A. A. JAHNKE.

INCANDESCENT LAMP BURNER.

APPLICATION FILED MAY 28, 1907.

939,137. Patented Nov. 2, 1909.

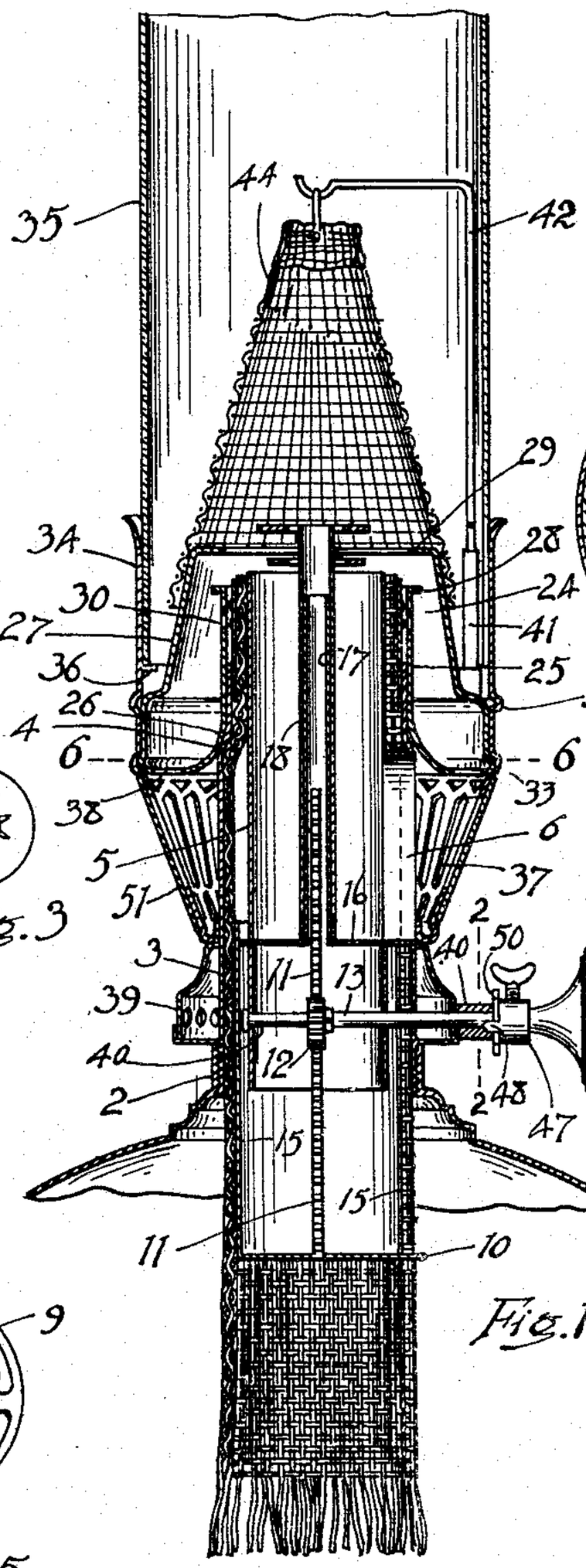

Fig. 1

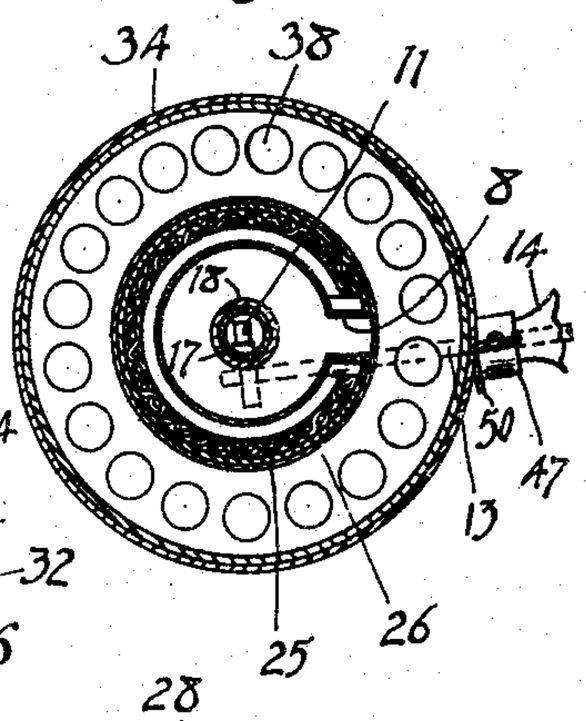

Fig. 6

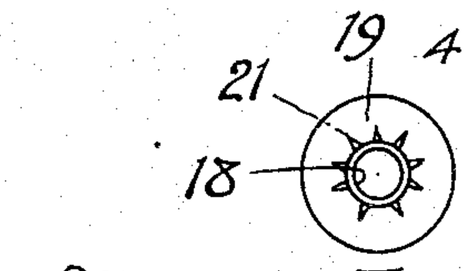

Fig. 3

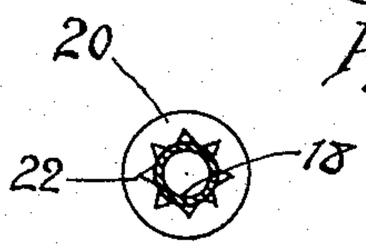

Fig. 4

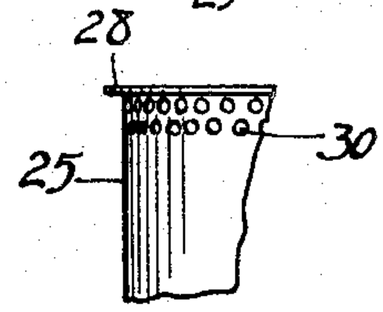

Fig. 7

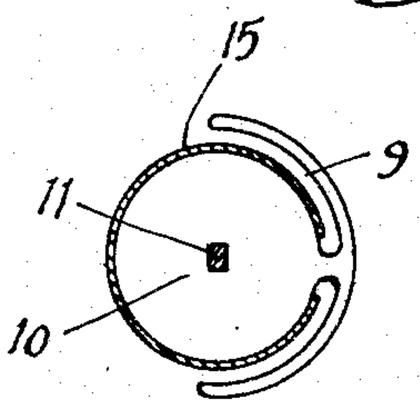

Fig. 5

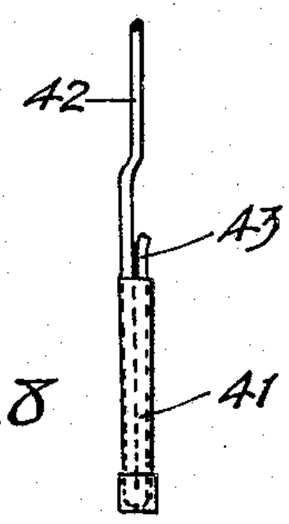

Fig. 8

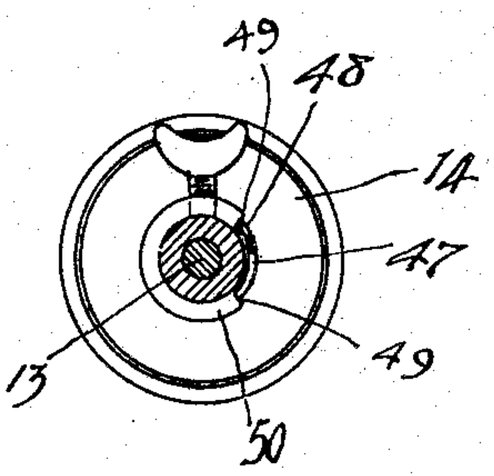

Fig. 2

WITNESSES:

Geoffrey Holt.

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BY

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ATTORNEY.

UNITED STATES PATENT OFFICE.

ALBERT A. JAHNKE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO INCANDESCENT OIL LAMP COMPANY, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF ARIZONA TERRITORY.

INCANDESCENT-LAMP BURNER.

939,137. Specification of Letters Patent. Patented Nov. 2, 1909.

Application filed May 28, 1907. Serial No. 376,071.

To all whom it may concern:

Be it known that I, ALBERT A. JAHNKE, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Incandescent-Lamp Burners, of which the following is a specification.

The object of the present invention is to provide an improved burner for incandescent oil lamps, by means of which the air can be supplied more evenly and to better advantage to the combustible gas generated from the oil.

In the accompanying drawing Figure 1 is a vertical section of a portion of a lamp equipped with my improved burner; Fig. 2 is a section on the line 2—2 of Fig. 1; Fig. 3 is a top plan view of the generator; Fig. 4 is a horizontal section thereof; Fig. 5 is a horizontal section of the wick raiser; Fig. 6 is a section on the line 6—6 of Fig. 1; Fig. 7 is a broken side view of the inner wall of the air chamber; Fig. 8 is a detail broken side view of the mantle post.

Referring to the drawing, 1 indicates the body of the lamp, a portion only being here shown. Into the neck 2 of said body is screwed the outer wall 3 of the wick chamber, said wall being formed with an inwardly extending shoulder 4. 5 indicates the inner wall of the wick chamber, and said outer and inner walls are formed with registering apertures forming an air inlet 6 leading to the interior of the inner wall of the wick chamber which thus forms the wall of the central draft tube. The edges of the apertures of the outer and inner tubes 3, 5, are connected, as shown at 8, so as to entirely inclose the wick within the wick chamber and prevent access thereto from the outer air. The wick used is a flat wick bent in the form of a cylinder, but with its vertical edges separated from each other, said edges passing on each side of the air inlet 6. Said edges pass into circular recesses 9 formed in the bottom plate 10 of the wick raiser, said plate being connected to a rack 11 which is engaged by a pinion 12 on a stem 13 turned by means of a handle 14. Connected to the inner edges of the recesses 9 is a cylindrical plate 15 which passes up with the wick through a guideway formed in a horizontal partition 16, the latter partition extending across the inner wall of the wick chamber beneath said air inlet 6. From the center of said partition rises a tube 17 in which reciprocates the rack 11 of the wick raiser. Upon this tube is placed the tube 18 of the generator, which carries the upper and lower spreaders 19, 20, the upper spreader having the apertures 21 and the lower spreader having the apertures 22, somewhat larger than the apertures 21. The function of these spreaders is to deflect the air admitted to the inlet 6 and cause it to fully commingle with the combustible vapor rising from the wick. The apertures 21, 22 in said spreaders form an important service in breaking up the current of air and preventing eddies, thus supplying the air uniformly to said vapor.

The air chamber 24 is inclosed by a single piece of sheet metal shaped to form an inner wall 25, having a shoulder 26 resting upon the shoulder 4, and also an outer wall 27. The inner wall has at the top the outwardly extending flange 28 and the outer wall has the inwardly extending flange 29 above the flange of the inner wall. Said inner wall is also formed near said flange with the apertures 30. These perforations 30 form an important function in admitting air from the air chamber to the combustible vapor rising from the wick, and dividing and evenly distributing the air so admitted. The outer wall is formed with circumferential beads 32, 33, and also formed with beads registering with the beads 32, 33, is the combined chimney holder and air screen 34, the upper portion being substantially cylindrical, to retain therein the chimney, shown at 35, and having inwardly extending feet 36, upon which said chimney rests, and the lower portion curving inwardly and being formed with numerous perforations 37 to admit air to the interior. The air so admitted passes up through apertures 38 formed in the bottom of the air chamber and thus passes into said chamber. Between the air screen and the neck of the lamp is the perforated base ring 39 which conceals the bearing 40 of the stem of the wick raiser.

Secured within the chimney holder is a pocket 41, in which is received the bottom of the mantle post 42, said post having its lower end bent back on itself to form a

spring arm 43, which by spring pressure holds the post securely in the pocket. Suspended from said post is the mantle 44. In conformance with the conical shape of the mantle the outer wall of the air chamber is also made of a conical form fitting snugly within the lower end of the mantle.

In order to prevent turning the wick too high, there is secured to the stem a collar 47 having a finger 48 which moves between stops 49 formed in a disk 50 secured to the bearing 40 for said stem.

In order to prevent the lamp smoking, when being carried by hand, I provide around the apertures 37 an air shutter 51, which can be turned to vary the extent of opening for the admission of air, so that, when necessary, the air can be shut off to prevent imperfect combustion.

The operation of the device can now be readily understood. The air is supplied partly through the air inlet 6 and up through the central draft chamber, being deflected by the spreaders 19, 20, and partly through the apertures 38 into the air chamber, whence it is supplied past the flange 28 and through the apertures 30. I have found that this arrangement furnishes a uniform and even supply of air to the hydro-carbon vapor arising from the wick. The flames of combustion are uniformly distributed within the interior of the mantle and pass uniformly through said mantle, thus producing uniform incandescence thereof.

I claim:—

In a lamp, the combination, with the outer wall of a wick chamber, of an inner wall of an air chamber, arranged adjacent to said outer wall to form an air conduit, said inner wall extending into close proximity with the top of the outer wall of the wick chamber, and being formed close to said top with small perforations to admit air into the space between said walls, and an outer wall of the air chamber having an inwardly extending flange to direct the air inward, substantially as described.

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

ALBERT A. JAHNKE.

Witnesses:

FRANCIS M. WRIGHT,

D. B. RICHARDS.