

No. 898,393.

PATENTED SEPT. 8, 1908.

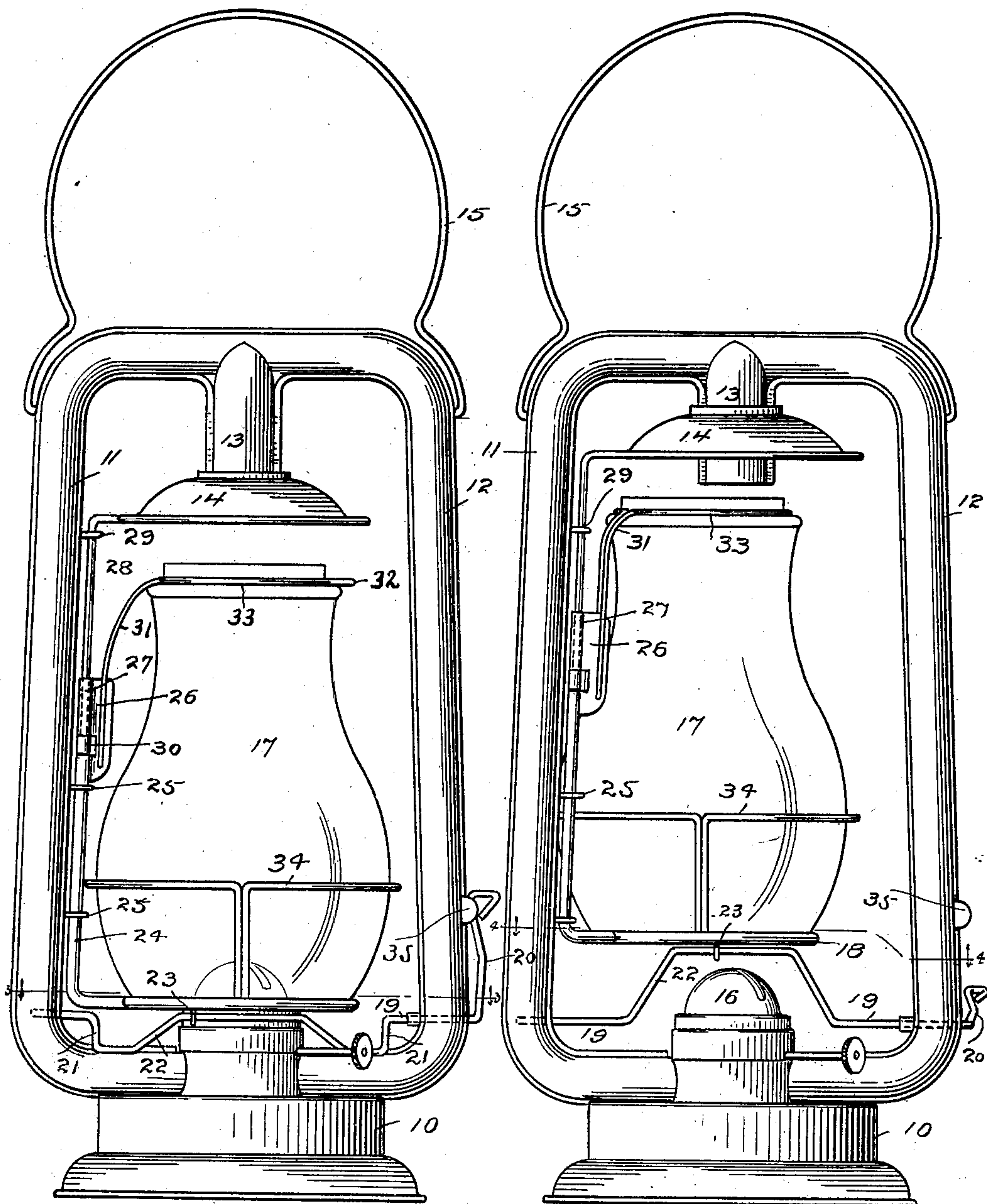
K. L. STENDAHL.
TUBULAR LANTERN.

APPLICATION FILED NOV. 18, 1907. RENEWED AUG. 5, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

Fig. 2.



Witnesses:

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S. W. Atherton

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Fig. 3.

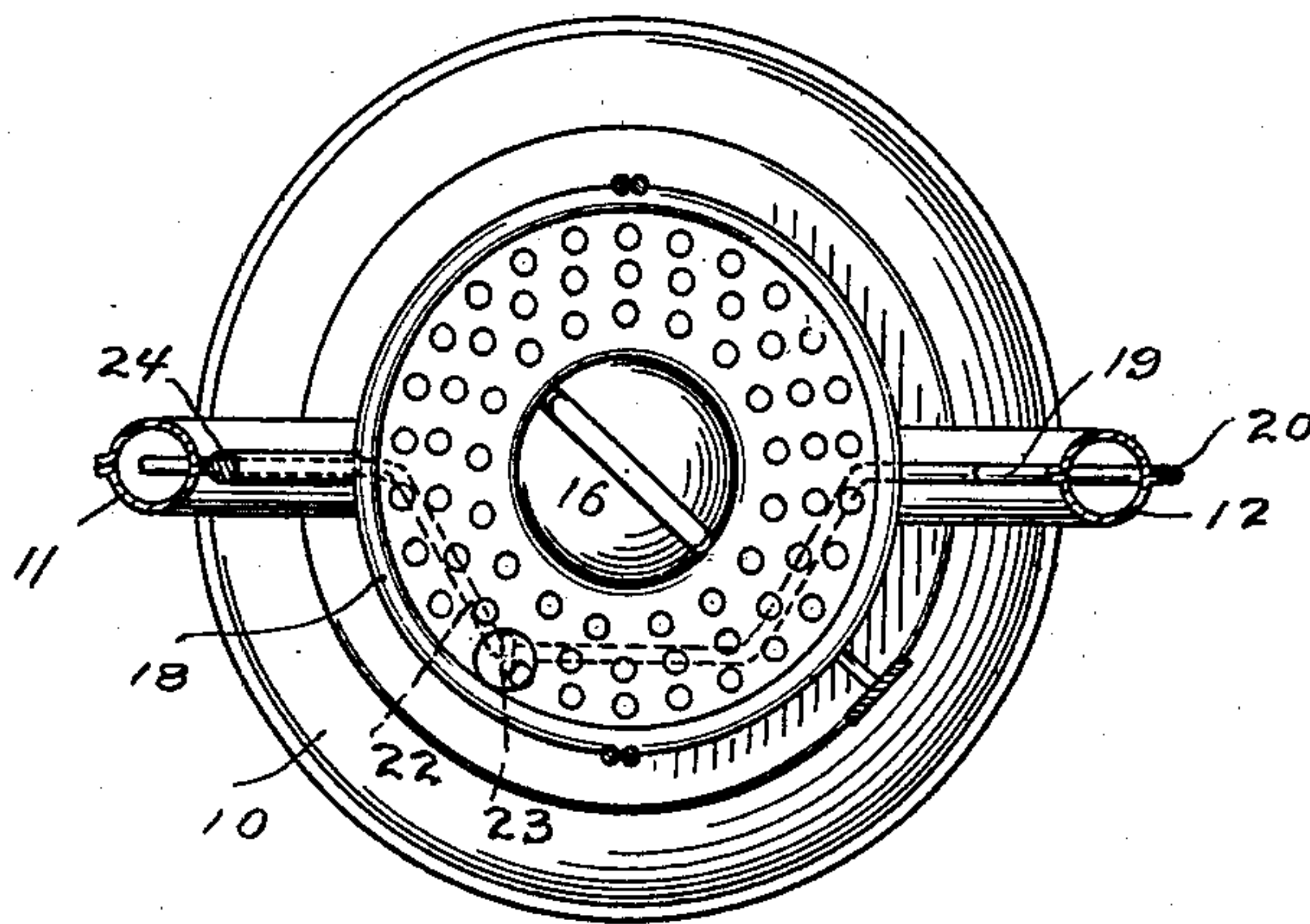
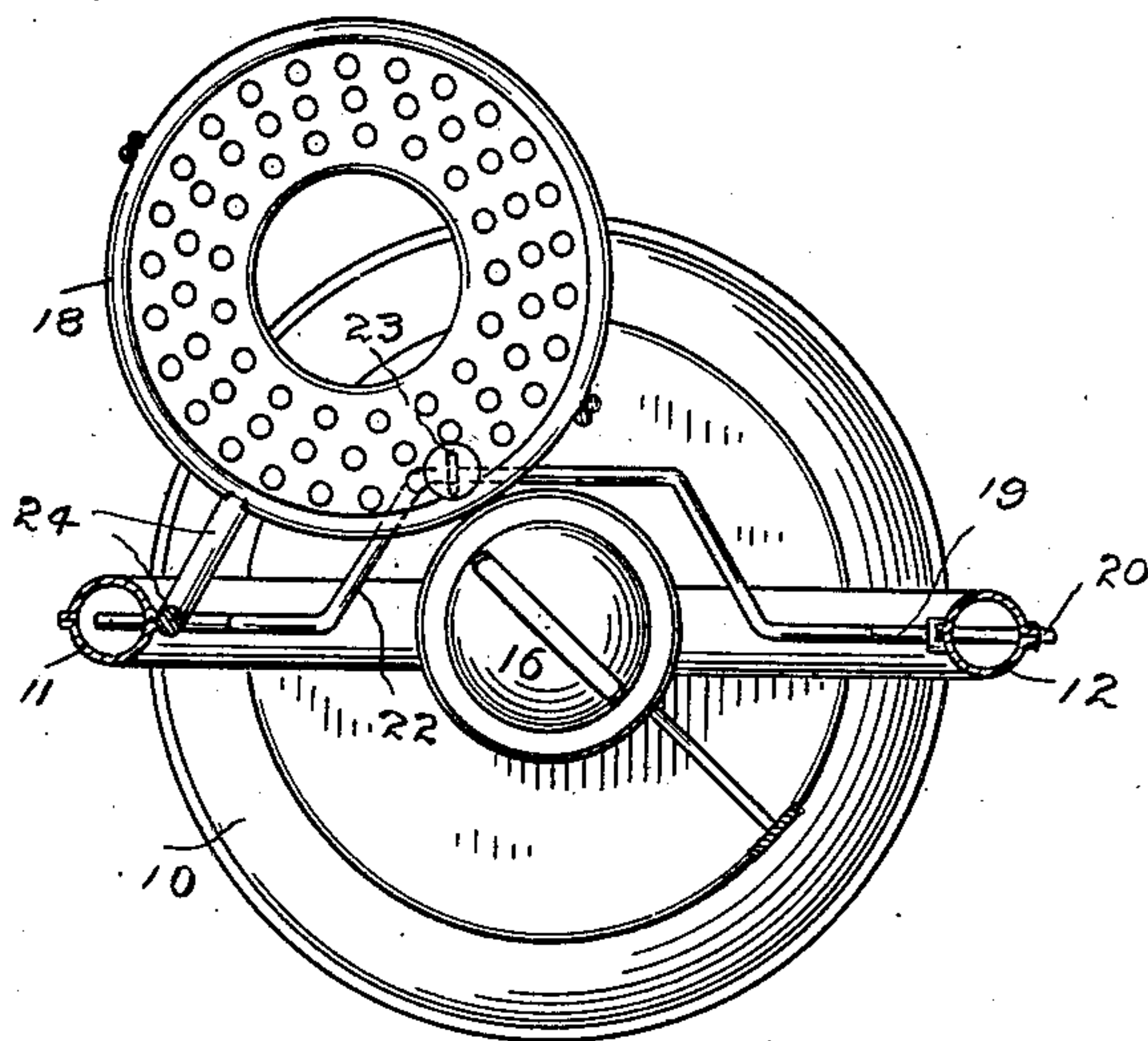


Fig. 4.



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UNITED STATES PATENT OFFICE.

KNUT LUDWIG STENDAHL, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE HURWOOD MANUFACTURING COMPANY, INCORPORATED, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

TUBULAR LANTERN.

No. 898,393.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed November 18, 1907, Serial No. 402,577. Renewed August 5, 1908. Serial No. 447,084.

To all whom it may concern:

Be it known that I, KNUT LUDWIG STENDAHL, a subject of the King of Sweden, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Tubular Lantern, of which the following is a specification.

This invention has for its object to simplify, cheapen and to greatly improve the construction and operation of the globe lifting mechanism in tubular lanterns.

With these ends in view, the invention consists in certain constructions and in certain parts, improvements and combinations which will be hereinafter described and then specifically pointed out in the claims hereunto appended.

In the accompanying drawings forming a part of this specification, Figure 1 is a side elevation of my novel lantern as in use; Fig. 2 a similar view showing the globe raised and partly swung aside; Fig. 3 a section on the line 3—3 in Fig. 1, looking down, the globe rest, base and lifting mechanism being in plan; and Fig. 4 is a section on the line indicated by 4—4 in Fig. 2, looking down, the globe rest however having been swung aside to the extreme of its movement.

10 denotes the base of a lantern, 11 and 12 the side tubes, 13 the center tube which is connected with the side tubes, 14 the canopy, 15 the bail or handle which is connected to the side tubes, 16 the burner, 17 the globe and 18 the rest by which the globe is carried.

My novel globe lifting mechanism comprises essentially a shaft 19 which is journaled in the side tubes near their lower end and is provided at one end with an operating lever indicated by 20. The shaft is provided just within the side tubes with offsets 21, and between these offsets the shaft is deflected to form a crank arm 22 which is pivotally connected to the globe rest as by an eye 23 on the underside of the globe rest through which the crank arm slides.

24 denotes a lifting rod which extends from the globe rest and then upward parallel with the side tube 11.

25 denotes eyes extending from side tube 11 in which the lifting rod oscillates and slides freely. At the upper end of the lifting rod is a head 26 having a guide 27.

28 denotes a canopy rod which extends from the canopy, then downward through an eye 29 extending from side tube 11, in which

it slides freely, through guide 27, in which it oscillates freely, and is provided at its lower end with an enlargement or collar 30 which lies between head 26 and guide 27, resting upon the head and preventing the canopy rod from being withdrawn from the guide.

31 denotes a spring globe holder formed from a single piece of wire which is bent at its mid-length to form a loop 32 for a finger piece, the two sides of the globe holder being curved outward forming a spring ring 33 which incloses the top of the globe, the ends of the globe holder then extending downward and being connected to head 26. To remove the globe it is simply necessary to raise the spring ring by means of the finger piece, which leaves the globe free to be swung from under the spring ring and then lifted from the rest.

34 denotes a guard for the bulge of the globe which is made of wire and is secured to the rest.

35 denotes a locking catch on side tube 12 which is adapted to be engaged by the operating lever to lock said lever in place and with it the globe holder, globe and canopy when said parts are in their normal or operative position as in Fig. 1.

The operation is as follows: To raise the globe, the operator disengages the operating lever from catch 35 and swings said lever downward as in Fig. 2. This oscillates the shaft and causes the crank arm to lift the rest, globe and canopy, swinging the rest and globe sidewise, as clearly shown in Fig. 2. The operator may then light the burner when the rest, globe and canopy may be swung downward to their normal position, as in Fig. 1. Should it be required, as in trimming, to remove the rest and globe from over the burner, the operating lever is carried downward from substantially the position shown in Fig. 2 to substantially the position shown in Fig. 4. This movement imparts further oscillation to the shaft, carries the rest and globe farther away from the burner and permits them to swing downward beyond the burner, as clearly shown in Fig. 4, until the downward movement is stopped by the engagement of the rest with the crank arm which is secured to the rest by eye 23. Backward movement of the operating lever raises the rest and globe to the position shown in Fig. 2 and then permits said parts to drop in position over the burner as in Fig. 1. The

engagement of the globe rest by means of the eye 23 which is adapted to slide on the crank arm, insures positive actuation of the globe rest by the shaft through all movements 5 which are imparted to said rest by said shaft. Since the crank arm must necessarily move in a different plane from the plane of the swinging movement of the globe rest, the sliding connection afforded by the said eye 23 10 permits this to be done freely and easily, the movement of the globe rest being effected positively, as above stated, by the shaft and its crank arm. It will be understood that the canopy rises and falls with the globe but 15 has no swinging movement, as the canopy is retained in position by the center tube and guide 27 oscillates on the canopy rod when the lifting rod is raised or lowered, the lifting rod serving merely to raise the canopy rod through the engagement of the enlargement or collar on the canopy rod with the head on the lifting rod. 20

Having thus described my invention I claim:

25 1. In a lantern, the combination with a globe rest having vertical and swinging movement, of a shaft having a crank arm engaging the globe rest which is raised, lowered and swung aside by oscillation of the shaft, 30 the crank arm having a sliding connection with the globe rest for positively actuating the latter in both directions of swing.

2. In a lantern, the combination with a globe rest having vertical and swinging 35 movement and a canopy having vertical movement, of a shaft having a crank arm engaging the globe rest, the crank arm having a sliding connection with the globe rest for positively actuating the latter in both direc- 40 tions of swing, and connections intermediate the canopy and the globe rest whereby the canopy is raised and lowered with the globe rest when the latter is swung aside.

3. In a lantern, the combination with a 45 globe rest having vertical and swinging movement and a canopy, of a vertically movable canopy rod connected to the canopy, a vertically movable and oscillatory lifting rod connected to the globe rest by which the 50 lower end of the canopy rod is engaged, and a crank arm having sliding connection with the globe rest for positively raising, lowering and swinging the globe rest outward and inward.

4. In a lantern, the combination with side 55 tubes, a center tube connected thereto and a canopy movable on the center tube, of a canopy rod by which the canopy is carried and which is connected to one of the side tubes so

as to have longitudinal movement thereon, a lifting rod upon which the canopy rod rests 60 and which is connected to the side tubes so as to have both vertical and oscillatory movement thereon, a globe rest by which the lifting rod is carried and a shaft journaled in the side tubes and having a crank arm pivotally 65 and slidably connected to the globe rest.

5. In a lantern, the combination with side tubes, of a shaft journaled therein and provided with a crank arm, and a globe rest pivotally and slidably connected to said crank 70 arm.

6. In a lantern, the combination with side tubes and a shaft journaled therein and having offsets, a crank arm between the offsets, and an operating lever, of a globe rest pivotally and slidably connected to the crank arm. 75

7. In a lantern, the combination with side tubes, a center tube connected thereto and a canopy movable on the center tube, of a canopy rod by which the canopy is carried and 80 which is longitudinally movable on one of the side tubes, a shaft journaled in the side tubes and having a crank arm, a globe rest pivotally and slidably connected to the crank arm and a lifting rod extending from the globe 85 rest upon which the canopy rod rests and which has longitudinal and oscillatory movement on the side tube.

8. In a lantern, the combination with a globe rest and a canopy, of a shaft having a 90 crank arm pivotally and slidably connected to the globe rest, a lifting rod extending from the globe rest and having a head and a guide, and a canopy rod extending from the canopy which passes through the guide and is pro- 95 vided with an enlargement below the guide and engaging the head, whereby vertical movement is imparted to the canopy corresponding with the vertical movement of the globe rest caused by oscillation of the shaft. 100

9. In a lantern, the combination with a globe rest, a globe carried thereby and a canopy, of a shaft having a crank arm pivotally and slidably connected to the globe rest, a lifting rod extending from the globe rest and 105 having a head and a guide, a canopy rod extending from the canopy which engages the guide and rests upon the head and a globe holder extending from the head and having a spring ring inclosing the top of the globe. 110

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

K. LUDWIG STENDAHL.

Witnesses:

A. M. WOOSTER,

R. E. WHITTLESEY.