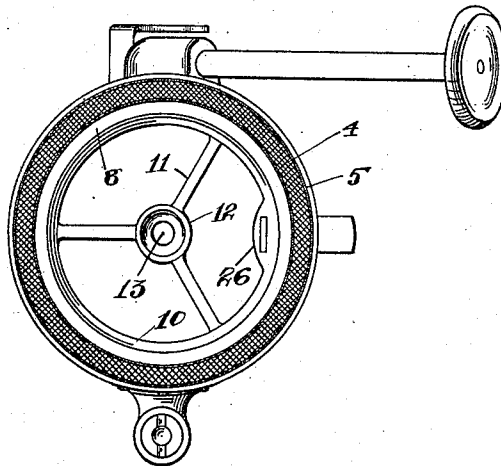


1,045,408.

Fig. 1 is a perspective view of a mechanical device, possibly a lamp or a container, with a domed top and a cylindrical body. The device is shown in a cross-sectional view, revealing internal components. A vertical rod (1) passes through the center, with a handle (7) attached to the top. A lever (6) is pivoted to the side of the body. The top of the device has a dome (15) with a small knob (3) on top. The body is divided into sections (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). A large, curved, hook-like component (3) is attached to the bottom of the device. A vertical rod (1) passes through the center, with a handle (7) attached to the top. A lever (6) is pivoted to the side of the body. The top of the device has a dome (15) with a small knob (3) on top. The body is divided into sections (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). A large, curved, hook-like component (3) is attached to the bottom of the device.

Fig. 3 is a perspective view of a mechanical device, possibly a lamp or a container, with a domed top and a cylindrical body. The device is shown in a cross-sectional view, revealing internal components. A vertical rod (1) passes through the center, with a handle (7) attached to the top. A lever (6) is pivoted to the side of the body. The top of the device has a dome (15) with a small knob (3) on top. The body is divided into sections (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). A large, curved, hook-like component (3) is attached to the bottom of the device. A vertical rod (1) passes through the center, with a handle (7) attached to the top. A lever (6) is pivoted to the side of the body. The top of the device has a dome (15) with a small knob (3) on top. The body is divided into sections (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100). A large, curved, hook-like component (3) is attached to the bottom of the device.

Fig. 2



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UNITED STATES PATENT OFFICE.

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OIL-BURNER.

1,045,408.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed July 22, 1911. Serial No. 639,990.

To all whom it may concern:

Be it known that I, WILLIAM R. JEAUVONS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Oil-Burners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to oil burners of the type wherein there are provided a pair of wick tubes and an air distributor having a spreader extending across and spaced from the top of the wick tubes, the body of the distributor being located within the inner wick tube and movable to a limited extent longitudinally with respect to said inner wick tube. In burners of this type, but a short distance is provided between the top of the outer wick tube end and the spreader thereabove. In many burners as constructed, this distance is about three sixteenths of an inch and does not exceed one-quarter inch. Such being the case, much care must be taken in regulating the height of the wick in order to light the same. If the top of the wick is too close to the spreader, difficulty is experienced in lighting the wick, not only on account of the provision of too narrow a space for the accommodation of the match or other lighting medium, but by the near proximity of the relatively cold surface of the spreader to the wick and to the flame of the igniter. This results in cooling the flame of the igniter and the flame produced at the wick, resulting in a tendency to extinguish both flames. On the other hand, if the wick be not elevated a sufficient distance, the lighting of the same is hindered by the proximity of the top of the wick to the outer wick tube. Hence, in burners of this type, it is necessary, in order to light the wick quickly, that the height to which the wick is turned be regulated closely.

It is the purpose of this invention to provide means whereby the space between the spreader and the top of the outer wick tube may be temporarily increased, thus facilitating the application of a match or other igniting medium to the top of the wick preventing the extinguishing of the flame and at the same time dispensing with the necessity for close regulation of the height of the wick. I accomplish this object by the con-

struction illustrated in the drawings forming part hereof, wherein—

Figure 1 represents a vertical sectional view of a burner constructed in accordance with my invention, certain parts being shown in elevation; Fig. 2 represents a sectional view corresponding to the line 2—2 of Fig. 1; and Fig. 3 a sectional detail corresponding to the line 3—3 of Fig. 1.

Describing by reference characters the various parts illustrated, 1 represents the burner generally, the same comprising an inner wick tube 2 and an outer wick tube 3, said tubes having interposed therebetween a wick 4 having the wick carrier 5.

6 denotes a wick raising shaft having an operating handle 7 and provided with means (not shown) for engaging the wick carrier to raise and lower the wick.

Within the interior of the inner wick tube, and a short distance from the top thereof, is secured a ring 8, said ring being conveniently formed of sheet metal of inverted U-shape in cross section and having its outer flange 9 soldered to the inner wick tube. From the inner flange 10 of this ring there projects a plurality of spider arms 11, said arms carrying a central socket 12, the socket being shown as a ring having a central perforation 13 for the reception of a spindle 14 depending centrally from the upper spreader plate 15.

The air distributor comprises, in addition to the spreader plate and spindle referred to, a ring 16 which is secured at its lower end to the bottom portion of a perforated support, said support having a vertical flange 17 by which it is secured to the bottom of the ring, a perforated frusto-conical portion 18, and a vertically extending imperforate portion 19. The lower spreader plate 20 is provided with a downwardly extending cylindrical neck 21 by means of which it is secured to this imperforate portion. This lower plate is spaced from the upper plate and provides therewith an outwardly discharging passageway 22 for air circulating upwardly from the interior of the burner, substantially as set forth in my patent No. 951,612, issued March 8th, 1910.

A perforated plate 23, which may be slightly frusto-conical in shape, extends across the bottom of the air deflector and carries an automatic locking device 24, which is adapted to engage the arms 11 in

the manner shown and described in my Patent No. 871,593, issued November 19, 1907. This locking device is provided, as is the case with the construction of said patent, with ledges 25 adapted to lie beneath the arms 11, the body of the locking device being cut away above said ledges to accommodate said arms and to permit of a limited vertical movement of the spreader before the ledges 25 engage the arms, thereby permitting of vertical movement of the distributor and its associated parts.

For the purpose of temporarily increasing the space between the lower edge of the spreader plate 20 and the top of the wick tube 3, the following construction is provided;—26 denotes a projection, which may be conveniently formed integral with the lower edge of the flange 10 on the ring 8, said projection having a guide aperture. 27 denotes a strap having its ends soldered to the interior of the inner wick tube, near the bottom thereof and having its body offset from said ends to provide a slot or guide with the adjacent wall of the inner wick tube. The strap will be located vertically below the projection 26, and these two members will form a vertical guideway the upper end of which is projected inwardly toward the center of the burner a greater distance than the lower end. An operating device for tilting the spreader is mounted within this guideway and comprises a metal strap having a vertically extending upper portion 28, the upper end of which is mounted in the slot of the projection 26, and a vertically extending lower portion 29 extending through the space provided between the strap 27 and the inner wick tube and connected with the upper portion by an inwardly projecting portion 30. The bottom of the strap is bent around the bottom of the tubes and then upwardly, in substantial U-shape, as shown at 31, and is provided with an outwardly projecting extension 32.

With the parts arranged as described, the operation will be as follows: Normally, the tilting device is in the position shown in full lines in Fig. 1, namely: with the upper end in proximity to the plate 23, the strap being supported by the offset portion 30 resting on top of the strap 27, with considerable clearance between the bottom of the strap and the bottom of the wick tubes. When it is desired to light the burner, the wick is turned up into the space between the outer wick tube and the bottom of the spreader plate 20, without any particular attention to avoided proximity to the latter. The operator places his finger under the projection 32 and lifts the strap. This tilts the distributor as a whole at the point where the ring 16 rests upon that portion of the ring 8 which is diametrically opposite the strap 28. This tilting of distributor and its parts is indi-

cated in dotted lines in Fig. 1, there being sufficient play of the spindle 14 in the socket aperture 13 and between the arms 11 and ledges 25 to permit this action. Owing to the location of the pivotal point of support for the distributor, that portion of the spreader which is diametrically opposite the wick while the portion of the spreader which is above said strap is tilted a material distance,—sufficient to permit the easy application of a match or other igniting means and to insure quick and easy lighting of the wick.

By the construction illustrated, it is possible to light the burner quickly and easily without paying any special attention to the height of the wick and to produce this result without any alteration in the working parts of the burner, the result being produced by the mere addition of a simple and relatively inexpensive attachment. The mounting of the attachment within the inner wick tube places it in a convenient location, where it is not liable to be unintentionally operated and where, owing to its construction and location, it will not interfere with the proper functioning of the burner. Furthermore, while the attachment is extremely simple of construction and relatively inexpensive of production, it has proven to be of marked efficiency and to overcome an objection which has long existed in lighting burners of the type shown herein.

Having thus described my invention, what I claim is:—

1. The combination, with a burner comprising an inner and an outer wick tube, a wick therebetween, the inner wick tube being provided with an inwardly projecting seat, a distributor resting on said seat and having a spreader extending above the tops of the wick tubes and spaced therefrom, of a device slidably mounted within the inner wick tube at one side thereof and adapted to engage a portion of the distributor and tilt the same on its seat to increase the distance between the top of the wick tubes and that portion of the spreader which is adjacent to said device.

2. The combination, with a burner having inner and outer wick tubes, a wick therebetween, and a vertically movable air distributor having a spreader extending above the tops of said tubes, of a supporting ring for the lower end of the distributor projecting inwardly from the inner wick tube below the top thereof, said ring being provided with an inwardly extending projection having a guide slot, a guide member within the lower portion of the inner wick tube carried by the wall thereof, said guide slot and guide member forming a guide way, and a vertically reciprocable device mounted in the guide member provided within the inner

tube and having its lower end extending outwardly beyond the bottoms of the wick tubes.

3. The combination, with a burner having
5 inner and outer wick tubes, a wick therebetween, and a distributor having a spreader extending above the tops of the wick tubes and spaced therefrom, of a pair of vertically arranged guides within the inner wick
10 tube, the upper guide being located nearer the center of the tube than the lower, and a device for tilting the distributor mounted in said guides and having a vertically extending portion mounted in the upper guide
15 and a vertically extending portion mounted in the lower guide, said portions being connected by an angularly extending portion, the lower portion of said device being bent outwardly beneath the bottom of the wick
20 tubes.

4. The combination, with a burner having
inner and outer wick tubes, a wick therebetween, and a distributor having a spreader
25 extending above the tops of the wick tubes and spaced therefrom, of a pair of vertically arranged guides within the inner wick tube,

the upper guide being located nearer the center of the tube than the lower, and a device for tilting the distributor mounted in
said guides and having a vertically extending
30 portion mounted in the upper guide and a vertically extending portion mounted in the lower guide, said portions being connected by an angularly extending portion.

5. The combination, with a burner having
35 inner and outer wick tubes, a wick therebetween, and a distributor having a spreader extending above the tops of the wick tubes and spaced therefrom, of a seat for the distributor located within the inner wick tube,
40 and a device having a portion within the inner wick tube arranged to engage the distributor at one side of its center to tilt the distributor and increase the distance between
45 a portion of the spreader and the tops of the wick tubes.

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

WILLIAM R. JEAVONS.

Witnesses:

J. B. HULL,

BRENNAN B. WEST.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."