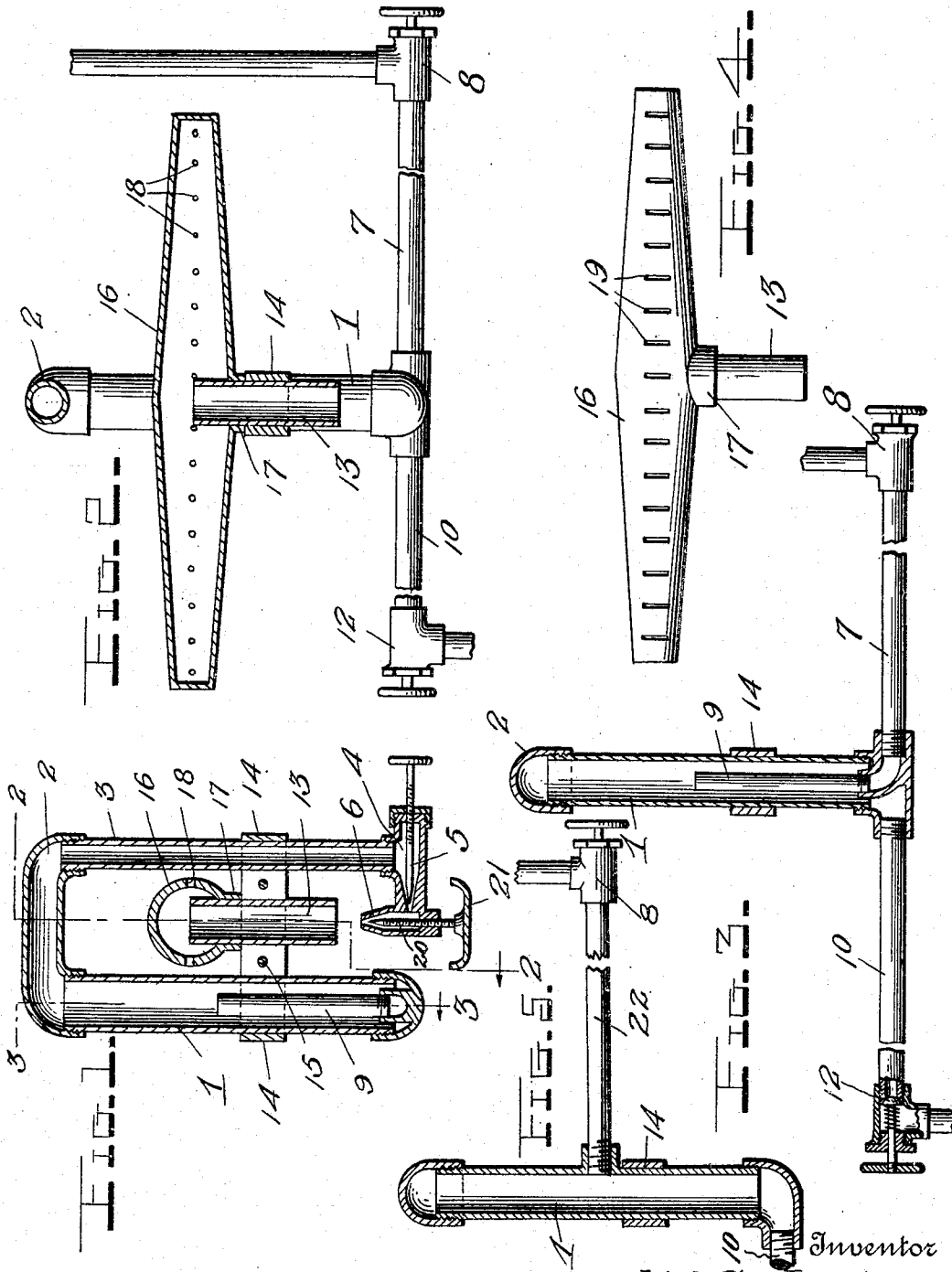


W. S. JENKS.  
OIL BURNER.

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939,029.

Patented Nov. 2, 1909.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM S. JENKS, OF LOS ANGELES, CALIFORNIA.

## OIL-BURNER.

939,029.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed April 19, 1909. Serial No. 490,765.

*To all whom it may concern:*

Be it known that I, WILLIAM S. JENKS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Oil-Burners; and I do 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 appertains to make and use the same.

This invention relates to improvements in oil burners.

The object of the invention is to provide an oil burner having means whereby the asphaltum or other sediment in the oil will be caught and drained off thus preventing the clogging up of the generating tube and the burner.

A further object is to provide an oil burner having a detachable burner head which may be readily removed and cleaned.

With these and other objects in view the invention consists of certain novel features of construction combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a vertical sectional view of a burner constructed in accordance with my invention. Fig. 2 is a similar view taken at right angles to and on the line 2—2 of Fig. 1. Fig. 3 is a similar view on the line 3—3 of Fig. 1. Fig. 4 is a detail side view of the burner head and its supporting tube showing a modified form of the burner openings, and Fig. 5 is a view similar to Fig. 3 showing a modified form of connection between the oil supply pipe and the generating tube.

Referring more particularly to the drawings 1 denotes the generating tube which is connected at its upper end by an elbow 2 with a gas tube 3 on the lower end of which is arranged a valve casing 4 having a needle valve 5 connecting with an injector 6. Engaged with the lower end of the generating tube 1 is an oil supply pipe 7 having arranged therein a regulating valve 8. The end of the oil supply pipe 7 extends upwardly in the generating tube as shown at 9, thereby forming a trap in the lower end of the generating tube to catch the asphaltum or other sediment in the oil and thus prevent the oil supply pipe or generating tube from becoming clogged up.

To the lower end of the generating tube 1 is connected a drain pipe 10 having arranged therein a spring projected safety valve 12, on the stem of which is arranged a handle by means of which the valve may be manually opened to drain the pipe 10.

Arranged between the generating tube and the gas tube 3 above the injector 6 is a burner tube 13, said tube being supported in proper position above the injector by means of clamping plates 14 which are held in operative position by clamping bolts 15. Loosely engaged with the upper end of the burner tube 13 is a transversely disposed burner head 16, said head being supported on the tube 13 by means of a collar 17. The upper end of the tube 13 projects up into the burner head a suitable distance to prevent the discharge end of the tube from becoming clogged by carbon or other sediment which may fall to the bottom of the burner head. The burner head 16 may be provided with discharge openings in the form of perforations 18 or in the form of slots 19, as shown in Fig. 4 of the drawings. The openings are arranged to direct the flame against the generator tube at a point immediately above the discharge end of the oil burner. This point is therefore the hottest upon the tube and as the oil enters is quickly vaporized by the heat.

In the injector 6 is arranged a cleaning needle 20 adapted to be screwed up into the tip of the injector to clean and keep the same open. On the lower end of the needle is arranged an oil pan 21 which serves the two fold purpose of operating the needle and to contain a small quantity of oil for the initial heating of the burner.

In Fig. 5 of the drawings, is shown a modified arrangement of the generating tube wherein the oil supply pipe 22 is connected directly to the generating tube at or slightly below the point where the flame from the burner engages the tube, this being the hottest point on the tube. When the oil is introduced into the tube at this point the volatile part of the same is vaporized by the heat and passes up to the burner tube while the heavy, tarry, residuum and the sediment in the oil falls to the bottom of the generating tube and is carried off by the drain pipe as hereinbefore described, thereby preventing the clogging up of the generating tube.

From the foregoing description, taken in connection with the accompanying draw-

ings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention as defined in the appended claims.

10 Having thus described my invention what I claim as new is:

1. In a device of the class described, a generating tube, an oil supply pipe opening into said tube, above its lower end and at a point adjacent to the hottest part of the tube, a drain pipe connected to the lower end of said generating tube, a safety valve arranged in said drain pipe, a burner, and a gas conducting pipe to connect said generating tube 20 with said burner.

2. In a device of the class described, a generating tube, an oil supply pipe opening into said tube, above its lower end and at a point adjacent to the hottest part of the tube, a drain pipe connected to the lower end of said generating tube, a safety valve arranged in said drain pipe, a burner, a valved gas conducting pipe to connect said generating tube with the burner, an injector on said gas 25 pipe, a cleaning needle in said injector and a combined oil pan and handle on the outer end of said needle.

3. In a device of the class described, a generating tube, an oil supply pipe arranged in said generating tube to form a trap, a drain pipe connected to said tube, a burner tube, a burner arranged on said burner tube, and a gas pipe to conduct the gas from said generator tube to said burner tube. 35

4. In a device of the class described, a generating tube, a valved drain pipe connected to the lower end of said generating tube, a valved oil supply pipe connected with and projecting up into said generating tube to form a trap, a gas tube connected to the upper end of said generating tube, a burner supporting tube, means to hold said burner tube in operative position between the generating tube and the gas tube, a burner head, means to support said burner head on said burner tube whereby the upper end of the tube projects into said head above the bottom thereof, a valved injector arranged on the lower end of said gas tube below the burner tube and an oil pan arranged below said injector. 40 45 50 55

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM S. JENKS.

Witnesses:

F. L. CRAIG,  
LYMAN W. SMITH.