

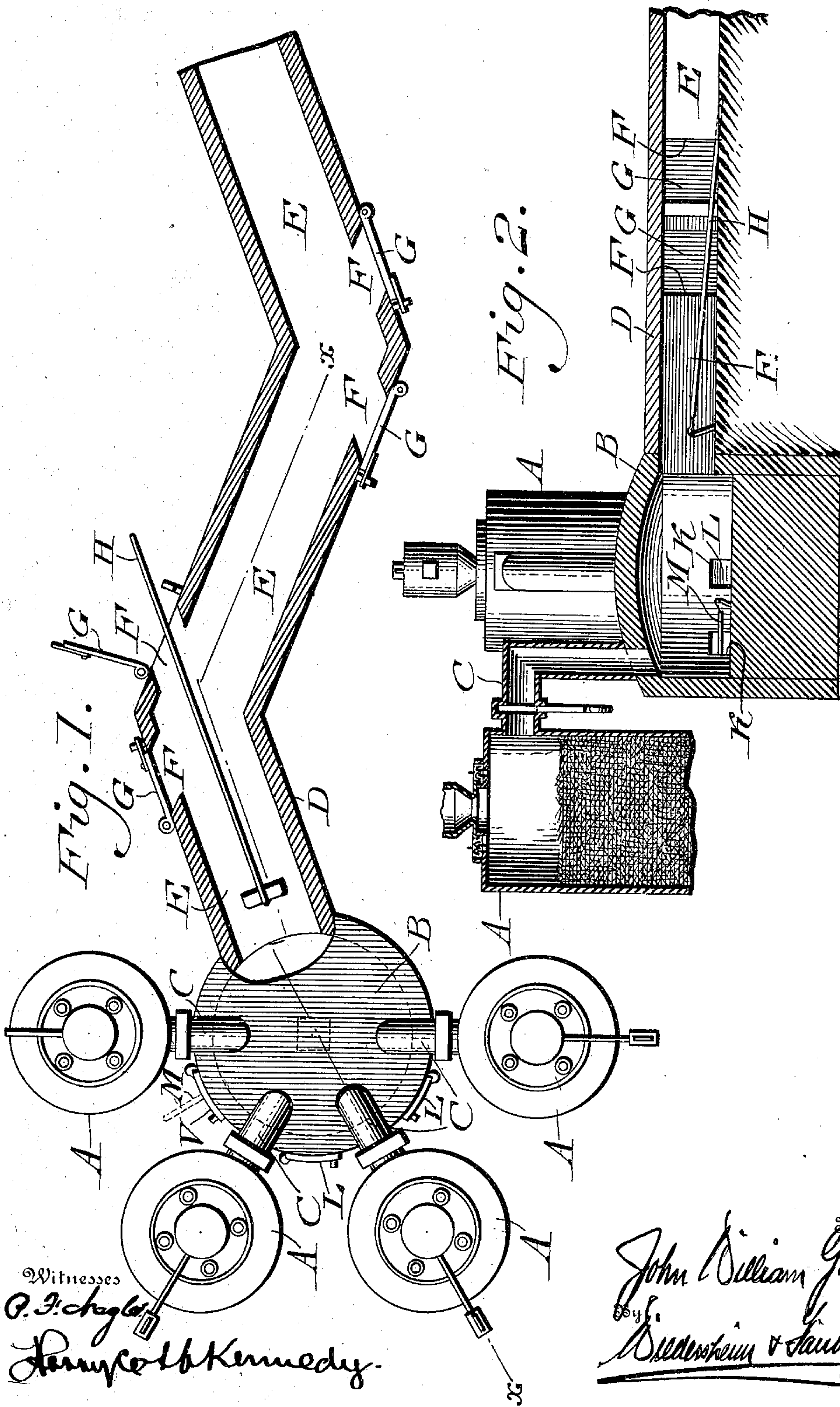
No. 735,492.

PATENTED AUG. 4, 1903

J. W. GAYNER.  
GAS PRODUCER.

APPLICATION FILED SEPT. 18, 1902.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN WILLIAM GAYNER, OF SALEM, NEW JERSEY, ASSIGNOR TO AMERICAN PRODUCER-GAS FURNACE COMPANY, A CORPORATION OF NEW JERSEY.

## GAS-PRODUCER.

SPECIFICATION forming part of Letters Patent No. 735,492, dated August 4, 1903.

Application filed September 18, 1902. Serial No. 123,809. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN WILLIAM GAYNER, a citizen of the United States, residing in the city and county of Salem, State of New Jersey, have invented a new and useful Improvement in Gas-Producers, of which the following is a specification.

My invention consists of a novel construction in gas-producers and the conduits through which the gas is led therefrom, the object being to provide a construction by which the soot accumulating in these conduits can be expeditiously removed.

The invention further consists of details of construction, as will be hereinafter specifically described and claimed.

Figure 1 represents a top plan of a gas-producer plant, with a conduit leading therefrom shown in section. Fig. 2 represents a vertical section thereof, taken on the line  $xx$ .

Similar letters of reference indicate corresponding parts in both figures.

Referring to the drawings, A designates a plurality of gas-producers that communicate with a common vault or compartment B by means of the valved pipes C.

D designates the conduit leading from the compartment B to the furnace.

The fuel employed in gas-producers deposits a large amount of soot upon the interior of the different conduits by which the gas is conducted from the producers to the furnace, and so much so, in fact, as to partially close the conduit, so that it becomes necessary for the successful operation of the gas-producer to remove this soot. Of course it is desirable to remove these accumulations with the greatest expedition to avoid closing down the furnace. To accomplish this, in the present case I have shown a conduit D, that consists of offset sections E, opposite the ends of which sections are openings F in the walls of the conduit that are adapted to be closed by doors G. Hoes or scrapers H are employed in removing the soot, one of which is shown in said drawings.

The operation is as follows: When it is desired to remove the soot from the conduit D of the gas-producer leading, for instance, to a glass-furnace, it is possible if the soot is re-

moved quickly to cut off the flow of gas from the producers to the furnace without cooling off the mass of glass in the furnace to an undesirable extent. It is understood, of course, that if the flow of gas to the furnace is cut off for such length of time as to cool the glass undesirable results follow. Therefore when using my invention as soon as the valves in the pipes C are closed all of the doors G are quickly opened and then with a man manipulating a hoe through each of these doors the soot can be quickly removed from the sections and through the openings F in a space of time that will permit the doors G to be closed and the flow of gas again turned on before the temperature of the mass of glass in the furnace is reduced to an undesirable extent.

It is understood, of course, that the vault or compartment B is also provided with openings K, having suitable doors L, which can be opened to permit the hoes or scrapers M to be inserted and the soot removed therefrom while it is being removed from the conduit. It is seen, therefore, that by making the conduit in offset sections I am enabled to apply my invention, no matter how far the entire conduit extends, it being understood that in the case of a long straight conduit it would not be practical to manipulate the hoe or scraper having a handle of the length required to reach all parts of the conduit. The sections E, however, can be made of the desired length, so that a hoe with a handle of practical length can be used from the opening at each end of the section, so as to clean out the entire section.

It is understood, of course, that while it is preferable to have an opening at the end of each section whereby two hoes can be manipulated in each section, yet the section could be shorter and have an opening at one end thereof, as will be obvious.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A conduit for conveying gas from a gas-producer, consisting of substantially horizontal angular sections having openings at their ends, the bottoms of said sections extending



to said openings, whereby a scraper can be inserted to scrape the accumulations within said sections to and through said openings.

2. The combination with a gas-producer 5 having a valved outlet, of a conduit consisting of substantially horizontal angular sections provided with openings at their ends, the bottoms of said sections extending to said openings, whereby the accumulations there- 10 in can be scraped to and through said openings.

3. A conduit for conveying gas from a gas-producer, consisting of substantially horizontal angular sections, said sections being pro- 15 vided with valved openings in the side thereof opposite the end of an adjacent section, the bottoms of said sections extending to said valved openings, and means for removing the accumulations in said sections through said 20 openings.

4. A conduit for conveying gas from a gas-

producer, consisting of angular sections horizontally arranged in approximately the same plane and having valved openings at their ends, whereby a scraper can be inserted to 25 remove the accumulations.

5. A conduit for conveying gas from a gas-producer, consisting of substantially horizontal angular sections having openings in their adjacent ends, facing in opposite directions, 30 the bottom of said sections extending to said openings, whereby the accumulations can be scraped to and through the same.

6. A conduit for conveying gas from gas-producers, consisting of substantially horizontal zigzag sections, and openings at the ends 35 of said sections alternating on opposite sides of the conduit.

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Witnesses:

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