

No. 620,809.

Patented Mar. 7, 1899.

S. TAYLOR.
BRICK PRESS.

(Application filed Oct. 20, 1898.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1.

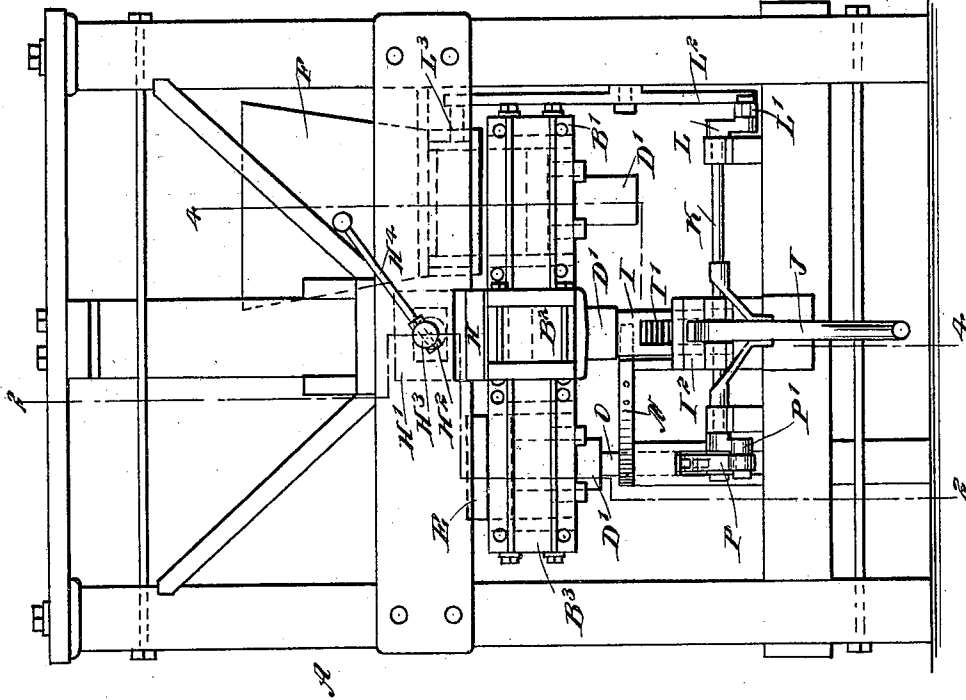
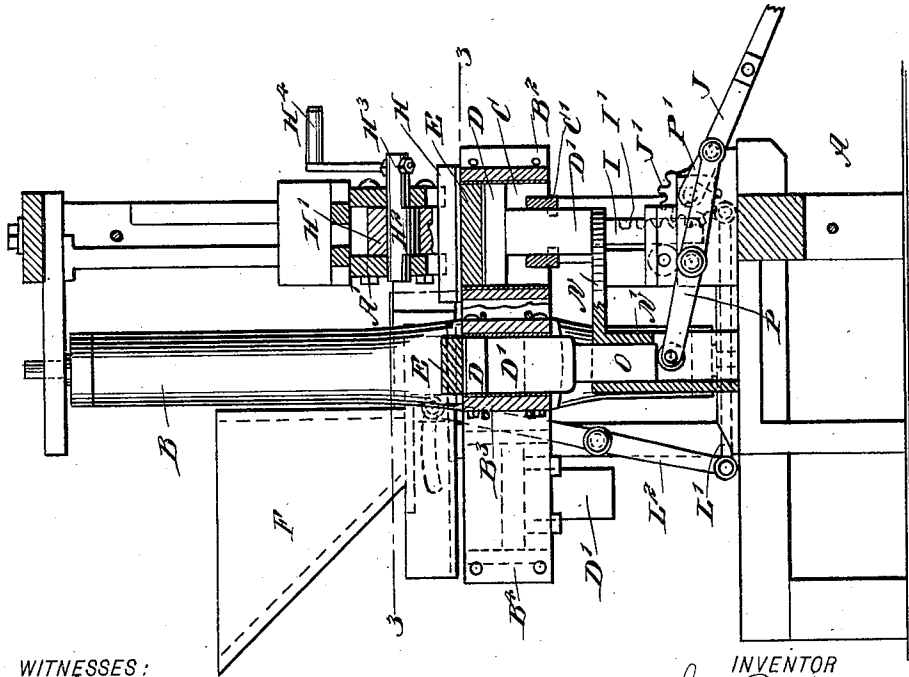


FIG. 2.



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FIG. 3.

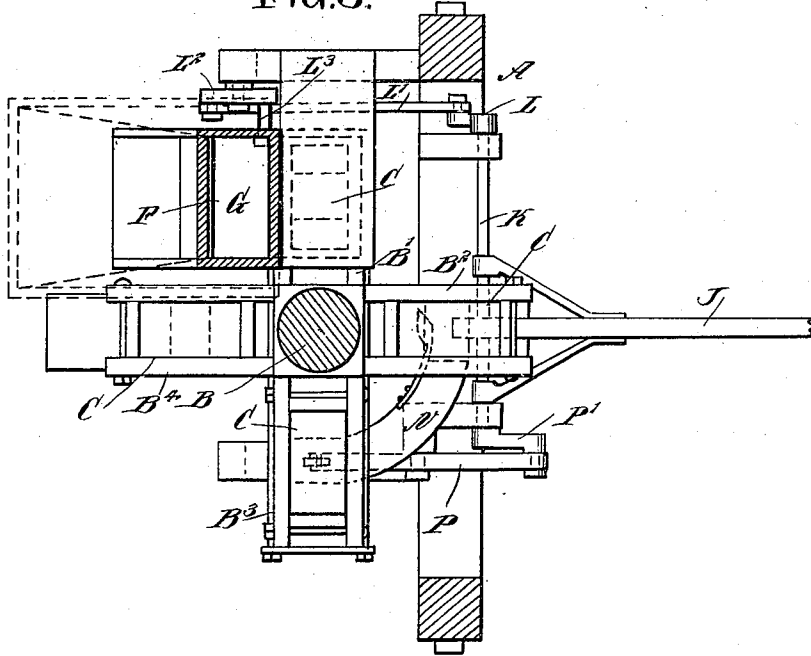
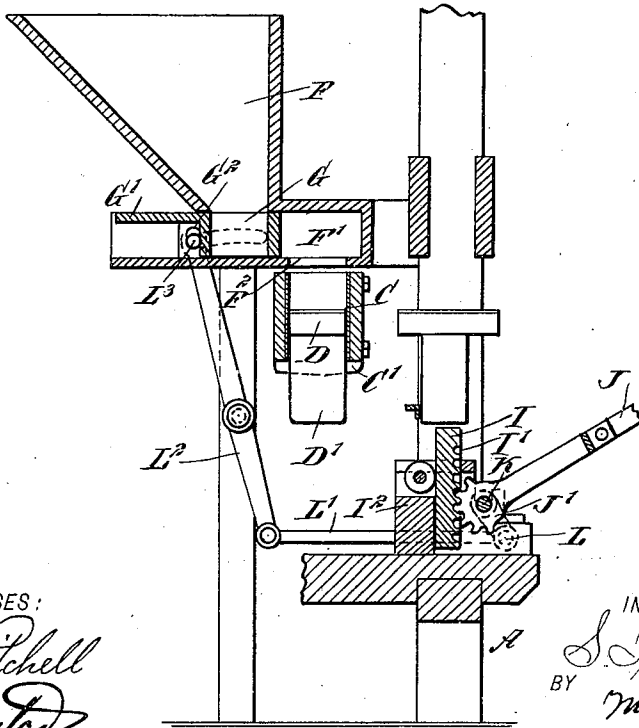


FIG. 4.



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SYLVESTER TAYLOR, OF CENTER, INDIAN TERRITORY.

BRICK-PRESS.

SPECIFICATION forming part of Letters Patent No. 620,809, dated March 7, 1899.

Application filed October 20, 1898. Serial No. 694,069. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER TAYLOR, of Center, Chickasaw Nation, Indian Territory, have invented a new and Improved Brick-Press, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved brick-press which is simple and durable in construction, very effective in operation, and arranged to properly press the material to a desired degree to form a good brick and to re-press soft bricks.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the improvement. Fig. 2 is a transverse section of the same on the line 2 2 in Fig. 1. Fig. 3 is a sectional plan view of the same on the line 3 3 in Fig. 2, and Fig. 4 is a transverse section of the improvement on the line 4 4 in Fig. 1.

The improved brick-press is mounted on a suitably-constructed frame A, in which is journaled a vertically-disposed post or shaft B, provided with a series of radial arms B¹ B² B³ B⁴, placed an equal distance apart and each carrying a mold C, open at the top and bottom and preferably lined with a suitable material, as indicated in the drawings. In each mold C is fitted to move a plunger D, provided with a depending lug D', adapted to be engaged by a lifting device, as hereinafter more fully described, for pressing the material into a brick E. Normally the plunger D rests in the lower end of the mold C on a cross-piece and guide C'. (Shown in Fig. 2.)

The material to be pressed into a brick is contained in a hopper F, opening at its lower end into a carrier G, fitted to slide in the hollow base F' of the hopper, said carrier G having an opening adapted to register with the lower end of the hopper to permit the material to pass by its own gravity into the opening to fill the carrier. The carrier is then moved forward to place the opening out of registry with the hopper and to carry the material to an opening F² in the bottom of the

hollow base F', said opening being adapted to register with the upper end of a mold C at that time under the base, as plainly shown in Fig. 4. The material now passes by its own weight from the carrier G through the opening F² into the mold to fill the same, the bottom of the mold being closed by the plunger D.

The carrier G is provided at its rear end with a cut-off G', moving under the bottom opening of the hopper F at the time the slide moves forward, as above described, so as to retain the material in the hopper during the time the mold is filled from the carrier.

The machine is adapted to be operated and controlled by manual force, the various moves and positions of the parts being determined by the eye of the attendant.

When a quarter-turn is given to the shaft B, then the arm, having its mold filled with material from the hopper, as described, moves under a cover or resistance plate H, having an upwardly-extending arm H', fitted to slide in suitable bearings A' on the main frame A. In the arm H' is arranged an eccentric H², secured on a shaft H³, journaled on the frame A, a crank arm or handle H⁴ being on the outer end of the shaft, so that the operator by turning the said crank-arm can raise or lower the arm H', and consequently the plate H. When the filled mold passes under the plate H, the operator turns the crank-arm H⁴ to bring the cover or resistance plate H downward upon the top of the filled mold, and the plunger is now pushed upward by a device presently to be described for pressing the loose material contained in the mold into a brick.

The lug D' of the plunger D is adapted to be engaged by the upper end of a bar I, formed in its front with rack-teeth I' and fitted to slide vertically in suitable bearings I², carried by the frame A. The teeth I' are in mesh with a segmental gear J', formed on the fulcrum end of a lever J, having its fulcrum-shaft K journaled in suitable bearings attached to the main frame A. (See Fig. 3.) Now when the operator swings the lever J downward the segmental gear-wheel J' imparts an upward sliding motion to the bar I and pushes the lug D', with the plunger D, upward to press the material in the mold and form a brick, as above mentioned.

The carrier G, previously mentioned, is reciprocated in the base F' of the hopper F by means actuated from the shaft K, which latter is for this purpose provided at one end with a crank-arm L, connected by a link L' with a lever L², (see Figs. 3 and 4,) fulcrumed on the main frame A and carrying at its upper end a pin L³, engaging an elongated aperture G² in the carrier G. When the lever J is swung downward to impart an upward movement to the rack-bar I, then the turning of the shaft K causes the crank-arm L and link L' to impart a swinging motion to the lever L² to shift the carrier G from under the opening of the hopper F and over the opening F² to fill the mold under the base F' with loose material at the time a brick is pressed at the front of the machine, as above described. Then another quarter-turn is given to the shaft B to cause the raised lug D' of the front plunger D to pass upon a fixed segment N and hold the plunger in an uppermost position, said lug finally passing over a block O, fitted to slide vertically in a guideway N', formed on the segment N. (See Fig. 2.) The lower end of the block O is engaged by a friction-roller journaled in one end of a lever P, fulcrumed on the main frame and connected at its front end with a crank-arm P', secured on the shaft K, as plainly shown in the drawings.

When the lever J is swung downward, as previously described, for pressing the brick at the front of the machine and for shifting the carrier G to one side of the machine, then at the same time a swinging motion is given to the lever P from the shaft K and crank-arm P' to impart an upward sliding motion to the block O and push the lug D' and the plunger D farther upward in the mold C to lift the brick out of the mold and permit of conveniently removing the brick from the machine. (See Fig. 2.) The lever J is swung upward at the beginning of an operation to cause the carrier G to return to a rearmost position and to move the rack-bar I and the block O downward into a lowermost position, after which a quarter-turn is given to the shaft B to bring the filled mold to the front of the machine to press the material into a brick, as above described, and to bring the pressed brick into position for discharge from the mold, as above explained. Thus at each quarter-turn of the machine one mold is filled with material, the one at the front has the material pressed into a brick, and the next following mold has its plunger actuated to move the pressed brick out of the mold for removal from the frame. It is understood that after the brick is pressed by the plunger in the mold at the front of the machine the operator turns the crank-arm H⁴ back to its former position to lift the plate H from the top of the mold containing the pressed brick.

The machine is very simple and durable in construction, is not liable to get out of order, and can be readily manipulated by the help

of one man and a boy, the man for actuating the lever J and the boy for removing the bricks.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a brick-press, the combination with a frame, of a vertically-disposed shaft mounted to turn therein, a plurality of arms carried horizontally by the shaft and comprising each a mold, a plunger mounted to reciprocate vertically in each mold, feed devices for supplying the molds as they turn with the shaft, a cover-plate, an eccentric-shaft with which the plate is connected and by which the plate is carried to move toward and from the molds, the eccentric-shaft being mounted in the frame, a vertically-movable bar adapted to engage the plungers, to push the same upward, the bar being located at a point beneath the cover-plate, whereby to compress the brick, a fixed segment located at one side of the bar and adapted to have the raised plunger movable over the upper face of the segment, and means mounted at the end of the segment opposite the vertically-movable bar, by which to further raise the plungers to dislodge the brick from the mold.

2. In a brick-press, the combination with a frame of a vertically-extending revoluble shaft, a plurality of arms carried horizontally thereby and comprising each a mold, a hopper located over the arms and having a hollow base, a carrier mounted to move in the base to feed the molds as they pass beneath the same, a rock-shaft mounted on the frame, a connection between the rock-shaft and the carrier to drive the carrier, a cover held by the frame and adapted to have the molds move thereunder, a plunger mounted to move vertically in each mold, a vertically-movable rack-bar situated at a point beneath the cover-plate and adapted to engage the molds to raise the same and compress the bricks, a lever mounted on the said rock-shaft and having a segmental gear meshing with the rack-bar, to move the rack-bar in unison with the said carrier, a fixed segment located at one side of the rack-bar and adapted to have the raised plunger move over the upper face thereof, a vertically-reciprocal block mounted at the end of the segment opposite the vertically-movable bar and adapted to further raise the plungers to dislodge the bricks from the molds, and a second lever having connection with the said rock-shaft and with the block, to drive the latter.

3. In a brick-press, the combination with the frame, of a vertically-disposed shaft mounted to turn therein, a mold carried on and turning with the shaft, a plunger mounted in the mold, a cover-plate supported on the frame in a plane above the mold, means for raising and lowering the cover-plate to engage and disengage the mold, a fixed segment located below the plane of the mold and adapted to

have the plunger slide over the upper face thereof, whereby to hold the plunger raised, means at one end of the segment for raising the plunger to compress the brick and to place the plunger on the segment, and means at the other end of the segment for further raising the plunger to dislodge the brick, the first-

named means being located at a point beneath the cover-plate.

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Witnesses:

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