

J. TROST.
OXYGEN GAS BURNER.

APPLICATION FILED APR. 1, 1919. RENEWED JULY 14, 1920.

1,359,128.

Patented Nov. 16, 1920.

FIG. 1.

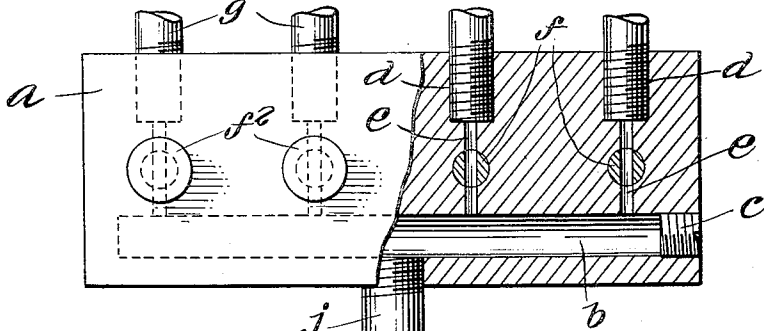


FIG. 3.

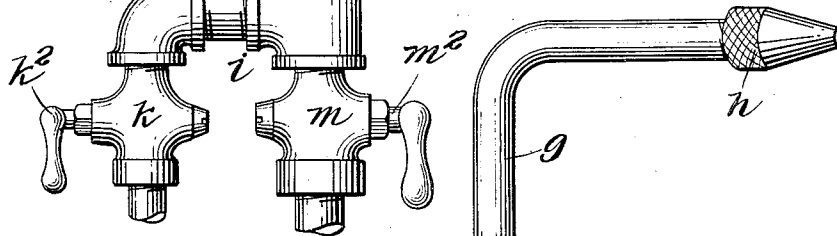
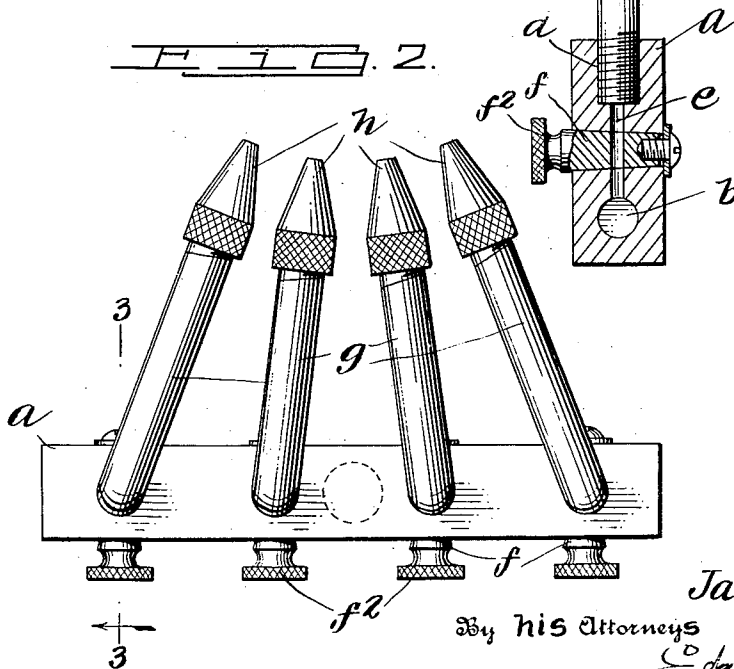


FIG. 2.



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OXYGEN-GAS BURNER.

1,359,128.

Specification of Letters Patent. Patented Nov. 16, 1920.

Application filed April 1, 1919, Serial No. 286,624. Renewed July 14, 1920. Serial No. 396,332.

To all whom it may concern:

Be it known that I, JACOB TROST, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Oxygen-Gas 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 gas burning devices for use by glass workers and particularly to what are known as oxygen gas burning devices which use oxygen gas combined with ordinary gas; and the object of the invention is to provide an improved burner of this class which is simple in construction, efficient in use and which is provided with a plurality of burner nozzles any one or more of which may be employed, and which is capable of exact regulation and adjustment; and with this and other objects in view the invention consists in a device of the class specified, constructed as herein-after 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 burner partially in section and with parts broken away;

Fig. 2 a plan view of the burner or burner head proper; and,

Fig. 3 a view showing a sectional detail of the construction.

In the practice of my invention, I provide a burner head *a* which is oblong in form and in one side portion of which is a main longitudinal bore *b* which opens at one end and the open end of which may be closed by a threaded plug *c*, and the opposite side portion of which is provided with a plurality of threaded sockets *d* which, in the form of construction shown, are four in number, and these threaded sockets are provided with supplemental bores *e* which communicate with the main bore *b* and are each provided with a valve *f* having operating milled heads *f*² at the bottom of the burner head *a*.

I also provide a plurality of burner tubes *g* which, in the construction shown, are of elbow form, and which are screwed into the

sockets *d* and provided with detachable burner nozzles *h*, said nozzles being threaded onto the tubes *g*.

The burner head *a* is employed in connection with a mixer device *i* which is connected with the head *a* and placed in communication with the bore *b* by means of a tube *j*, and the mixer device comprises two supply tubes *k* and *m* having controlling valves *k*² and *m*².

The mixer device is of the usual or any preferred construction, and in the use of my improved burner oxygen gas is admitted through one of the tubes *k—m* and ordinary gas through the other of said tubes, and this mixture of gas passes into the main bore *b* and burner head *a* through which it passes through the supplemental bores *e* into and through the tubes *g* and out through the burner nozzles *h*.

The burner nozzles *h* are detachable and as will be understood nozzles of different capacity may be employed, and by means of my improvement it will be seen that any one of the burners or burner nozzles *h* may be separately employed, or any two or three thereof, and in this way I provide means whereby any desired degree of heat may be employed and controlled at the will of the operator, and the burner tubes *g* may, as will be understood, be turned into any desired position, and the nozzles *h* separated or brought closer together as may be desired, and while I have shown and described the preferred form of my improvement, my invention is not limited to the details of construction herein shown and described, and changes therein and modifications thereof may be made, within the scope of the appended claims, without departing from the spirit of my invention, or sacrificing its advantages, and while I have described my improved burner as particularly adapted for use in connection with oxygen and ordinary or coal gas, it will be understood that said burner may be used in connection with hydrogen and other gases.

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

1. In a gas burning device of the class described, a burner head provided with a main longitudinal bore which is open at one end and provided with a closure device, a plurality of supplemental bores communicating with the longitudinal bore at right

angles thereto and opening through one side of said head and provided with separate valves, and elbow-shaped burner tubes rotatably mounted in said supplemental bores and provided with nozzles.

2. In a gas burning device of the class described, a burner head provided with a main longitudinal bore which is open at one end and provided with a closure device, a plurality of supplemental bores communicating with the longitudinal bore at right angles thereto and opening through one side of said head and provided with separate valves, burner tubes mounted in said supplemental bores and provided with nozzles, and means connected with said head for supplying a mixture of oxygen and gas to the main longitudinal bore.

3. In a gas burning device of the class described, a burner head provided with a main longitudinal bore which is open at one end and provided with a closure device, a plurality of supplemental bores communicating with the longitudinal bore at right angles thereto and opening through one side of said head and provided with separate valves, burner tubes rotatably mounted in said supplemental bores and provided with nozzles, and means connected with said head for supplying a mixture of oxygen and gas to the main longitudinal bore.

4. In a gas burning device of the class described, a burner head provided with a main longitudinal bore which is open at one end and provided with a closure device, a plurality of supplemental bores communicating with the longitudinal bore at right angles thereto and opening through one side

of said head and provided with separate valves, elbow-shaped burner tubes rotatably mounted in said supplemental bores and provided with nozzles, and means connected with said head for supplying a gas mixture to the main longitudinal bore.

5. In a gas burning device of the class described, a burner head provided with a main longitudinal bore or chamber, a plurality of supplemental bores communicating with the main longitudinal bore or chamber at an angle thereto and opening through one side of said head, burner tubes mounted in connection with said head and communicating with said bore or chamber and provided with nozzles, and means for supplying a gas mixture to said bore or chamber.

6. In a gas burning device of the class described, a burner head provided with a main longitudinal bore or chamber, a plurality of supplemental bores communicating with said bore or chamber and opening through one side of said head, a plurality of burner tubes adjustably connected with said head and communicating with said bore or chamber through said supplemental bores, nozzles connected with said burner tubes, and means for supplying a gas mixture to said bore or chamber.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 29th day of March, 1919.

JACOB TROST.

Witnesses:

C. E. MULREANY,
H. E. THOMPSON.