

Specification of George Harman Barth : inhaling apparatus.

Contributors

Barth, George Harman.

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A.D. 1868, 17th SEPTEMBER. N^o 2867.

S P E C I F I C A T I O N

OF

GEORGE HARMAN BARTH.

—
I N H A L I N G A P P A R A T U S .
—

L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

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CHURCH

1877

CHURCH



A.D. 1868, 17th SEPTEMBER. N° 2867.

Inhaling Apparatus.

LETTERS PATENT to George Harman Barth, Chymist, of The Lodge, No. 111, Westbourne Grove, Bayswater, in the County of Middlesex, for the Invention of "**IMPROVEMENTS IN APPARATUS FOR ADMINISTERING AND SUPPLYING AND PURIFYING GASES OR VAPOURS FOR MEDICINAL AND OTHER PURPOSES.**"

Sealed the 12th March 1869, and dated the 17th September 1868.

PROVISIONAL SPECIFICATION left by the said George Harman Barth at the Office of the Commissioners of Patents, with his Petition, on the 17th September 1868.

I, **GEORGE HARMAN BARTH**, Chymist, of The Lodge, No. 111, West-
5 bourne Grove, Bayswater, in the County of Middlesex, do hereby declare
the nature of the said Invention for "**IMPROVEMENTS IN APPARATUS FOR
ADMINISTERING AND SUPPLYING AND PURIFYING GASES OR VAPOURS FOR MEDICINAL
AND OTHER PURPOSES,**" to be as follows :—

My Invention relates to improvements upon my former Invention and
10 apparatus for which Letters Patent were granted to me dated the 17th
day of March 1854, No. 641.

Barth's Improved Inhaling Apparatus for Medicinal Purposes.

This Invention is also applicable to other apparatus, especially those in which metal gas holders are used.

This my present Invention is for apparatus to economise the use of gas, gases, or vapours by purifying them after being inhaled, and thus enabling them to be re-breathed. I accomplish this result by using a 5 gasholder, which is fitted with weights to counterpoise its weight, and is fitted with an appliance to measure the gas contained therein. The gasholder may be supplied with gas or vapour at the ordinary tension and density, or with gas compressed into a strong receptacle, or in a liquid form, or in a solid form. The purification is effected by placing 10 nets or partitions of cotton, wool, hemp, or other suitable material inside the gasholder, which are saturated with some proper chymical solution, such as solution of caustic potash, and other solutions may be used, so that when the gas or vapour after being inhaled is exhaled into the gasholder it has to pass through the interstices of the nets or partitions, 15 which thus absorb its impurities before it is again inhaled. The chymical solution is contained in a vessel secured on or in a core enclosed by the gasholder. When the gasholder is empty the nets or partitions are charged with solution; when gas or vapour is admitted they are in a condition to absorb and take from the gas or vapour all or some of its 20 impurities, and thus render it again fit to be used.

By gas or gases I mean any kind of gas, and by vapour any kind of vapour which can be used alone or combined with other gas or vapour, or mixed with air for medicinal purposes; and by medicinal purposes I mean for the relief of disease, or for causing insensibility to pain, 25 or producing sleep. My Invention may also be employed to purify gas for various other purposes.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said George Harman Barth in the Great Seal Patent Office on the 16th March 1869. 30

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, GEORGE HARMAN BARTH, Chymist, formerly residing at The Lodge, No. 111, Westbourne Grove, Bayswater, in the County of Middlesex, but now residing at No. 8, Cambridge Villas, Hammersmith, in the County of Middlesex, send greeting. 35

Barth's Improved Inhaling Apparatus for Medicinal Purposes.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Seventeenth day of September, in the year of our Lord One thousand eight hundred and sixty-eight, in the thirty-first year of Her reign, did, for Herself, Her heirs and
5 successors, give and grant unto me, the said George Harman Barth, Her special licence that I, the said George Harman Barth, my executors, administrators, and assigns, or such others as I, the said George Harman Barth, or my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and
10 at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN APPARATUS FOR ADMINISTERING AND SUPPLYING AND PURIFYING GASES OR VAPOURS FOR MEDICINAL AND OTHER**
15 **PURPOSES,**" upon the condition (amongst others) that I, the said George Harman Barth, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the
20 same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said George Harman Barth, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and
25 ascertained in and by the following statement:—

This my present Invention has relation to, but consists of entirely distinct and novel improvements upon, my Invention for "Improvements in the Mode of Supplying and Administering Gases for the Alleviation and Cure of Certain Diseases," for which Her most
30 Excellent Majesty Queen Victoria granted me Letters Patent, dated the 17th day of March 1854, No. 641.

This my present Invention is for a gasholder by means of which gas or vapour, or a mixture of gas and vapour, or gas, vapour, and air, can be conveniently administered when required for medicinal or surgical
35 purposes, and which will purify and economise the gas administered if it be desired to effect this object.

The gasholder I prefer to make of zinc or other metal; it is of the ordinary construction, is inverted over water in a suitable vessel, which

Barth's Improved Inhaling Apparatus for Medicinal Purposes.

may be fitted with an interior core if desired in the customary way. The gasholder is fitted with a rod scaled to measure the quantity of gas used; it is also provided with counterpoise weights to regulate its weight. The gas or vapour can be supplied to the gasholder from any receptacle containing it through a proper entrance cock at the ordinary 5 tension and density; or it may be compressed into a strong metal receptacle and admitted to the gasholder therefrom, or it can be supplied in a liquid form or even in a solidified form, if the gas will assume these or one of these forms. The purification is effected by causing the gas or vapour to pass through nets, 10 diaphragms, or partitions of cotton, wool, hemp, or any other suitable material, which are placed in the interior of the gasholder in such way that when gas is admitted it must pass through the nets or partitions before it can be withdrawn from the gasholder. In order to remove impurities from the gas or vapour the nets, diaphragms, or 15 partitions are saturated with such proper chymical solution as will absorb, remove, or neutralize the impurity. As an instance, I charge the nets to remove carbonic acid gas with a solution of caustic potash or with caustic lime water. The solution may be contained in a vessel placed on the top of the core when the instrument is made with a core, 20 or in such situation that whensoever the gasholder is empty and descends the nets or partitions are moistened by the solution, and when it ascends they ascend, and being charged with the solution purify the gas, which must pass through the interstitial spaces of the nets, diaphragms, or partitions before it can be withdrawn from the gasholder. 25

A principal feature in this my Invention is that the gasholder washes or cleans itself by descending into and remaining in water when not in use, thus preventing the danger of diseased emanations being transmitted to one person who may inhale after another person from air-tight bags which cannot be cleansed. It also enables the operator to measure 30 the quantity of gas used by merely inspecting the scale rods, and when it is desired to have the gas purified or made otherwise capable of being re-breathed and thus economised, it perfectly and conveniently accomplishes the desired purpose.

Any form of tube and mouth piece, face piece, or inhaling apparatus 35 can be applied to this my gasholder. I do not select any especial kind, but leave it to the discretion of those who use the apparatus.

By gas or gases I mean any kind of gas, and by vapour any kind of

Barth's Improved Inhaling Apparatus for Medicinal Purposes.

vapour which may be employed alone or mixed together, or mixed with air; and by medicinal and surgical purposes I mean for the relief of disease, or causing insensibility to pain, or producing sleep.

This my Invention may be used for the purification of gas, gases, or
5 vapours for various other purposes. I do not confine myself to the exact form of the apparatus or substance of which it is made, or of the exact substance of which the nets, diaphragms, or partitions are made, provided always that they become moistened by the chymical solution when used, and that they allow the gasholder to ascend or descend and filter
10 through the interstitial spaces, gas, gases, or vapours which pass into and out of the gasholder.

GEORGE HARMAN BARTH. (L.S.)

LONDON :

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Printers to the Queen's most Excellent Majesty. 1869.

... which may be employed alone or mixed together or mixed with
 ... by medical and surgical purposes I mean for the relief of
 ... or causing an inability to pain, or producing sleep.
 ... my invention may be used for the purification of the water in
 ... for various other purposes. I do not confine myself to the exact
 ... the apparatus or substance of which it is made, or of the exact
 ... at which the jets, discharges, or perforations are made, provided
 ... always that they become moistened by the vapour which rises from
 ... and that they show the tendency to expand or contract and then
 ... through the perforations, gas, steam, or vapours which pass into
 ... out of the chamber.

GEORGE HILMAN BARTON (S.S.)

LONDON:
 Printed by GEORGE EDWARDS and WILLIAM BENTLEY,
 15, Abchurch Lane, in the Strand, near the Theatre Royal, 1848.



