No. 649,717. Patented May 15, 1900.

A. W. BROWNE.

GAS ADMINISTERING APPARATUS.

(Application filed Nov. 22, 1899.)

(No Model.)

2 Sheets—Sheet 1.

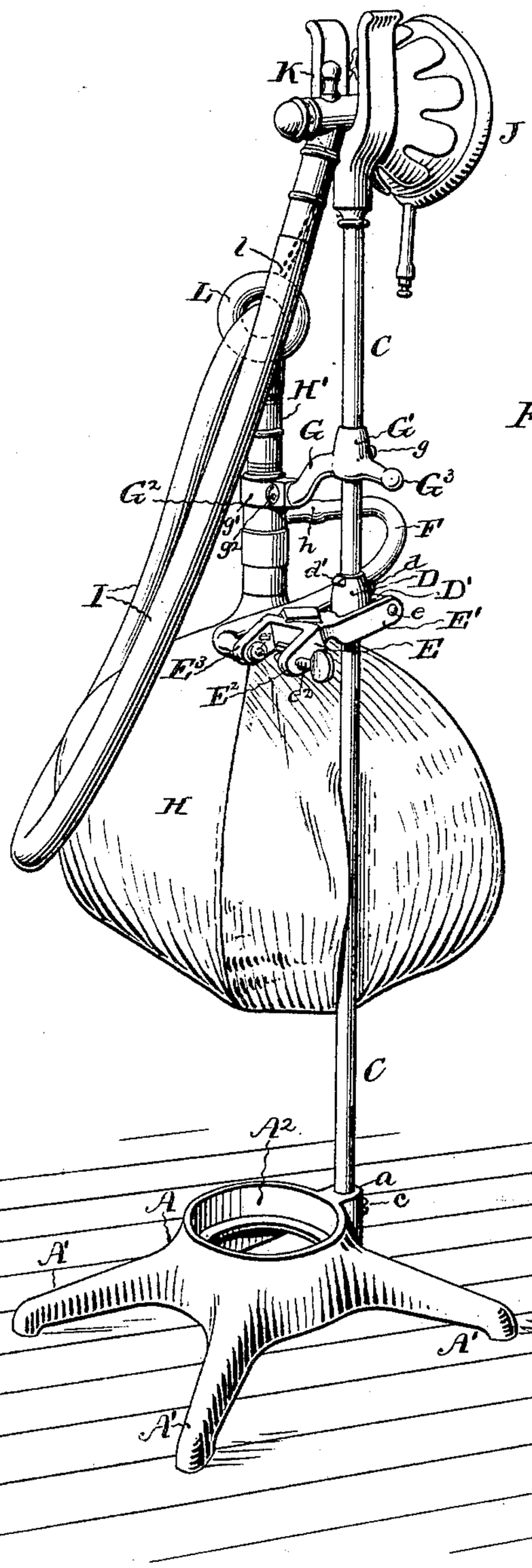

FIG. 1.

WITNESSES:

C. E. Jones

J. B. Wait

INVENTOR:

Arthur W. Browne,

by Edward F. Simpson, Jr.

Attorney.

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FIG. 2.

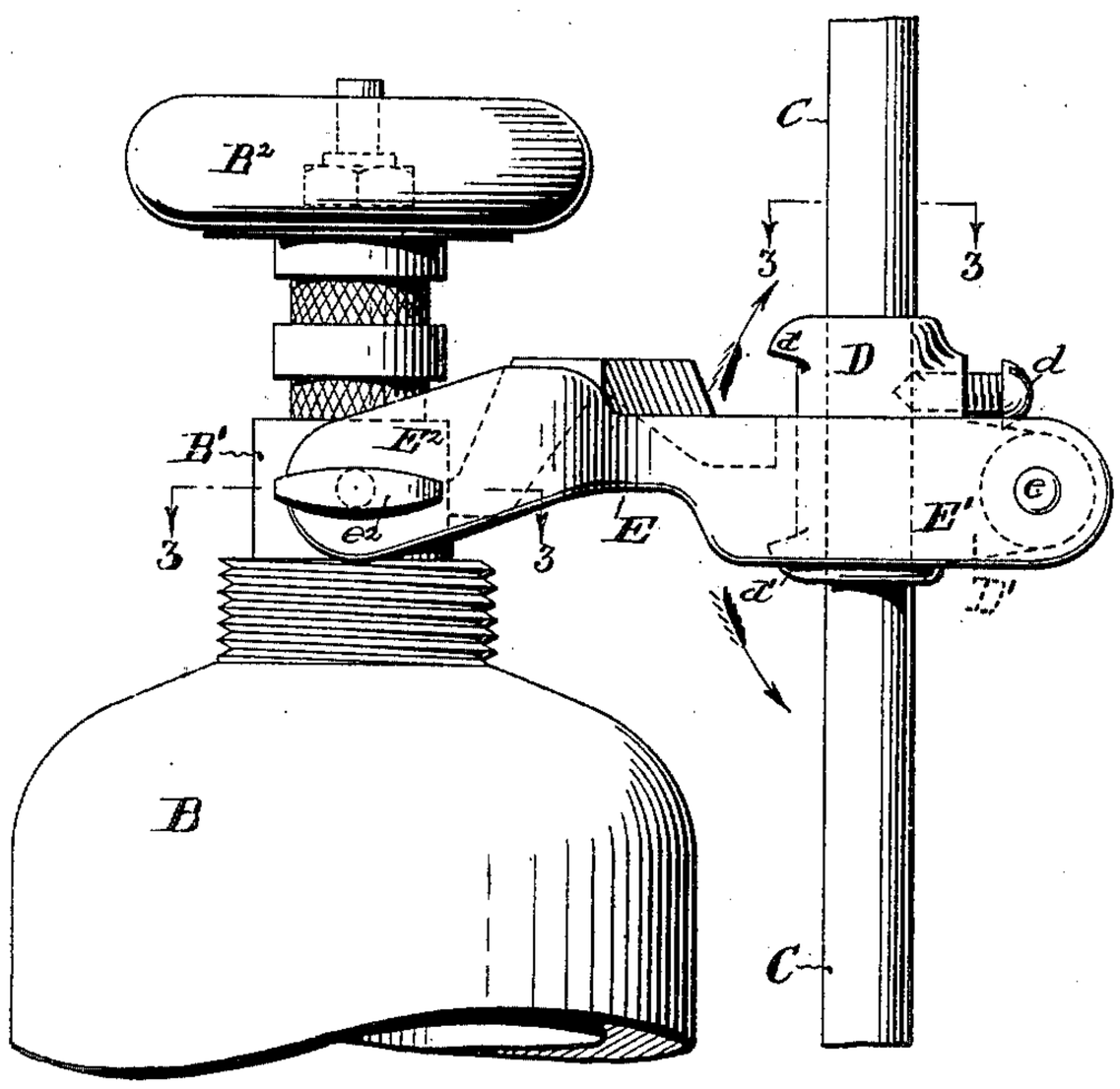
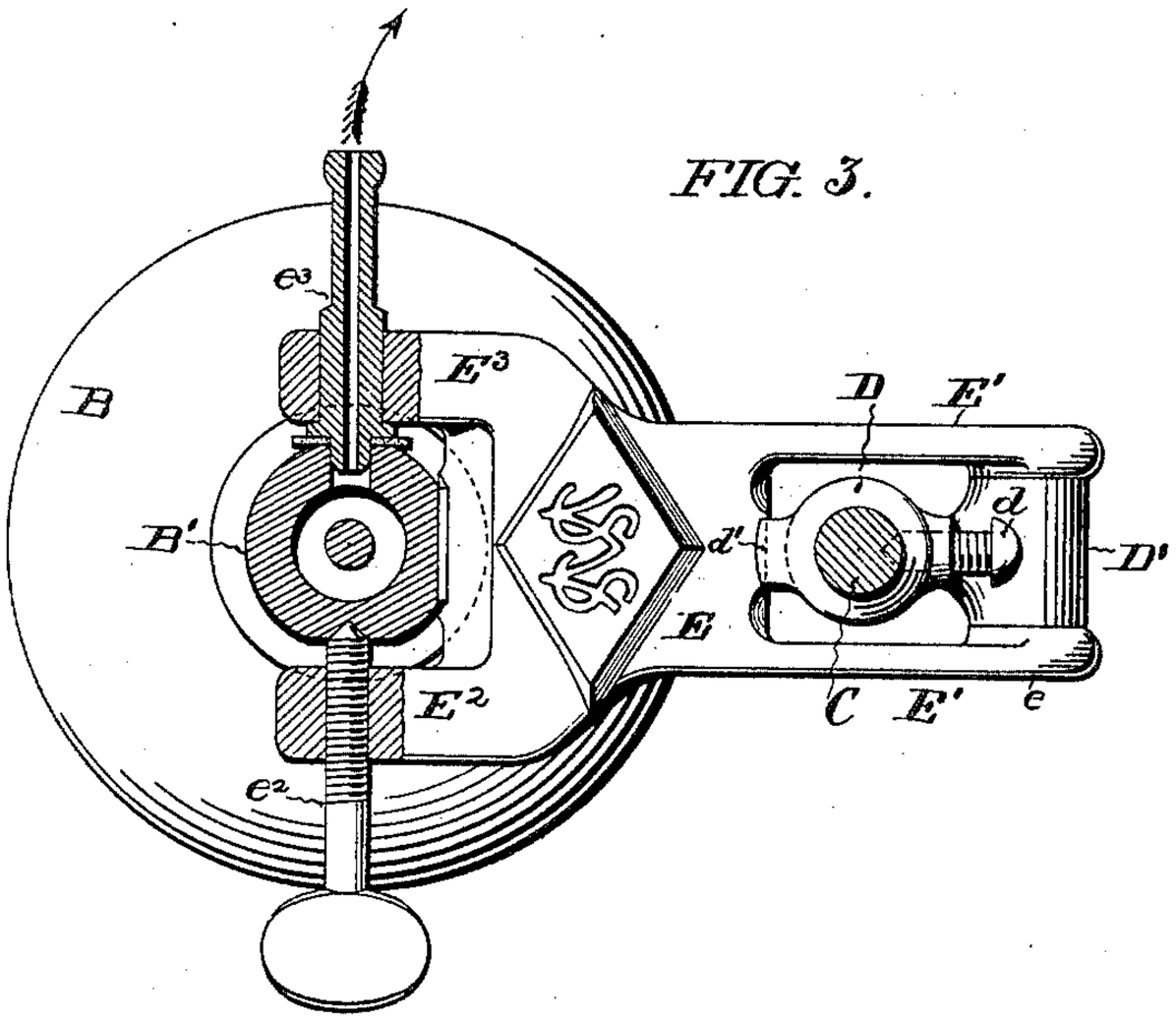


FIG. 3.



WITNESSES:

C. E. Jones

J. D. Wade

INVENTOR:

Arthur W. Browne,

by Edward F. Simpson, Jr.

Attorney.

UNITED STATES PATENT OFFICE.

ARTHUR W. BROWNE, OF NEW YORK, N. Y., ASSIGNOR TO THE S. S. WHITE DENTAL MANUFACTURING COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

GAS-ADMINISTERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 649,717, dated May 15, 1900.

Application filed November 22, 1899. Serial No. 737,839. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR W. BROWNE, a citizen of the United States, residing at New York, (Prince's Bay,) in the county of Richmond and State of New York, have invented certain new and useful Improvements in Gas-Administering Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of apparatus for administering anesthetic gas or oxygen by dentists and surgeons which consists of suitable means, such as a stand, for conveniently supporting a gas holder or cylinder, a gas receiver or bag, and an inhaler or mouthpiece.

The object of my invention is to improve this class of apparatus by rendering them more simple and efficient and at the same time more easily and conveniently manipulated.

My improvements are embodied in the apparatus illustrated in the accompanying drawings, and I will first describe said apparatus and then point out the improvements in the claims following the specification.

In said drawings, Figure 1 is a perspective view of the apparatus with the gas holder or cylinder omitted. Fig. 2 is a view in side elevation, on an enlarged scale as compared with Fig. 1, showing the yoke portion of the apparatus secured to a gas holder or cylinder. Fig. 3 is a plan or top view of said yoke portion of the apparatus and the gas holder or cylinder, some parts being in horizontal section on the lines 3 3 of Fig. 2.

As shown in the drawings, a base A, having suitable legs A′, is provided with a central socket or seat A^2 for the reception of the lower end of a gas holder or cylinder B and with a smaller socket *a* adjacent to the central socket or seat for the reception of the lower end of an upright rod or standard C, which is thus detachably connected with said base. A set-screw *c* may be used for securely holding the rod C in place. Secured upon said standard C, so as to be vertically adjustable thereon, is a carrier D, which may be securely locked in position by a set-screw *d*. A yoke E is pivoted to said carrier by way of a pivot-bolt *e*, which passes through the inner forked end E′ of the yoke and through a lug or bracket D′ on said carrier. The outer forks or members E^2 and E^3 of the yoke are, as usual, adapted for engagement with the neck B′ of the gas-holder B, the fork E^2 being provided with a set-screw e^2 for engaging a socket or recess in said neck B′ and the fork E^3 being provided with an outlet tube or nipple e^3, which at its inner end engages an opening in the holder-neck above the seat of a suitable valve therein and adapted to have a flexible tube F connected to its outer end. The carrier D is formed with lugs *d′ d′* to limit the up-and-down movement of the yoke E.

The pivotal connection of the yoke with its support facilitates the attachment of the yoke to the neck of a gas-holder supported in the stand, the proper seating of the set-screw e^2 and nipple e^3 in the respective socket or recess and opening in said neck being thereby readily effected. This connection also provides for the slight variation in the length of gas-holders supposed to be of the same length. By means of the vertical adjustment of the yoke relatively to its support the stand is rendered capable of supporting gas holders or cylinders of various lengths, it simply being necessary to slide the yoke-carrier up or down upon the rod or standard C to locate the yoke in the proper position for engaging the neck of a gas-holder of any particular length.

A supporting arm or bracket G is adjustably secured upon the standard C above the yoke E by way of its socketed inner end G′, a set-screw *g* being employed to hold the arm in place. The outer end of the arm is provided with a clamp G^2 of yoke or fork like form, the movable member *g′* of which is adjustably connected to the fixed member thereof by a screw g^2. This arm is designed to support a flexible gas receiver or bag H, the metallic coupling-tube H′ of which is grasped and held by the clamp G^2 of the supporting-arm. The flexible tube F is connected to the coupling-tube H′ of the gas-receiver by way of a nipple *h* in order to afford communica-

tion between the gas-holder and gas-receiver. Connected to the outer end of the coupling-tube is one end of a flexible tube I, the opposite end of which is connected to an inhaler J of usual construction. A suitable forked rest K may be provided at the upper end of the standard C for supporting the inhaler when not in use, and, if desired, a ring L, connected to the support or stand by way of a chain, (shown by dotted lines *l*,) may be used to prevent the flexible tube I from bending too abruptly near its end connected to the coupling-tube H′. The supporting-arm G is best extended beyond its inner socketed end, as at G^3, whereby the arm and its extension may serve as a handle by which the entire stand or apparatus may be lifted and moved from place to place as desired.

In the operation of the apparatus a holder or cylinder charged with suitable gas, such as nitrous oxid, is placed in the base-socket and the neck of the holder engaged by the yoke and suitably clamped, after which the valve of the holder may be manipulated by any suitable means, as a hand-wheel B^2, to permit a proper quantity of the gas to pass from the holder to the receiver or bag by way of the flexible tube F. The inhaler J may then be applied to the face of a patient and the gas administered as desired.

An apparatus constructed according to my invention is simple in construction and operation and affords excellent means for supporting gas holders or cylinders of different lengths, which may be quickly, easily, and securely held in position. The apparatus, moreover, is compact in form, light in weight, and may be readily taken apart for transportation, and then as readily assembled again.

While I have shown only a single embodiment of my improvements, it will of course be apparent that my invention is not restricted to the precise details of construction herein shown and described and that the pivoted yoke for the gas-holder neck may be used with any suitable form of apparatus or stand.

I claim as my invention—

1. The combination, in a gas-administering apparatus, of a support for a valve-necked gas-holder, and a yoke pivoted to said support and provided with two members, one of which is fitted with a nipple for engagement with the valved neck of the gas-holder, and the other member of which is fitted with a set-screw also for engagement with said neck, substantially as and for the purpose described.

2. The combination, in a gas-administering apparatus, of the base provided with a seat for the reception of a valved gas-holder, an upright standard connected with said base, and a yoke for engaging the valved gas-holder and having pivotal connection with said upright standard, substantially as and for the purpose described.

3. The combination, in a gas-administering apparatus, of the base provided with a seat for the reception of a valved gas-holder, an upright standard connected with said base, a carrier having vertically-sliding connection with said standard, and a yoke for engaging the valved gas-holder, and having pivotal connection with said carrier, substantially as and for the purpose described.

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

ARTHUR W. BROWNE.

Witnesses:

SEYMOUR CASE,

NETTIE F. DECKER.