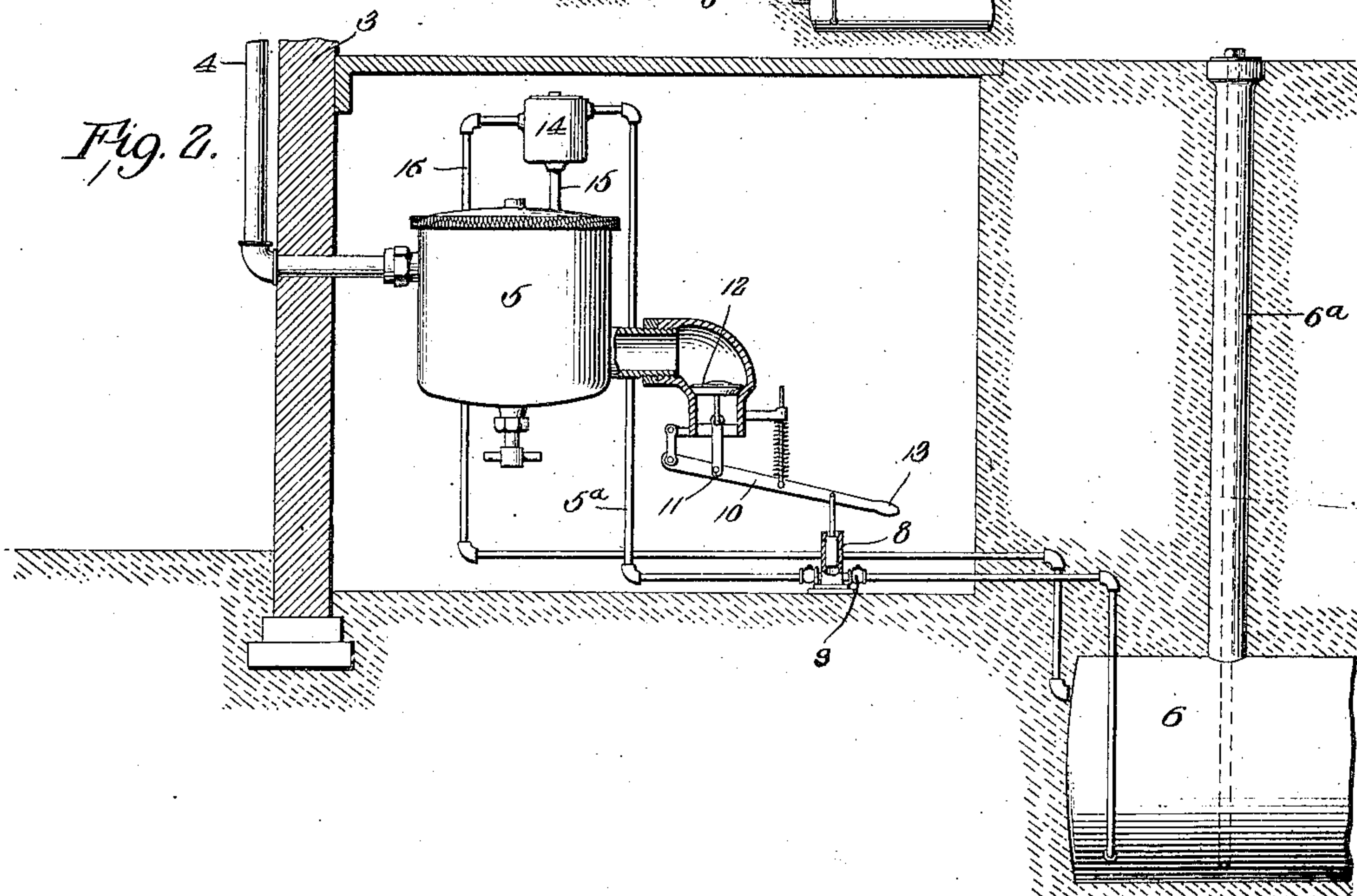
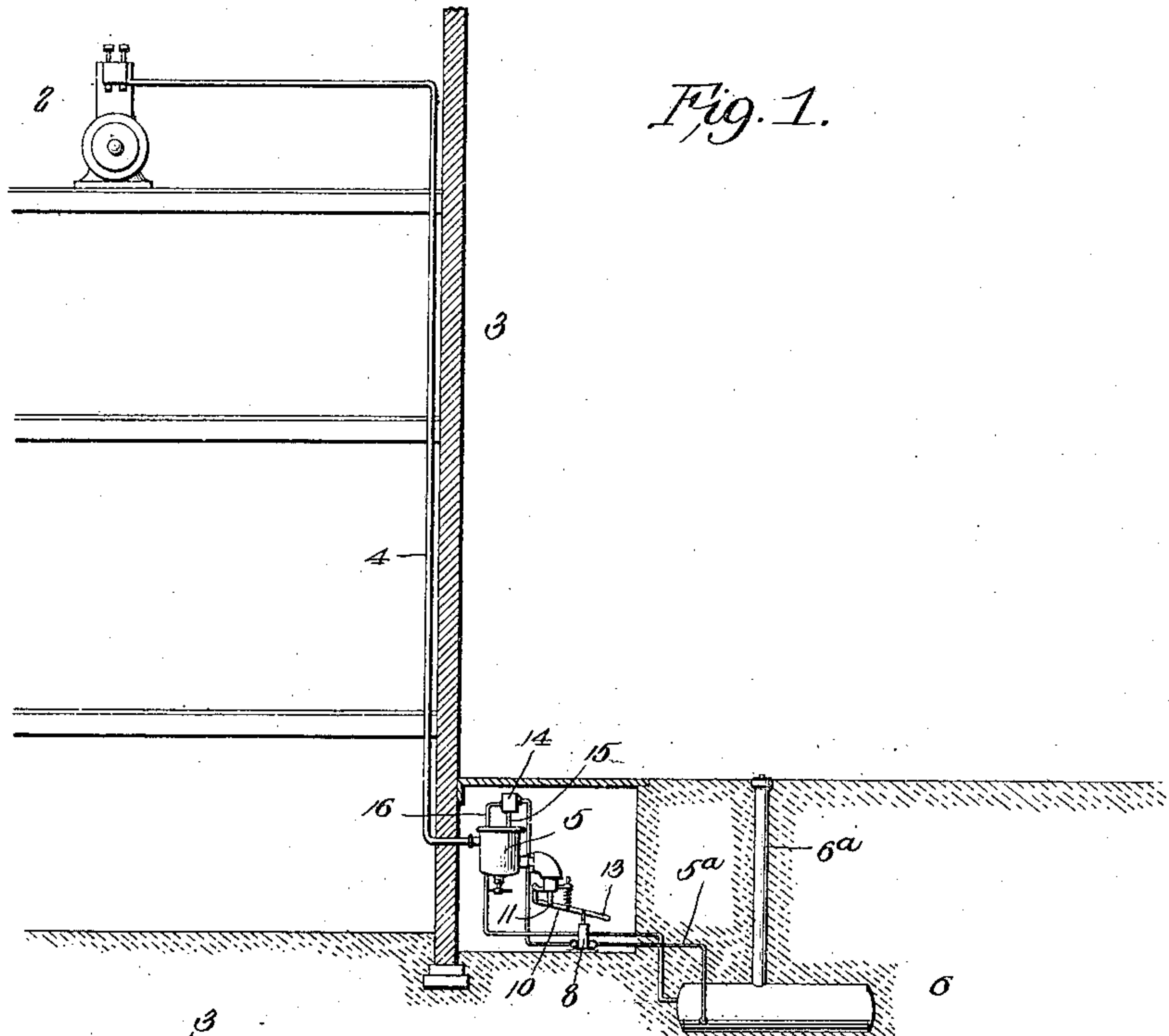


C. M. KEMP.
SAFETY CARBURETING PLANT.
APPLICATION FILED APR. 15, 1907.

903,479.

Patented Nov. 10, 1908.



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UNITED STATES PATENT OFFICE.

CLARENCE M. KEMP, OF BALTIMORE, MARYLAND.

SAFETY CARBURETING PLANT.

No. 903,479.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed April 15, 1907. Serial No. 368,305.

To all whom it may concern:

Be it known that I, CLARENCE M. KEMP, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented new and useful Improvements in Safety Carbureting Plants, of which the following is a specification.

The present invention relates to gas generating plants for making power gas of that type in which carbureting instrumentalities are provided to furnish and supply the carbureted air or gas for an explosive engine.

The purpose of the invention is to so assemble and combine the explosive engine and its carbureting and gas supplying auxiliaries as to safeguard the building in which the explosive engine or power device may be located from the danger incident to locating the supply of gasoline or other enriching fluid and the gas-forming devices within the building; it being a well established fact that where gasoline in any quantity is stored or used in a building, the insurance rates are extremely high, and in many cases the underwriters refuse to insure buildings in which gasoline is kept.

Generally stated my invention contemplates the locating of the gasoline supply and the carbureter instrumentalities, at a distance from the explosive engine or power device, and where the same is used in a building for power purposes, outside of the building; and so connecting the engine and the carbureting devices as that when the engine is started, it will draw from its outside source the gas or carbureted air; the entire operation of delivering the gasoline to the carbureter and saturating the air therein, taking place outside of the structure.

Another feature of my invention relates to a novel form of pump for starting the carbureting devices and feeding the gasoline thereto; which pump may be manually operated to supply a starting charge and thereafter will automatically supply the gasoline. By the use of this novel arrangement of pump, I am able to dispense with the objectional gravity feed from the main source of gasoline, which gravity feed is a menace to safety because of the danger of flooding and overflowing the carbureting devices in event of derangement of the parts; this supplying of gasoline from a lower level than the carbureting devices being looked upon with favor by the insurance underwriters, for the reason

that it is deemed safer than the ordinary gravity feed system.

In order that my invention may be understood by those skilled in the art, I have illustrated in the drawings which accompany and form a part of this specification, one embodiment of my invention and in said drawings: Figure 1 is a side elevation of an apparatus constructed in accordance with this invention, the same being shown in connection with a gas engine located within a building; and Fig. 2 is an enlarged detail view of the carbureting apparatus, certain parts thereof being shown in section.

Referring to the drawings by numerals, like numbers indicating like parts in the several views, 2 (Fig. 1) represents an explosive engine or power device of any suitable type, located within a building in any desirable position. From the engine 2 a gas suction pipe 4 leads to a carbureting device 5, which is located outside of the building in any suitable place, and it may, if desired, be placed in a suitable vault below the surface of the ground, as shown. The said carbureter 5 is connected by a suitable feed pipe 5^a with a gasoline supply tank 6, located at any suitable distance therefrom, said tank having the usual filling and vent pipe 6^a as shown. The said carbureter 5 may be of any approved float controlled type, and as its inner arrangement is of no consequence, so far as the present invention is concerned, I do not illustrate or describe the interior construction thereof. The carbureter 5, as stated, is connected with the storage tank 6, which is preferably at a lower level than the carbureter 5, by means of the gasoline supply pipe 5^a and in said pipe between the carbureter 5 and the storage 6, is a pump 8 comprising a cylinder and reciprocating piston, suitable check valves 9 of ordinary construction to permit inflow and outflow past the pump being located on either side of the pump 8, as shown. The piston of the pump 8 is connected with a lever 10 pivotally mounted at one end on the casing of the carbureter 5, and having a connection 11 with the air valve 12 of the vacuum chamber of the carbureter. The said lever 10 is provided with a handle 13 by means of which the pump 8 may be manually operated, and it will be seen that as the pump 8 is operated, the air valve 12 of the carbureter will be lifted, and a starting charge supplied by

the carbureter to the engine. When the engine makes its suction stroke and creates a vacuum in the carbureter 5, by suction through the gas pipe 4, the said air valve 12 will be lifted, and through the connection 11 with the pump lever 10 will automatically operate the pump 8 and feed gasolene to the carbureter supply tank 14, from which, by means of pipe 15, the gasolene will pass to the flow chamber of the carbureter 5, which is provided with the usual needle valve (not shown), through which the gasolene is drawn into the vacuum chamber and mixed with the air. The small supply tank 14 is preferably provided with an overflow return pipe 16, which leads therefrom to the main storage tank 6, so that the small supply tank 14 will only contain a sufficient amount of gasolene to keep the carbureter supplied. It will be seen that by means of this combined manual and automatic pump, a supply of gasolene may at first be manually and then automatically drawn from a lower level and fed to the carbureter in proper proportion to furnish a constant supply, and as the stroke of the pump will vary directly with the pull on the air valve, the gasolene supply will vary according to the work and the needs of the engine.

It will be understood, of course, that many variations in mechanical construction may be made without departing from the spirit of my invention, and as I deem all such mechanical expedients to be within the purview thereof, I do not limit myself to any of the details herein shown and described, except so far as I am limited by the prior art to which the invention belongs.

While I have described the present invention in connection with gasolene as the fluid

fuel, it will be understood that any other suitable fluid, as, for example, alcohol, may be used in connection with my apparatus to enrich air and form the explosive charge; and I do not, therefore, wish to be understood as limiting the use of my invention to any particular fuel.

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

1. The combination with a carbureter, of an air intake valve therefor, a source of fluid supply, a feed connection between said carbureter and said supply, and a pump in said feed connection controlled by the air intake valve of said carbureter.

2. The combination with a carbureter, of an air intake valve, a source of fluid supply, a feed pipe connecting said carbureter and said supply, a pump in said feed pipe, and connections between said pump and the air valve of the carbureter for actuating the said pump.

3. The combination with a carbureter, of suction means therefor, an air intake valve, a source of fluid supply for said carbureter, a feed pipe connecting said carbureter with said source of supply, a manually operable pump in said feed pipe and connections between said pump and the air valve of said carbureter to automatically operate said pump when the suction means is running.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CLARENCE M. KEMP.

Witnesses:

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JOHN S. COLE.