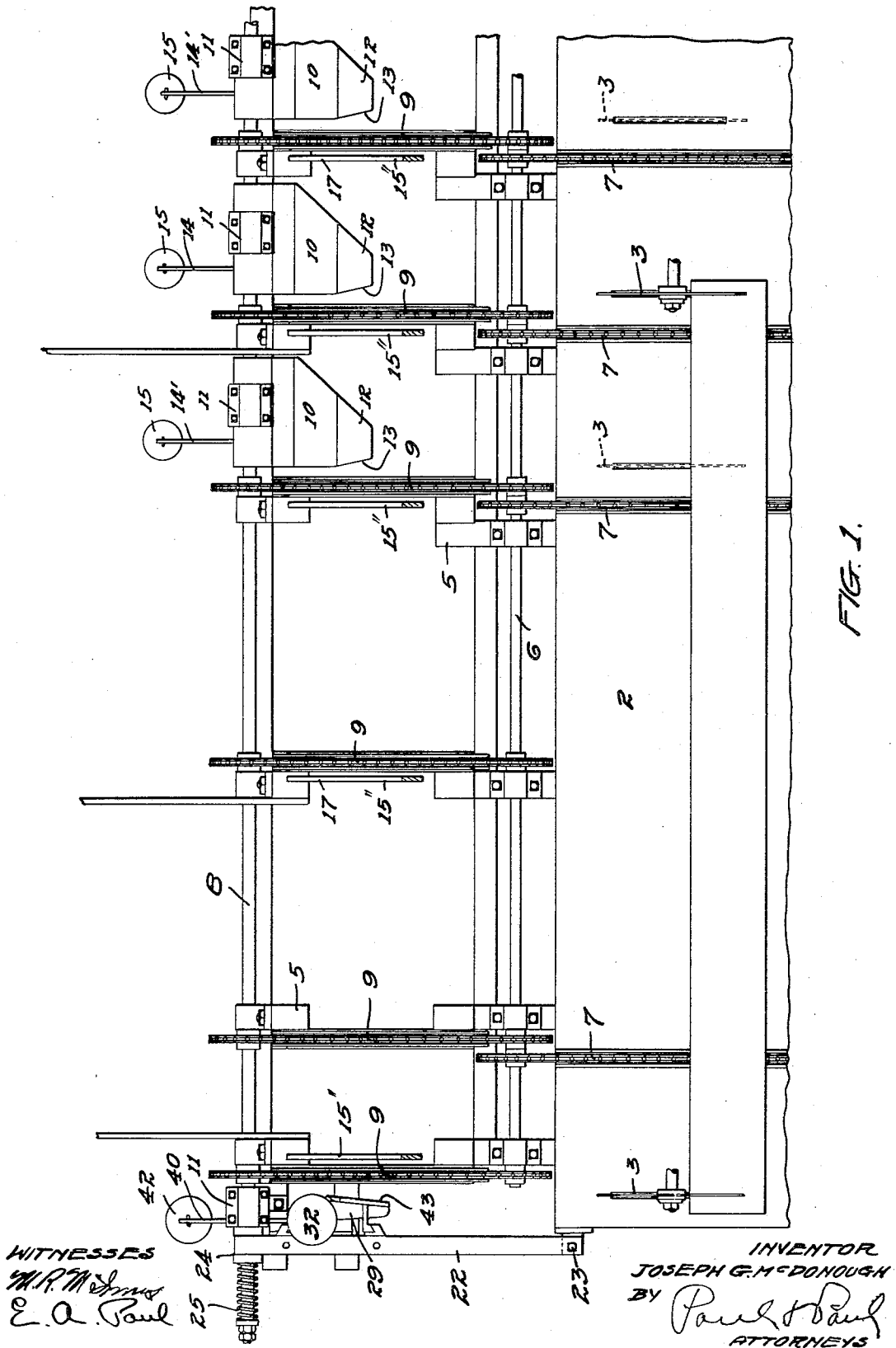


J. G. McDONOUGH.
LUMBER MARKING DEVICE.
APPLICATION FILED JAN. 19, 1916.

1,288,084.

Patented Dec. 17, 1918.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

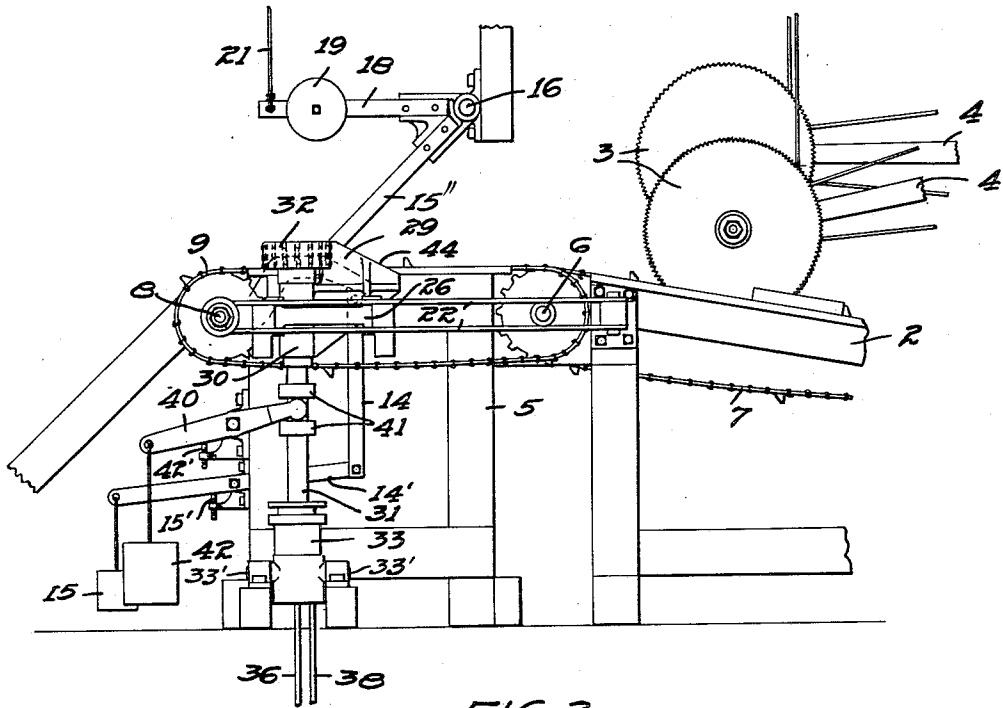


FIG. 2.

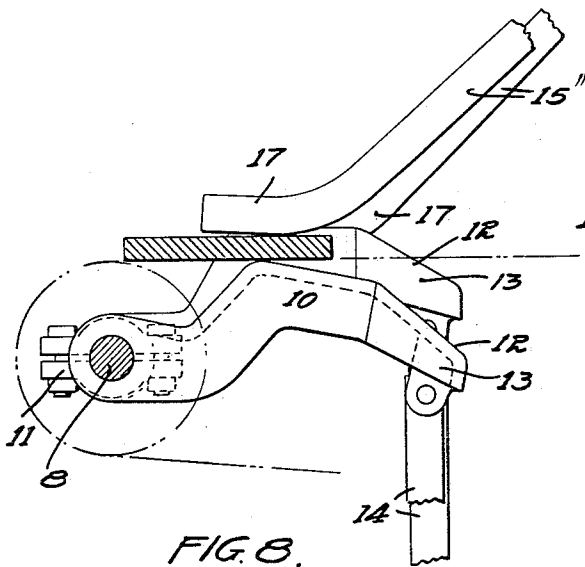


FIG. 8.

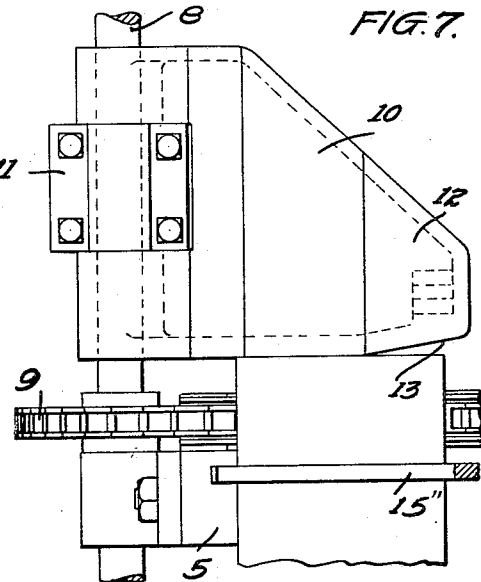


FIG. 7.

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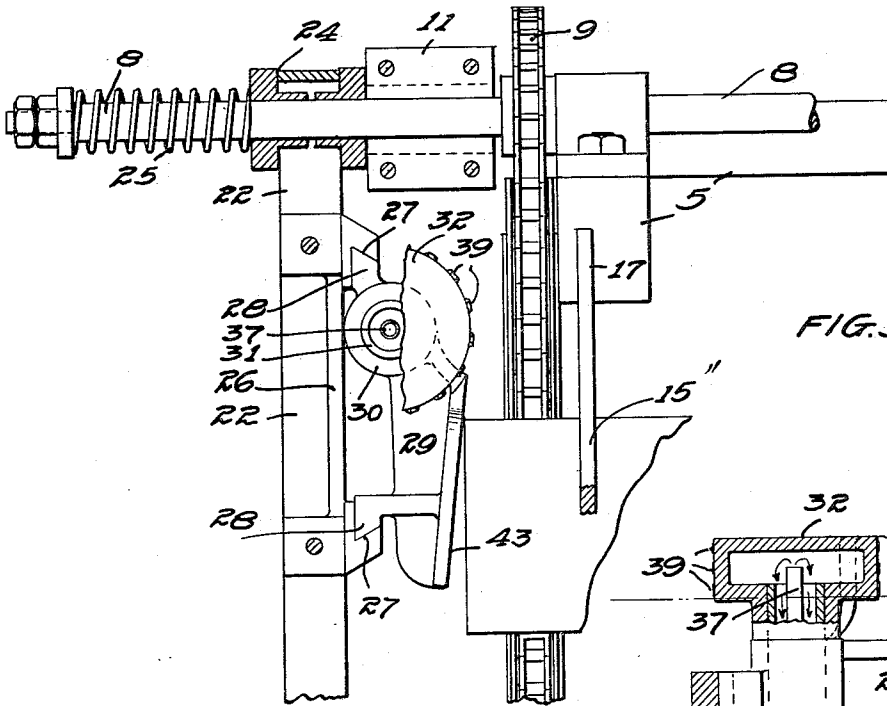


FIG. 3.

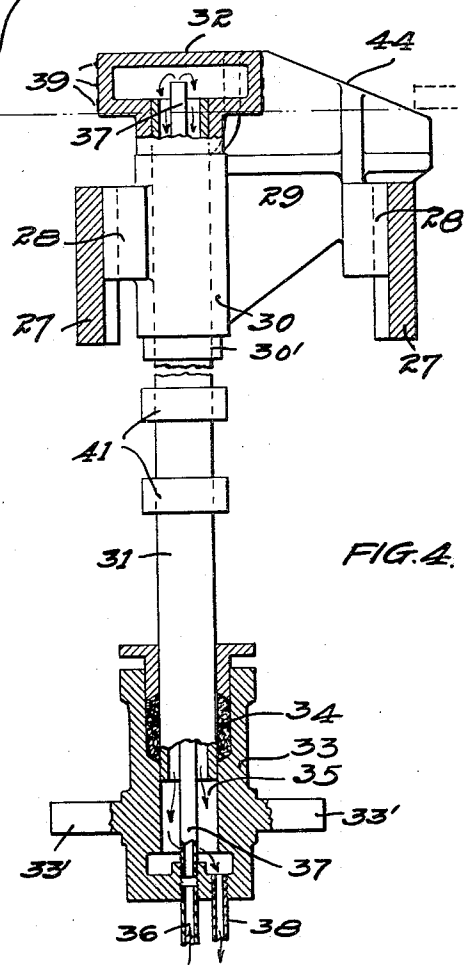


FIG. 4.

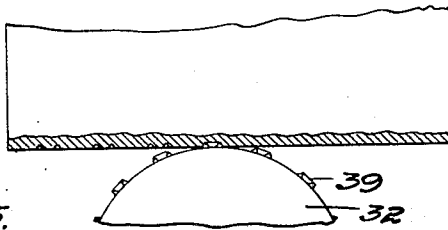


FIG. 5.

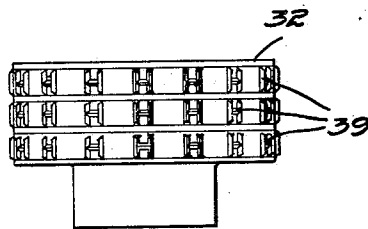


FIG. 6.

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JOSEPH GILBERT McDONOUGH, OF EAU CLAIRE, WISCONSIN.

LUMBER-MARKING DEVICE.

1,288,084.

Specification of Letters Patent.

Patented Dec. 17, 1918.

Application filed January 19, 1916. Serial No. 73,036.

To all whom it may concern:

Be it known that I, JOSEPH G. McDONOUGH, citizen of the United States, resident of Eau Claire, county of Eau Claire, State of Wisconsin, have invented certain new and useful Improvements in Lumber-Marking Devices, of which the following is a specification.

The object of my invention is to provide a lumber marking device designed particularly for use in connection with a lumber trimmer and adapted for marking lumber of varying thickness.

A further object is to provide a marking device equipped with means for insuring the proper marking of the lumber, regardless of any accumulation of sap or pitch thereon.

A further object is to provide a marking device adapted for marking lumber of varying length.

Other objects of the invention will appear from the following detailed description.

The invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification,

Figure 1 is a plan view of a portion of a lumber trimmer with my invention applied thereto,

Fig. 2 is an end elevation of the same,

Fig. 3 is a plan section of a portion of one end of the machine, showing the marking device,

Fig. 4 is a vertical sectional view through the marking device.

Fig. 5 is a detail sectional view, showing the marking device in operation,

Fig. 6 is a detail view, showing the face of the marking device,

Fig. 7 is a plan view, showing the means for holding the lumber against the marking device,

Fig. 8 is a sectional view, showing the means for holding the lumber against upward tilting during the marking operation.

In the drawing, 2 represents the table of the lumber trimmer and 3 the trimmer saws, having their arbors supported upon suitable arms 4 above the table, as usual in machines of this kind. 5 is a frame, mounted on or adjacent to the trimmer frame and having bearings for a shaft 6 which supports the lumber feed belts 7. A drive

shaft 8 is mounted in bearings on the frame 5, parallel with the shaft 6 and is connected by feed belts 9 with the shaft 6. These belts 9 receive the lumber from the belts 7 after it passes the saws. On this shaft 8 I mount a group of tilting members 10, each consisting preferably of a casting that is forked on one side and held in place against movement lengthwise of the shaft by plates 11 which fit in between the arms of the fork and are securely bolted to the shaft. Each of these members has an upper downwardly and inwardly inclined surface 12 in the path of the lumber as it is brought along by the feeding chains 9 and if the lumber happens to be too long to drop down against the edge of the tilting member, it will ride over the top thereof, being directed by the inclined surface 12.

As shown in Fig. 1, there are a group of these members, interposed between the feed chains opposite the trimmer saws and adapted to engage the varying lengths of lumber. Should a longer piece be delivered from the trimmer, with its ends trimmed by the outer saw, it will engage the end of the outer tilting member and ride over the others.

Each member, in addition to the inclined surface 12, is provided with an inclined surface 13 in a plane at right angles substantially to the surface 12 and formed on the edge of the member, operating as a guide to direct the piece of lumber between the member and the marking device. These tilting members are yieldingly held by means of links 14 pivotally connected therewith at their upper ends and to levers 14' at their lower ends, said levers being pivoted intermediate to their ends in the frame 5 and provided with weights 15 which operate to hold the tilting members upwardly against the weight of the lumber passing thereover. I prefer to provide stops 15' in the path of the levers 14', as indicated in Fig. 2, to limit the downward tilt of the lever.

Above each tilting member I provide an arm 15'' pivoted at 16 and having a lower end 17 that is adapted to rest on the top of the lumber and provided with a lever 18 on which a weight 19 is mounted for holding the arm 15'' down upon the lumber with a yielding pressure. A flexible connection 21 is attached to the lever 18 for limiting the downward travel of the arm 15''.

At one end of the machine is a bar 22 piv-

oted at 23 and having a loose bearing at 24 on the projecting end of the shaft 8, said bearing being free to slide on said shaft and normally held against outward movement by a helical spring 25 that is coiled on said shaft. The bearing plates 11 at the end of the shaft serve as stops to limit the movement of the bar and its bearing 24.

Upon this arm a frame 26 is mounted, having seats 27 formed therein to receive brackets 28 on a casting 29. This casting has a vertical bearing 30 for a tube 31 on the upper end of which a hollow cylindrical hub 32 is mounted. Beneath the casting 29 on the tube 31 is a collar 30', which holds the casting in its raised position in the frame 22. The lower end of said tube is inserted into a cylinder 33 having a packing 34 at one end in which said tube is slidable and provided with a steam chamber 35 communicating with a steam supply pipe 36. A pipe 37 leads from the supply pipe 36 up through the tube 31 into a hollow head 32 for delivering steam thereto and heating the walls of said head, and an exhaust pipe 38 leads from the lower end of the cylinder for conducting away the water of condensation. The cylinder 33 has pivot pins 33' formed thereon, journaled in bearings on the frame of the machine to allow the cylinder to oscillate with the tube 31 during the passage of the lumber past the marking device.

The outer face of the head 32 has marks or characters 39 formed thereon and, as indicated in Fig. 6, I prefer to provide a comparatively wide face on the head and arrange three groups or series of marks thereon, one at the bottom, one in the middle and one at the top of the head, thereby adapting the device for lumber of varying thickness. For instance, the group of marks at the bottom of the head will engage the end of an ordinary board. The first and second groups will mark a two inch plank and a three inch plank would be marked by all of the groups.

The hub of the head 32 rests on the bearing 30 and the casting 29 is free to slide in its seats in the frame 26 and is normally held in its raised position by means of a lever 40 having one end fitting between collars 41 on the sleeve and provided with a weight 42. A stop 42' is mounted in the path of the lever 40 for limiting its downward movement.

The casting 29 is provided with an inclined face 43 in the path of the moving lumber, the end of the piece of lumber contacting with this surface and sliding thereon toward the marking die. The pressure of the lumber on the face 43 will be sufficient to force the bar 22 outwardly against the tension of the spring 25 and allow the end of the lumber to slide past the inclined face and engage the face of the die. When the

marks on the die contact with the end of the lumber, the die will be revolved and sufficient pressure will be exerted thereon through the spring 25 to force the characters formed on the die into the end of the lumber and make a legible brand thereon, which will be repeated entirely across the piece of lumber. In case, therefore, a portion of the end of a piece of lumber should be of such a nature that a legible brand could not be impressed thereon, the repetition of the brand along the inner end of the lumber would insure a legible mark at some point thereon. If for any reason a piece of lumber should approach the branding device untrimmed, or be too long to slide on the surface 43, it will contact with an inclined surface 44 on the top of the casting 29 and riding up thereon, cause the casting 29, with the branding device supported thereby, to be depressed against the pull of the weight 42 and thereby the lumber will be carried over the branding mechanism without clogging the feed of the machine or breaking the branding device.

With this apparatus, lumber of varying thickness can be easily and quickly branded and the cylindrical die will insure a legible marking at some point on the end of the lumber, and in case a piece of lumber too long to be engaged by the brander should be brought up by the feed chains, it will contact with the inclined surfaces of the guides and be directed thereby over the branding device without causing damage thereto.

In various ways the details of construction herein shown and described may be modified and still be within the scope of my invention.

I claim as my invention:

1. The combination, with belts for moving pieces of lumber of different length, of a branding device mounted to contact with one end of the pieces of varying length and yielding under the pressure of the lumber thereon, and means at the opposite end of the pieces of lumber of different length for engaging and holding them against said branding device.

2. The combination, with means for moving lumber, of a branding device mounted to contact with one end of the lumber and a guide at the opposite end of the lumber having a face for contacting with the lumber and holding it against said branding device, said guide also having a surface arranged at an angle to the direction of movement of the lumber for guiding it to said contacting face.

3. The combination, with a means for moving lumber, of a branding device mounted to contact with one end of the lumber, a tilting guide provided at the opposite ends of the lumber and having a face

for contacting with the lumber and holding it against said branding device, said guide tilting downwardly under the weight of a piece of lumber that is too long to contact with said face.

4. The combination, with means for feeding lumber, of a branding device mounted to contact with one end of the lumber and a plurality of guides having faces for contacting with the other end of the lumber to hold it against said branding device, said guides being mounted to swing downwardly under the weight of a piece of lumber that is too long to contact with the face of the guide.

5. The combination, with means for moving lumber, of a branding device mounted to contact with the end of the moving lumber, said branding device revolving under contact of the lumber therewith and having a cylindrical branding face of a depth equal to the thickest piece of lumber to be branded, said branding face having annular rows of branding dies formed thereon at the bottom, in the middle and at the top of said branding face, said dies engaging the ends of the pieces of lumber and sinking the mark therein.

6. The combination, with means for moving lumber, of a revolving branding device, a member wherein said branding device is mounted, said member having an inclined face positioned to contact with the end of the lumber and direct it into engagement with said branding device, said member being mounted to yield under the pressure of the lumber on said inclined face.

7. The combination, with means for feeding lumber, of a pivoted bar, a branding device mounted thereon in the path of the end of the lumber, said branding device being revolved by the engagement of the lumber therewith, means for holding pieces of lumber of different length in contact with said branding device, and means for yieldingly resisting the movement of said bar through the pressure of the lumber on said branding device.

8. The combination, with means for moving pieces of lumber of varying length, of a branding head having peripheral marks or characters for branding the transverse end surfaces of said pieces of lumber, means for heating the characters on said head, and means for holding the pieces of lumber of varying length for branding the marks thereon.

9. The combination, with means for moving pieces of lumber of varying length, of a branding head having peripheral marks or characters for branding the transverse end surfaces of said pieces of lumber, and means for holding the pieces of lumber of varying length for branding the marks thereon, said head having a hollow spindle

for delivering steam thereto for heating the characters on said head.

10. The combination, with means for moving pieces of lumber of different length, of a branding head having a face provided with marks or characters for making impressions on the transverse end surfaces of such pieces of lumber, said head yielding under pressure of the lumber thereon, means for heating said head and the branding characters thereon, and means for holding the pieces of lumber of varying length against longitudinal movement.

11. The combination, with means for moving lumber, of a branding head cylindrical in form having peripheral marks or characters for branding the trimmed ends of the pieces of lumber, said head revolving in the plane of the lumber and through contact therewith, means for heating the characters on the face of said head and means for holding the ends of the pieces of lumber of varying length against said face for branding the marks in said ends.

12. The combination, with means for moving lumber, of a branding device mounted to contact with one end of the trimmed lumber, an oscillating guide provided at the opposite end of the lumber and having a face for contacting with the lumber and holding it against said branding device, said guide moving to an inoperative position under the pressure of a piece of lumber that is too long to contact with said face.

13. In a machine of the class described, the combination of feeding means adapted to move a board horizontally, marking means adapted to cooperate with a vertical edge of the board during its feeding movement, and means effective to cam a board toward the marking means during the feeding movement.

14. The combination, with a feeding means adapted to move pieces of lumber or timber horizontally, of a marking means adapted to cooperate with the vertical edge of the lumber or timber during its feeding movement, and means engaging the lumber or timber for directing the surface to be marked into contact with said marking means.

15. The combination, with a feeding means adapted to move pieces of lumber or timber, of means for placing an identifying mark on a surface of the lumber or timber during its feeding movement, and means engaging the lumber or timber for directing the surface to be marked into contact with said identifying means and means for heating said identifying means.

16. The combination, with means for moving pieces of lumber of varying length, of a branding head for applying identifying marks or characters to vertical surfaces of said pieces of lumber, means for heating

said head, and means for holding the pieces of lumber of varying length for branding the marks thereon.

17. The combination, with means for
5 marking the ends of lumber or timber, of means for moving the pieces to be marked horizontally and longitudinally into contact with such marking means.

18. The combination, with means for
10 marking the vertical end surfaces of lumber

or timber, of means for moving the pieces to be marked horizontally and longitudinally into contact with said marking means.

In witness whereof I have hereunto set my hand this 3d day of Jan., 1916.

JOSEPH GILBERT McDONOUGH.

Witnesses:

ANNA KNOBEL,

C. F. CAMPBELL, Jr.