

(No Model.)

2 Sheets—Sheet 1.

W. H. MURRAY.
VAPORIZER.

No. 453,818.

Patented June 9, 1891.

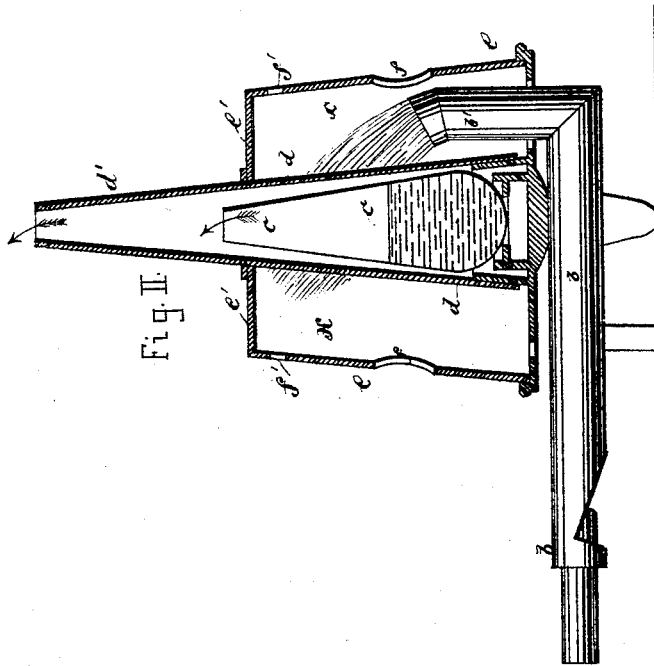


Fig. II.

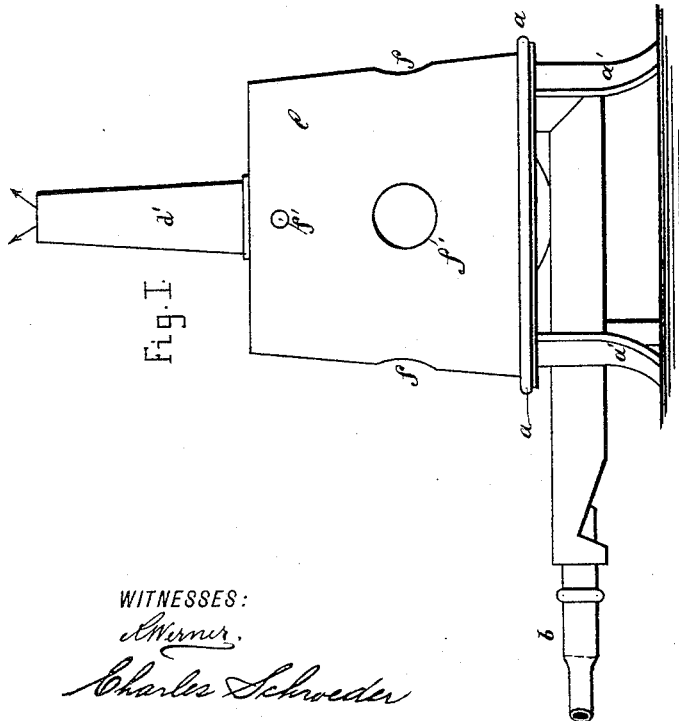


Fig. I.

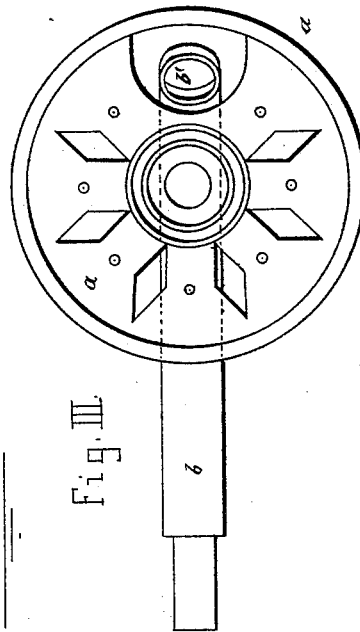


Fig. III.

WITNESSES:

Werner.
Charles Schroeder

INVENTOR

William Henry Murray

BY

George Raegener

ATTORNEYS.

(No Model.)

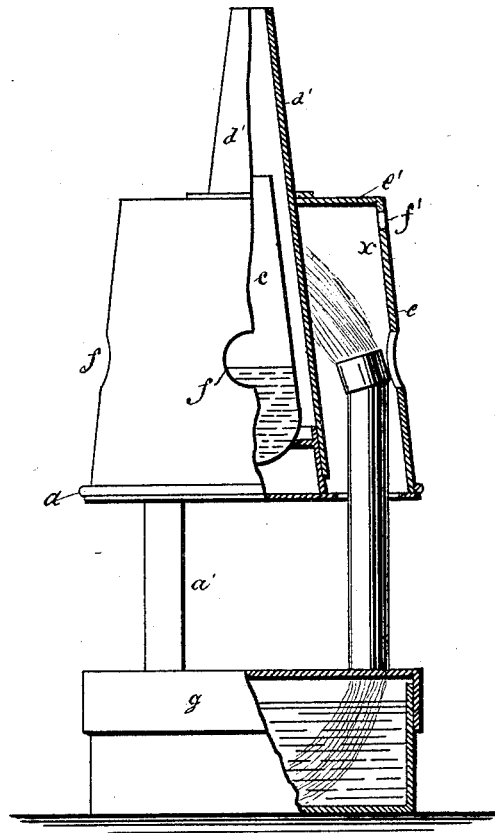
2 Sheets—Sheet 2.

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Fig. IV



WITNESSES:

Armer
Charles Schroeder

INVENTOR

William Henry Murray
BY *George H. Ragsdale*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM HENRY MURRAY, OF WANDSWORTH, ENGLAND.

VAPORIZER.

SPECIFICATION forming part of Letters Patent No. 453,818, dated June 9, 1891.

Application filed November 4, 1890. Serial No. 370,357. (No model.) Patented in England November 30, 1889, No. 19,262.

To all whom it may concern:

Be it known that I, WILLIAM HENRY MURRAY, chemist's assistant, of 15 Mayfield Villas, Merton Road, Wandsworth, in the county of Surrey, England, a subject of the Queen of Great Britain, have invented an Improved Apparatus for Vaporizing Medicines, Disinfectants, Perfumes, and other Substances, (for which I have made application for Letters Patent in Great Britain, No. 19,262, dated November 30, 1889,) of which the following is a specification.

This invention consists of an apparatus or contrivance for vaporizing by heat—such as from the flame of a gas or other suitable burner or lamp, for instance, a spirit-lamp—any suitable medicines, chemicals, or chemical compounds for medicinal purposes or otherwise, such as disinfectants and perfumes, &c., or for vaporizing or burning any other substances or materials, as desired—for instance, insect-destroyers, microbe-killers, &c.—and for which it may be suitable.

The chemicals or ingredients are contained in a kind of flask or holder of any suitable material, (but advantageously made of glass,) and this holder or vessel is placed in the center part of the apparatus or contrivance which forms the subject-matter of the present invention, and which I will now proceed to fully describe with reference to the accompanying sheets of drawings, so that the said invention may be fully understood and readily carried into practice.

Figure I represents a side view in elevation of the said apparatus or contrivance and heated by a gas-jet on the well-known "Bunsen" burner principle. Fig. II is a vertical central section of Fig. I. Fig. III is a plan of Fig. I with the double shield or cover removed. Fig. IV is a similar apparatus only heated by a spirit-lamp instead of by a gas-jet, as in Figs. I to III.

a is the bottom or supporting frame mounted on legs a' and carrying the gas-pipe b , the turned-up end b' of which forms the burner. Upon this frame a is placed the flask c or other convenient vessel which contains the chemicals or ingredients to be vaporized, and over this flask c is placed the double casing

d and e , the inner part d of which completely covers the flask or vessel c and forming an annular space x between said inner case d and the outer wall e and top e' . The burner or heat-producer is mounted in this annular space x , between the inner casing d and the outer casing e , and air to support combustion is admitted through suitable openings below, while the products of combustion can escape through suitable openings f and f' in the casing or outer wall e , these holes f and f' being of such a size that a warm body of air is retained in the space x . The flame from the burner thus produces a constant heat (subject to regulation) around the flask or chemical-holder c , and so vaporizes the contents which pass out up the passage or chimney d' into the room or compartment in which the apparatus is in use.

Fig. IV shows an equivalent apparatus, only the heat-producer in this case is a spirit-lamp, the reservoir or vessel g for holding the spirits forming the base or stand upon which legs a' of the apparatus are mounted.

All the other parts are identical or equivalent to those previously described.

It will be obvious that the apparatus may be made of any size and proportions or dimensions, according to requirements, and any suitable material or materials may be used in the construction thereof, though it may be mentioned that brass or copper will be found very advantageous for forming the parts d , d' and e , e' , which latter may be formed all in one part, as shown, or in separate parts, if desired.

The form or shape of the apparatus may be varied, if desired.

The arrangement of the shield or wall d between the burner or heat-producer and the vessel c , containing the chemicals, &c., is of great importance and forms an essential feature of my present invention.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In a vaporizer, the combination, with an exterior casing closed at the top, of an interior casing in said exterior casing, a burner at

the side of the interior casing and in the space between said interior and exterior casings, and a vessel in said interior casing for receiving the substance to be vaporized, substantially as set forth.

5 2. In a vaporizer, the combination, with an exterior casing closed at the top, having bottom draft-openings and side outlet-openings, of an interior casing in said exterior casing,
10 a vessel for receiving the substance to be va-

porized in said interior casing, and a burner between said interior and exterior casings, substantially as set forth.

WILLIAM HENRY MURRAY.

Witnesses:

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