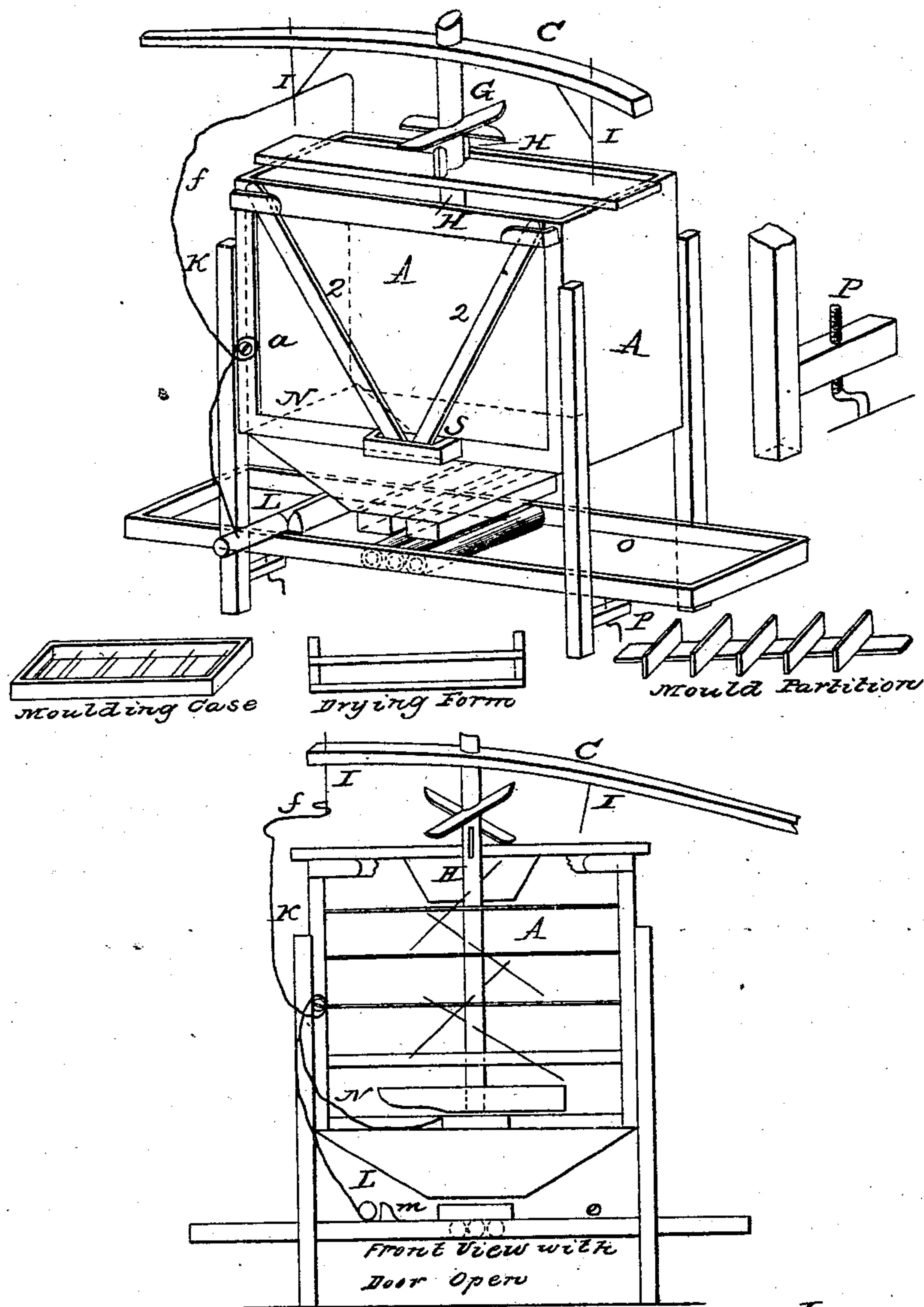


BRETZ, SANGSTER, & BRETZ.

Brick Machine.

No. 85,061.

Patented Dec. 22, 1868.



Witnesses
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United States Patent Office.

JOHN BRETZ, WILLIAM SANGSTER, AND JOHN F. BRETZ, OF SPRINGFIELD, ILLINOIS.

Letters Patent No. 85,061, dated December 22, 1868.

IMPROVED BRICK-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that we, JOHN BRETZ, WILLIAM SANGSTER, and JOHN F. BRETZ, of Springfield, Sangamon county, State of Illinois, have invented a new and improved Brick-Machine; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 represents the brick-machine closed.

Figure 2 represents the same, with the adjustable side taken out, to show the inner arrangement.

A is the mixing-box, supported upon an open framework, to leave the space clear underneath, so that moulds can be inserted under the press from either side.

B is a shaft, of cast-iron or wood, and turned by the sweep C, said sweep turning towards the left.

D D are knives, perforating the shaft B, and revolving with it, between the cross-bars E E, to cut and grind the clay or mud.

E E represent any number of cross-bars, running from side to side of the mixer A, and close enough together to hold the lumps until the knives D catch and crush them.

F is the press, at the bottom of the shaft, for pressing the clay into the moulds.

G and H comprise the apparatus which raises and lowers the shaft and press during the revolution of the sweep C, and consists of the two iron half plates G, cast upon the shaft, inclining across each other, so that the opposite ends of each shall have the same depression or elevation, and the two uprights H H, over which the two half plates G pass, thus raising the shaft and press from off the mould when the plates G pass over the uprights, and dropping down by their own weight when these plates have passed over the uprights.

I I are two pins upon the sweep, extending downwards from the same, at equidistance from the shaft, and arranged to catch the rod *f* of the lever K, during the revolution of the sweep C, and thus work the lever K.

K is the lever, which consists of the iron rod *f*, running quite over the clay or mixing-box A, and down on each side, and the round connecting-bar L, and stick M, the whole working upon the pivot *a*, which fastens it to the left side of the mixer A.

That part of the iron rod which passes over the top of the mixer is shaped so that the pins I catch the portion nearest, and shove it back, and slide off from it, after it moves along half way, and the spring N pushes the lever back, so that the next pin catches it in the same way.

M is a square stick, attached, by loose sliding rings, to the connecting-bar L, so that it always keeps its horizontal position when the lever is moved forward, and by this the moulds are pushed under the press.

N is a spring, which pushes the lever back to its place when the pressure from the pins above is removed.

O is an adjustable carriage, to run the moulds out upon, and is supported by four screw-legs, at each lower corner of the machine.

In other brick-machines, these carriages are fastened tightly to the sides, and, when worn at the bottom, they drop from their proper place and level, and have to be taken out for repairs.

When this adjustable carriage O is thus worn or drops out of place, we raise it in place by simply turning the screw-legs upon which it rests.

X is a movable side, which can be taken out when the machine is to be cleaned, and Q Q are two slats, and R R, two cast-iron ears, and S, an iron slat, all of which, combined, form the fastening for the movable side, X.

The moulds used are like other moulds with sliding partitions, with the exception of the cross-bars *u u*, Figure 4, which are riveted in the moulds, to give them additional strength.

V are rollers, in the adjustable carriage O, upon which the moulds rest when being filled, and by which the sliding them off upon the carriage is facilitated.

Figure 6 represents drying and dumping-forms connected with this machine. The bricks are dumped from the moulds upon one of these forms, and then another form is placed directly over it, and the next mould dumped upon that, and so on, one over the other, the whole only occupying a small space, and putting the bricks in a condition for drying, as well as being sheltered from rain.

What we claim as our invention, and desire to secure by Letters Patent, is—

The arrangement and combination of the sweep C and pins I I, with the lever K, (said lever being constructed as described,) with the twisted iron rod *f*, connecting-bar L, stick M, and pivot *a*, and spring N, all operated as and for the purposes herein set forth.

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WILLIAM SANGSTER.
JOHN F. BRETZ.

Witnesses:

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