

D. HESS.

Improvement in Brick-Machines.

No. 130,046.

Patented July 30, 1872.

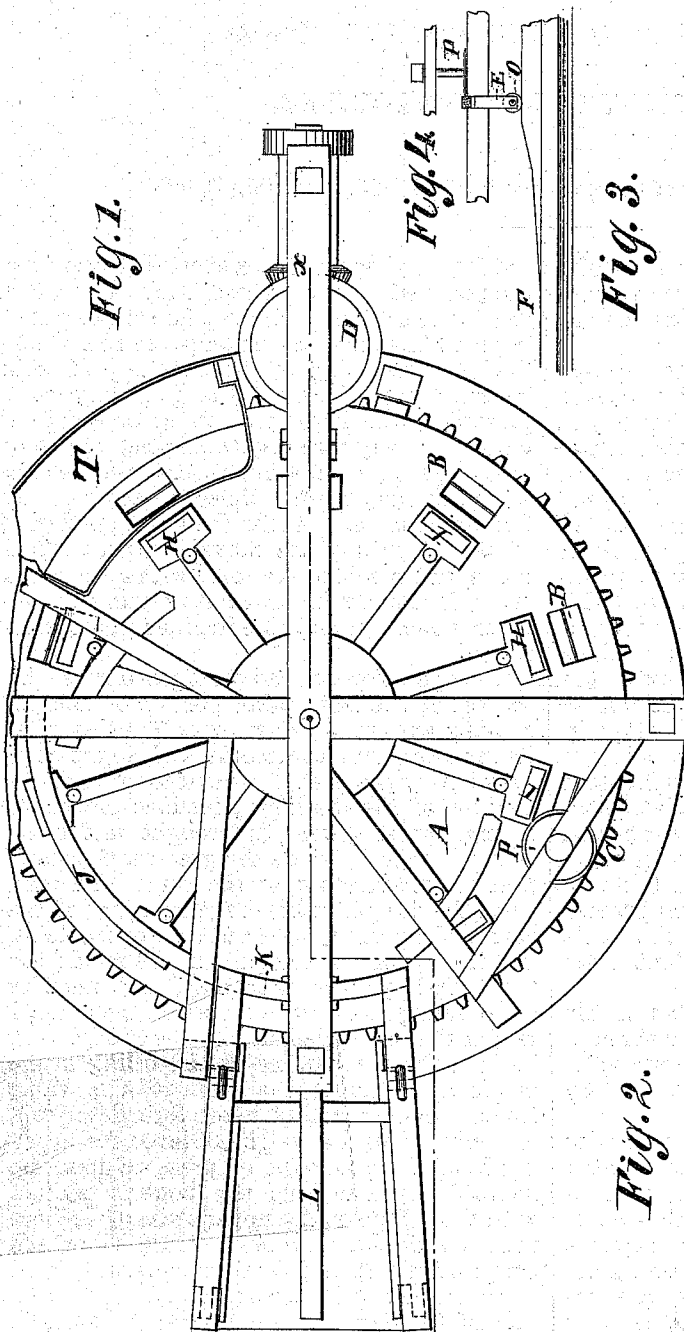


Fig. 1.

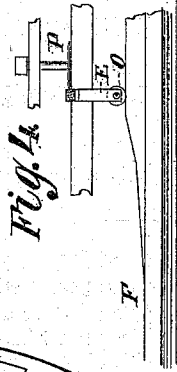


Fig. 4.

Fig. 3.

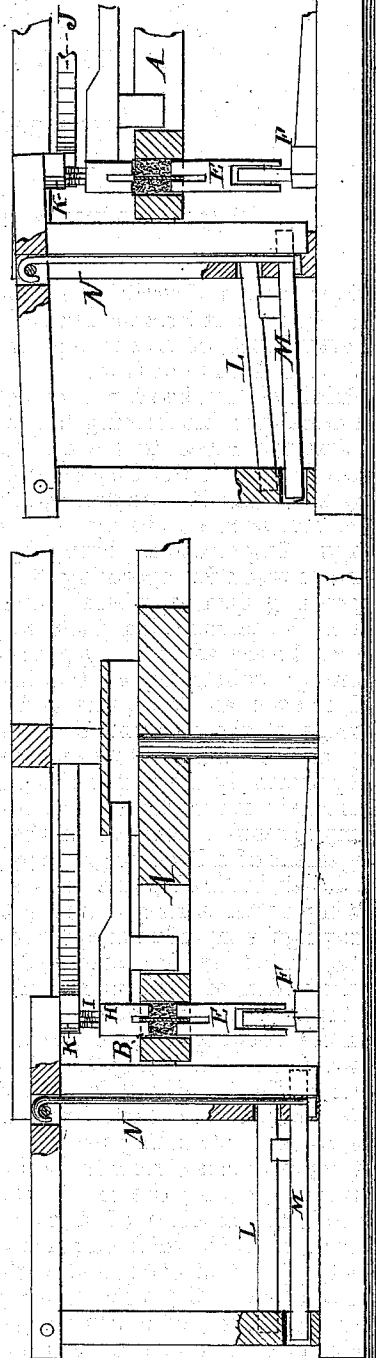


Fig. 2.

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UNITED STATES PATENT OFFICE.

DANIEL HESS, OF DES MOINES, IOWA.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. 130,046, dated July 30, 1872.

Specification describing a new and useful Improvement in Brick-Machines, invented by DANIEL HESS, of Des Moines, in the county of Polk and State of Iowa.

This invention has for its object to improve the brick-machine forming the subject-matter of a patent issued to me on the 12th day of December, 1871, No. 121,871, whereby its efficacy and durability are greatly increased. The invention consists chiefly in the employment of a yielding or self-adjusting upper inclined plane or track for operating the upper series of pressing devices, whereby injury or breakage of the surrounding parts is prevented if the molds are too densely packed or contain a foreign substance, as the inclined plane will, in such an event, rise and allow of the passage of the pressing devices without injury, and be immediately returned to its normal position by the action of a weighted lever connected with the same. The second feature of my invention consists in the relative arrangement of a level or graduated surface on the lower inclined plane with a knife or revolving cutter arranged above the table for removing the superfluous portion of the pressed brick, which is projected above the table by the action of said graduated plane upon the lower pressing devices.

In the drawing, Figure 1 is a plan or top view of the machine. Fig. 2 is a section through line *xx*, Fig. 1. Fig. 3 is a detail sectional view. Fig. 4 is a detached view of the rotary cutter and surrounding parts.

A represents a horizontal table or circular platform carrying the molds B, and rotated through the medium of a continuous peripheral rack, C, which engages with a spur-wheel, D, that is connected with a suitable motive power. E are the lower pressing devices, consisting of stems carrying presser-heads at their upper ends, and pulleys or rollers at their lower ends. F is a continuous circular track or way arranged below the table A, and having various parts of its circuit made level, while others are made inclined, for performing the several functions to be hereinafter specified. The upper series of pressing devices consists of horizontal bars and stems, which carry the presser-heads H and pulleys I at their outer ends. J is an upper inclined plane, which extends from near

the feeding-hopper T to a short distance from the point where the pressed bricks are planed or trimmed. Said inclined plane is graduated in such a manner, and arranged in relation to the lower inclined plane, that the clay, after its insertion into the molds, is gradually compressed by the lower and upper pressing devices. The clay receives its greatest degree of pressure at the point nearest the planing device; and to remedy a great defect existing in my former machine, I render the inner portion K of the inclined plane movable in a vertical plane, and combine the same with a weighted lever, L, and an intermediate sliding frame, M, to which the movable inclined plane is attached.

The operation and advantages derived by the use of the adjustable portion of said inclined plane are as follows, viz.: The clay, after its insertion into the molds and slight compression by the pressing devices through the medium of the stationary inclined planes, as in my former patent, is brought under the rotary planer P, where the greatest degree of pressure is exerted upon the same. To overcome the danger of breakage or injury of the surrounding parts, which is an inevitable result in my former machine, if the molds are too densely packed with clay, or a stone or other foreign substance placed in the same, I render the inclined plane capable of adjusting itself to the inequalities of the filling in the molds by attaching the same to a movable frame. Said frame, as heretofore described, is combined with a weighted lever for exerting a sufficient amount of pressure upon the inclined plane to hold the same in contact with the rollers on the upper pressing devices until an obstruction is encountered or the bricks have been sufficiently compressed, when it will immediately rise and allow of the passage of the parts without injury, and then be returned again to its normal position through the action of the weighted lever. The revolving cutter or planer P, which, in connection with the graduated or level portion of lower inclined plane, is the second feature of my improvement, is employed for the following reasons, viz.: Owing to the difficulty of filling the molds at all times with the same quality and quantity of clay, and the fact that the same can only be compressed to a certain

point, the bricks are not always of the same size. To obtain uniformity in the size of the brick after it has been compressed in the mold and passed from under the movable inclined plane, I provide means for withdrawing the upper pressing device, and so graduate the lower inclined plane, by making the same level at the point O, that the lower piston forces the brick to a uniform gage-level, exposing the surplus clay, if any, above the top of the mold, when it is subjected to the action of the revolving cutter, which removes the superfluous clay and renders the bricks uniform in size.

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

1. The self-adjusting or movable upper inclined plane K, operated and secured in position by a weighted lever, L, and intermediate frame M, and relatively arranged in connection with the pressing devices and molds as specified.

2. The graduated or level portion O of the lower inclined track, in combination with the rotary cutting disk or planer P, as and for the purpose herein shown and described.

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