

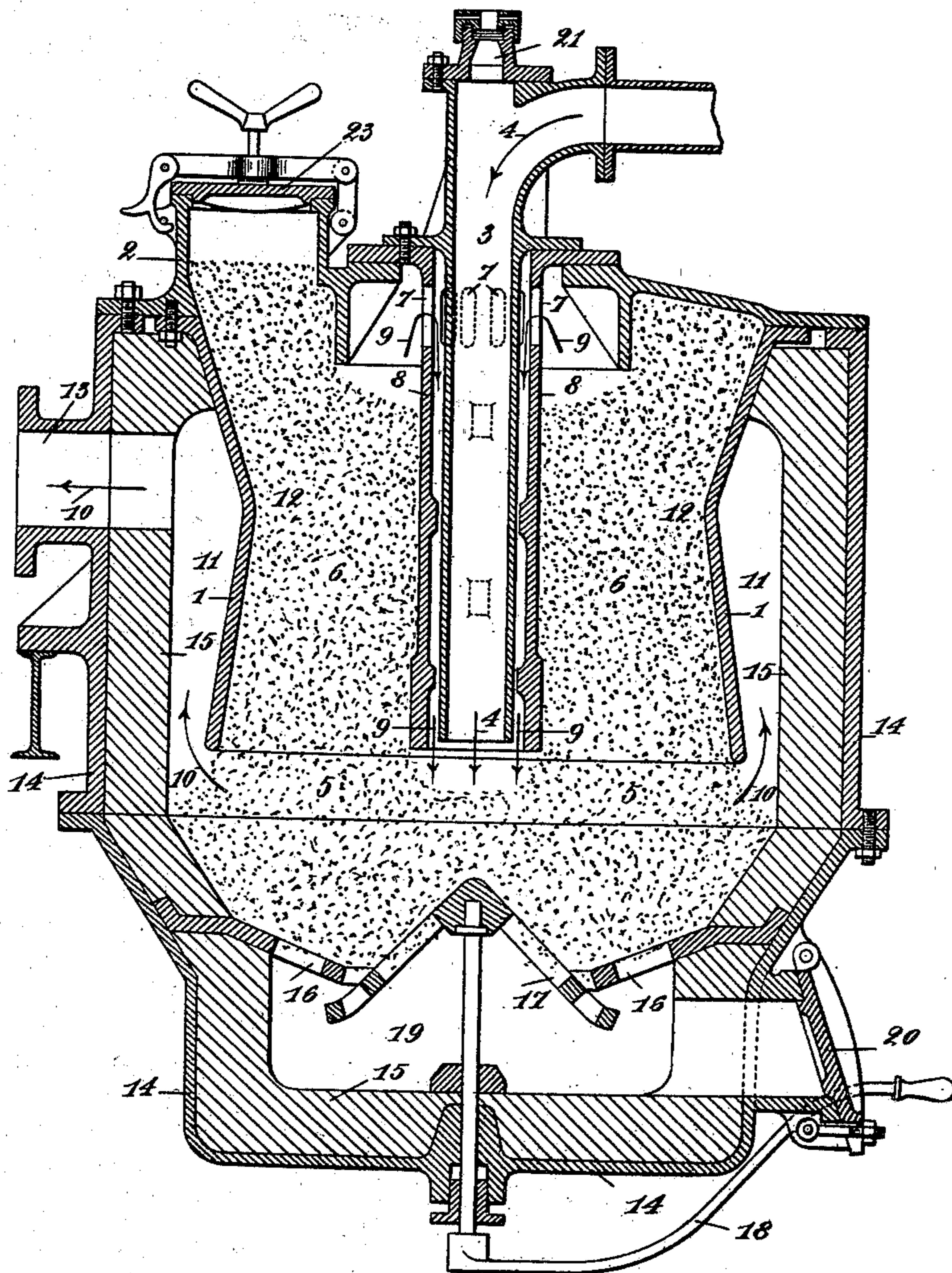
No. 732,950.

PATENTED JULY 7, 1903.

A. LECLERE.
GAS PRODUCER.

APPLICATION FILED JAN. 2, 1902.

NO MODEL.



WITNESSES:

Isabella Waldron.
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INVENTOR.

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BY

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANDRÉ LECLERE, OF PARIS, FRANCE, ASSIGNOR TO SOCIÉTÉ ANONYME
POUR LA PRODUCTION ET L'EMPLOI DE LA VAPEUR SURCHAUFFÉE,
OF CHÂLON-SUR-SAÔNE, FRANCE.

GAS-PRODUCER.

SPECIFICATION forming part of Letters Patent No. 732,950, dated July 7, 1903.

Application filed January 2, 1902. Serial No. 88,240. (No model.)

To all whom it may concern:

Be it known that I, ANDRÉ LECLERE, a citizen of the Republic of France, and a resident of Paris, France, have invented certain new and useful Improvements in Gas-Producers, of which the following is a specification.

The present invention relates to a new construction applicable to the air-admitting ports in gas-generating producers and is designed for protecting the walls of these air-admitting ports against fusion or slag-fouling. By this construction a zone of inert or reducing aqueous gases is maintained around the end of the air-supply tube, these coming, for instance, from the distillation of the combustible material and going in the incandescent combustible without being previously sucked by or mingled with the air injected. Thus is obtained locally a physical cooling and thermic internal reactions, preventing quick combustion arising in contact with the end of the inlet-tube. When aqueous gases from distillation are employed at the same time, water and tar are continuously decomposed by the incandescent combustible and there are obtained rich gases of constant composition and temperature.

In the accompanying drawing is shown in cross-section a producer constructed according to the present invention.

The apparatus comprises a chamber 1 for receiving the combustible material, and in the drawing this is shown as of hour-glass form. This chamber 1 is provided with a charging-inlet 2, closed by means of a suitable cover 23. The air necessary to produce the gas enters through the central pipe 3, as indicated by the arrow 4. It then traverses the carbonaceous material and burns in the zone 5, while the products coming from the distillation of the upper strata of carbonaceous material escape through the ports 7, disposed in the case 8, surrounding the central tube 3. These products, as they follow the arrows 9, traverse the combustion zone 5 and, as shown by the arrows 10, traverse the space 11, mixed with the gases of partial combustion. The gaseous mixture so formed heats the carbonaceous material at 12 and escapes with quite a constant composition and temperature into the outlet-pipe 13, disposed in the outer case 14 of the apparatus, which case is

provided with an inner refractory or insulating wall 15, intended to preserve it and to diminish the radiation of heat. The apparatus is completed by a trelliced arrangement 16, having at the center an opening that may be shut up by means of a conical trellice 17, which can be agitated from outside by means of a lever 18 in order to let the ashes fall in the ash-pit 19, that may be cleaned by means of the cleansing-gates 20 permitting removal of the ashes. The air-conveying pipe in its upper portion has a cap 21, serving at the beginning of the performance to ignite the carbonaceous material by means of petroleum or otherwise.

It will be understood that the products escaping from the combustible material or fuel freshly fed into the apparatus are at a relatively low temperature and very rich in inert gases and also largely charged or commingled with aqueous vapors, and are therefore very poor in combustible gases. These gases passing through the opening 7, descend in the direction of the arrows 9 around the inlet air-pipe 3, which they thus cool. Thus a protecting zone is produced around the inlet end of the air-pipe, and this end is protected against fusion.

Having thus described my invention, what I claim is—

A gas-producer comprising a suitable chamber having a closed upper end and a gas-outlet, an inner depending wall forming a coal-receiver, an air-blast pipe depending centrally in said coal-receiver, and a tube or pipe inclosing said air-blast pipe and forming an annular space between said tube and blast-pipe, said annular space communicating with the coal-receiver at the top and terminating at the bottom in proximity to the end of the air-blast pipe whereby gases arising from the material in the receiver are drawn down through said annular space and discharged at the lower end to form a protecting zone around the end of the air-pipe substantially as described.

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

ANDRÉ LECLERE.

Witnesses:

EDWARD P. MACLEAN,
JULES FAYOLLET.