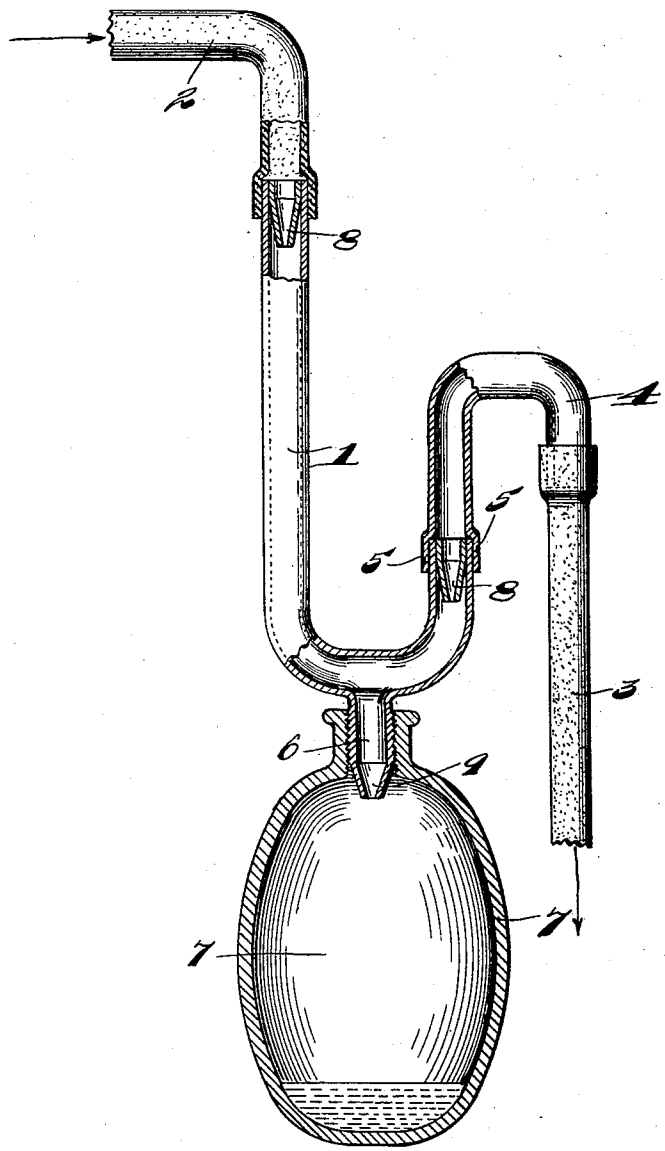
J. B. McDEVITT.

WATER TRAP FOR CARBID LIGHT SYSTEMS.

APPLICATION FILED OCT. 17, 1912.

1,077,358. Patented Nov. 4, 1913.



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UNITED STATES PATENT OFFICE.

JAMES B. McDEVITT, OF CHICAGO, ILLINOIS.

WATER-TRAP FOR CARBID LIGHT SYSTEMS.

1,077,358. Specification of Letters Patent. Patented Nov. 4, 1913.

Application filed October 17, 1912. Serial No. 726,275.

To all whom it may concern:

Be it known that I, JAMES B. McDEVITT, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Water-Traps for Carbid Light Systems, of which the following is a specification.

My invention relates to carbid light systems and has for its object the production of means for trapping or collecting water with which the gas from the generator is ordinarily laden before the gas reaches the light for consumption. The presence of water interferes with the proper combustion of the gas at the lamp, and if in large enough quantities prevents entirely the operation of the lamp causing the extinguishment of the flame during operation of the lamp. In the generation of gas from carbid the gas is always saturated with water and so that without the provision of means for removing the water from the gas, a very unsatisfactory system results, this being one of the reasons carbid light systems are not popular in automobiles.

It is the object of this invention to provide means for absolutely purifying the gas, so far as water or moisture therein is concerned in the travel of the gas from the generator to the lamp.

A further object is the production of a water trap or collector, as mentioned, which will be of simple and economical construction and efficient in use.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing forming a part of this specification, and in which the figure is a sectional side elevation of a water trap for carbid light systems embodying my invention.

The preferred form of construction, as illustrated in the drawing comprises a substantially U-shaped pipe 1 which is interposed in the flexible gas pipe which extends from the gas generator to the lamp, the end 2, when the device is in use, communicating with the gas generator, the end 3 communicating with the lamp. The end 2 is connected directly with one end or leg of the member 1, the pipe end 3 being connected to the other end of said member by means of a rigid U-pipe section 4, the end 5 of which fits tightly over said end of said member, as shown. Formed in the member 1 at the bight thereof is a depending nipple 6. Threaded upon the nipple 6 is a collector 7 in the form of a bulb which is constructed preferably of rubber. Arranged in the member 1 at the ends thereof are conical members 8 which serve to restrict or contract the gas passage through the member 1, as will be readily understood. The lower end 9 of the nipple 6 is correspondingly formed in order to restrict the passage therethrough communicating with the collector 7.

With the arrangement set forth the gas in passing from the generator to the lamp for consumption will be required to first pass through the member 8 which is arranged adjacent the pipe end 2. Here the gas, by reason of the restriction in the gas passage will impinge upon the member 8 about the orifice or passage therethrough and effect the deposit upon said member 8 of any moisture or water with which the gas is laden. This water of condensation will drip from the member 8 toward the bight in member 1 whence the same will enter the nipple 6 and be deposited therefrom into the collector 7. By restricting the lower end of nipple 6 the possibility of the water collected in collector 7 splashing up through said nipple into the gas passage, by reason of jarring of the vehicle in conjunction with which the device is used, will be reduced to a minimum. Also through the introduction of the member 8 which is arranged adjacent the pipe section 5, any moisture which still remains in the gas after passing the other member 8 and the nipple 6, will be deposited upon the under side of the tapered end of the former and thus insure the removal of all moisture from the gas. The water which is removed by the last mentioned member 8 will flow downwardly toward the nipple 6 whence the same will be also deposited into the collector 7.

Flexible connections are preferably used as shown in order to permit of the attachment of the main gas pipe to pipe connections disposed in any position and still secure the vertical position of the water trapping device which is essential to the proper operation thereof. By detachably connecting the member 7 with the nipple 6, the former, when water has been collected therein, may be readily and easily detached to discharge

the water therefrom and as expeditiously replaced when empty.

In addition to serving in the capacity of the water trap as described, the collector 7 by reason of the flexibility thereof serves also in the capacity of a gas reservoir serving to maintain a constant pressure in the system and hence conducing to the production of a non-flickering flame.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. In a gas purifier, the combination of a pipe having a depending U-bend therein; a nipple depending from the lower portion of said bend, said nipple having a restricted opening; and a collector provided at the lower end of said nipple, substantially as described.

2. In a gas purifier, the combination of a pipe having a depending U-bend therein; a nipple depending from the lower portion of said bend; a collector detachably connected with the lower end of said nipple, and a conical member arranged in said pipe restricting the passage through said pipe, substantially as described.

3. In a gas purifier, the combination of a pipe having a downwardly turned bend; a nipple depending from said bend, the lower end of said nipple being contracted; a collector connected with said nipple, and means in said pipe restricting the passage through said pipe, substantially as described.

4. In a gas purifier, the combination of a pipe having a downwardly turned bend; a nipple depending from said bend; a collector detachably connected with said nipple; and means in said pipe at either side of said nipple restricting the passage through said pipe, substantially as described.

5. In a water trap for carbid light systems, the combination of a pipe having a downwardly turned bend; a nipple depending from said bend; a collector detachably connected with said nipple; and conical members arranged in said pipe at either side of said nipple restricting the passage through said pipe, substantially as described.

6. In a water trap for carbid light systems, the combination of a pipe having a U-bend therein disposed vertically; members arranged in the legs of said bend restricting the passage therethrough; a nipple depending from the bight of said bend having a tapering lower end; and a collector detachably connected with said nipple, substantially as described.

7. In a water trap for carbid light systems, the combination with a flexible gas pipe, a rigid U-bend interposed in said gas pipe; members arranged in the legs of said bend restricting the passage therethrough; a nipple depending from the bight of said bend, having a tapering lower end; and a collector detachably connected with said nipple, substantially as described.

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

JAMES B. McDEVITT.

Witnesses:
A. A. Olson,
Joshua R. H. Potts.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."