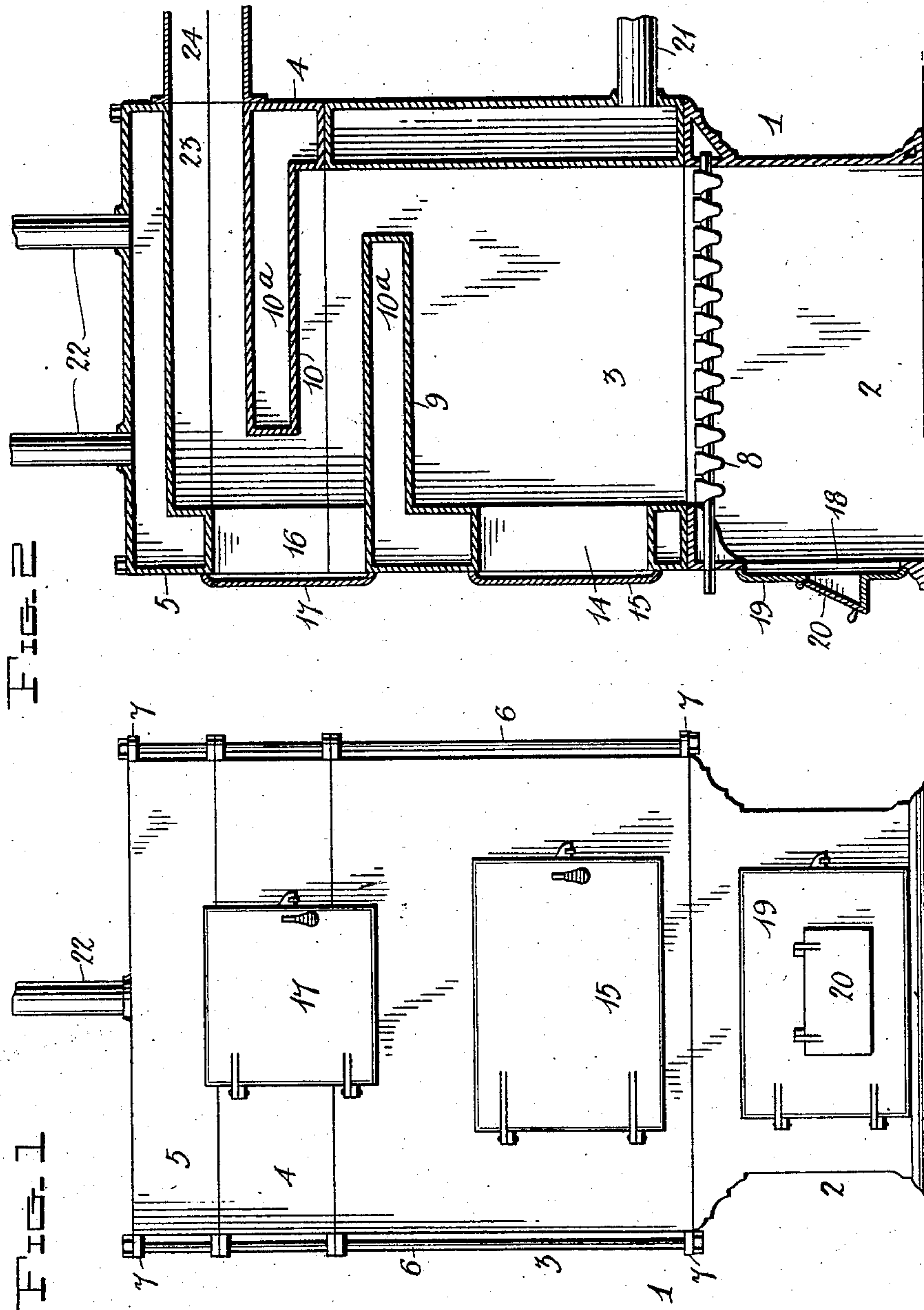


No. 850,062.

PATENTED APR. 9, 1907.

M. J. SELZER.
HOT WATER HEATER.
APPLICATION FILED APR. 12, 1906.

2 SHEETS—SHEET 1.



Witnesses

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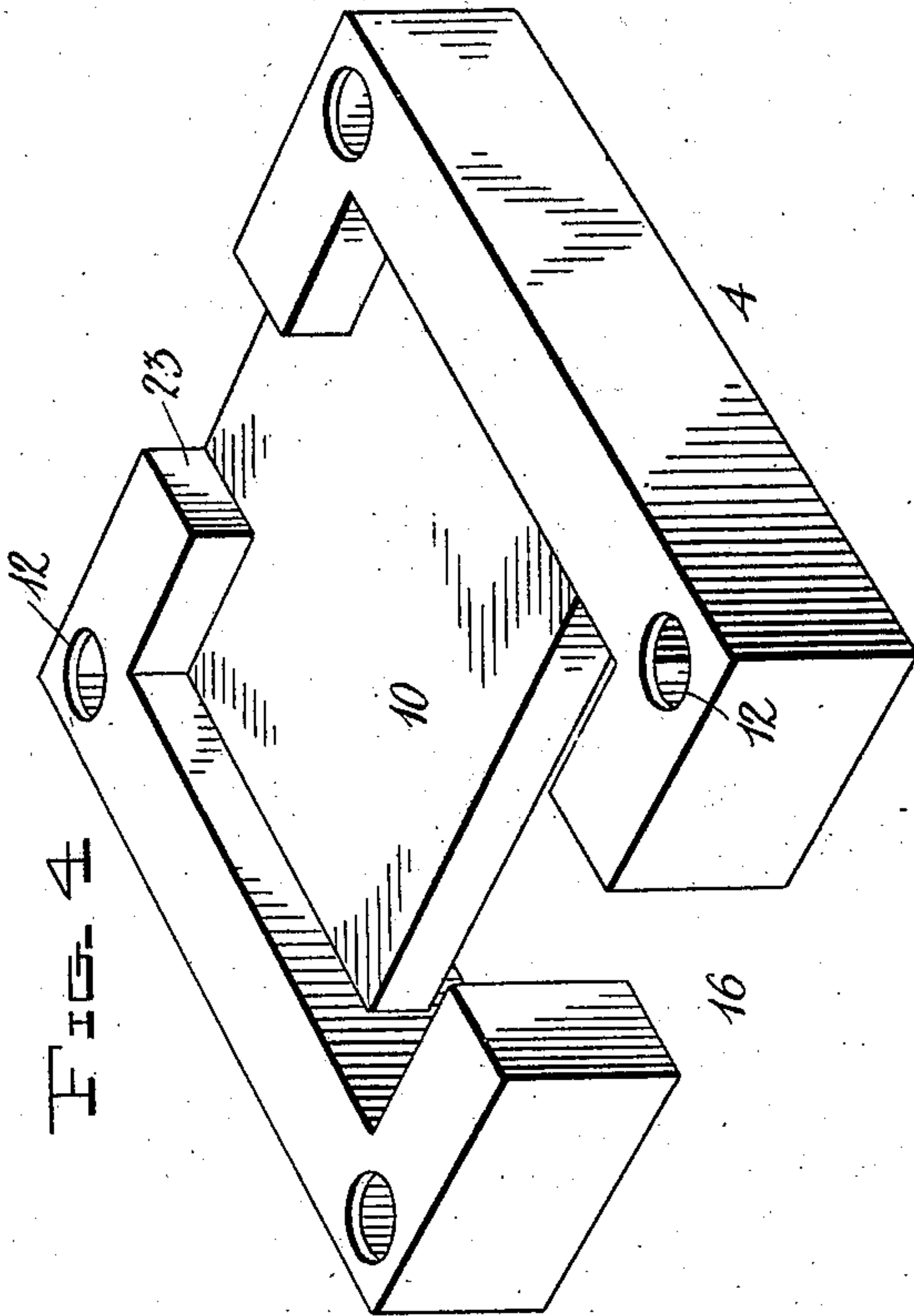


FIG. 4

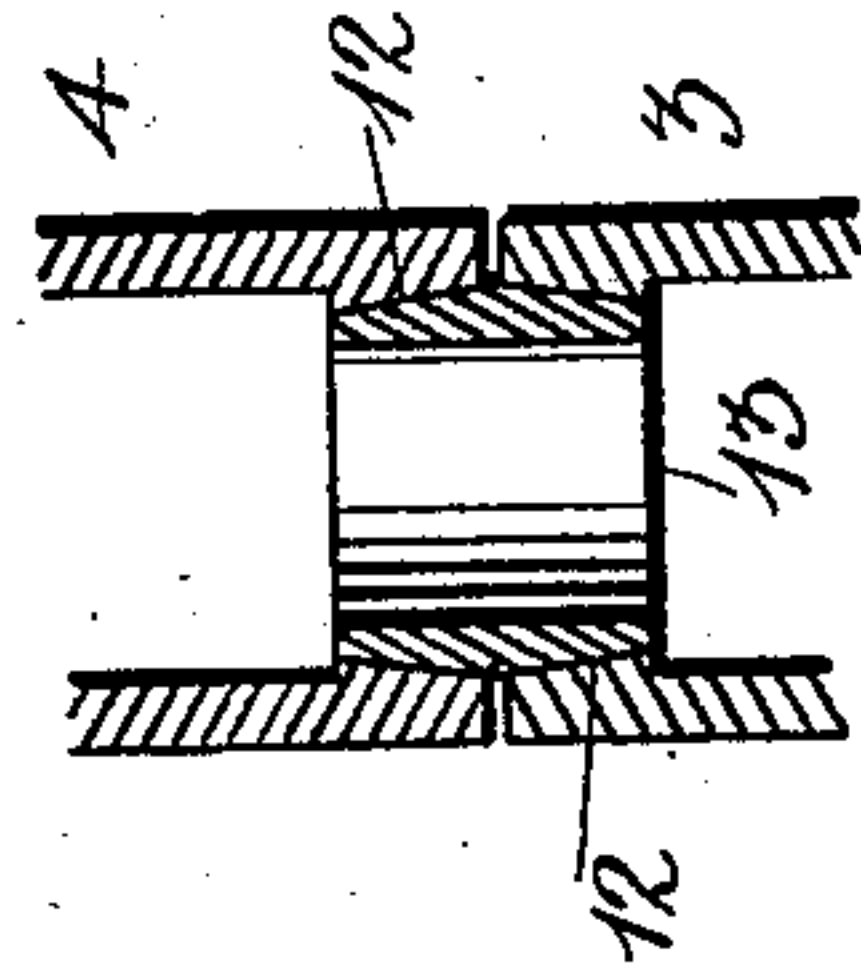


FIG. 5

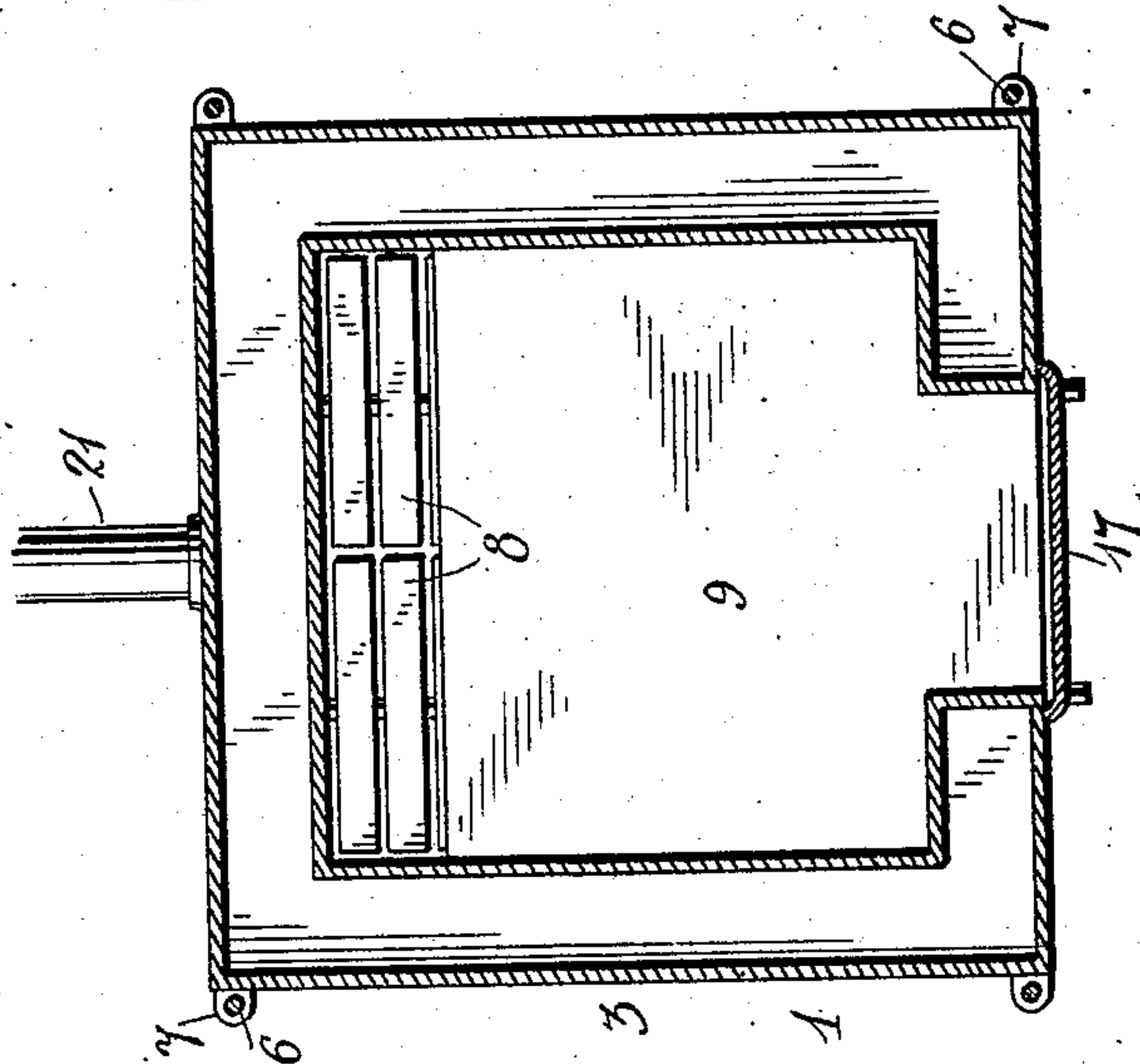


FIG. 3

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UNITED STATES PATENT OFFICE.

MICHEL J. SELZER, OF AKRON, OHIO.

HOT-WATER HEATER.

No. 850,062.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed April 12, 1906. Serial No. 311,406.

To all whom it may concern:

Be it known that I, MICHEL J. SELZER, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Hot-Water Heaters; 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.

This invention relates to improvements in hot-water heaters.

The object of the invention is to provide a heater of this character the walls of which are formed of a series of hollow rectangular double-walled sections, between the double walls of which is formed a water-space.

A further object is to provide a heater formed of hollow sections having hollow horizontally-disposed partitions which form baffle-plates by means of which a circuitous passage is provided for the smoke and heat before passing out of the heater, and thereby forming a large heating surface or area for the water in said sections, means being provided whereby communication is furnished between said sections, thus allowing the water to circulate therethrough, and means to tightly clamp said sections together into a water-tight engagement.

With the above and other objects in view the invention consists in certain novel features of construction, combination, and arrangement of devices, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a front view of a heater constructed in accordance with the invention. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a horizontal sectional view. Fig. 4 is a perspective view of one of the sections of the heater removed, and Fig. 5 is a detail sectional view of the joint between the sections of the heater.

Referring more particularly to the drawings, 1 denotes the heater, which is formed of a series of sections, of which 2 is the ash-pit, 3 is the fire-box, and 4 and 5 are intermediate and top or closing sections. The sections are hollow and are preferably rectangular in shape and adapted to be placed one above the other and clamped or tightly held in together by means of tie-rods 6, which pass through apertured lugs 7,

formed on the outer sides of the sections, as shown. In the top portion of the lower ash-pit section 2 is arranged suitable grate-bars 8.

The fire-box section 3 and the intermediate and cover sections 4 5 are formed with double walls, between which is provided a water-space through which the water circulates and is heated. The sections 3 and 4 are provided with horizontally-disposed partitions 9 and 10, which project inwardly from the opposite sides of said sections and a part of the way across the same, as shown, thereby forming baffle-plates. The partitions or baffle-plates 9 and 10 are double-walled, thus providing water-circulating spaces 10^a therein, which communicate with the water-spaces between the side walls of the sections 3 and 4.

The double-walled sections are provided near each cover with alined openings or passages 12, in which are arranged coupling-sleeves 13, whereby a water-tight joint is provided for the sections to permit the circulation of water therethrough. The fire-box section 3 is provided with a fuel-opening 14, which is closed by a suitable door 15. The section 4 is provided with a clean-out opening 16, which is formed in part by recesses in the front wall of the adjacent sections, as shown, and is closed by a door 17. The ash-pit section 2 is provided with the usual clean-out opening 18 and door 19, said door having the usual damper 20.

In the back wall of the water-space in the fire-box section 3 and near the lower end of the same is arranged a cold-water-return pipe 21, while the top section 5 is provided with hot-water-discharge pipes 22. In the rear sides of the intermediate and top sections 4 and 5 are formed alined recesses, which together form a smoke-outlet 23, with which is connected a smoke-pipe 24.

By providing a large water-heating surface or area such as herein shown and described much less fuel is required to heat the water, and by arranging the water-spaces as shown a comparatively inexpensive construction of heater is provided.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the prin-

ciple or sacrificing any of the advantages of this invention as defined by the appended claim.

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

10 In a hot-water heater, a plurality of intercommunicating, double-walled, hollow sections and an ash-pit, the lower section resting upon said pit and provided with a fire-box and a closable opening leading thereinto, and provided near its top with a hollow partition projecting toward but terminating at a distance from the rear wall, the top of the section being cut away above said opening down to the top of said partition, the intermediate section being provided with a forwardly-extending hollow partition intermediate its top and bottom and terminating at a distance from the front wall, the front wall being cut away opposite said partition to regis-

ter with the cut-away portion in the bottom section and the rear wall being cut away down to the top of the partition, and the top section having a portion of its bottom raised to register with the cut-away portion of the rear wall and extending to the cut-away portion in the front wall of the intermediate section, the top section being adapted to communicate with outflow-pipes and the bottom section with an inflow-pipe and a door for closing the opening formed by the cut-away portions of the bottom and intermediate sections.

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

MICHEL J. SELZER.

Witnesses:

D. H. RICHARDS,
FRANK G. MARSH.