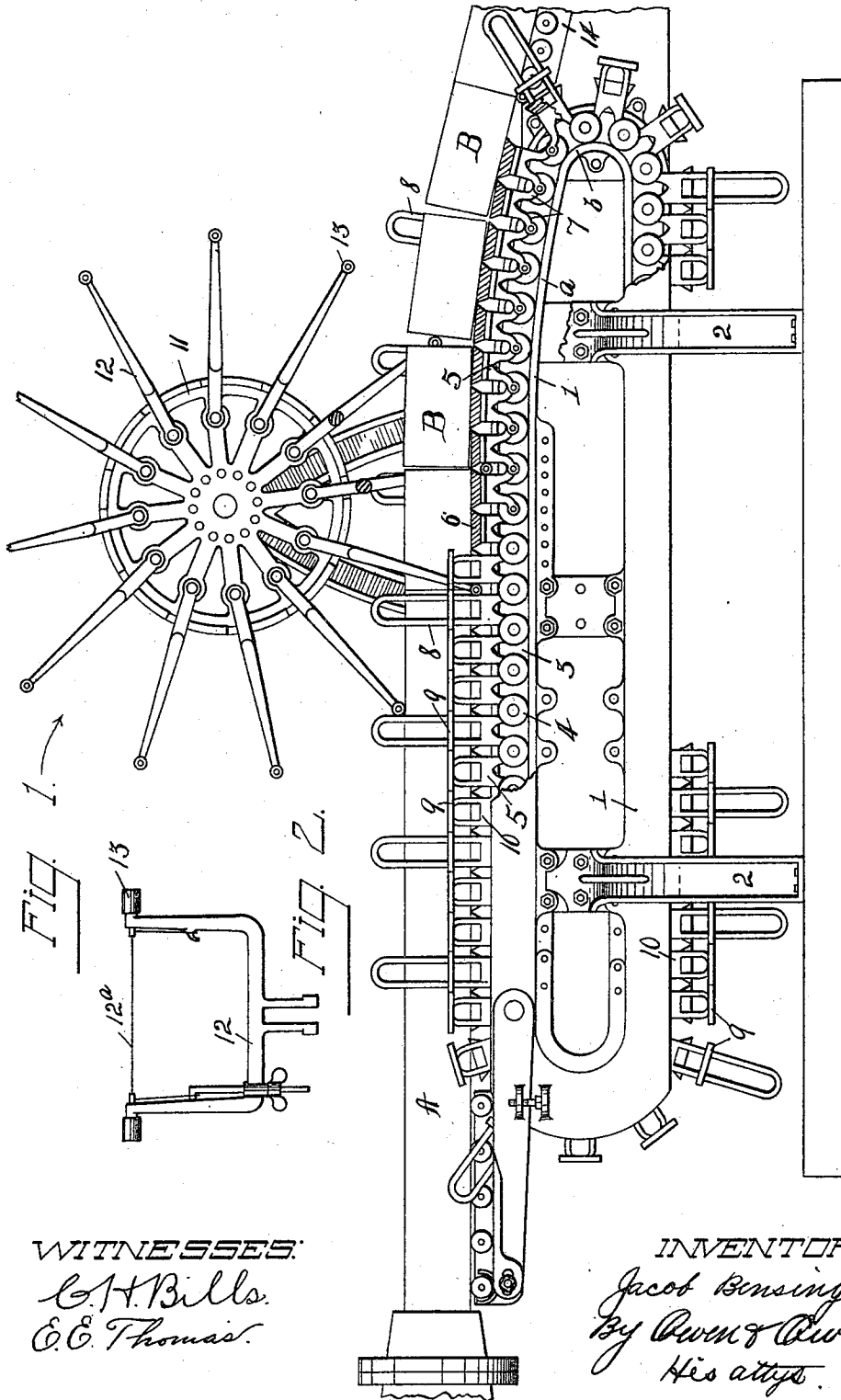


J. BENSING.
 END-CUT BRICK MACHINE.
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975,502.

Patented Nov. 15, 1910.



WITNESSES:
 C. H. Bills.
 C. E. Thomas.

INVENTOR.
 Jacob Bensing.
 By Owen & Owen,
 His attys.

UNITED STATES PATENT OFFICE.

JACOB BENSING, OF MALINTA, OHIO.

END-CUT BRICK-MACHINE.

975,502.

Specification of Letters Patent.

Patented Nov. 15, 1910.

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To all whom it may concern:

Be it known that I, JACOB BENSING, a citizen of the United States, and a resident of Malinta, in the county of Henry and State of Ohio, have invented a certain new and useful End-Cut Brick-Machine; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to machinery of the class adapted for the cutting of columns of clay or other plastic material into sections, and has particular reference to end-cut brick machines, but is not restricted to such use as it may be employed in connection with the cutting of other articles for which it may be adapted or appropriate.

In the use of end cut machines of this class considerable difficulty has been experienced in an endeavor to provide a carrier for the column and bricks, or other articles, when severed therefrom, which will carry the severed articles in a manner to prevent the under sides thereof from becoming gouged or injured by the sharp edges of the carrier sections when such sections tilt under the articles in following a curved portion of the track on which they travel, and which will also facilitate the delivery of the several sections from the carrier to the delivery-table at the end of the machine.

The object of my invention is the provision of simple and efficient means for overcoming the above objections, whereby the practicability and commercial value of machines of this class is materially enhanced, and to improve upon the construction and operation of the machines described in my previous United States Letters Patent, Nos. 411,638, 524,302, 563,252, 621,315, 718,077 and 801,639, granted to me, respectively, September 24, 1889, August 14, 1894, July 7, 1896, March 21, 1899, January 13, 1903, and October 10, 1905.

The invention is fully described in the following specification and a preferred embodiment of the same illustrated in the accompanying drawings, in which,—

Figure 1 is a side elevation of a machine embodying my invention with portions of

the same broken away and in section, and Fig. 2 is a detail of one of the cutter-arms.

Referring to the drawings, 1, 1 designate the two sides of the machine, which are supported by legs or standards 2, and spaced apart in a suitable manner. On the inner wall of each side is provided an endless grooved way or track 3 in which the anti-friction rollers 4 on the contiguous ends of the sections of links of the endless carrier of the machine work.

The sections of the carrier are shown as comprising the two end members 5, 5 which support and are connected together by a carrier bar 6, and are formed on their forward and rear edges with the projecting lugs 7, 7 which pivot to the contiguous lugs of the adjoining carrier sections and carry the rollers 4 on the pivots therewith. Rising from the base members 5 of every third carrier section are the standards 8, which serve as guides for directing the movements of the cutter-arms as hereinafter described. The standards 8 carry cross-pieces 9 on their outer sides intermediate their ends, which cross-pieces have endwise abutment against similar cross-pieces 9 carried at the upper ends of short standards 10 rising from the members 5 of the intermediate carrier sections. The purpose of the pieces 9 is to maintain the carrier sections relatively rigid when traveling over a straight portion of the track.

11 designates the cutter-wheel, which is suitably mounted above the carrier. Projecting radially from the rim portion of this wheel, to which they are pivoted for limited oscillatory movements, are a plurality of U-shaped cutter-arms 12 adapted to carry cutter-wires 12^a at their ends, as shown in Fig. 2. On the descent of the arms 12, the rollers 13, carried at the ends thereof, engage and travel down the forward faces of the adjacent standards 8 by which they are guided to make a straight vertical or perpendicular cut through the column A to sever a section B therefrom, while on the ascent of the cutter-wires through the cut previously made the arms 12 are guided by the standards to hold the wires from contact with the section ends.

To carry out the features of my present invention, the carrier sections are of suitable width for the combined width of three to equal the length of a severed column sec-

tion B, as indicated. With this arrangement, when the sections are passing over a curved portion *a* of the track, as indicated in advance of the cutter wheel center, the center carrier bar or section of a set will support the column section, while the two end sections will tilt relative to such column section as the curvature of the track may require. The advantages of this arrangement over the supporting of a column section by two carrier bars is very important to the practical and satisfactory operation of the machine, for in the use of two-section sets the inner or contiguous edges of the same may cut into and injure the under surface of the column section supported thereby when following a curve in the track. This triple arrangement of the carrier sections is also of material importance in the delivery of the several column sections to the delivery frame or table 14 at the forward end of the machine, such frame being placed on an incline, as shown. As the three carrier sections subjacent to a block or column section B move down the gradual downwardly curving portion *a* of the track 3 the center one alone supports the block until the nose or forward end of the block passes upon the first roll of the delivery table 14, at which instance the tops of the center carrier section and delivery table are in the same plane. On the continued forward movement of such section it abruptly drops from supporting contact with the block due to its following the abruptly curved portion *b* of the carrier track and leaves the rear end of the block supported by the last carrier section of the set until the block has advanced a sufficient distance upon the delivery table to be entirely supported thereby. It is thus apparent that the arrangement of the carrier into sets of three sections each as above described provides a simple means for carrying the column sections without injury to the bottoms thereof when such carrier sections are relatively inclined, and when combined with the curvature *a—b* of the track and the location and inclination of the delivery table 14 as indicated, serve

to deliver the column sections to such table in an easy and improved manner, whereby any injury to the green column sections is entirely avoided.

I wish it understood that my invention is not limited to any specific construction and arrangement of the parts except in so far as such limitations are specified in the claim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is,—

In an end cut brick machine, an endless track having its upper portion straight for a distance with its forward end portion formed with a prolonged downward curve, as *a*, and terminating in an abrupt downward curve, as *b*, a delivery-table inclining downwardly from adjacent the forward end portion of the track, an endless carrier operating on the track and comprising a plurality of hinged sections, a rotary cutter operative to sever a column carried by the carrier in immediate advance of each third carrier section whereby three carrier sections are disposed beneath each column section, the center carrier section of each set remaining in constant flat contact with the bottom of the supported column section until the forward end of the column section moves upon the delivery table, which table is arranged to support the forward end of the column section immediately before the center carrier section of a set drops from contact with a column section by following the curved portion *b* of the track, the rear carrier section of a set then supporting the rear end of the column section, in contact therewith until over half the length of the latter section has moved upon the delivery-table, substantially as described.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

JACOB BENSING.

Witnesses:

C. W. OWEN,
E. E. THOMAS.