

F. G. HANEY.
POTTERY KILN.

APPLICATION FILED SEPT. 3, 1909.

Patented Aug. 2, 1910.

2 SHEETS—SHEET 1.

965,892.

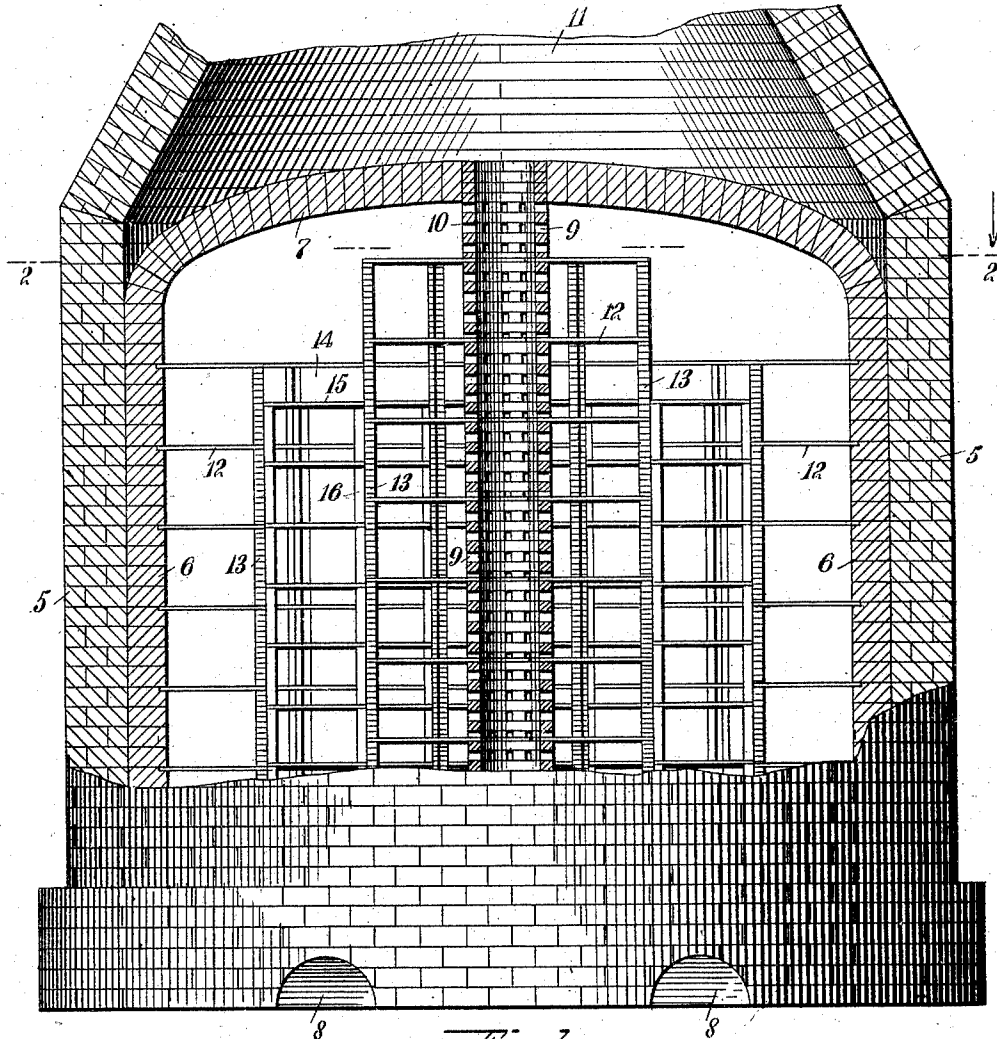


Fig. 1

Fig. 3

WITNESSES.
E. G. Bromley.

E. Mulock

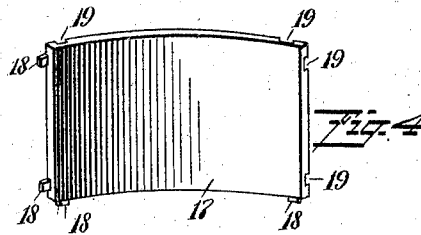
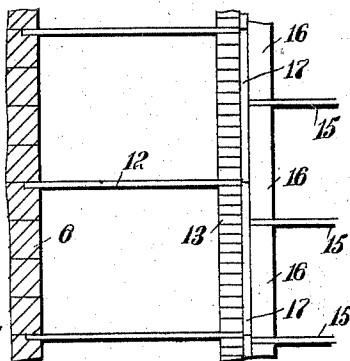


Fig. 4

INVENTOR

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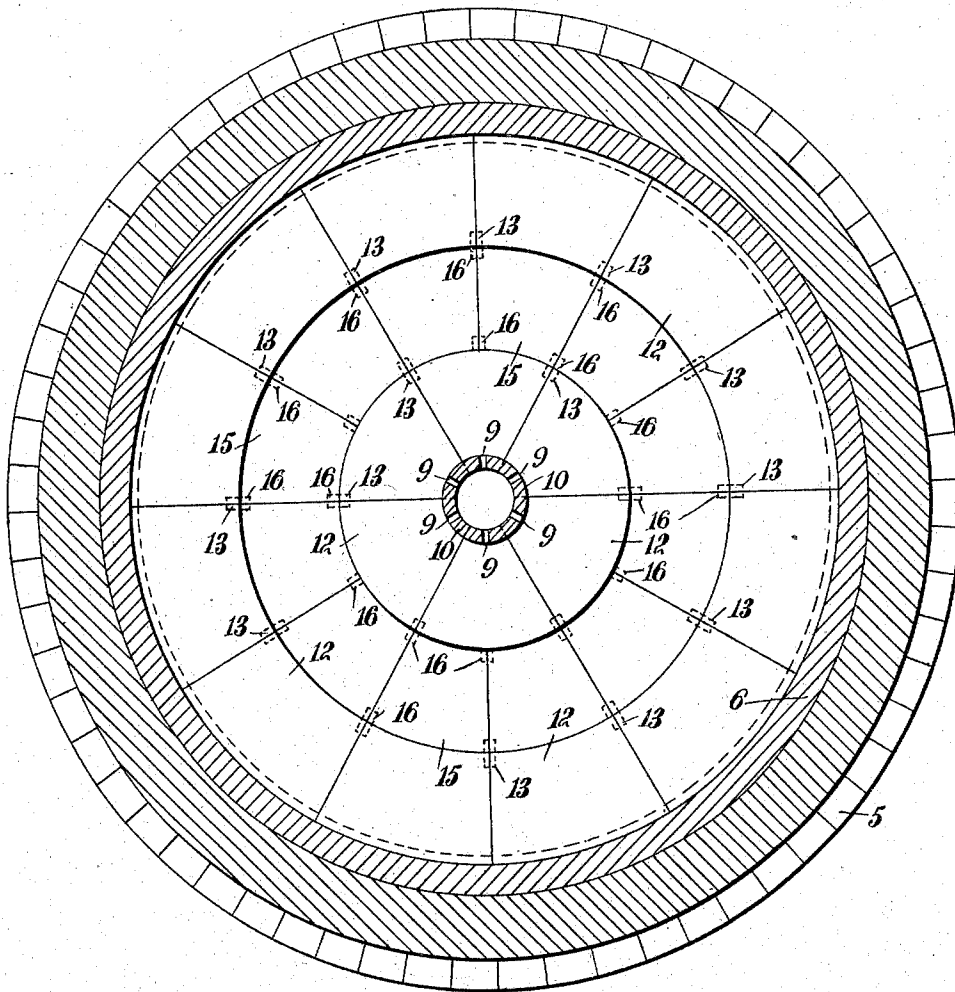


Fig 2

WITNESSES
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UNITED STATES PATENT OFFICE.

FREDERICK G. HANEY, OF EAST LIVERPOOL, OHIO, ASSIGNOR OF ONE-FOURTH TO AARON MOORE AND ONE-FOURTH TO WILLIAM SIMPSON, OF EAST LIVERPOOL, OHIO.

POTTERY-KILN.

965,892.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed September 3, 1909. Serial No. 516,052.

To all whom it may concern:

Be it known that I, FREDERICK G. HANEY, a citizen of the United States, and a resident of East Liverpool, in the county of Columbiana and State of Ohio, have invented a new and Improved Pottery-Kiln, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to provide a kiln wherein the necessity for the employment of saggars or supporting devices is avoided; to provide a construction wherein the kiln may be adapted to be heated by either coal or gas; and to provide a construction and arrangement whereby the breakage caused by the removal of articles is diminished.

One embodiment of the present invention is disclosed in the structure illustrated in the accompanying drawings, in which like characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a vertical section of a kiln constructed and arranged in accordance with the present invention; Fig. 2 is a horizontal section taken on the line 2—2 in Fig. 1; Fig. 3 is a detail view in vertical section of a series of supporting shelf compartments; and Fig. 4 is a perspective view of a shield for the shelf compartments to be employed when the kiln is using coal for heating.

The arrangement and construction of the interior of the kiln is that which my invention is most closely allied with. The outer wall 5 and lining wall 6 of the kiln are of usual construction. The inner chamber, which is formed within the kiln by the crown 7, is in direct communication with fire boxes 8, 8, the heat, steam and gases passing through perforations 9, 9 in a central stack 10, into a cupola 11, and thence to the open air.

In loading the chamber there have heretofore been used receptacles of vitrified or burnt clay, which have been called by the trade "saggars". The biscuits have been placed within these saggars, and the saggars within the kiln, resting one upon the other, and being disposed with reference to the supporting weight. When the chamber of the kiln is sufficiently loaded or filled, the door, or wall section thereof, is closed, and the fires started. The fires are continued

for the necessary length of time and at a necessary degree of temperature, and then suspended or withdrawn. The kiln is allowed to cool, when the door or wall section is removed and the saggars containing the baked articles are withdrawn from the kiln. It is in the operation of handling these saggars that a large percentage of breakages occur.

In the present invention the saggars are dispensed with, and the interior of the kiln is provided with a double row of shelves 12, 12. The shelves 12, 12 are formed as sectors of the circular plane of the interior of the chamber, and are constructed from burnt clay of any suitable form or thickness. The inner edges of these shelves are inserted in the lining wall 6 of the chamber, and the outer edges of the shelves are supported on piers 13, 13. The piers 13, 13 are disposed as shown in Fig. 2 of the drawings, to extend under the corners of adjacent shelves 12. The shelves 12 which are supported by the lining wall 6 constitute a tier of shelves at the outside of a central passage 14. In the inner side of the passage 14 is formed a second tier of shelves 12, the inner edges of which are supported by the stack 10, while the outer edges are supported at the corners thereof by the piers 13, 13. When the two tiers are completely formed there will be found the passage 14 between, which is employed by the operator in loading the kiln. The loading is done by placing the articles to be baked upon the various shelves, both the outer and the inner circle. When the required or desired number of articles to be burned have been placed on these shelves, the operator then forms a series of similar shelves in the passage 14. This is done by using a number of loose platforms 15, 15, which are placed upon upright blocks 16, 16, placed at the four corners of the platforms 15, 15 to support the same. The platforms 15, 15 are thus built and loaded section by section, the operator backing out from the passage 14 as the loading and the building of the platforms 15 continue.

In the above described manner the interior of the kiln is formed with a series of shelves and interposed platforms, each and every part thereof supporting the articles to be baked. If the articles to be baked are of the unglazed surface type known as bisque,

the heating is accomplished by means of gas, and in such event the communication between the shelves 12, 12 and the platforms 15, 15 is permitted to remain open. When, however, in heavier burning, or that wherein coal is used for heat, it becomes desirable to exclude the articles from direct contact with the smoke and gases of combustion, to do which I have provided shields 17, 17 of various and suitable sizes to fit between the piers 13, 13 and the shelves 12, 12. Any suitable means for holding the shields 17, 17 in place may be employed. I have illustrated in the drawings a method wherein the shields are provided with engagement tabs 18, 18 and sockets 19, 19 to receive the same. When, in placing the shield 17, shown in Fig. 4, the tabs 18, 18 are inserted in the sockets 19, 19, forming for the outer and inner shelves continuous and unbroken walls which exclude the smoke and gas from the shelf compartments, and thus protect the articles placed upon the said shelves 12. The articles contained on the platforms 15, 15, if desired, may be placed in saggars or exposed to the direct contact with the heat.

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

1. A pottery kiln comprising a chamber having a suitable lining provided with annular grooves; a plurality of shelf sections adapted to fit within the said grooves; a plurality of short separable piers adapted to rest upon each tier of said shelves to support the tier above; and a plurality of interposed platforms adapted to be built up from the floor of said kiln between the said shelves, said platforms being formed from heat resisting material.

2. A pottery kiln comprising a chamber having a suitable lining provided with annular grooves; a plurality of shelf sections adapted to fit within the said grooves; a

plurality of short separable piers adapted to rest upon each tier of said shelves to support the tier above; and a plurality of shield pieces adapted to inclose the said shelves and having connecting tabs and sockets formed in the edges thereof to entirely lock each with the other to form a continuous wall for the shelf sections.

3. A pottery kiln comprising a chamber having a suitable lining provided with annular grooves; a plurality of shelf sections adapted to fit within the said grooves; a plurality of short separable piers adapted to rest upon each tier of said shelves to support the tier above; a plurality of shield pieces adapted to inclose the said shelves being formed from heat resisting material; and a plurality of interposed platforms adapted to be built up from the floor of said kiln between the said shelves, said platforms being formed from heat resisting material.

4. A pottery kiln comprising a chamber having a suitable lining provided with annular grooves; a plurality of shelf sections adapted to fit within the said grooves; a plurality of short separable piers adapted to rest upon each tier of said shelves to support the tier above; a plurality of shield pieces adapted to inclose the said shelves and having connecting tabs and sockets formed in the edges thereof to entirely lock each with the other to form a continuous wall for the said shelf sections; and a plurality of interposed platforms adapted to be built up from the floor of said kiln between the said shelves, said platforms being formed from heat resisting material.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK G. HANEY.

Witnesses:

JAMES N. ROSE,
O. E. SOTTUNG.