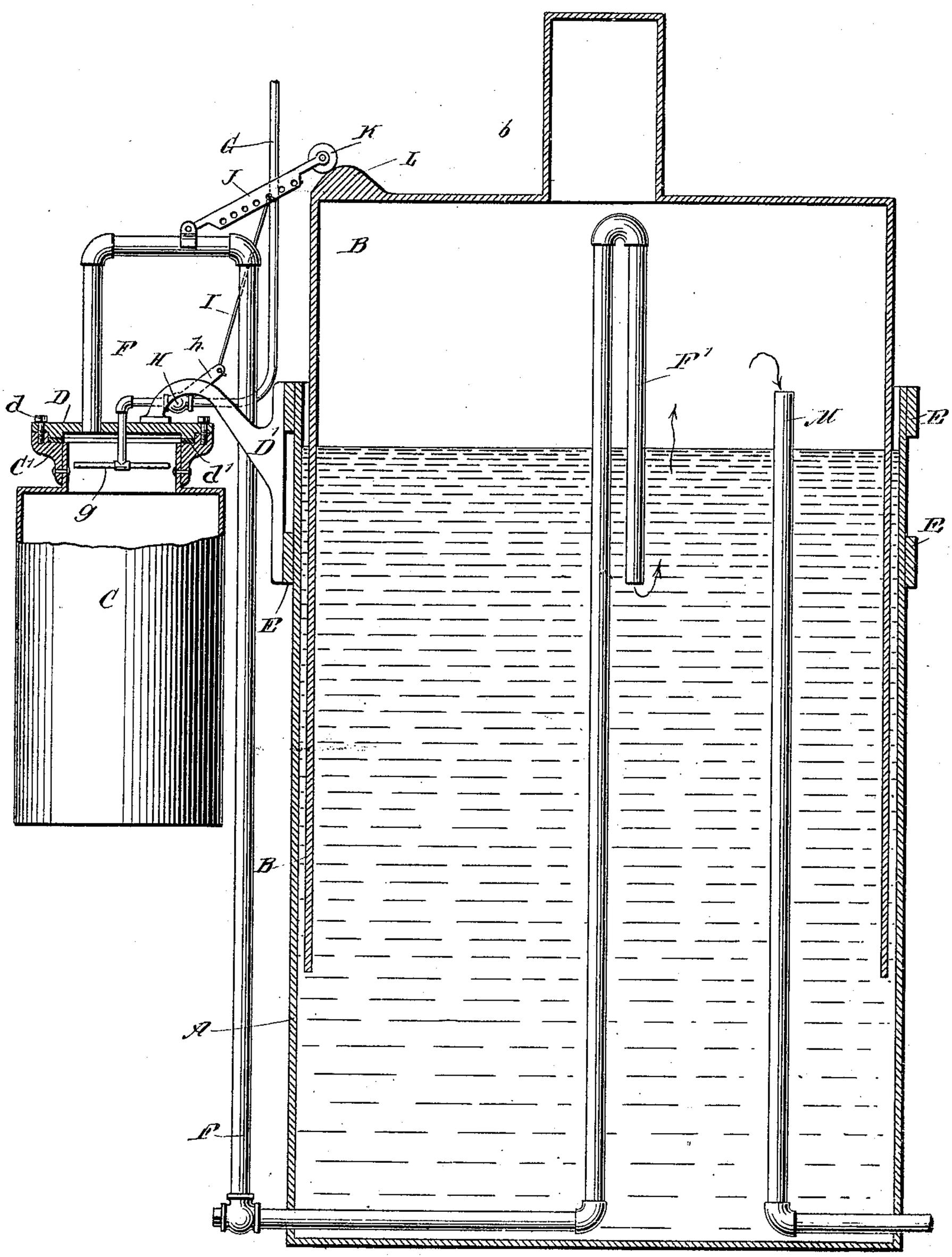
No. 641,555. Patented Jan. 16, 1900.

A. F. SHRIVER.

ACETYLENE GAS GENERATOR.

(Application filed Aug. 2, 1899.)

(No Model.)



WITNESSES:

Edward Thorpe.
H. L. Reynolds.

INVENTOR
A. F. Shriver
BY Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

AUGUSTUS FREDERICK SHRIVER, OF ARBUCKLE, CALIFORNIA, ASSIGNOR TO HIMSELF, AND WALTER STOREY, OF SAN FRANCISCO, AND JAMES H. SMITH, OF STONYFORD, CALIFORNIA.

ACETYLENE-GAS GENERATOR.

SPECIFICATION forming part of Letters Patent No. 641,555, dated January 16, 1900.

Application filed August 2, 1899. Serial No. 725,886. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS FREDERICK SHRIVER, of Arbuckle, in the county of Colusa and State of California, have invented a new and Improved Acetylene-Generator, of which the following is a full, clear, and exact description.

My invention relates to an improvement in acetylene-generators, and comprises the novel features hereinafter described and claimed.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which the figure of drawing represents a sectional elevation of my device.

The gasometer used in connection with my device is of the usual form, consisting of a tank A, which is filled with water, and a bell B, which rises and falls within the tank, according to the amount of gas which is stored at any time.

Surrounding the upper end of the tank A are two hoops E, made of band-iron and serving as supports for brackets D′, which support at their outer ends the generators. The figure of drawing shows only one of these generators in place; but it is to be understood that as many of these generators may be employed as desired. The generator consists of a tank C, provided with a cover D, which is detachable therefrom, said cover being fixedly supported upon the outer end of the bracket D′. The cover of the tank is secured to a casting C′ by means of screws *d*, which pass through the edge of the cover and engage with said casting, which is secured to the upper end of the tank C. A packing-ring *d′* is placed between the cover and the tank to insure a tight joint.

A pipe F is secured to the cover D and communicates with the interior of the tank A, said pipe carrying the acetylene as generated from the generator to the gasometer. This pipe F extends downwardly alongside of the tank, entering the same at or near its bottom and then extending upward until at some distance above the water-level in the tank, when it turns downwardly, providing a leg F′, which is open at its lower end and terminates beneath the water-level, so that the gas discharges into the gasometer through a layer of water, which will remove all foreign bodies and deliver the gas pure.

The water-supply pipe G extends from an elevated tank or other source of water-supply and passes through the cover D into the generator, where it is connected with a cross-pipe *g*, provided with a series of small perforations by means of which water is discharged in fine streams upon the carbid within the generator. The pipe G is provided with a valve H, which has a crank-arm or handle *h*, by which its position is controlled. A lever J is pivoted by one end on the pipe F and has a roller K on its outer or free end adapted to engage the side of the bell B when the latter is elevated and to pass over a rounded swell or cam projection L on the top of the bell when the bell falls to a certain position. The lever J is provided with a series of apertures adapted to receive one end of a link I, the other end of said link being connected with the valve-arm *h*. By this means the valve is closed when the bell rises and is opened as soon as the bell falls to a certain position by the rocking movement of the valve-arm *h*, thus admitting water to the generator until the bell again rises, when the water is automatically cut off. The upper end of the bell B is also provided with a small extension *b*, adapted to receive the upper end of the pipe F and the leg F′, through which the gas is discharged into the gasometer. By this means the gasometer is enabled to fall so that there is but little space between its upper end and the water-level, while at the same time the leg F′ is permitted to extend a sufficient distance above the water-level to form a perfect seal when the generator is opened for refilling. The gas is conveyed from the gasometer through a pipe M, which extends downwardly and out through the lower portion of the tank A.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In an acetylene-generator, the combination of a gasometer having a rising and falling bell, with a generator, a water-supply connecting by a pipe with the generator, a valve in said pipe, and a lever connected with

the valve to operate it and having a roller upon its free end adapted to normally engage the side of the gasometer-bell and thereby to be held in an inclined position, and being also adapted to pass over the upper end of the bell when it falls sufficiently and to thereby open the water-supply valve, substantially as described.

2. In an acetylene-generating apparatus, the combination of a gasometer having a rising and falling bell, and a cam on the top of the bell, with a generator, a water-supply connecting by a pipe with the generator, a valve in said pipe provided with an operating handle or arm, a lever having a roller upon its free end adapted to engage the side of the gasometer-bell and to pass over the cam on the upper end thereof when the bell falls sufficiently, said lever having a series of holes, and a link connected with the valve-arm and adapted to enter the holes in the lever, whereby the opening of the valve may be varied in amount, substantially as described.

3. An acetylene-generating apparatus, comprising a gasometer having a rising and falling bell, and a tank, two hoops secured about the upper end of the tank and adapted to support the generators, a series of arms or brackets secured to said hoops and adapted to each support a generator, said generators each consisting of a cover secured to its arm, and a tank or holder adapted to be secured to the cover, pipes leading from the covers and discharging beneath the water in the generator by a downwardly-extending leg which rises above the water-level, the gasometer-bell having an upward extension accommodating said pipe when the bell falls, an elevated water-supply connected by a pipe with the generators, a valve in the water-pipe having a crank-arm connected therewith, a lever pivoted by one end and having a roller on the other end engaging the side of the gasometer-bell when the bell is raised, the lever being at such time inclined with the roller end upward, said roller end of the lever being adapted to pass over the top of the bell when it descends sufficiently, and a curved projection or cam on the top of the bell adapted to engage said roller, the lever having a series of holes, and a link engaging the valve-arm or crank and adapted to enter said holes, substantially as described.

AUGUSTUS FREDERICK SHRIVER.

Witnesses:
C. D. STANTON,
GEO. F. SCOTT.