

PUBLISHED
APRIL 27, 1943.

BY A. P. G.

E. USSANI D'ACCADIA
GAS PRODUCER BY SOLID FUEL, COMBINED WITH
A PURIFIER, AND SUITABLE TO FEED GAS
MOTORS, AND ESPECIALLY AUTO MOTORS
Filed Dec. 11, 1941

Serial No.
422,552

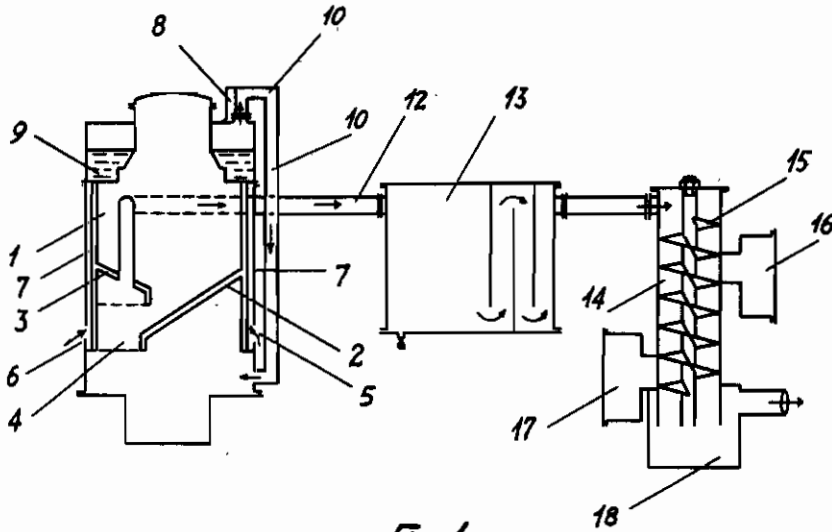


Fig. 1

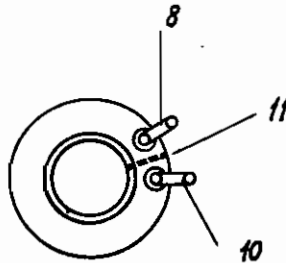


Fig. 2

J. E. ...

ALIEN PROPERTY CUSTODIAN

GAS PRODUCER BY SOLID FUEL, COMBINED WITH A PURIFIER, AND SUITABLE TO FEED GAS MOTORS, AND ESPECIALLY AUTO MOTORS

Eduardo Ussani D'Accadia, Milano, Italy; vested in the Alien Property Custodian

Application filed December 11, 1941

It is known how one of the troubles arising in the gas producers actually in use, consists in the considerable loss in depression owing to the frictions caused by the pressure of the coal placed upon the burning zone, which loss results in a diminished efficiency of the motor by the quantity of the gas, which feeds the said motor.

In order to avoid this trouble, there have been foreseen in the gas producer means suitable to partly separate the effective burning chamber from the zone forming the fuel storage, contained in the gas producer, which circumstance affords the additional advantage not to allow that a too strong fuel mass begins to burn or that the burning zone be disadvantageously displaced upwards.

Moreover, with the effective gas producer there are combined organs purifying the produced gas in the apparatus, which, together with other additional arrangements, better illustrated in the following, improve still the advantages of the gas producer, object of the present invention.

The attached drawing represents, for example's sake, a scheme of combination of a gas producer with the purifying organs according to the invention, viz:

Figure 1 is a view of the assemblage, where the various elements are represented in section;

Figure 2 is a plant from above, of the effective gas producer.

As it results from the drawing, the gas producer includes a chamber 1, where the fuel is charged into from above and which is provided of two inclined transversal partitions, 2 and 3, the one opposite the other, so as to form a kind of hopper and an effective burning chamber 4, of reduced volume, and in which the fuel practically remains at a permanent level.

The air entering at the openings 5 and 6 through the intervening space 7, suitably cools

the walls of the space 1 and is heated. This air is then introduced through the pipe 8 into the space 8 containing some water licked by it, removing advantageously some water vapour.

The air is compelled to run wholly through the annular chamber 9, as the issuing air pipe 10 is arranged adjacent to the pipe 8, but separated from it by a divisory partition 11, which extends through the whole height of the chamber 9. The pipe 10, which, like the pipe 8, is linked with the chamber 9 by means of a wide cone connection, brings the air under the grate. These cone connections are foreseen in order to avoid that in case of displacements or inclinations of the gas producer, some water be absorbed or should remain blocked up the air entrance.

The gas produced in the gas producer, through the pipe 12 is forwarded to the labyrinth chamber 13, where it forsakes a good deal of its impurities, and therefrom into the purifying chamber 14, containing a cochlea 15, which compels the gas to develop a rotatory descending movement, thanks to which, by centrifugal strength, the heavier impurities are cast outwards and gathered in the special collecting tanks, as 16 and 17, or in the lower tank 18.

The said tank 18 preferably contains a viscous substance suitable to withhold the impurities descending along the walls of the chamber 14.

The gas issues then, in state of great purity, through the pipe 19, which forwards it to the motor.

Of course all sizes and building details can vary according to needs, without therewith, however, forsake the scope of the present invention.

Moreover, everyone of the elements above described and illustrated, can also be applied separately, in a system according to the above type.

EDUARDO USSANI D'ACCADIA.