(No Model.)

H. H. NORRINGTON.

APPARATUS FOR LIGHTING BUILDINGS.

No. 554,295. Patented Feb. 11, 1896.

Fig. 1.

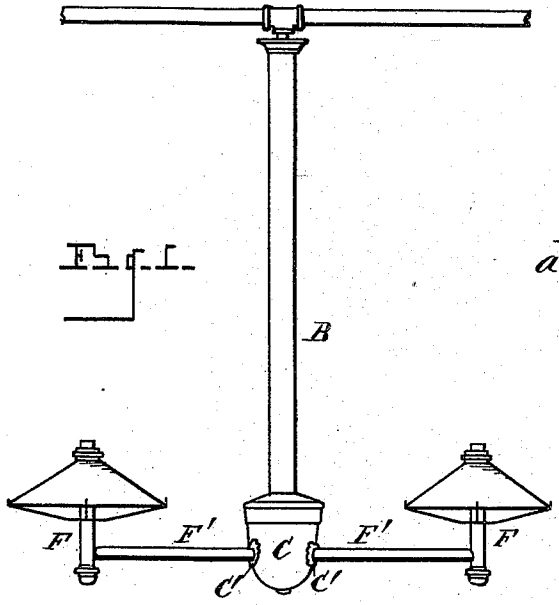


Fig. 2.

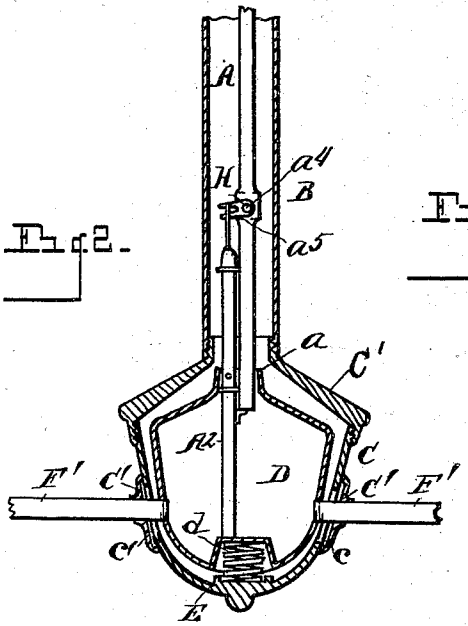


Fig. 3.

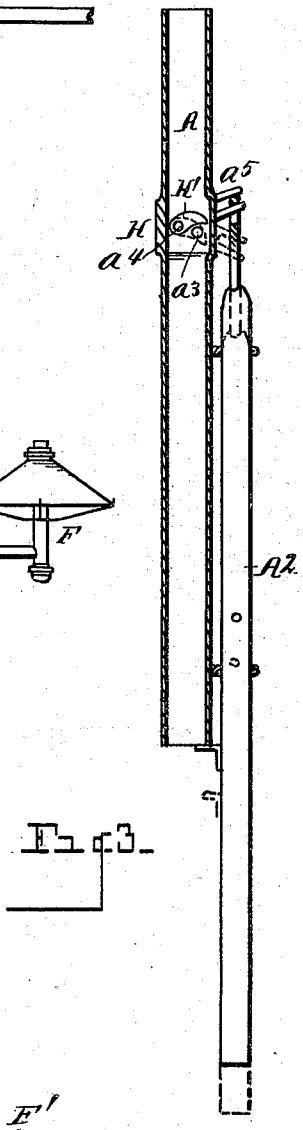
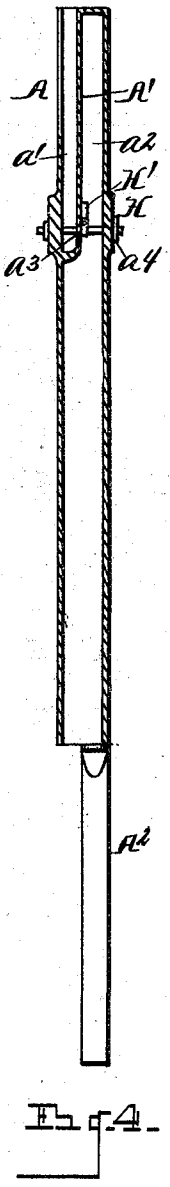


Fig. 4.



WITNESSES

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APPARATUS FOR LIGHTING BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 554,295, dated February 11, 1896.

Application filed March 11, 1895. Serial No. 541,265. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. NORRINGTON, a citizen of the United States, residing at West Bay City, county of Bay, State of Michigan, have invented a certain new and useful Improvement in Apparatus for Lighting Buildings; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in an apparatus for lighting buildings, having in view greater reliability, durability, and efficiency; and it consists of the construction, combination, and arrangement of devices hereinafter described and claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a vertical section showing the valve in elevation. Fig. 3 is a vertical section through the valve. Fig. 4 is a similar view to Fig. 3, but at right angles thereto.

My invention relates to that general class of devices wherein lamps are suspended from a feed-pipe, an automatic feed being provided to control the supply of oil to the lamps.

I carry out my invention as follows:

A represents a feed-pipe leading from any suitable source of supply. The source of supply, not forming a feature of my invention, is not shown herewith.

B is an outer pipe inclosing the feed-pipe A.

C is a shell having a rigid connection with the lower end of the outer pipe B.

D is an oil-reservoir having a yielding connection with the lower end of the feed-pipe A within said shell. To this end the upper portion of the reservoir D may be sleeved upon and have a sliding connection with the lower end of said feed-pipe, as at *a*. The oil-reservoir is supported upon any suitable spring E at its base, the spring being located between the shell C and the base of the reservoir D. I have shown a coiled spring so located, but a flat or any other suitable form of spring may be employed, as may be desired.

F F denote lamps, and F′ F′ denote supply-pipes leading to the lamps from the reservoir D through the shell C. To permit the vertical movement of the supply-pipes F′ the shell C is provided with elongated slots *c c*, through which said pipes project. C′ denotes cover-plates attached to said supply-pipes to cover the slots *c c*.

It has been found that when the lamps are suspended from a spring, as is practically the case in constructions heretofore devised, there is a tendency to weaken the spring so that it is not always reliable in its operation.

In my present invention the oil-reservoir, as will be seen, is contained in the outer shell C, resting upon the spring E at its base, the outer shell being rigid and fixed, the oil-reservoir having a yielding or adjustable engagement therewithin upon the lower end of the feed-pipe A. Within the lower end of the said feed-pipe A, I locate a valve H to control the feed of oil from the pipe A into the reservoir D. This valve, as shown more in detail in Figs. 3 and 4, is constructed with a diaphragm A′ dividing the feed-pipe into two inner apartments a' and a^2 adjacent thereto, said apartments communicable through a way or channel a^3, a movable wing or arm H′ normally closing said way or channel a^3 through the diaphragm A′. This wing or arm H′ is fulcrumed at one end upon a journal a^4, one end of which is provided with a crank-arm a^5, with which is connected a weighted operating-bar A^2, extending downward adjacent to the base of the reservoir D, the weighted bar A^2 normally holding the wing H′ in closed position.

The operation of the valve will be understood.

When the weight of the oil in the reservoir D is sufficient, the reservoir will descend and the weighted bar A^2 will hold the valve in closed position. When, however, the supply of oil from the reservoir D to the lamps has been sufficiently diminished in said reservoir, the spring E will lift said reservoir, thereby lifting the bar A^2 and the wing H′ permitting a fresh supply of oil to pass into the reservoir through the channel a^3. In this manner the supply of oil is controlled by the amount of oil in the reservoir.

While I have shown the valve hereinbefore described, I would have it understood that I do not limit myself thereto solely in connec-

tion with other features of my device, as any other suitable valve might be used with the shell C and interior reservoir D instead of the weighted valve herein described. I prefer to countersink the lower portion of the reservoir D, as shown at *d*, to receive the spring, so that the reservoir will be held in position by the spring.

The shell C is preferably engaged with the pipe B by means of a cap C′ having a threaded engagement therewith.

What I claim as my invention is—

1. In a lighting apparatus, a stationary shell, a feed-pipe, a vertically-movable spring-actuated reservoir within the shell and supported by the spring which rests upon the shell, and communicable with the feed-pipe, and a valve to control the communication of the feed-pipe with said reservoir, said valve being actuated by the vertical movement of the reservoir, substantially as shown.

2. In a lighting apparatus, the combination of a feed-pipe A, an outer pipe B, a shell having a rigid connection with the outer pipe, a reservoir having a movable connection with the feed-pipe within said shell, a spring located between the reservoir and the shell to actuate the reservoir when the supply of oil therewithin is sufficiently diminished, and a valve to control the feed from the feed-pipe into the reservoir actuated by the lifting of the reservoir, substantially as set forth.

3. In a lighting apparatus, the combination of a feed-pipe A, a shell C, a reservoir located within the shell communicating with the feed-pipe, a valve to control said communication, a spring bearing against the shell to actuate the reservoir and thereby to actuate said valve when the weight of oil in the reservoir is sufficiently diminished, and lamps provided with connecting supply-pipes F′ F′ communicating with the reservoir, said shell provided with orifices *c c* to permit the movement of the supply-pipes as said reservoir rises and falls, substantially as set forth.

4. In a lighting apparatus, a vertical feed-pipe, an oil-reservoir communicable with the lower end of the feed-pipe and having a movable engagement therewith, said feed-pipe having a vertically-extended diaphragm A′ therein provided with a passage therethrough dividing the adjacent portion of the feed-pipe into two apartments communicable the one with the other through said passage, a movable wing or arm H′ to control the communication through said passage, and an operating-bar extending downward toward the base of said reservoir to operate said wing, substantially as and in the manner described.

In testimony whereof I sign this specification in the presence of two witnesses.

HENRY H. NORRINGTON.

Witnesses:
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