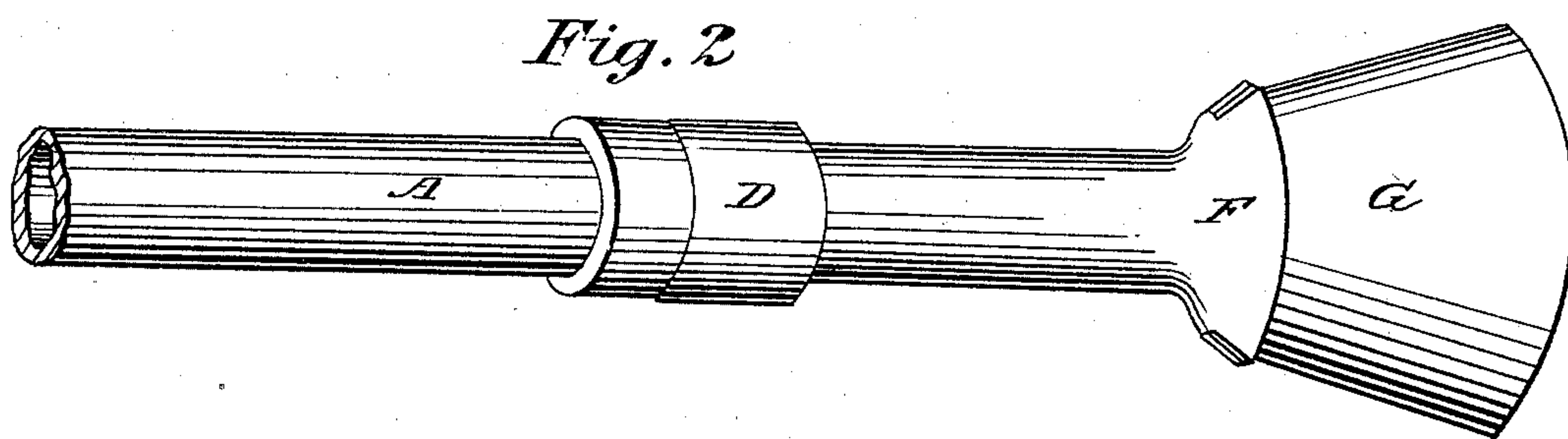
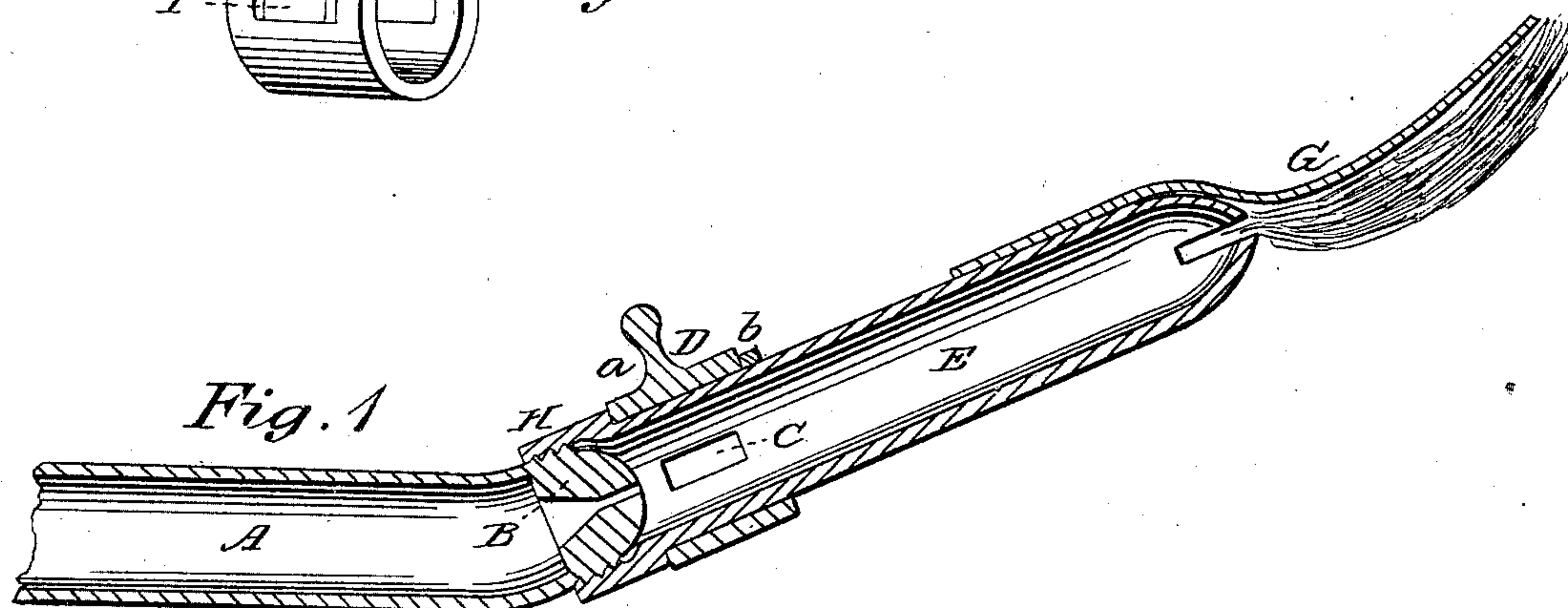
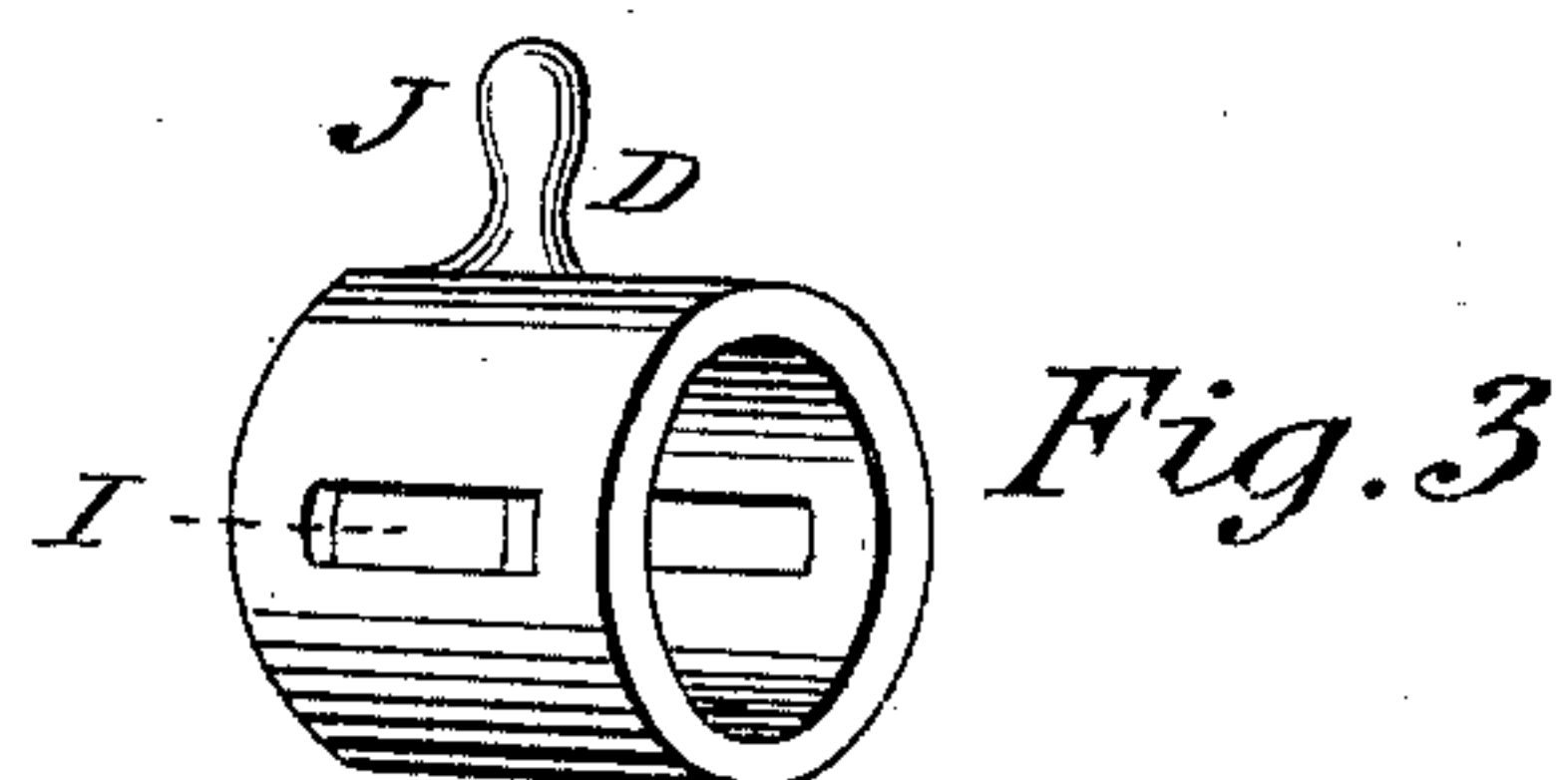


E. SAVAGE.
Vapor Burner.

No. 94,778.

Patented Sept. 14, 1869.



Witnesses:
L Hailer
P. T. Dodge

Inventor:
E. Savage
by Dodge & Munroe
his atty.

United States Patent Office.

EDWARD SAVAGE, OF CHICAGO, ILLINOIS.

Letters Patent No. 94,778, dated September 14, 1869.

IMPROVEMENT IN VAPOR-BURNERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDWARD SAVAGE, of Chicago, in the county of Cook, and State of Illinois, have invented certain new and useful Improvements in Vapor-Burners; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention relates to vapor-burners; and consists in a novel construction and arrangement of the supply-pipes, in connection with a metallic plate for heating them, and an adjustable slotted or perforated ring, for supplying and regulating a supply of atmospheric air.

In the drawings—

Figure 1 is a longitudinal section of my improved burner;

Figure 2 is a bottom elevation of the same; and

Figure 3 is a perspective view of the ring for supplying air.

In constructing my improved vapor-burner, I form the end of the supply-pipe A, which is connected with the gasoline or petroleum-reservoir, as clearly shown in fig. 1, so as to have a small opening, B, through which the fluid or vapor passes in a jet, and on its outer surface cut a screw-thread, H.

To the pipe A, I connect the short pipe E, by screwing it thereon, having provided the inner surface of its end with a suitable screw-thread for that purpose, as shown in said fig. 1.

The end of the pipe A I curve, so that the pipe E may form an angle with it, as shown in the same figure.

The outer end of the pipe E I fashion so as to form a broad, flat, narrow-mouthed burner, F, as shown in figs. 1 and 2, and to its upper side fasten, by any suitable means, a plate, G, shaped and arranged as clearly shown in the same figures.

Near its opposite or inner end, and so as to be just above the hole B of the pipe A when the pipes are connected, I make two slots or openings, C, of the same size, and immediately opposite to each other; and on this pipe, and immediately over the slots C, I

place a flat ring, D, with slots or openings I, corresponding in size and shape with the slots in the pipe E, and having a small handle, J, for convenience in operating it.

The end of the pipe E may have a shoulder, a, and a pin, b, or other suitable devices for keeping the ring D in place.

In operating my burner thus constructed, I first heat the pipes with an alcohol lamp or other convenient apparatus, having first adjusted the ring D so as to allow a supply of air to pass into the pipe E. The pipes, when thus heated, will cause a jet of fluid or vapor to pass through the hole B, where the air, coming through the slots or openings I C, will mingle with it, and the two will pass up the pipe E and out through the burner F, and then can be lighted.

When lighted, the flame will strike against the plate G, as shown in fig. 1, and heat it. This heat will be communicated to the pipes E and A in turn, and thus cause a continuous supply of vapor for the flame.

By means of the ring D, the supply of air is easily regulated, it being only necessary to adjust it for that purpose.

If at any time the hole B becomes clogged and needs cleaning, or if the pipe E needs cleaning or repairing, or if it is desired to exchange it for another for any reason, it is readily removed by simply unscrewing it.

My improved vapor-burner is intended to drop from the ceiling or project from side walls in the same manner as the ordinary gas-burners, and to be used in place of them.

In this way I produce a simple and cheap burner, which, when lighted, continues to supply itself with vapor and atmospheric air united, and to give a brilliant and at the same time an economical light.

Having thus described my invention,

What I claim, is—

A vapor-burner, consisting of the pipes A and E, in combination with the plate G and ring D, all constructed and arranged substantially as herein described.

EDWARD SAVAGE.

Witnesses:

WM. H. LOTZ,

LOUIS SCHMIDT.