Dec. 14, 1926. 1,610,810

T. H. NOLL

STEAM GENERATING MEANS

Filed July 27, 1925

Fig. 1.

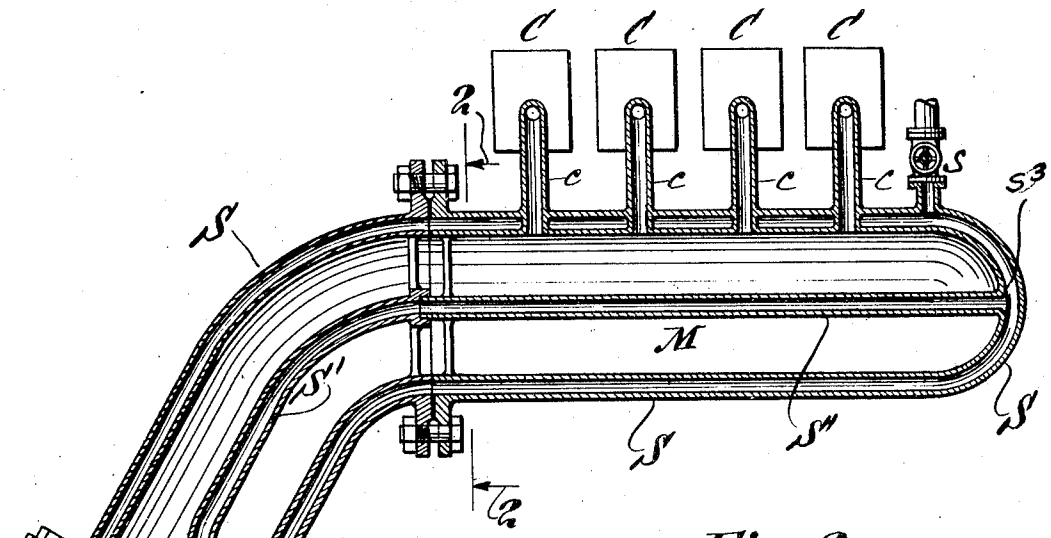
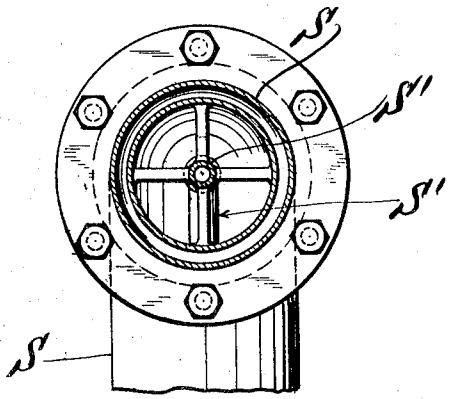


Fig. 2.



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UNITED STATES PATENT OFFICE.

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STEAM-GENERATING MEANS.

Application filed July 27, 1925. Serial No. 46,262.

The object of my invention is the utilization of the heat inherent in the gaseous exhaust from hydrocarbon motors for the purpose of generating steam for use for any and various purposes; and to this end the invention consists in the specific combination and arrangement of parts and elements herein described and claimed, and a distinctive feature being the incorporation, with exhaust manifold of an engine of the character designated, of a water circulatory system, substantially as hereinafter set forth.

In the accompanying drawing I illustrate a practical embodiment of the essential features of my invention, although I do not limit myself to the identical construction or arrangement of conjunctive parts and appurtenances herein shown and described by way of exemplification, since changes in minor details, and equivalent mechanical expedients, may be resorted to with like results, and without departing from the spirit and intent of my invention in this respect.

With this understanding,

Fig. 1 represents a central vertical longitudinal sectional elevation of a hydro-carbon motor exhaust manifold constructed and combined with my steam-generating means and

Fig. 2 a transverse section taken upon the plane of line 2—2, Fig. 1.

In Fig. 1, C, C, C, C, represent diagrammatically four cylinders of a motor of the character designated connected by their exhaust pipes *c*, *c*, *c*, *c*, with a manifold M, closed at one extremity and opening at the other extremity into a conduit M^1, leading to a muffler, all in a manner well known in the prior state of the art.

In the present case however, the manifold M, is formed with and enclosed in a jacket S, constituting a steam-generating chamber, which is fed with water through the medium of a supply pipe S^1, preferably positioned axially as related to the manifold through which it extends, as shown in Fig. 1, of the drawings, and communicating with the generator jacket S, at the extreme inner end S^3 thereof.

Obviously this combination and arrangement of parts and elements may be varied somewhat in adapting my steam-generating device to gas-motors of various types and conditions of use, the essential feature in this respect being the utilization of the heat of the gaseous motor exhaust as an economical means of heating water and generating steam for employment as a heat or power medium for whatever purpose desired.

The generator jacket S, is provided with a steam outlet control valve *s*, and the water supply pipe S^1, with an inlet control valve s^1, or equivalent means for regulating the flow of both liquid and fluid.

It is obvious in this connection that my auxiliary heating device may, under certain conditions and requirements, be used simply as a water heater by regulating the supply and flow of water under pressure therethrough.

What I claim as my invention and desire to secure by Letters Patent is:

A manifold formed with an enclosing jacket constituting a steam-generating chamber, means for feeding water to said jacket at its extreme inner end and extended substantially centrally therethrough, a water inlet control valve, and a steam outlet control valve for said enclosing jacket.

THEOBALD H. NOLL.