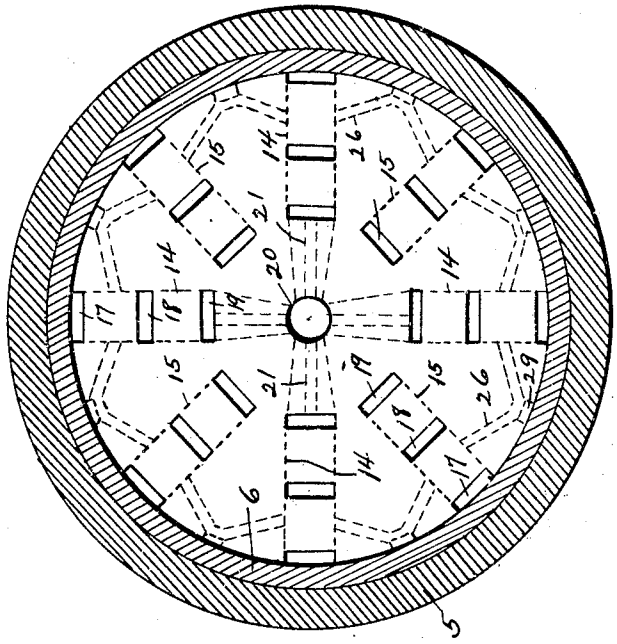
H. C. KAPELLE.

PORCELAIN KILN.

APPLICATION FILED JAN. 2, 1914.

1,108,585. Patented Aug. 25, 1914.

Fig. 2.



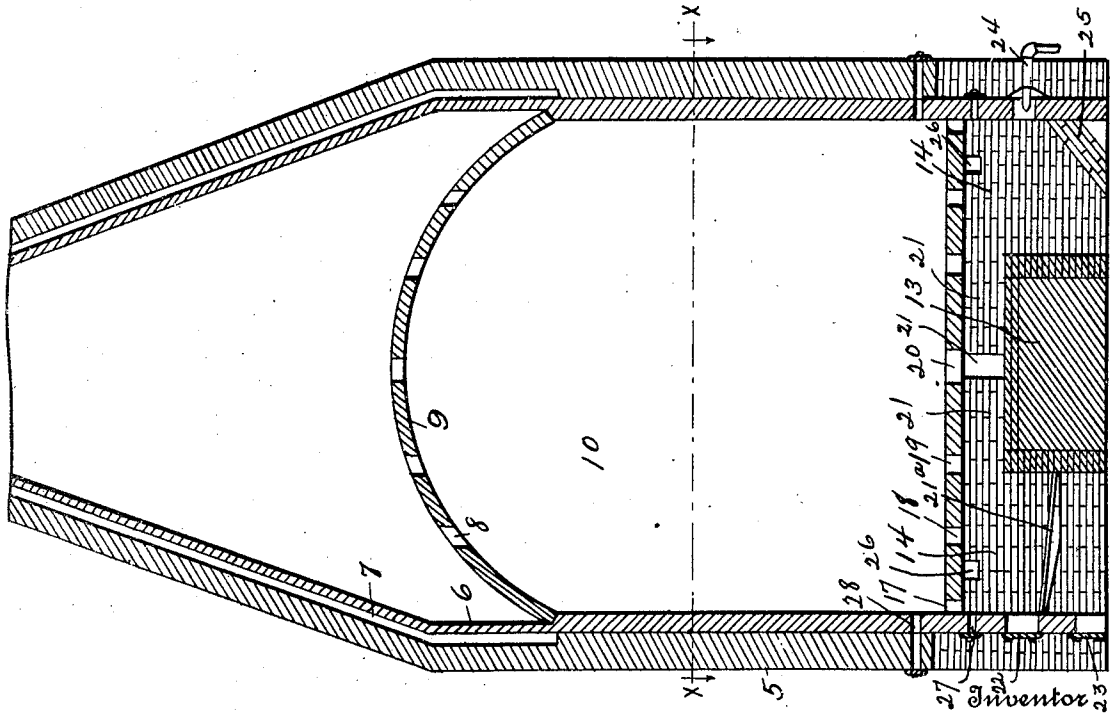


Fig. 1.

Witnesses

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HENRY C. KAPELLE, OF SCHENECTADY, NEW YORK.

PORCELAIN-KILN.

1,108,585. Specification of Letters Patent. Patented Aug. 25, 1914.

Application filed January 2, 1914. Serial No. 809,388.

To all whom it may concern:

Be it known that I, HENRY C. KAPELLE, a citizen of the United States, residing at Schenectady, in the county of Schenectady and State of New York, have invented certain new and useful Improvements in Porcelain-Kilns, of which the following is a specification.

This invention relates to kilns and more particularly to porcelain kilns and it has for its object the provision of an improved device of this character constructed in such a manner that all parts of the baking chamber are subjected to an even and equal degree of heat.

It is a further object of the invention to provide a kiln of the type specified constructed to discharge all of the heat into the baking chamber instead of discharging part of it into the building wherein the kiln is located.

It is a further object of the invention to economize space and to construct the kiln in such a manner that it will last for many years and will not be put out of repair by reason of falling or crumbling arches or crumbled or broken walls.

Further objects and advantages of the invention will be set forth in the detailed description which now follows:

In the accompanying drawing, Figure 1 is a sectional view through a kiln constructed in accordance with the invention, and Fig. 2, is a horizontal sectional view upon line X X of Fig. 1.

Like numerals designate corresponding parts in both figures of the drawings.

Referring to the drawing, numeral 5 designates the outer wall of the kiln, and 6, the inner wall thereof, said inner wall, at the upper portion of the kiln being separated from the outer wall by an expansion space 7. Exhaust openings, 8, are provided in the crown 9, of the baking chamber 10.

The invention more particularly resides in the formation of the bottom of the kiln. A central solid mass of masonry indicated at 13, is disposed centrally of the kiln and around this mass of masonry, are disposed the direct firing holes 14, and the indirect firing holes 15. There are eight firing holes, four of which are direct and the other four of which are indirect. The bottom of the baking chamber 16, is pierced at 17, 18, 19, and centrally at 20, and horizontal flues 21, lead from the direct firing holes 14, over the top of the masonry 13, to the central opening 20, and the openings 19 likewise communicate with these flues.

Either coal or oil may be used for fuel. In the case of the former, grate bars 21^a, are provided to which coal may be fed through doors 22, and the ashes removed through door 23. Where oil is provided, it may be supplied through nozzle 24, and the checker work 25 be provided, upon which the oil may drip.

Equalizing flues 26 establish communication between the direct and the indirect firing holes and in all of these firing holes peep holes 27, are provided through which the state of the fire may be viewed, and peep holes 28 are provided through which the contents of the baking chamber may be viewed. Intermediate of the firing holes the equalizing flues communicate with exhaust openings 29.

Since by the description herein shown and described, the firing holes are brought entirely below the bottom 16, of the baking chamber, it follows that all of the heat must be discharged into said baking chamber. By the alternative arrangement of direct and indirect firing holes with an equalizing flue between them room is provided for every other firing hole to be carried to the center of the kiln while, at the same time, the heat from all of the firing holes is utilized and equalized. With this arrangement it is found that every part of the baking chamber is subjected to the same degree of heat and there are no unbaked articles left therein. It will also be seen that no arches are provided which will be likely to fall and that the inner wall is so spaced from the outer wall at 7, that expansion and contraction of the inner wall may take place without affecting the outer wall. This results in rendering the kiln a long lived one.

While the elements shown and described are well adapted to serve the purposes for which they are intended, it is to be understood that the invention is not limited to the precise construction set forth, but includes within its purview such changes as may be made within the scope of the appended claims.

Having described my invention, what I claim is:

1. A kiln of the character described, comprising an outer inclosing wall, a centrally arranged masonry mass located therein, al-

ternating direct and indirect firing holes radially disposed about said masonry mass, equalizing flues between said firing holes, said direct firing holes being extended to the center of the kiln over said masonry mass and said indirect firing holes terminating short of the center of said kiln, and a baking chamber above said firing holes with which said firing holes have communication.

2. In a porcelain kiln the composition with an inclosing outer wall, of a masonry mass centrally disposed therein and lying in spaced relation to the side walls thereof, a baking chamber bottom disposed within said kiln and lying horizontally over and in spaced relation to said mass, a plurality of firing holes all radially disposed within the confines of said outer wall and comprising flues extended above said masonry mass to the center of the kiln, a plurality of additional radial firing holes alternating with first named firing holes which terminate short of the center of the kiln, equalizing flues between said firing holes there being openings leading from all of said firing holes through the baking chamber bottom, and there being a central opening in said baking chamber bottom beneath which the inner ends of all of the first named flues join.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY C. KAPELLE.

Witnesses:
FRED DE GRAFF,
ELLA E. GLINDMYER.