(No Model.)

F. M. REED.

GENERATOR.

No. 492,366. Patented Feb. 21, 1893.

Fig. 1.

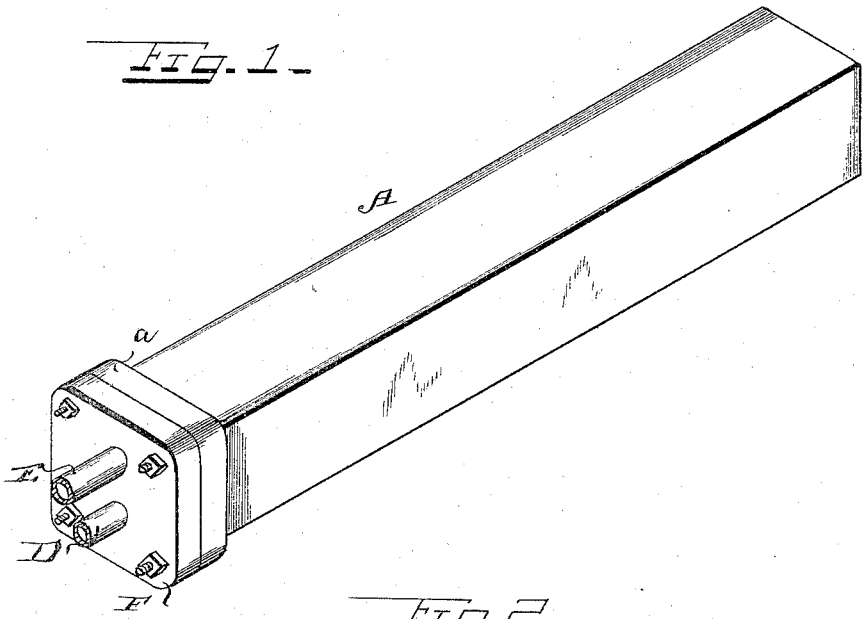


Fig. 2.

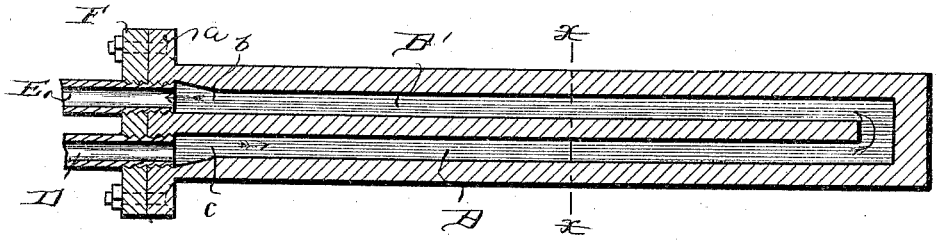
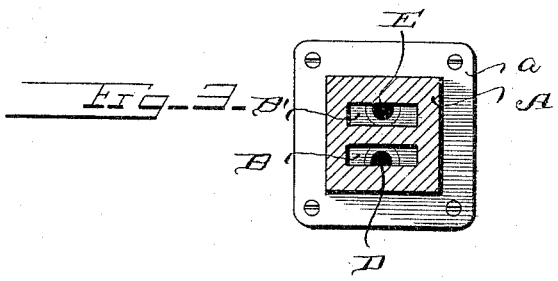


Fig. 3.



Witnesses:

Jesse Heller.

Phil. C. Masi.

Inventor.

Franklin M. Reed

by E. W. Adamson

his Attorney.

UNITED STATES PATENT OFFICE.

FRANKLIN M. REED, OF ANDERSON, INDIANA, ASSIGNOR OF ONE-HALF TO EDWARD SHAW, OF SAME PLACE.

GENERATOR.

SPECIFICATION forming part of Letters Patent No. 492,366, dated February 21, 1893.

Application filed September 30, 1892. Serial No. 447,410. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN M. REED, a citizen of the United States, and a resident of Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Generators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a perspective view. Fig. 2 is a vertical longitudinal section and Fig. 3 is a vertical transverse section taken on line *x x* Fig. 2.

This invention has relation to certain new and useful improvements in hydrocarbon generators, and is especially designed as an improvement over the generator shown and described in my pending application for patent, filed June 15, 1892, Serial No. 436,858; and the invention consists in the novel construction and combination of parts as hereinafter described and set forth in the claims.

Referring to the accompanying drawings, the letter A designates an elongated metal casting, preferably of rectangular cross-section, and formed at one end with an exterior flange *a*. Formed in this casting while in the mold, are two longitudinal chambers B, B′, situated one above the other. Said chambers enter the casting at that end having the flange *a*, and lead to a point near the opposite end, where they join each other, as shown, so that in reality they form a continuous passage, doubled back upon itself. The entrance and exit to these chambers or passages, is somewhat contracted, as shown at *b* and *c*, and the circular apertures formed thereby are provided with a screw-thread, and receive respectively the threaded ends of the oil supply pipe D, and the gas discharge pipe E. These pipes extend through a cap piece F, which is firmly bolted or otherwise secured to the flange *a*.

The operation is as follows: The generator is set up in connection with a burner, in the manner similar to that shown and described in my application above referred to, so that it shall be partially or wholly enveloped in the flame thereof. The oil supply pipe is connected with a suitable reservoir not shown, and the gas discharging pipe is led to the burner, or other desired point. When combustion is started in the burner, over which the generator is designed to be supported, the generator becomes enveloped in the flame, and is heated to a high degree, so that the oil entering therein becomes converted into gas early in its passage and flowing through the upper chamber, is heated intensely, so that as it passes through the discharge pipe to the burners, it is in a highly combustible state, and burns without smoke or odor, and with strong heating and lighting properties. Owing to the high degree to which the generator casting becomes heated, the passages or chambers will not become choked or clogged with heavy particles of carbon, a difficulty largely experienced in generators of this character. Should any such clogging occur however, after continued use, the chambers may be easily cleaned by removing the cap and using a suitable tool.

On account of the perfect combustion at the burners, and the rapidity with which the oil is converted into gas, the generator is entirely free from "back lash" or tendency of the gas to work back in the direction of the oil supply.

Suitable cocks for the oil and gas are provided for the oil and gas pipe, so that generation and combustion at the burners may be regulated to the desired point. The generator above described besides being very effective for its purpose, is extremely simple in its construction, and durable. A great advantage of forming the body in a single casting lies in the fact that it is impossible for it to warp and bend in such a manner as to permit the escape of gas, as may be the case where the passages or chambers are covered by a longitudinal removable cap. This casting can also be produced at a low cost.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The hydro-carbon generator herein described, comprising an integral elongated hollow casting, having an interior longitudinal

partition forming therein two chambers one above the other, said chambers being connected at their inner ends to form a continuous passage, a projecting surrounding flange on that end of said casting where are the mouths of said chambers said chambers being contracted into circular form where they enter said end, and formed with a thread, a cap removably secured to said flange and covering said end, an oil-supply pipe leading through said cap and screwed in the mouth of one of said chambers, and a gas-discharge pipe similarly connected with the other of said chambers, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

FRANKLIN M. REED.

Witnesses:
SAMUEL P. MOORE,
D. C. CHIPMAN.