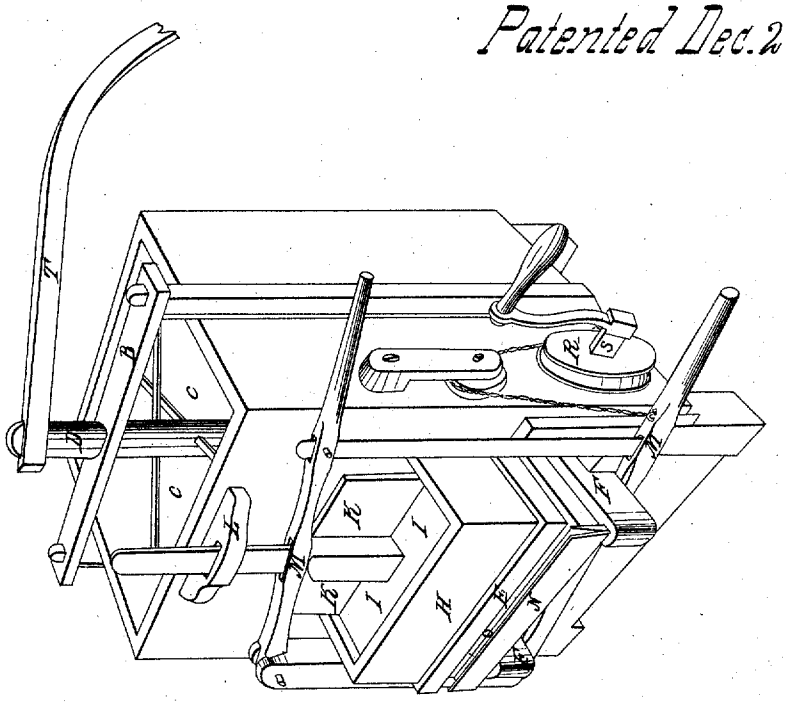
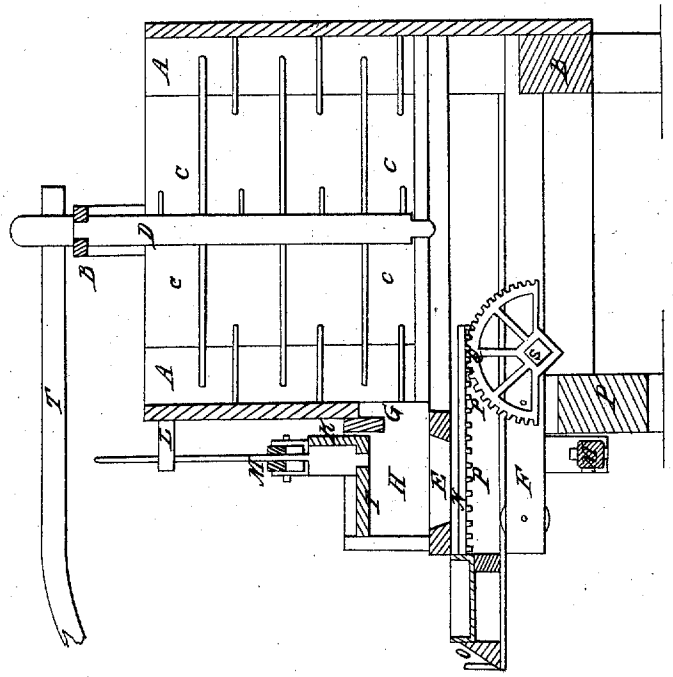
9298X

B. Hamblett,

Brick Machine.

Patented Dec. 28, 1835.





A.M. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

Dec 28 1835 9298X 29

Benjamin Hamblet Portland Maine

Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Benjamin Hamblet himself of his improvement in the machine for making brick and Tile

To all to whom these Presents shall come

Be it known that I the said Benjamin Hamblet of Portland in the County of Cumberland & State of Maine have invented a new and useful improvement in the manner of making and constructing machinery for making mortar and striking the same into brick & tiles by Horse power or any other power and that the following is a full & exact description of the construction and operation of the said machine as invented and improved by me— 1. I make a frame five & half feet high & three & half feet square for striking four bricks in a mould & four feet square for striking six Bricks in a mould. I have three sets of girts one near the top middle and bottom. Then I plank it all round & spike them strong. On the middle girts I lay one cross girt from right to left. On these girts I lay a flooring of Plank which makes the bottom of the mortar pit. In the center of this floor I make a round hole four inches deep and four inches diameter to receive the lower gudgeon of the grinding shaft. Then I lay another cross girt from ~~the~~ right to ~~the~~ left on the uppermost of girts and make a large hole through it directly over the hole in the bottom through which I pass the grinding shaft. On two or more of the sides I put in a row of wooden pins about horizontally five inches more or less apart from the bottom to near the top. These pins may be eighteen inches long more or less. This mortar Box & frame may be made in two parts. The bottom part of it in which the striking apparatus as placed may be about two feet high. The posts of timber six by six more or less with two sets of girts. The upper two girts whereon the floor of the mortar box is placed should be flush with

9298x

the tops of the posts. The timbers which make the place for the false moulds should be put under these girts. The tram ways for the carriage should be on the lower tier of girts. Then the upper part on the frame for the mortar box may be made of joists of the same bigness as the lower part & planked all round. & set on the under part and fastened on by strong hasps or spiked on. The bigness of it may be regulated as above according to the number of bricks to be struck at a time

2. Then I have a strong shaft which Pass perpendicularly in the mortar Box. the lower gudgeon standing in the mortice aforesaid and the upper end passing up through the cross girt about two feet above it. This shaft is set with two rows of pins horizontally & cross wise and long enough to reach nearly across the mortar Box and as the shaft turns round these pins pass between the pins aforesaid set in the sides of the box & thereby the mortar is ground & made for the Bricks. On the top of this shaft a sweep is framed after the common manner of the cyder Mill by which a horse turns the machine — B. In front of the bottom an opening is made about four inches deep and a little longer than the length of the brick moulds through which the mortar passes from the mortar box to fill the moulds, as the bricks are struck by the operation of the machine. A. On the under side of the girts on which the floor of the mortar box is laid Spiked in two timbers four inches square more or less as may be necessary & fasten them on strong. These two timbers should project out in front two foot and have a like piece framed in the ends. These two timbers should be about two feet apart when four bricks are struck at once & about three feet apart when six bricks are struck at once. On these two the place is made for the false moulds through which the mortar is forced on to the brick moulds. The place for the false moulds is made bevelling all round and the false moulds are made bevelling also exactly to suit. By this bevel shape the false moulds are kept in their place. These timbers also serve to confine the carriage on the upper side which carries the moulds in and out when striking & making bricks.

3. These false moulds or tubes, have four or six openings according to the number of Bricks the moulds carry and corresponding nearly in

size with the brick moulds but a little smaller all round. The open ings in the false moulds in each aperture should be bevelling on each side & end upwards so as to hold the mortar from dropping down when the brick moulds are passing in and out. — 6. I make three sides of a crib or box of Plank eight inches high which stands round the aperture (No 4.) in which the false moulds are placed and is a little larger than that aperture. The two inner ends of the before named pieces of this crib pass into two mortices in the front side of the mortar box. This crib receives the mortar from the mortar box aforesaid through the opening in front of the mortar box ready to be forced down through the false moulds into the brick moulds & may properly be called the receiver. This crib is kept in its place by two strong pins standing in front of it or by hasps — 7. A dasher or follower. works in this receiver made as follows. A thick piece of Plank is fitted to the size of this receiver. Then another piece of Plank six inches wide more or less is put edgeways upon the follower & flush with inner edge. This part of the dasher when the dasher is down closes the opening in front by which the mortar passes from the mortar box into the receiver when the mortar tub is not wanted; and this is done every time the dasher is pressed down to fill the moulds. And when the dasher is raised the aperture is opened and the mortar again let into the receiver. and so on continually. Close to the upright part of this dasher in the middle a piece of Plank ten inches wide is framed in with a tenon at each edge and may be about three feet long. The upper end of the handle passes through a guide to keep the motion steady & perpendicular. The handle of this dasher also passes loose through a mortice in the lever which works it & works on this mortice on a pin.

8. On the left side of the machine in front a loose post stands perpendicular. three feet eight inches long more or less & is pivil loose on to a steel pin in that corner post of the machine.

9. The left end of the upper lever is set loose in a mortice in the upper end of this loose post & held in by a pin. This lever reaches horizontally across the machine and about two feet beyond. When the machine is

in operation the dasher is worked up and down by this leaver & another. The other leaver is fixt into a loose mortice in the lower end of the loose foot aforesaid and held in by a pin in the same manner that the other leaver is & runs parallel with below the carriage aforesaid & may be of the same length with the upper leaver. These leavers are connected together on the right side of the receiver by a piece of wood 4 by 1 inches & parallel with the loose foot aforesaid. This piece which I call a hauling brace passes loose through a mortice in each leaver & is held in each mortice by a pin. The use of this leaver is to tread upon with the foot in bring down the dasher, in filling the moulds with mortar which is much easier than to press the upper one down with the hand. Both can be used together if necessary — 10 — Two pieces of joist are fastened into the lower guts for ways for the carriage to travel in and out on when the machine is in operation. Two friction Rollers are set in each gut with iron shaped edges. These ways must be so placed as to bring the upper side of the carriage & moulds close under the false moulds so as to sink the upper sides of the bricks. — 11. Then I make a carriage to travel on the ways aforesaid three feet long & two & quarter feet wide when four bricks are struck at a time & three feet wide when five bricks are struck at a time. This carriage is made of two pieces of plank set up edgewise & two feet of the back part of the carriage is floored over with boards. The way pieces and floor should be five inches thick. These way pieces should come right over the friction Rollers (No. 10.) Then cast iron ways with a iron groving should be let into these wooden ways so as to come directly over these friction Rollers & travel on them when the carriage travels in and out. The front part of this carriage should be cut down enough to let the brick mould & strike board in flush with the floor. The plank should be about ten inches wide. Then a small trough should be made in front of the moulds into which to wipe the clay when striking. The use of the flooring of the back part of the carriage is to keep the mortar from caging down while the carriage is running in and out. On the underside of this flooring a cast iron tooth rack one & a half feet long is placed and fastened on.

12. The Cog Wheel aforesaid is made of Iron & is about 18 inches diameter more or less which is made to work forward & fast on an iron shaft of proper size say 1¼ inch square. This shaft goes across the machine from right to left behind the front post & rests in an iron box on each end. The right hand end of this shaft comes out about an inch beyond the machine and has a crank fitted into it by which it is worked when the Whirl runs the carriage in and out. A pulley is put on to this shaft close up to the machine seventeen inches in diameter. A nut on the left end of this shaft holds it from slipping endwise.

13. A Rope is fastened to this pulley passes over another pulley upon the side of the machine & the other end goes down & is fastened onto the lower leaves. The use of this rope is to raise the follower when the moulds are run out and thereby to open the receiver so that it may be filled with mortar and ready for the next filling of the moulds.

14. I have now described the several parts of my machine aforesaid & their operation. I do not claim the whole as my own invention. Though it was necessary to describe them all in order to describe what I claim as my own I mention and describe the operation of the whole machine. The parts which I claim are the following. The improvement on the dasher by working it and steadying it by the staff & the guide through which the handle passes. The box, post and the leaves & the manner of connecting them together and with the staff and their operation; The manner of connecting the shaft of the Cog wheel & the leaves with the rope passing up over the pulley. The application of the rack and Cog Wheel to the carriage to move it in and out. The method moulding and striking the bricks crosswise instead of lengthwise which preserves the bricks in better shape than the mould and strike them lengthwise & they may be struck either way. To the other parts of the machine I lay no claim except to use them with those that I do claim.

15. A flat piece of Wood should be laid on the left front post so as to bring the box post forward a little and a flat piece of wood should also be laid onto the right front post for the leaves to bear against as they move up and down. 16. The use of the line attached to the pulley on the shaft of the cog wheel and passing over the pulley on the

right side of the right hand front post & down to the lower liver is to raise the dasher when the carriage is run out. Style may be made in this machine by altering the shape of the moulds and false moulds.

In testimony that the above is a true specification of my said improvement as above described I have hereunto set my Hand this twenty ninth day of April in the year of our Lord One thousand Eight hundred and thirty five

Witnesses
Jonathan Morgan
Daniel Hamblet

Benj Hamblet

2352 wt.

(Drawing)

(Patented Dec 28th 1835)