

J. KIRBY, Jr.
LAMP.

No. 520,265.

Patented May 22, 1894.

Fig 1.

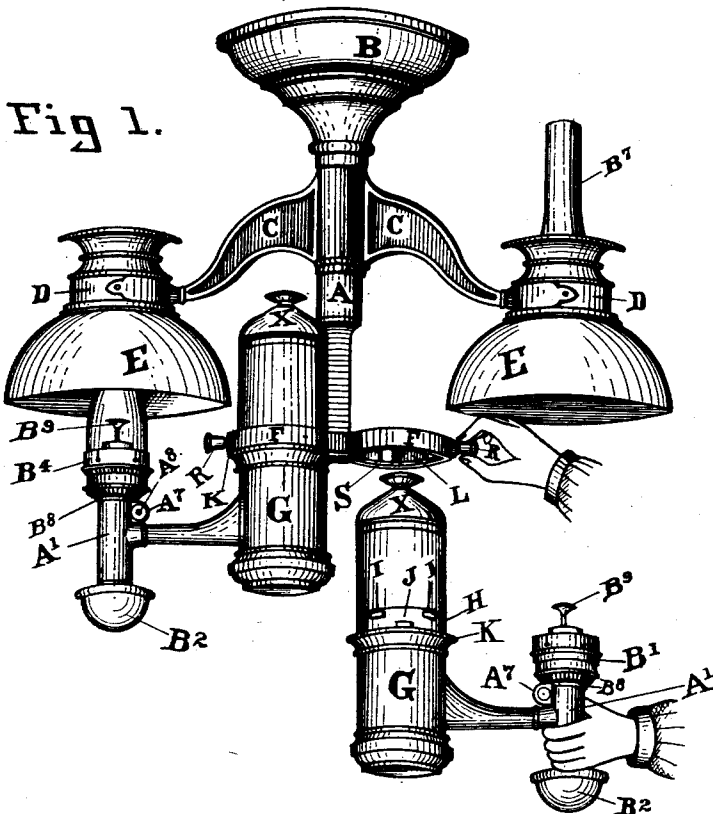


Fig 6.

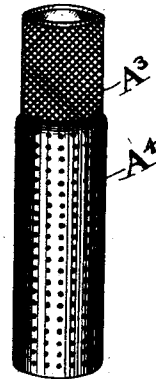


Fig 3.

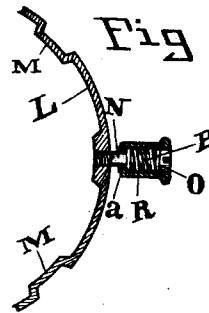
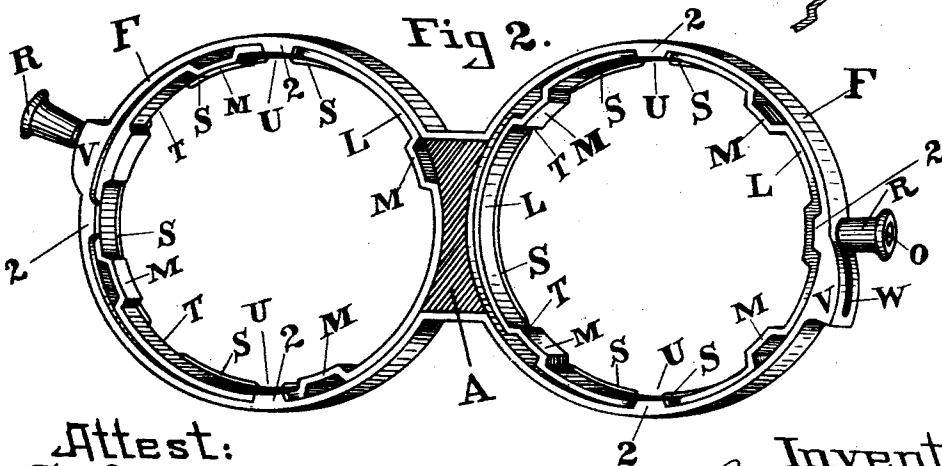


Fig 2.



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Fig 4.

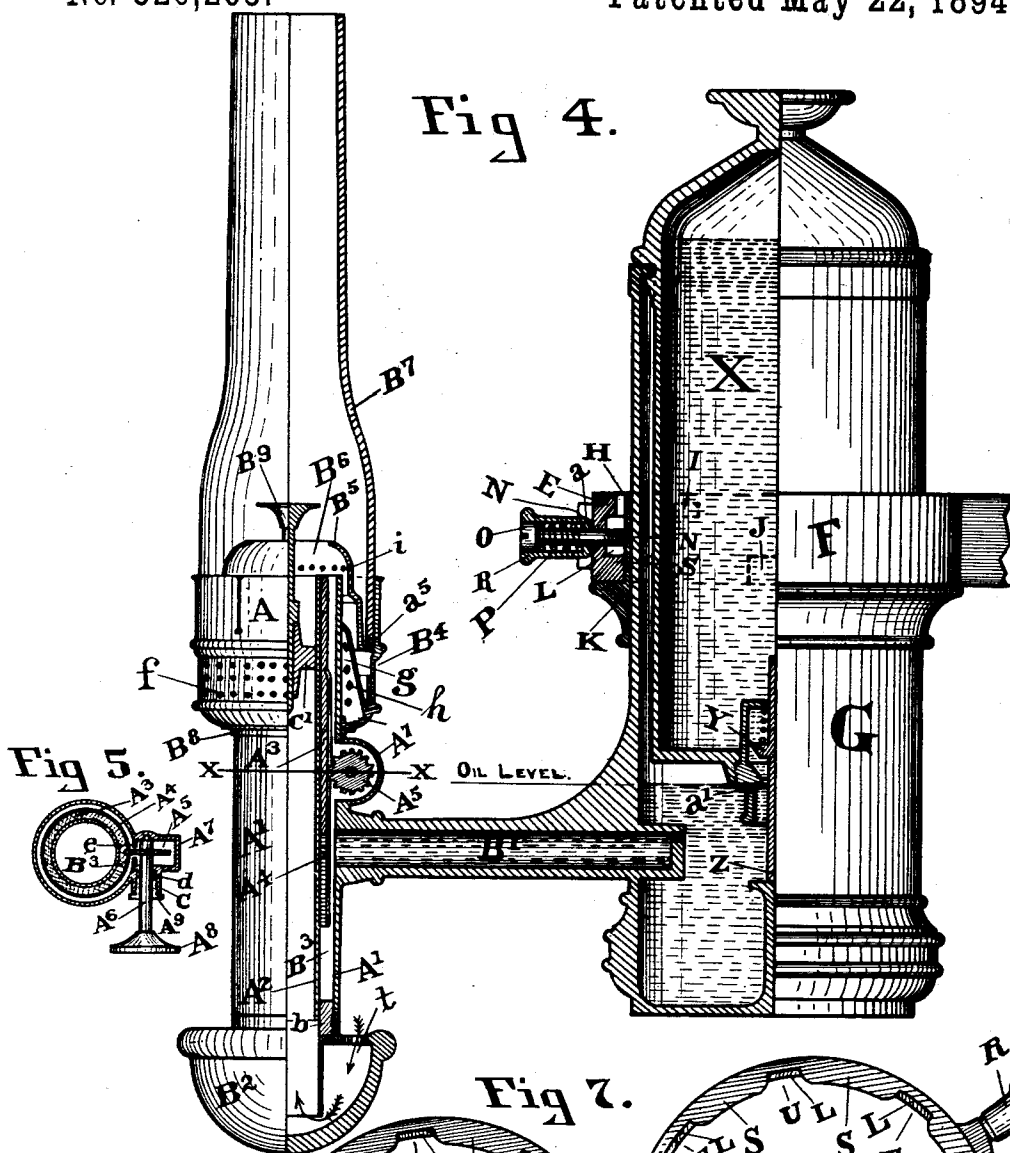


Fig 5.

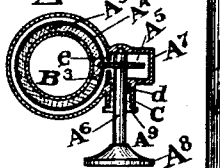
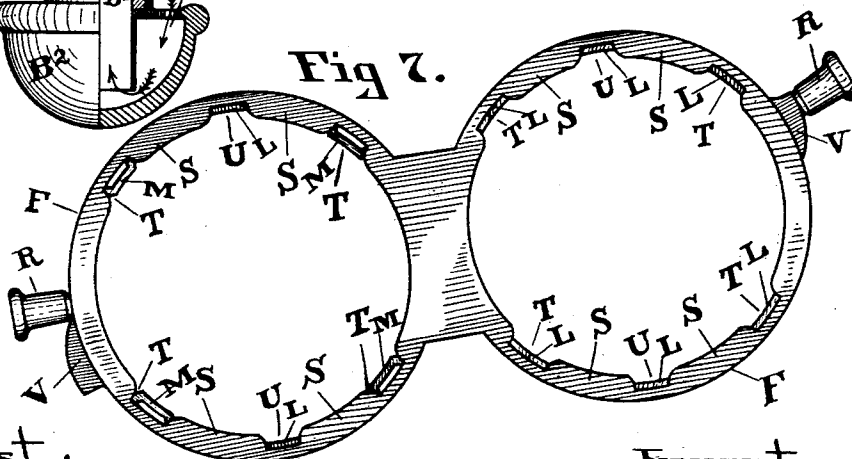


Fig 7.



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UNITED STATES PATENT OFFICE.

JOHN KIRBY, JR., OF DAYTON, OHIO, ASSIGNOR TO THE DAYTON
MANUFACTURING COMPANY, OF SAME PLACE.

LAMP.

SPECIFICATION forming part of Letters Patent No. 520,265, dated May 22, 1894.

Application filed June 22, 1892. Renewed April 4, 1894. Serial No. 506,354. (No model.)

To all whom it may concern:

Be it known that I, JOHN KIRBY, Jr., a citizen of the United States, residing in the city of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Lamps, of which the following is a specification.

My invention relates to railway-car lamps; and it has for its object the production of a chandelier lamp having downwardly-detachable oil-reservoirs, one which will be compact in form, firm and steady in all its parts when secured to an overhead support, and exceedingly convenient in use.

My invention will first be described in connection with the accompanying drawings, and then pointed out in the claims.

Figure 1 of the drawings is a side view of my improved lamp with one of the reservoirs removed. Fig. 2 is an enlarged perspective view of the exterior and interior coupling-rings separated from the supporting-hanger. Fig. 3, is a horizontal section through the interior coupling ring and safety catch showing the manner in which the latter is constructed. Fig. 4, is an enlarged elevation of a burner and reservoir in half section. Fig. 5, is a half size cross section through line xx of Fig. 4. Fig. 6, is a perspective view of the wick carrying tube, and Fig. 7, is an inverted plan of the interior and exterior coupling rings, one of the former being shown in a locked, and the other in an unlocked position.

The several letters and numerals of reference represent corresponding parts in all the figures.

A, represents a single central supporting hanger provided with an enlarged base, B, for rigid attachment to a car ceiling or other overhead support, and carrying arms, C C, to the outer ends of which shade holders D D, which may be of any desired type are secured in the usual manner and carry shades E E.

F F are exterior coupling-rings, adjacent to each other preferably made in one piece, and secured to the hanger A by any suitable means. Each ring is provided with inward-projecting studs 2 at its upper side and an inward-turned flange S at its lower side. It is also provided on its outer side with an in-

clined projection V, the ring and said projection being slotted at W.

L is an interior coupling-ring, provided on its inner side with projections M, which have vertical channels m in their backs. By bringing these channels in line with the studs 2 the ring L can be inserted into the exterior ring F, the distance between the top of the lower flange S and the bottom of the studs 2 being equal to or preferably a little more than the depth of ring L. By rotating the interior ring L within the exterior ring F the vertical channels m will be turned away from their alignment with the studs 2 and the interior ring thereby prevented from withdrawal, being held in place by the flange S below and the studs 2 on top. A stem N, having a head O, is screwed into the ring L, passing through the slot w in the exterior ring F and its inclined projection V, the slot serving to permit a certain amount of rotation of ring L by means of the stem N, yet preventing it being rotated sufficiently to bring the vertical channels m and the studs 2 in line. Around the stem N is coiled a spring P, one end of which bears against the head O and the other against an inward-turned flange a of a movable knob or casing R. Accidental rotation of ring L is prevented by spring P pressing knob R against the inclined projection V.

G are reservoirs, each of which is provided with a fixed circumferential ring H, having studs I and J projecting from the upper and lower portions respectively of its periphery. A shoulder or flange K is formed on the lower edge of each ring H, its function being to form a stop to prevent the reservoir being pushed too far through the exterior coupling-ring while being coupled. It also forms a finish and hides from view the openings which would otherwise be seen and appear unsightly. The inward-turned flange S of the exterior coupling-ring F is notched, as at T and U, the notches U being engaged by the studs J on the reservoir-ring H to hold the reservoir and its burner in proper relation to the shades, while the notches T allow the studs I on the reservoir-ring to pass above the top of the interior coupling-ring, where they may be engaged to prevent withdrawal

of the reservoir by rotating the interior coupling-ring L so as to bring the projections M directly under the studs I, thereby locking the reservoir securely in place.

5 The reservoirs are constructed on what is known as the student lamp principle, a detachable oil holder X, being contained within the reservoir G. This oil holder is supplied with a valve Y, having a stem Z, which when
10 the holder is in position bears against the bottom of the reservoir, and lifts the valve, allowing oil to flow into the reservoir, until it reaches the aperture a' , when no more air can enter the holder, and the oil will cease to
15 flow, and will then flow into the reservoir only as it is consumed and air is thereby admitted, thus a constant level of the oil within the reservoir G, and burner is maintained so long as there is oil in the holder, the burner
20 being connected with the reservoir by means of a tube B', through which the oil passes.

A' is the outside and A² the inside burner tubes which are connected at the bottom by a collar b, which collar is screw threaded to
25 receive a drip cup B², as more clearly shown in Fig. 4, air being admitted to the center of the burner through openings t, as indicated by the arrows.

A³ is the wick, and A⁴ the wick holder composed of a perforated cylinder with one end
30 turned inward to prevent slipping of the wick.

A⁵ is a pinion wheel mounted upon a shaft A⁶, and contained within a casing A⁷. One
35 end of shaft A⁶, has a bearing in one of the walls of the casing, while the other extends through the opposite wall, and is provided with a button A⁸ for convenience in turning.

A hollow screw threaded extension C, forms
40 a stuffing box on the casing A⁷, within which is placed a suitable packing d, which when pressed tightly around shaft A⁶ by the packing nut A⁹ prevents leakage of oil.

A slot e, is cut in the outside burner tube
45 to allow the teeth of the pinion wheel to extend into the space B³, and engage with the perforations of the wick holder by which engagement the wick is raised and lowered by the turning of the wheel. The top of the
50 burner is provided with a cap B⁴, having air openings f, air regulator g, provided with perforations h, of proper size and number to admit the requisite amount of air to obtain the proper light, and a cone B⁵, having a central
55 opening B⁶, a flange a⁵ forming a seat for the chimney B⁷, and perforations i, of sufficient size and number to allow a certain required

portion of the hot air and gases to pass out and around the outside of the flame between the latter and the walls of the chimney. The
60 cap B⁴ rests upon a collar B⁸ at proper distance from the top of the burner tubes.

B⁹ is a flame spreader supported by a spider C secured to the inside of burner tube as
65 shown in Fig. 4.

I am aware that lamps having downwardly detachable reservoirs composed of a single central body with branching arms carrying
70 burners are old, and I do not broadly claim such reservoirs.

I claim as my invention—

1. In a chandelier lamp, the combination, with a single central supporting-hanger having arms provided at their outer ends with
75 shade-holders, and shades carried by said holders, of a plurality of coupling-rings each attached directly to the lower end of said hanger, and a plurality of reservoirs each provided with a branching arm and a burner
80 attached to the outer end of said arm, the reservoirs being adapted to couple with said rings from below, whereby they are detachable downwardly, substantially as described.

2. In a lamp, the combination, with a single central supporting-hanger having arms
85 provided at their outer ends with shade-holders, and shades carried by said holders, of a plurality of exterior coupling-rings each attached directly to the lower end of said hanger, each of said rings being provided at its upper
90 edge with inward-projecting studs and at its lower edge with an inward-turned flange having two series of notches, a plurality of interior coupling-rings, each rotatable between
95 the studs and flange on its respective exterior ring, means for rotating and locking the interior rings, and a plurality of reservoirs, each having two series of radial lugs and a circumferential flange below the lugs, the upper series of lugs being adapted to pass up-
100 ward through one series of notches in the flange on the exterior ring and to be engaged by the inner projections on the interior ring, the lower series of lugs entering the other series of notches in the flange to prevent rota-
105 tion of the reservoir, each of said reservoirs being also provided with a branching arm and a burner attached to the outer end of said arm, substantially as described.

JOHN KIRBY, JR.

Witnesses:

N. EMMONS, Jr.,

CHAS. V. HUNSAKER.