

No. 705,117.

Patented July 22, 1902.

C. H. MYERS.
INHALER.

(Application filed Feb. 15, 1900.)

(No Model.)

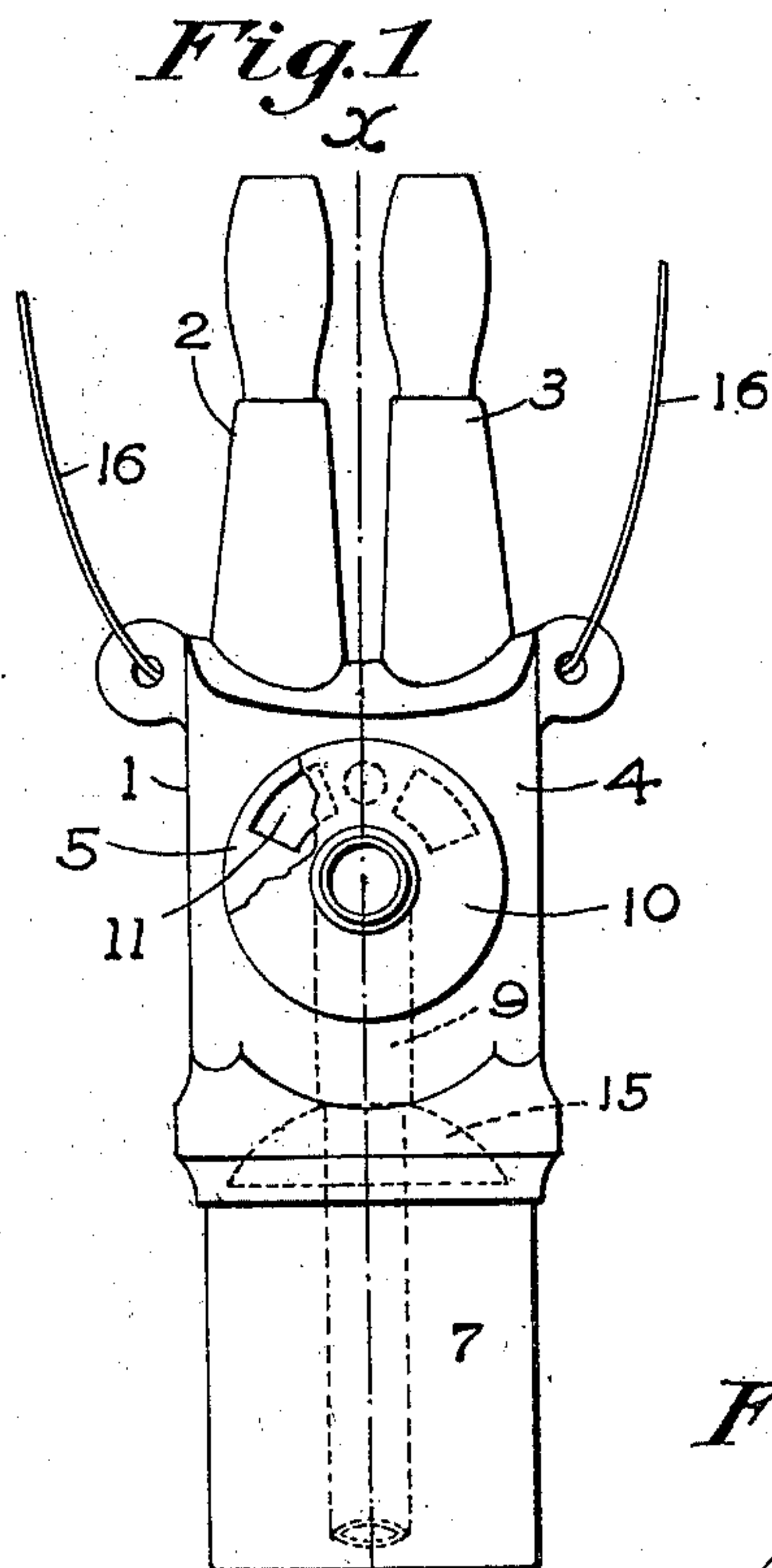


Fig. 2

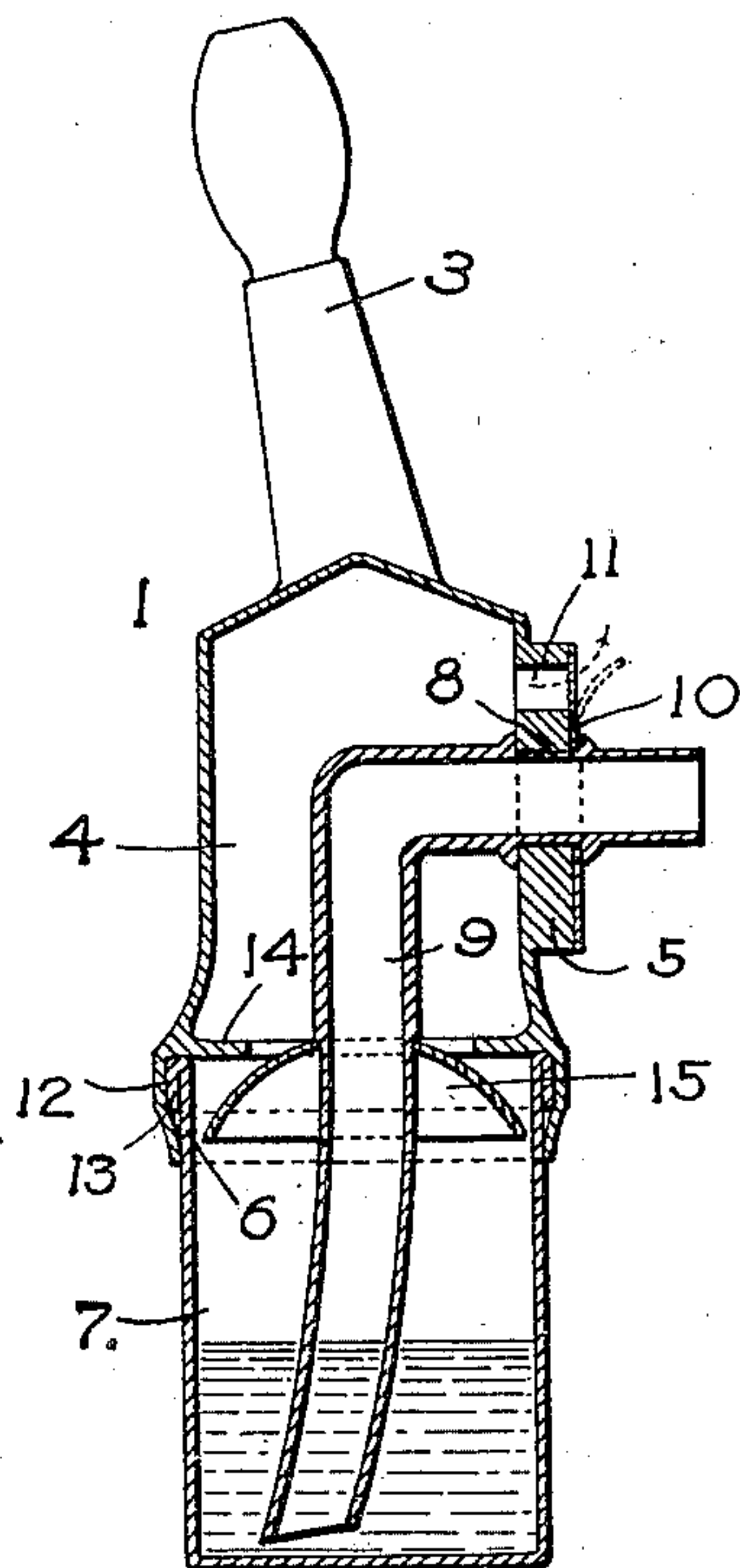


Fig. 5

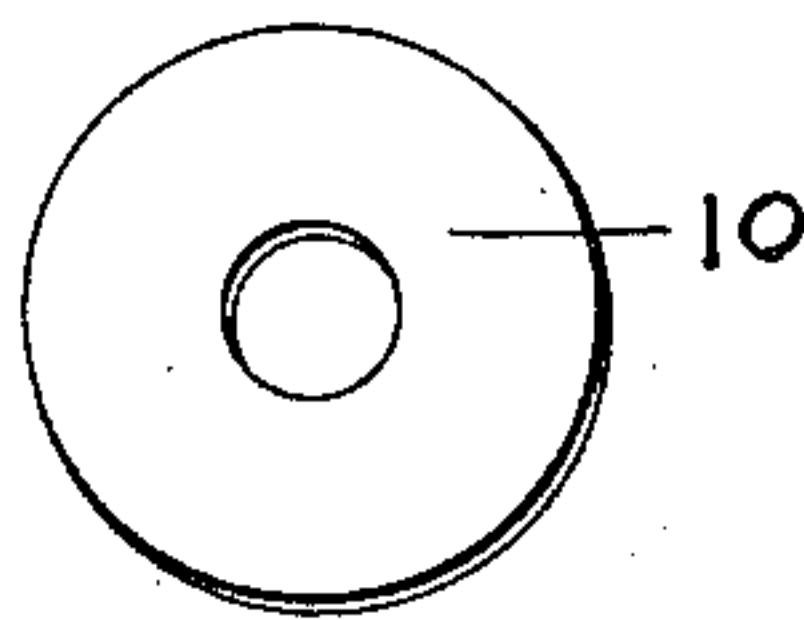
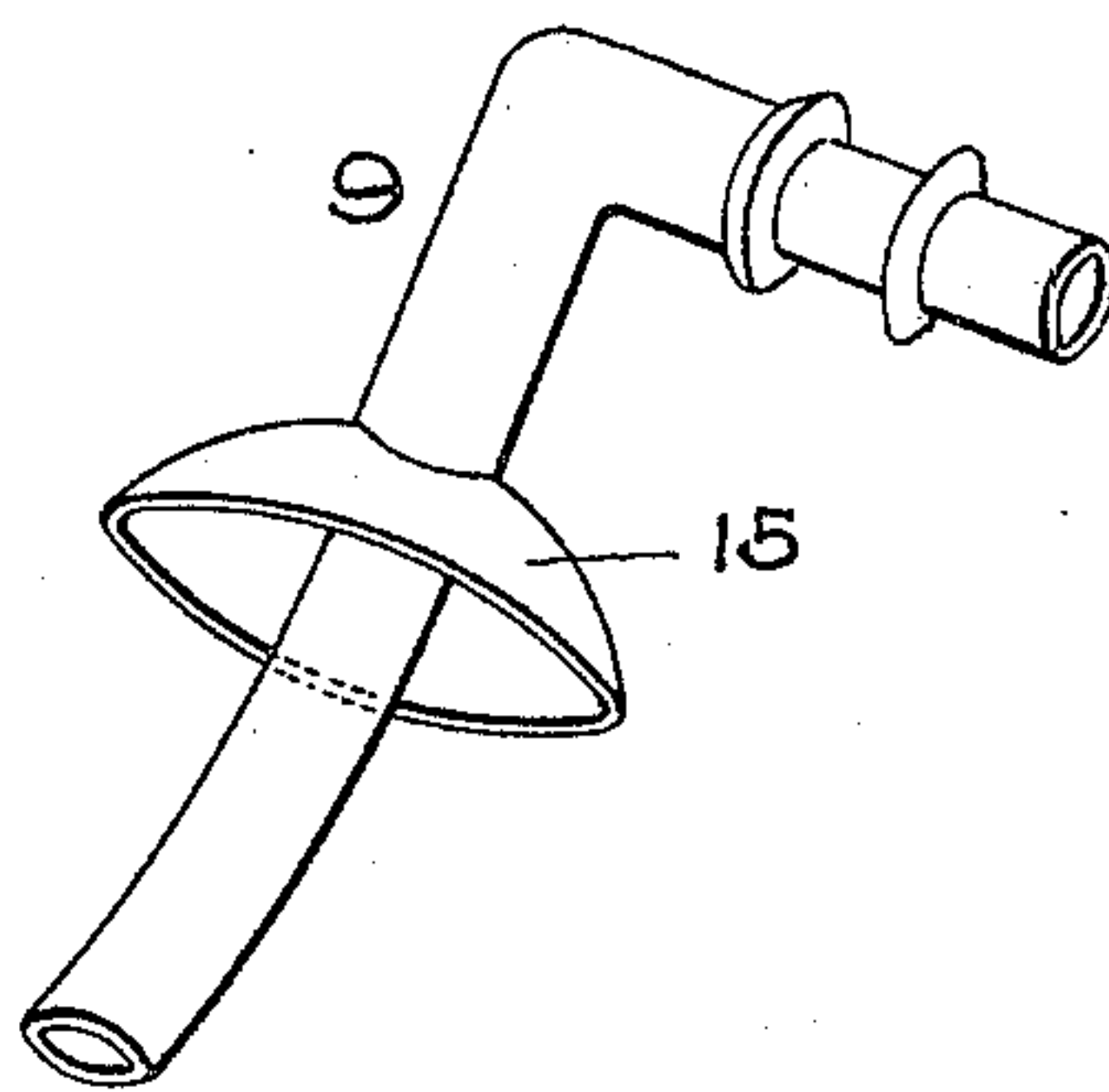
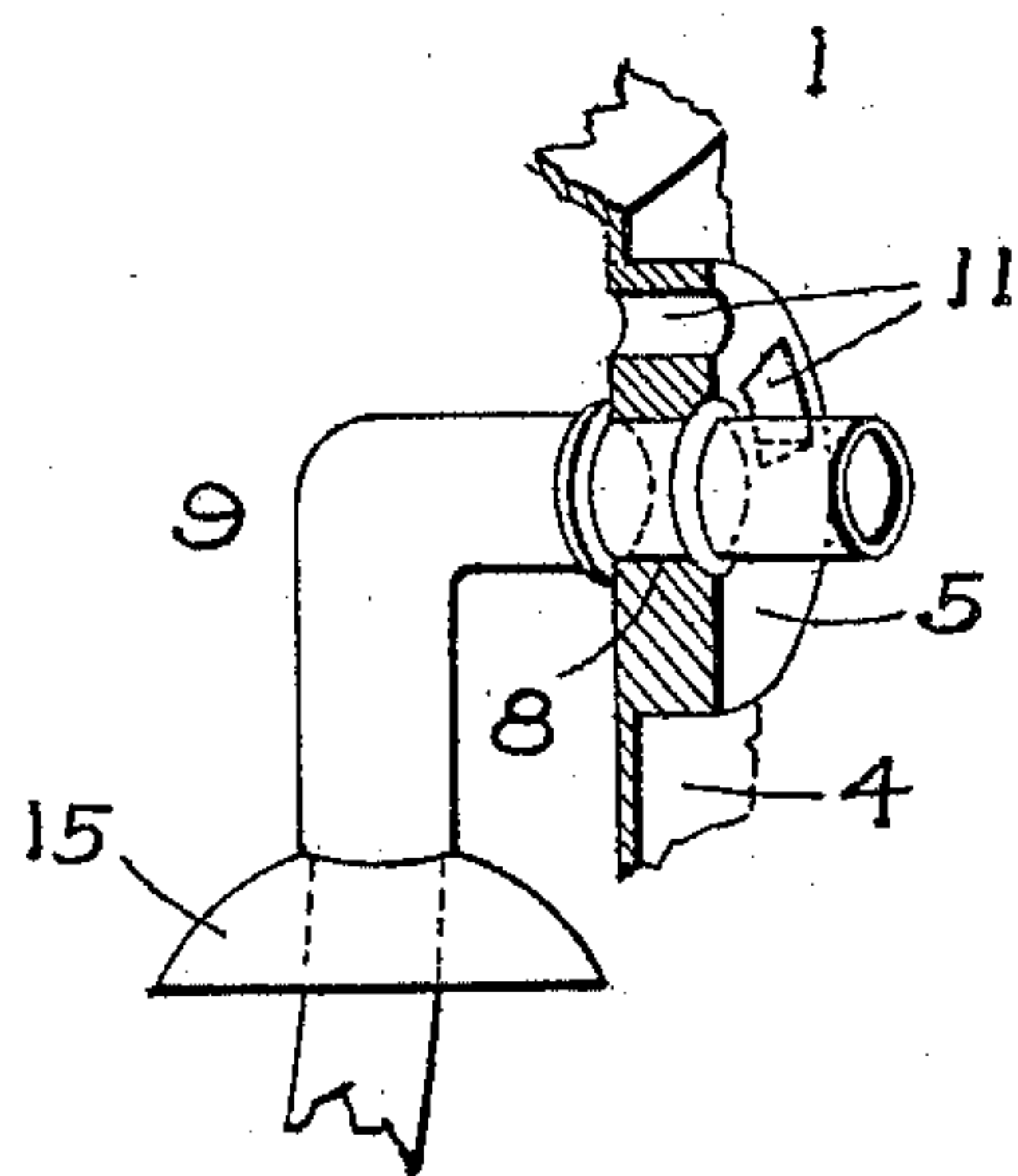


Fig. 4



Witnesses:-

C. H. Schafer.
Geo. H. Mayer.

Inventor:-

Cornelius H. Myers
By his Atty:- Wm. H. Rowe

UNITED STATES PATENT OFFICE.

CORNELIUS H. MYERS, OF SOUTH BEND, INDIANA.

INHALER.

SPECIFICATION forming part of Letters Patent No. 705,117, dated July 22, 1902.

Application filed February 15, 1900. Serial No. 5,252. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS H. MYERS, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Inhalers, of which the following is a specification.

The object of my invention is first to provide an inhaler-body which will be light, soft, and flexible, which may be comfortably worn, and which may be easily and securely connected to an inhalation-pipe and provide a seat adjacent thereto for an exhalation-valve which may be easily attached to and connected with a flask for holding a liquid and which will readily conform itself to the facial contour and be worn continuously with comfort to the user. With the above immediate and other objects incident thereto my invention consists in certain features particularly described and claimed with reference to the accompanying drawings, wherein—

Figure 1 is a front elevation of my improved inhaler with a portion of the exhalation-valve broken away; Fig. 2, a vertical section in line $\alpha \alpha$ of Fig. 1; Fig. 3, a perspective view in detail of the inhalation tube, broken away at its lower end, and a fragment of the inhaler-body and valve-seat integral therewith in section; Fig. 4, a perspective view of the inhalation-pipe and shield thereon, and Fig. 5 a perspective view of the membranous disk.

The inhaler-body consists of a body-shell 1, made of soft rubber and having nose-tubes 2 and 3, a dilatable open end or neck 4, adapted to engage over a flask-neck, and an exhalation-valve-seat neck 5, all made integral to provide a soft flexible elastic body which will closely fit the several parts to be connected thereto and which will allow the nose-tubes and body to bend or be compressed or deflected in any direction to yield and fit or adjust the parts to the movement of the head of the user, and thus adapt the inhaler to be worn with comfort.

The neck 4 of the inhaler-body is fitted closely around and upon the neck 6 of a flask 7 to provide an air-tight connection in a simple and inexpensive manner, and the neck 5 has a central aperture 8 to receive the outer end and elbow of an inhaler-tube 9, the inner end of said elbow being extended downwardly into the flask 7, the latter being snugly and

securely held by the flask-neck 4 of the inhaler-body by the elastic pressure of the said neck around the neck of the flask.

The neck 5 of the body is hub-shaped and is provided with ports 11. Over the flat outer face of the neck 5 is placed a valve-closure preferably consisting of a thin membranous disk 10 of elastic material, such as rubber, perforated at its center to fit around and to be secured upon the inhaler-tube 9. Said closure is drawn closely down upon the valve-seat to cover the ports 11 when the air is inhaled and quickly yields to the slightest pressure of air exhaled, thus permitting the exterior air of inhalation to be admitted to the inhaler only by way of the inhaler-tube 9 and by first passing through the medicament contained in the flask 7. The patient is thus supplied at all times with purified air carrying healing and vitalized agents absorbed from the liquids contained within the flask.

The neck of the body has an inner recess 12 to receive an outer ring-flange 13 upon the flask 7, which will thus hold the flask securely to the inhaler-body, and the said neck also has an inwardly-projecting cover-flange 14 to cover the top of the flask within a suitable distance from the inhaler-tube to allow the air to pass up into the inhaler-body to the nasal tubes and at the same time prevent the liquid within the flask from splashing up into the body of the inhaler. The inhaler-tube is fitted with a spherical shell or inverted pan 15, which projects outwardly therefrom below and within close proximity to the under side of the cover-flange 14, the latter nearly resting upon it, the periphery of the disk 15 extending within close proximity to the inner surface of the flask 7, thus to provide a dash-pan below the flask-cover flange, which will cooperate with the latter to shut off the liquid from splashing into the inhaled body, but give free passage between them for the air to be drawn from the flask to the nasal tubes.

The bottom of the inhaler-tube is bent outwardly from the center of the flask to within a short distance from the inner cylindrical wall thereof, thus to conduct the air passing through said tube to the very bottom and below the water-line of the contents of the flask at all times. The liquid cannot there-

fore be easily accidentally spilled from the flask and will be available for use until the least possible amount remains therein.

The inhaler above described is so sensitive in its action that a drop or a few drops of highly-concentrated and volatile drug, as an anesthetic, may be administered through the inhaler by exposing the drug opposite adjacent the outer end of the inhaler-tubes. The diffusion of such powerful drugs with atmospheric air is thus greatly augmented, and the operation of administering otherwise dangerous and powerful drugs is greatly simplified and rendered safer than by the means ordinarily employed. The exhalation of the patient is not in the least retarded by the thin membranous valve. The soft and elastic body of the inhaler rests lightly in place and when attached to the head by suitable cords it is so light and comfortable that it may be constantly worn whether awake or asleep without inconvenience.

The inhaler may thus be used in the constant treatment of patients for tuberculous diseases and may be used as easily as eyeglasses by workmen employed in vitiated air or by firemen to guard against breathing the flame in a burning building.

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

1. An inhaler, the combination with a flask, of a tubular body, nostril projections on the upper end thereof, a part at its lower end adapted to engage over the flask-neck, a neck in the side of the body having an exhalation-

port therein, a valve fitted to control the port, an inhalation-tube at its upper end fitted through said neck and valve and at its lower end extending into the flask.

2. An inhaler comprising a body having nostril projections thereon, an exhalation-valve and a neck at its lower end having a cover-flange projecting therein above the said neck, of an inhalation-tube extending from within the said body downwardly therefrom within said flange and a flask fitted upon said neck and receiving the lower end of the inhaler-tube, substantially as described.

3. An inhaler comprising a body having nostril projections thereon, an exhalation-valve, a neck at its lower end, a flask fitted to said neck, an inhalation-tube passing through the body and extending down into the flask, and a dash-plate secured to the inhalation-tube and extending outwardly therefrom at the top and nearly closing the neck of the flask, substantially as described.

4. An inhaler comprising a body having nostril projections thereon, an exhaust-valve and a neck at its lower end, a flask fitted to said neck, an inhalation-tube passing through the body and extending down into the flask, a cover-flange projecting from the top of the flask inwardly, and a dash-plate extending from the inhalation-tube outwardly, substantially as described.

CORNELIUS H. MYERS.

Witnesses:

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C. H. SCHAFER.