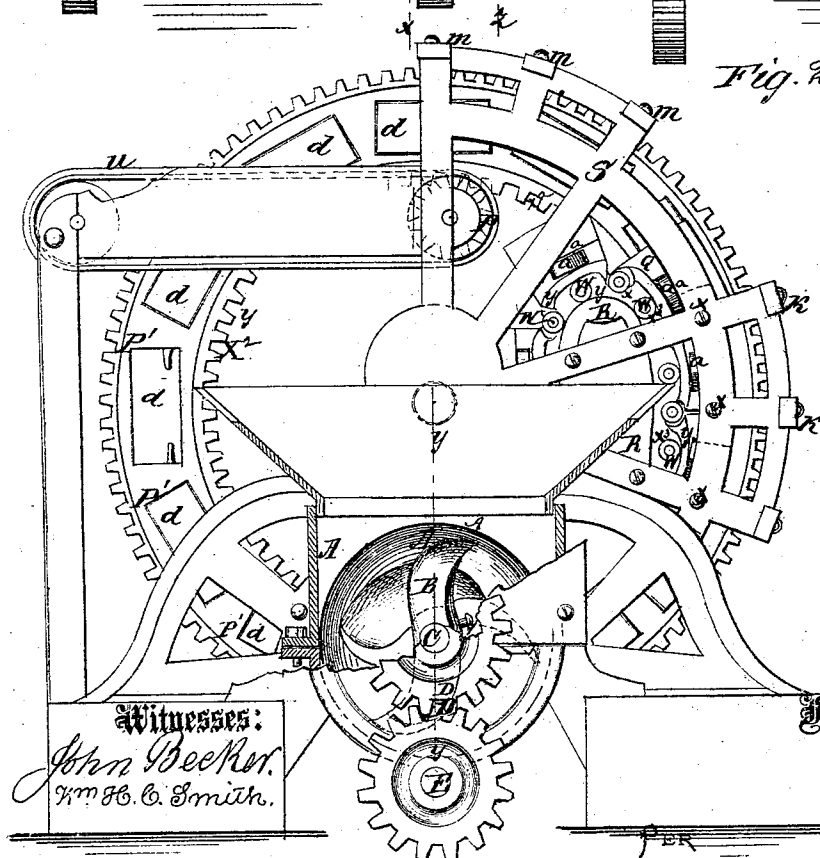
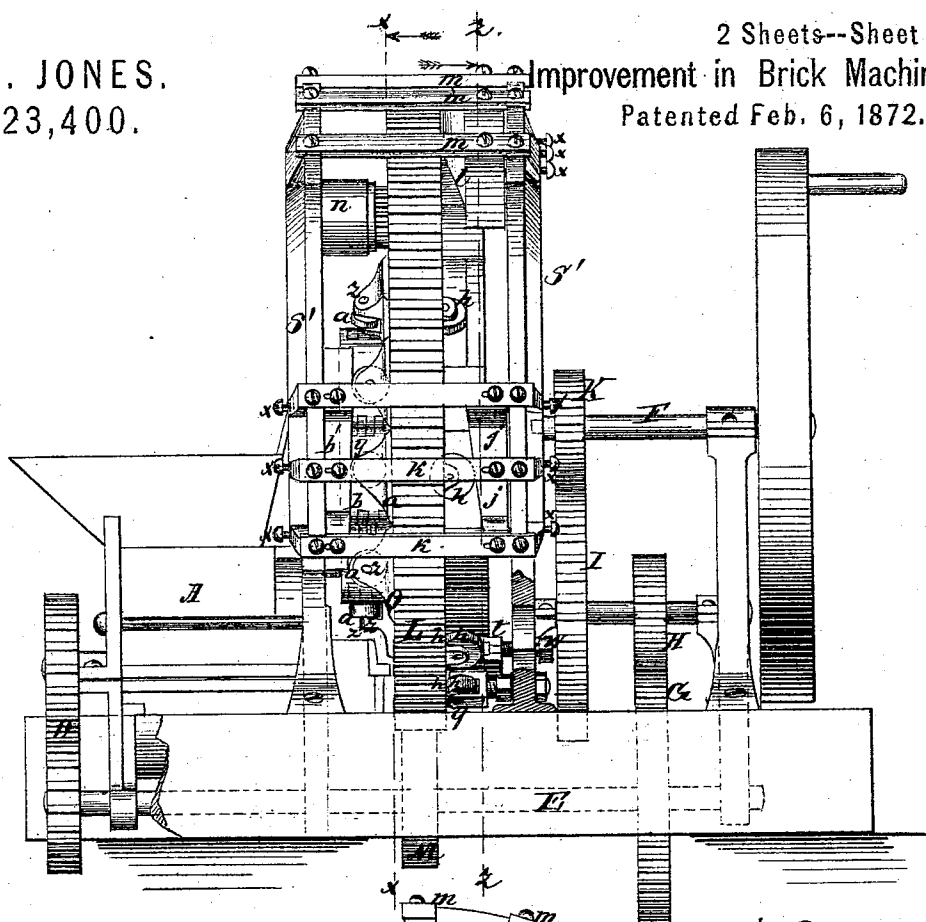


H. JONES.
No. 123,400.

2 Sheets--Sheet 1.
Improvement in Brick Machines
Patented Feb. 6, 1872.



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Improvement in Brick Machines.
Fig. 3. Patented Feb. 6, 1872.

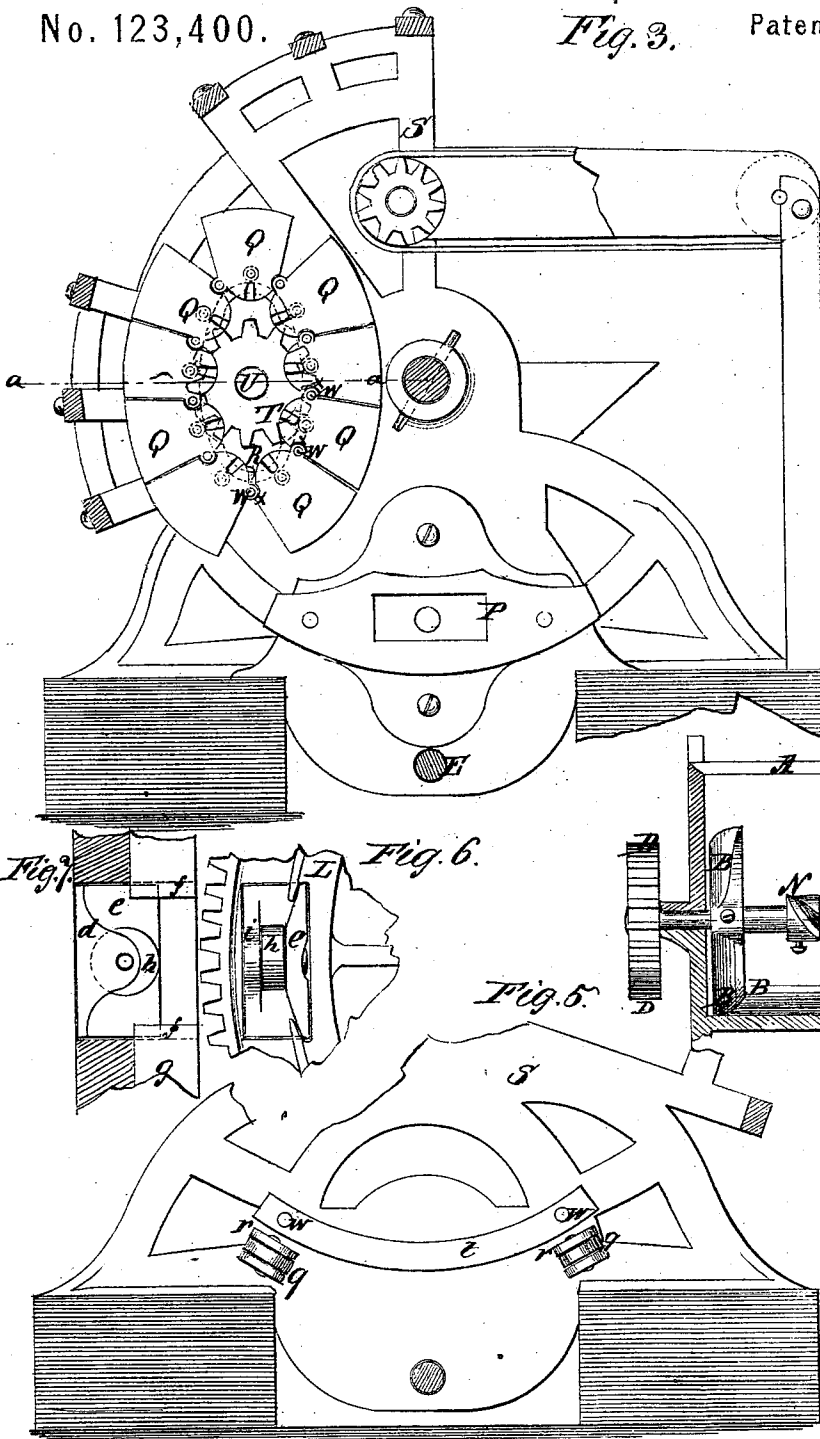


Fig. 8

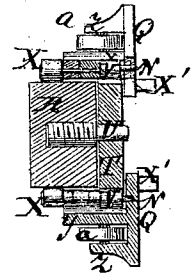


Fig. 4.

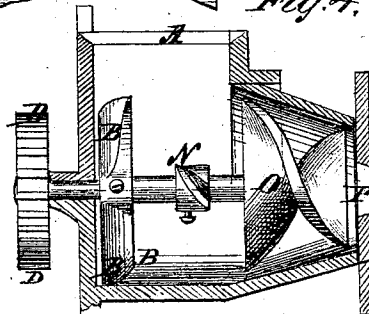


Fig. 6.

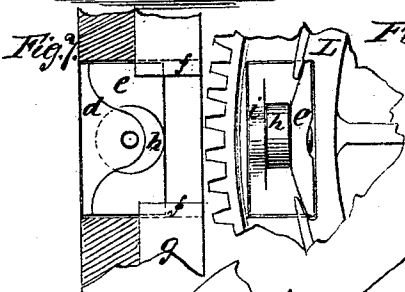
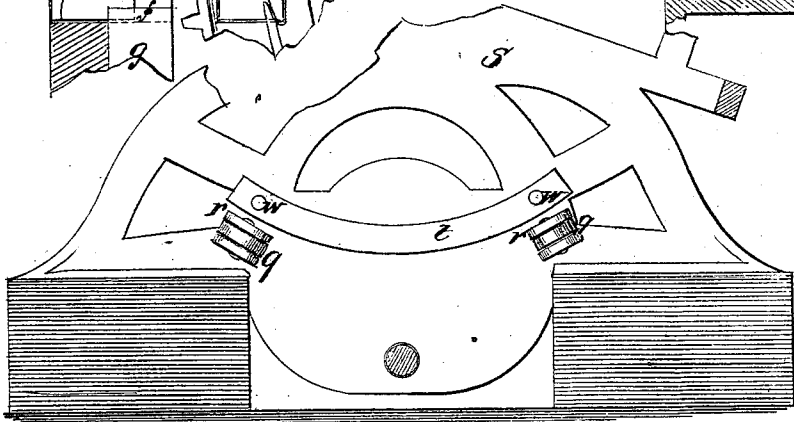


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY JONES, OF FORT MADISON, IOWA.

IMPROVEMENT IN BRICK-MACHINES.

Specification forming part of Letters Patent No. 1-3,400, dated February 6, 1872.

To all whom it may concern:

Be it known that I, HENRY JONES, of Fort Madison, in the county of Lee and State of Iowa, have invented a new and Improved Brick-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

The invention will be first fully described, and then clearly pointed out in the claims.

Figure 1 is a side elevation of my improved machine, with a part broken out. Fig. 2 is an end elevation, partly sectioned. Fig. 3 is a section on the line $x x$ of Fig. 1, looking in the direction of the arrow 1. Fig. 4 is a section through the mud-mill and conveyer on the line yy of Fig. 2. Fig. 5 is a partial section on the line $z z$ of Fig. 1. Fig. 6 is a side view of a section of the mold-wheel. Fig. 7 is a section of Fig. 6; and Fig. 8 is a section of the mold-closers and the chain by which they are attached, the section being taken on the line aa of Fig. 3.

Similar letters of reference indicate corresponding parts.

A is the case of the mud-mill, B the mixing-knives, and C the shaft whereon the knives are mounted, said shaft being arranged horizontally and geared at the outer end by a pair of spur-wheels, D, with a long shaft, E, extending under the machine from the other side, and gearing with the driving-shaft F by the wheels G H I K. This shaft E also drives the large mold-wheel L by the pinion M. The said knives B are strong, thick, S-shaped arms of steel, mounted at the center on the shaft, and they are provided with sharp cutting-edges N on the advancing sides, calculated to cut and displace the sticks, roots, and the like sometimes contained in the clay. As many of these arms will be put on the shaft as required. They are beveled on the sides, which will work the clay along toward the mold-wheel, and at the inner end of the mold-case a spiral conveyer, O, is applied to the shaft, to take the clay thereat and convey it through a plate, P, into the molds P' of the mold-wheel, which is turned slowly and continuously along past the said plate. These molds, so filled, are moved along by the turning of the wheel along up in front of the mold-closers Q,

jointed together in an endless chain, which is suspended on an elliptically-shaped support, R, therefor, projecting from the inner face of the housing S, within a recess, in which support is a toothed wheel, T, mounted on a stud, U, and receiving the rollers V of the pivot-pins W, by which the said closers are jointed together in a chain, in the notches between its cogs, to control the action of the chain. These pivot-pins have other rollers, X, on the other ends to work over the surface of the support R, and the flanges Y have studs between the pivot-pins for other rollers, x^3 , to bear on support R. The faces of these closers are parallel with the side of the mold-wheel, and they have a flange, y , perpendicular thereto, by which they are jointed together by the pins W. They also have another flange, z , parallel with y , but a sufficient distance therefrom to admit of arranging the friction-wheel a between them. These wheels a , in the upward movement of the chain, come in front of the inclined plane b of a bar, b' , supported inside of the housing S on the cross-bars k , and arranged for causing the closers to press firmly against the side of the wheel to sustain the force of the pressers, which act at this time. These closers have pins X^1 projecting from the pressing-face and taking into a notch between the teeth of the internal rim X^2 , which causes the chain to move with wheel L. The said pressers d , which are blocks of the same size or slightly smaller than the molds P', have plates e attached to them, which are fitted to slide back and forth in under-cut grooves f in a flange, g , on the side of the wheel L opposite to the mold-closers, which grooves allow the pressers to move into the mold-spaces P'. The said pressers carry friction-wheels h mounted between the flange i and plate e , which, being carried by the rotation of wheel L along against the inclined plane of the bar j mounted on the cross-bars k stretching from one to the other of the housings S S', force the plungers in against the clay, pressing it against the mold-closers Q, thereby forming the bricks. After the molds with the formed bricks in them pass beyond the closers the pressers come in contact with the inclined face of a bar, l , supported on the cross-bars m , by which the bricks are forced out upon an endless carrier, n , on suitable cylinders, and operated by a pinion, p , on one gearing with the

toothed rim X^2 . The bars b' and j , having the inclined faces for forcing the mold-closers and the pressers toward the wheel, are clamped to the cross-bars k by bolts passing through slots in said bars, so as to be adjusted toward or from the wheel, and they are supported against shifting back by screws x , and the bars k are boxed to the housings so as to effectually hold them against spreading. q represents rollers supported in adjustable studs r in the lower part of the housing S' , so that the wheel L will bear against them at the side opposite to where the mud is forced into the molds, and be supported by them against the lateral force sustained at this point in consequence of the forcing of the mud in. t is a curved plate attached to the housing S' , just above the rollers q , for arresting the backward movement of the pressers caused by the mud being forced against them, they being in the position in the molds in which they are left after discharging the bricks. This plate is supported by adjusting-screws w , for regulating it, so as to stop the pressers exactly at the right point.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

1. The combination, with the mold-wheel, of the chain of mold-closers, the pressers, and the curved bars j b' with inclined planes, all operating substantially as specified.

2. The combination, with the mold-wheel and pressers, of the curved bar l and the endless carrier n , substantially as specified.

3. The mold-closers Q hinged together in an endless chain by the flanges y and pins W , and the latter provided with rollers V and X , and the whole combined with the support R and wheel T , substantially as specified.

4. The mold-closers having the pins X^1 arranged for gearing with the toothed rim X^2 , substantially as specified.

5. The bars b' , j , and l , bars k and m , housings S S' , and supporting-screws X , arranged substantially as specified.

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