

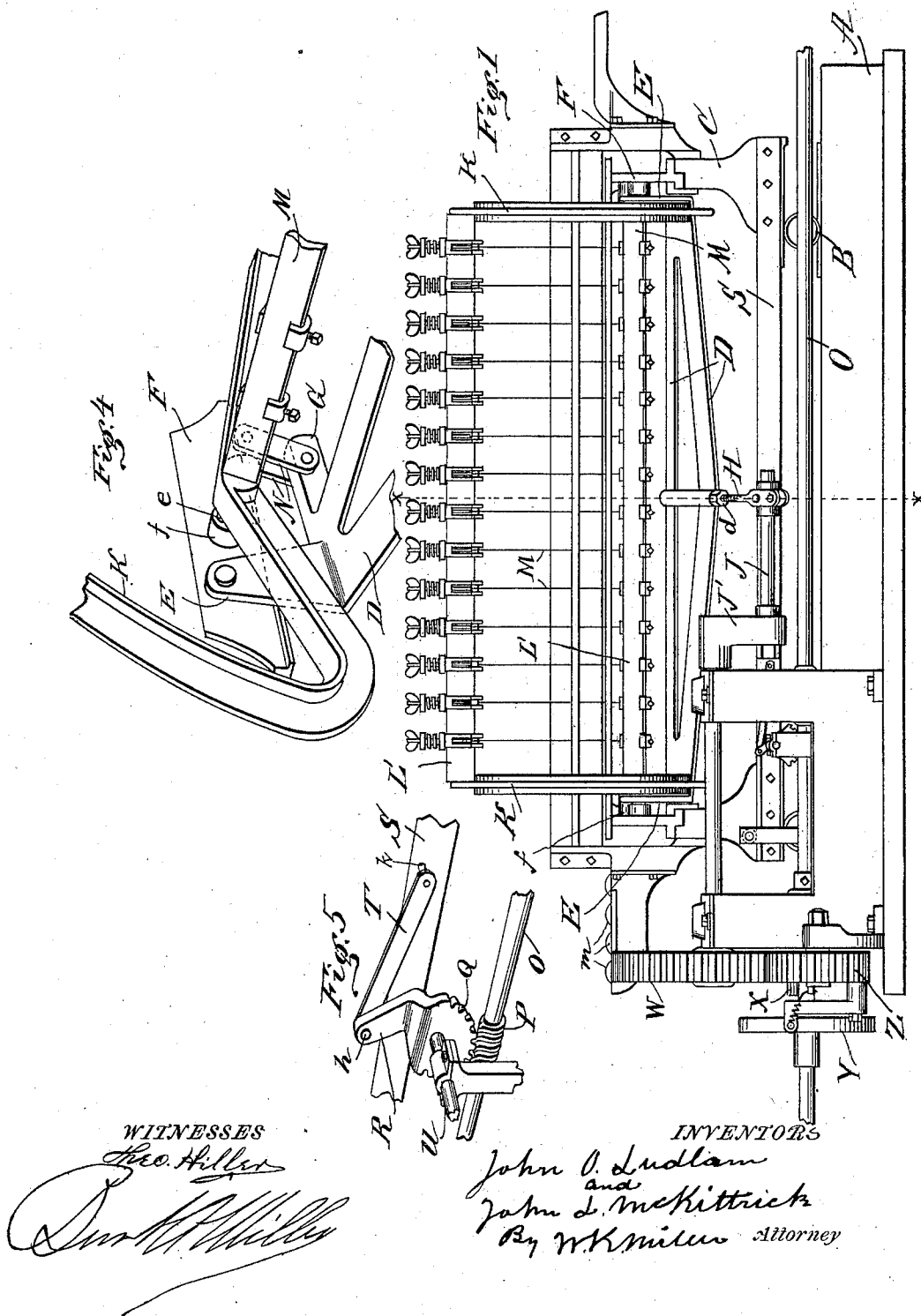
(No Model.)

2 Sheets—Sheet 1.

J. O. LUDLAM & J. L. McKITTRICK.
BRICK OR TILE CUTTING MACHINE.

No. 586,192.

Patented July 13, 1897.



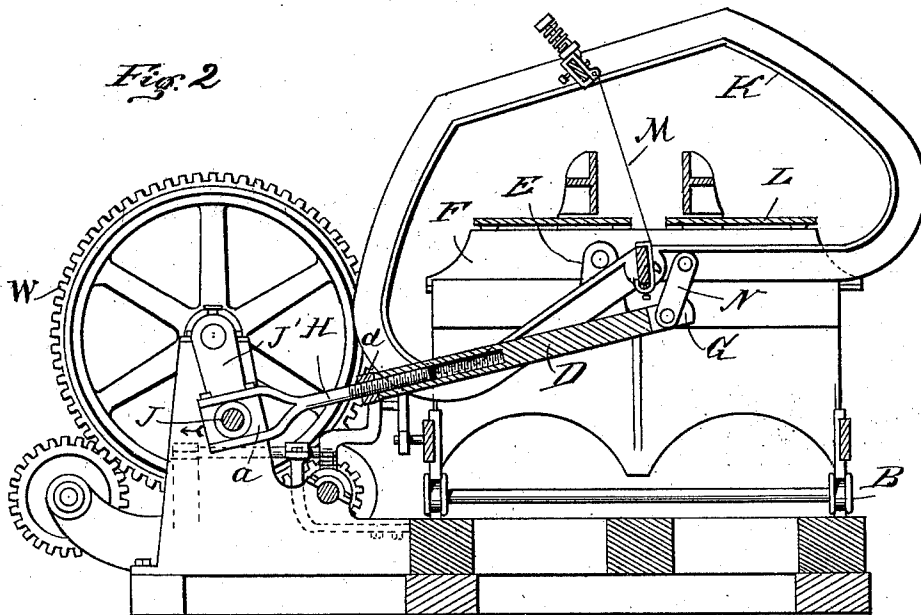
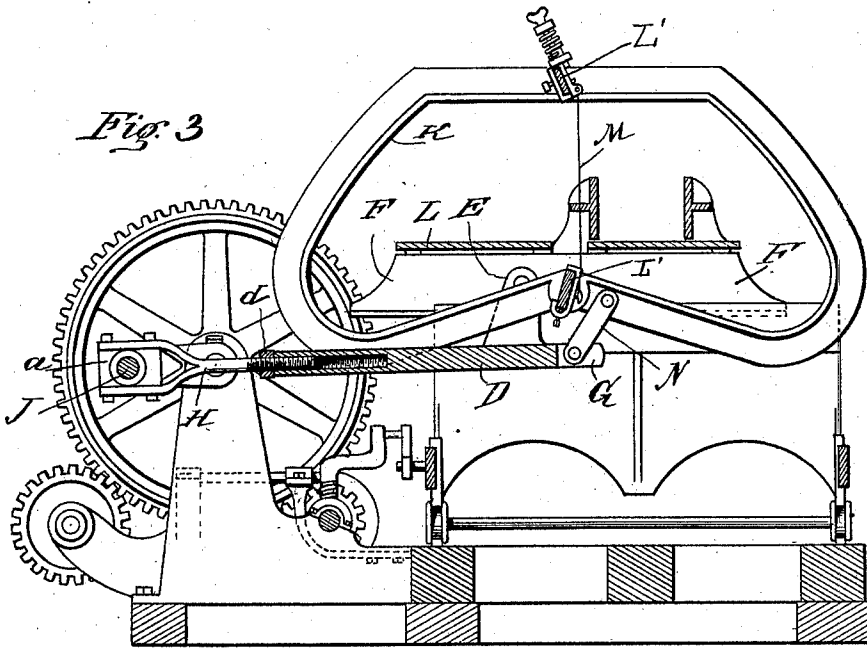
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WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN O. LUDLAM AND JOHN L. MCKITTRICK, OF CANTON, OHIO.

BRICK OR TILE CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 586,192, dated July 13, 1897.

Application filed May 26, 1896. Renewed April 29, 1897. Serial No. 634,461. (No model.)

To all whom it may concern:

Be it known that we, JOHN O. LUDLAM and JOHN L. MCKITTRICK, citizens of the United States, and residents of Canton, county of Stark, State of Ohio, have invented a new and useful Improvement in Brick or Tile Cutting Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making
10 part of this specification.

Our invention relates to an improvement in brick and tile cutters, the object of which is to provide a cutter in which the cutting-wires will pass through the column of clay obliquely
15 to cut downwardly and forward, thereby producing to a certain extent a draw cut.

With this object in view our invention relates to certain features of construction and combination of parts, as will be hereinafter
20 described and claimed.

Figure 1 of the accompanying drawings is a side elevation of a brick and tile cutter illustrating our invention. Fig. 2 is cross-section on line *x x* on Fig. 1, showing the position of
25 the parts when the cut is partially made. Fig. 3 is a similar section showing the parts in position after completing the cut. Fig. 4 is a perspective of a fragment of parts slightly enlarged, showing detail. Fig. 5 is a similar
30 view of a worm and a segment of worm-wheel having a rotatable arm extension and pitman connection with the cutter-supporting frame.

A denotes the base, provided on its upper face with a suitable track or way on which the
35 supporting-wheels B may travel.

C denotes the longitudinally-vibratable frame.

D denotes a swinging frame having at its end portions a vertical arm E, the upper end
40 portion of which is pivotally secured to the end portions of the frame F. An arm, as G, projects rearwardly from the swinging frame D, which will be explained farther on. About central to the swinging frame D is provided
45 an outwardly-projecting arm H, having at its outer end a journal-box *a*, adapted to the crank-pin J. The arm H is formed of two portions H and D, the former provided with an external screw-thread and the latter with
50 an internal screw-thread. The former is turned into the latter and secured in desired adjustment by the check-nut *d*. By the last-

named devices the arm H, which serves as a pitman connection with the crank-pin J, may be lengthened or shortened to give the proper
55 vibration to the rocking frame which carries the cutting-wires and to move the cutter-supporting frame F on frame C transverse the clay-supporting table L.

The rocking or vibratable frame is composed of the end frames K, which are pivotally secured to the frame F by trunnions *e*, supported in sockets *f*. The end frames K are secured together by cross-bars L' and L', on which the cutting-wires M may be secured
60 in any of the well-known and approved ways.

The cutting frame formed by the end pieces K and cross-bars L' and L' is connected to the frame D by the links N, pivotally connected to the arm G on frame D.
65

O denotes a continuously-rotating shaft, having mounted thereon a worm P, that engages a segmental wheel Q, (see Fig. 5,) said wheel having an outwardly-projected arm R, having at its outer end a wrist-pin *h*. The
75 side bar S of the horizontally-movable frame C is provided with a stud-pin *k*. The pins *h* and *k* are connected by a pitman-rod T, by which the frame C, with frame F supported thereon, is moved from right to left on the
80 frame A, the worm-wheel having passed out of engagement with the worm, the arm R having passed below the supporting shaft or pin U, the column of clay passing over the rollers *m* onto the table L will move the table L
85 and frame C to the opposite end of the stroke of the arm R, which has now completed a full revolution, at which instant the worm P will engage the cogs of wheel Q to rotate the arm the other half of the stroke or back to the
90 place of beginning. During this longitudinal movement of frame C the frame F will be moved by the crank-pin J across the supporting-frame C under the table L, carrying with it the cutter-actuating frame D and the cutter-frame K. The rotary movement of the
95 crank J' and pin J will raise and depress the frame D, by which the cutter-frame will be rocked on its pivotal connection to the frame F to change the angle of the cutting-wires. 100
For instance, in Fig. 2 the parts are shown at the middle of the cut, the crank down and moving in the direction of the arrow, the top or upper end of the cutting-wire in advance

of the lower end to give the wire a downward and raking cut in the column of clay, by which the cut on the top side of the brick will be smooth. In Fig. 3 the parts show the cut completed and the frame K being rocked or tipped to carry the top of the cutting-wire over to the opposite side and forward of the lower end, by which is produced a reversed downward draw cut.

Any suitable mechanism may be employed to reciprocate the frame or carriage C, and in the present instance we have shown a set of wheels W X Y Z, but these form no part of our present invention, and a full description of the same is not deemed necessary.

Having thus fully described the nature and operation of our invention, what we claim is—

1. The combination in a brick and tile cutting machine, of a reciprocating clay-table, a cutter-frame, and means for simultaneously oscillating and transversely moving the cutter-frame in one direction through the uncut column of clay, and simultaneously oscillating and transversely moving the cutter-frame in the opposite direction through the uncut column of clay, substantially as set forth.

2. The combination in a brick and tile cutting machine, of a supporting-frame, and reciprocating table, the movement of which coincides with the movement of the column of clay, a pivoted cutter-frame, and means for rocking it in opposite directions through the column of clay to make two distinct cuts therethrough, substantially as set forth.

3. The combination in a brick and tile cutting machine, of a clay-table, a vibratable frame, D, a transversely-movable frame, F, pivotally secured thereto, a rotary crank-pin, J, to which said frame, D, is connected with one end, a cutter-frame pivotally connected to the opposite end of said frame, D, and to the frame, F, and adapted to rock on its pivotal connections with the frame, F, and move transversely of the clay-table, substantially as set forth.

4. The combination in a brick and tile cutting machine, of the longitudinally-movable frame C, the actuating-shaft O, having mounted thereon, a worm P, a segmental worm-wheel Q, having an outwardly-projecting arm R, and link T, whereby said arm is connected to frame C, substantially as set forth.

5. The combination, in a brick and tile cutting machine, of the longitudinally-reciprocating supporting-frame, an actuating-shaft provided with a gear, a mutilated gear meshing with the first-named gear, and a link connecting the mutilated gear with the longitudinally-reciprocating supporting-frame, substantially as set forth.

In testimony whereof we have hereunto set our hands this 19th day of May, A. D. 1896.

JOHN O. LUDLAM.

JOHN L. MCKITTRICK.

Witnesses:

W. K. MILLER,

BURT O. MILLER.