W. WRIGHT.

Gas Burner.

No. 21,229. Patented Aug. 17, 1858.

Fig: 1

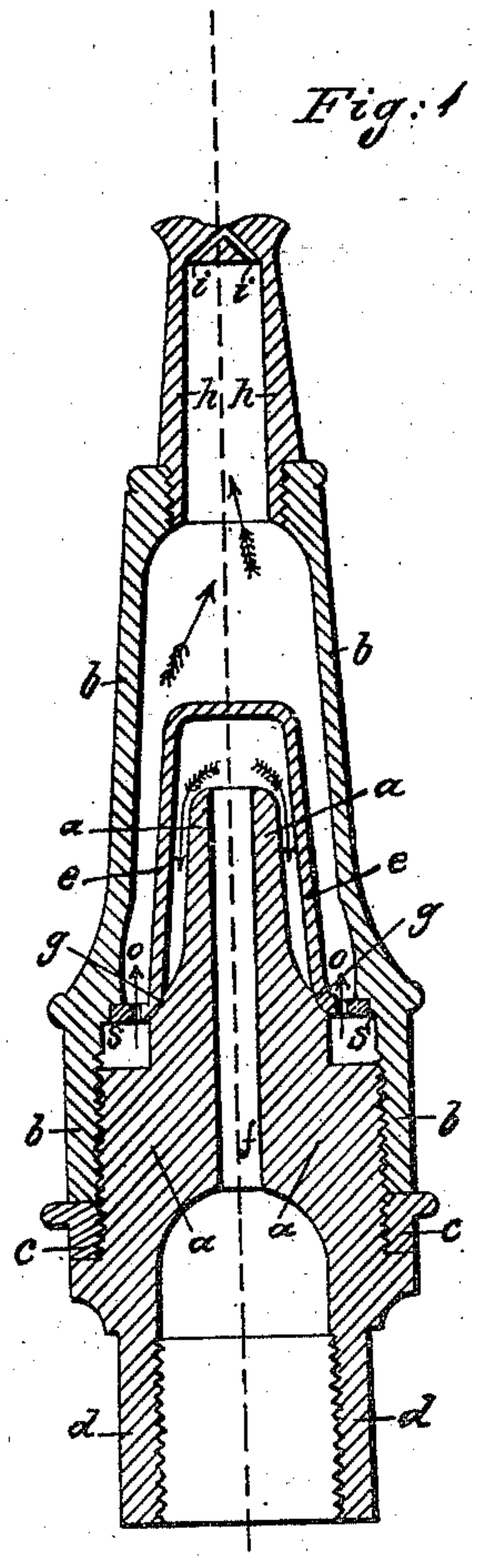


Fig: 2.

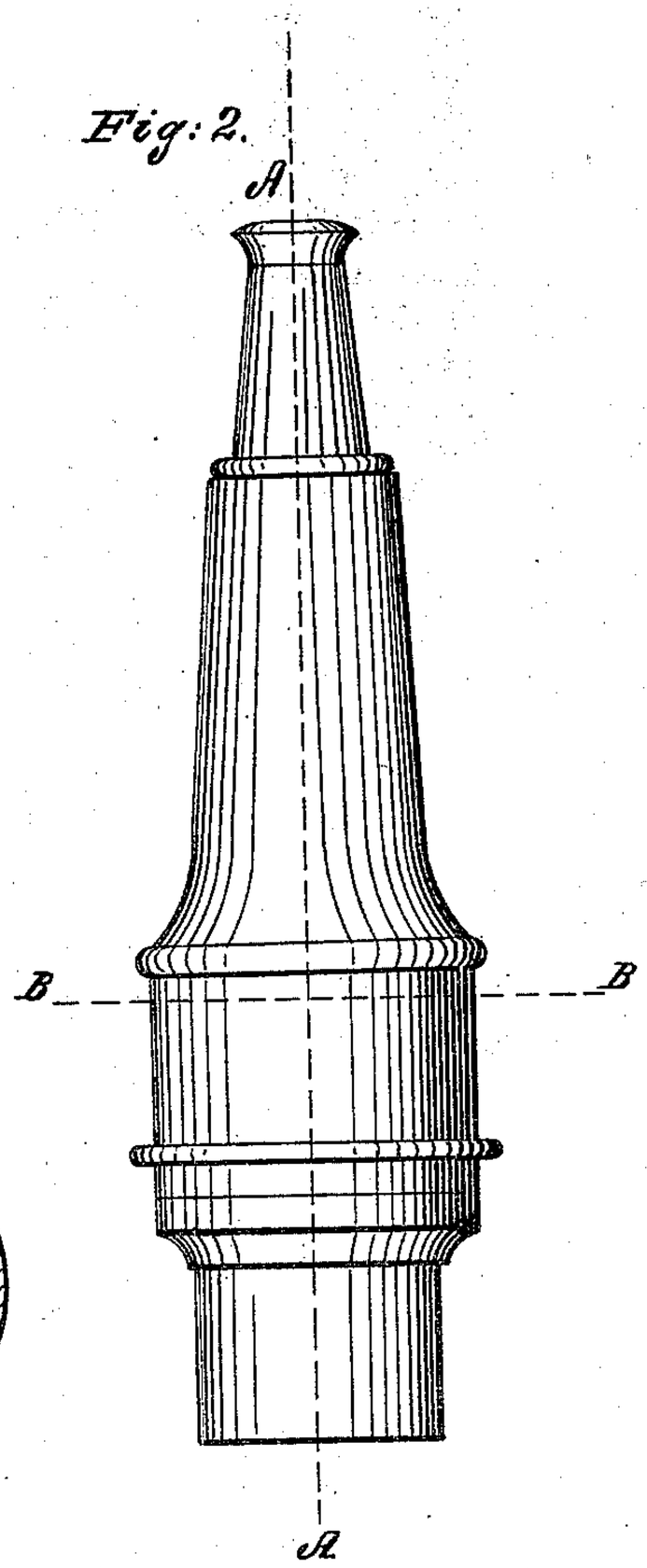
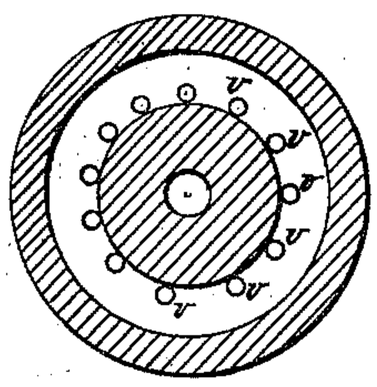


Fig: 3.



UNITED STATES PATENT OFFICE.

W. WRIGHT, OF ST. LOUIS, MISSOURI.

GAS-BURNER.

Specification of Letters Patent No. 21,229, dated August 17, 1858.

To all whom it may concern:

Be it known that I, WILLIAM WRIGHT, of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Gas-Burners; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, making part of this specification, in which—

Figure 2 is a plane elevation, Fig. 1 a longitudinal section through A, and Fig. 3 a transverse section through B.

The nature of my invention consists in the peculiar construction of the burner, whereby the flow of gas through it is regulated and whereby I am enabled to change the direction of the current and to force the gas against the heated sides of the burner, thus rarefying and purifying it, and preventing it from blowing through—in the manner hereinafter set forth.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I first make the tube or hollow shell *p* of the form shown on the drawing—and in the top and bottom end of it I cut a screw thread, as shown at *p* and *n* and I also form it with a shoulder at *s* where I also turn a sharp thin edge, after which I make the thimble *e* of the form shown and introduce it to the position shown, with the flange bearing against the shoulder at *s*. I then with a corking iron drive the thin edge *s* down hard on the flange, which secures the thimble firmly to its position. I then make the gas receiver *a* the upper part of which is so made as to form a valve which fits into a seat made in the thimble *e* as shown at *g*. On the outside of this receiver, a thread is cut as shown at *b* and on it an adjustable flange nut is screwed shown at *c*. In the top of the tube *b* the "tip" *h* is screwed, in the top of which there are two diagonal orifices as shown at *i i*. The drawing shows the burner on an enlarged scale, it being just double the proper size.

Now suppose the burner to be screwed on the gas pipe at *d*. The gas passes up through the receiver at *f* and into the thimble *e*. The tube *b* is then screwed up a short distance which opens the valve *g*, which allows the gas to enter the chamber *s* and pass up through the small orifices, which are made around the flange of the thimble *e* as shown by the arrows *o o*. These orifices are also shown at *v v v* Fig. 3. The gas after leaving these orifices passes up against the inside of the tube *b* and tip *h* and out through the orifices *i i* where it is consumed.

It will be seen that in case the tube *b* was screwed up so as to open the valve *g* the gas would escape around the receiver *a* through the thread *b* unless there was some method of making a joint around the bottom of the tube. Now this end is obtained by the use of the adjustable nut *c* which enables me to open the valve to any given distance and at the same time to make a tight joint.

One of the objects of this invention is to regulate the amount of gas that flows through it at will by its peculiar construction and another object is to force the current of gas to change its direction twice—so as to arrest its velocity—and prevent it from "blowing through," that is, escaping at the orifices *i i* faster than it is consumed.

The first of these objects is effected by the use of the valve *g* and the nut *c* for by the use of the valve the flow of gas may be stopped entirely or there may be just enough allowed to escape to support combustion or it may be opened so as to burn six cubic feet per hour.

The second of the aforementioned objects is obtained by the use of the thimble *e* over the upper end of the receiver, for by it the gas is forced to return, and pass up through the orifices *v v v* as shown by the arrows *o o* and thus brought in contact with the heated surface of the tube *b* by which it is heated, and rarefied and dried, thus causing a more perfect consumption of the gas and a more brilliant light.

It will thus appear that by the use of the thimble *e* in combination with the receiver *a* I am enabled to effect the two fold object of regulating the supply, or rather the consumption, of the gas, and of arresting the velocity of its flow through the burner and by the use of the adjusting screw *c* I am enabled to complete the adjustability of the contrivance by thus providing a method of perfecting the joints.

I lay no claim to any of the devices used in the inventions of C. H. Johnson or E. P.

Gleason, or A. H. Roy, or J. C. Walsh as such; but—

What I claim as new, and as my invention is—

The adjustable valve, in combination with the chamber in which the said valve seats and the adjusting nut around the said valve whereby the joint is made tight in any given position, for the purpose specified and in the manner specified.

WILLIAM WRIGHT.

Witnesses:

THOS. B. ANNAN,

AMOS BROADNAX.