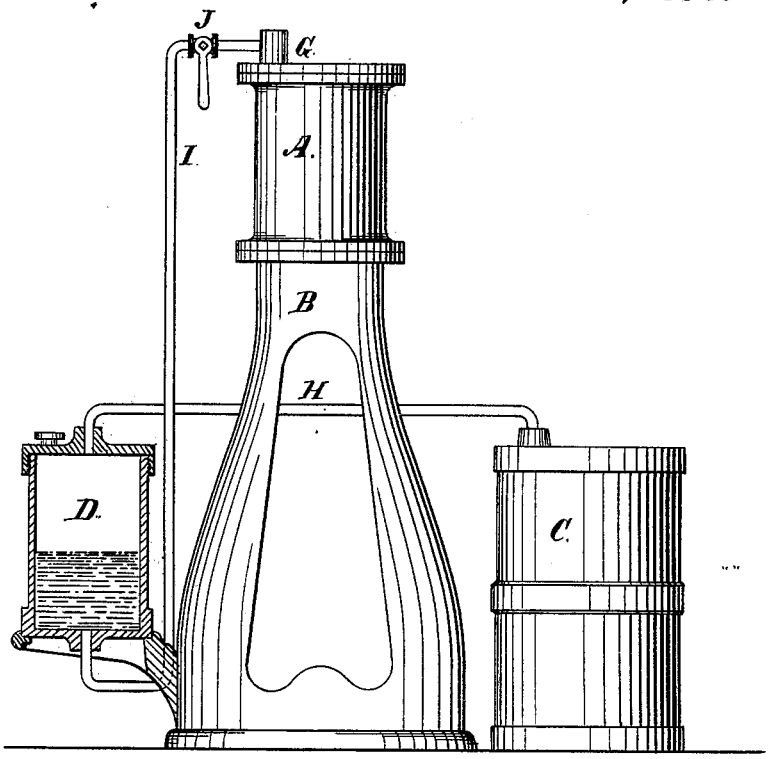
J. BRADY.

Gas Engine.

No. 200,970. Patented March 5, 1878.



Witnesses:

Fred. Haynes

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UNITED STATES PATENT OFFICE.

JAMES BRADY, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN GAS-ENGINES.

Specification forming part of Letters Patent No. **200,970**, dated March 5, 1878; application filed January 2, 1878.

To all whom it may concern:

Be it known that I, JAMES BRADY, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Gas-Engines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification.

My invention relates to that class of gas-engines in which the gas that supplies the motive power is generated by the combustion of oil or other liquid hydrocarbon, the required quantity of gas being generated by the burning of a modicum of oil supplied to a burner at every stroke of the engine produced by the expansion of the gas so generated.

The invention will be sufficiently illustrated by a description of it as applied to a gas-engine, in which the expanding gas is applied only on one side of the piston; and it consists in means whereby the pressure of the compressed air which sustains the combustion of the oil is automatically applied to forcing the required modicum of oil to supply the burner.

A in the drawing represents the cylinder of the engine, supported by a pedestal, B. Upon the top of said cylinder is a box, G, containing the burner.

Air is conducted from the compressed-air chamber C to the said burner through a pipe, (not shown in the drawing,) the air being compressed in said chamber by the action of the engine, and by means unnecessary to describe, as they in no way pertain to my invention.

D is the oil-reservoir, from which the oil or other hydrocarbon that supplies the burner has hitherto been intermittingly pumped, a special pump of complicated and expensive construction, requiring frequent repairs, having heretofore been necessary.

It is the object of my invention to do away with a pump for feeding the oil to the burner in engines of this description, and to avoid the cost of their construction and frequent repairs. This I effect by making the expansive force of the compressed air in the air-chamber C force the oil to the burner, it being obvious that if the compressed air has force enough to enter the burner-box G against any back pressure, it has force enough also to compel the oil to enter said box under the same back pressure. The devices employed by me to effect this result are, first, a pipe or passage, H, leading from the compressed-air chamber C to the oil-reservoir D, and establishing communication between said air-chamber and the space in said reservoir above the oil therein; second, a pipe or passage leading from the bottom of said reservoir to the burner-box G; and, third, a cock or valve, J, which may be automatically operated by various means or devices receiving motion from the engine.

I do not deem it necessary to describe particularly any device or devices for operating said cock or valve in the manner described, as a great variety of such devices will readily suggest themselves to any mechanic—as, for instance, an eccentric on the crank-shaft or tappets on the piston-rod or other reciprocating part.

I claim—

1. The combination, in a gas-engine, of a compressed-air chamber, C, an oil-reservoir, D, and a pipe or passage, H, connecting said chamber with said reservoir, for transmitting pressure from said chamber to the oil in said reservoir, to force the oil from said reservoir into the burner-box of such engine for conversion into gas, substantially as described.

2. The combination, with the compressed-air chamber, oil-reservoir, and pipe H, connecting the said chamber and reservoir, of the pipe I, connecting the bottom of said reservoir with the burner-box G, and the cock J in said pipe I, for regulating the supply of oil to said burner-box, substantially as and for the purpose specified.

JAMES BRADY.

Witnesses:

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