-tube 12. A handle 14 is permanently attached to the cover, which is preferably made of metal, from which it may be stamped at small expense, the vessel 8, constituting the body of the lamp, being preferably made without any protuberance.

A handle 15 is attached to the cylindrical stand 1, preferably by means of a rivet 16 at the lower end of said handle, the upper end of which is provided with lips 17, engaging perforations 18, formed in the cylinder-wall for the admission of said lips 17, which may be then bent to prevent the withdrawal thereof and the consequent disengagement of the handle. This construction is simple and much preferable to soldering, which would be apt to become loosened by the heat emitted from the lamp.

The generator consists of a vessel 19, made tapering from its upper to its lower edge and provided at its upper edge with a flange 20, adapted to rest upon the upper edge of the cylinder 1. The vessel 19 is preferably made of copper or other refractory metal which will not be injured in the event of its boiling dry, and it has a bulging top piece 21, provided with a central screw-threaded neck or flange 22 of comparatively large diameter to receive a correspondingly screw-threaded cover 23, which is provided with a nozzle 24. This nozzle is cut off obliquely at its inner end, so as to form an opening elongated at the point of attachment thereof to the cover, which latter is provided with an opening 25, corresponding with the large elongated opening in the nozzle. The latter is tapered, as shown, to a fine discharge point or opening 26.

Within the vessel 19, or more properly within the bulging portion 21 of said vessel, is disposed a diaphragm 27, having a plurality of openings 28. By removing the cover 23 a wad of medicated cotton or other bibulous substance, such as a sponge, may be placed upon the diaphragm, the vessel below said

diaphragm being partially filled with water or other liquid which it may be desired to vaporize.

The operation of my invention will be readily understood. After placing the liquid and medicament in the generator the lamp, in which alcohol is preferably used as fuel, is placed in position and the wick ignited, thus speedily converting the liquid contents of the generator into steam, which rising through the diaphragm becomes impregnated by the substance placed above said diaphragm and is forcibly emitted through the small discharge-opening of the nozzle.

Inhalers of the class to which my invention belongs are usually furnished with a nozzle having a mouthpiece from which the medicated vapor must be directly inhaled by the patient. This is apt to cause irritation of the lungs and the mucous membrane of the respiratory organs. By my improvement the device is held at a distance of, say, from six to twelve inches from the mouth of the patient, toward which the steam will be directed in a forcible jet which insures its proper inhalation, but which at the same time admits of the taking into the lungs of large quantities of oxygen, whereby the detrimental and irritating effects are obviated.

My improved device is of extremely simple construction, and it may be produced at a trifling expense. The rim 7 will prevent the lamp from being dropped out or displaced when the device is moved about during the operation thereof. The peculiar construction of the nozzle is of such a nature that the results referred to will be surely attained, the intake of said nozzle being of very large size, while its discharge-opening is comparatively extremely small, thus compelling steam to be ejected very forcibly. This compactness of construction is also extremely desirable, inasmuch as it greatly guards the device from accidental injury. Other advantages will be readily apparent to those skilled in the use of devices of this character.

I desire it to be understood that I do not limit myself to the exact structural details herein set forth, but reserve to myself the right to any changes and modifications which may be resorted to without departing from the spirit and scope of my invention or sacrificing the utility of the same.

Having thus described my invention, I claim—

1. In a device of the class described, a cylindrical stand having an outturned bottom flange, and a bottom piece having a peripheral flange clenched over said bottom flange, said cylindrical stand being provided with an opening at a distance from the bottom thereof, leaving a rim below said opening.

2. In a device of the class described, a generator comprising a vessel having a perforated diaphragm and a screw-threaded neck in combination with a screw-threaded cover having an elongated opening and a nozzle having an oblong opening or inlet corresponding with the elongated opening in the cover, with which it is securely connected, said nozzle being tapered to a fine discharge-opening.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN W. SWINDELL.

Witnesses:

J. J. PATTERSON,

G. THOMAS.