L. STOCKSTROM.

OIL BURNER.

APPLICATION FILED DEC. 16, 1914.

1,183,603.

Patented May 16, 1916.

Fig. 1.

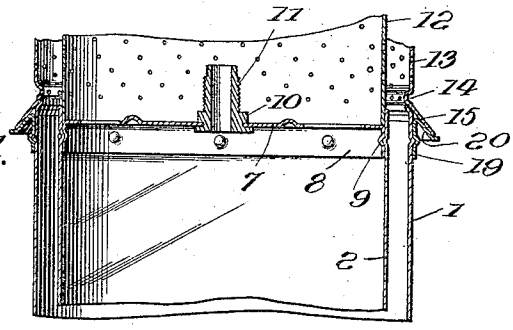


Fig. 2.

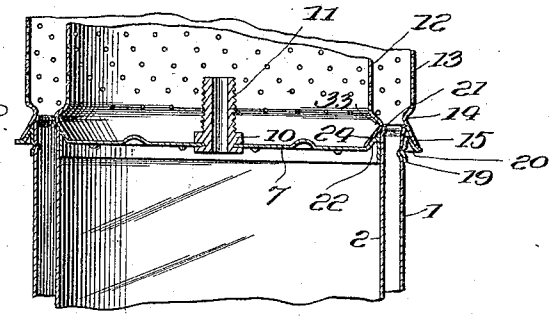
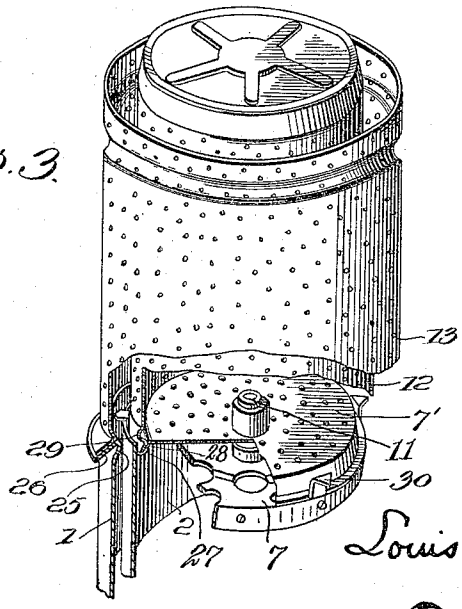


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

LOUIS STOCKSTROM, OF ST. LOUIS, MISSOURI, ASSIGNOR TO AMERICAN STOVE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

OIL-BURNER.

1,183,603. Specification of Letters Patent. Patented May 16, 1916.

Original application filed July 3, 1914, Serial No. 848,759. Divided and this application filed December 16, 1914. Serial No. 877,563.

To all whom it may concern:

Be it known that I, LOUIS STOCKSTROM, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Oil-Burners, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in oil burners, and is a division of application Serial Number 848,759, filed July 3rd, 1914.

The object of my invention is to provide an oil burner of the wick type in which the combustion tubes are more readily seated in their proper position in the burner tubes, so that the burner or burners will be supplied with the proper amount of air. In burners of this character it has been found difficult to properly center the combustion tubes on the wick tubes, as they would at times get on top of the wick tube and not down in their proper position, which would supply too much air and, therefore, the proper combustion would not take place.

Another object of my invention is to provide a combustion section in which the centering means also strengthens the same and prevents it from getting out of shape and thus at all times insures the proper centering of the combustion tubes on the wick tubes.

A still further object of my invention is to provide a simple, cheap and effective means for properly centering the combustion tubes on the wick tubes and having certain details of structure hereinafter more fully set forth.

In the accompanying drawings: Figure 1 is a vertical sectional view of the oil burner embodying my invention. Fig. 2 is a vertical sectional view similar to Fig. 1, and showing the centering means on both the inner and outer wick tubes. Fig. 3 is a perspective sectional view of a modified form showing the wick stop support, serving as means for centering the combustion tubes on the wick tubes used with a wick-stop.

Referring now to the drawings, 1 represents the outer wick tube and 2 the inner wick tube, which are arranged the proper distance apart, all of which is well understood by those skilled in the art and needs no further description. Secured to the inner wick tube 2 is a diaphragm 7, which is provided with a downwardly extending flange 8, having a punched in portion 9, which securely fastens the diaphragm to the inner wick tube 2. The diaphragm 7, at the center is provided with an upwardly extending sleeve 10 threaded at 11, on which is adapted to be screwed a wick stop when the same is to be used on the burner. In Figs. 1 and 2 I have omitted the wick stop, but it is understood that this is to be used.

In Fig. 3 is shown the invention used in connection with a wick-stop 30, which is screwed upon the threaded sleeve 11 by the diaphragm 7′, as shown.

The outer combustion tube 13 is provided adjacent its lower end with an inwardly extending beading 14, which strengthens the combustion tube and prevents it from warping by the intense heat to which it is subjected. Below this inwardly extending beading 14, the combustion tube 13 has an outwardly and downwardly extending portion 15, which is adapted to engage the obliquely arranged portion of the ring carried by the outer wick tube, as will be hereinafter more fully described.

Secured to the outer wick tube 1 is the ring 19, in the same manner in which the diaphragm 7 is secured to the inner wick tube, and has its upper end turned downwardly in an oblique angle, as indicated at 20, and the angle thereof being the same as that of the outwardly flared end 15 of the outer combustion tube 13. By this structure it will be seen that the oblique portion 20 of the ring 19 forms a longer seat for the outwardly flared portion 15 of the outer combustion tube 13, and thus insures of the seating of the combustion tubes on the wick tubes.

In the modification shown in Fig. 2, the outer combustion tube 13 and its flange 15 and ring 19 are constructed in precisely the same manner as that shown in Fig. 1. The upper end of the inner wick tube 2 in this modification is slightly drawn outwardly, as indicated at 21, and the diaphragm 7 has at its outer periphery an inclined wall 22 arranged at the same angle as that of the portion 21, of the inner wick tube. The inner combustion tube 12 has an outwardly bulged portion 33, which is turned inwardly at 24, at the same angle as that of the portion 22 of the diaphragm, and the portion

21 of the wick tube 2. By this structure it will be seen that the inner combustion tube 12 also aids in centering the same upon the wick tubes.

In the modification shown in Fig. 3, the upper end of the outer wick tube 1 is drawn inwardly, as indicated at 25, and then downwardly at an oblique angle at 26, forming a support for the combustion tube and also serving as means for centering the combustion tube on the wick tube. The inner wick tube 2 is perfectly straight, as clearly shown in the drawing, and has a perforated diaphragm 7′ provided with an inclined wall 27, against which the outwardly flared end 28 of the inner combustion section 12 rests. The inner combustion tube is provided with a beading 29 just above the flared portion 28, which strengthens the combustion tube and prevents it from being affected by the intense heat to which it is subjected. The diaphragm 7′ is provided with the upwardly and outwardly extending wick stops 30, formed integral therewith and which are adapted to extend over the space between the inner and outer wick tubes 1 and 2, and limit the upward movement of the wick to prevent it from being turned up too far to cause perfect combustion and thus prevent the smoking of the burner.

By the structure above described, it will be seen that in placing the combustion tubes on the wick tubes the outwardly flared end 15 of the outer tube 13 will engage the oblique portion of the wick tube and cause the combustion tubes to properly center themselves in respect to the wick tubes, and whereby the amount of air will be fed to the burner to cause proper combustion.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. An oil burner comprising wick tubes, a ring secured to the upper end of one of the wick tubes and having a downwardly flared portion, and a combustion section having one of its tubes correspondingly flared at its lower end and adapted to rest upon the outwardly flared end of the ring.

2. An oil burner comprising wick tubes, rings secured to the upper ends of the wick tubes and having downwardly flared portions, and a combustion section formed of two tubes provided at their lower ends with downwardly flared portions adapted to rest upon the flared portions of the rings, substantially as shown and described.

3. An oil burner comprising wick tubes, the upper end of the inner wick tube having a ring secured thereto and having an inwardly and downwardly flared portion, the upper end of the outer wick tube having a ring secured thereto and having an outwardly and downwardly flared portion, and combustion sections having the inner and outer tubes flared inwardly and outwardly respectively to correspond with the flared portion of the rings whereby the combustion tubes may be centered on the wick tubes.

4. An oil burner comprising wick tubes, the upper end of the outer wick tube having a ring secured thereto and having an outwardly and downwardly flared portion, a diaphragm spanning the space within the inner wick tube and having an upwardly flared wall below the upper end of the wick tube, and a combustion section comprising tubes having their lower ends flared outwardly and inwardly to correspond with that of the ring carried by the outer wick tube, and the flared portion of the diaphragm whereby the combustion section is centered on the wick tubes.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

LOUIS STOCKSTROM.

Witnesses:
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