No. 647,494. Patented Apr. 17, 1900.

C. H. HORTON.

MOLD SANDING MACHINE.

(Application filed Dec. 28, 1898.)

(No Model.)

FIG. I.

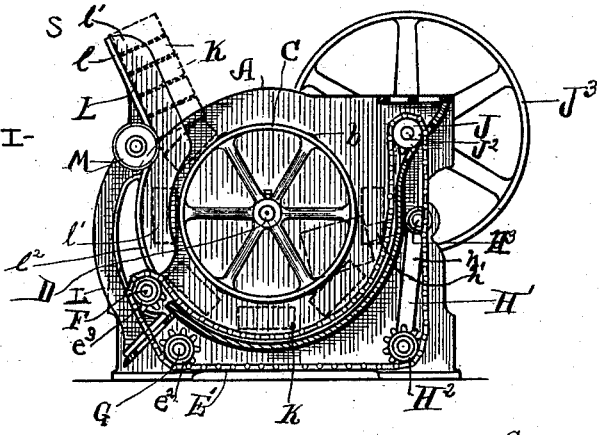


FIG. II.

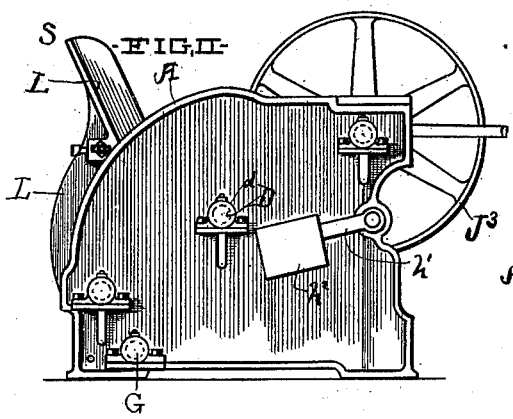


FIG. III.

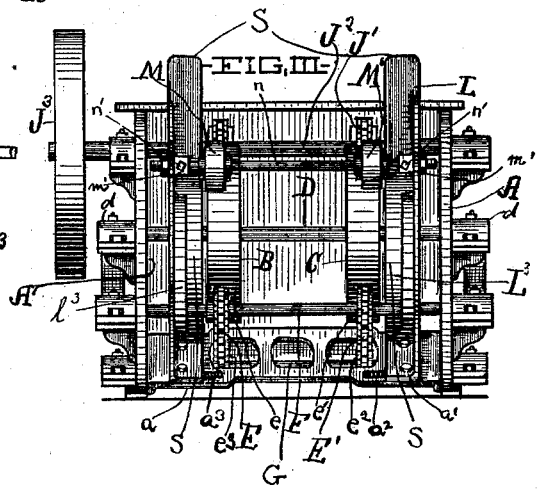


FIG. IV.

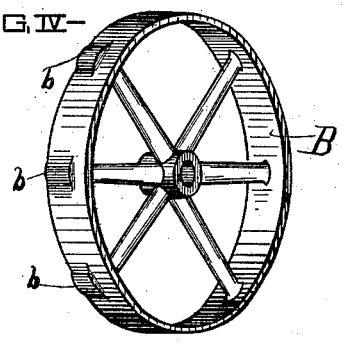
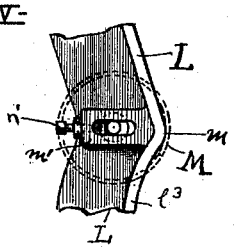


FIG. V.



WITNESSES:
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UNITED STATES PATENT OFFICE.

CHARLES H. HORTON, OF PAINESVILLE, OHIO, ASSIGNOR TO THE HORTON MANUFACTURING COMPANY, OF SAME PLACE.

MOLD-SANDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 647,494, dated April 17, 1900.

Application filed December 28, 1898. Serial No. 700,505. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. HORTON, of Painesville, Ohio, have invented certain new and useful Improvements in Mold-Sanding Machines; and I do hereby 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 pertains to make and use the same.

My invention relates to machines for sanding brick-molds; and it consists in the peculiar construction of the same, whereby the molds may be stacked and fed in rotation to the sand-box.

My invention also consists in certain other features of construction to be hereinafter set forth and claimed.

In the drawings, Figure I is a vertical sectional view of a sanding-machine embodying my invention. Fig. II is a view in side elevation of the sanding-machine. Fig. III is a view in front elevation of the machine. Fig. IV illustrates the carrier or feed wheel. Fig. V illustrates a sectional view of a portion of the hopper or slide frame, showing the location and method of adjusting the rollers used in connection with the slide.

A represents the casing or sand-box proper, in which are mounted two feed or carrier wheels B C, mounted on a shaft D, which in turn is journaled at the sides of the said casing A in suitable boxings *d d*.

The wheels B and C are provided with a number of cams *b*, arranged on their peripheries at suitable distances from each other. The curvature of the surface of these lugs is such as to enable them to readily pass under a mold when it is lying on the wheels. When the machine is operated, the lugs pass under the upper end of the mold as they lie on the wheels, tipping them at an angle which enables them to slide into the opening at the top of the sand-box. I desire it clearly understood that these lugs are designed to give the proper inclination to the molds to adapt them to enter the sand-box and are not intended to propel the molds in any way. If for any reason the molds become caught in the sand-box, these lugs will pass under them and will not jam the molds together.

E E′ represent endless sprocket-chains which are guided by idler sprocket-wheels *e*, *e′*, e^2, and e^3, respectively. Two of the sprocket-wheels, *e e′*, are mounted on a shaft or spindle F, and two, e^2 and e^3, are mounted on a shaft G.

H′ represents a device for tightening the chain E′. A similar device (not shown in the drawings) is located on the opposite side of the machine for tightening the chain E. The device H′ comprises two arms *h h′* at suitable angles, as illustrated. One of said arms *h′* is provided with an adjustable weight h^2, and the other arm is provided with an idler or loose sprocket-wheel H^2 at its lower end, which engages the respective chains and keeps the same taut. It will be understood that the tightener-arms *h h′* are properly journaled in the side of the casing A, as at H^3, so as to give them proper play.

J J′ represent driving sprocket-wheels, around which the chains E and E′ are respectively carried. The sprocket-wheels J and J′ are secured to a shaft J^2, which in turn is rotated, by means of a pulley J^3 and suitable connections with the driving power, in such a manner as to regulate the speed of the machine according to the demand for the molds or to the supply of the same.

The chains E and E′, in connection with wheels B C, act as carriers for the molds K, as illustrated in Fig. I, and the tighteners H and H′ act to so tighten the chains E and E′, respectively, against the wheels B and C as to carry the said molds along through the machine and deliver them.

S represents a two-part adjustable hopper and guide adapted to receive, hold, and guide the molds and in connection with wheels B and C to feed the molds one after the other to the machine. The hopper S, as herein-before set forth, is composed of two parts, each of which is adjustably secured to an inclined plate mounted at the base of said frame A at its rear end, as at *a a′*, and slots a^2 a^3 are provided, which allow of the adjusting of the parts L L′ of the hopper toward or from each other, as desired or found necessary and according to the length of the molds K. Each of the parts L and L′ of the hopper comprises a standard or support L, an

inclined bracket l, mounted on said standard, a depending curved flange or guide l^2, and a flange l', forming a continuous side piece for both the bracket l and the guide l^2.

The molds are placed in the hopper S with their faces downward. The flanges l^2 are curved to conform to the curvature of wheels B and C and are located so as to allow of the free passage of the molds K between them and the wheels B and C, as illustrated in Fig. I, and act to guide the said molds to chains E and E′ and between same and the wheels B and C.

M and M′ represent two rollers mounted upon a shaft n, which has its bearings near the top of each of the standards L and L. This shaft n, is adjustable in its bearings by means of a thumb-screw n'. By adjusting the shaft n the rollers M and M′ are made to project more or less beyond the surface of the hopper S. The axial line of the rollers M and M′ is slightly lower than the peripheries of the wheels B and C, and the said rollers are so adjusted that their peripheries project slightly beyond the interior of the hopper, as illustrated more clearly in Fig. V. The function of rollers M and M′ is to avoid frictional contact between the side of molds K and the angular portion m of the hoppers S and allow of the molds dropping at this side either of their own gravity or by reason of being started by cams or projections b b. It will be noticed that the cams or projections b b on wheels B C are of such a construction that while they act against the sides of the molds as starters and tilters to lift the inner ends of the same still it is impossible for the said cams to jam or cramp the molds against the hopper S, inasmuch as they will slide or ride under the molds if the molds are not started or dropped to feeding position.

In operation the molds K are stacked in the hopper S so that their open faces will be downward, as illustrated in Fig. I. The wheels B and C in revolving cause the cams b b to engage the molds and act as starters to feed them between the said wheels and the lower part of the hopper S and are caught and carried by the chains E E′ and between them and the wheels B and C and carried through the sand-box, where they are thoroughly sanded, and from thence they are carried upward around said wheels B and C and delivered in any desired manner.

While I have set forth certain details of construction which I consider best adapted to perform their several functions when properly assembled, I do not desire to be limited to the same, inasmuch as certain of these may be modified.

What I claim is—

1. In a mold-sanding machine, the combination with the casing and mechanism therein, of a hopper located in proximity to said casing, said hopper comprising two vertical standards longitudinally adjustable upon an inclined plate located at the base of the said casing and at the rear end thereof, an inclined bracket mounted upon the top of each standard, a curved guide depending from the top of each standard below the said bracket, an adjustable shaft extending horizontally between the said standards and having its bearing in the respective standards in proximity to the lower end of each bracket, and rollers located upon the said shaft, substantially as described, for the purpose set forth.

2. In a mold-sanding machine, the combination of a casing, an inclined plate located at the base of the said casing at the rear end thereof, two vertical standards adjustable horizontally on said plate, brackets supported by and rigidly secured to said standards, curved guides secured to and depending from said standards, and two adjustable rollers mounted on a shaft supported by the said standard in proximity to the lower ends of the said brackets, substantially as described, for the purpose set forth.

3. In a mold-sanding machine, the combination with a casing, and a hopper located at one end of said casing, of wheels mounted in said casing, said wheels having, on their peripheries, curved-faced lugs adapted to pass under and tilt the mold into position for entering the casing, substantially as described, for the purpose set forth.

Signed by me at Painesville, Ohio, this 18th day of November, 1898.

CHARLES H. HORTON.

Witnesses:
DAVID H. PROPER,
LOUISE BERNARD.