

New Inventions.

NEW BRICK MACHINE.

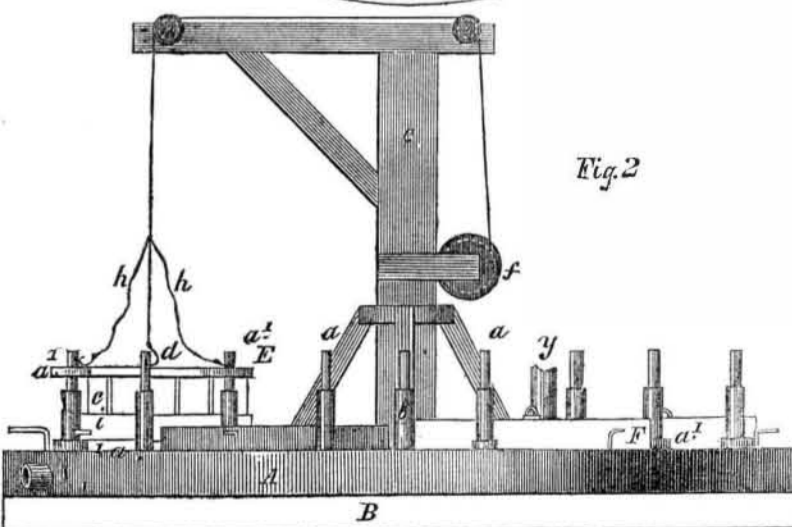
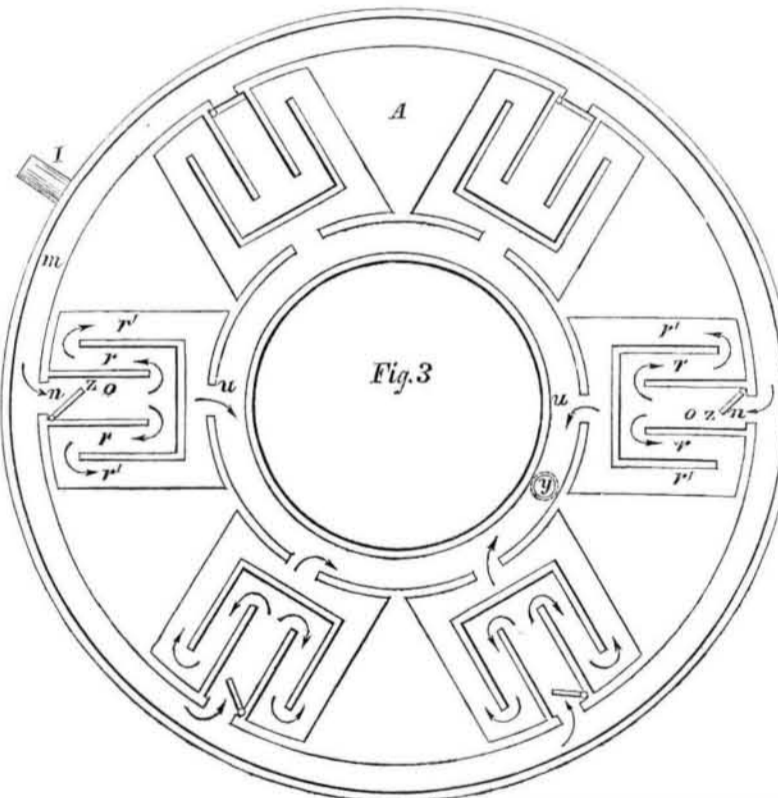
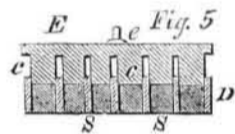
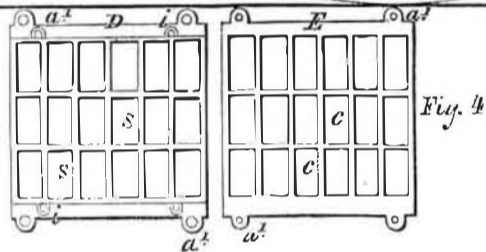
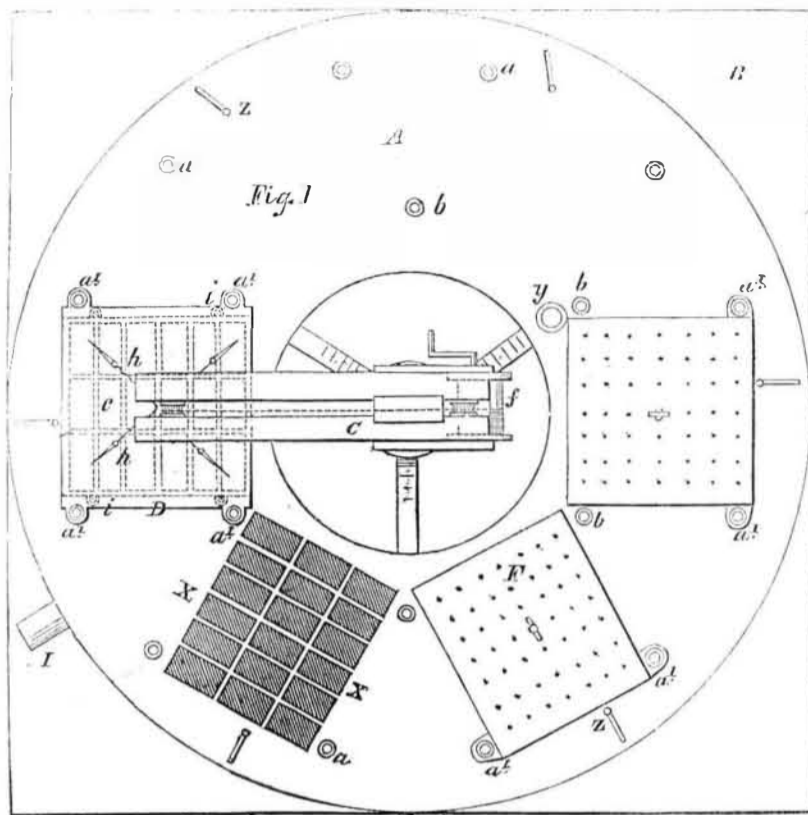
New Brick Machine.

In the apparatus represented in the accompanying engraving, fig. 1 is a plan of the machine, fig. 2 a side elevation, fig. 3 an inverted plan of the flue table or bed detached, fig. 4 a plan of the mold box, and an inverted plan or under horizontal view of the pressing plate detached, and fig. 5 a vertical transverse section of the mold box and pressing plate.

A circular bed, A, of large diameter, is seated horizontally upon a foundation surface or table, B. A crane, C, is erected centrally within the circular bed, and hung so that its jib may be made to perform a circular horizontal travel over the said bed. An inner and outer row or circle of vertical guides, a and b, are inserted in the bed so as to form a step or shoulder midway of their length; the arrangement of these guides around the bed is such, that upon a radial line being drawn from the center of the crane post centrally between any two of the inner row of guides, b, the width or distance apart of the two outer guides, a, intersected by an extension of the said radial line will be the same as the width or distance between the two specified inner guides, b, thereby forming a succession or series of quadrangular sets of vertical guides for the reception over or on them of a quadrangular mold box, D, pressing plate or platen, E, and cover, F, as represented in fig. 1.

The mold box, D, is formed of vertical rectangular sides, united by partitions or cross ties that divide the box into five hundred (more or less) molds S, open top and bottom, the upper surface of the circular bed, A, serving as the bottom to the molds, when the box is situated as in fig. 1, when it is ready for filling with clay, which may be deposited by hand or otherwise into the molds; a platen, E, is then brought to bear down upon the clay in the molds, as represented in figs. 1 and 5; this platen is formed of a top plate with under projecting pressers, c, that fit into the molds, and, by their weight, and that of the top plate, as also by any loose additional weight that may be put thereon, serve to compress the clay to the required dimensions of the brick. The platen is lifted to its situation over the mold box by a hook, d, attached to the main chain or cord of the crane, and hitching into a loop, e, on the top plate of the platen, the crane chain being raised or lowered as required by turning the winch, f. The perforations through the snugs of the mold box, a', are of the requisite diameter to admit of the box being dropped over the enlarged lower portions of the vertical guides, a and b, while the holes through the snugs of the platen are of the same diameter as the upper portion of the said guides, so that the shoulders formed at the junction of the large and small diameters of the guides will serve to arrest the motion of the platen when it has been lowered sufficiently to compress the clay to the required extent, by which arrangement a uniform size of brick is insured. This size may be regulated at pleasure by inserting washers over the smaller portions of the guides, to rest upon the shoulders thereof, so as to reduce the depth of the pressers into the molds.

When one set of bricks is thus formed, the crane chain is unhitched from the platen, and hitched to the mold box by branch hooks and chains, h, united to the main chain, and connecting with the mold box by loops, i; the winch is then turned so as to lift the mold box from the bricks and leave them on the circular bed, A, as represented at X X in fig. 1, the mold box in rising carrying the platen with it. The mold box and platen thus free from the molded bricks are then swung over the next series or sets of vertical guides by turning the crane, and the mold box being dropped over the guides is again filled with clay; the crane hooks being unhitched from the box, and the platen raised to afford room for putting in the clay, when the platen is again brought to bear down upon the clay in the molds as before, and the box and platen afterwards removed to the next series of verti-



cal guides, and so in succession until the circular bed is covered with bricks. To give a gradual pressure on the clay in the molds for the purpose of expelling moisture and increasing the consistency of the brick, the winch barrel is turned but slowly

during the early part of the depression of the platen and quicker towards the close; a sounder brick will thus be produced, while the most complete adjustability in the operation of the platen throughout its entire stroke is afforded.

The circular bed, A, is made hollow, and has flues in it for circulating hot air, for the purpose of drying the brick on the bed on which it is pressed or molded. These flues consist of an outer annular induction and inner annular eduction flue, with radial direct and return flues uniting them, the radial flues being so arranged as to pass the current of hot air immediately under the several tiers or rows of bricks, the circular bed only intervening. Hot air is blown through a pipe, I, into the outer annular induction flue, m, from whence it passes through throats, n, into direct radial flues, o, it is then diverted so as to return by other adjoining radial flues, r, and again through further radial flues, r', direct to the eduction flue, u, from whence it escapes by a pipe, y; the throats, n, forming the communication of the induction flue with the radial flues are provided with dampers, z, that serve to regulate the amount of hot air to be admitted, and also to shut off the flow of hot air through any one or more of the sets of radial flues over which no range of bricks is situated either during the operation of covering the bed with its several ranges of bricks or during the removal of any of the ranges to the kiln. The return radial flues, it will be observed, serve to heat equally the several rows of each range of bricks, and any number of direct and return flues may be arranged to circulate the hot air according to the number of rows in each range.

After the bricks are molded, and during the time they remain on the circular bed to dry, each range of bricks should be covered with a bonnet to retain the heat. Perforations are made in the tops of the bonnets, to permit the escape of the vapor which is emitted during the process of drying.

By this method of making bricks the various well-known facilities and advantages of the ordinary manual process are combined with those of the machine or press system, while many disadvantages peculiar to the action generally of the latter are avoided. The bricks are made rapidly, dried, and prepared for the kiln upon the bed on which they are molded with but little delay, and without the labor of removal or exposure or defacement to which they are subjected in the ordinary way. This machine is capable of manufacturing tile, hollow cornice, or any of the other well-known forms of brick. For further information address the inventor, Prof. John C. fr. Salomon, Jr., No. 50 Lee st., Baltimore Md. Patented April 25th, 1854.

Berdan's Mechanical Bakery.

A bakery upon an extensive scale has been commenced at Central Hall, Brooklyn, N. Y., by H. Berdan, Esq., in which the various manipulations are all performed by new and improved machinery. The cut dough is carried into a vertical oven on trucks, and on an endless platform is carried down, baking gradually as it is moved along, and is discharged in well baked loaves at the lower end. The bread baked in this manner is superior in quality, and the loaves are larger, for the same price, than those generally sold in our city.—The machine was invented by Mr. Berdan with the object in view of economizing labor and producing good bread, and he has succeeded far beyond his expectations.

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