

L. E. Ransom,

Brick Mold,

No. 12,558,

Patented Mar. 20, 1855.

Fig. 2

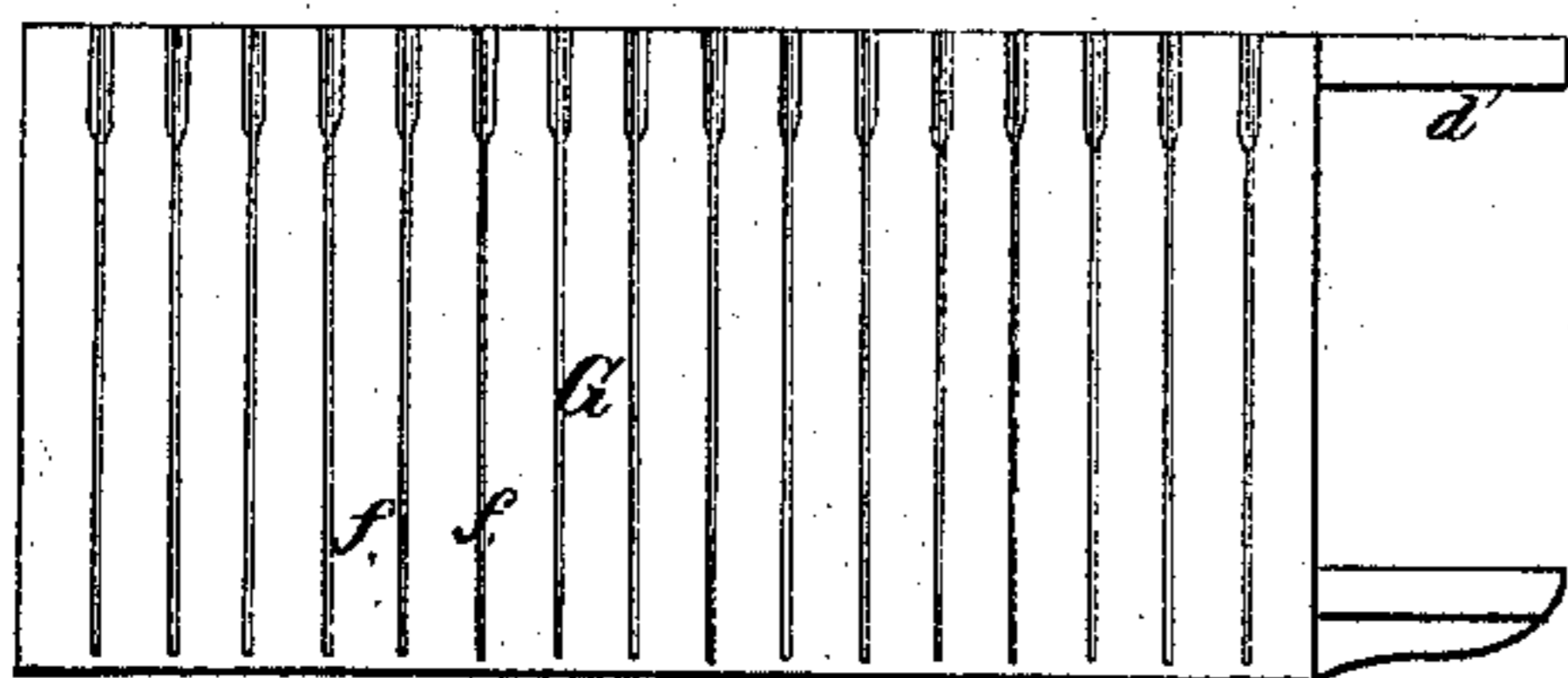


Fig. 3



Fig. 9

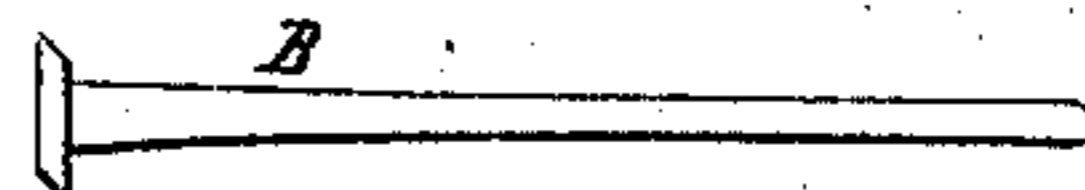


Fig. 8

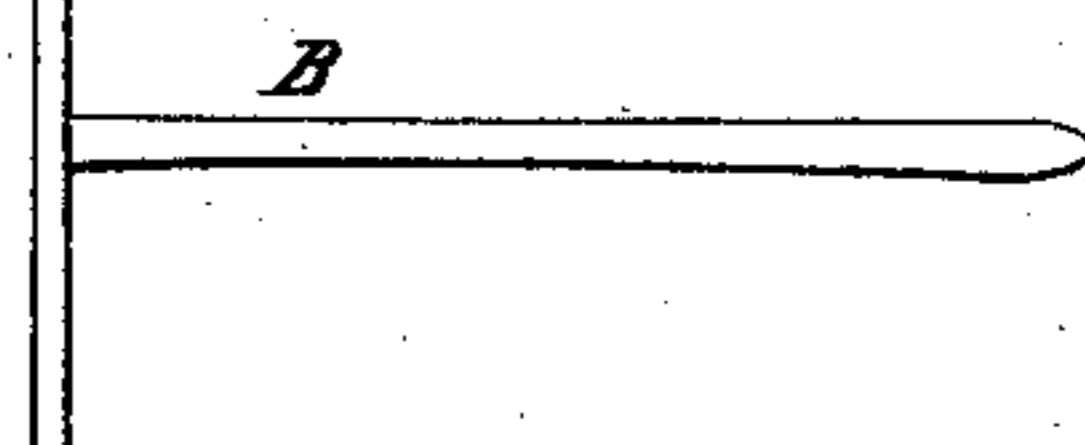


Fig. 11

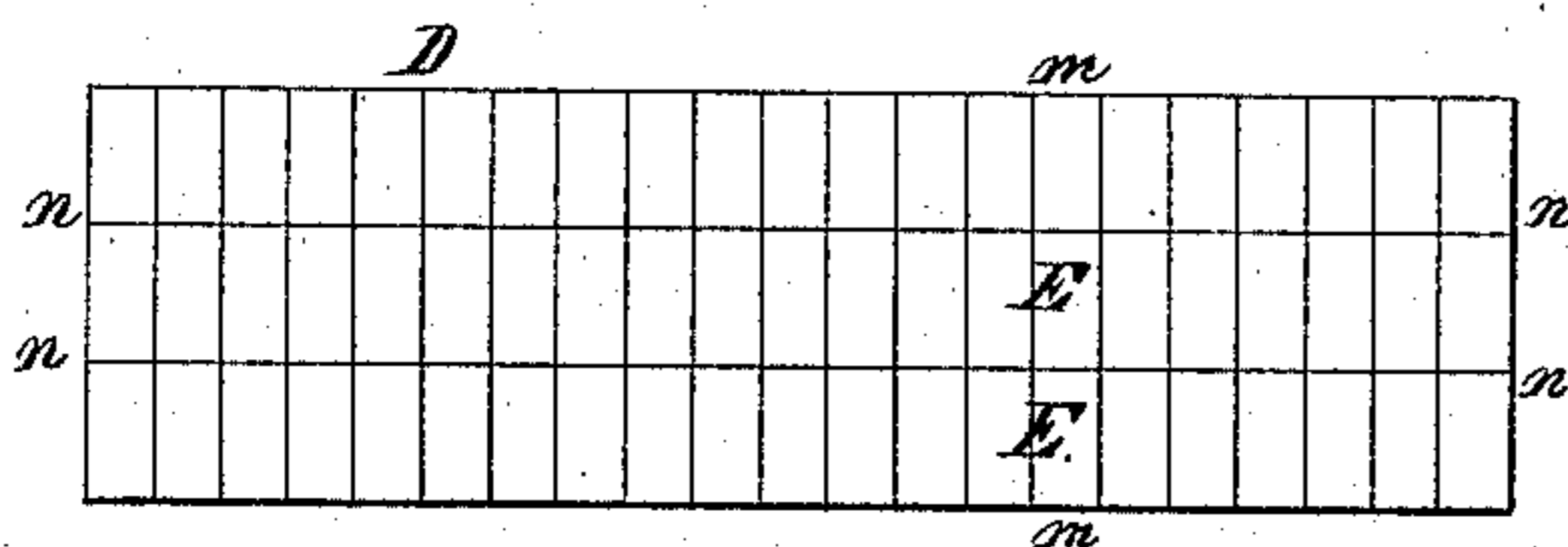


Fig. 12

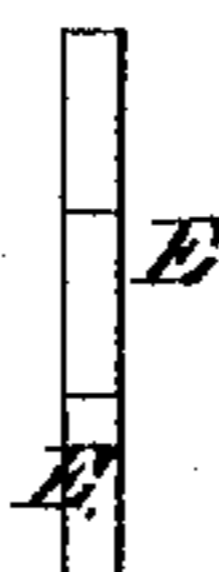


Fig. 4

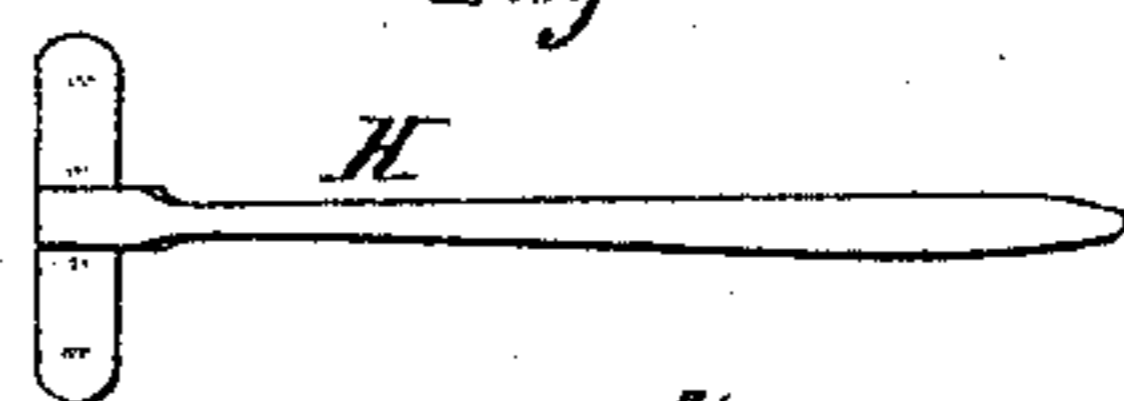


Fig. 5

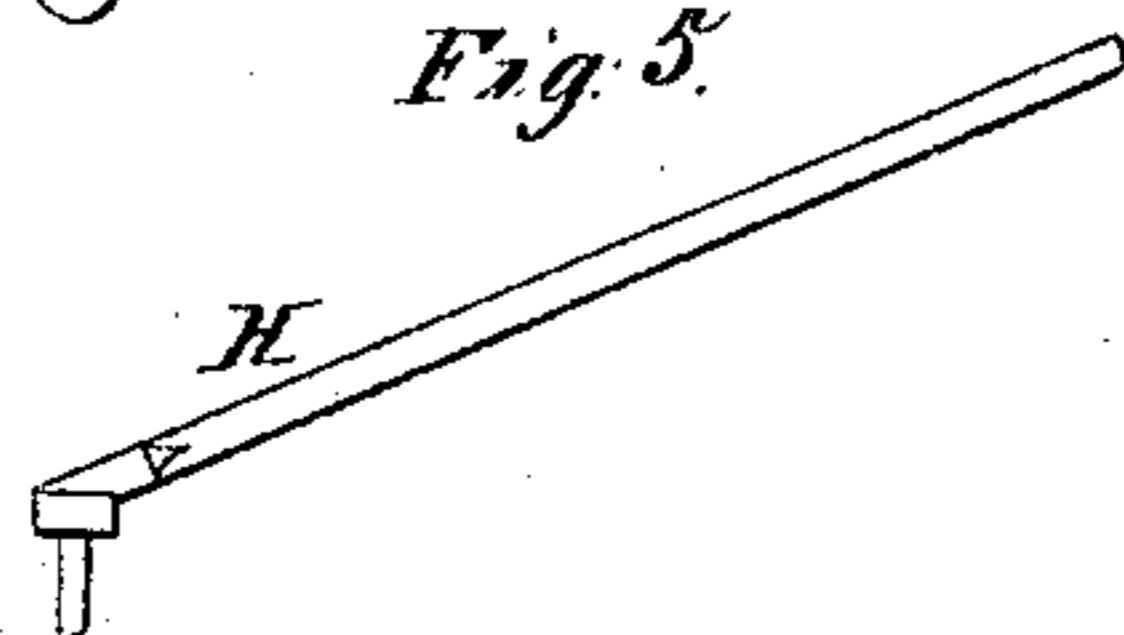


Fig. 1

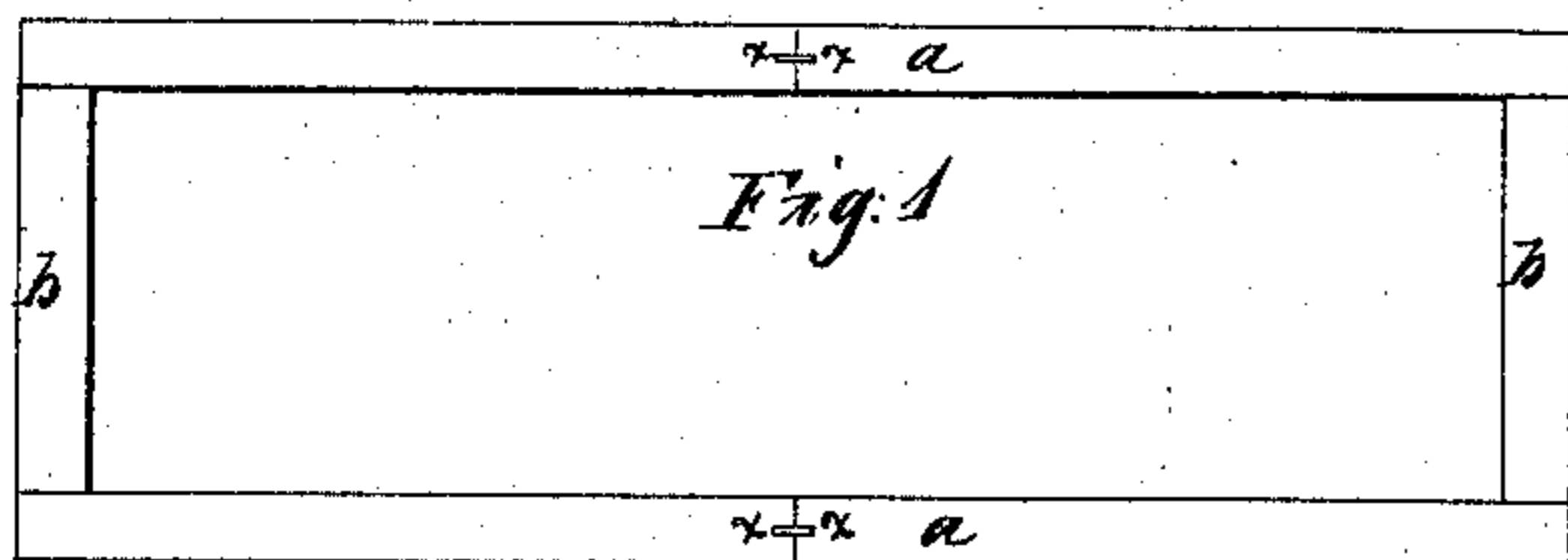


Fig. 10



Fig. 16

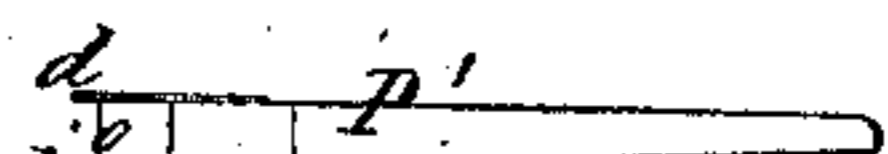


Fig. 15

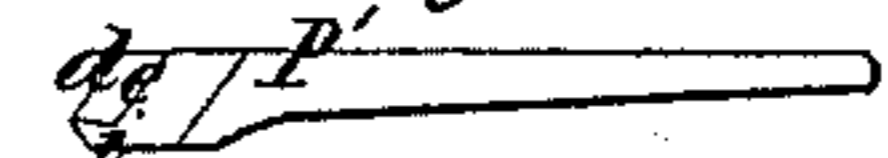


Fig. 6

Fig. 7

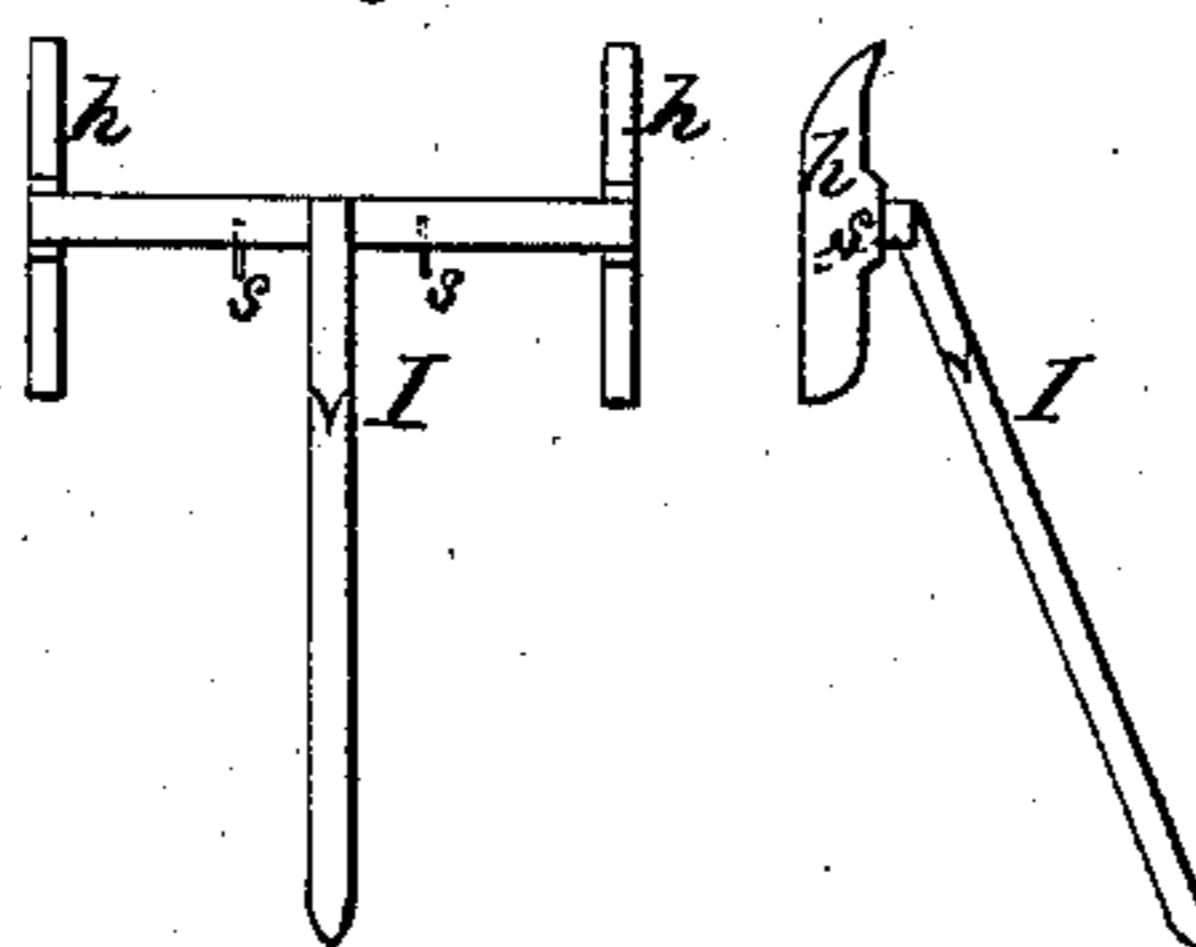


Fig. 13

Fig. 14



UNITED STATES PATENT OFFICE.

L. E. RANSOM, OF HAVANA, OHIO.

MANUFACTURE OF BRICKS.

Specification of Letters Patent No. 12,558, dated March 20, 1855.

To all whom it may concern:

Be it known that I, LOOMIS E. RANSOM, of Havana, in the county of Huron and State of Ohio, have invented a new and useful Improvement in the Manufacture of Brick; and I do hereby declare that the following is a full, clear, and exact description of the same, together with its operation, reference being had to the annexed drawing, forming part of this specification, in which—

Figure 1, shows the manner of placing the guides: Fig. 2, is a top view of gage G. Fig. 3, is an end view of the same. Fig. 4, is a top view of cutter H. Fig. 5, is a side view of cutter H. Fig. 6, is a top view of cutter I. Fig. 7, is a side view of cutter I. Fig. 8 is a top view of cutter scraper. Fig. 9 is a side view of cutter scraper. Fig. 10 is a side view of cutter guides *a*. Fig. 11 shows the bed of mortar divided by the cutters H and I in the bricks E. Fig. 12, shows a row of bricks edged for smoothing. Fig. 13, is front view of edging tool. Fig. 14, is end view of same. Fig. 15, is side view of smoothing tool. Fig. 16, is front view of same.

Similar letters of reference in the several figures denote the same part.

The nature of my invention consists in taking tempered mortar in a mass to the place of deposit for drying and distributing the same in rows or beds of any desired width and thickness upon the yard by means of guide bars and scraper or lute; and after forming said rows or beds of mortar, tempered as it may chance to come from the mill or mixer either too soft proper or too hard for molding, and with tools hereafter to be described, or others substantially the same, while the mortar is green, or before it shall have cracked by too much drying, producing transverse and longitudinal lines of weakening or separation as the case may be, depending on the temper of the mortar, thus defining the dimensions of the bricks rapidly and without regard to their smoothing or final finish, so that, as each brick will contract toward its center in drying, these lines of separation will widen and permit the insertion of an edging tool, to be described, for turning the bricks upon their edges to facilitate drying, and for other purposes, to be described.

To enable others skilled in the art to use my invention, I will proceed to describe the same and its operation.

The process of forming bricks by my improved mode is as follows. The clay is tempered by any of the usual mills or mixers and discharged or shoveled, into a wheel barrow or other conveyance in which it is conveyed to the yard, and deposited upon the hard surface prepared for its reception between the parallel guides *a*, placed at the distance of 18 or 27 inches, (or the length of two or three brick apart). These guides *a*, are about eight or ten feet long, and of the thickness of a brick, their ends have slits *x*, cut in them through which metal-wedges pass to the ground, serving to keep the guides in line and fasten them to the yard; the cross guides *b*, give the requisite distance to be preserved between the guides *a*. Before laying down the guides *a*, I wet their inner edges and sprinkle them with sand to prevent the adhesion of the mortar, though if any such adhesion takes place, a thin knife passed between the guide and edge of the bed will readily insure separation. After the mortar is deposited between the guides *a*, as above described it is spread out and smoothed over the top by the scraper or lute B, which to prevent adhesion is occasionally dipped in water or sand. After filling the space between the guides *a*, and smoothing the upper surface, by means of the scraper or lute B, the guides *a*, are removed, and there remains on the yard a bed of mortar the thickness of a brick, and in width equal to two or three times the length of a brick according to the distance apart of the guides *a*. The gage G, shown in Figs. 2, and 3, is then placed over the bed with the interior face *d'*, against one of the longitudinal edges of the bed, then the blades of the cutter H, shown in Figs. 4 and 5, are inserted in the slits *f*, in the top of the gage, and drawn through them, dividing the bed in the lines *m, m*, of Fig. 11. This operation is repeated until the whole bed is formed into sections containing each two or three bricks, as seen in Fig. 11, the gage being moved longitudinally as the operator finishes the portion of the bed beneath it. This movement may be facilitated by constructing on gage G, wheels and handles, so that said gage may be rolled along the bed as required for the operation. Instead of the cutter H, there may be used a series of knives or cutters secured perpendicular to a board, and otherwise so arranged as to pass simultaneously through the slits *f*, of the

gage G, to the yard, cutting at one stroke as many sections of two or three bricks as can be covered by the gage G.

Besides the above mentioned plans there
5 may be used rollers armed with knives, and many other means of rapidly describing the transverse division lines m, m . After dividing the bed by the lines m, m , the cutter I, is pushed in the direction of the length of
10 the bed, one of the guides h resting against one of the edges of the bed; this cuts the longitudinal lines n, n , marking out the bed D, into the bricks E. The bed D, is then suffered to remain where formed until
15 the clay in drying causes a separation along all the lines m, m , and n, n , dividing the bed into separate and distinct bricks. The edging tool shown in Figs. 13, and 14, is then inserted in the transverse lines m, m ,
20 and the bricks raised on edge as seen in Fig. 12. This tool is nothing more than a piece of board with a projecting sheet iron, or other metallic blade q , as seen in Figs. 13 and 14. The bricks are now in a rough
25 condition, and for the purpose of bringing them into a condition suitable for facing brick, I pass the tool P' shown in Figs. 15 and 16, over the upper edges of the row of bricks when placed as seen in Fig.
30 12. This tool has a smooth metallic surface c , equal in width to the thickness of a brick, bounded on one side by the flat plate, and on the other by the knife i , both perpendicular as to the surface c . The surface c ,
35 as the tool is drawn toward the operator compresses and smoothes the edge of the brick, while the plate d , and knife i , sharpen the edges and trim off any superfluous thickness of the brick. The ends of the brick may
40 be smoothed in the same way if it be so desired. After pressing and polishing the upper edge of each row of bricks as above described, they are allowed to remain until sufficiently dry to remove for burning. In
45 this manner with but few attendants, may

be formed with the utmost rapidity bricks that will be equal in quality to any produced by the ordinary process of molding, and equally as durable for all building purposes.

Having thus described my improved mode 50 of manufacturing bricks, I wish it to be understood that I make no claim to any portion of the processes of manufacturing bricks set forth in the French patents of Capgras, and Chanon, June 21st, 1843, and 55 Charles Henry Maigret, May 22d, 1840, But

What I do claim as new and of my own invention, and desire to secure by Letters Patent is:

The manufacture of bricks substantially 60 as above described; that is to say by first spreading the tempered mortar or clay at once upon the ground where the bricks will be left to dry and in beds of certain desired length, width and thickness, and then while 65 the mortar is in a soft state, or before it shall crack by too much drying, producing therein lines of weakening or separation defining the dimensions of the bricks without regard to their smoothness or final finish; 70 and after the bricks in drying shall have separated from each other along the lines thus formed, turning them on edge, and squaring and polishing their edges and defining the thickness of the same by rubbing 75 over them the metallic tool P' or otherwise substantially as set forth; the desired thickness of the bed being produced by means of guide bars or molds and scraper or lute substantially as specified, whereby I am en- 80 abled to dispense with off bearers, and otherwise to simplify the manufacture of bricks.

In testimony whereof I have hereunto signed my name before two subscribing witnesses. 85

L. E. RANSOM.

Witnesses:

GEO. PATTEN,
SAML. GRUBB.