

No. 652,628.

Patented June 26, 1900.

L. PARTL.  
ACETYLENE GAS GENERATOR.

(Application filed Jan. 30, 1900.)

(No Model.)

Fig. 1.

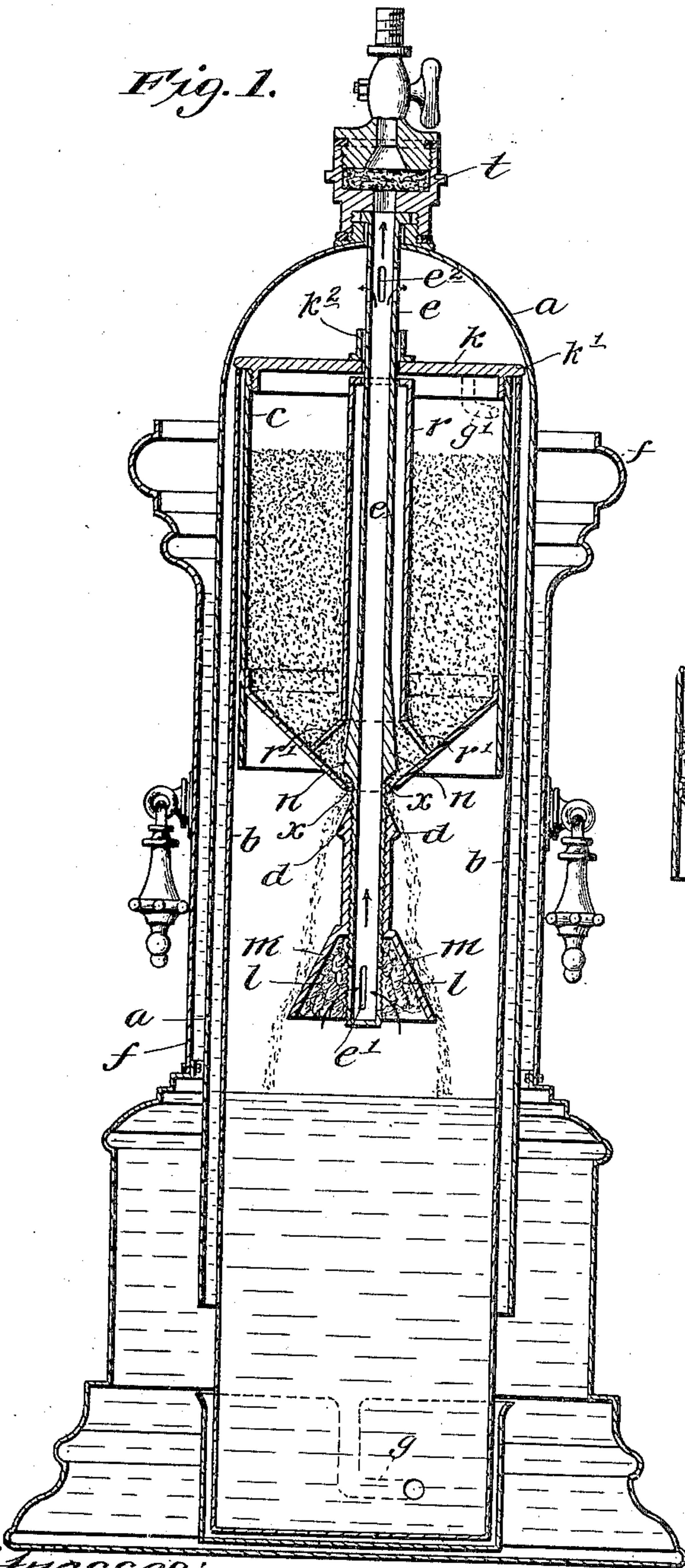
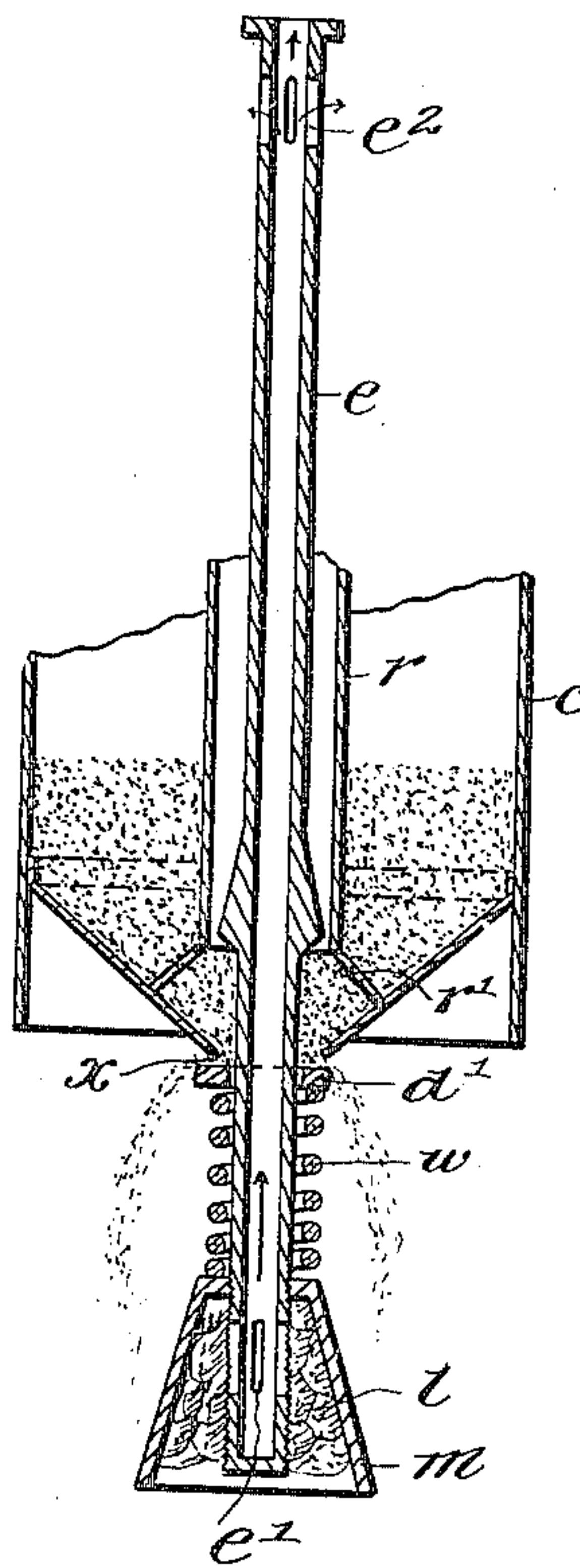


Fig. 2.



Witnesses:

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# UNITED STATES PATENT OFFICE.

LUDWIG PARTL, OF BUDA-PESTH, AUSTRIA-HUNGARY.

## ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 652,628, dated June 26, 1900.

Application filed January 30, 1900. Serial No. 3,463. (No model.)

*To all whom it may concern:*

Be it known that I, LUDWIG PARTL, a subject of the Emperor of Austria-Hungary, residing at Buda-Pesth, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Generators for Acetylene Gas, of which the following is a specification.

The present invention consists of an acetylene-generator having the carbid-receptacle inside the gasometer-bell and supported from the bottom of the gasometer-reservoir, through the said carbid-receptacle of which a guiding-tube passes, which is secured to the gasometer-bell. By this arrangement the gasometer-bell is guided centrally, and the gases developed are conducted into the gasometer, the development of the gas being further automatically regulated by the said guiding-tube through the agency of a suitable disk valve, which opens or closes the exit-openings for the carbid.

The invention is illustrated in the accompanying drawings in the form of a table-lamp by way of example.

Figure 1 is a longitudinal section of such a lamp, and Fig. 2 represents a modified form of a part of the same.

As will be seen in Fig. 1, a reservoir *b* is concentrically arranged in the gasometer-reservoir *f*, being secured in position by a bayonet-joint *g*. In the upper part of the reservoir *b* a carbid-receptacle *c* is arranged, being secured in position by a bayonet-joint *g'*. Said receptacle terminates in a cone and is closed by a suitable lid *k*, screwed thereto and having a flange *k'* resting upon the top of the reservoir *b* for supporting said receptacle. Through the receptacle, a tube *e* passes in such manner as to be capable of vertical movement therein. The upper opening is preferably strengthened by a flange *k<sup>2</sup>* to better guide the tube *e*, while the lower opening *x* is somewhat larger in diameter than the tube. The tube *e* is itself connected to the gasometer-bell *a* by a suitable screw attachment that can be easily tightened and is provided with conical ribs *n d* both above and below the opening *x* of the carbid-receptacle. The cone *n* limits the fall and the cone *d* the rise of the gasometer-bell *a*. At each end of

the guide-rod *e*, which rod is preferably closed at the bottom and there surrounded by a cap *m*, containing a sponge *l* or other porous material, openings *e'* *e<sup>2</sup>* are provided. A suitable socket *t*, likewise preferably containing some drying material, serves either for the direct attachment of a tap and burner or for a union and rubber tubing. In order now to relieve the guide-rod *e* from the pressure of the carbid in the receptacle *c*, the said tube is loosely surrounded by a sleeve *r*, which is attached to the bottom of the carbid-holder and is preferably enlarged at the end and provided with suitable openings *r'*, through which the carbid can pass. Because in small generators the sudden cut off of the feed of the carbid, as with a fixed valve-piece *d*, is very unpleasantly noticeable by reason of a variation in the gas-main, it is preferable to construct this piece in the form of a disk *d'*, as shown in Fig. 2 of the drawings, and to arrange the same loosely on the tube *e*. A cylindrical spring *w*, surrounding the tube *e*, supports the disk, so that elasticity, but at the same time a tight closure of the carbid-exit openings *x*, is obtained.

The operation of the invention is as follows: For the purpose of putting the apparatus into operation the reservoir *b* and gasometer-reservoir *f* are filled with water and the carbid-receptacle *c* and tube *e* placed in the reservoir *b*, being, if desired, secured by means of the bayonet-joint *g'* or the like, as heretofore described, to prevent the same from rising of itself. The cone *n* of the tube *e* then closes the exit-openings *x* for the carbid, and the receptacle can be filled with carbid and closed by the lid *k*. The tube *e* is now screwed to the gasometer-bell *a* and the said bell somewhat raised, so that some carbid can fall beneath the disk *n*, which is likewise moved into the water in the reservoir *b*. Acetylene gas is at once developed and passes through the opening *e'* of the tube *e*, the tube *e*, and the opening *e<sup>2</sup>* thereof into the gasometer-bell, raising the same until the cone *d* prevents further carbid from falling into the water. If, now, gas is consumed, the gasometer-bell will fall, the opening *x* is uncovered, and the carbid can fall into the water until the rod *e* is again raised by the filled bell *a*, and the



cone *d* prevents the further escape of carbid. This operation continues until all the carbid has been utilized.

As will be evident from Fig. 2 of the drawings, a considerably more regular operation of the apparatus and at the same time a securer cut off of the opening *x* are obtained by using the elastically-supported disk *d*, because the spring, even when a lump of the carbid is caught between the disk and the opening, presses the disk *d* obliquely on the opening and prevents further lumps from passing through.

This system can of course be adapted for large generators, and instead of leading off the gas direct from the gasometer-bell *a* it can be led off by a tube inserted from beneath between the gasometer-bell *a* and receptacle *b*.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A generator for acetylene gas, comprising an outer tank or reservoir, a gasometer-bell located therein, a carbid-receptacle situated within the gasometer-bell and supported from the bottom of the gasometer-reservoir, a guiding-tube connected to the bell and passing through the carbid-receptacle and through the top of said bell and having upper and lower valve-pieces for closing said receptacle at certain positions and for limiting the movement of the bell in either direction, whereby to automatically regulate the feed of the carbid according to the position of the bell, said tube having openings in its upper and lower

ends, whereby the gas developed in the generator may be conducted directly through said tube into the gasometer-bell, and to the place of use, substantially as described.

2. A generator for acetylene gas, comprising an outer tank or reservoir, a gasometer-bell located therein, a carbid-receptacle situated within the gasometer-bell and supported from the bottom of the gasometer-reservoir, a guiding-tube connected to the bell and passing through the carbid-receptacle and through the top of said bell and having upper and lower valve-pieces for closing said receptacle at certain positions and for limiting the movement of the bell in either direction, whereby to automatically regulate the feed of the carbid according to the position of the gasometer-bell, said tube having openings in its upper and lower ends, whereby the gas developed in the generator may be conducted through said tube directly into the bell and to the place of use, and a sleeve loosely surrounding said guiding-tube and lying inside the carbid-receptacle, said sleeve having its lower end enlarged and provided with openings to permit the passage of the carbid from the receptacle to the generator, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

LUDWIG PARTL.

Witnesses:

MOLWÉRÖDÖZ,  
GLÜCKÖDÖZ.