J. G. BARBOUR.
BRICK CUT-OFF TABLE.
APPLICATION FILED APR. 22, 1912.

1,110,371.
Patented Sept. 15, 1914.
3 SHEETS-SHEET 2.

Inventor
James G. Barbour.

Patented by
Sylvia Boren
J. H. Bishop.

Attorneys
To all whom it may concern:

Be it known that I, James G. Barbour, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Brick-Cut-Off Tables, of which the following is a specification.

My invention relates to brick-cut-off tables such as are used for dividing the clay column into bricks after said column has passed from the ordinary brick machine. In the ordinary brick-cut-off tables such as are in use at the present time it is impossible to cut a brick having an irregular face or one provided with lugs or ribs without the use of specially shaped platens to guide the wires through the clay column during the cutting operation.

It is the object of my invention to provide a brick-cut-off table by means of which a brick having irregular face or one provided with lugs or ribs may be cut without the use of any specially formed platen.

A further object is to provide a device of this character wherein no platen is used above the clay column.

A still further object is to provide a device of this character in which it is not necessary to use a transversely slotted platen beneath the clay column for guided as a device which will produce a brick having a similar face upon each side. These objects together with other objects readily apparent to those skilled in the art may be attained by the construction and mechanism illustrated in the accompanying drawings, although my construction may be embodied in a variety of other mechanical forms, the construction illustrated being chosen by way of example.

In the drawings—Figure 1 is a side elevation of the brick-cut-off table constructed in accordance with my invention, also showing a portion of the end of the brick machine. Fig. 2 is a top plan view of the same. Fig. 3 is a section taken on the line 3—3 of Fig. 2. Fig. 4 is an enlarged side elevation of a portion of my brick-cut-off table. Fig. 5 is a detailed perspective view showing one form of an upper track. Fig. 6 is a similar view of a lower track. Fig. 7 is a perspective view showing one end of the upper bar with the wire tension head and wire bracing bar secured thereto, showing a different form of track. Fig. 8 is a plan view of another form of upper track. Fig. 9 is a similar view of the lower track to be used therewith. Similar numerals refer to corresponding parts throughout the several figures of the drawings.

1 represents the die of a brick machine, such as is ordinarily used in the stiff mud process of brick manufacture. As the clay column 3 issues from the mouth of the brick machine it is cut across at intervals by wires 4, for the purpose of forming brick. The wires are carried by a cut-off frame 5 by means of the bar 6 and tension heads 7 secured to a bar 8. As the wires pass through the clay column they pass through slots 9 in the thrust plates 10 and pass into the slots 11 in the ribs 12 of said thrust plates. Suitable means not shown is provided for reciprocating the cut-off frame 5 upon the base 13. Said base 13 is normally stationary but during the cutting operation the whole device travels with the clay column. The rollers 14 and tracks 15 are provided for said traveling movement, suitable means being employed to carry said device with the clay column and return it to its normal position. This much of the device is the ordinary construction in brick-cut-off tables.

In my device I slidably mount the bars 6 and 8 upon shafts 16 and 17 respectively carried by the cut-off frame 5. To any suitable part of the device preferably to the ribs 12 of the thrust plates 10 I attach tracks such as at 13. Numerous forms of tracks may be used for producing brick of different design, but for the purpose of illustration I have shown throughout several views of the drawings the specific form of track which is used in cutting a brick such as the one shown in my application. Serial No. 634,041 filed March 15, 1912. Pins 19 or their equivalents are provided upon the bar 8 and engage the tracks 18. A lower track 20 is located upon any suitable portion of the device and is engaged by the pins or their equivalents 21 upon the bar 6. Supporting platens 22 and 23 are carried by the cut-off frame 5 and are adapted to support the clay column 3. As the cut-off frame 5 reciprocates said platens 22 and 23 are alternately slid beneath the clay column 3, one of said platens always supporting said clay column.

The wires 4 are attached at their upper
extremities to the hooks 24 upon the tension heads 7, said wires passing through the slots 11 in the ribs 12 of the thrust plates and between the platens 22 and 23, the lower extremities of said wires being attached to the hooks 25 upon the bar 6. Said wires are always held taut by means of the tension springs 26 upon the tension heads 7, it being possible to change the tension as desired upon said wires by means of the wing nuts 27. The upper and lower wire bracing bars 28 and 29 respectively are secured to the upper and lower bars 8 and 6 respectively, said wire bracing bars being provided with slots 30, which are adapted to accommodate the wires 4 at a point as near as possible to the clay column.

In the form of track shown in Figs. 1 to 6 inclusive I have shown a track provided with a curved groove 31, said groove adapted to be engaged by the pins 19 and 20 or their equivalents. In the form of track shown in Fig. 7 I prefer to use merely a bar having a face provided with alternate lugs and depressions 32 and 33 respectively, said face forming a cam track. For this form of track I prefer to use a roller 34 instead of a pin. By the use of this form of track a brick is produced having alternate ribs and grooves upon both faces. In the form of track shown in Figs. 8 and 9 I prefer to use a flat bar having a lug and depression 35 and 36 respectively near each extremity, the lugs and depressions being reversed in the upper and lower tracks. By this form of track I produce a brick having four lugs and four depressions upon each face thereof, each lug tapering from the edges of the brick towards the center thereof and vanishing into the opposite groove. Numerous other forms of track may be used for forming different designs of brick, the present forms being shown merely for illustration. By using a straight track it is also possible to cut a brick with a straight wire cut face with this device.

The operation of the device is as follows: The clay column 3 as it issues from the mouth of the brick machine 2 is continuously moving across the platens 22 and 23, and between the thrust plates 10. At predetermined intervals the whole device is caused to move forward with the clay column upon the rollers 14 and tracks 15. At the same time the cut-off frame is caused to reciprocate upon the base 13 of the device thereby drawing the wires 4 through the clay column and through the grooves 9 in the opposite side plate 10 and into the grooves 11 in the rib 12, thus dividing the clay column into bricks. At this point the reciprocatory motion ceases and the whole device is returned on the rollers 14 to the normal position which is shown in Figs. 1 and 2 of the drawings. The means for causing these operations of the machine are of ordinary construction and are used upon devices of this character at present in use and as they form no specific part of the present invention it is not thought necessary to show them. As the cut-off-frame reciprocates transversely of the device the sliding bars 6 and 8 are caused to reciprocate longitudinally upon the shafts 16 and 17 by means of the pins 19 traveling upon the tracks 18. This longitudinally reciprocating of the bars 6 and 8 causes the wires 4 to be reciprocated in the same manner, the cut at the upper face of each brick thus formed conforming with the upper track and the cut at the lower face of each brick being of the same shape as the lower track. As the wires 4 are held in a straight line between the wire bracing bars 28 and 29 the face of the brick thus cut will form a straight line between the upper and lower edges at any point between the ends of said brick, but this line need not necessarily be vertical as the upper and lower ends of the wires may be oscillated in opposite directions as by means of the form track shown in Figs. 1 to 6 inclusive of the form described. As shown in these figures the upper and lower extremities of each wire travel in reverse arcs thus forming a brick having a concavo-convex face upon either side. In the form of track shown in Fig. 7 the lower track may be a duplicate of the upper track shown or it may be just the reverse, that is it may be provided with a depression directly beneath each lug upon the upper track and with a lug directly beneath each depression upon the upper track. By means of the former construction a brick is produced having alternate ribs and grooves upon each side while with the latter construction a brick is produced having a series of alternate lugs and depressions along the upper edge of each side, said lugs vanishing into depressions at the lower edges and the depressions terminating in lugs at the lower edges. By means of the track shown in Figs. 8 and 9 a brick is formed having two straight sides with four lugs and four depressions upon either side. Numerous other forms of brick may be produced by slight changes in the form of track, but it is not thought necessary to illustrate any further constructions of tracks.

I claim—

1. In a cut-off table, a cut-off frame, upper and lower shafts carried by said frame, bars slidably mounted upon said shafts, cut-off wires carried by said bars, tracks carried by said cut-off table, said tracks adapted to longitudinally reciprocate said bars.

2. In a cut-off table, a cut-off frame, upper and lower shafts carried by said frame, bars slidably mounted upon said shafts, cut-off wires carried by said bars, tracks carried by said cut-off table, pins secured to said slidable bars, said pins adapted to move
upon said tracks, said tracks adapted to simultaneously reciprocate the upper and lower slidable bars in opposite directions.

3. In a cut-off table, a cut-off frame, upper and lower shafts carried by said frame, sleeves longitudinally slidable upon said shafts, cut-off wires carried between said upper and lower sleeves, upper and lower tracks carried by said cut-off table, said tracks provided with oppositely disposed grooves, pins secured to the slidable sleeves, said pins adapted to move in the grooves of the tracks for the purpose of reciprocating said slid-able sleeves.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

JAMES G. BARBOUR.

Witnesses:
John H. Bishop,
F. W. Bond.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."