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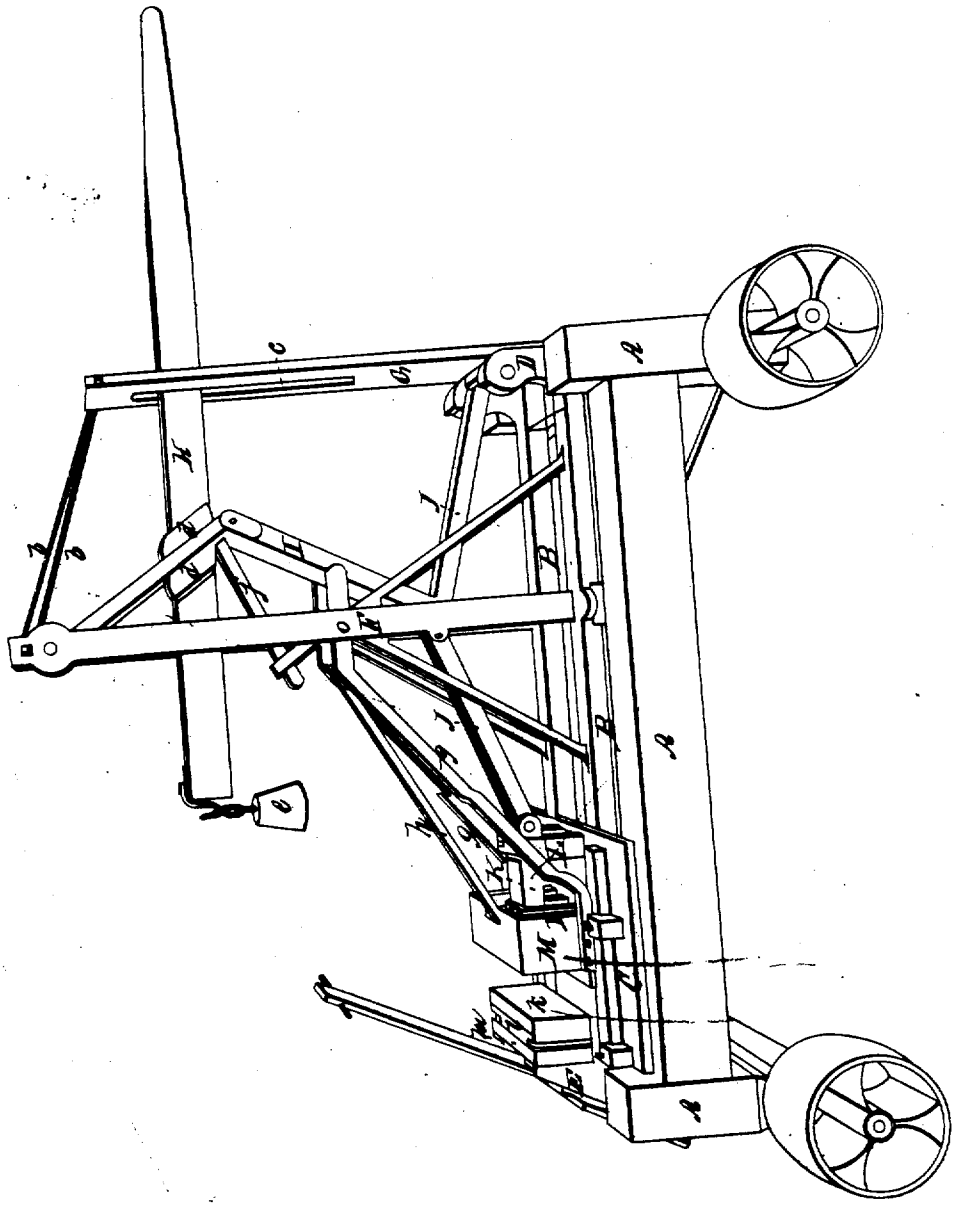
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W. Wadsworth,

Brick Machine.

Patented June 26, 1835.

8,940x.



June 26 1835

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8940x William Wadsworth

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 William Wadsworth himself of his improvement in a machine for manufacturing pressed bricks called the Improved Brick Press.

To all people to whom these presents shall come, William Wadsworth of Hartford in the County of Hartford and State of Connecticut sends greeting. Be it known that I the said William Wadsworth have invented, made, constructed and applied to use a new and useful improvement in a machine for manufacturing pressed brick which I call the Improved Brick press by which pressed brick can be made in a more perfect and rapid manner than in any mode hitherto known and used. My improvement consists in a combination of machinery, all the separate parts of which may have been heretofore known or used separately or for other purposes and the new combination for a new purpose, to effect an improvement in a valuable art, constitutes my invention for which I pray that the exclusive use may be secured to me according to the provisions of law. Herewith is forwarded to the Patent Office a model and two sets of drawings by reference to which this specification can be clearly understood. My machine is represented by the model and drawings as on four wheels, and it will be usually convenient to have it on wheels of convenient height. That it may be moved over the brick yard, that the bricks may be pressed by the spot where it is intended to deposit them. Make a substantial frame of some wood, cast iron or other material about five feet in length, and about twenty inches in width with strong posts at the corners & cross pieces, the front part being raised to meet the fixtures on the axletree about eighteen inches high from the bottom of the wheels. This frame must be sufficiently strong, and well fastened to support the machine, and the strain in the operation. The tops of the posts are raised about two & a half inches above the side

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side pieces and ends of the frame. The sides and ends of the frame are marked A. A. A. A. across the side frame timbers under the upright posts for sustaining the leaver H. is a strong cross piece of timber or other material fastened to the side pieces of the frame by tenons or in any other convenient mode, to strengthen and sustain the frame under the upright posts. The end is seen in the drawing & marked a. The frame must be made perfectly smooth on the top except the carriage B.B. are two pieces of cast iron or other suitable metal, which I call the bed pieces. They may be about two or three inches deep & about two inches wide or any other dimensions that on experience may be found expedient. They are about five inches apart and extend the whole length of the frame to which they must be well secured &. they are raised about three quarters of an inch above the frame, except that part where the plate C. is let into them. They must form a smooth surface with the plate C. The ends of the bed pieces must be stout and strong - and rise about five and a half inches. The ends D. are perforated with one & a half inch holes to receive the gudgeons on the stationary end of the horizontal toggle joint, the ends E. rise about the same height. These ends and bed pieces must be large and strong enough to bear the whole strain in pressing the brick without trembling. C is a plate of cast iron or other material seventeen inches long, and nine inches wide, three quarters of an inch deep and let into the bed pieces to form an even surface with them this lies across the frame and bed pieces to which it is securely fastened. This plate has wings extending from the outer edge of the front side of it, four inches wide and ten inches long coming to the front end of the frame. These wings lie on the outside of the bed pieces adjoining them, and of even height with them. The use of this is to support the elevations L. L. & P. P. likewise operates as a brace and supporter to the bed pieces. H. is an upright sustaining post of cast iron or other suitable material rising from one of the bed pieces about three feet six inches high. one other similar post rises from the other bed piece. The edge of which is only visible in the drawing. these must be connected by an iron bar at the top just below which are circular enlargements of the posts through which

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are one and a half inch holes to receive the gudgeons on the upper end of the perpendicular toggle joint. C. is an upright wooden part at one end of the machine rising from the frame and connected with the former named upright posts by rods b.b. to steady it. In this wooden part is a slot a through which passes the leaver H. This slot must extend high enough to let the leaver rise to a level and low enough to let it recede so far as to bring the toggle joints straight. H. is the leaver of wood or other material that works the toggle joints and effects the pressure on the brick. It passes through the upper part of the perpendicular toggle joint just above its centre joint where it is secured fast. This toggle joint where the leaver passes through it is enlarged as is represented on the drawing. d. d. for the purpose of securing a better purchase to the lever. e. is a weight fastened to one end of the working leaver of sufficient size to balance it. I.I. is the perpendicular toggle joint which turns on gudgeons passing through the upright sustaining posts jointed in the middle in the usual manner and secured to the horizontal toggle joint close by its centre joint by a bolt on which it works for this purpose. there is an elevation in the horizontal toggle joint of the height of one and a half inch. The centre of this is cut down to receive a tenon which is made on the lower end of the perpendicular toggle joint through the elevation and tenon a hole is made of suitable dimentions to receive a bolt to connect the toggle joint. on which bolt the perpendicular toggle joint works. J.J. is the horizontal toggle joint secured stationary at D. as before described but moveable at the attached end where it is secured by a suitable mortize & tenon by a bolt to the bar or follower K. the toggle joints are of cast iron or any other metal and of any required size. R.R.R. are bars of cast iron or other suitable material proceeding from the bed pieces to the upright sustaining posts to strengthen them. K. is a moveable horizontal bar or follower secured at one end to the horizontal toggle joint as aforesaid made of cast iron or other suitable material. The width of these inches. The depth of two inches. L.L. are two elevations of cast iron or other suitable material. The one at the edge of the plate

C.

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C. the other which in the drawing is nearly concealed by the mould. There are two others similar to them on the other side of the plate. all four of which are cast on the plate C. they are raised high enough to receive the moveable bar or follower K. through which it passes in spaces cut large enough for it to move freely in. secured in those spaces by straps of iron passing over by screws in the tops of the elevations marked t, t, g, g. is what I call the bridle b. b. I call the brace. These are made of wrought iron, are to move forward and back the mould M. which receives and holds the brick while in the process of pressing. the bridle g, g. is fastened by bolts or screws to the outside of the lower parts of the mould M. on each side of it. and the brace b, b. on the other manner fastened to the upper side of the mould. There are in a shape as appears by the drawing, and model to the segment right where they are firmly fastened together. There the brace stops and thence the bridle pieces change their direction and proceede back horizontally over a roller between the upright sustaining posts marked O.

The sides of the bridle where it proceeds horizontally are about two inches apart at the commencement of the horizontal part. They are secured by a permanent bolt back of which are two cast steel rollers on which the arm i. fastened to the beam I plays. These rollers are scarcely visible on the drawing, but may be readily understood by the following description. they are placed about two inches apart between the sides of the bridle supported by gudgeons passing through the sides of the bridle so formed that they will readily turn round. The cog d. at its lower end ordinarily acts between these two rollers. The beam I. is attached to the perpendicular toggle joint one inch above the centre joint reaching twelve inches parallel with it. The arm i. is fixed on the beam by a socket and wedge to adjust it as plans are in the manner represented by the model & drawing. When the lower arm is born down the lower end of the arm i. is brought against the front roller between the sides of the bridle and carries it with the mould M. forward till it encloses the block which brings it to the point where the pressure is given to the brick at which point the lower

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end of the dog rises over the front roller and presses freely so far as may be necessary in conveying the working leaver to the lower end of the slot C. when the leaver is raised up. the claws end of the dog will pass over the front and strike the back roller between the sides of the bricks and bear it back to the position represented in the drawing and with it the mould far enough to receive another brick for pressure and then the dog will act against the back roller and remain stationary till the downward pressure of the same will bring the dog again in contact with the forward roller. The mould M. is a box of two sides and two ends made of suitable thickness of cast iron or other material of the necessary thickness of the capacity required to mould and hold the brick to be pressed viz three inches and three quarters in width lined with iron & steel plates three sixteenths of an inch in thickness on the front bottom part of the mould is an apron two & a half inches broad with an elevation on each end both serve for a support and guide to the brick and are even with the inner surface of the mould and when the pressure is given the brick they press under and by the plates k. n. m. at the end of the bar or follower N. which in the drawing is concealed in the mould. M. is a cast iron plate three quarters of an inch thick edged with iron and steel plates three sixteenths of an inch thick fastened securely to the end of the bar or follower N. which shall exactly fill the mould. M. k is a cast iron plate of the same size as the one on the follower and edged with iron & steel in the same manner over which the mould M. shall pass when it is pressed forward by the dog i the plate L corresponds with the plate K as does plate m. The plate m is secured to the ends E. by solid and sufficient screws passing through the ends E. and the plates L & K are secured to the plate m by a screw attached to the centre of plate L passing through an aperture in the centre of plate m by a nut and washer on the opposite side. between the plates m & i. may be introduced at pleasure thin sheets of copper or sheet iron or any other material to regulate at pleasure the thickness which is desired for the bricks to be pressed

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ed. The plate K is secured to plate C by screws one at each end. N is a rail or slide of cast iron or other material cast on the mould M moving with it, and P, P are the elevations cast on the plate C on which it moves. There are corresponding rails and projections on the other side not exhibited on the drawing. By means of this machinery on the drawing represented at that end to receive the brick to be pressed. The brick is to be placed between the plate K and the mould M, which may readily be done so that on moving the lever H the mould M shall pass over the brick and enclose it perfectly so that it shall be in the mould between the plate K and the die on the following enclosed in the mould. Then by pressing down the working lever H by hand power. The two toggle joints will be reduced till they are both made perfectly straight. The horizontal toggle joint being entirely level and the perpendicular toggle joint being perfectly straight between the two upright sustaining posts. The pressure will gradually increase and at the point where it terminates it will be equal to by the ordinary pressure of a single hand on the lever to give a power and pressure on the brick almost beyond calculation, and enough to press the brick to any desired degree. Our testimony that the foregoing is a true specification of my said improvement I have hereunto set my hand this eighteenth day of March in the year of our Lord one thousand eight hundred and thirty five.

Witnesses
Alphens Bigelow Jr
Augustus Peabody

William Wadsworth

Drawing

2632 ni