

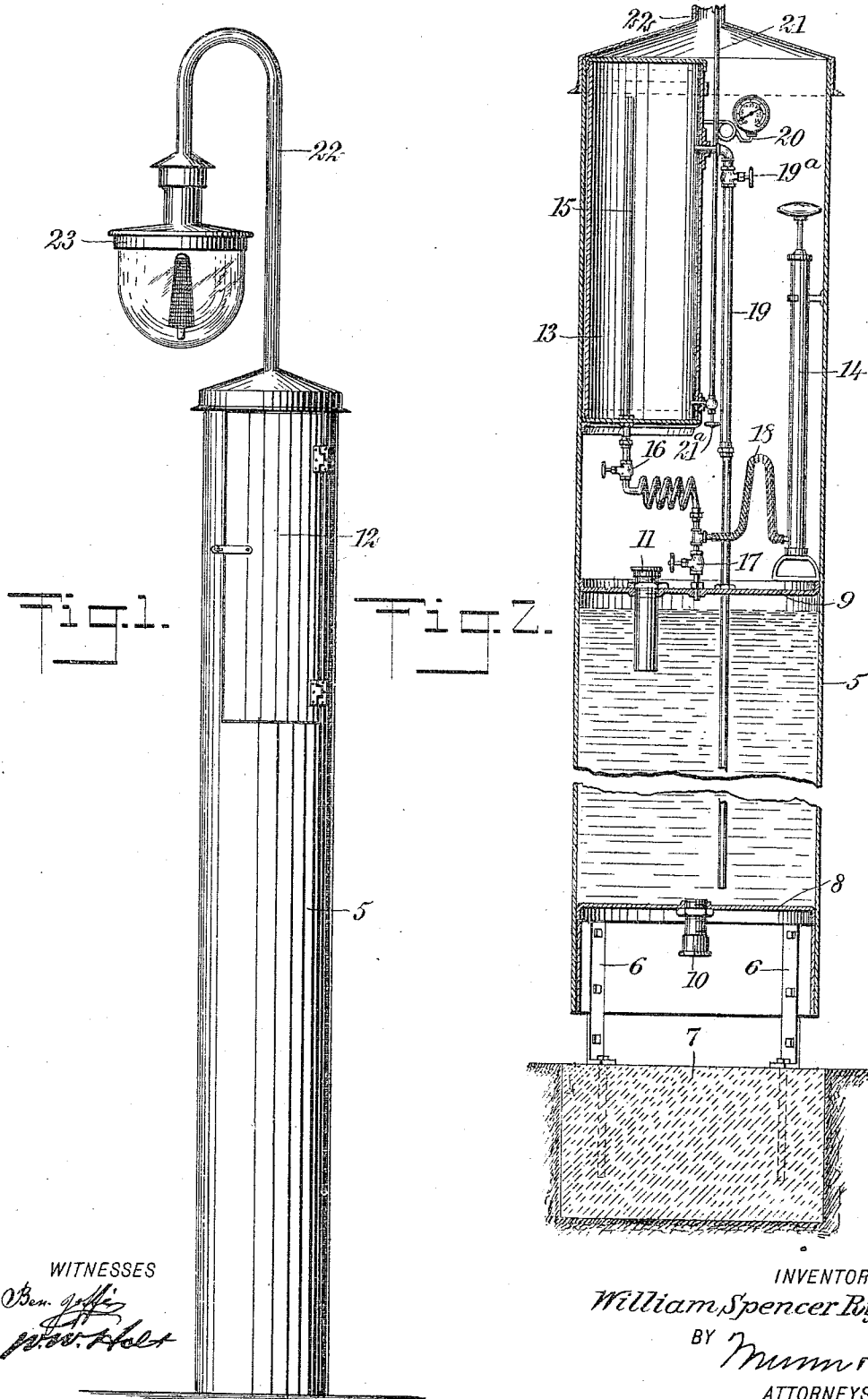
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LAMP.

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957,627.

Patented May 10, 1910.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## LAMP.

957,627.

Specification of Letters Patent.

Patented May 10, 1910.

Application filed March 3, 1908. Serial No. 418,946.

*To all whom it may concern:*

Be it known that I, WILLIAM SPENCER RYAN, a citizen of the United States, and a resident of Viola, in the county of Mercer and State of Illinois, have invented a new and Improved Lamp, of which the following is a full, clear, and exact description.

This invention is an improvement in lamps, relating more especially to street lamps of the character disclosed in Letters Patent granted to me May 12, 1908, Number 887,698, wherein the fuel of the lamp is contained in a reservoir which forms a lamp post.

The present invention not only has in contemplation the location of the supply reservoir in the lamp post or casing, but also the feed tank which supplies the fuel to the lamp, together with means for introducing fluid pressure above the free surface of the fuel in both the reservoir and feed tank, to respectively discharge the fuel in the reservoir to the feed tank above and thence feed the fuel under pressure to the lamp.

The invention further resides in certain special features of construction and combination of parts, as will be hereinafter particularly described and set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the views.

Figure 1 is a side elevation of the lamp complete, and Fig. 2 is a central vertical section through the upright casing constituting the lamp post.

In carrying out the invention I employ an upright cylindrical casing 5, which forms the lamp-post and is securely anchored to the ground, preferably by bolting or otherwise securing feet 6 on the inside of the lower end of the casing and bolting these feet to a base of concrete 7. The metal of the casing to which the feet are bolted is preferably of double thickness, in order to insure strength and rigidity, and directly thereabove the casing is provided with a bottom or head 8 which, in connection with a similar head 9 arranged intermediate the casing, forms a supply reservoir for the fuel. The heads 8 and 9 are respectively provided with nipples 10 and 11, the former serving as a drain, as a means for connecting the post and its appurtenances to an interior lighting system

by underground pipes or for supplying the reservoir from an underground source, and the nipple 11 extending a slight distance within the reservoir and constituting a filling-plug. This extension of the nipple 11 into the reservoir prevents the same from being completely filled, thus at all times presenting an air chamber above the free surface of the fuel.

That part of the casing above the reservoir has a projecting flange for shedding the water, and a door 12, which provides access into the upper portion of the post and wherein is located a fuel feed tank 13, an air compressor 14, together with the pipe connections between the compressor, reservoir and tank, these connections comprising a pipe 15 leading from the top of the reservoir through the feed tank to its upper portion, and being provided with valves 16 and 17, between which is connected the discharge pipe of the compressor, preferably in the nature of a flexible tube 18, in order that it may be easily disconnected. Leading from a point near the bottom of the reservoir to the upper portion of the feed tank is a pipe 19 having a controlling valve 19<sup>a</sup>. Connected with the feed tank, at a point normally above the free surface of the fuel is a pressure gage 20. Also connected to the feed tank is a feed pipe or hollow wire 21, which passes through a tubular overhanging arm 22, rigid with the top of the tank, to a lamp 23, and has a controlling valve 21<sup>a</sup> located at a point within convenient reach from the casing door. This valve is always left open, except in case of accident or when the lamp is being repaired.

In the operation of the apparatus, after the reservoir has been filled with oil, gasoline or such other fuel, the valves 19<sup>a</sup> and 17 are opened and the valve 16 closed. The compressor is then operated to force the air above the free surface of the liquid in the reservoir, which causes the fuel to flow up through the pipe 19 to the feed tank, the lamp at this time being lighted. The length of time the lamp will burn under certain pressures in the tank may be found by practice, so that the pumping of the air into the reservoir may be continued until the gage records a pressure which indicates that there is sufficient fuel in the feed tank to burn the length of time required. The valves 17 and 19<sup>a</sup> are then closed, and the pressure in the feed tank further increased

if desired by working the pump with the valve 16 open. This causes an increased supply of fuel to pass from the feed tank to the lamp, which obviously makes the latter  
5 burn brighter. When the desired pressure is recorded on the gage, the pumping of air directly into the feed tank is discontinued and the valve 16 closed. When the lamp  
10 has burned the length of time for which fuel has been forced into the feed tank it will go out of its own accord for the lack of more fuel.

It will be apparent that by inclosing the feed tank, air compressor, gage, and the several connections in the casing of the post,  
15 these parts will not only be protected from the weather but will be removed from points where they would present an unsightly appearance.

20 The invention as shown and described while being the preferred construction and arrangement of the apparatus, may obviously be modified in particulars falling within the scope of the annexed claims.

25 Having thus described my invention I claim as new and desire to secure by Letters Patent:

30 1. The combination of an upright casing, constituting a lamp post, a fuel supply reservoir in the lower portion of the casing, a lamp carried by the casing, a fuel feed tank located in the upper portion of the casing,

having connections with the reservoir and lamp, a door forming a portion of the upper part of the casing, and a filling-tube extending into the top of the reservoir below the normal level of the fuel, accessible through said door. 35

2. The combination of an upright casing, constituting a lamp post, having spaced  
40 heads secured therein forming in connection with the casing a fuel reservoir, a fuel feed tank arranged within the casing above the reservoir, a lamp, a pipe leading from the top of the reservoir to the top of the feed  
45 tank, having controlling valves, an air compressor having a connection with said pipe between the controlling valves, a supply pipe leading from the lower portion of the reservoir to the upper portion of the feed tank,  
50 a lamp having a feed connection with the lower portion of the feed tank, adapted to be fed under the air pressure created by the compressor in the fuel tank, and a gage connected with the fuel feed tank for de-  
55 termining said pressure.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM SPENCER RYAN.

Witnesses:

JOHN G. ZERN,  
BERT BAILEY.