

(No Model.)

2 Sheets—Sheet 1.

J. J. BUHOUP.
OIL BURNER.

No. 477,193.

Patented June 14, 1892.

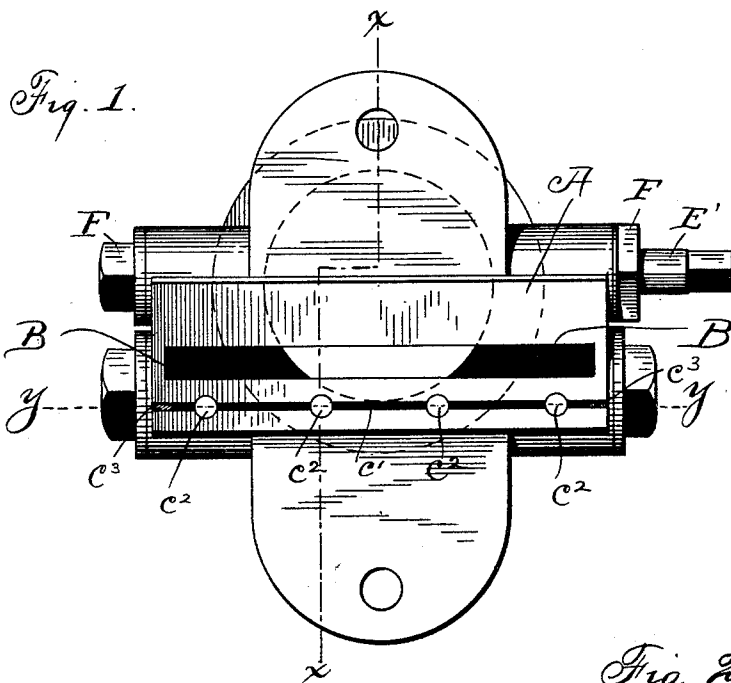
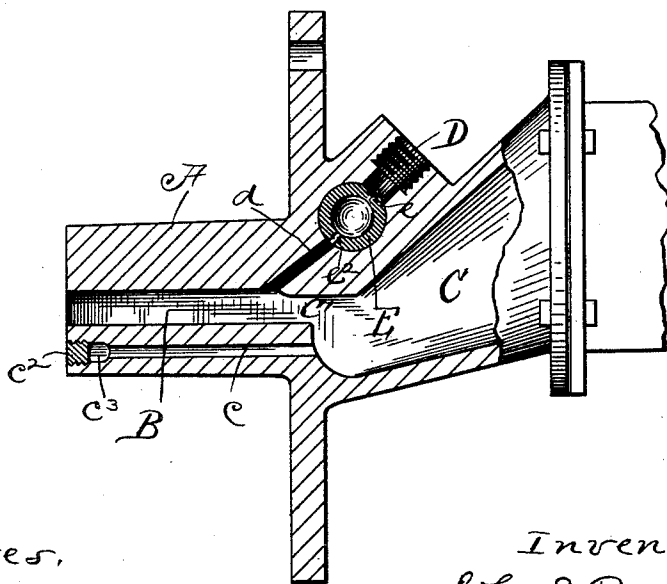


Fig. 2.



Witnesses,

E. Byron Gilchrist
Attorney

Inventor,

John J. Buhoup
By [Signature] Attorney

(No Model.)

2 Sheets—Sheet 2.

J. J. BUHOUP.
OIL BURNER.

No. 477,193.

Patented June 14, 1892.

Fig. 3.

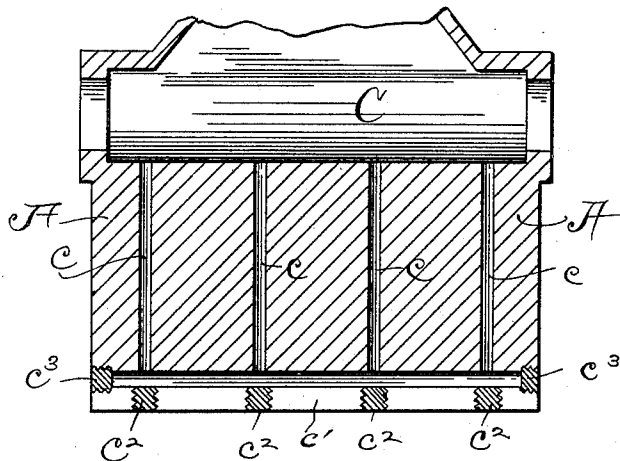


Fig. 4.

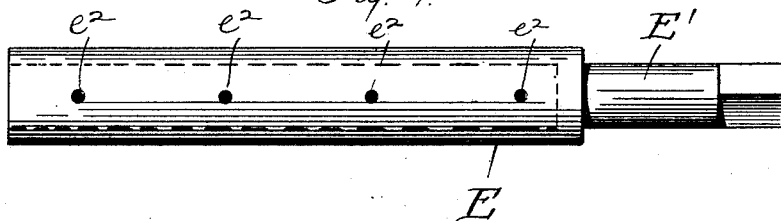


Fig. 5.



Witnesses,
E. Byron Gilchrist
[Signature]

Inventor,
John J. Buhoup
By *[Signature]*
Attorneys

UNITED STATES PATENT OFFICE.

JOHN J. BUHOUP, OF CLEVELAND, OHIO, ASSIGNOR OF THREE-FOURTHS TO
MARY A. SHEPPARD AND WILLIAM J. SHEPPARD, OF SAME PLACE, AND
RICHARD B. TATE, OF PITTSBURG, PENNSYLVANIA.

OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 477,193, dated June 14, 1892.

Application filed September 3, 1891. Serial No. 404,619. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. BUHOUP, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Oil-Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in oil-burners; and it consists more especially in the peculiar construction of oil-valve for regulating and equalizing the distribution of oil to the burner, so as to produce a uniform sheet of flame at the mouth of the burner.

It also consists in suitable means for preventing the dripping of oil from the mouth of the burner.

It consists, also, in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of the burner. Fig. 2 is a vertical section on line *x x*, Fig. 1. Fig. 3 is a horizontal section on line *yy*, Fig. 1. Figs. 4 and 5 are elevations of the oil-valve hereinafter more fully described.

The body of the burner A may be made in sections bolted together or, as shown in the drawings, of a single casting.

B represents the mixing or commingling chamber, the side walls of which diverge toward the mouth or outlet of the burner, thus spreading the fuel and flame into a fan-shaped form.

C and D represent, respectively, air and oil supply pipes, that communicate with the mixing or commingling chamber B by means of passage ways or inlets *c'* and *d*, respectively. These passage ways or inlets extend, preferably, the entire width of the rear end of the commingling or mixing chamber B, the oil-inlet discharging somewhat forward of the air-inlet to prevent the possibility of oil entering the latter.

The air-supply is controlled by a valve. (Not shown.)

For regulating the supply of oil to the mixing-chamber and insuring an equal distribu-

tion of the same the entire width of said chamber a cylindrical or tubular valve E is provided. The construction of casting A is such as to form a suitable seat for this valve, the casting or body of the device having a lateral opening at one or either side for the entrance and removal of the valve for cleaning and other purposes, such lateral opening or openings being screw-threaded internally for receiving a correspondingly-threaded plug F. Plug F (or one of such plugs in case there are two) is pierced for the passage of the valve-stem E' to the outside of the body of the device, where it can be manipulated. Oil-valve E has a longitudinal peripheral groove, as at *e*, communicating with and distributing the oil to the interior of the valve by means of holes *e' e'* at opposite ends of the groove. Valve E also has a series of orifices *e²*, that are adapted to discharge into the oil inlet or passage-way D, leading to the mixing-chamber. The oil-valve shown in the drawings has a series of four outlet orifices at approximately equal intervals, and the relative arrangement of inlet and outlet orifices *e' e²* is preferably such that an orifice *e'* discharges approximately midway between two orifices *e²*. With such arrangement the equal distribution of oil to the mixing or commingling chamber is regulated to a nicety.

To prevent the dripping of oil, at the mouth of the burner is provided a series of holes or channels *c*, extending from the air supply pipe or reservoir to a horizontal slit *c'* in the front end of the burner, slit *c'* extending the entire width of the mouth of the burner and being preferably enlarged next to the discharging ends of holes *c*, as at *c²*. Slit *c'* is plugged opposite the discharging ends of holes or channels *c*, as at *c³*, and preferably, also, at the sides, as at *c⁴*, whereby the air discharged from holes or channels *c* is spread and distributed to all points widthwise the front of the burner and directs into the flame any oil that would otherwise have dripped.

What I claim is—

1. In an oil-burner, the combination, with the mixing or commingling chamber having inlets for air and oil, respectively, of a tubu-

95

lar valve having a series of outlet-orifices adapted to register with the oil-inlet of the mixing or commingling chamber and having a longitudinal peripheral groove and an orifice at either end of said groove for receiving and distributing the oil to the series of outlet-orifices, substantially as set forth.

2. In an oil-burner, the combination, with the mixing or commingling chamber having inlets for oil and air, respectively, and an air supply pipe or reservoir, of a slit in the front end of the burner below and extending approximately the entire width of the mouth of the burner, substantially as indicated, one or more openings or channels leading directly from the air supply pipe or reservoir to and discharging into said slit, and a plug or spreader located opposite the discharging end of said air channel or channels, substantially as set forth.

3. In an oil-burner, the combination, with a mixing or commingling chamber having inlets for oil and air, respectively, and an air supply pipe or reservoir, of a slit in the front end of the burner below and extending approximately the entire width of the mouth of the burner, a series of openings or channels leading directly from the air supply pipe or reservoir to and discharging into said slit, and plugs or spreaders located opposite the discharging ends of said air channels or openings, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 15th day of August, 1891.

JOHN J. BUHOUP.

Witnesses:

C. H. DORER,

E. BYRON GILCHRIST.