

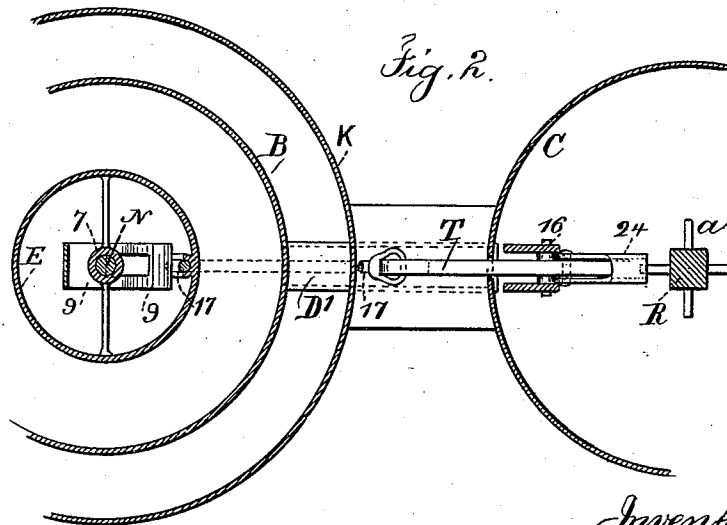
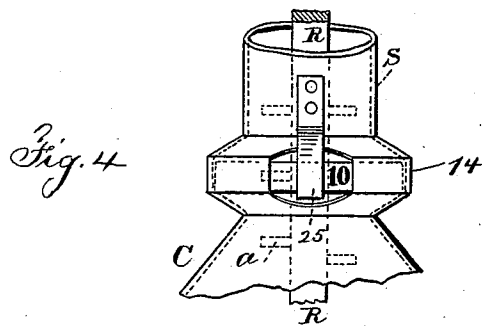
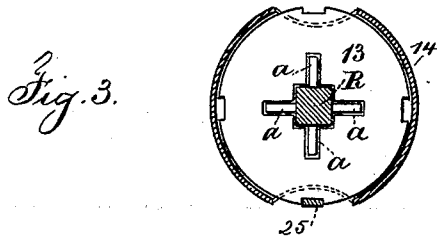
(No Model.)

2 Sheets—Sheet 2.

C. H. VAN HISE.
LAMP.

No. 471,282.

Patented Mar. 22, 1892.



Witnesses

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Inventor

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att.

UNITED STATES PATENT OFFICE.

CHARLES H. VAN HISE, OF NEW YORK, N. Y.

LAMP.

SPECIFICATION forming part of Letters Patent No. 471,282, dated March 22, 1892.

Application filed August 12, 1891. Serial No. 402,430. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. VAN HISE, a citizen of the United States, residing in the city and State of New York, have invented an
5 Improvement in Lamps, of which the following is a specification.

This invention is a modification of and improvement upon the device set forth in my patent, No. 458,509, granted August 25, 1891, and the present invention is for adapting the
10 improvement to an Argand lamp having a wick that is cylindrical throughout its length; and the invention consists in the combinations of devices hereinafter set forth and
15 claimed.

In the drawings, Figure 1 is a vertical section of the lamp complete. Fig. 2 is a sectional plan at about the line *x x*. Fig. 3 is a sectional plan at the line *y y*; and Fig. 4 is a
20 detached view of a portion of one of the reservoirs, showing the thumb-disk and catch of the regulator-rod. In Figs. 2, 3, and 4 the parts are shown in larger size than in Fig. 1.

This lamp is especially intended for streets, parks, gardens, &c., where the lamp is required to burn a certain number of hours, and by the present invention the lamp is automatically extinguished at or about the desired
25 time, in consequence of the consumption of the oil acting through a float, by the extinguishing devices.

I have represented in the drawings three reservoirs A B C, connected together by the tubes D D', and at 2 upon the reservoir A is
35 a suitable screw-cap to allow for filling the reservoirs, and there may be a cock at the lower end of the reservoir A, by which the contents of the reservoirs can be drawn off. Through the reservoir B is an air-tube E, and
40 the wick F surrounds this air-tube, and there is a wick-tube G outside of the wick. These parts are constructed in any usual or desired manner. I have represented the wick-tube G as provided with a downwardly-projecting
45 rim 5, setting within the upper end of the receiver B, and I have represented a wick-raiser H and rod H' for adjusting the wick.

The cylinder K surrounds the receiver B, there being an air-space between them, and
50 there is a deflector L at the upper end of the cylinder K and an air-distributor K' for directing the ascending current of air to the

flame. Within the air-tube E is a central rod N, fitted to slide freely in suitable bridges or supports 7, and at the upper end of this rod
55 is a deflector or button O, which acts as a flame-spreader; and its under edge is preferably made as an annular groove 8, the size of the deflector and the groove being such that when the deflector is dropped it will act as
60 an extinguisher by entirely covering the upper end of the Argand wick, and I prefer to connect with the deflector-button a perforated cylinder P to act as an air-distributor within the flame.

I make use of the spring-latch 9 at the button end of the rod N in such a position that when this spring-latch is in action to hold up the rod N and deflector O it will be at the proper height for the flame to burn properly,
70 and when this latch is moved aside the rod N and deflector O are unsupported and drop and the flame is instantly extinguished. In order to raise the rod and deflector into the proper position for lighting the lamp, the rod
75 itself may be pressed up with the finger; but I have represented a lifter 10, connected to the rod and extending down below the bottom of the lamp as a convenient device against which the finger can be pressed in restoring
80 the parts to the normal position.

Within the vessel C is a float Q, connected to the lower end of a regulator-rod R, which passes up into one of the tubes S, that support the cap S' of the lamp, and this regulator-rod has projecting from it ranges of pins,
85 as indicated at *a*. There is a thumb-disk 13 within the chamber 14 at the bottom of the tube S, and the metal of this chamber is removed at one or opposite sides to give access
90 for turning this thumb-disk 13 and the regulator-rod R to bring either range of pins into position to act upon the drop-lever T, which is pivoted at 16 and has a rod 17 extending to and acting upon the spring-latch 9. I have
95 represented this rod 17 as within a tube passing through the receiver B; but the connection may be made in any convenient manner.

It is to be understood that any desired number of ranges of pins *a* may be provided upon
100 the regulator-rod R and that the pins in each range are at uniform distances apart; but the pins in one range are closer together than those in another range, and these pins are

for determining the period of time during which the lamp is allowed to burn, and when one pin in either range comes into contact with the end of the lever T that end of the lever is carried down as the oil is consumed and the other end of the lever T and the rod 17 are raised, and when the pin passes clear of such lever, so as to liberate the same, the rod 17 drops and the end of the rod 17 strikes the end of and moves the spring-latch 9 and releases the central rod N, so that this rod and the deflector drop and extinguish the light, and this downward movement of the rod 17 is promoted by a spring T', that is fastened to the inner wall of the reservoir c and acts upon the inner end of the lever T to raise the same as the pin on the rod passes clear of such lever, and when the lamp is again to be lighted the deflector and rod are raised, the spring-latch passes beneath the rod and holds the same. The lever T is beneath the next pin in the range of pins ready to be depressed and again liberated when the oil has been consumed sufficiently to allow the float to descend and liberate the drop-lever from the pin. This drop-lever may be constructed in any desired manner—such, for instance, as that represented in my aforesaid patent. I have, however, represented the same with a catch 24 at the end, which yields as the rod R is lifted, so that the catch may pass by one of the pins and catch beneath the same, and the rod 17 is thereby held up until the pin passes clear of the end of the drop-lever as the float descends.

The rod 17 does not act upon the spring-latch while being drawn up, and in falling the rod by its inertia strikes the end of the spring-latch 9 and throws the latch far enough away to allow the rod N to drop. I have represented this latch as having a mortise that is large enough for the rod to drop through, as seen in Fig. 2, and when the rod N is raised the spring-latch returns to the position shown in Fig. 1, with the end of the latch against the side of the rod 17, and when this rod 17 is lifted the latch will spring sufficiently for the end of the latch to come into the path of the rod 17, so as to be acted upon thereby when said rod is dropped.

It is to be understood that the regulator-rod R slides through the thumb-disk 13, and

that upon the edge of this thumb-disk there may be marks or numbers to indicate the number of hours that the lamp will burn when the disk has been turned to expose such number at the opening in the chamber 14, and it is preferable to notch the disk 13, as shown in Fig. 3, and to provide a spring 25 to set into a notch and prevent the disk being accidentally turned.

I claim as my invention—

1. The combination, with an Argand lamp, the rod N, passing through the air-tube, and the deflector upon its upper end, of a float within the receiver, a regulator-rod connected therewith and having projections, a drop-lever acted upon by the projections, and a spring-latch for holding up the central rod and deflector, and which latch is moved by the drop-lever and rod to allow the deflector to fall and extinguish the flame, substantially as set forth.

2. The combination, with an Argand lamp, of the central rod passing through the air-tube and having a deflector or button upon its upper end, the spring-latch for holding up the rod and deflector, a lifter connected with the central rod, a float within the receiver of the lamp, a regulator-rod having ranges of pins projecting therefrom, the pins in the different ranges being at different distances apart, a thumb-disk surrounding the regulator-rod and adapted to be turned by hand for turning the regulator-rod, a drop-lever having a latch at the end, and a rod extending from the drop-lever and acting upon the spring-latch for dropping the deflector and extinguishing the flame when one of the pins on the regulator-rod separates from the drop-lever, substantially as set forth.

3. The combination, with an extinguisher, of a rod connected to the same and passing to the bottom of the lamp, a spring for holding the rod, a float in the reservoir, a series of pins connected with the float, and a lever and connection to move the spring and allow the extinguisher to act, substantially as specified.

Signed by me this 11th day of August, 1891.
C. H. VAN HISE.

Witnesses:
GEO. T. PINCKNEY,
HAROLD SERRELL.