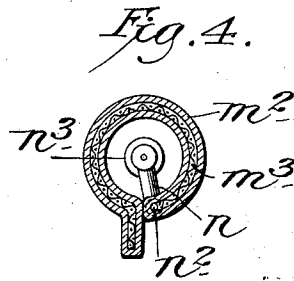
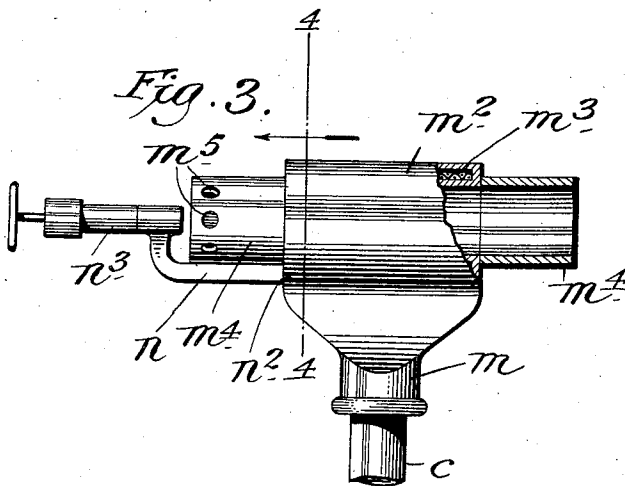
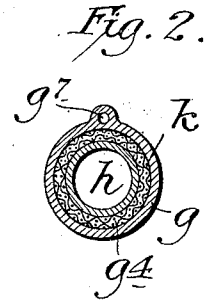
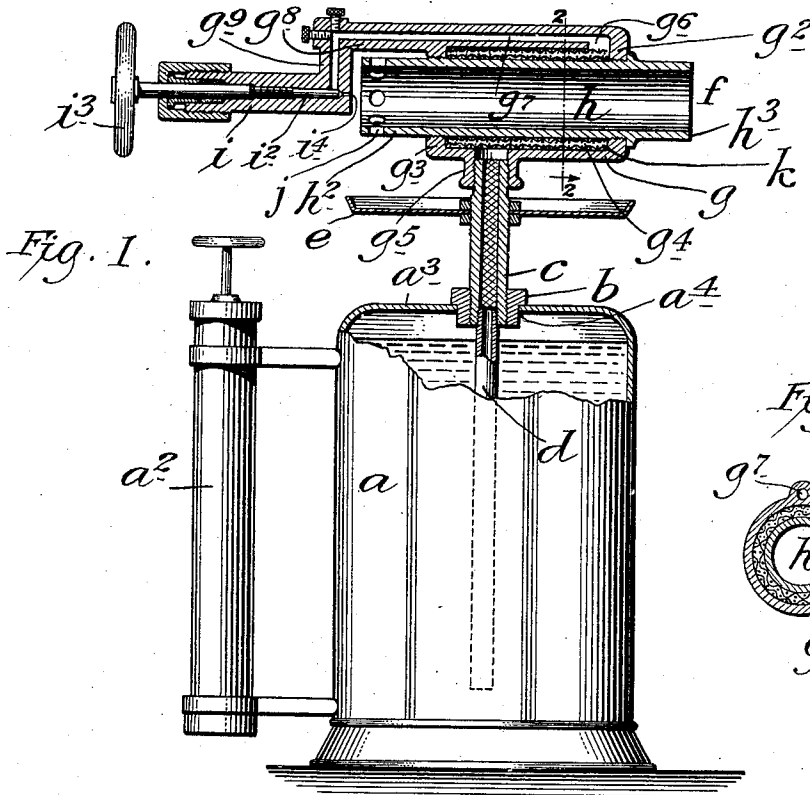


W. CHAUSSÉ.
VAPOR BURNER.

APPLICATION FILED OCT. 28, 1908.

933,822.

Patented Sept. 14, 1909.



WITNESSES
A. R. Appleman
C. E. Nutreany

INVENTOR,
Wilfrid Chausse,
BY *Edgar Tate & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILFRID CHAUSSÉ, OF LONG ISLAND CITY, NEW YORK, ASSIGNOR OF ONE-FOURTH TO LONDON P. SMITH, OF NEW YORK, N. Y., AND ONE-HALF TO GUY OSBORN, OF MOUNT VERNON, NEW YORK.

VAPOR-BURNER.

933,822.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed October 28, 1908. Serial No. 459,830.

To all whom it may concern:

Be it known that I, WILFRID CHAUSSÉ, a citizen of the United States, and residing at Long Island City, in the county of Queens and State of New York, have invented certain new and useful Improvements in Vapor-Burners, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to vapor burners, torches and other devices of this class which burn hydro-carbons; and the object thereof is to provide an improved device of this class designed for use as a paint burner, as a heater for soldering irons and other articles, and for various other purposes; and with this and other objects in view the invention consists in a device of the class specified constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which;—

Figure 1 is a side view of my improved vapor burner or torch, part of the construction being in section, Fig. 2 a transverse section on the line 2—2 of Fig. 1, Fig. 3 a view similar to Fig. 1, but showing a modification, and;—Fig. 4 a transverse section on the line 4—4 of Fig. 3.

In the practice of my invention, I provide a can *a* of the usual form and construction, and said can is provided at one side with an air pump *a*² which is placed in communication therewith in the usual manner. The can *a* is also provided in the top *a*³ thereof with an opening *a*⁴ closed by a plug or sleeve *b* in which is screwed a tube *c*, in the lower end of which is screwed a tube *d* which extends downwardly into the bottom of the can, and connected with the upper end portion of the tube *c* is an igniting pan or receiver *e* designed to receive a small quantity of oil or hydro-carbon which is ignited in order to supply an initial heat to the burner *f* for the purpose of producing an initial supply of vapor.

The burner *f* comprises a main casing *g* through which is passed a tube *h*, said casing being provided with end members *g*² and *g*³ through which said tube is passed, said end

members and said tube being correspondingly threaded, and the tube *h* and casing *g* form an annular chamber *g*⁴, and said casing *g* is provided adjacent to one end with a tubular neck *g*⁵ by means of which connection is made with the tube *c*, and at the opposite end portion of said casing is a port *g*⁶ which communicates with a tubular passage *g*⁷ running longitudinally of the casing *g*, and said casing *g* is provided at the end thereof adjacent to the end *h*² of the tube *h* with a tubular extension *g*⁸ which forms an extension of the tubular passage *g*⁷ and at the end of which is a right angled extension *g*⁹ which ranges transversely of the adjacent end of the tube *h*, and which is provided with another right angled extension *i* in line with the longitudinal axis of the tube *h* and through which is passed a needle valve *i*² provided at its outer end with a handle *i*³ and adapted to control a port or passage *i*⁴ also in line with the longitudinal axis of the tube *h*. The tube *h* is provided at the end *h*² adjacent to the needle valve *i*² with side ports or passages *j* for the admission of an initial supply of air therinto, the said end of said tube adjacent to the needle valve *i*² being also open.

The annular chamber *g*⁴ around the tube *h* is filled with wire mesh, gauze, or similar material as shown at *k*, and the tube *c* is also filled with the same material. The wire gauze or similar material in the tube *c* is intended to serve as a strainer for the hydro-carbons and the wire gauze or similar material in the annular chamber *g*⁴ also serves as a strainer but the principal function thereof is to aid in vaporizing the hydro-carbons.

In practice the can *a* is filled or partially filled with the desired hydro-carbons or hydro-carbon products, and if desired pressure may be applied in said can by means of the air pump *a*. A small amount of hydro-carbon is then placed in the pan or receiver *e* and is ignited. This serves to heat the burner *f* and the tube *c*, and there is an initial generation of vapor which passes through the tube *c*, through the casing *g* and around said casing, or around the tube *h* therein and also longitudinally of said casing until it passes through the port *g*⁶ from which it passes through a tubular passage *g*⁷, through the tubular extension *g*⁸ thereof, and through the right angled extension *g*⁹

of said tubular extension and is discharged through the port i^4 into the tube h , and at the same time air enters through the end h^2 of the tube h adjacent to the needle valve and also through the ports or passages j , and this air mingles with the vapor and is burned in the tube h in the usual manner and a high degree of temperature is produced by which all the parts of the burner are heated and the generation of vapor at the required temperature continued and a flame of high degree of temperature is discharged from the end h^3 of the tube h .

In Figs. 3 and 4 I have shown a modified form of my improved vapor torch or burner, and in the figures of the drawing illustrating this modified form of burner, the can a is omitted, but a part of the tube c is shown. In this form of construction I take a tube m and insert therein a roll of wire gauze, or wire mesh, after which one end of said tube is rolled out or flattened and formed into a tubular casing m^2 which corresponds with the casing g in Fig. 1, and the casing m^2 is provided with an annular chamber which is filled with wire gauze, or similar material as shown at m^3 . The casing m^2 is provided with tubular end extensions m^4 which may be brazed thereto or connected therewith in any desired manner and form a continuation of the central bore or passage through the casing m^2 , and connected with one end of the casing m^2 is a pipe n which communicates with said casing at n^2 and which is connected with a needle valve device n^3 at the end of one of the tubular end extensions m^4 of the casing m^2 and in line with the central bore or passage through the casing m^2 and the tubular extensions m^4 thereon, and the

tubular extension m^4 adjacent to the needle valve device n^3 is provided with side ports or passages m^5 .

In the construction shown in Fig. 1, the ends of the tube h project from both ends of the casing g , and the form of burner thus produced is practically the same as that shown in Figs. 3 and 4, the needle valve device being substantially the same in both cases, and the operation of the form of construction shown in Figs. 3 and 4 will be the same as that shown in Figs. 1 and 2.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

A vapor burner comprising a tubular casing in which is an annular chamber filled with wire gauze, said casing being provided at each end with tubular extensions, and said casing being also provided at one side thereof and adjacent to one end thereof with a tubular coupling which is in communication therewith, a tube ranging longitudinally of said casing opposite said coupling and in communication with the end of said chamber opposite to that with which said coupling communicates, and a needle valve device connected with said tube and adapted to discharge into and centrally and longitudinally of said tubular casing.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 27th day of October 1908

WILFRID CHAUSSE.

Witnesses:

A. R. APPLEMAN,
C. E. MULREANY.