

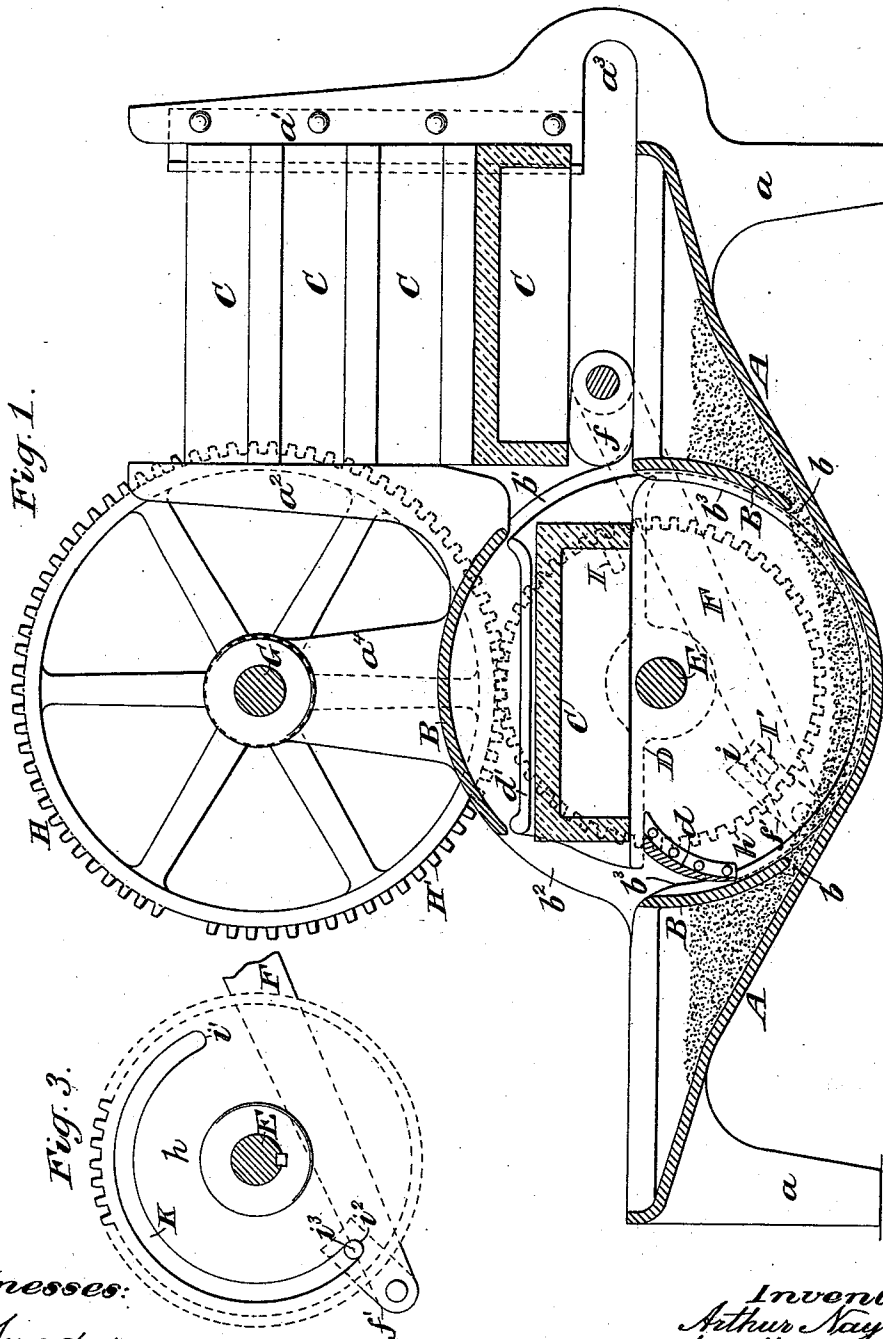
(No Model.)

2 Sheets—Sheet 1.

A. NAYLOR.
BRICK MOLD SANDER.

No. 464,286.

Patented Dec. 1, 1891.



Witnesses:
O. Sundgren
George Barry

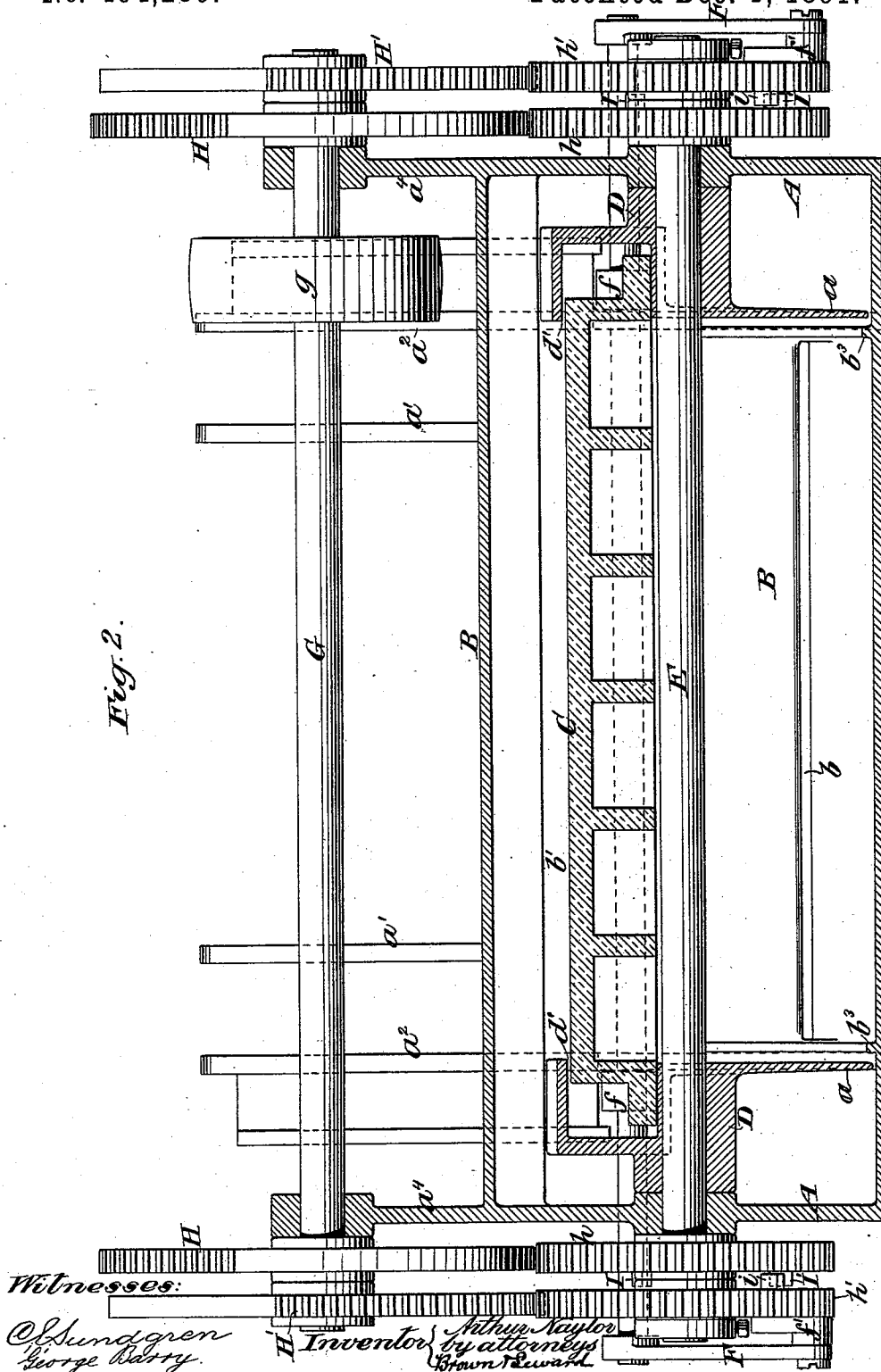
Inventor:
Arthur Naylor
by attorneys
Brown & Howard

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Fig. 2.



UNITED STATES PATENT OFFICE.

ARTHUR NAYLOR, OF PEEKSKILL, NEW YORK.

BRICK-MOLD SANDER.

SPECIFICATION forming part of Letters Patent No. 464,286, dated December 1, 1891.

Application filed March 25, 1891. Serial No. 386,307. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR NAYLOR, of Peekskill, in the county of Westchester and State of New York, have invented a new and useful Improvement in Machines for Sanding Brick-Molds, of which the following is a specification.

My invention relates to an improvement in machines for sanding brick-molds in which provision is made for carrying the molds into engagement with a supply of sand, so as to bring the sand into contact with the entire interior of the mold, and then allow all that does not adhere to the mold to escape and for automatically feeding the molds into position to be sanded.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the machine in transverse vertical section, showing some of the molds in end elevation. Fig. 2 is a view in vertical longitudinal section, showing the gear in elevation; and Fig. 3 is a modified form of a portion of the gear.

A broad trough is provided along its central depressed portion with a cylindrical shell open at the opposite sides near the bottom to allow the sand in the trough to run into it and open at its opposite sides above the center for the entrance and discharge of the molds. Within the said cylindrical casing there is a rotary carriage adapted to receive the molds as they are fed within the casing and carry them around within the casing in such a manner as to at first scoop the sand into them and subsequently empty it. The molds to be sanded are arranged in a vertical series at one side of the casing and are automatically drawn into position within the casing as the mold therein is sanded. The operating mechanism is so timed that the carriage for the sanded mold will rest while the next succeeding mold is being drawn into place and it is being discharged and then moved, carrying the mold to be sanded into engagement with the sand and back to position to empty the sand, the operation being continuous.

A represents the trough, shown in the present instance as supported upon legs a and

provided lengthwise along its depressed portion with a cylindrical shell or casing B, the latter having openings b in proximity to the bottom of the trough to allow the sand in the trough to flow from opposite sides down into the depressed portion of the trough within the casing B. The said casing is also provided upon its opposite side above the center with openings b' and b'' , the former for the entrance of the mold to be sanded and the latter for the discharge of the mold.

The molds are represented by C, one of them being shown in transverse section within the casing B, another in transverse section ready to be dropped into position to be slid within the casing, and others in end elevation superposed one upon another in position to be successively fed within the casing. The molds are held in a vertical series by means of suitable guides a' and a'' , projecting upwardly from the frame of the trough A.

Within the casing B there is located a carriage D, fixed to a rotary shaft E, extending longitudinally through the casing. The carriage D is of skeleton formation, so as to leave free access to the interior of the mold when the latter is adjusted thereon. The mold C is fed to the carriage with its open face downward, and the carriage is provided along its advancing edge at one side of the mold with a scoop d , the free edge of which travels in proximity to the bottom of the trough A as the carriage is carried around by the shaft E and serves to scoop the sand and direct it into the mold. The interior of the casing B is provided throughout its lower half with guide-ribs b'' , which project inwardly a short distance from the wall of the casing and serve to prevent the mold from engaging the wall of the casing as it is carried around therein. The ends of the carriage D are made to lap over the ends of the mold, as shown at d' , to hold them in position on their seats.

From the above it will be seen that as the mold seated upon the carriage D within the casing B is carried around within the casing it will become gradually filled with the sand scooped therein from the bottom of the trough, and as it comes over into the position shown in Fig. 1, in which it was fed into the casing and in position to be discharged therefrom,

the sand which does not adhere to its walls will be allowed to freely return to the bottom of the trough. The next succeeding trough to be sanded is held suspended by means of a pair of feed-arms f , one at each end, connected by links F with a crank-pin on a wheel mounted on the shaft E , as will be hereinafter more particularly referred to. While the mold C within the casing B is being carried around into position to receive the sand and back to its position to be discharged, the arms f are carried back into a recess a^3 in the trough-frame out from under the ends of the next succeeding mold, and the latter is allowed to drop into position in front of the arms f , to be drawn by them into position within the casing B when the mold therein has reached its position to be discharged. The advance of the next succeeding mold serves to crowd the mold which has been sanded out from within the casing to be removed for use.

The operating mechanism is constructed and arranged as follows: A drive-shaft G is mounted in standards a^4 , preferably fixed to or formed integral with the ends of the trough A , and has fixed thereon a band-pulley g , by means of which motion is transmitted to the shaft G from a suitable source of power. (Not shown.) The shaft G is provided upon each of its opposite ends with a pair of mutilated gear-wheels H and H' , fixed to rotate with the shaft. The mutilated gear-wheels H and H' mesh with gear-wheels h and h' on the ends of the shaft E , the wheels h being fixed to the shaft E and the wheels h' being loosely mounted thereon. The links F are connected with crank-pins f' , fixed to the faces of the wheels h' . The mutilated portions of the gears upon the wheels H and H' are so arranged with respect to each other that, supposing the parts to be in the position shown in Fig. 1, the two wheels h and h' will be simultaneously rotated until the feed-arms f have reached the outward limit of their stroke within the recess a^3 . At this moment the mutilated portion of the gear on the wheel H' will have come adjacent to the wheel h' and the latter will cease to rotate, while the rotation of the wheel H , rotating the wheel h , and hence the mold C , will continue until the shaft E has completed its revolution and brought the mold C back to its normal position to be discharged. At this moment the mutilated portion of the gear-wheel H will have come adjacent to the wheel h and the latter will cease to rotate. At this moment, however, the gear upon the wheel H' has come in mesh with the wheel h' and started it upon its further revolution, thereby drawing the feed-arms f toward the casing B and advancing the next succeeding mold into position upon the carriage D within the casing B and at the same time crowding the sanded mold out from within the casing B . The said wheel h' will

continue to rotate until the feed-arms f have advanced the mold to be sanded into its position within the casing B and then receded to the position shown in Fig. 1, when the two wheels h h' will be again simultaneously operated as before.

For the purpose of preventing any displacement of the wheel h' , which might prevent it from catching the gear upon the wheel H' at the moment the wheel h stops its revolution, I have provided the wheel h with a pair of lugs or stops I and I' and have provided the wheel h' with a single lug or stop i , so located that the lugs or stops I I' will engage the lug i and adjust the wheel h' if the latter be out of proper position.

In Fig. 3 I have shown the wheel h as provided with an elongated curved slot K , the ends i^1 and i^2 of which correspond to the lugs I and I' in the form shown in Figs. 1 and 2, and have provided the wheel h' with a pin i^3 , adapted to travel in the slot K , the pin i^3 corresponding in function to the lugs i in Figs. 1 and 2.

What I claim is—

1. In a machine for sanding molds, the combination, with a receptacle for the sand and a casing located in the sand-receptacle and having openings therein for the entrance of sand and for the reception of molds, of a revolving carriage located within the casing and provided with a seat for the reception of the mold and means for rotating the carriage, and hence the mold, within the casing to bring the mold into contact with the sand, substantially as set forth.

2. In a machine for sanding molds, the combination, with a receptacle for the sand and a casing located in said receptacle and provided with openings to admit sand into its lower portion and with openings to admit the mold within its upper portion, of a revolving carriage located within the casing and provided with a seat for the reception of the mold, means for supporting the molds to be sanded in proximity to the casing, and means for automatically feeding the molds one after another from without within the casing, substantially as set forth.

3. In a machine for sanding molds, the combination, with a sand-receptacle and a casing located therein and provided with openings for the reception of the sand and molds, of a revolving carriage located within the casing, a seat upon the carriage for the reception of the mold, and a scoop attached to the carriage in position to direct the sand within the mold as the carriage with the mold thereon is revolved, substantially as set forth.

4. The combination, with the revolving mold-carriage and the feeding device for sliding the molds laterally on the carriage, said feeding device having a reciprocating movement in the direction of the path of feed, of intermittent gear connecting the drive-shaft

with the carriage-operating shaft and with the feed-operating device for operating them at suitable intervals, substantially as set forth.

5 5. The combination, with the revolving carriage and the device for feeding the molds to the carriage, of the intermittent gear for operating the revolving carriage and the feed at suitable intervals and interlocking stops

located upon the respective gears for driving the carriage and feed, whereby the operative position of said gears is insured, substantially as set forth.

ARTHUR NAYLOR.

Witnesses:

J. E. HAINES,

G. M. NAYLOR.