G. W. PHILLIPS.

DEVICE FOR THE ADMINISTRATION OF MEDICATED OXYGEN.

APPLICATION FILED OCT. 19, 1908.

1,009,929. Patented Nov. 28, 1911.

Fig. 1.

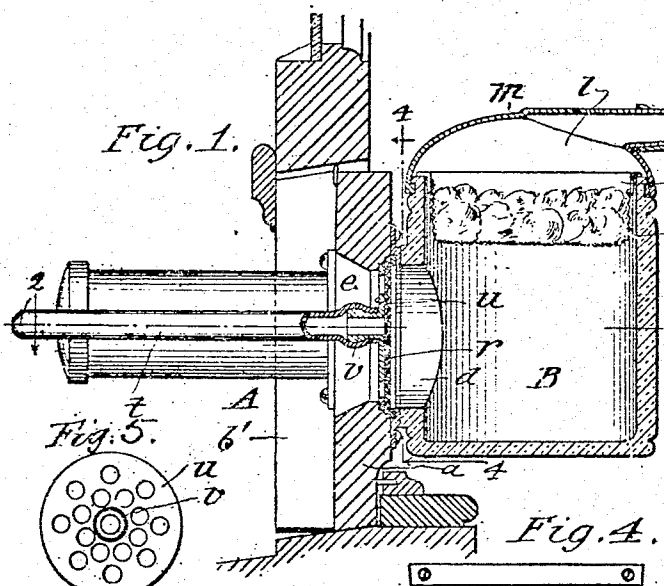

Fig. 3.

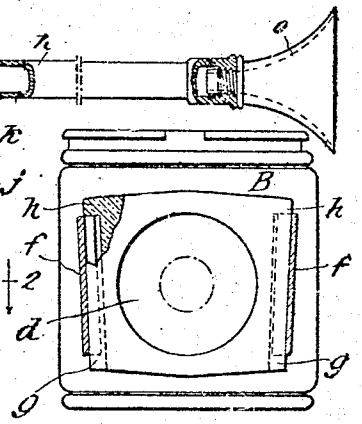

Fig. 5.

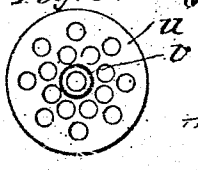

Fig. 4.

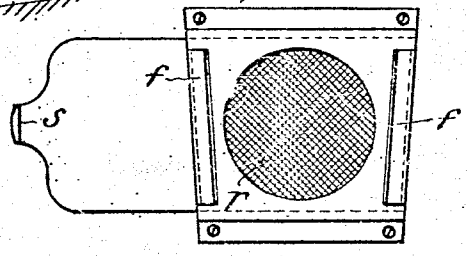

Fig. 2.

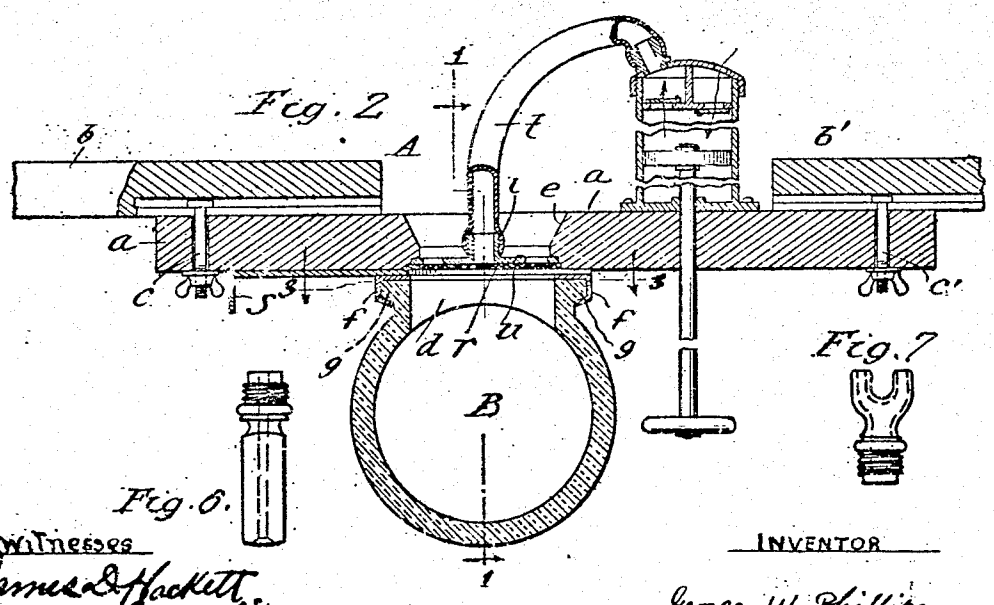

Fig. 7.

Fig. 6.

Witnesses

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DEVICE FOR THE ADMINISTRATION OF MEDICATED OXYGEN.

1,009,929. Specification of Letters Patent. Patented Nov. 28, 1911.

Application filed October 19, 1908. Serial No. 458,504.

To all whom it may concern:

Be it known that I, GEORGE W. PHILLIPS, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Devices for the Administration of Medicated Oxygen, of which the following is a specification.

This invention relates to devices for administering medicated oxygen and aims to provide certain improvements therein.

According to my invention I provide a device which is adapted to be connected with any window, and through which the outer air is led to the patient or other user. Preferably the air is passed through a medicament whereby it takes up or becomes charged with the latter, so that in the act of breathing the medication is drawn directly into the lungs of the patient.

A particular feature of improvement is that the device can be applied to the window without in any way marring or altering the latter, and can be freely removed and replaced when desired.

Means are provided for preventing the ingress of dust to the medication chamber so that the air received by the patient is free from foreign substances. Means are also provided for forcing the outside air into the apparatus by means of a pump or like device in those cases where the conditions are such that the natural flow of air is insufficient. Means also are provided for governing or controlling the flow.

Referring to the drawings which illustrate one embodiment of the invention,—Figure 1 is a vertical section of the complete apparatus shown in position at a window. Fig. 2 is a horizontal section taken approximately on the line 2—2 in Fig. 1. Fig. 3 is a section taken on the line 3—3 in Fig. 2, the receiver for holding the medicating substance being shown in front elevation. Fig. 4 is a section taken on the line 4—4 in Fig. 1 and showing a slide for controlling the flow of air. Fig. 5 is a plan of a disk or diaphragm adapted to connect the pump tube with the receiver. Figs. 6 and 7 are views of different forms of mouth and nose piece.

Referring to the drawings, let A indicate the mounting board of the device which as shown is made in three sections,—a central section *a* and end sections *b b'*. Each of the sections *b b'* is grooved and overlaps the section *a*. Bolts *c c'* are provided, the heads of which move in the grooves of the sections *b b'*, and the shanks of which extend through the section *a* and are there provided with suitable thumb nuts for binding the sections together.

When the device is to be used in connection with a window, the window sash is raised and the support A is adjusted beneath, the support being extended to such width that the ends of the sections *b b'* fit in the grooves of the sash guides, the sections being then rigidly connected by the bolts *c c'*.

In one of the sections, preferably the middle section *a* the receiver B is mounted. This receiver is provided at its front with an opening *d* which corresponds with an opening *e* made in the section *a*. Any suitable means for holding the receiver in place may be provided, preferably that shown which consists of metal guides *f f*, and designed to receive flanges *g g* formed upon the receiver. The latter is preferably made of glass, and in this case the flanges are molded integrally with the body of the receiver. Stops *h h* are preferably formed on the upper end of the flanges *g g'* so as to limit the downward movement of the receiver in its guides.

In the upper part of the receiver is mounted a wire or other basket *j* which is supported by a suitable metal ring *k* resting on the upper edge of the receiver. The basket *j* is designed to contain cotton or other absorbent material which can be impregnated with any suitable medicament which it is designed to convey to the throat or lungs of the patient. Above the basket *j* and connected to the top of the receiver is a cap or cover *l* which is formed with a spout *m* designed to be connected by a rubber or other tube *n* with a suitable mouth piece or nozzle *o* which is held near the mouth of the patient. The mouth piece preferably screws into the tube so that it is easily applied and removed.

As thus constructed, the device is of great practical value in the treatment of diseases of the throat, bronchial tubes and lungs, since it affords an abundant supply of fresh air to the patient uncontaminated by the air of the room, and if desired such air is medicated in such manner as may be indicated by the particular disease being treated. It is found in practice that no effort is required upon the part of the patient to draw

air through the apparatus; in fact there is a sufficient natural flow of air to supply that which is necessary to the patient. If the mouth piece *o* shown in Fig. 1 is held close to the patient's nose or mouth a sufficient supply of fresh air will be obtained without effort.

The invention, however, includes other improvements which will now be described. I prefer to introduce into the passage between the outer air and the receiver B a screen *r* (Figs. 1 and 2). For convenience this may be supported in any desirable way, but for simplicity I prefer to mount it in the opening of the section *a* as shown particularly in Fig. 2. This device may be of any suitable construction to reduce or cut off the flow, and preferably consists of a slide working in front of the guides *f* which hold the receiver B.

In some cases where the tube *n* is particularly long, or under other conditions, it is desirable to force the air into the receptacle from the outside. My invention includes any suitable means for accomplishing this result, that shown consisting of a pump located on the middle section *a* of the mounting device, such pump being provided with a handle which extends inwardly through the section *a*. The pump is of usual construction having suitable inlet and outlet valves, and is provided with a connecting tube *t* which leads from the outlet side of the pump to the air passage *e*. It may be held in such passage in any convenient manner, preferably by the use of a disk *u* which has at its middle a nipple *v* to which the tube is attached. The nipple *v* is provided with a passage leading toward the interior of the receiver B, and the disk *u* is formed with a series of passages surrounding the nipple. As the pump is operated a stream of air is forced into the receiver which by induction carries in with it quantities of the outer air through the passages in the disk.

If it is desired to use the device for the administration of oxygen in tanks, the receiver B may be removed from its support, and a cork or plug inserted in its opening which is provided with an aperture to fit the tank, as indicated in dotted lines in Fig. 3.

It will be seen that my invention provides a thoroughly efficient and practical means for administering fresh air either medicated or unmedicated to a patient within a room. This is done by an apparatus which is easily applicable to any window and which requires no alteration or change in existing conditions. It will also be seen that the strength of the current of air can be increased as desired by the use of the pump, or can be diminished as desired by the use of the controlling slide *s*.

While I have shown in detail one form of my invention, I do not wish to be limited thereto as various changes can be made therein without departing from the invention.

What I claim is:—

1. In a device of the character described, the combination of a receiver, an inhaling tube, an adjustable support for said receiver adapted to fit in a window or the like and having an opening leading to said receiver, and said receiver having a support for the medicating substance, and means for varying the flow of air through said inhaling tube.

2. In a device of the character described, the combination of an adjustable support adapted to fit in a window, a receiver removably mounted upon said support, passages leading from the outer air to said receiver, a strainer in said passages, an apertured support within said receiver for the medicating substance, and a flexible tube connected with the top of said receiver at one end and having a mouth piece or the like at the other end.

3. In a device of the character described, the combination of an adjustable support adapted to fit in a window, a receiver removably mounted upon said support, passages leading from the outer air to said receiver, a strainer in said passages, a slide adapted to vary the effective area of said passages, an apertured support within said receiver for the medicating substance, and a flexible tube connected with the top of said receiver at one end and having a mouth piece or the like at the other end.

4. In a device of the character described, the combination of an inhaling tube, an adjustable member adapted to fit in a window or the like, said member having a passage through it, means for supporting the end of said inhaling tube in connection with said passage, and means for forcing the air into said tube.

5. In a device of the character described, the combination of an inhaling tube, an adjustable member adapted to fit in a window or the like, said member having a passage through it, means for supporting the end of said inhaling tube in connection with said passage, and a pump for forcing the air into said tube.

6. In a device of the character described, the combination of a board adapted to fit in a window or the like, and having an opening therein, a receiver having a sliding connection with said board, and having an opening in its side coincident with the opening in said board, said receiver also having an opening in its upper part, and an inhaling tube connected with said last named opening.

7. In a device of the character described,

the combination of a support adapted to fit in a window, and a receiver, said support comprising a central part, two end pieces movable longitudinally with respect to said central part, and clamps adapted to clamp said parts together and maintain them rigid.

Signed at New York city in the county of New York and State of New York this 17th day of October A. D. 1908.

GEORGE W. PHILLIPS.

Witnesses:
JAMES D. HACKETT,
JAMES LEO WHITE.