

No. 630,027.

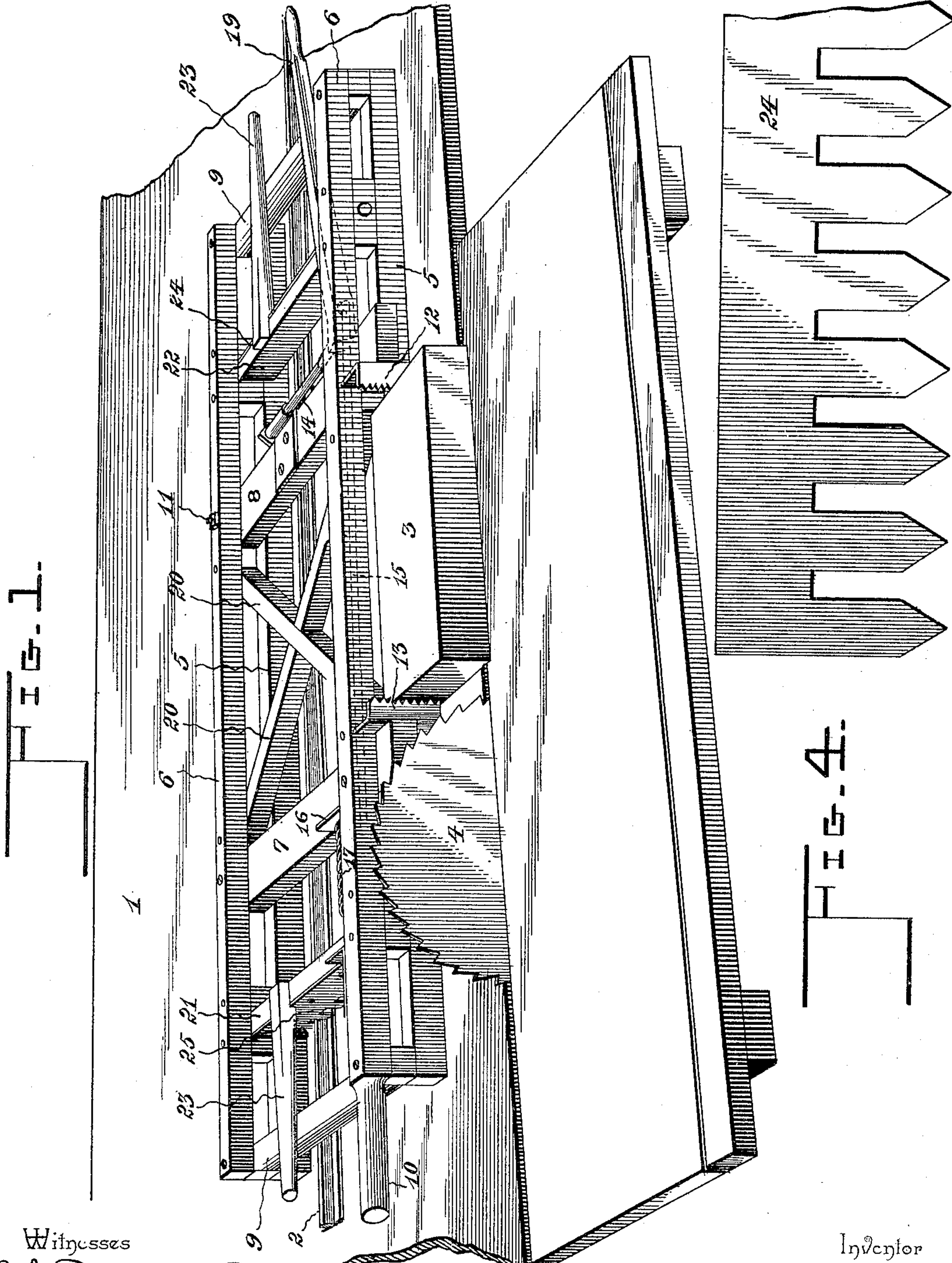
Patented Aug. 1, 1899.

W. E. BROWN.
SHINGLE SAWING MACHINE.

(Application filed Apr. 12, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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Inventor

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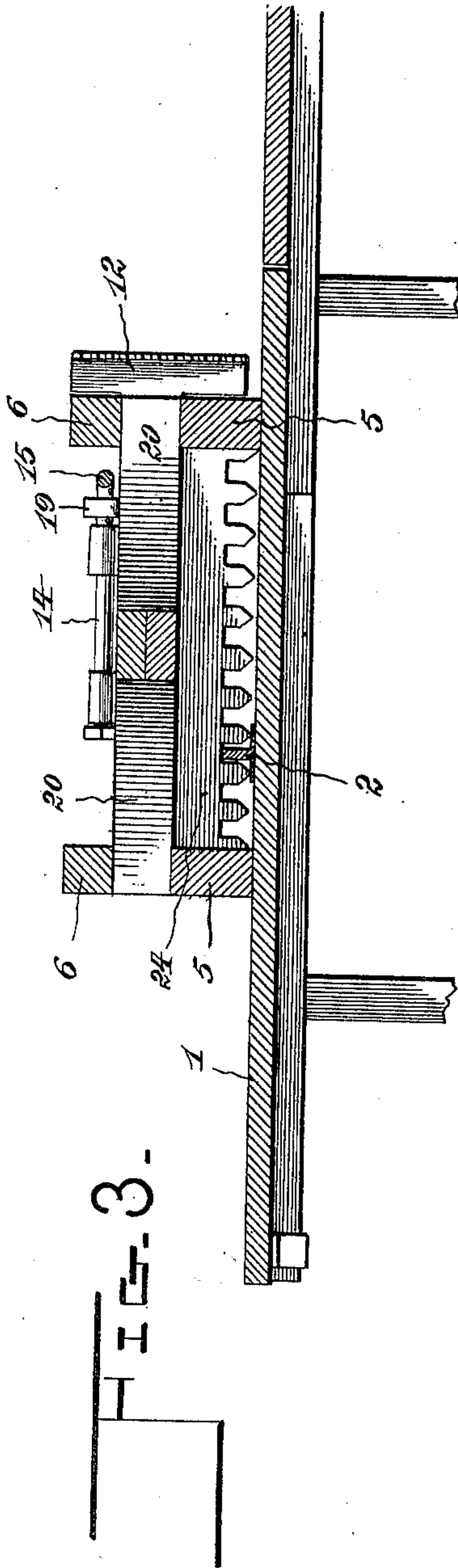
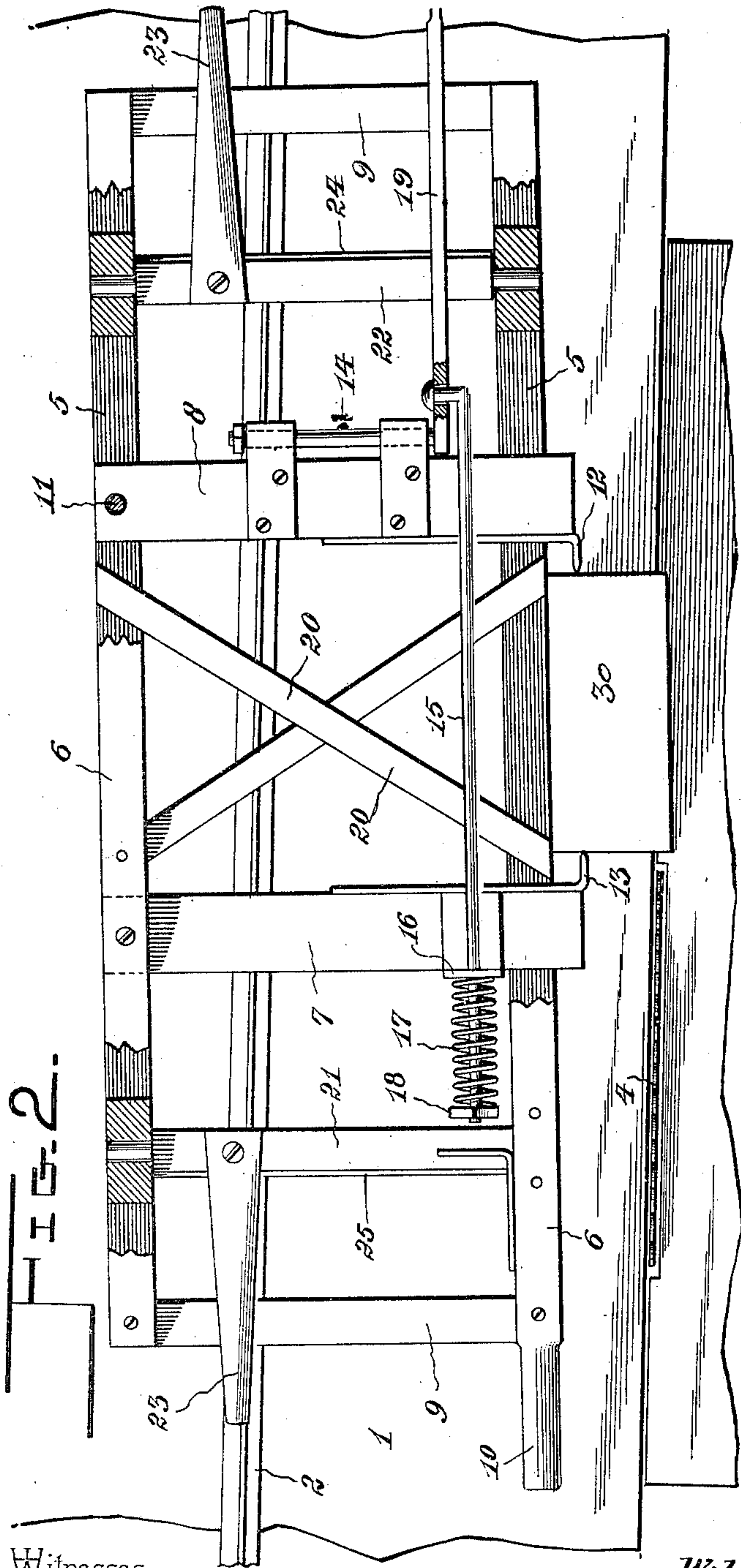
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2 Sheets—Sheet 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM E. BROWN, OF BRINK HAVEN, OHIO.

SHINGLE-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 630,027, dated August 1, 1899.

Application filed April 12, 1899. Serial No. 712,781. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. BROWN, a citizen of the United States, residing at Brink Haven, in the county of Knox and State of Ohio, have invented a new and useful Shingle-Sawing Machine, of which the following is a specification.

My invention relates to shingle-sawing machines, and particularly to a device adapted for use as an attachment in connection with a flat-table sawing-machine; and the object in view is to provide simple and efficient means whereby the bolt or block supporting carriage may be guided upon the table of the sawing-machine and whereby the ends of the carriage may be alternately fed toward the plane of the saw, the use of the bolt or block carriage in connection with the sawing-machine being such as to require no change in the construction of the latter.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a shingle-sawing attachment constructed in accordance with my invention applied to and showing so much of a sawing-machine as is necessary to illustrate the arrangement and operation thereof. Fig. 2 is a plan view, partly broken away, of the carriage. Fig. 3 is a transverse section of the same, showing a portion of the sawing-machine table. Fig. 4 is a detail view of a portion of the comb.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

Arranged upon the sawing-machine table 1 in operative relation with the longitudinal track or guide 2, which consists of an upwardly-projecting rail, is the carriage designed for holding a shingle block or bolt 3 and advancing it in operative relation with a saw 4. In the construction illustrated the carriage consists of a frame comprising runners 5, parallel longitudinal rails 6, spaced upwardly from and arranged in the vertical planes of said runners, cross-bars 7 and 8, connecting the sides at intermediate points

and arranged between the planes, respectively, of the runners and side rails, and end cross-bars or rounds 9, also terminally secured between the runners and side rails, one of the side rails being extended to form a grip 10. The cross-bar 8 is pivotally mounted by means of a bolt or screw 11 at one end and is free to swing at the other end in the guide formed by the adjacent sides of the runner and side rail, and carried by this pivotal transverse member of the frame is a bolt or block engaging jaw 12 for coöperation with a fixed jaw 13, said jaws being suitably serrated to properly engage the ends of the bolt or block. Owing to the movability of the jaw 12 it will be understood that slight variations in the lengths of the bolts or blocks will not interfere with the proper engagement thereof, and the rear or inner side of the bolt or block bears against the flush outer sides of the adjacent runner and side rail, as clearly shown in Figs. 1 and 2, to prevent the pressure of the saw from causing the bolt or block to recede. In other words, said flush surfaces of the runner and side rail furnish a firm backing for the bolt or block. Also mounted upon the main bar 8 is a rock-shaft 14, which is connected by a draw-rod 15 with a fixed object, such as the companion cross-bar 7, said rod extending through a guide-opening in an ear 16, rising from the bar 7, and having coiled thereon a tension-spring 17, of which the tension may be adjusted by means of a nut 18. This spring bears against the ear 16 and holds the bar 8, with the jaw carried thereby, yieldingly in the operative position, and the rod is connected eccentrically with the rock-shaft to provide a dead-center lock when the lever 19, which is attached to the rock-shaft, is in its normal position. Preferably the draw-rod is connected directly with the locking-lever 19, as illustrated in the drawings.

Suitable intersecting braces 20 may be arranged to connect the sides of the carriage-frame between the transverse planes of the bars 7 and 8.

Arranged transversely in the carriage-frame, preferably near its extremities, and terminally mounted in suitable bearing-blocks arranged between the runners and side rails, are rockers 21 and 22, provided with handles

or levers 23 and depending combs 24 and 25 to engage the guide-rail or track 2. The teeth of these combs are preferably arranged to form rail or track engaging notches disposed at an interval of approximately three-fourths of an inch, it being obvious, however, that this interval may be changed in accordance with the desired thickness of the shingles to be cut and also to suit the length of the carriage or the intervals between the ends of the shingle block or bolt and the planes of the combs when in their normal positions, as will be understood from the following description of the operation: Having secured the block or bolt by means of the clamp and advanced the carriage toward the plane of the saw to arrange the outer or front surface of the block or bolt approximately in the plane of the saw or the plane of the front edge of the table, the combs being in engagement with the guide rail or track, the comb at one end of the carriage is disengaged from the rail or track by turning the rocker or elevating the outer end of the attached lever or handle and the carriage is advanced toward the plane of the saw to allow the engagement of the next tooth of said comb with the rail or track. The carriage is now advanced in the oblique position, in which it is held by the combs to cut the first shingle, and after returning the carriage to its initial position the other end thereof is advanced by disengaging the adjacent comb and reengaging the next tooth thereof with the rail or track to again cause the block or bolt to project beyond the plane of the saw a distance equal to the thickness of a shingle. The oblique position of the carriage in its movement parallel with the guide-rail or track causes the desired taper of the shingles, the latter being cut alternately from the butt and from the tip. The interval between the guide-rail-engaging points of the combs determines the thickness of the shingles and, owing to the fact that the shingle block or bolt is arranged between the vertical transverse planes of the combs, provides for giving the necessary thickness of said shingles both at tip and butt by the adjustment of the carriage at one end only. In other words, after having cut a shingle the advance of the carriage at that end adjacent to the rocker 22 not only causes the adjacent end of the block or bolt to project beyond the plane of the saw, but also the opposite end of the block or bolt; but owing to the angular disposition of the carriage the first-named end of the block or bolt projects to a greater distance, and thus causes the tapered construction which is necessary in shingles.

It will be understood that in practice various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having described my invention, what I claim is—

1. An attachment for sawing-machines having a carriage provided with block or bolt clamping devices, and rocking combs mounted upon the carriage for engagement with a longitudinal guide-rail or track, substantially as specified. 70

2. An attachment for sawing-machines having a carriage provided with block or bolt clamping devices, transverse rockers mounted upon the carriage, and combs depending from said rockers for engagement with a longitudinal track or guide, substantially as specified. 75

3. An attachment for sawing-machines comprising a carriage, shingle block or bolt engaging jaws mounted upon the carriage at an intermediate point, and rocking combs mounted upon the carriage between said block and bolt engaging jaws and the extremities of the carriage and adapted for engaging a longitudinal rail or track, substantially as specified. 80 85

4. An attachment for sawing-machines comprising a carriage, shingle block or bolt engaging jaws mounted upon the carriage at an intermediate point, and rocking combs mounted upon the carriage at equal distances from said block or bolt engaging jaws, and between the same and the ends of the carriage, and provided with teeth, spaced at equal intervals, and adapted for engaging a longitudinal guide-rail or track, substantially as specified. 90 95

5. An attachment for sawing-machines, consisting of a carriage and means for guiding the same, fixed and movable block-engaging jaws, a swinging bar carrying the movable jaw, a jaw-operating lever mounted upon said bar, and a spring-actuated draw-rod eccentrically connected with said lever to form a dead-center lock, substantially as specified. 100 105

6. An attachment for sawing-machines having a carriage and means for guiding the same, fixed and movable block-engaging jaws, a swinging bar carrying the movable jaw, a draw-rod, a fixed guide through which said rod extends, a tension-spring connected with the draw-rod, a rock-shaft mounted upon said movable bar, and a lever attached to the rock-shaft and having said draw-rod eccentrically connected therewith, substantially as specified. 110 115

7. An attachment for sawing-machines having a carriage provided with vertically-spaced runners and side rails, fixed and pivoted transverse bars connecting said runners and side rails, block-engaging jaws carried respectively by said fixed and movable transverse members, a draw-rod extending through a guide on the fixed transverse member and having an actuating-spring, and a clamping-lever mounted upon the movable transverse member and having the draw-rod eccentrically connected therewith, said jaws being arranged adjacent to the plane of the flush outer surfaces of one of the runners and the super-jacent side rail, substantially as specified. 120 125 130

8. The combination with a sawing-machine

5 having a flat table provided with a longitudinal upstanding guide-rail or track, of a carriage having block or bolt engaging devices, and rocking combs mounted upon the carriage adjacent to its extremities, and opposite sides of the plane of said block-engaging devices, for engagement with said rail or track, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

W. E. BROWN.

Witnesses:

C. T. AUSTIN,
S. L. THOMPSON.