

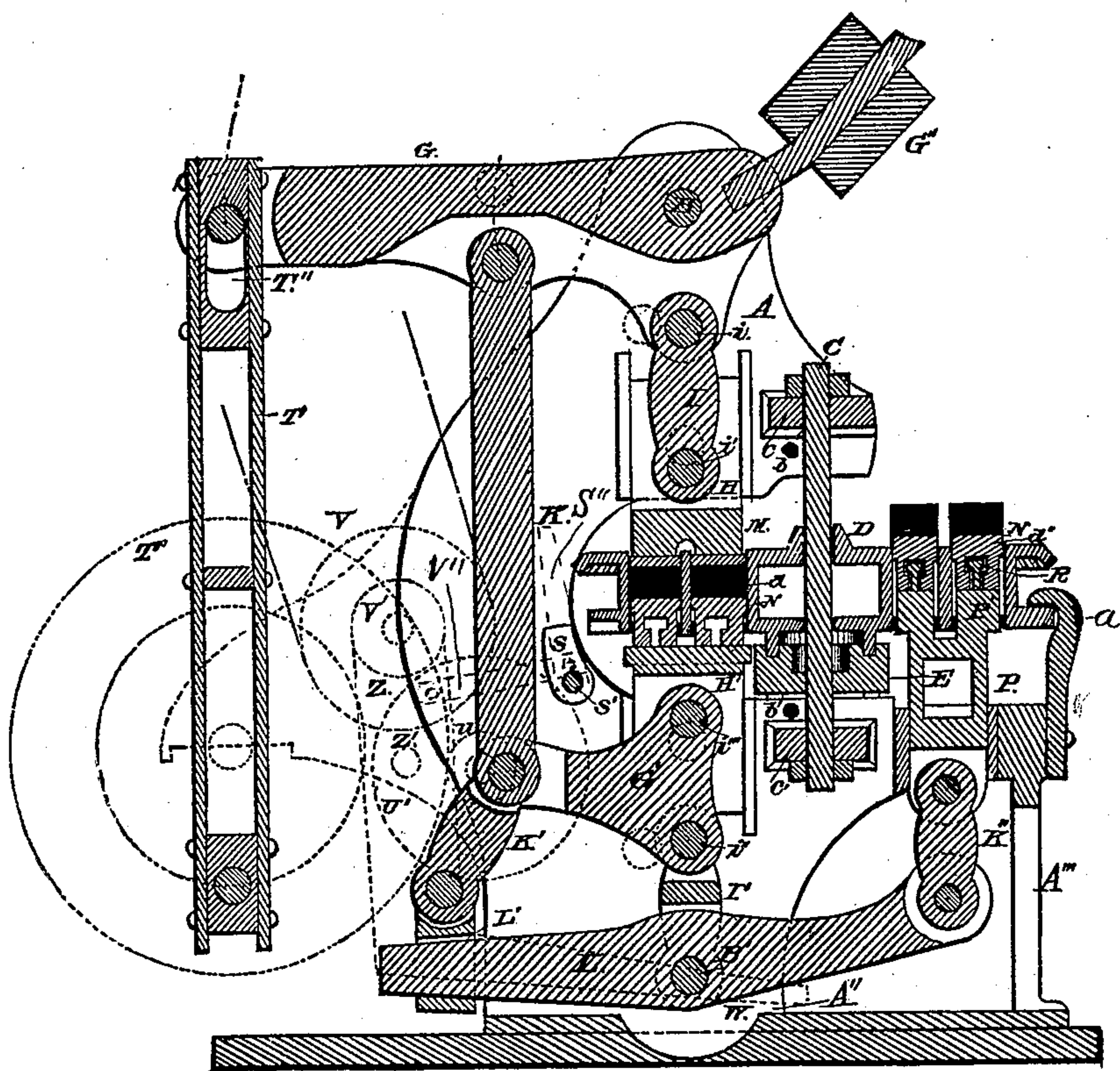
(No Model.)

L. B. KENNEDY.

BRICK MACHINE.

No. 267,542.

Patented Nov. 14, 1882.



WITNESSES  
*R. E. Grant*  
*A. Moore*

INVENTOR  
*Lewis B. Kennedy.*  
By *Saml. J. Wallace,*  
Attorney



# UNITED STATES PATENT OFFICE.

LEWIS B. KENNEDY, OF KEOKUK, IOWA.

## BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 267,542, dated November 14, 1882.

Application filed August 22, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS B. KENNEDY, a citizen of the United States, residing at Keokuk, Iowa, have invented a certain new and useful Improvement in Brick-Machines, which is made substantially as shown in the drawing, consisting of a central section of the machine, and set forth hereinafter.

This invention consists in certain features of improvement in machines for compressing nearly-dry pulverized clay into brick, ready for hacking up.

The main frame has two side plates, A A', and a base-plate, A'', to which they are fixed with a space between them. Plates A A' correspond in form, and are held together by bolts B B' and b b', with bearings c c' projecting from each to the median line. These side plates form a frame, which is bent in form to reach over and under the table D, as shown. The bolt C connects the upper and lower parts from the bearings c c' through the table D, to give strength to the frame. The table D is circular, and bears four pairs of molds, d d', one pair in each quarter, and has a stationary table, D', at one side for holding the clay for filling the molds. The table D rests by an annular bearing in a sunken channel in saddle E, which rests upon and spans the space between plates A A'. The saddle is adjustable so as to bring the molds true under their plungers M, and its sunken channel is arranged to carry oil for its lubrication. The table D is arranged to turn upon this bearing by means of hand-crank F and gearing, as shown, so as to bring each pair of molds in turn into the several positions for filling with clay, compressing the clay into brick, and for discharging the brick, so that there will be a pair in each position at the same time.

The main lever G is pivoted on bolt B between the top ends of plates A A', and is connected by link I and pivots i i' with slide H below, which is fitted to move freely up and down in guideways between plates A A', and bears plungers M on its lower end, arranged to descend into the molds d when in place below. This lever G is also connected to lever G' below by link K, so as to move that in the same way that it moves. The lever G' is con-

nected by link I' and pivot i'' with pivot B' between the lower ends of plates A A', and by pivot i''' with slide H', which is held in guideways between plates A A', so as to move freely vertically. The molds d d' have movable bottoms N, arranged to fit them closely, but free to slide up and down, and have projections at the bottom to hold them from falling out. These bottoms have long dependent bases, which project below the table when down, and come over the head of slide H' when the molds are turned into place under the plungers M. The link K connects by sub-link K' with holder L' on lever L, which is pivoted on bolt B'. This holder is movable along the lever, so as to adjust the length of its throw. The lever L is connected by link K'' to slide P, which is held in guideways between plates A A', so as to move freely up and down, and has plungers P' on its upper end, arranged to enter the molds d' when in position opposite to the plungers M. These plungers have catch-heads R rising above them, with enlarged tops, which are arranged to fit into channels in the dependent bases of the mold-bottoms, so as to enter and leave them only as the table turns, the channels being contracted below, so the enlarged parts cannot pass out downward. Any other form of catch which will act in a like way may be used as the equivalent of this.

The table D has catch-spaces cut into its lower rim, one for each pair of molds, and catch-holder S is borne by rock-shaft S' between plates A A', so that it may be thrown by handle S'' into this catch when the table is turned to bring a pair of molds true under the plungers M, so as to lock and hold them in place for the plungers to descend and enter the molds.

The lever G is moved by pitman T from a crank on drive-wheel T', so as to move it down and up a certain space. This pitman has a slot, T'', for the pivot of lever G, to allow the lever to be stationary a portion of the time, and the lever has a counter-weight, G'', arranged to balance the weight of the parts and hold them up during such time.

The parts are arranged as shown, so that when the molds opposite table D' are filled with pulverized clay from it the table can be turned



by crank F till these molds are brought to position *d*, under plungers M, while another pair of molds are brought into place to be filled, and the slot in pitman T lets lever G remain stationary, and till the table is caught by the lock-holder S, with the parts in position shown in drawing, except with the plungers apart, and the pivots in position shown in dotted lines. The parts are also arranged so that then as the wheel T' turns the pitman is drawn down farther, so as to draw down the lever G and bring the parts into positions shown in full lines, pushing slide H down and plungers M into the molds *d* and slide H' up and the mold-bottoms N into the molds, so as to press the clay into compact brick by motion inward from both top and bottom, and make both sides equally compact; and then the pitman is pushed up again, returning all the parts to their first position, withdrawing the plungers from the molds, leaving the table free to turn again to bring new molds into these positions, and to take the molds containing the pressed brick forward till they reach the position *d'*. This arrangement of parts is such that at the moment of greatest pressure upon the brick the pivots *i i' i'' i'''*, the plungers M, mold-bottoms N, and the molds are brought into one direct line with the outer bolts, B B'', which bear the strain, as shown, so as to secure great pressure by machinery of an economic weight. When the plungers descend into the molds *d* the lever L pushes the plungers P' up into the molds *d'* on the opposite side of the table, so as to push out the brick into position shown, so they can be removed by hand, and the reverse motion pulls down the plungers P' and the mold-bottoms N by the enlarged heads of parts R engaging with their contracted channels. The motion of lever L then relaxes, so as to release the pressure between the heads R and bottoms N and leave the table free to turn.

The power-belt runs on pulley V, which has friction-pulley V' on the same shaft to engage with and turn friction-wheel U', which has pulley U on its shaft to turn the drive-wheel T'. The pulleys V V' are mounted on a swinging frame, Z, which is pivoted to turn at Z' and has a foot-lever, W, by which it can be turned to press pulley V' onto wheel U' to turn it to drive the machinery, but without the pressure of which the friction will not drive and the machine is idle. The lever S'' is connected by bar V'' with the frame Z, so that until lever S'' moves so far as to throw the holding-lock S into its catch in the table the frame Z cannot move far enough to drive the machine, which prevents the accident of bringing down the plungers when the molds are not in exact position to receive them.

In some cases the wheel T' is not used, and

instead a lever is pivoted at its journal-bearings, and arranged to move by hand. This has a slotway for a pulley to play in, which is held by bars from lever G, so as to pull the lever G down with a leverage-power, which increases very greatly when by the motion of this lever the pulley runs along the slot to the pivoted end thereof, so as to gain great force upon the brick at the point of greatest pressure, the machine in this case being the same as when the power attachment is used in all other respects. Several of the parts may be modified to secure a like result by equivalent means.

I claim—

1. The combination of belt-wheel V, the swinging friction-wheel V', and foot-lever W, with friction drive-wheel U' and wheels U and T', arranged so that the machine can be started or stopped by foot-lever W.
2. The combination, with a movable brick-mold, of lever G, pivoted to the main frame at B, and having slide H, bearing plunger M, connected by link I, and lever G', pivoted to the main frame at B' through link I', and having slide H', connecting with plunger N, pivoted to it, all arranged and connected as set forth, so that the mold and series of parts, with their joints, will come into a direct line between pivots B B' at the point of greatest pressure upon the brick.
3. The combination of lever L and slide P, connected therewith, bearing plungers P', with the catch-channels in the movable brick-mold bottoms N, arranged, as set forth, to draw down the bottoms into the molds after the brick are discharged.
4. The combination of the revolving table D, bearing brick-molds, with an annular channel-bearing therefor adapted to hold oil for its lubrication.
5. The combination of a movable table, D, bearing brick-molds, and plunger M, adapted to press brick therein, with a friction-wheel V', hung in a movable frame, so as to be alternatively brought into or out of action to drive said plunger, and with a lock, S, to hold the table in place for the descent of the plunger, having a guard-bar, V'', connecting it with the movable frame, so that the drive-wheel cannot be brought into action until the lock is in place in the table, as set forth.
6. In combination with the discharger-lever L, the slide L', movable thereon toward or from the center pivot, so as to increase or diminish the distance of the discharger-throw and of the purchase for its movement.

LEWIS B. KENNEDY.

Witnesses:

SAML. J. WALLACE,  
JAS. A. BOYD.