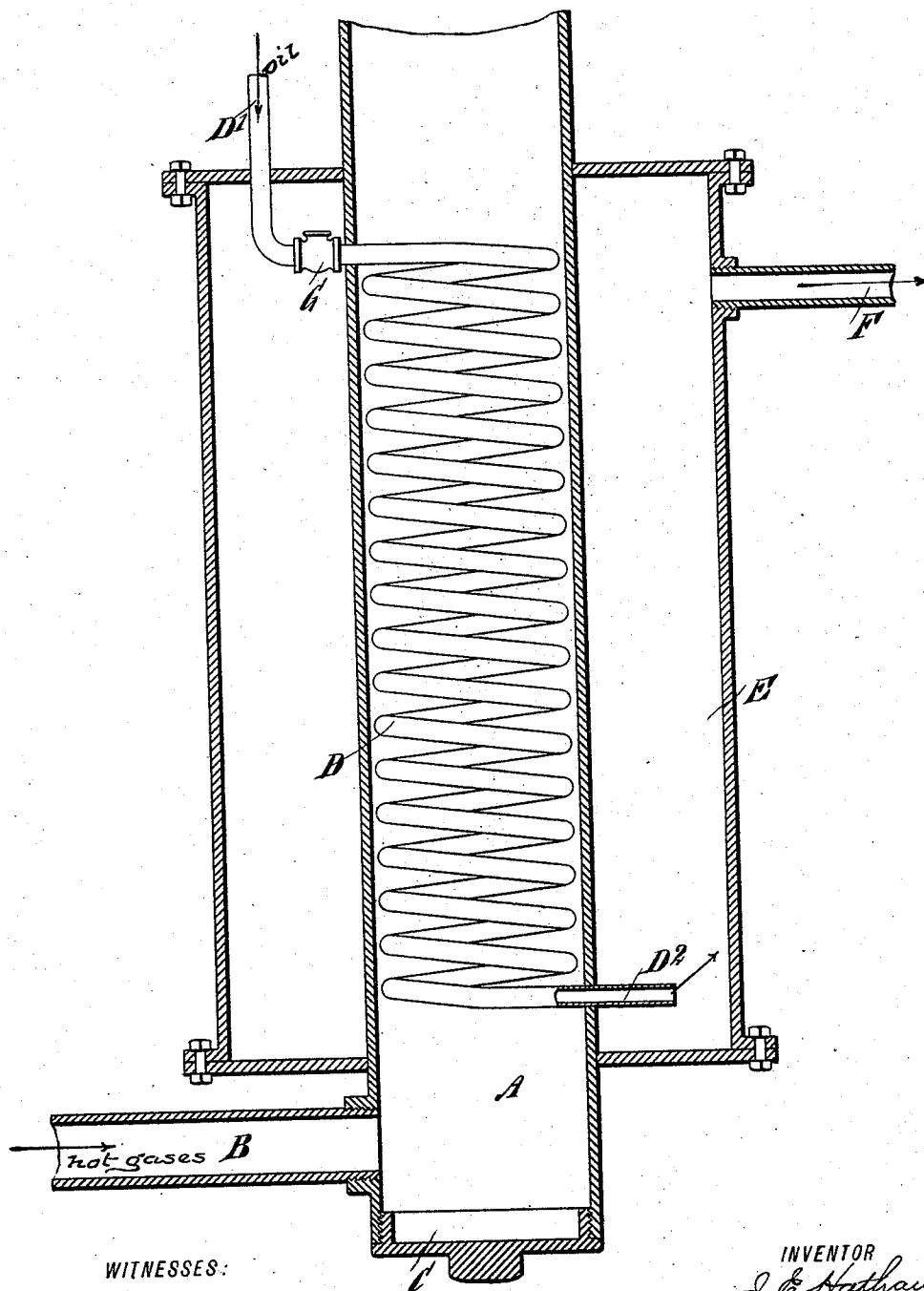


(No Model.)

J. E. HATHAWAY.
GAS GENERATOR.

No. 572,797.

Patented Dec. 8, 1896.



WITNESSES:

Edward Thorpe
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INVENTOR

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UNITED STATES PATENT OFFICE.

JESSE ELWOOD HATHAWAY, OF SANTA FÉ SPRINGS, CALIFORNIA.

GAS-GENERATOR.

SPECIFICATION forming part of Letters Patent No. 572,797, dated December 8, 1896.

Application filed January 8, 1896. Serial No. 574,719. (No model.)

To all whom it may concern:

Be it known that I, JESSE ELWOOD HATHAWAY, of Santa Fé Springs, in the county of Los Angeles and State of California, have invented a new and Improved Gas-Generator, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved gas-generator which is simple and durable in construction, very effective in operation, and more especially designed for generating gas from crude oil, kerosene, gasoline, and the like, and for use as a motive agent in gas-engines.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which the figure is a sectional side elevation of the improvement.

The improved gas-generator is provided with a vertically-disposed gas-pipe A, connected near its lower end by a pipe B with the exhaust-chamber of a gas-engine on which the improvement is to be used. The lower end of the exhaust-pipe A is adapted to be closed by a cap C, and in said pipe is arranged a coil of pipe D, extending at its upper end through the side wall of the pipe A to connect with a suitable oil-supply. The lower end D² of the coil of pipe D likewise extends through the side wall of the pipe A to discharge the generated gas into a gas-reservoir E, surrounding the exhaust-pipe A and connected near its upper end by a pipe F with the gas-engine, so that the generated gas passes by the pipe F to the engine to be used therein as the motive agent.

On the upper end D' of the coil of pipe D and within the reservoir E is arranged a safety-valve G, so that any gas generated in the upper end of the coil of pipe D can pass through the safety-valve G into the reservoir E. Now it will be seen that when the engine is in operation the exhaust, in the form of hot products of combustion, passes through the exhaust-pipe A in an upward direction to heat the coil of pipe D, so that the oil passing down said pipe is heated and vaporized, and the vapors thus generated pass by the end D²

into the reservoir E, from which the gases pass into the engine, as previously explained.

By the arrangement described the gases generated are kept in a heated state within the reservoir E, as the latter surrounds the exhaust-pipe A, as previously explained, and consequently a condensation of the gases is not liable to take place.

If it is desired to start the engine, then the operator removes the cap C from the lower end of the exhaust-pipe A and then heats the coil of pipe D by the introduction of a flame from a lamp or other source or by introducing cotton-waste saturated with kerosene or other inflammable material and burned in the lower end of the pipe A. Thus a sufficient quantity of gas is generated previous to starting the engine, so as to permit of at once running the engine.

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

1. A gas-generator comprising an exhaust-pipe through which pass the hot products of combustion from a gas-engine, a coil of pipe arranged in said exhaust-pipe and connected at one end with an oil-supply and adapted to discharge at its other end the generated gas, a gas-reservoir surrounding the exhaust-pipe and into which discharges the gas-discharge end of said coil of pipe, and a safety-valve arranged in the upper end of said coil of pipe and opening into said reservoir, as set forth.

2. A gas-generator, comprising an exhaust-pipe through which pass the hot products of combustion from a gas-engine, a coil of pipe arranged in said exhaust-pipe and connected at one end with an oil-supply and adapted to discharge at its other end the generated gas, a gas-reservoir surrounding the exhaust-pipe and into which discharges the gas-discharge end of said coil of pipe, a removable cap for said exhaust-pipe to permit of introducing a flame or burning fuel therein to heat said coil of pipe, and a safety-valve arranged on the upper end of said coil of pipe, substantially as shown and described.

JESSE ELWOOD HATHAWAY.

Witnesses:

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