

No. 642,763.

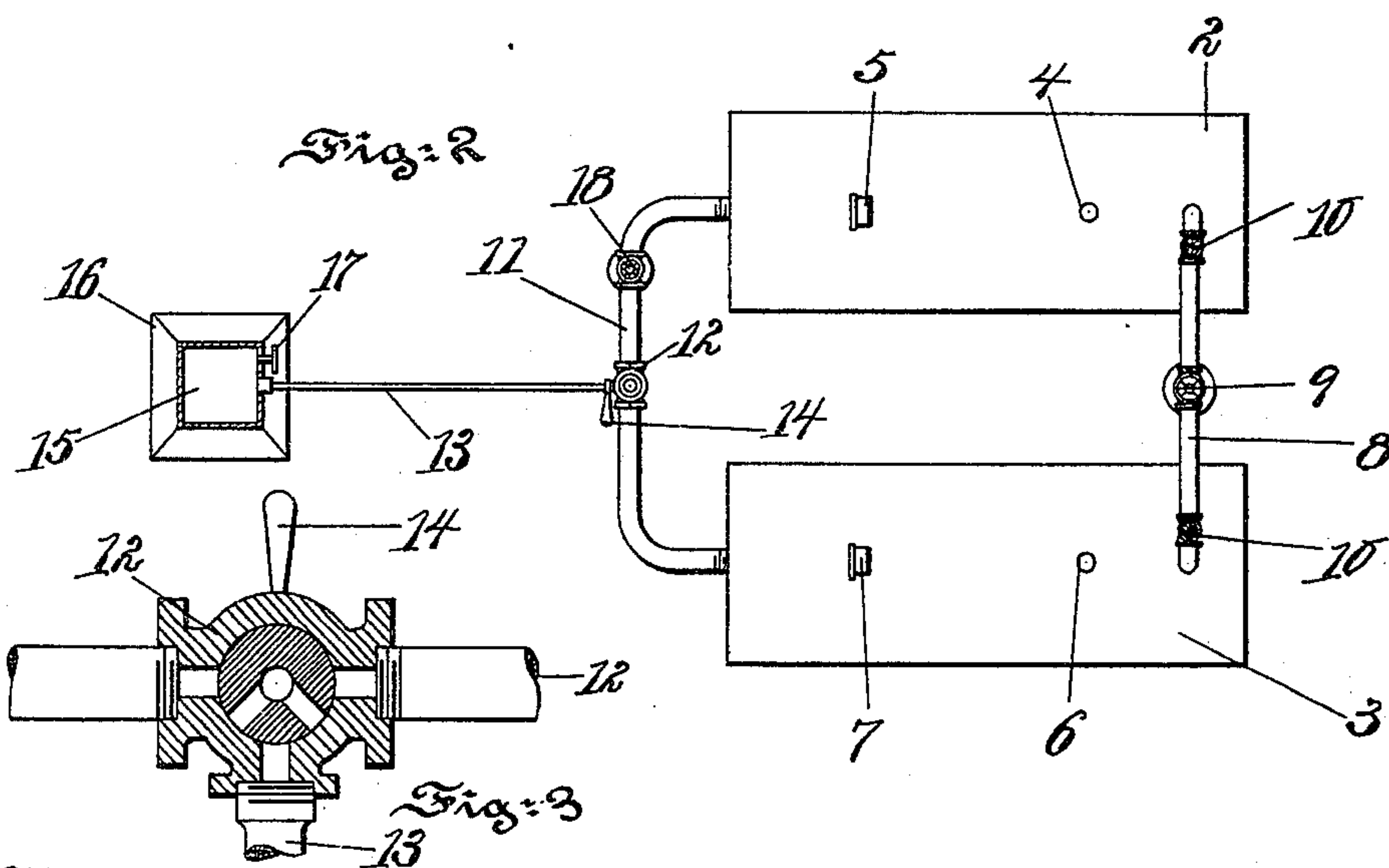
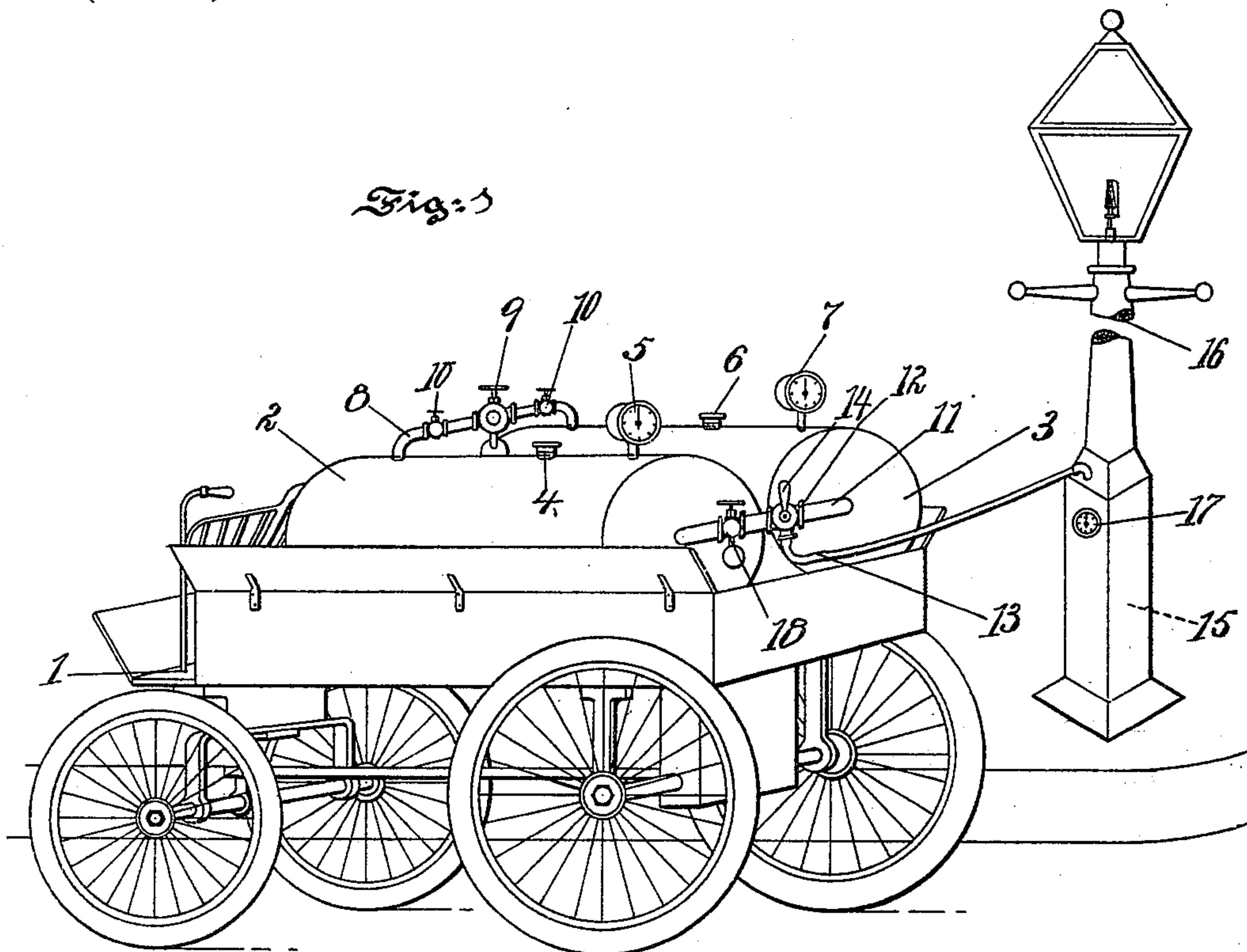
Patented Feb. 6, 1900.

R. THAYER.

SUPPLY WAGON FOR INCANDESCENT OR OTHER HYDROCARBON BURNERS.

(Application filed Sept. 23, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

RUSSELL THAYER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
KITSON HYDRO-CARBON HEATING AND INCANDESCENT LIGHTING COM-
PANY, OF SAME PLACE AND CHARLESTON, WEST VIRGINIA.

SUPPLY-WAGON FOR INCANDESCENT OR OTHER HYDROCARBON-BURNERS.

SPECIFICATION forming part of Letters Patent No. 642,763, dated February 6, 1900.

Application filed September 23, 1899. Serial No. 731,399. (No model.)

To all whom it may concern:

Be it known that I, RUSSELL THAYER, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Supply-Wagon for Incandescent or other Hydrocarbon-Burners, of which the following is a specification.

In the use of hydrocarbon oil—such, for example, as kerosene—it is customary to supply the oil under pressure. An example of this use of oil is to be found in systems of street-lighting—such, for example, as the Kitson—in which mantles or incandescents are heated by means of a Bunsen burner, to which kerosene is fed from a suitable tank by means of air-pressure therein. In such systems it is customary and for many reasons desirable to locate the oil-tank in the base of the post or support of the light. Under these circumstances an attendant must go to each post and first renew the supply of oil in the tank and then create the necessary air-pressure therein. This has been done usually by means of an air-pump, forming a part of the equipment of each post. Such method of renewing the supply of oil and creating the necessary pressure necessarily consumes considerable time and is therefore expensive.

One object of the present invention is to obviate such expenditure of time and labor and to provide means by which the necessary supplies of oil and of air under pressure can be renewed and maintained throughout a considerable district in an expeditious, comparatively inexpensive, and satisfactory manner.

To this and other ends the invention comprises the improvements hereinafter described and claimed.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a perspective view illustrating a supply-wagon or equipment embodying features of my invention and showing also a lamp-post. Fig. 2 is a diagrammatic view illustrating a plan of a portion of the equipment shown in Fig. 1, and Fig. 3 is a detail view drawn principally in section.

In the drawings, 1 is a wagon or vehicle

adapted to be drawn or to propel itself from place to place.

2 and 3 are tanks or receptacles suitably mounted upon or carried by the wagon. One of these tanks—for example, the one designated 2—contains air under considerable pressure. The air may be forced into this tank by way, for example, of the inlet 4 through the intervention of suitable air-compressing apparatus that can be located at a central station. Such an air-compressing apparatus is inexpensive to run, and it will serve, if necessary, to compress air into the tanks of several supply-wagons.

5 is a pressure-gage by means of which the air-pressure in the tank may be ascertained. The other tank 3 contains a supply of oil, which may be introduced into it by way of the inlet 6 at the central station. This tank is also provided with a pressure-gage 7, by means of which its internal pressure may be ascertained.

The tanks 2 and 3 are connected together in such a way that the pressure of the air or an appropriate part of it is transmitted to the oil. The pipe 8 constitutes such a connection, and it is illustrated as provided with a reduction-valve 9 and with hand-valves 10. The reduction-valve 9 serves to permit a portion of the air under pressure to escape from the tank 2 into the tank 3, so that the pressure upon the oil is not as great as the pressure of the air in the tank 2. There are means for discharging either the air or the oil, as required. The pipe 11, which communicates with the tanks and the three-way valve 12, and the discharge-pipe 13 constitute such means. When the three-way valve is in the position shown in Fig. 3, neither air nor oil can escape. However, by turning the handle 14 of the valve in one direction or the other it is possible to permit of the escape of either air or oil, as required.

15 represents the tank, from which oil is forced under pressure to supply the burner. As shown, this tank 15 is mounted within the lamp-post 16 and is provided with a pressure-gage, as 17.

In use the tanks on the supply-wagon are respectively filled with oil and with air under pressure. The attendant in charge then takes the wagon from lamp to lamp, and at each

lamp he connects the discharge-pipe 13 with the tank 15. It may be assumed that the pressure in the tank 15 should initially be sixty pounds and should be permitted to run
 5 down to, say, forty pounds. If the tank 15 requires a fresh supply of oil, the attendant in charge manipulates the handle 14 in order to permit of the escape of oil from the tank 3 through the pipe 13. The pressure in the tank
 10 3, which is obtained by way of the pipe 8, is sufficient to cause the oil to flow into the tank 15 against the pressure therein. After the proper supply of oil has been thus introduced into the tank 15 the attendant turns the han-
 15 dle 14 into position for permitting of the escape of air from the tank 2 into the tank 15 until the pressure therein is equal to the required amount, which may be, for example, fifty pounds. A reduction-valve 18 may be
 20 employed to prevent excessive pressure on the tank 15. It will be noted that by means of the described portable supply apparatus it is possible to replenish a number of street-lights in an expeditious and economic manner.
 25 It will be obvious to those skilled in the art to which my invention appertains that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise construction
 30 and arrangement of parts hereinabove set forth and illustrated in the accompanying drawings; but,

Having thus described the nature and objects of my invention, what I claim as new,
 35 and desire to secure by Letters Patent, is—

1. Supply apparatus of the type described comprising a wagon, oil and compressed-air

tanks carried thereby, a connection between said tanks for permitting air-pressure to reach the supply of oil, a reduction-valve in said
 40 connection, a discharge connection adapted for application to the tanks to be filled, and a valve for connecting said discharge connection with one or the other of said tanks to supply oil and air separately as required. 45

2. Supply apparatus of the type described comprising a wagon, intercommunicating tanks mounted thereon, a controlling-valve for maintaining different pressures in said tanks, a discharge-pipe, and means for con-
 50 necting the discharge-pipe with one or the other of the tanks, substantially as described.

3. Supply apparatus of the type described comprising a wagon, tanks thereon and of which one is adapted to contain oil under pres-
 55 sure and the other to contain air under greater pressure, a discharge connection, and a three-way plug-valve for connecting the discharge connection with one or the other of the tanks, substantially as described. 60

4. Supply apparatus of the type described comprising a wagon, a tank mounted thereon for containing a supply of oil under pressure, a tank thereon for containing a supply of air under different pressure, a discharge-pipe as
 65 13, and means for connecting said pipe with one or the other of the tanks, substantially as described.

In testimony whereof I have hereunto signed my name.

RUSSELL THAYER.

In presence of—

H. J. JACKSON,
 K. M. GILLIGAN.