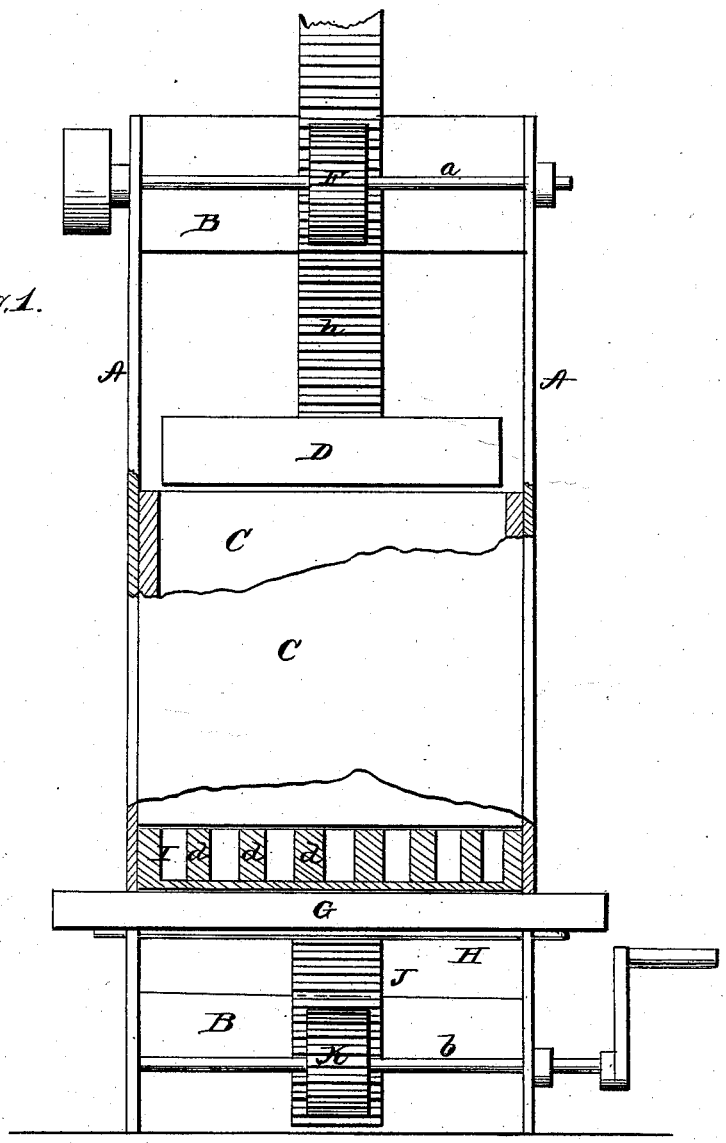
3 Sheets—Sheet 1.

W. O. NIGHTENGALE.
Brick-Machine.

No. 203,188. Patented April 30, 1878.

Fig. 1.



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Brick-Machine.

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Fig. 2.

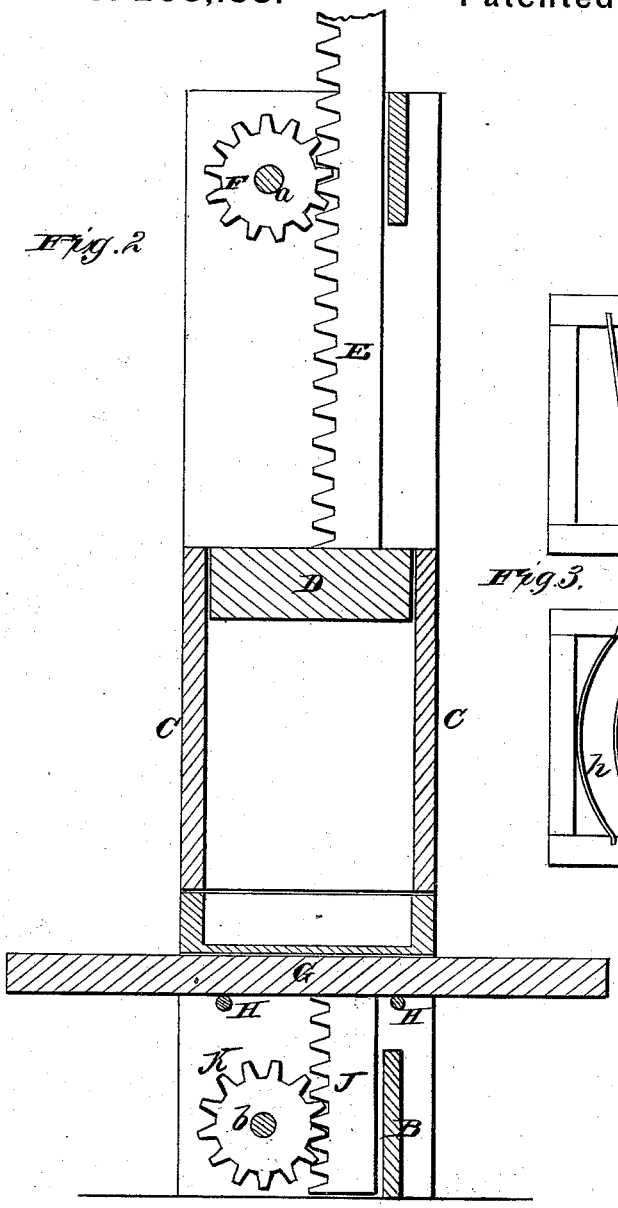
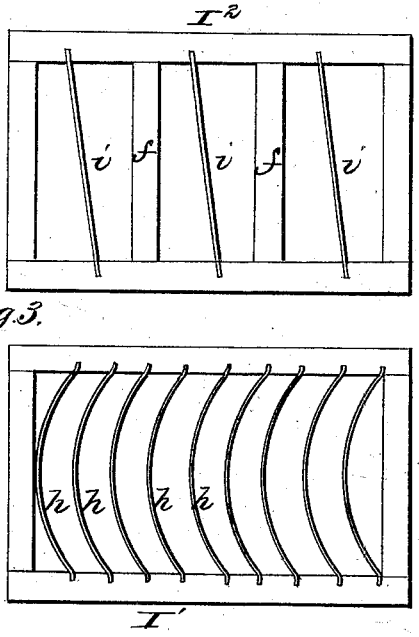


Fig. 3.



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3 Sheets—Sheet 3.

W. O. NIGHTENGALE.

Brick-Machine.

No. 203,188. Patented April 30, 1878.

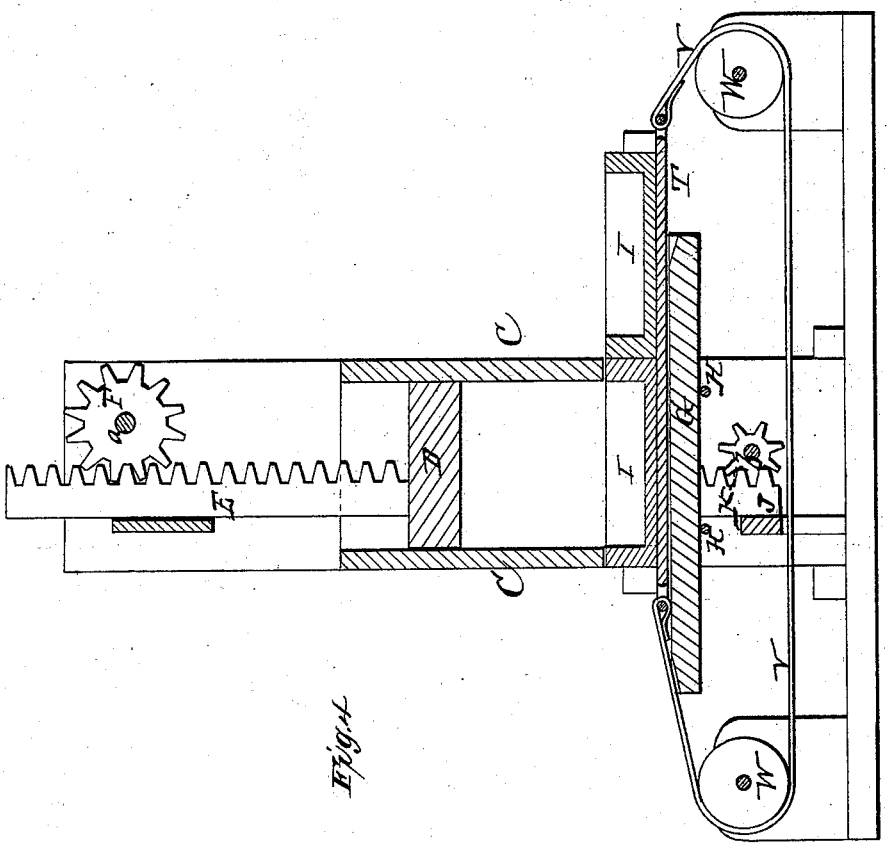

Fig. 1.

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UNITED STATES PATENT OFFICE.

WILLIAM O. NIGHTENGALE, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN LYSAGHT, OF SAME PLACE.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. **203,188**, dated April 30, 1878; application filed March 27, 1878.

To all whom it may concern:

Be it known that I, WILLIAM O. NIGHTENGALE, of Johnstown, in the county of Cambria, and in the State of Pennsylvania, have invented certain new and useful Improvements in Brick-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a brick machine and molds, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a front elevation, partly in section. Fig. 2 is a transverse vertical section of the same. Fig. 3 shows two forms of molds. Fig. 4 is a vertical section, showing a modification of my invention.

The frame of my brick-machine may be composed of two vertical end pieces, A A, connected at top and bottom by cross-bars B B, and also having the side pieces C C secured to them in such a manner as to form an elevated mud-box, which is open at top and bottom. D is the follower or plunger, provided with an upwardly-extending rack-bar, E, into which takes a pinion or cog-wheel, F, secured on a horizontal shaft, *a*, having its bearings in the upper ends of the end pieces A A.

Below the mud-box is a table, G, held in place by means of a stirrup or two or more rods, H, passed through the end pieces A A, as shown. The table G is held at such a distance below the mud-box that a mold, I, will just fit snugly between them, as shown in the drawing.

The box is filled with clay, and the follower or plunger D forced down, which packs and presses the clay into the mold. A second mold is then placed in front on the table, and by it the first mold is pushed out, the second mold taking its place, and the plunger, continuing to descend, fills the second mold and presses the clay into the same. A third mold is then made to push out the second, and so on until the box is empty, the side of the box acting as a cut-off to smooth the brick on top.

As soon as the molds are taken out the bricks are ready for the kiln.

In case any mold should become stuck fast the table G must be lowered by removing the rods H. To this end the table is provided with a downwardly-extending rack-bar, J, into which takes a pinion, K, on a horizontal shaft, *b*, having its bearing in the end pieces A A.

When the rods H are removed the table is run down, by means of the rack and pinion, till the mold can be loosened and removed, when the table is run up again and held by the rods.

The mold I is made in rectangular form, with cross-partitions *d*, as shown in Fig. 1, for making ordinary-shaped bricks.

For curved bricks I use a rectangular mold, I^1, in the sides of which are sprung sheet-metal partitions *h h*, in curved form.

For making wedge-bricks or key-bricks, I use a mold, I^2, with two or more cross-partitions, *f*, dividing it into spaces of twice the width of a brick. In each of these spaces is inserted a sheet-metal partition, *i*, set inclined, as shown, so that in each space of the main mold are made two key or wedge bricks.

For making what is called "soap-brick," I use a mold similar to the mold I^2, and in each space is inserted a sheet-metal partition, parallel with the main partitions, but only of half the width.

The follower D of the press may also be operated by a piston and cylinder, if so desired.

In Fig. 4 I show a tray, T, placed on the table G, said tray being attached to the ends of a belt, V, passing around pulleys W W. The tray T is to be moved back and forth to remove a full mold and insert an empty one, first in one direction and then in the other.

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

1. The combination, with the box C, of the table G, detachable rods H, rack J, and pin-

ion K on the shaft *b*, for raising and lowering the table supporting the molds, for the purposes herein set forth.

2. The mold I^1, provided with curved sheet-metal partitions *h*, sprung into the sides of the mold, as herein set forth.

3. The mold I^2, provided with stationary cross-partitions *f* and angling movable sheet-metal partitions *i*, for the purposes herein set forth.

4. In combination with the frame, box, and follower, operated substantially as described, the tray T for supporting the brick-molds, the table G, belt V, connected to both ends of the tray and passing around the pulleys W, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of March, 1878.

WM. O. NIGHTENGALE.

Witnesses:

FRANK GALT,

J. M. MASON.