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ELECTRIC APPARATUS SIMULTANEOUSLY PRODUCING
DISSOCIATION OF WATER INTO HYDROGEN AND
OXYGEN, FIXATION OF OXYGEN AND THE
UTILIZATION OF HYDROGEN
AS COMBUSTIBLE
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Fig. 1.

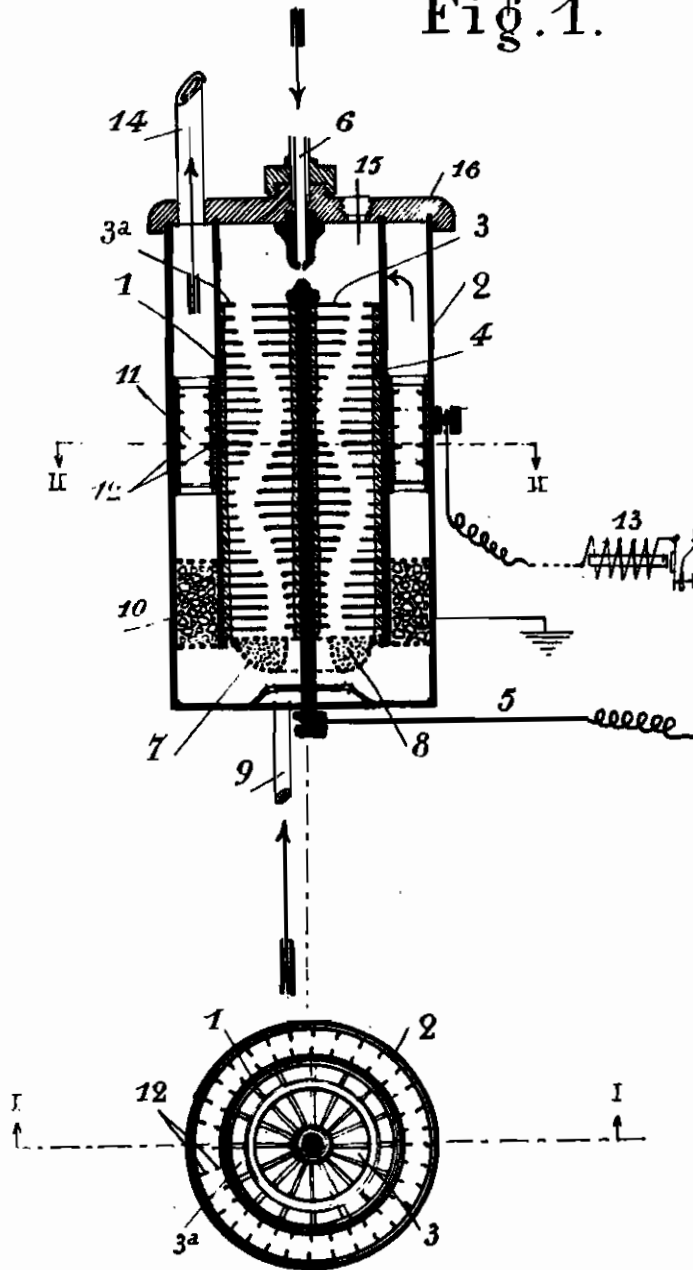


Fig. 2.

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ALIEN PROPERTY CUSTODIAN

ELECTRIC APPARATUS SIMULTANEOUSLY PRODUCING DISSOCIATION OF WATER INTO HYDROGEN AND OXYGEN, FIXATION OF OXYGEN AND THE UTILIZATION OF HYDROGEN AS COMBUSTIBLE

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Application filed March 26, 1942

Based on the same principle of dissociation of water and fixation of oxygen gas by carbonic gas, as described in the French Patent letter of Messrs. Jacques Couelle and Dimitri Costin, taken 11th March 1941, the object of the present invention consists in an apparatus which is electric simultaneously producing the same operations and having the purpose to obtain and separate particularly the hydrogen gas of the oxygen which afterwards will be used as combustible for industrial and home heating.

This apparatus is represented on the annexed rather schematical sketches, added in order to explain and also to furnish an example of execution of one of the shades of the object of the invention.

As to the sketch:

Figure 1 shows the total of the electric apparatus producing simultaneously dissociation of water in order to obtain hydrogen and oxygen, seen in elevation and length-cut following the line I, I of Figure 2.

Figure 2 shows the same apparatus seen in plane and in transversal cut following the line II, II, of the Figure 1.

In the shown example the apparatus is composed by two cylindrical bodies 1 and 2 concentrically disposed.

The cylinder 1 includes heating plates 3, 3a, in preference of pure nickel or platinum. These plates are isolated from each other by targets 4, of isolating material known, for instance mica. These plates can resist a temperature of 1500° which will be communicated to same by passing an electric current entering at conductor 5 in the centre of the cylindrical body 1 and getting out at its periphery. This current may vary in intensity by application of a rheostat.

These plates 3 and 3a are superposed thus that they form successive diffusers; these plates dissociate the water arriving by pipe 6, and will be projected in the body 1.

In the inferior part of body 1 is also a diffuser 7, representing the particularity of being perforated by a large number of holes like a strainer, and whose interior is furnished with foam of platinum 8.

The oxygen and hydrogen gas, which have been obtained by dissociation of water after the known principles, receive in quantities as necessary oxygen of carbon, after having traversed the diffuser, spoken of last; this principle is a new one; the oxygen of carbon comes by pipe 9 and serves to neutralize the oxygen to be. The thus separated gases pass a filter 10 containing active coal which

simultaneously realizes the absorption of oxygen and the cleaning of hydrogen. However it is possible that there residue still some rests of oxygen in the hydrogen gas, same will be completely neutralized by having passed them in the separator 11 constituted by electrodes 12 whose current is sent in them by very short interruptions in using an apparatus 13 with trembler, known system, as employed on the coils of induction by Ruhmkoff.

Now the hydrogen gas is completely separated from the oxygen and by pipe 14 is ready for utilization to nourish all systems of burners in order to be used for domestic heatings.

This apparatus also is furnished with an orifice 15 with a pierced gaze on the cover 16. This orifice allows to control the degree of the heating of the apparatus.

This apparatus can be constructed in different shades and sizes, and also its dispositions may be varied, always without changing the general disposition of the invention which has been abovescribed, nor its industrial result which is new and which is to realize by electricity the dissociation of water with the precise end to use out of it only the hydrogen gas for all heating and all applications after having eliminated the oxygen gas.

Recapitulation

Electric apparatus simultaneously producing dissociation of water into hydrogen and oxygen, fixation of oxygen and the utilization of hydrogen as combustible, characterized by:

1. Two bodies of similar shade concentrically disposed the one in the one in the other.

The interior body containing heating plates by passage of an electric current.

2. A diffuser containing foam of platinum placed on the low part of the interior body as above mentioned.

3. An arrival of oxide of carbon placed in the low part and in the interior of the exterior body.

4. A filter containing active coal, this filter surrounding the inferior and exterior part of the interior body, as mentioned in the first paragraph.

5. A separator with electrodes electric, also surrounding the exterior part of the interior body mentioned in first paragraph.

6. Distributions of electric current on the one hand, constant for the dissociation of the separation of gas and the absorption of the gas oxygen.

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