

No. 667,328.

Patented Feb. 5, 1901.

A. LUNDIN.  
LAMP.

(Application filed Sept. 28, 1900.)

(No Model.)

FIG. 1

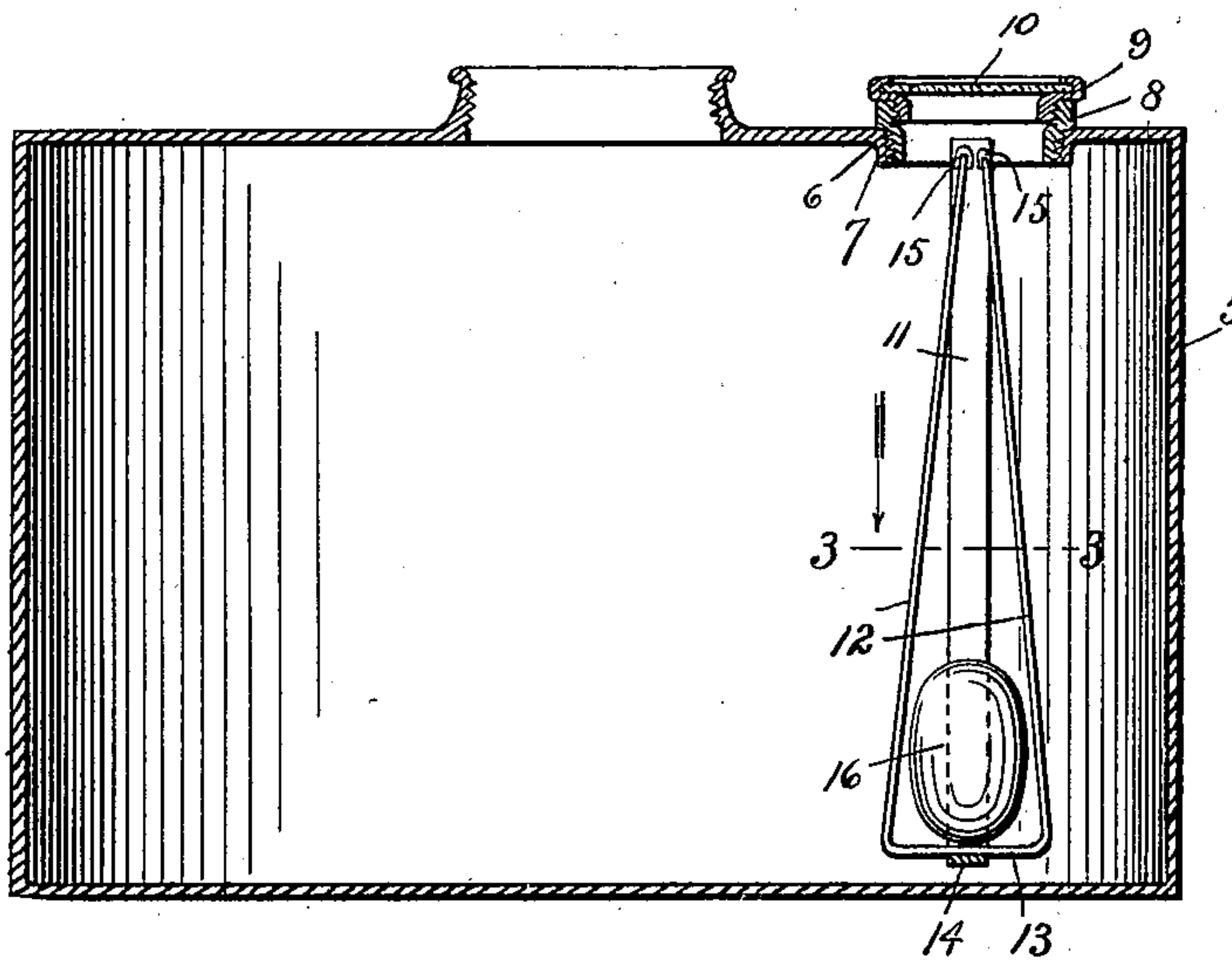


FIG. 2

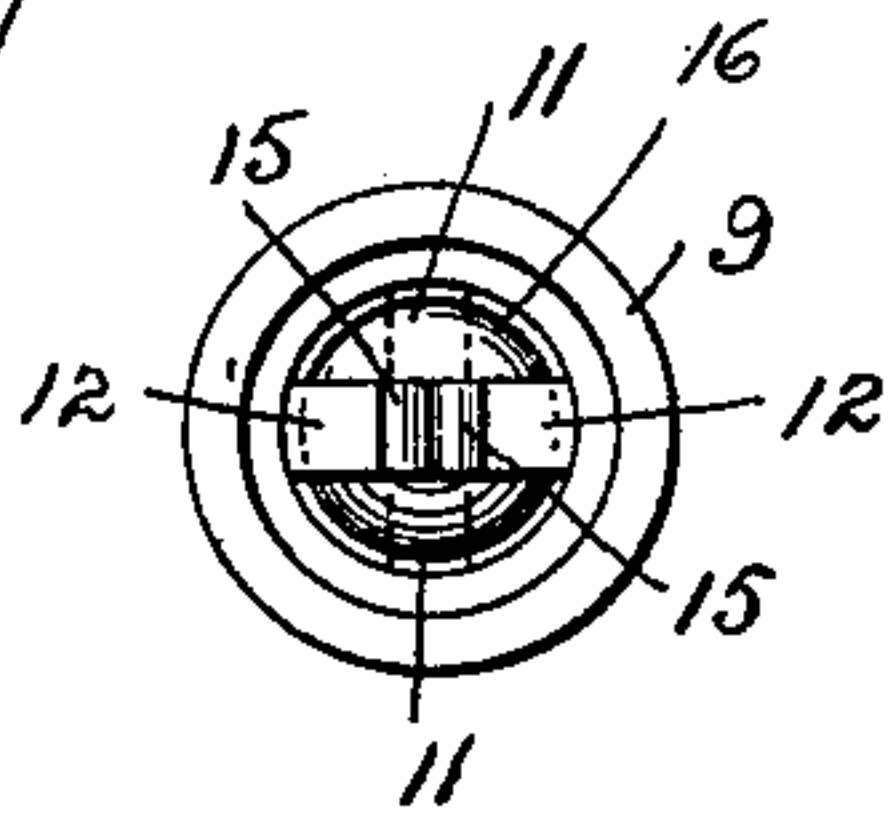
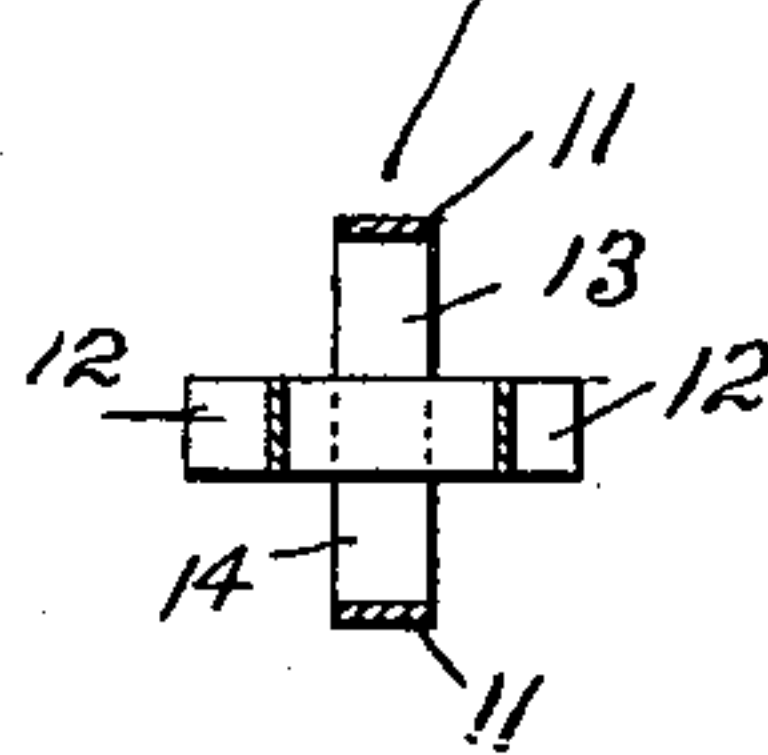


FIG. 3



WITNESSES

*Edwood Bell*  
*F. A. Stewart*

INVENTOR.  
*August Lundin*  
BY *Edgar T. H. [Signature]*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

AUGUST LUNDIN, OF NEW YORK, N. Y.

## LAMP.

SPECIFICATION forming part of Letters Patent No. 667,328, dated February 5, 1901.

Application filed September 28, 1900. Serial No. 31,355. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST LUNDIN, a subject of the King of Sweden and Norway, residing at New York, (Brooklyn,) in the county of Kings and State of New York, have invented certain new and useful Improvements in Lamps, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to lamps; and one object thereof is to provide an improved indicating device by means of which the height of the oil in the reservoir of a lamp may be determined at any time, a further object being to provide a device of the class described which will indicate when the reservoir is full in the process of filling the same and by means of which it may be also determined when the reservoir of the lamp is empty, or substantially so.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by the same reference characters in each of the views, and in which—

Figure 1 is a central vertical section of a lamp-reservoir provided with my improvement; Fig. 2, a plan view of the indicator which I employ, and Fig. 3 a cross-section on the line 3 3 of Fig. 1.

In the drawings forming part of this specification I have shown at 5 an ordinary lamp-reservoir, and in the practice of my invention I form in the top thereof an opening 6, provided with a screw-threaded collar 7, and into this collar 7 I screw a supplemental collar 8, provided with a detachable cap 9, composed of a metal rim and glass top 10. The supplemental collar 8 forms part of a float-cage consisting of vertical metal strips 11, secured to the opposite sides of said collar and extending downwardly approximately to the bottom of the lamp-reservoir, and two spring-fingers 12, which project upwardly and the lower ends of which are connected by a cross-bar 13. The metal strips 11 are also connected at the bottom by a cross-bar 14, and the cross-bar 13 is preferably formed integrally with the spring-fingers 12, and the cross-bar 14 is also preferably formed inte-

grally with the metal strips 11, and the said metal strips 11 and spring-fingers 12 form the body portion of my improved float-cage, the bottom of which consists of the cross-bars 13 and 14.

The spring-fingers 12 are preferably of the same form as the metal strips 11 and project upwardly within the supplemental collar 8, and each is preferably provided at its upper end with a knob 15, and in practice these knobs are preferably colored white, black, or any other color that will attract attention.

A float 16, preferably composed of glass and made hollow, is placed in the float-cage, and said float is made of substantially the same dimensions in cross-section as the said cage.

In the process of filling the lamp-reservoir the cap 9 is screwed off and the oil is poured into the reservoir through the collar 8. In this operation the float 16 rises in the float-cage and gradually forces the spring-fingers 12 outwardly until it reaches the top of the cage, when the upper ends of said spring-fingers will rest against the side walls of the collar 8. The appearance of the float 16 at the top of the cage indicates that the reservoir is full, and the gradual fall of said float as the oil within the reservoir is consumed will also be indicated by said spring-fingers, which gradually converge until the float reaches the bottom of the float-cage, when the upper ends of said spring-fingers will be in the position shown in Figs. 1 and 2. It will also be apparent that the position of the float or the height of the oil in the reservoir at any time will be indicated by the position of the upper ends of the spring-fingers 12, which may be seen at all times through the glass top 10, and my invention is not limited to the material of the cage or of the float, and changes in and modifications of the construction described may be made without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. An indicator for lamp-reservoirs, comprising a collar having a screw-threaded cap provided with a glass, and a cage consisting of strips secured to the opposite side of said collar and adapted to project downwardly into



the reservoir of the lamp and approximately to the bottom thereof, and spring-fingers extending from the bottom of said cage upwardly and terminating within said collar, 5 the upper ends of said spring-fingers in their normal position being substantially together, and a float placed in said cage and adapted to separate said fingers as it rises therein, substantially as shown and described.

10 2. The combination with a lamp-reservoir, of a float-cage consisting of a collar provided with a glass cap or cover, and a cage connected with said collar consisting of strips extending downwardly approximately to the 15 bottom of the reservoir, and spring-fingers connected with the bottom of said cage and extending upwardly and terminating within said collar, the upper ends of said spring-fingers being normally approximately together, 20 and said cage being provided with a float which is adapted to separate said fingers as it rises in said cage, substantially as shown and described.

3. An indicator for the reservoirs of lamps,

comprising a float-cage and float placed there- 25 in, said cage consisting of a collar or ring, side strips connected therewith and adapted to extend downwardly in the reservoir, and spring-fingers connected with the bottom of 30 said cage and projecting upwardly into said collar or ring, the ends of said fingers within said collar or ring being normally together or approximately so, substantially as shown and described.

4. An indicator for lamps comprising a cage 35 provided with spring-fingers 12 secured to the bottom thereof and extending upwardly therein and terminating within the upper end of said cage and a float placed in said cage, substantially as shown and described. 40

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 27th day of September, 1900.

AUGUST LUNDIN.

Witnesses:

F. A. STEWART,  
C. C. OLSEN.