

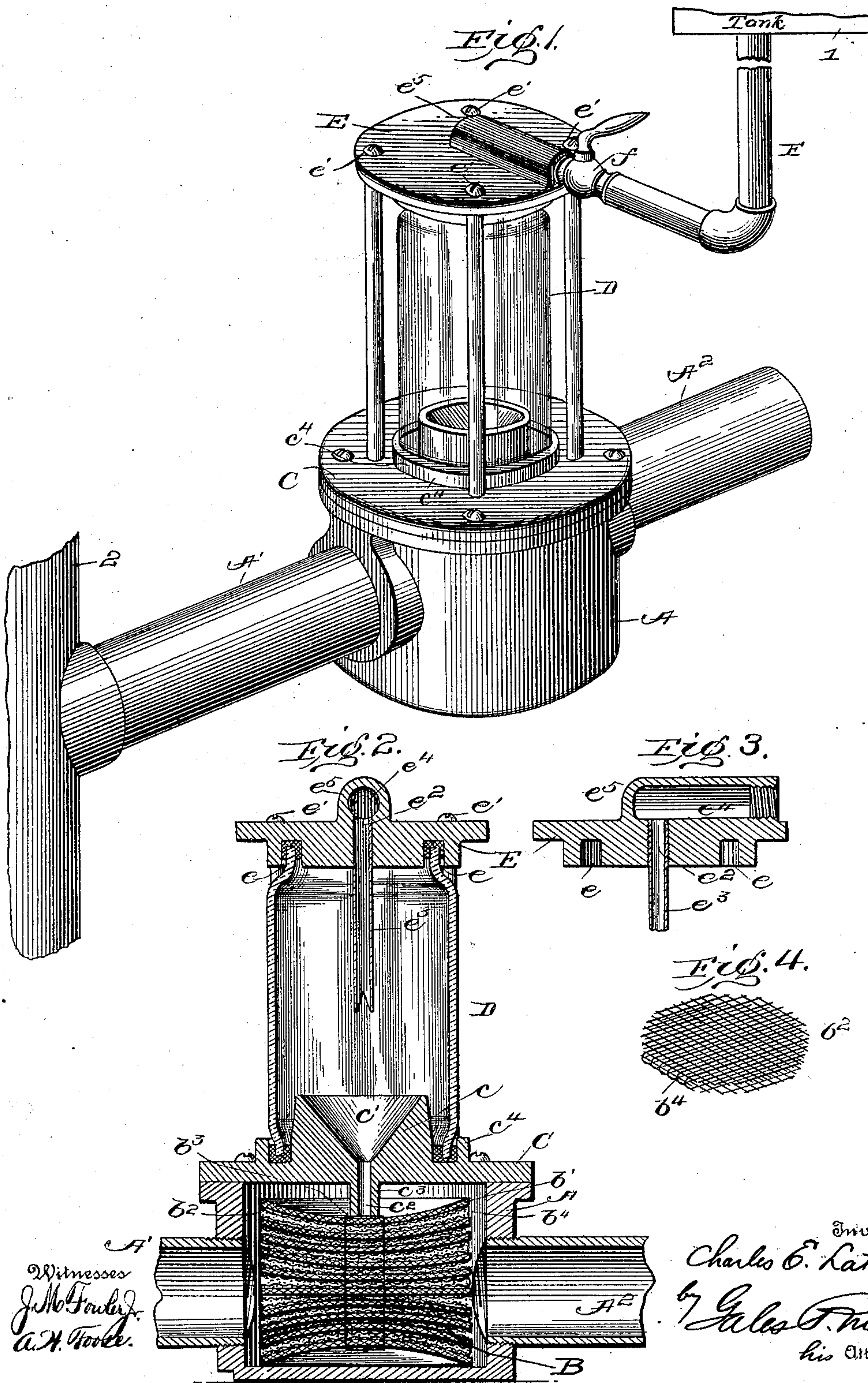
No. 663,699.

Patented Dec. 11, 1900.

C. E. LATHAM.
CARBURETER.

(Application filed May 29, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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CARBURETER.

SPECIFICATION forming part of Letters Patent No. 663,699, dated December 11, 1900.

Application filed May 29, 1900. Serial No. 18,370. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. LATHAM, a citizen of the United States, residing at Stonington, in the county of New London, State of Connecticut, have invented certain new and useful Improvements in Vaporizers for Gas-Engines and the Like, of which the following is a description, reference being had to the accompanying drawings, and to the characters of reference marked thereon.

My invention relates to improvements in vaporizers for use with gas-engines and the like, one object being to provide a simple and inexpensive structure in which the parts are conveniently arranged and can be readily assembled, it being possible to obtain access to all parts quickly and easily.

A further object is to provide a simple and efficient member for receiving the gasoline or other fluid and allowing the same to evaporate therefrom.

To these ends and also to improve generally upon devices of the nature indicated my invention consists in the various matters hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of the present invention, showing the relation of the vaporizer to the fuel-tank and the engine. Fig. 2 is a sectional elevation of the vaporizer. Fig. 3 is a sectional elevation of the top plate for supporting the feed-cylinder, said section being taken at right angles to the section of Fig. 2; and Fig. 4 is a detail perspective of one of the gauze disks.

Referring now more particularly to the drawings, 1 indicates the tank for storing the gasoline or other fluid to be employed, and 2 the engine.

The vaporizer includes an open-top cylindrical casing A, having oppositely-located openings in its side walls, the bottom of this casing being adapted to rest upon a suitable support. Suitably fitted into the said openings in the side walls of the casing are pipes A' and A², the former of which is also suitably connected to the explosion-chamber of the engine 2, while the latter has its end open to the air. A suitable member B for receiving the gasoline and permitting the same to evaporate therefrom is located in the chamber formed by the casing A, said member B

being readily bodily inserted into or removed from said chamber through its top.

Fitting over the open top of the casing A and suitably removably secured to said casing, as by screws, is a plate C, which has an upwardly-extending circular enlargement *c* at about its center, said enlargement being hollowed out to produce a drip-cup *c'*, this drip cup or funnel communicating with a bore or channel *c*² through the said plate C and leading to the chamber of the casing A. Preferably this bore *c*² extends through a teat or projection *c*³ upon the under side of said plate, which teat extends to the member B, and thus feeds the gasoline directly to said member. Extending about this enlargement *c* is an annular flange *c*⁴, there being thus produced between the enlargement and the flange a groove which receives the lower end of a glass cylinder or shell D, suitable packing being also held in said groove. A top plate E, having a groove *e* in its under side for the reception of the upper end of said cylinder, fits upon this cylinder, said top plate being removably connected to the plate C, as by screw-bolts *e'*. Extending centrally through the said top plate is a threaded bore *e*², into which is screwed a drip-tube *e*³, and said bore opens at its top into a bore *e*⁴, extending partly through an enlargement *e*⁵ upon the top plate, said bore *e*⁴ having one end open, but being closed at its other end. A pipe F, provided with a suitable valve *f*, connects the bore *e*⁴ with the tank 1.

The member B for receiving the gasoline is composed of alternate layers of felt *b'* and wire-gauze or other reticulated material *b*², said layers being tied together by means of a wire *b*³, passing centrally through them and having its ends twisted together. By thus alternating the felt and the wire-gauze a large surface of the felt is exposed for evaporation of the liquid held thereon, and in order to thoroughly separate adjacent faces of neighboring felt disks the wire disks are doubled, and thus consist of two wire plates connected at the point of doubling only, the plates being bent away from each other, whereby the felt disks are held correspondingly spaced. The doubled edges *b*⁴ of the wire disks are arranged alternately, so that the felt disks are spaced apart upon all sides.

The valve *f* being opened, gasoline flows from the tank 1 through the bore or channel *e*⁴ and the drip-tube, falling from the end of this tube into the funnel *c'* and flowing thence
 5 through the channel *c*³ upon the felt disks, which thus become saturated. The gas-engine drawing air through the pipe *A*² the evaporation from the felt disks is facilitated, and the air from the said pipe *A*² is mixed
 10 with the vapor and passes to the engine.

The present device is of simple structure and the parts can be readily assembled and inspected. The glass cylinder, with the drip tube and funnel, forms a sight-feed, while the
 15 cover for the chamber of the casing *A* can be readily removed, without disturbing the parts carried thereby, for the purpose of cleaning the channel from the funnel or of obtaining access to the vaporizing member *B* for any
 20 purpose whatever, such as repair, renewal, &c. Furthermore, no valve is employed in the vaporizer, the air being simply drawn through the saturated felt.

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

1. In a device of the nature indicated, a casing provided with an open-top chamber and having inlet and outlet openings for air,
 30 a vaporizing member of absorbent material adapted to be bodily inserted into and removed from said chamber through the said top, a plate detachably secured to said casing and extending across said opening, said
 35 plate having an enlarged portion upon its upper side and a teat upon its lower side, a drip-cup being formed in said enlarged portion and communicating with a channel through said teat, a flange surrounding said enlarged
 40 portion, a glass shell having its lower end fitting in the groove between said enlarged portion and the said flange, a top plate fitting upon the upper end of said shell and having a channel therethrough, an enlarge-
 45 ment upon the upper side of said top plate and having therein a channel communicating with the channel through said plate, one end of the channel in the said enlargement being

open while its other end is closed, a drip-tube attached to said top plate and communicat- 50
 ing with the channel therethrough, said tube emptying into the said drip-cup and having its end removed therefrom, whereby a sight-feed is permitted, and means detachably se- 55
 curing the said top plate to the plate covering the chamber in the casing; substantially as described.

2. A vaporizing member for devices of the nature indicated comprising a series of disks of absorbent material and a series of reticu- 60
 lated plates, said disks and plates being adjacent each other and being alternately arranged; substantially as described.

3. In a vaporizing member for devices of the nature indicated, two disks of absorbent 65
 material, and two reticulated plates interposed between said disks, said plates being bent away from each other whereby said disks are held spaced apart; substantially as described. 70

4. In a vaporizing member for devices of the nature indicated, two disks of absorbent material, and an interposed spacing-disk, said latter disk comprising a reticulated plate bent upon itself to present two plates between 75
 the absorbent disks, the connecting portion of said plates serving to hold them spaced from each other; substantially as described.

5. A vaporizing member for devices of the nature indicated comprising alternate disks 80
 of absorbent material and reticulated spacing-disks, said spacing-disks being formed of reticulated plates bent upon themselves to produce two plates between neighboring ab-
 sorbent disks, the plates of a spacing-disk 85
 being bent away from each other and the folded points of the spacing-disks being out of line with one another; substantially as described.

In testimony whereof I affix my signature, 90
 in presence of two witnesses.

CHARLES E. LATHAM.

Witnesses:

ELIAS B. HINCKLEY,
 JOHN H. RYAN.