

L. FALLOT.
ACETYLENE GENERATOR.
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1,016,681.

Patented Feb. 6, 1912.

Fig. 1.

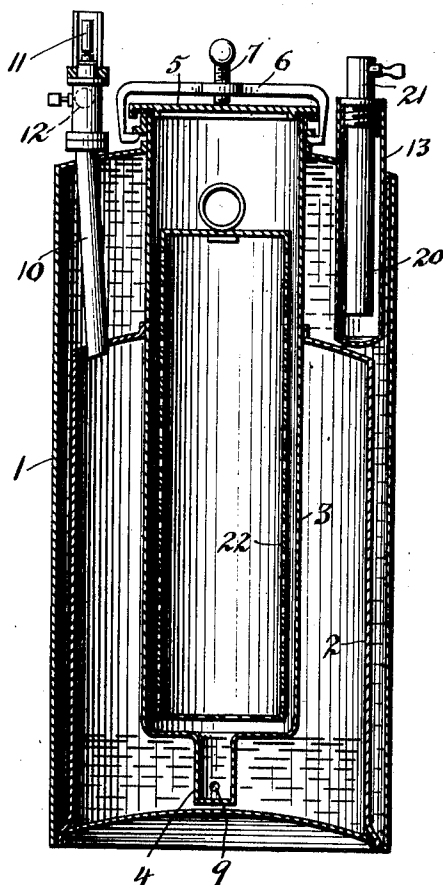


Fig. 2.

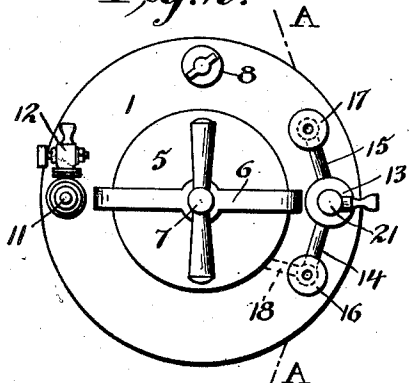
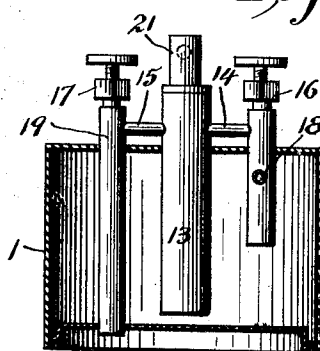


Fig. 3.



Witnesses:

L. S. Hamilton
M. L. Newcomb

Inventor:

Louis Fallo
by L. S. Hamilton
Atty

UNITED STATES PATENT OFFICE.

LOUIS FALLOT, OF PARIS, FRANCE.

ACETYLENE-GENERATOR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LOUIS FALLOT, engineer, citizen of the French Republic, residing at Paris, in the Department of the Seine, France, have invented a certain new and useful Acetylene-Generator, of which the following is a specification.

This invention relates to apparatus for generating acetylene for the production of light for projectors, in cinematograph lanterns or for other purposes; or for the production of heat as, for example, in autogenous soldering, or for other applications.

15 The improved apparatus comprises an acetylene generator, as hereinafter set forth and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 shows the acetylene generator in vertical section. Fig. 2 illustrates it in plan. Fig. 20 3 shows a vertical section of the upper part of the generator taken along the line A—A of Fig. 2.

The acetylene generator shown in Figs. 1, 2 and 3 comprises an outer receptacle 1 to the bottom of which is fixed an inner receptacle 2; through the upper end of both of these receptacles passes a third receptacle 3. This receptacle is normally water and air tight, except at the small opening 9 formed in the lower tubular extension 4. The upper part of the receptacle 3 is provided with a lid 5 which may be hermetically closed by means of the stirrup or bail 6 and the screw 7.

35 The annular space between the receptacles 1 and 2 is, when the apparatus is in use, filled with water for the purpose of cooling the generator, such water being introduced through an opening furnished with plug or stopper 8.

In use, the receptacle 2 contains a determined quantity of water which is introduced by being poured into the receptacle 3, whence it flows into receptacle 2 through the small opening 9. The top of the receptacle 2 is connected by the tube 10 to a safety valve 11 and to a cock or valve 12, through which, when desired, air may be forced under pressure into the receptacle 2 and produce therein a pressure sufficient to force the water therein into the receptacle 3 through the opening 9. The water may be forced to the top of the receptacle 3 by this action when such receptacle is placed in

communication with the atmosphere by the removal of lid 5.

The upper end of the receptacle 1 carries a vertical tube 13 which is closed at its lower end and incloses a purifying apparatus 20. The upper part of the tube 13 communicates by lateral tubes 14 and 15 with valves 16 and 17 through which valves communication is opened respectively with the upper part of the receptacle 3 and the upper part of the receptacle 2 by tubes 18 and 19. Gas entering the tube 13 either through tube 18, valve 16, and tube 14, or through tube 19, valve 17 and tube 15, passes through the purifier 20 and can be led away or escape through the valve 21.

22 is a holder containing the carbid and placed within the receptacle 3. When the water is forced into and rises in the receptacle 3, the carbid is attacked and acetylene is given off and passes through the tube 18, the valve 16 being open and the valve 17 being closed. The gas thus generated and conducted passes through the purifier 20 and the valve 21. The ascent of the water in the receptacle 3 is effected by the pressure in the receptacle 2 as long as this pressure is greater than that of the generated acetylene in the receptacle 3.

When it is desired to stop the generation of gas the valve 17 is opened so as to establish communication for a moment between and equalize the pressure in receptacles 2 and 3. The valve 16 is then closed. The gas which continues to be generated for some time forces the water out of the receptacle 3 and passing through the opening 9 passes through the receptacle 2, the tube 19, the valve 17, the purifier 20 and the valve 17. The valve 21 being closed in its turn gas accumulates in the receptacle 2 and sets up the pressure therein necessary for the next working of the apparatus, after re-opening the valves 16 and 21.

When the apparatus is first started, there is a small quantity of air in the vessel 2 above the surface of the liquid therein. At the first stopping of the generation of gas, and upon the opening of the valve 17, this air will mingle with the gas, but it is so small in volume as compared with the constantly generated gas that no serious results will follow. After the first stoppage, the pressure necessary to force the liquid up into the inner receptacle is produced by the

gas which has accumulated in the vessel 2, as before described.

Having thus described my invention, what I claim is:—

5 An acetylene generator comprising a closed vessel adapted to contain a body of liquid and also to hold gas under pressure, an inner closed receptacle in said vessel hav-
10 ing its lower end provided with a small opening below the normal level of the liquid, a removable container in said receptacle having its lower end adapted to admit liquid but supported above the normal level of the liquid in the vessel, a tube communicating

with the inner receptacle, a pipe connecting 15 the upper end of said vessel with said tube, valves in said tube and pipe, a delivery pipe connected with said tube between said valves, and means whereby pneumatic pressure may be brought to bear upon the sur- 20 face of the liquid in said vessel to force it up into said receptacle and container.

In testimony whereof I affix my signature in presence of two witnesses.

LOUIS FALLOT.

Witnesses:

HENRY DANTER,

LUCIEN UMPANY.