

(No Model.)

2 Sheets—Sheet 1.

J. A. BUCK.
BRICK MOLD SANDER.

No. 499,206.

Patented June 13, 1893.

Fig. 1.

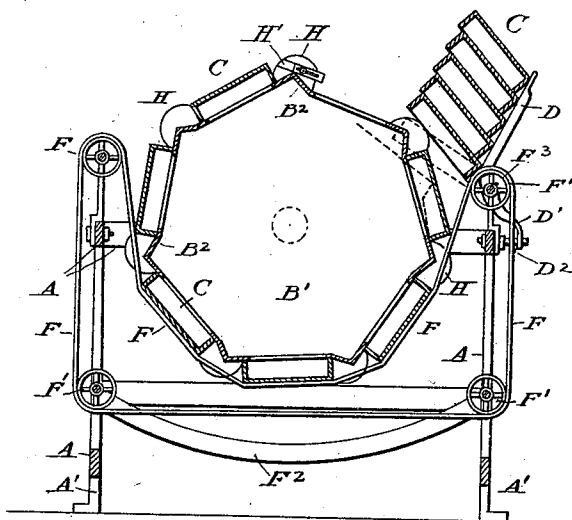


Fig. 2.

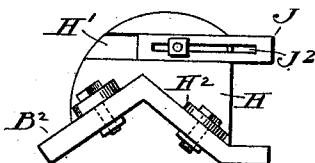
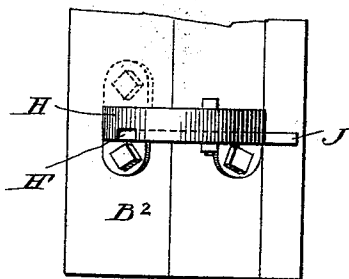


Fig. 3.



Witnesses:

Frank C. Curtis
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Inventor:

James A. Buck
by Geo. A. Buck
att'y.

UNITED STATES PATENT OFFICE.

JAMES A. BUCK, OF CRESCENT, NEW YORK, ASSIGNOR TO FRANCES C. BUCK,
OF SAME PLACE.

BRICK-MOLD SANDER.

SPECIFICATION forming part of Letters Patent No. 499,206, dated June 13, 1893.

Application filed September 27, 1888. Serial No. 286,631. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. BUCK, a resident of Crescent, in the county of Saratoga and State of New York, have invented certain new and useful Improvements in Brick-Mold-Sanding Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

My invention relates to improvements in brick-mold-sanding machines, and consists of the novel construction and combination of parts hereinafter described and pointed out in the claims.

Figure 1 of the drawings, is a central vertical longitudinal section of the machine, shown in use. Fig. 2 is a side elevation of an adjustable stop secured to a detached cross bar or rib. Fig. 3 is a top plan view of the parts shown in Fig. 2, with one end of the box broken away. Fig. 4 is a view in perspective of the whole device shown as in use. Fig. 5 shows in side elevation a modified form of rack support.

The novel features which form the subject matter of this application, are improvements which can be applied to such machines as were shown and described in United States Letters Patent No. 385,790, issued to me July 10, 1888, to which patent reference may be had.

I make use of a common rectangular frame A, supported by the legs A'. The frame supports in suitable bearings the journals of a revoluble heptagonal cylinder B, consisting of the septangular shaped heads B', connected by the cross bars or metallic ribs B². The seven sides of the cylinder are each adapted to receive a sand-mold C. The molds are fed by gravity down the inclined rack D upon the cylinder to the positions shown in Fig. 1, where all except the upper one are held in place by the belts F. The belts are run over loose pulleys F', the lower pulleys having their bearings in the weighted, vertically movable, frame F² in the usual well known man-

ner. The rack D is pivoted upon the pulley-shaft F³ and is maintained in an upright position substantially as shown by means of the downwardly projecting arms D' bearing upon the rubber blocks D² secured to the frame.

It will be observed in Fig. 1 that the mold-supporting cylinder is provided with a stop H at each of the seven angles, and that the molds supported by the cylinder, occupy the spaces between the stops. The stops are so located that when rotary movement is communicated to the cylinder the straight edges of the stops on each bar B² engage with the bottom mold on the rack and slide it out from beneath the pile onto the cylinder. It sometimes happens that the end of the mold resting against the rack, on account of the mud deposited thereon, adheres so firmly to the frame as to require a greater force than gravity, to cause it to drop upon the cylinder. Idle rollers, and rollers or pulleys, operated by a belt or chain connected with the pulley-shaft, have been employed to assist the force of gravity, but the rollers when clogged with mud would refuse to operate, or, after starting the end suddenly, were incapable of controlling its movements thereby increasing the tendency of the mold to slip too fast and become entangled between the stops and belts.

I am able to provide a certain and positive means for starting and controlling the movements of the end of the mold resting against the rack, and at the same time to diminish the cost of the machine.

The rack D and contiguous pulleys supported by shaft F³ are so arranged relatively to one another that the pulleys and belts project beyond the rack toward the cylinder and directly beneath the molds, in a position to engage with the molds at the proper time as will be explained. As the stops engage with the bottom mold of the pile on the rack, they carry it before them and pass under the next mold above, the stops being so arranged on the cylinder as to slide along on the lower edges of the sides or partitions of the mold, and hold up the pile as shown in Fig. 1. It will be seen that by reason of the inclination or tip of the inverted molds only their bottoms or upper edges come in contact with the rack, so that the lower edge of the bottom

mold does not engage with the inwardly projecting pulleys and bands; but as the cylinder advances and the stop which supports the pile of molds reaches the position indicated by dotted lines in Fig. 1 the upper ends of the molds drop until they are in a position about right angular to the rack the bottom mold occupying about the position shown by dotted lines in Fig. 1. In this position it will be seen that the lower edge of the bottom mold will be forced against the belts on the pulleys and carried by them down to contact with the cylinder.

When desired the stops may be made adjustable to feed different sizes of molds to the same cylinder, as shown in Figs. 2 and 3, and on the upper part of the cylinder in Fig. 1. The side of the stop is provided with a groove H' adapted to receive, and form a slideway for, the slotted bar J. The bar may be adjusted to project any desired distance from the straight edge of the stop by means of a threaded bolt passed through a bolt hole in the stop, and the slot J² in the bar, and a threaded nut. In case the molds used are of a short size the bar J is secured in a position projecting from the stop H as shown in Fig. 1, being varied according to the size. The stops are detachable from the cross-bars B² and may be secured by bolts through ears H². I have shown two on the same side. One may be on the opposite side from the other, as shown by dotted lines in Fig. 3. As the stops force the bottom mold from beneath the pile on the rack, they are forced to slide the whole length of the next mold above. On account of the deposit of sand and grit upon the molds the stops are very rapidly worn away by such slide movements, which necessitates their frequent renewal. When the stops are cast integral with the cross bars or ribs, the bars must also be renewed although they are not in the least worn or impaired.

By having the stops detachable as I have shown, they can be easily detached, when worn, and new ones secured to the cross-bars

and the stops may be made of a material different and more durable than the cross-bars.

In Fig. 5 I have shown a modified form of rack-support. If the rack D were rigidly secured to the frame, the concussion of the molds as they are one by one forced therefrom by the cylinder-stops, would loosen and destroy it. In most cases the spring afforded by the rubber blocks D² is sufficient, but when desired, the rack may be pivoted upon the frame itself as at D⁴, and the shaft F³ have its bearings in the oscillatory rack. The rack is held to its work by the coil spring S, which adjustably connects the pivoted rack with the frame, the eye D⁵ being capable of attachment to the frame at different points thereon by screw D⁶.

By having the bearings of shaft F³ located in the oscillatory spring-supported part of the frame, as shown in Fig. 5, instead of pivoting the frame upon such shaft, as shown, in Fig. 1 and as heretofore practiced, the various parts are subjected to less strain when the stops force a mold against the wheel.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a brick-mold sanding-machine, the combination with a rotary mold-carrying cylinder; mold-engaging stops secured to such cylinder; of a yielding mold-feeding rack pivoted at its lower end upon a fixed support; a mold-supporting belt; a belt-supporting pulley and shaft; and bearings for the shaft secured to and movable with such rack, substantially as described.

2. In a brick-mold-sanding machine, the combination with a rotary mold-carrying cylinder of an adjustable mold-engaging stop, substantially as described.

In testimony whereof I have hereunto set my hand this 15th day of September, 1888.

JAMES A. BUCK.

Witnesses:

GEO. A. MOSHER,
CHAS. L. ALDEN.