(No Model.)

F. W. MEEKER.

MANUFACTURE OF BRICK.

No. 287,699. Patented Oct. 30, 1883.

Fig. 1.

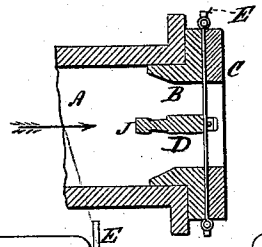

Fig. 2.

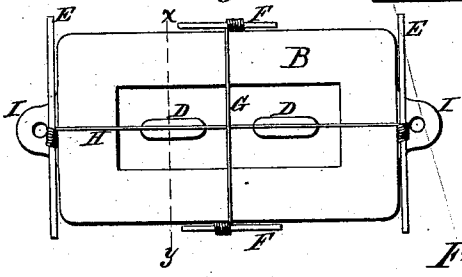

Fig. 3.

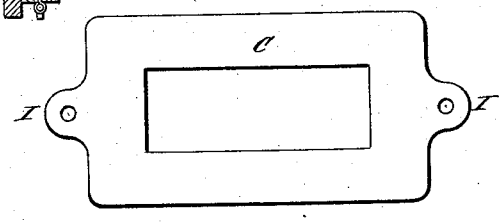

Fig. 4.

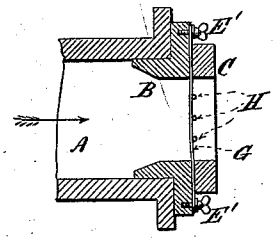

Fig. 5.

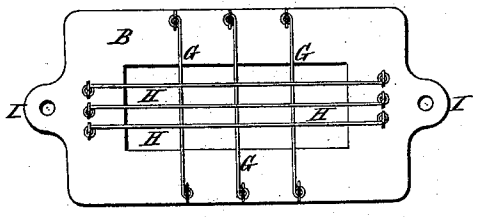

Fig. 6

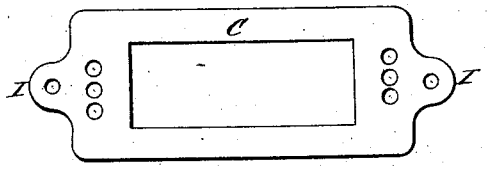

Fig. 7.

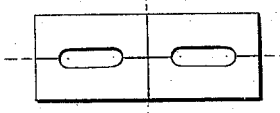

Fig. 8.

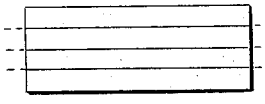

Fig. 9.

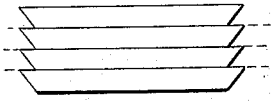

Fig. 10.

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John McClure
Witnesses.

Frederick W. Meeker,
Inventor.

UNITED STATES PATENT OFFICE.

FREDERICK W. MEEKER, OF NEW YORK, N. Y., ASSIGNOR TO THE FIRE PROOF BUILDING COMPANY OF NEW JERSEY.

MANUFACTURE OF BRICK.

SPECIFICATION forming part of Letters Patent No. 287,699, dated October 30, 1883.

Application filed March 19, 1883. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK W. MEEKER, of the city, county, and State of New York, have invented a new and useful Improvement in the Manufacture of Brick, which is fully set forth in the following specification.

This invention has more particular reference to the manufacture of brick, tiles, or other articles, by means of machines operating to press the soft clay through dies or openings, so as to give it the proper shape.

It consists in dividing the issuing clay longitudinally by a series of wires or knives placed in the path of the stream, then at suitable intervals dividing the stream by transverse cuts, so as to form sections of several (two or more) bricks and tiles, and drying or baking these sections or masses while the pieces composing the same are still adhering.

It further comprises certain other improvements, as hereinafter specified.

In the accompanying drawings similar letters of reference represent similar parts.

Figures 1, 2, 3 show the mouth-piece A of a machine, with the forming-die B bolted to it by the bolts I I. The die in Figs. 1 and 2 contains stationary cores D, which are secured to the die by a brace, J, at the back. The finishing-die C is bolted to the front of the forming-die by the same bolts I I. The aperture of the finishing-die has its walls slightly beveled, so as to narrow the aperture in the line of the travel of the clay, as shown in Fig. 1.

I attach the wires G H to metal rods F F E E, and said wires being laid between the forming-die B and the finishing-die C, they are held tightly in position by the tightening of the bolts I I, which hold the dies to the mouth-piece.

An improvement in the way of setting the wires is shown in Figs. 4, 5, 6, where thumb-screws E′ E′ are shown tapped into the forming-die B, and holding the wires G H, which are wound tight around the screws. The wires are clinched, as before, between the faces of the dies. This arrangement, by a suitable number of holes tapped into the face of the forming-die, enables the wires to be adjusted in any number to any suitable position.

The soft clay, as it issues solid or tubulated, is cut by the wires or thin knife-blades into horizontal or vertical divisions, making a clean cut in each case, with true, square, sharp edges. The clay stream is then cut across by the usual system of transverse wires on a rotary frame into pieces of suitable length, as previously described. The surfaces of the soft clay cut by the wires or knife-blades reunite sufficiently in their damp condition to admit of the several pieces forming a single length to be handled together, dried together, and burned together as one mass.

By means of my invention it thus becomes possible to handle clay before it is burned in masses composed of thin pieces or slabs, which adhere together, so as to mutually support each other, so that slabs can be made, without the use of separate molds, much thinner than has ever been possible heretofore.

This method of making narrow or thin slabs in masses, so as to dispense with the use of molds for each thin slab, greatly cheapens the product. A hatchet, wedge, or chisel inserted between the pieces after they are burned, with a light, sharp blow of a hammer, will cause the pieces to separate. They may be kept stuck together thus until the building or place where they are to be used is reached, thus forming a convenient method of attachment for transportation in safety.

It will thus be seen that the above method enables, as may be observed in the drawings, several solid or hollow brick to be made out of one section of clay coming from the mold, instead of having to make each brick issue separately from a die, as heretofore practiced, and they can all be handled and baked together in one mass and then separated, either before or after transportation. It is also new to dry and bake the sections of adhering clay in masses, whether cut longitudinally or transversely, or both.

Fig. 7 shows four furring-bricks made out of one hollow brick by means of two wires, one horizontal and one vertical, set at right angles.

Fig. 8 shows four flat bricks made out of one piece by means of three horizontal wires.

Fig. 9 shows four ceiling-bricks made out of one piece by means of three horizontal wires. The shape of the sides of the bricks is made by the forming and finishing dies.

Fig. 10 shows four hollow bricks made out

of one by means of three vertical wires. The shapes and number of pieces made may be infinitely varied.

This system of cutting may be applied to horizontal and vertical expressing or pipe machines, and is suitable for brick, porous terra-cotta, light or floating brick, &c.—in fact any material capable of being forced by a piston out of a die or aperture.

Among the advantages of this invention are, that a number of bricks of clay, porous terra-cotta, &c., can be made simultaneously at the same expense as one piece as far as the machine and its attendance goes. A number of these pieces can be dried, burned, and transported together and separated subsequently, and the making and preserving of bricks of more or less thickness in layers or masses grouped together as one piece prevent warping and breaking in drying, burning, and handling, and keep the edge true and square.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the forming-die and the finishing-die, of the cutting-wire, substantially as described.

2. The process herein described of making bricks, which consists of forcing the clay against wires, as described, so as to divide it into sections, so that the same will adhere together in masses of two or more sections while in their damp condition, dividing it by a cutter at right angles to the line of its path out of the machine, and then drying and baking such masses, substantially as described.

3. The process herein described of making bricks, which consists of forcing the clay against wires, as described, so as to divide it into sections, so that the same will adhere together in masses of two or more sections while in their damp condition, and then drying and baking such masses, substantially as described.

4. As a new article of manufacture, a mass of baked bricks made hollow, corrugated, or grooved, substantially as described, and adhering together.

5. As a new article of manufacture, a mass of dried and unbaked bricks made hollow, corrugated, or grooved, substantially as described, and adhering together.

6. The combination of one more cores for forming hollows in the clay, with a die or dies, and a cutting wire or wires arranged to cut the mass of clay through or between the hollows without destroying the same, substantially as described.

7. The process herein described of cutting clay into sections, both longitudinally and transversely, and then drying and baking the same while still adhering together in masses.

8. The process herein described of cutting clay into sections, both longitudinally and transversely, and then drying the same in masses while still adhering together.

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

FREDERICK W. MEEKER.

Witnesses:
B. F. LEE,
JOHN MCCLURE.