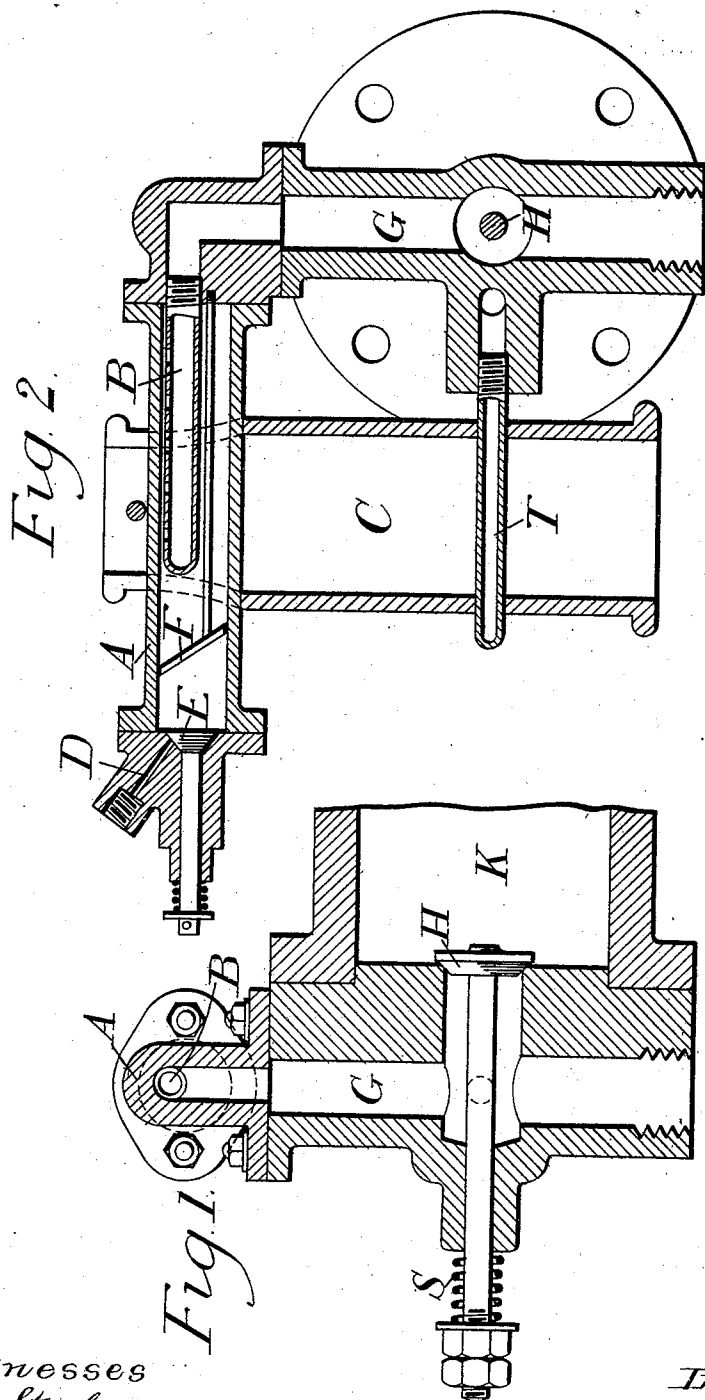


(No Model.)

A. BARKER.
VAPORIZER FOR OIL ENGINES.

No. 566,125.

Patented Aug. 18, 1896.



Witnesses
J. C. Stack
James P. Mansfield

Inventor
Arthur Barker
by *Alexander Howell*
Atty

UNITED STATES PATENT OFFICE.

ARTHUR BARKER, OF LONDON, ENGLAND, ASSIGNOR TO THE GROVER & COMPANY, LIMITED, OF SAME PLACE.

VAPORIZER FOR OIL-ENGINES.

SPECIFICATION forming part of Letters Patent No. 566,125, dated August 18, 1896.

Application filed March 7, 1896. Serial No. 582,191. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR BARKER, a citizen of England, residing at No. 13^a Malta Street, Clerkenwell, London, England, have invented new and useful Improvements in or Connected with Vaporizers for Oil-Engines, of which the following is a specification.

My invention relates to means of obtaining in a simple and effective manner the oil-vapor employed in an oil-motor engine in such a manner as to avoid deposit in the cylinder. For this purpose I employ a vaporizer which I shall describe, referring to the accompanying drawings.

Figure 1 is a part longitudinal section of the cylinder with vaporizer according to my invention. Fig. 2 is a transverse section of the vaporizer.

An outer tube A, having within it a tube B, perforated with small holes along its upper side, is fixed across a chimney C so as to be heated by a suitable lamp placed at the lower part of the chimney. A duct D, closed by a conical valve E, which is held to its seat by a light spring, leads from an oil-reservoir at a higher level. Within the tube A is fixed an inclined disk F of such size as to leave around it a narrow passage. The tube B opens into a passage G, which is screw-threaded at its lower end to receive a regulating cock or valve, and which communicates with the engine-cylinder K by an opening closed by a valve H, held to its seat by an adjustable spring S. When a heated tube is used for igniting the cylinder charge, this tube T may be arranged, as shown, in the chimney C so as to be heated by the same lamp as that which heats the vaporizer.

The vaporizer operates as follows: When the engine-piston makes its outward charging-stroke, the valve H opens, admitting air to the cylinder, and a partial vacuum being created in the whole passage G and tube A the valve E opens and a charge of oil enters by the duct D, becomes dispersed in spray around the edge of the valve E, and is again dispersed around the edge of the disk F. The dispersed oil is converted into vapor in the

tube A, and this vapor, free from liquid oil, enters the tube B by the perforations on its upper side and passes into the passage G and mixes with the air entering the cylinder past the valve H.

Having thus described the nature of my invention and the best means I know for carrying the same into practical effect, I claim—

1. The combination of a tube into which the oil to be vaporized is admitted, an eduction-tube within the vaporizing-tube communicating through a passage with the interior of the cylinder, the valve in said passage, and the valved oil supply to the vaporizer-tube, and means for heating said vaporizer-tube, substantially as and for the purpose described.

2. The combination of the vaporizing-tube and means for heating it; a valved oil-inlet thereto, an eduction-tube in the vaporizer, and a spreader in the vaporizer intermediate the oil-inlet and the eduction-tube, substantially as and for the purpose described.

3. The combination of the chimney, the vaporizer-tube lying athwart the same, the conical valve in one end thereof and the oil-inlet above and closed by said valve; the perforated eduction-tube in said vaporizer-tube, the passage connecting said eduction-tube with the cylinder, and the spring-seated valve in the inlet from said tube to the cylinder, substantially as and for the purpose described.

4. The combination of the chimney C, the vaporizer-tube A, the oil-inlet, the spring-seated valve E; the eduction-tube B, the disk F between the eduction-tube and the oil-inlet; the passage connecting said eduction-tube with the interior of cylinder, and the spring-seated valve in said passage, and an igniter, all substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 24th day of February, A. D. 1896.

ARTHUR BARKER.

Witnesses:

OLIVER IMRAY,
JNO. P. M. MILLARD.