

No. 730,766.

PATENTED JUNE 9, 1903.

W. HENRY.  
STEAM GENERATOR.  
APPLICATION FILED SEPT. 23, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

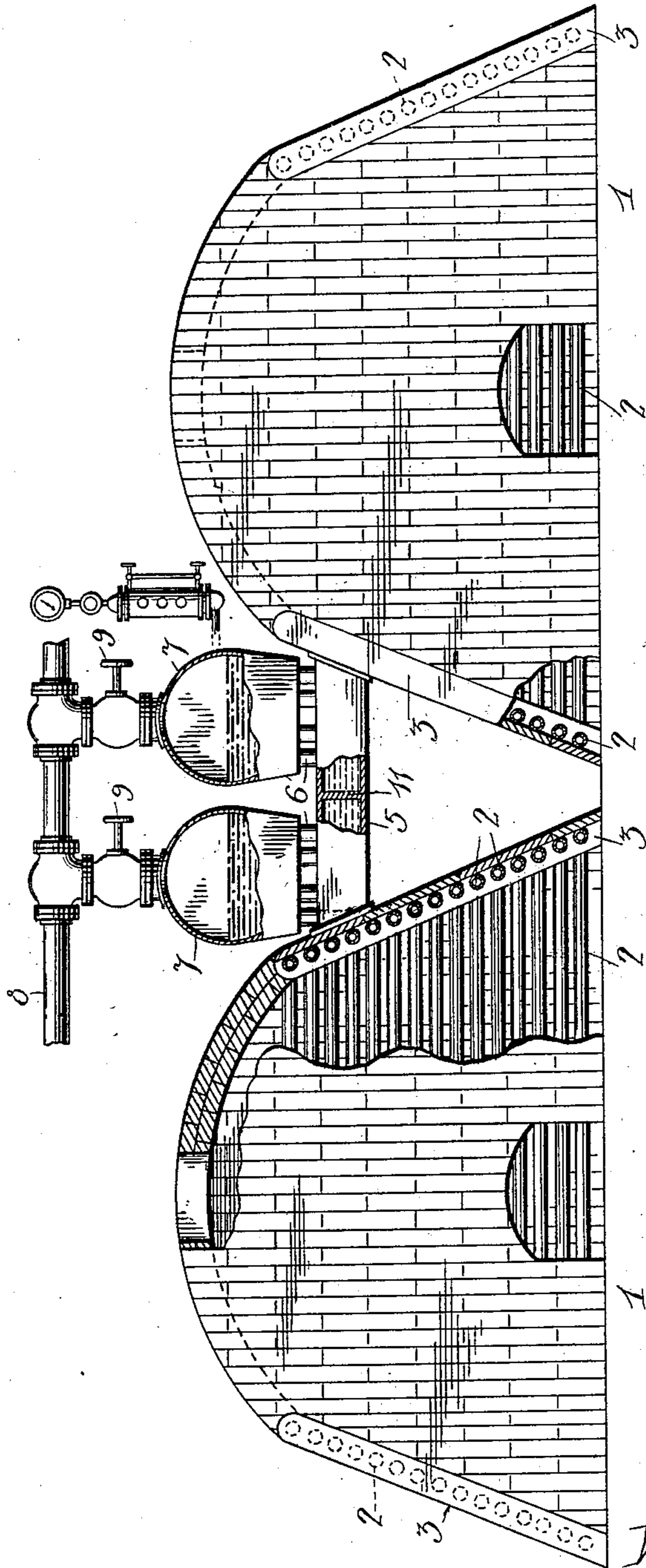


Fig. 1

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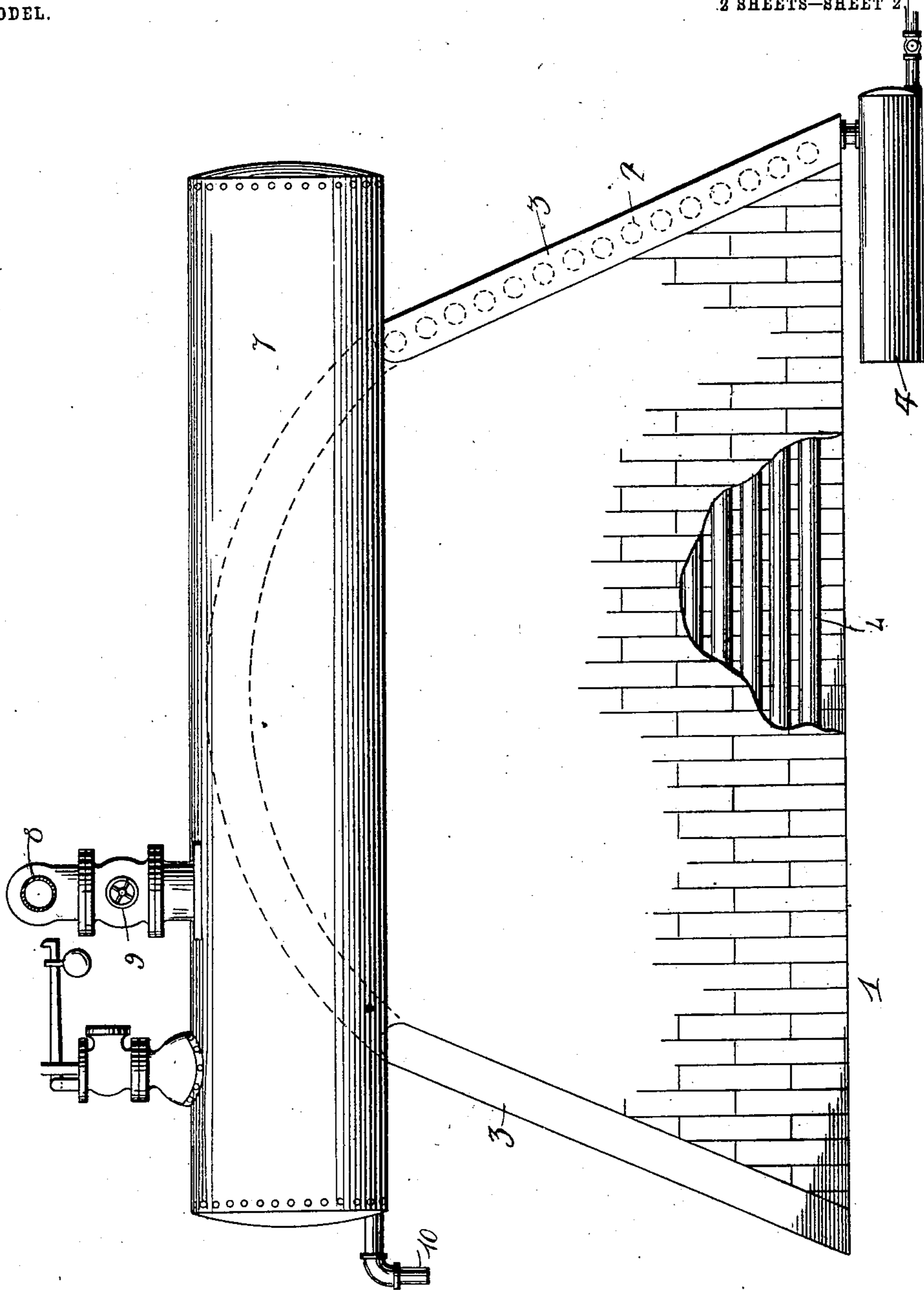
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2 SHEETS—SHEET 2

FIG. 2



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# UNITED STATES PATENT OFFICE.

WILLIAM HENRY, OF SUPERIOR, WISCONSIN.

## STEAM-GENERATOR.

SPECIFICATION forming part of Letters Patent No. 730,766, dated June 9, 1903.

Application filed September 23, 1902. Serial No. 124,505. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY, a citizen of the United States, residing at Superior, in the county of Douglas and State of Wisconsin, have invented certain new and useful Improvements in Steam-Generators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to steam-generators.

The object of the invention is to provide simple, durable, and inexpensive means for utilizing the waste heat from coke-ovens or other forms of furnaces for the purpose of generating steam.

With this and other objects in view the invention consists in certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully set forth, and particularly defined in the appended claim.

In the accompanying drawings, Figure 1 is a vertical sectional view through two coke-ovens, illustrating the application of the invention. Fig. 2 is a vertical sectional view, taken at right angles to Fig. 1, on an enlarged scale.

Referring to the drawings, 1 denotes a coke-oven, which may be of any well-known or approved form, having one or more of its sides (three being shown in the present instance) provided with rows of water-tubes 2, connected at their ends by water-legs 3, which in turn communicate at their lower ends with mud-drums 4. The adjacent water-legs 3 of each two ovens communicate with a water-head 5, which is bolted or otherwise secured to the legs, and in turn communicate through a pipe 6 with the boilers 7, from which steam is conducted through the outlet-pipes 8, controlled by valves 9. The water-head is divided by a partition 11, whereby independent control of the boilers 7 may be secured.

10 denotes the water-inlet to the boiler. 45

By the present construction it will be noticed that the heat heretofore wasted in coke or other similar ovens or furnaces is utilized to heat the water within the tubes 2, and thus convert it into steam, which finds its way to the steam-space in the boilers 7, from which it is led to the point of consumption by the pipes 8. 50

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of my invention will be readily apparent, it is thought, without requiring a more extended explanation. 55

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of my invention. 60

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is— 65

Two coke-furnaces arranged side by side and having their adjacent sides lined with water-tubes, water-legs to which the water-tubes are connected, a head connected to and communicating with the adjacent water-legs and provided with a partition, boilers communicating with said water-heads, a steam-outlet pipe communicating with said boilers, and independent valves for controlling the escape of steam from said boilers to said outlet-pipe, substantially as set forth. 70 75

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 80

WILLIAM HENRY.

Witnesses:

FRED R. ANDERSON,  
J. H. GOSNELL.