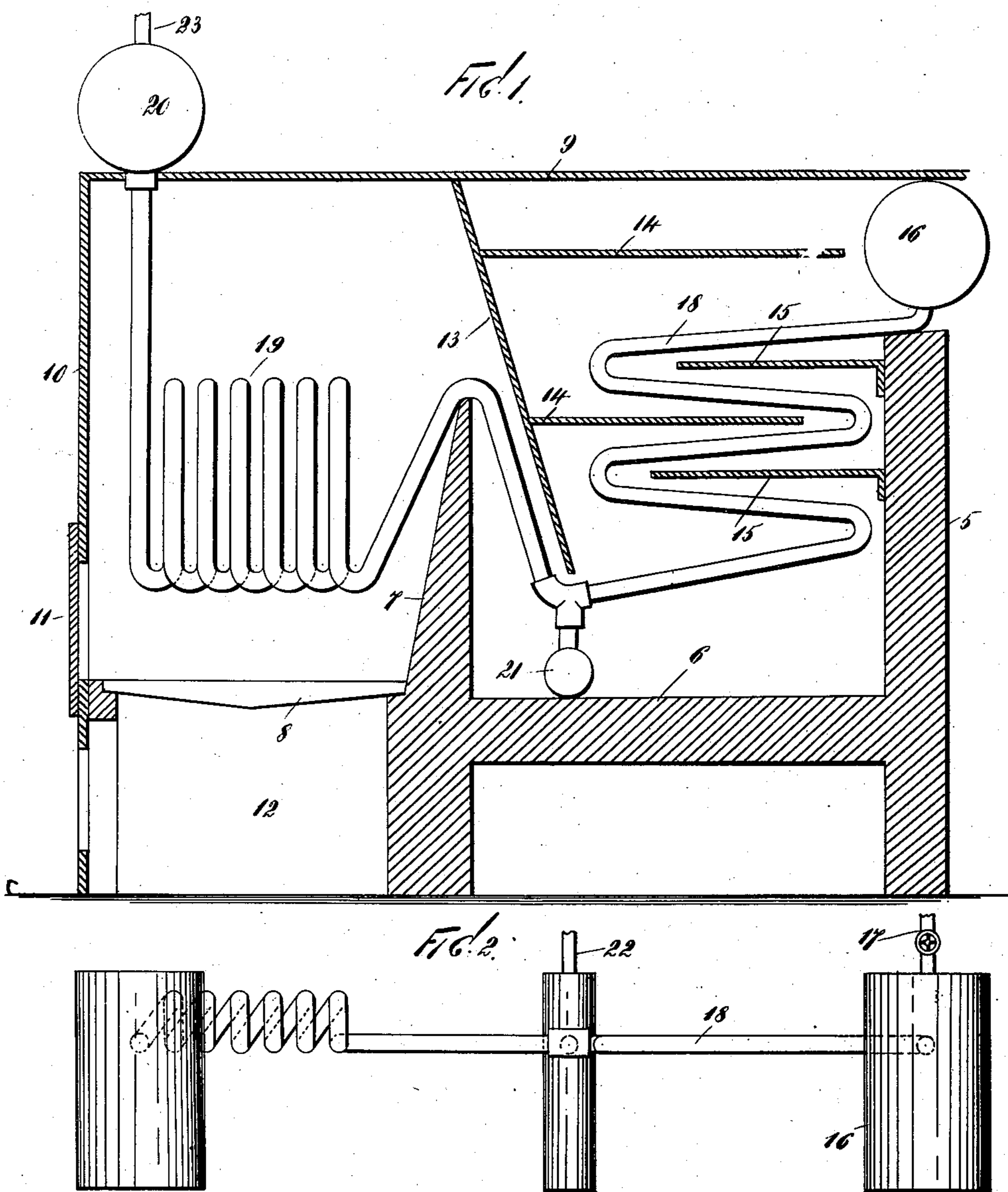


(No Model.)

S. E. SNEDEKER.
STEAM GENERATOR.

No. 594,216.

Patented Nov. 23, 1897.



WITNESSES:

John Backler,
C. Gersh

INVENTOR

Samuel E. Snedeker.
BY
Edgar S. S. S.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

SAMUEL EDGAR SNEDEKER, OF WHITE PLAINS, NEW YORK.

STEAM-GENERATOR.

SPECIFICATION forming part of Letters Patent No. 594,216, dated November 23, 1897.

Application filed April 24, 1897. Serial No. 633,566. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL EDGAR SNEDEKER, a citizen of the United States, residing at White Plains, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Steam-Generators, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to steam-generators; and the object thereof is to provide an improved apparatus for this purpose which is simple in construction and operation and by means of which steam may be quickly and easily generated with a less consumption of heat than usual in this class of devices; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a central longitudinal vertical section of my improved steam-generator, and Fig. 2 a partial plan view thereof.

In the drawings forming part of this specification the separate parts of my improvement are designated by the same numerals of reference in each of the views, and in said drawings I have shown a furnace which comprises a back wall 5, a bottom wall 6, a central upright buffer-wall 7, in front of which is placed the grate 8, and the furnace is provided with a top 9 and a front wall 10, in which is placed a door 11, and below the grate 8 is an ash-receiving chamber 12.

The furnace may be composed of any desired material, and extending downwardly and backwardly from the top 9 thereof to the rear of the buffer-wall 7 is a transverse partition 13, with which are connected backwardly-directed horizontal partition-plates 14, two of which are shown, and these partition-plates 14 extend backwardly to within a predetermined distance from the top wall of the furnace, and the backwardly-directed wall 5 of the furnace is provided with corresponding partition-plates 15, which extend forwardly in the direction of the transverse partition 13

and which are arranged above and below the lower partition-plate 14.

The water-supply of the steam-generator consists of a vessel 16, of any desired form or construction, which is preferably arranged directly over the upper portion of the rear wall 5 of the furnace and is provided with a supply-pipe 17, which communicates therewith, and connected with said vessel 16 is a pipe 18, which extends downwardly and forwardly and is coiled backwardly and forwardly between the partition-plates 14 and 15 and carried beneath the bottom of the transverse partition-plate 13 and upwardly over the buffer-walls 7 and is then formed into a plurality of vertical coils 19, and the end thereof is carried upwardly through the top of the furnace and connected with a steam-drum 20. Connected with the lower point of the pipe 18, within the rear portion of the furnace and directly beneath the lower side of the transverse partition-plate 13, is a mud-drum 21, and said mud-drum is provided at one end with a discharge-pipe 22, in which is placed a suitable valve.

It will be understood that a plurality of pipes 18 and the coils 19 may be employed and that each of said pipes and said coils will be connected with the water-supply vessel 16 and with the steam-drum 20, as herein shown and described, and said steam-drum is provided with the usual steam-pipe 23.

This apparatus is simple in construction and operation, and by means thereof steam may be almost instantly generated, the position of the coils 19 facilitating this operation, and it will also be observed that the water is highly heated in the separate coils of the pipe 18 in the rear portion of the furnace before it reaches the coils 19, which are directly over the grate.

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

1. A steam-generator, comprising a furnace, which is provided at the front thereof, with a grate, and rearwardly of said grate with a transverse buffer-wall, said furnace being also provided with a downwardly and backwardly directed partition rearwardly of said buffer-wall. and with horizontal parti-

tion-plates which extend backwardly toward the rear wall of the furnace, and with corresponding partition-plates which extend forwardly from the rear wall of the furnace, a
5 water-supply drum or vessel mounted over the rear portion of the furnace, a pipe connected therewith and coiled back and forth longitudinally of the rear portion of the furnace between said partition-plates, said pipe
10 being carried downwardly beneath said transverse partition, and then upwardly over said buffer-wall, and formed in coils over the grate, said coils being in communication with a steam-drum, substantially as shown
15 and described.

2. A steam-generator, comprising a furnace which is provided at the front thereof, with a grate, and rearwardly of said grate with a transverse buffer-wall, said furnace
20 being also provided with a downwardly and backwardly directed partition rearwardly of said buffer-wall, and with horizontal partition-plates which extend backwardly toward the rear wall of the furnace, and with corre-

sponding partition-plates which extend forwardly from the rear wall of the furnace, a water-supply drum or vessel mounted over the rear wall of the furnace, a pipe connected therewith and coiled back and forth longitudinally of the rear portion of the furnace
25 between said partition-plates, said pipe being carried downwardly beneath said transverse partition, and then upwardly over said buffer-wall, and formed in coils over the grate, said coils being in communication with a
30 steam-drum, and the pipe in the rear portion of the furnace being provided below said transverse partition with a mud-drum which is in communication therewith, substantially as shown and described.
35 40

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 21st day of April, 1897.

SAMUEL EDGAR SNEDEKER.

Witnesses:

JOSEPH P. HANCE,
GEORGE ANDREW MEAD.