

(No Model.)

J. LATSHAW & S. ALLINDER.

SAND MOLDING MACHINE.

No. 262,795.

Patented Aug. 15, 1882.

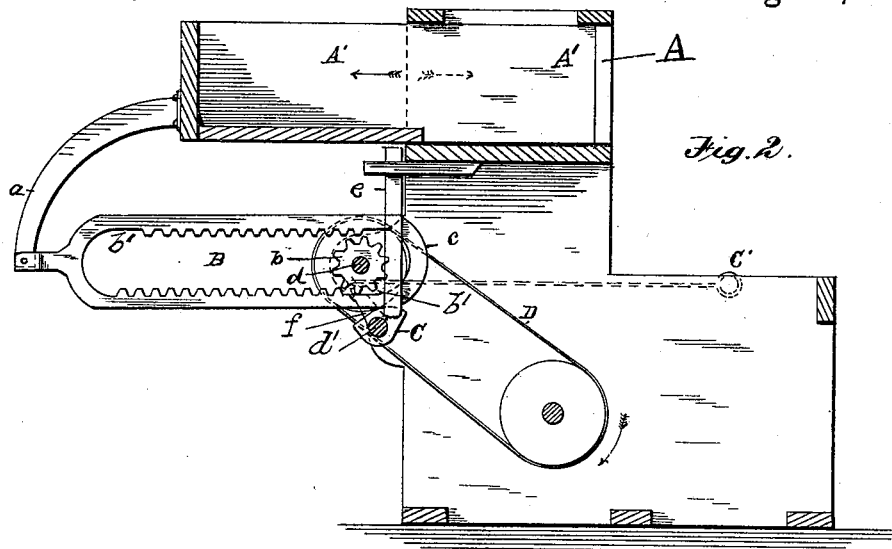


Fig. 1.

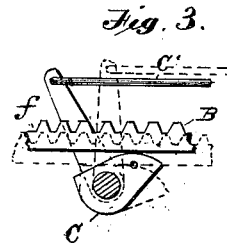
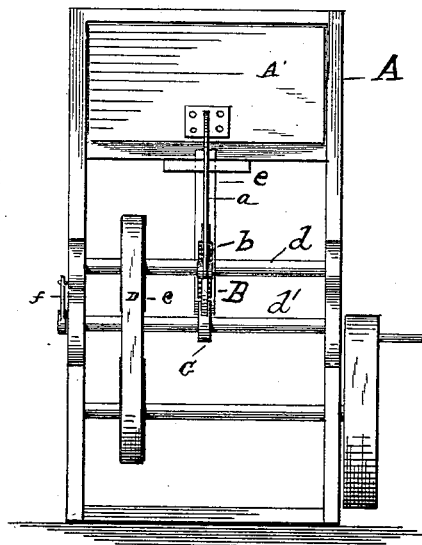


Fig. 4.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN LATSHAW AND SAMUEL ALLINDER, OF INDIANAPOLIS, INDIANA.

## SAND-MOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 262,795, dated August 15, 1882.

Application filed June 16, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN LATSHAW and SAMUEL ALLINDER, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Sand-Molding Machines; and we do declare the following to be a full, clear, and exact description of the invention, such as 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to an improvement in sand-molding machines having special reference to the feeding of the flask; and it consists in the combination, as also in the construction, of the parts substantially as herein-  
after more fully set forth and claimed.

In the accompanying drawings, Figure 1 is a sectional elevation of our improvement in sand-molding machines. Fig. 2 is an end elevation, and Figs. 3 and 4 are detailed views thereof.

In carrying out our invention we mount upon a suitable support a receptacle, A, upon or above which the sand-hopper is arranged. (Not here shown.)

A' is the sand-drawer, with that portion of its bottom left open which feeds the sand into the flask. When the drawer is receiving sand from the hopper the opening in its bottom is in a vertical line with the bottom of the receptacle A, as seen in Fig. 2. When the drawer, after having received its supply of sand, is feeding the sand into the flask, its open-bottomed end will have been slid out in the direction indicated by the dotted arrow of the receptacle A over the flask.

Our invention pertains to the mechanism for effecting this movement of the sand-drawer, and its return movement into the receptacle A under the sand-hopper.

It therefore consists chiefly of the double rack B, connected or fastened to one end of the sand-drawer A' by an arm or bracket, a, a pinion, b, a pulley, c, on the shaft d of the said pinion, and a cam, C, all operated and arranged as presently set forth. The racks, which are connected together, are arranged in a vertical plane, and guided by and between the arms of a bifurcated bar, e, suitably secured in position to the supporting-frame of the box A. The cam C is mounted on a shaft, d', hav-

ing its bearings in the same frame, and is arranged to act against the under side of the lower rack, and has a lever, f, to which is connected an operating hand-bar, C', which, with the aid of the hand, moves the cam into the positions indicated in Fig. 3. A belt, D, encompassing the pulley c and the pulley of a suitable motor, drives the pinion b, and this operates the racks effecting the movement of the sand-drawer. In causing the movement of the sand-drawer in one direction the pinion is permitted to engage with one of the racks—the upper one, for instance. In causing its movement in the opposite direction the cam C is moved by its lever f, to which the hand-bar C' is connected, so as to cause it to lift the lower rack into engagement with the pinion. Each member of the double rack B is provided with a toothless portion, b', at diagonally-opposite ends, whereby at the end of each movement of the sand-drawer the pinion b may constantly rotate without operating the rack. The direct connection through the curved bracket a to the drawer A' permits the employment of a straight rack and accompanying simple means for its guidance and operation, and does away with the necessity of an intermediate connecting-link and a curved rack or its equivalent, as heretofore employed.

We claim and desire to secure by Letters Patent—

1. In a sand-molding machine, the combination of the drawer A', bracket a, double rack B, having toothless portions b', pivotally secured to the bracket a, the pinion b, and means for meshing the rack with either side of the pinion at will, substantially as shown and described.

2. In a sand-molding machine, the combination, with the sand-drawer A', of the bracket a, a double rack, B, having toothless portions b', and pivotally secured to the bracket, a bifurcated guide, e, a pinion, b, a cam, C, and means, substantially as shown and described, for operating the pinion and cam, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN LATSHAW.  
SAMUEL ALLINDER.

Witnesses:

CHAS. F. SEATON,  
WM. A. VAN BUREN.