

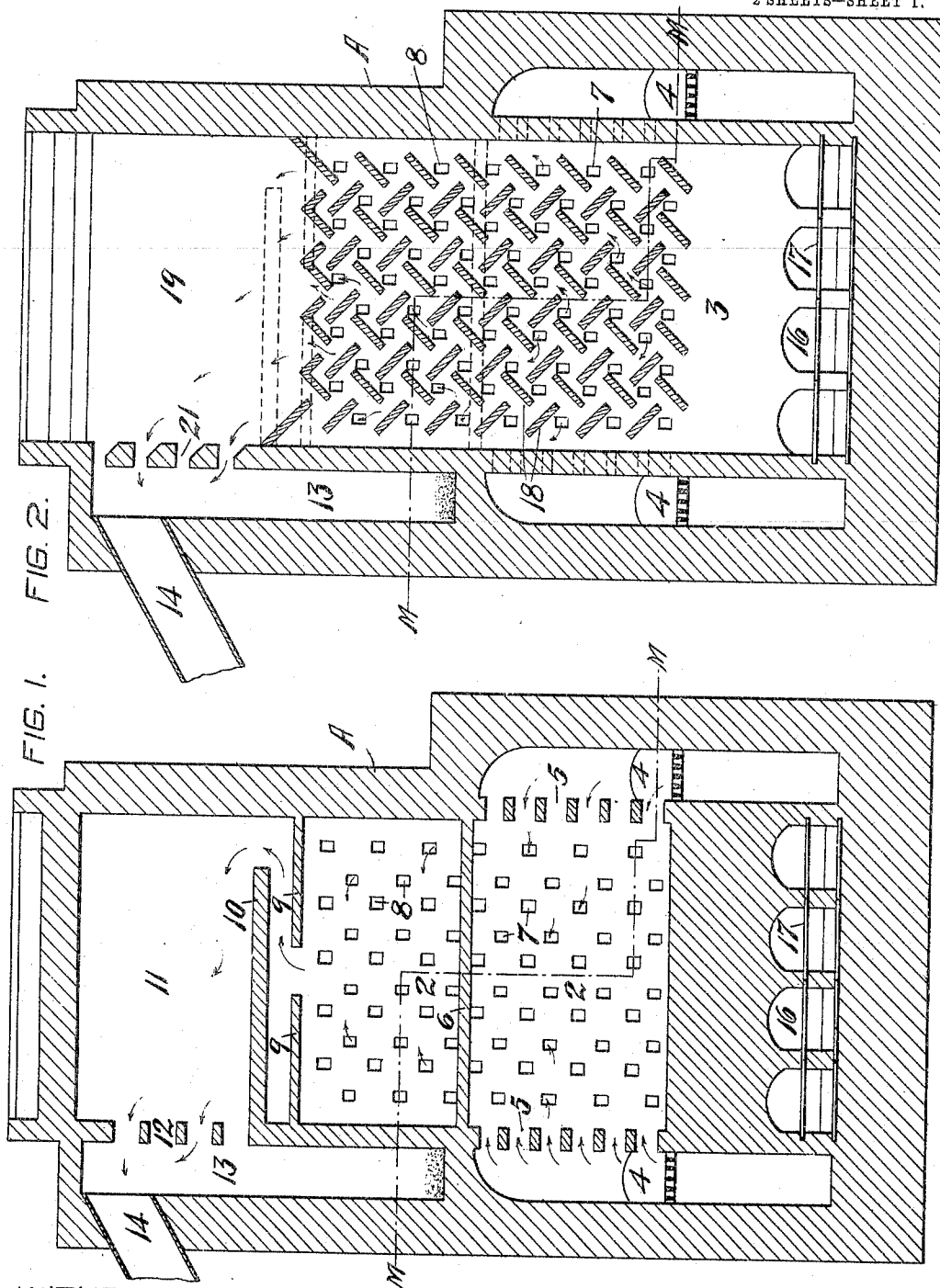
No. 783,903.

PATENTED FEB. 28, 1905.

A. SKOOG.
ORE FURNACE.

APPLICATION FILED JULY 11, 1904.

2 SHEETS—SHEET 1.



WITNESSES,
Chas. F. Chapin.

[Signature]

INVENTOR,

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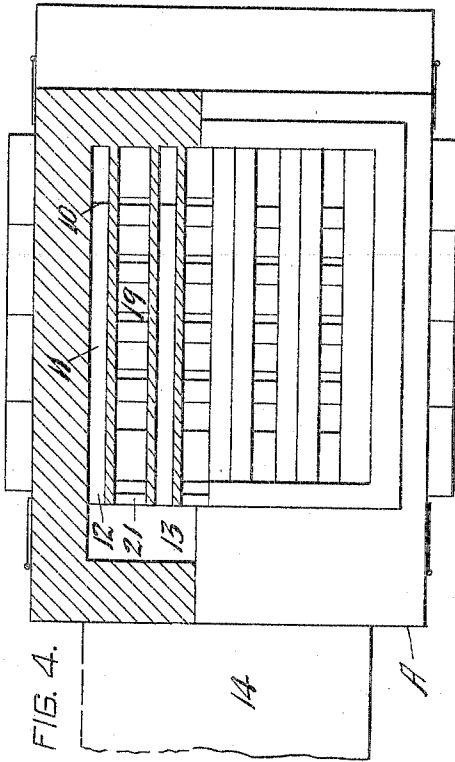


FIG. 4.

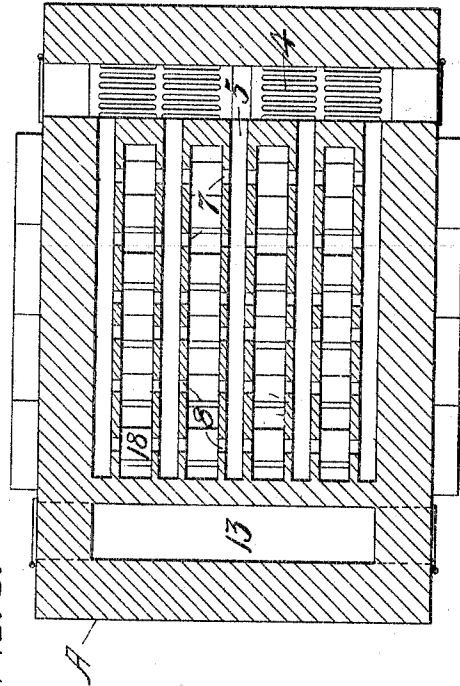


FIG. 5.

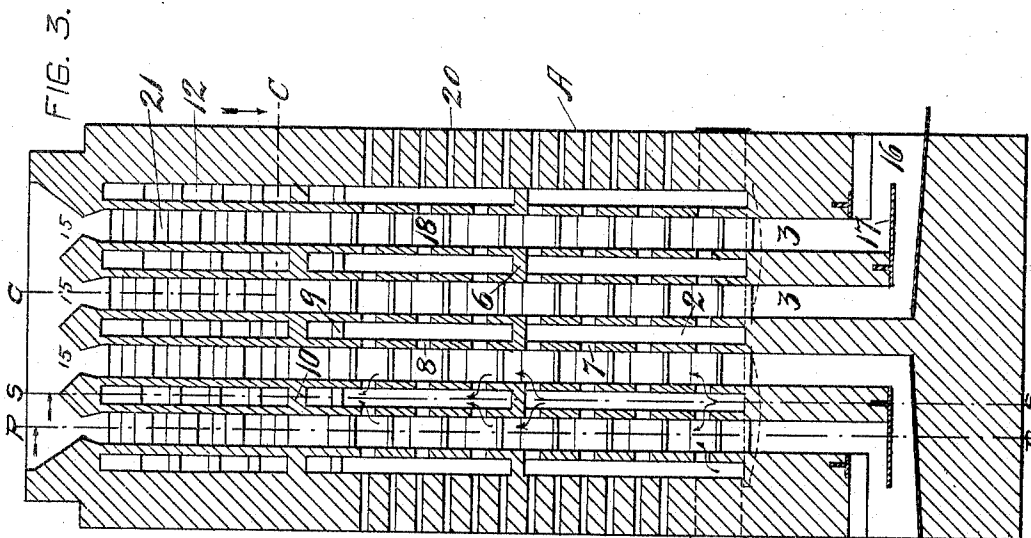


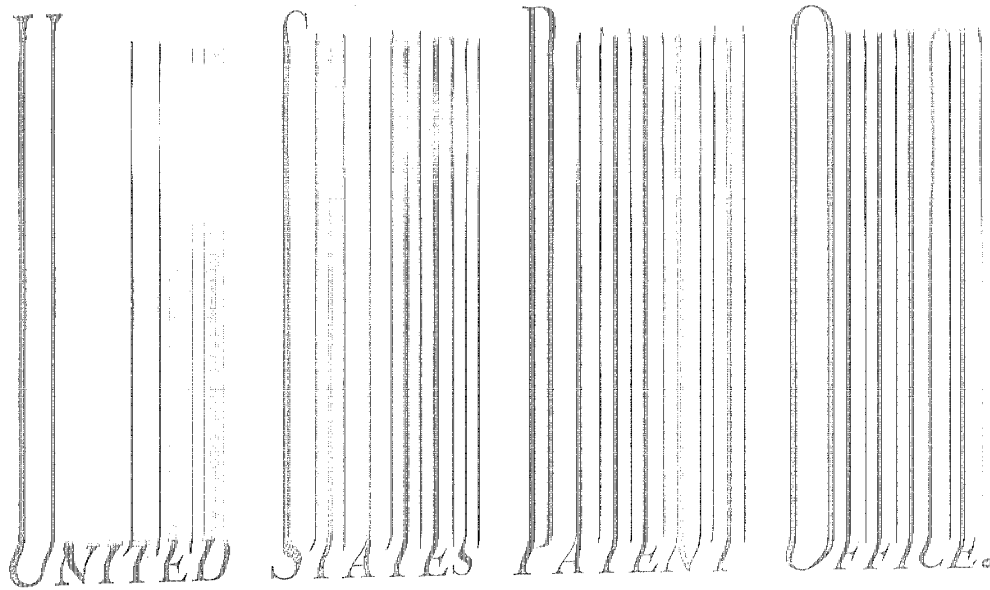
FIG. 3.

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AUGUST SKOOG, OF SHREVEPORT, LOUISIANA.

ORE-FURNACE.

SPECIFICATION forming part of Letters Patent No. 783,903, dated February 28, 1905.

Application filed July 11, 1904. Serial No. 216,067.

To all whom it may concern:

Be it known that I, AUGUST SKOOG, a citizen of the United States, residing at Shreveport, in the parish of Caddo and State of Louisiana, have invented new and useful Improvements in Ore-Furnaces, of which the following is a specification.

My invention relates to improvements in ore-furnaces, and particularly in upright furnaces used for roasting quicksilver ores.

Its object is to provide a furnace of this character which may be operated continuously, one wherein the ore may be acted on by the heat from all sides and wherein the heat is also made to pass through the contained ore and out again, carrying with it the mercurial vapors, and one wherein the ore will be dried as it enters the ore-chamber, so it will not hang upon the tiling.

It consists of the parts and the construction and combination of parts, as hereinafter more fully described, having reference to the accompanying drawings, in which—

Figure 1 is a section through the fire-chamber on line S S of Fig. 3. Fig. 2 is a section through the ore-chamber on line P P of Fig. 3. Fig. 3 is a cross-section taken through the center of furnace. Fig. 4 is a plan view, partly in section, on line C C of Fig. 3. Fig. 5 is a horizontal section taken on line M M of Figs. 1 and 2.

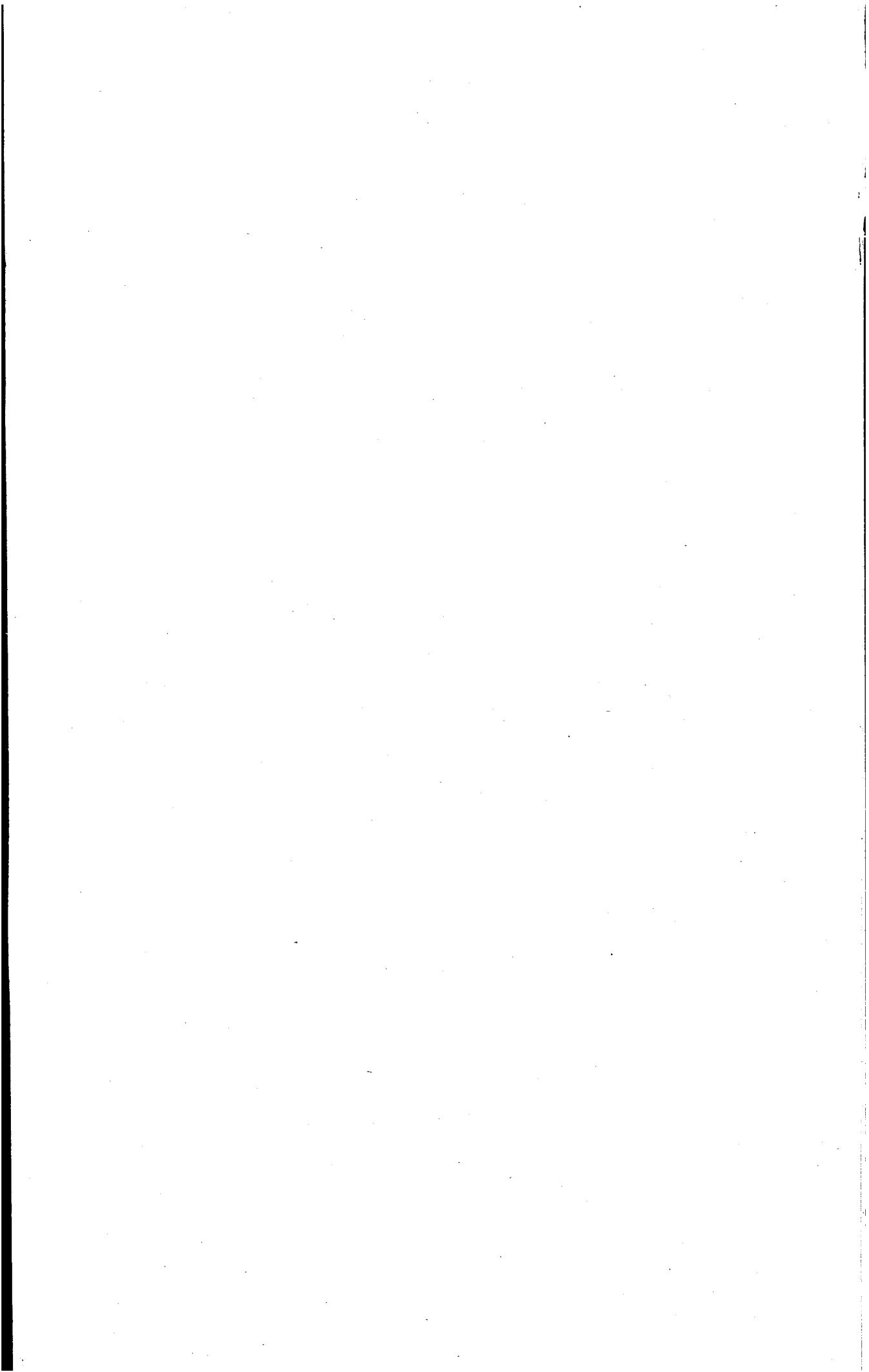
A represents an upright furnace having the vertically-disposed alternating fire-chambers 2 and ore-chambers 3. As here shown, there are five fire-chambers and four intermediate ore-chambers, all extending in one direction

up through the contained ore and thence out through the openings 8 into the fire-chambers again above partitions 6.

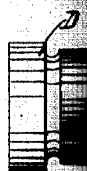
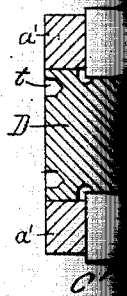
About two-thirds the height of the fire-chambers are baffles 9 10, through and around which the heat and ore vapors pass into upper compartments 11 of the fire-chambers, thence out through end openings 12 into the dust-chamber 13 at one side of the furnace, and thence through the exit 14 to the condensers.

The ore-chambers are open at top and bottom, ore being fed in continually or as often as drawn off through the hopper-openings 15. After being deprived of its values the ore is drawn off at the bottom through the opening 16. A plate 17 acts to sustain the ore in the outermost ore-chambers and allow the charge from the rear chambers to be withdrawn.

The ore-chambers are provided with the usual staggered inclined tiling 18, down through which the ore percolates in sinuous course. This tiling, however, does not extend more than two-thirds (or thereabout) of the height of the ore-chambers or not above the topmost of the openings 8, since the space 19 in the upper part of the chambers corresponding to the compartment 11 of the fire-chambers is left untiled, since this space 19 in each ore-chamber is adapted as a drying-chamber for the ore. The outer ends or tops of the tiles of the outermost rows also do not extend to the walls of the ore-chambers 3. Therefore spaces are provided through which the products of combustion can readily pass upwardly even when the furnace is full of



No. 783



WITNESS

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