2 Sheets—Sheet 1.

E. ORCUTT.

Brick Kiln.

No. 5,808.

Patented Sept. 26, 1848.

Fig. 2

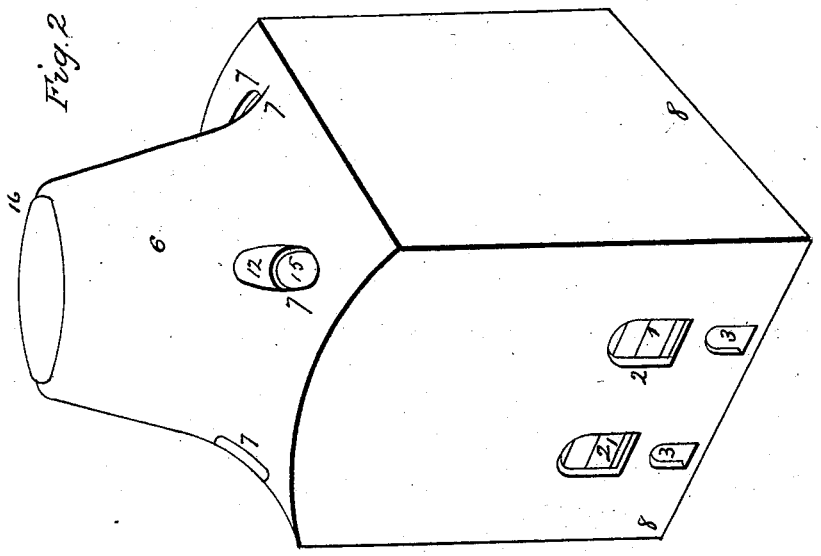

Fig. 1

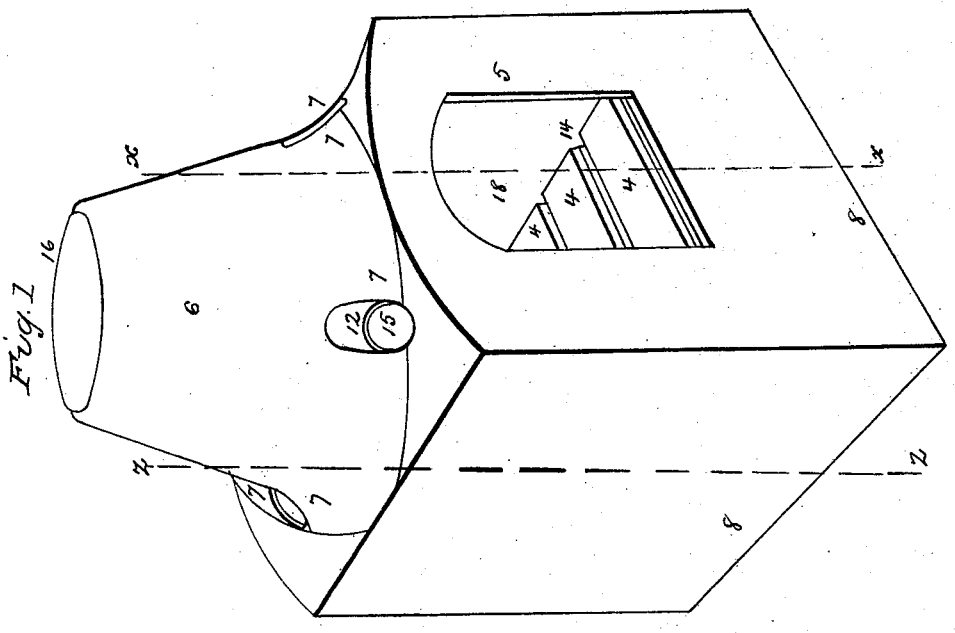

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Fig. 3

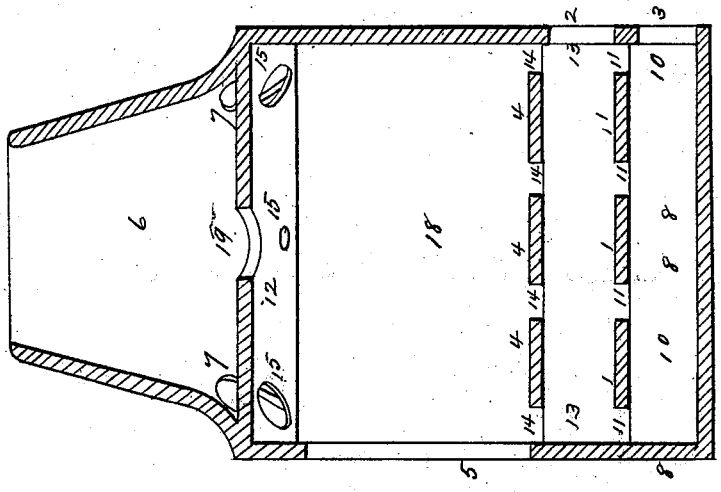
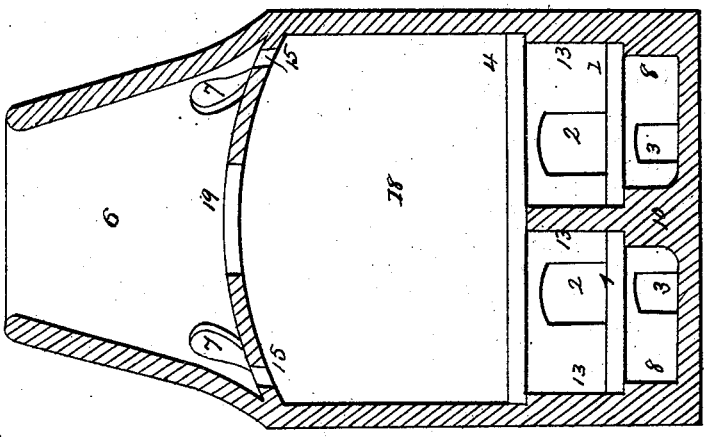


Fig. 4



UNITED STATES PATENT OFFICE.

ELEAZER ORCUTT, OF BENNINGTON, VERMONT.

LIMEKILN.

Specification of Letters Patent No. 5,808, dated September 26, 1848.

To all whom it may concern:

Be it known that I, ELEAZER ORCUTT, of Bennington, in the county of Bennington and State of Vermont, have invented a new and useful Improvement in the Construction of Limekilns, by which is secured a great saving of fuel and time in burning lime.

To enable others to make and use my invention I will describe its construction.

Figure 1 is a perspective view of the front and left side, Fig. 2 is a perspective view of the back and side, Fig. 3 is a vertical section, on the line *x x* of Fig. 1, Fig. 4 is a vertical section on the line *z z* of Fig. 1.

I construct the outer walls of the kiln of stone, or fire brick; and the form of the kiln may be oval, round, or square, the lower part (8) to the height of about eighteen inches from the bottom, is merely for receiving the coals and ashes which drop from the fire above. Into this part draft holes (3) are made through the walls of the kiln, about six inches wide by 8 or 10 inches in length equal in number to the fire holes which will depend upon the size of the kiln. These draft holes are marked (3) in the drawing. Across the kiln, at about 18 inches from the bottom, I build fire arches or bars (1) resting upon one, or more, supports (10) through the middle of the interior of the kiln, according to its size; through these arches are openings (11) for the coals and ashes to fall down. These bars or arches are marked (1) in the drawings. Into this part of the kiln above the fire bars No. 1 or arches and through the walls of the kiln, and over the draft holes (3) before mentioned are the fire holes or fuel doors marked in the drawings (2) which may be about eight inches wide by 10 inches in height and may be closed by sheet or cast iron doors. Above this part of the kiln, and at the height of at least eighteen inches, I build the floor (No. 4) of the kiln resting upon supports (No. 13) corresponding with those beneath the fire bars or arches. Through this floor an opening (No. 14) to receive the smoke and heat; this floor is marked (4); and immediately above this, in the walls of the kiln, on the side which is most convenient, is the doorway marked (5) in the drawings, through which the lime stone are put into the kiln No. 18; and which door-way is to be closed with fire brick while the kiln is being burnt; and is again to be opened to remove the lime. Above this apartment No. 18 I build an arch (12) with any required number of draft holes 15 through it leading into the cupola or upper apartment No. 6 contiguous to the draft holes No. 7 in the side of the cupola hereafter mentioned. This arch may be at any convenient height above the floor of the kiln; and above this arch I construct a cupola in a form similar to that marked 6, or a second arch or crown may be substituted with a hole in the top or apex, Through the walls singular to that represented at 16, at the foot of the cupola arch No. 6 which is above the arch 12 of the kiln I construct air or draft holes 7, four or more in number, at equal distances from each other and opening from without, above the last mentioned arch 12; these holes may be about eight inches wide by ten inches in length; they are marked 7 in the drawing; and by means of opening or closing these draft holes while the lime is being burnt the heat may be turned to any part of the kiln.

All the arches and fire bars and the floor of the kiln should be of fire brick or other fire proof material.

The central opening 19 is for the main draft. The openings No. 15 are to be closed with plates at the commencement of the burning operation. These plates are not represented in the drawings. To regulate the heat, open one of the holes 15 and the angle of the kiln over which the opening is made will immediately become hot.

What I claim as my invention in the burning of lime and desire to secure by Letters Patent is—

Constructing the top of the kiln with the cupola above the arch as described, said arch and cupola being made with the draft holes 7 and 15 for the purpose of regulating the heat of the kiln, the regulating of the heat being produced by opening and closing the said holes 7 and 15 and the confining and saving of the heat being effected by constructing the arch over the kiln and the cupola over the arch as described.

In testimony whereof I the said ELEAZER ORCOTT hereto subscribe my name in the presence of the witnesses whose names are hereto subscribed on the 29th day of March A. D. 1847.

ELEAZER ORCUTT.

Signed in presence of—
EMORY HAUYPPE,
WM. S. SOUTHWORTH.