

No. 698,044.

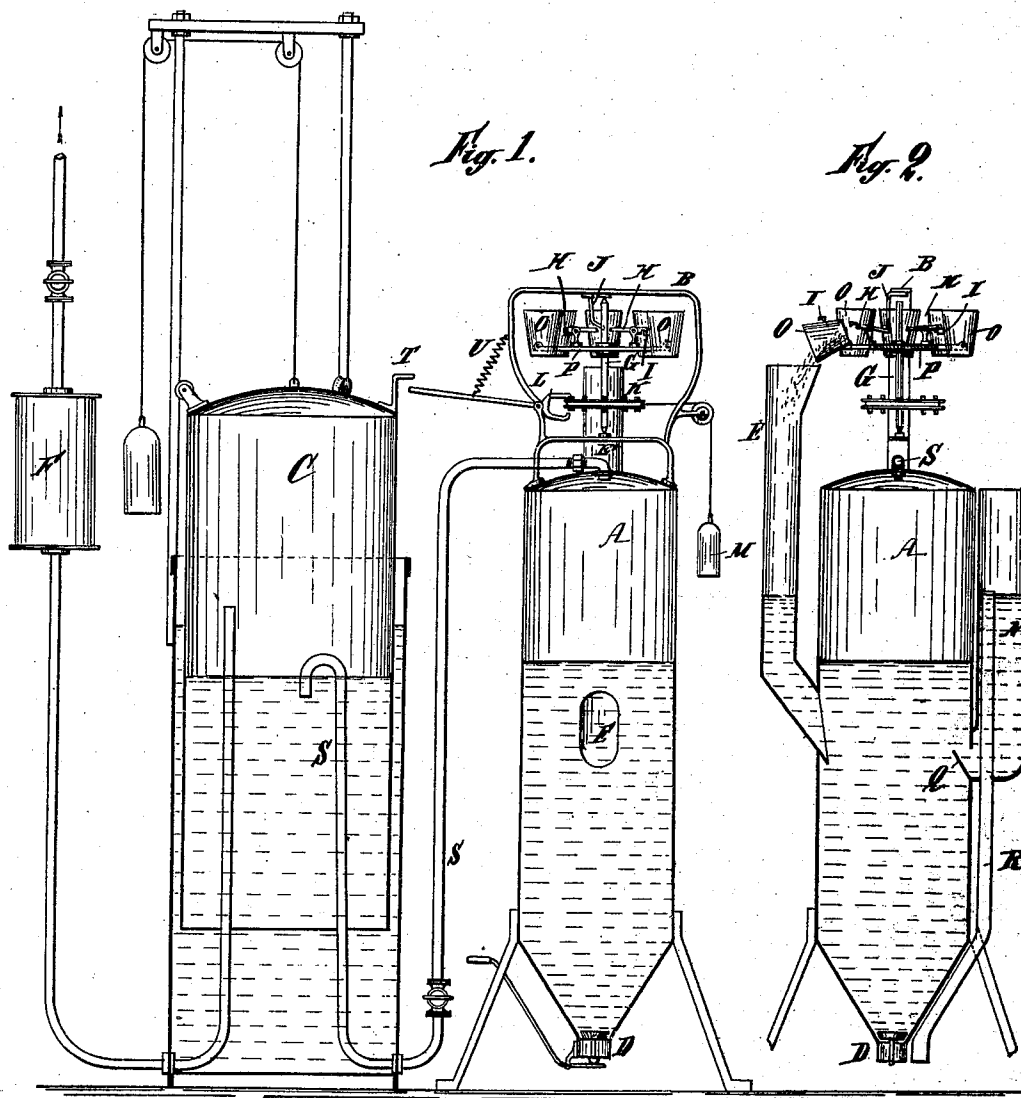
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J. NOUZARET.

APPARATUS FOR GENERATING ACETYLENE GAS.

(Application filed July 25, 1898.)

(No Model.)



Witnesses:

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Inventor:

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By

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UNITED STATES PATENT OFFICE.

JEAN NOUZARET, OF BRUSSELS, BELGIUM, ASSIGNOR TO THE COMPAGNIE CONTINENTALE D'INCANDESCENCE ET DE CHAUFFAGE (SYSTÈME FRANK ET POITRIMOL.)

APPARATUS FOR GENERATING ACETYLENE GAS.

SPECIFICATION forming part of Letters Patent No. 698,044, dated April 22, 1902.

Application filed July 25, 1898. Serial No. 686,862. (No model.)

To all whom it may concern:

Be it known that I, JEAN NOUZARET, a subject of the King of Belgium, and a resident of Brussels, Belgium, have invented certain new and useful Improvements in Apparatus for Generating Acetylene Gas, of which the following is a specification.

This invention relates to an apparatus designed to produce acetylene gas for domestic purposes and to work automatically while being of such a simple and safe construction as to enable it to be worked and attended to by any one not specially trained for the purpose.

In order that the invention may be clearly understood and readily carried into effect, reference will be had to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of an apparatus constructed according to this invention. Fig. 2 is a transverse section through the generator and recharging apparatus.

It may be mentioned that the drawings serve merely as an illustration by way of an example of the apparatus and that the proportions and details of construction, as well as the general arrangement, may be varied to suit particular circumstances.

The apparatus broadly consists of a generator A, adapted to be charged with the carbid or carbureted calcium from an automatic charging apparatus B, of a gasometer C, and of a purifier F. The two last-named parts may be of any ordinary or known construction, and it is therefore only necessary to describe the generator and its charging apparatus.

The generator A here shown is of cylindrical form standing on end and closed at the top and has at its lower end a conical or funnel-shaped portion, which is provided with an outlet-valve D, as shown. To one side of the cylindrical portion of this generator is fixed a pipe E, rising above the generator and formed with an enlarged mouth arranged in proximity of the charging apparatus B. This latter consists of a horizontally-arranged carrier-plate P, firmly secured to a vertical spindle G and supporting a number of buckets O, distributed around its circumference, each

of which contains a predetermined charge of carbid. These buckets are suspended by pivots and are capable of being tipped in order to discharge the carbid into the mouth of the pipe E, as represented in Fig. 2. If desired, the buckets may be provided with hinged covers to afford protection to the carbid. The tipping of the buckets may be effected either in a plane passing through the radius or in a plane at right angles, according to the form of bucket. The said buckets are so constructed as to have a tendency to tip automatically, and this may be effected either by placing the pivots out of center or by weighting the front of the bucket, a pivoted catch H being provided to automatically lock the buckets and retain them in their normal or upright position by engaging in an eyepiece I on the buckets. The catch together with the bucket held by it revolve with the carrier-plate P, and they pass at the required movement beneath a fixed incline J, whereby they are disengaged from the bucket and allowed to tip forward, so as to discharge the carbid with the mouth of the pipe E.

On the spindle G, but below the carrier-plate P, is a pulley K, controlled by a rope or the like having a weight M and passing over a guide-pulley, as shown. The tendency of this pulley is to revolve the entire charging apparatus; but its motion is checked by pivoted and forked lever L, adapted to act against two series of pegs provided in the sides of the said pulley. These pegs are so arranged as to permit of an angular movement of the pulley K at each complete oscillation of the forked lever L equal to the distance between two consecutive buckets. By this arrangement each complete oscillation of the forked lever L causes one of the buckets O to arrive in close proximity to and to be discharged into the pipe E. The lower end of this pipe E extends into the interior of the generator and so prevents gas-bubbles from rising vertically or by capillary action into such pipe.

The gas generated in the interior of the generator is balanced by a column of water contained in a vertical pipe N, in communication with the generator by an opening situated somewhat above that of the pipe E and pro-

ected against the entrance of gas-bubbles by an inclined screen or shield Q. This pipe N is provided with an overflow-tube R, through which the excess of water from the generator
5 is allowed to escape, while serving at the same time as a safety device for limiting the maximum pressure of gas in the generator.

The gas generated in the generator flows through a bent tube S into the gasometer C of
10 sufficient capacity to receive the gas generated from a charge of carbid, the gas causing the bell of the gasometer to ascend with its uppermost position and then to descend gradually in accordance with the consumption
15 of the gas. On the said bell is secured a tappet T, which is so arranged as to strike against the tail end of the forked lever L when the bell C reaches its lower position, and thereby causes a fresh charge of carbid to be
20 discharged into the generator, whereupon the bell ascends again. The forked lever L now being disengaged from the tappet T is returned to its former position by means of a spring V. This method of charging repeatedly and only in small quantities permits of
25 both the gasometer and the generator being of small size, while yet being of a working capacity limited only by the number of buckets carried by the charging apparatus. These
30 buckets may be arranged to be recharged during the operation of the apparatus, and in

such case the operation is only interrupted for the purpose of removing through the plug or valve D the residues which accumulate in the lower part of the generator, which, however, is only required to be cleaned at long
35 intervals, owing to the prolonged form of its lower end.

Having now particularly described and ascertained the nature of my said invention and
40 in what manner the same is to be performed, what I claim as new, and desire to secure by Letters Patent, is—

In combination in an apparatus for generating acetylene gas, a horizontally-revolving
45 carrier, a series of buckets pivotally supported on said carrier, catches for holding said buckets from tipping, and stationary means for successively operating said catches as the
50 carrier moves, an escapement mechanism controlling the carrier and including a horizontal pulley connected with the carrier having pins, a weight for moving said pulley, a forked lever L for controlling the pulley, the bell and
55 a tappet T on said bell for operating the forked lever, substantially as described.

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

JEAN NOUZARET.

Witnesses:

AUGUSTE DEBAUTER,
STRANDEN FEERELOON.