

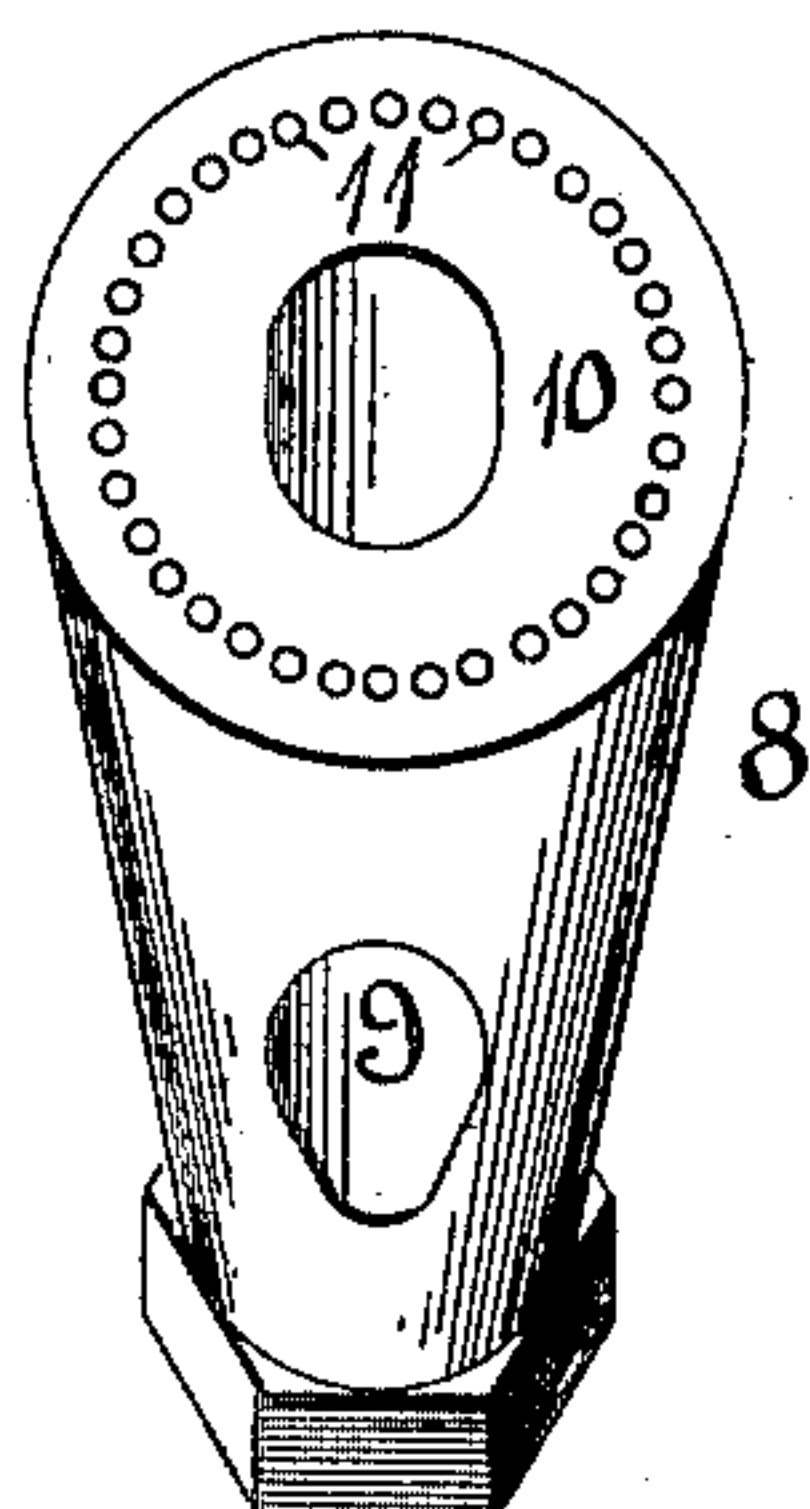
No. 657,739.

Patented Sept. 11, 1900.

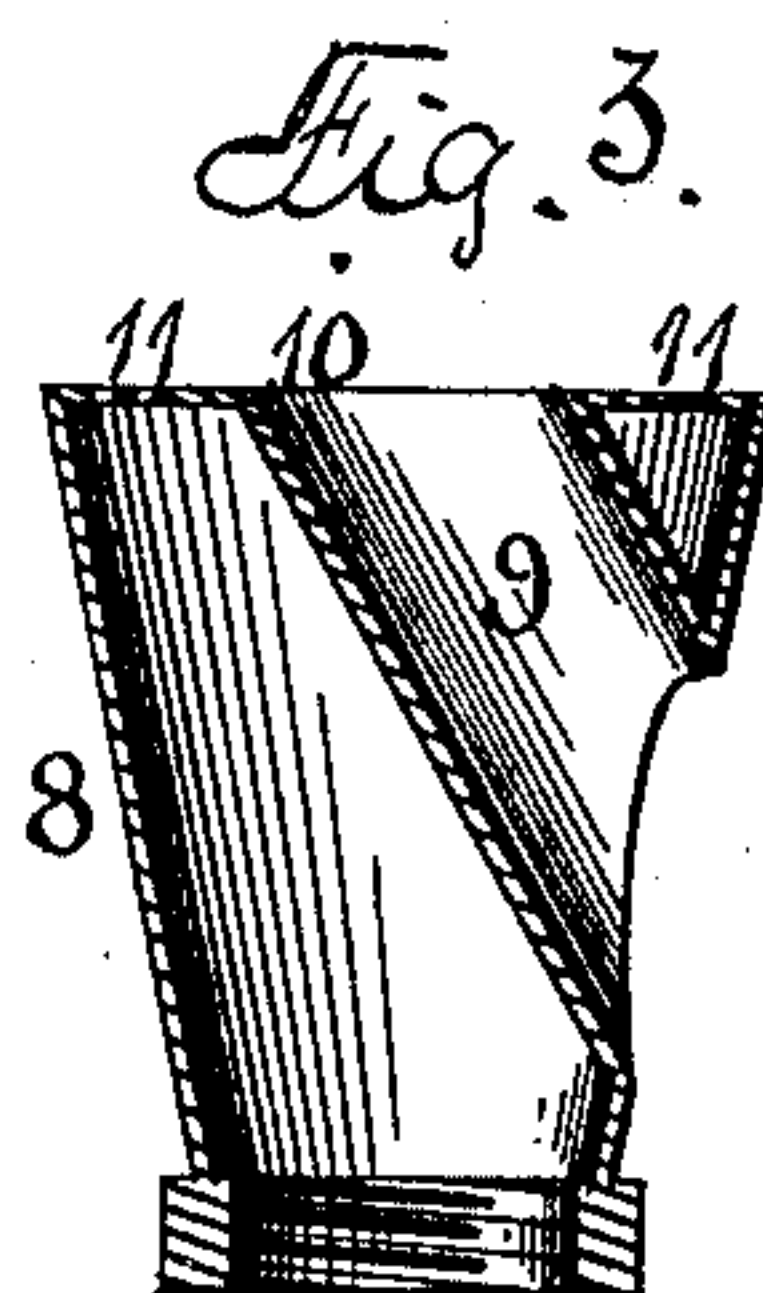
G. KILTZ.  
VAPORIZER FOR PETROLEUM ENGINES.

(Application filed July 5, 1899.)

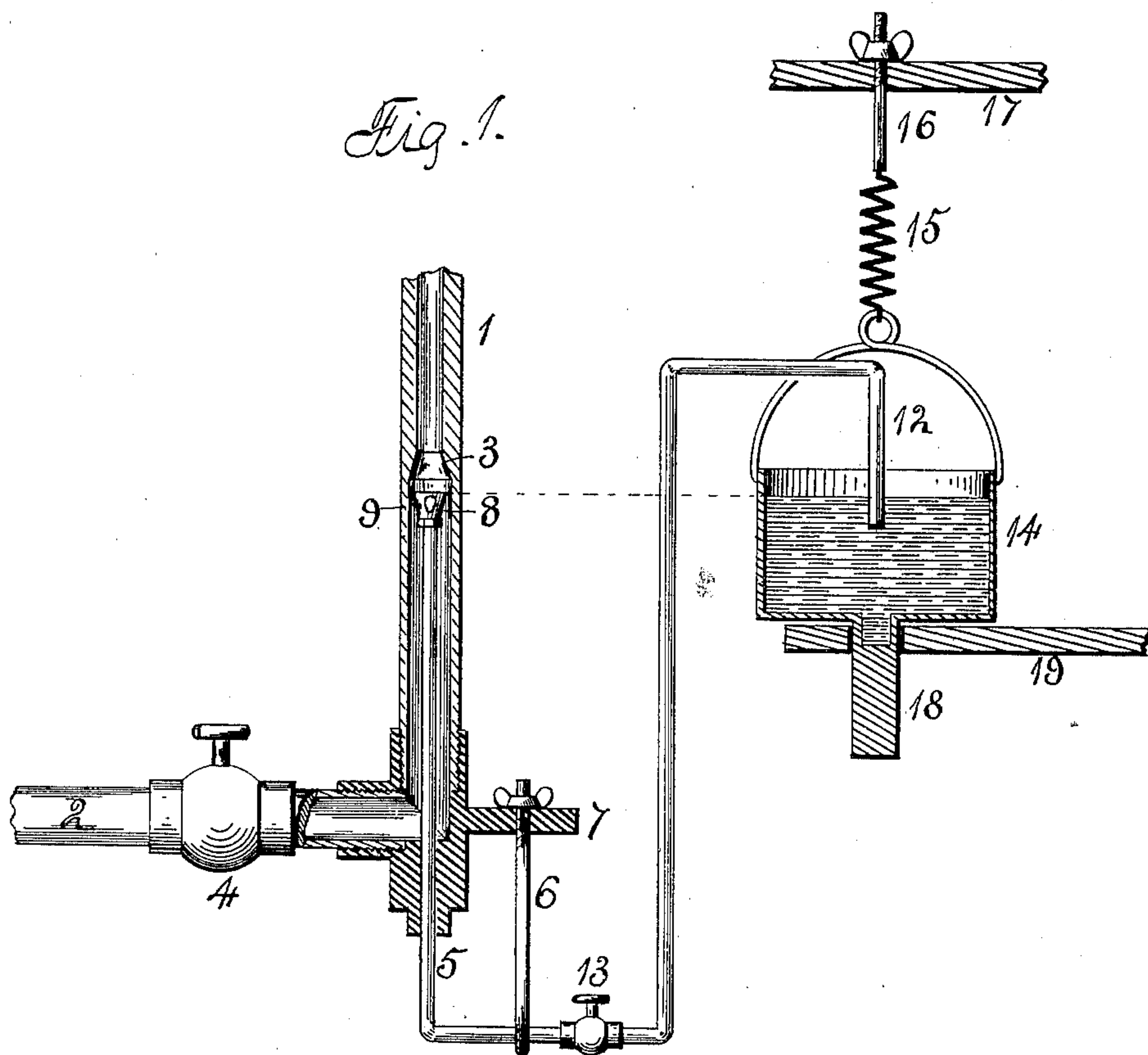
(No Model.)



*Fig. 2.*



*Fig. 3.*



*Fig. 1.*

Witnesses:  
J. P. Taylor.  
E. Behel.

Inventor:  
George Kiltz  
By A. O. Behel  
att.

# UNITED STATES PATENT OFFICE.

GEORGE KILTZ, OF MARENGO, ILLINOIS.

## VAPORIZER FOR PETROLEUM-ENGINES.

SPECIFICATION forming part of Letters Patent No. 657,739, dated September 11, 1900.

Application filed July 5, 1899. Serial No. 722,785. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE KILTZ, a citizen of the United States, residing at Marengo, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Gas-Engines, of which the following is a specification.

One object of this invention is to construct a gas-engine in which the gasolene is supplied without the use of a pump and in which the supply is equal to the quantity required to run the engine.

A further object of this invention is to deliver the gasolene into the mixing-chamber in the form of a very fine spray, which is easily exploded and all consumed, leaving no gasolene in its original state.

In the accompanying drawings, Figure 1 is a vertical section of my improvements. Fig. 2 is an isometrical representation of the nozzle. Fig. 3 is a vertical section of the nozzle.

A pipe 1 is adapted to connect with the cylinder of a gas-engine, to which is joined an air-pipe 2. The upper portion of the pipe 1 is reduced in size at the point 3. A valve 4 controls the admission of air through the air-pipe. Within the pipe 1 is supported an oil-supply pipe 5, which is held in place by a rod 6, supported by the bracket 7. The end of this oil-pipe located within the pipe 1 supports a nozzle 8 of conical form, having a passage-way 9 extending obliquely in its lengthwise direction. The top plate 10 of the nozzle has a series of small openings 11 communicating with the interior of the nozzle. The oil-supply pipe has a vertical portion 12 connecting with portion located within the pipe 1 by a series of bends forming a siphon, and a valve 13, located in one of the bends, serves to cut off the supply of oil to the nozzle.

An oil-can 14 is supported by a spring 15, connected to a screw 16, adjustable in connection with a stationary support 17. The lower end of this oil-can has a tubular projection 18, passing through an opening in a stationary support 19. In supporting the oil-can by a spring a stationary height of oil in

the nozzle is had at all times irrespective of the quantity of oil in the can, and the vertical portion 12 of the oil-pipe will enter the tubular projection 18 when the can is raised, owing to the small quantity of oil in the can, so that all of the oil can be used out of the can! The object of keeping the oil at a given height is to prevent it from overflowing through the openings in the nozzle. In raising the nozzle by means of the rod 6 it is brought into closer relation with the reduced portion of the pipe, so that the suction of the piston will be increased and more oil and less air will be taken. The air in vaporizing the oil passes around and through the nozzle, so that the oil issuing from the openings 11 in the nozzle will not have a chance to mingle before it is vaporized.

I claim as my invention—

1. In a gas-engine, an air-supply pipe, an oil-pipe located within the air-pipe and supporting a nozzle at its upper end, the nozzle being in conical form having an end plate provided with a series of perforations and an air passage-way extending obliquely through the nozzle having its outlet located at or about the center of the top plate of the nozzle.

2. In a gas-engine, an air-supply pipe having its upper portion contracted, an oil-pipe located within the air-pipe and supporting a nozzle at its upper end and located below the contracted portion of the air-pipe, the nozzle being in conical form having an end plate provided with a series of perforations, and an air passage-way extending obliquely through the nozzle having its outlet located at or about the center of the top of the nozzle.

3. In a gas-engine, an oil-supply pipe adapted to have a connection with an engine, an oil-can supported by a spring and located away from the engine, the outer end of the oil-supply pipe bent in siphon form and turned down into the open end of the can.

GEORGE KILTZ.

Witnesses:

PHILIP L. KILTZ,  
MILES GRENNAN.