

966,492.

V. VARIN.
LUMBER MARKING MACHINE.
APPLICATION FILED JAN. 31, 1910.

Patented Aug. 9, 1910.

4 SHEETS—SHEET 1.

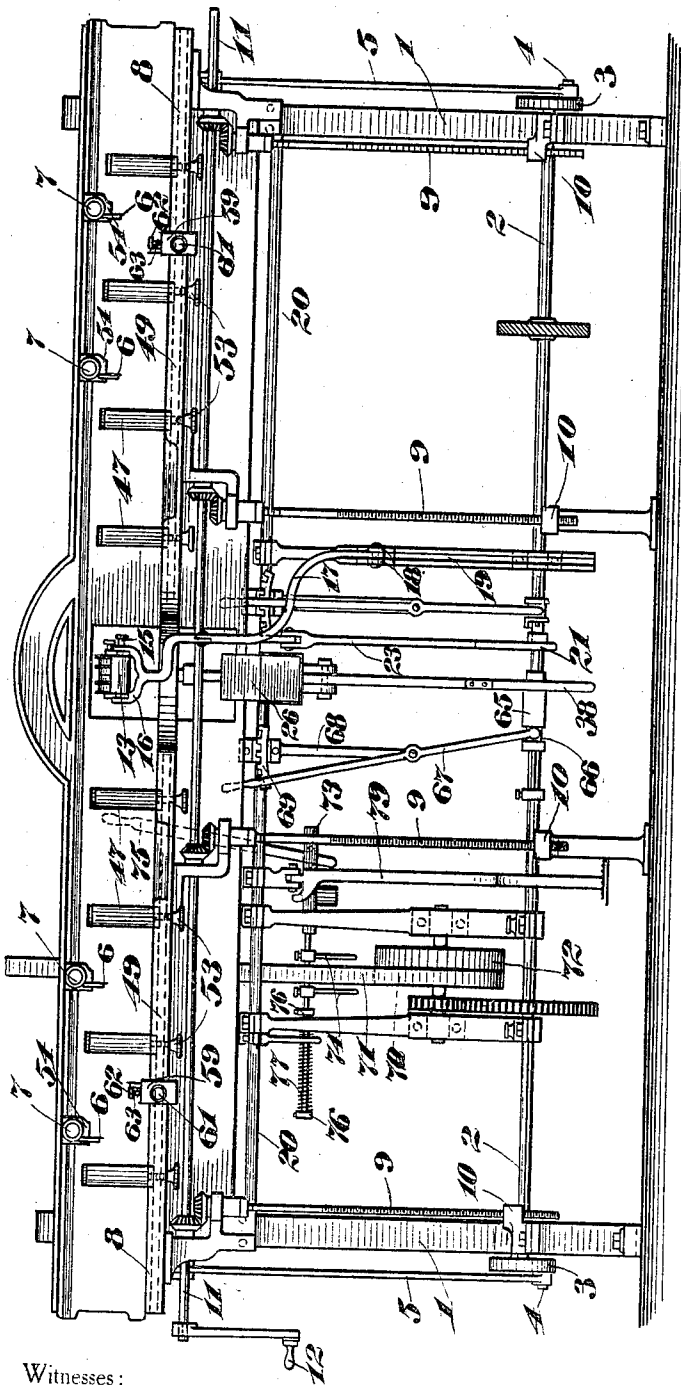


Fig. 1

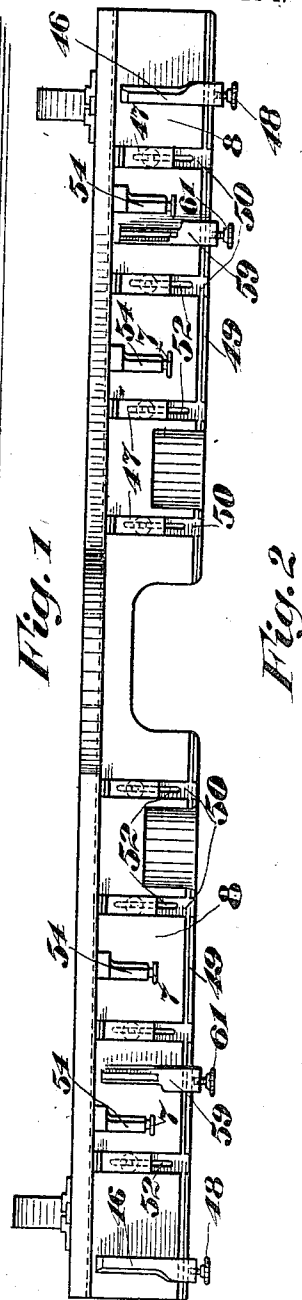


Fig. 2

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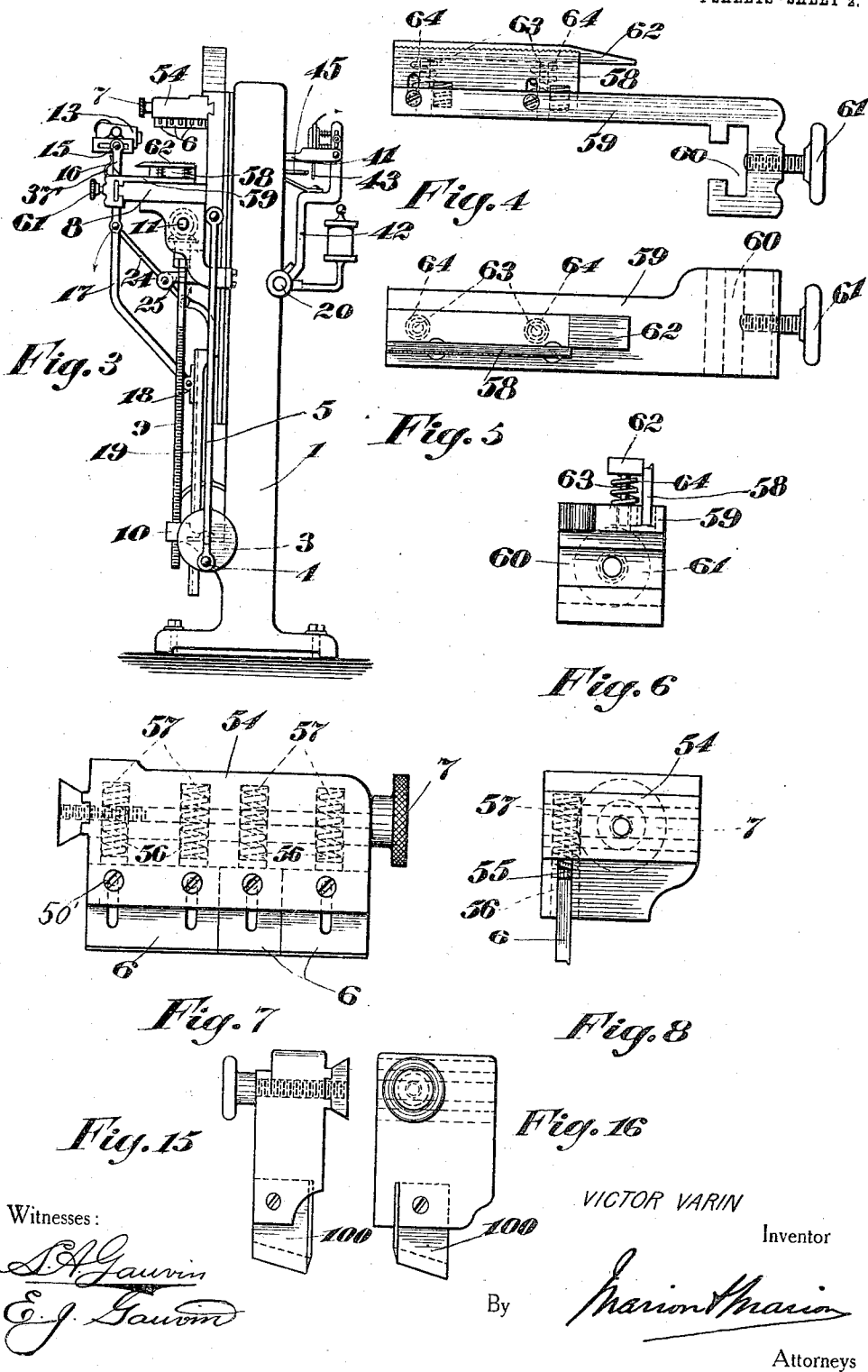
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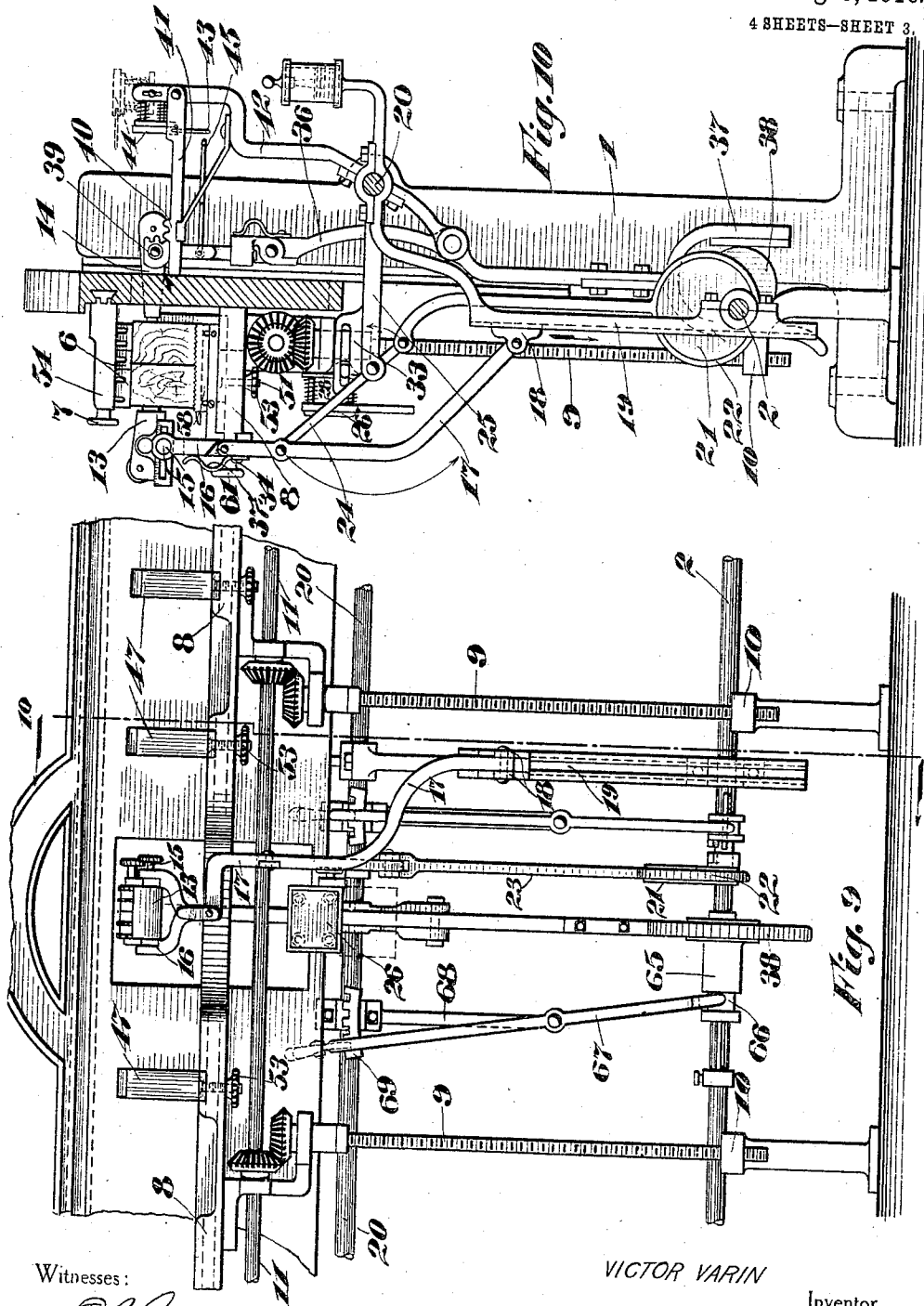
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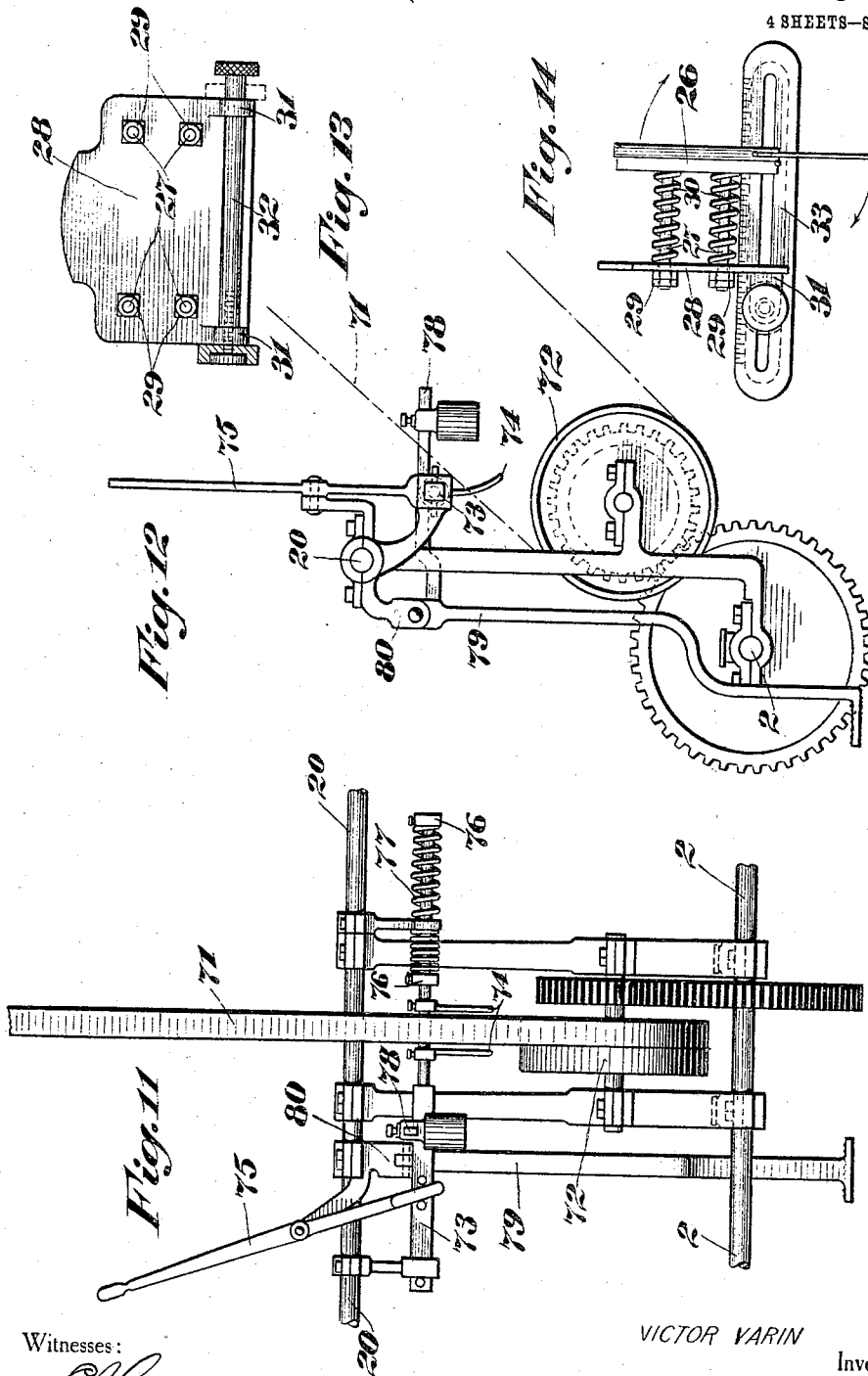
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UNITED STATES PATENT OFFICE.

VICTOR VARIN, OF MONTREAL, QUEBEC, CANADA.

LUMBER-MARKING MACHINE.

966,492.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed January 31, 1910. Serial No. 541,084.

To all whom it may concern:

Be it known that I, VICTOR VARIN, a subject of the King of Great Britain, residing in the city and district of Montreal, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Lumber-Marking Machines; and I do hereby declare that the following is 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.

The invention to be hereinafter described relates to marking machines, and particularly to lumber marking machines.

Broadly speaking, it comprises a framework, an adjustable table or beam secured thereto, marking devices adapted to operate on the lumber, means for inking two sets of the marking devices, and means for operating the marking devices.

In order to more clearly disclose the construction, operation and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings, like reference characters designate the same parts.

In the drawings: Figure 1 is a front elevation of the invention; Fig. 2 is a plan view of the table and attachments; Fig. 3 is a right-hand end elevation; Fig. 4 is an enlarged side elevation of one of the lower marking devices, detached; Fig. 5 is a plan view of Fig. 4; Fig. 6 is a right-hand end view of Fig. 4; Fig. 7 is a side elevation of one set of upper cutters, detached; Fig. 8 is a right-hand end view of Fig. 7; Fig. 9 is an enlarged front view of a part of the machine, showing the mechanism for operating the front and rear cutters; Fig. 10 is a vertical cross section on line 10—10 of Fig. 9, looking in the direction of the arrow; Fig. 11 is an enlarged front view of the pulley mechanism for operating the machine, and the belt shifting mechanism; Fig. 12 is a right-hand elevation of Fig. 11; Fig. 13 is a rear view of the inking pad for the front markers, detached; Fig. 14 is a side elevation of Fig. 13; Fig. 15 is a side elevation of a solid bevel cutter which may be substituted for the upper marker; and, Fig. 16 is a front view of Fig. 15.

In the preferred form of the machine, a good, solid, substantial framework 1 is pro-

vided. In the lower part of this framework is journaled an operating shaft 2. To this shaft are secured disks 3, provided with wrist pins 4 to which are connected the lower ends of pitman rods 5. The upper ends of the rods 5 are pivotally connected to a reciprocable beam or table having sliding tongue and groove connection with the frame. To this beam are detachably connected blocks provided with spring-pressed marking knives 6. The connection between the blocks and beam may be mortise and tenon and a thumb screw or hand-bolt 7 may be used for tightening them, if desired. Slidably connected to the beam, by tongue and groove, or similar means, is an adjustable table 8, the adjustment of which is effected by threaded supporting rods 9 and cooperating bevel pinions. The rods 9 are connected at their opposite ends to the adjustable table and have their lower ends threaded into tubular sockets 10 projecting upwardly from the lower end of the frame. The operating shaft 11 for adjusting the table is mounted in hangers depending from the lower face of the table 8 and is provided with bevel pinions adapted to intermesh with and drive similar pinions on the shaft 9. A crank or handle 12 of usual form may be employed for rotating the operating shaft 11. The adjustable table is adapted to support the lumber to be marked.

The marking apparatus comprises two sets of stamps adapted to operate simultaneously on opposite faces of the lumber, and means for actuating the stamps. In the preferred form, this marking mechanism comprises a front stamp 13 and a rear stamp 14. The machine, of course, is particularly adapted for marking prepared lumber already cut to the proper size and ready for use in building constructions. Accordingly, all similar pieces, such as joists, sills, panels, &c., must be indicated with the same mark. Therefore, the front and rear markers are arranged or adjusted to mark the same characters and adapted to operate on the same or opposite faces of two pieces at once. The front marker 13 comprises simply a head or block, in which is arranged any well known form of marker or stamp. This block is provided with a longitudinal slot in its base adapted to receive a pin 15 threaded through the opposite arms or branches of a yoke 16. One edge of the slot is provided with gradua-

tions. By tightening the pin 15, the block may be secured at various adjusted positions with respect to the adjacent face of the piece being marked. The yoke 16 is formed as an extension of a curved arm 17, the lower end of which is pivoted to a block 18 slidably mounted in ways 19 mounted on the shafts 2 and 20 in the frame 1. Secured to the shaft 2 is an eccentric 21 about which is disposed the strap 22 from which extends a rod 23, the upper end of which is pivoted to one end of a lever link 24 fulcrumed in one end of a bracket 25 extending from the frame 1. The opposite end of the link is pivotally connected to the arm 17. Consequently, as the shaft 2 rotates, the eccentric 21 will effect vertical reciprocation of the rod 23, which will impart an arc movement to the long end of the link 24. This movement of the link 24 will cause a downward and outward movement of the stamp 13 in a curvilinear path, the block 18 traveling freely in the way 19. As the marker reaches its downward limit, it will be pressed against the spring supported inking pad 26. The pad face is rigidly secured to the ends of the bolts 27, which are adapted to slide freely through openings in a back plate 28 and are provided with adjusting nuts 29. Coil springs 30 are disposed about the bolts 27 and act to hold the pad yieldingly in outward position. The backing plate is provided with ears 31, through which a clamping bolt or rod 32 is passed. This rod may be slid horizontally in slotted ears 33 extending upwardly from the bracket 25 and is provided with a head on one end and a tightening nut on the opposite end. By tightening the nut on the rod 32, the back plate 28 may be clamped in any desired position. One edge of the slots in the ears 33 is provided with graduations by which the pad may be adjusted, as desired. The graduations for adjustment of the pad correspond to the graduations for adjustment of the marker 13. Consequently, when the marker is adjusted horizontally, the pad should be equally and oppositely adjusted. The adjustment of the marker, of course, is to enable it to operate on pieces of various thicknesses.

Should the marker 13 be adjusted too far forward toward the face of the lumber, considerable damage to the machine would result. In order to avoid this, the upper end of the arm 17 is provided with a hinge joint 34, adapted to allow continued forward or inward movement of the lower part of the arm 17 after the block 13 has engaged and marked the face of the piece. A leaf spring 37' is adapted, normally, to maintain the yoke 16 and arm 17 in the position shown in Fig. 10.

The operation of the marker 14 is somewhat different from that of the marker 13.

The surface upon which the marker 14 operates will always be at the same point. Consequently, there is no need for adjustment of this marker. Like the marker 13, it may be of any well known construction and suitably mounted in the block which is pivotally mounted in a yoke formed on the upper end of a lever arm 36. As in the case of the marker 13, means must be provided for inking the marker 14. The lever arm is fulcrumed in the frame 1 and is provided with a yoke 37 which fits about an eccentric 38 slidably keyed to the shaft 2, as will later appear. As the eccentric revolves, the lever arm will be reciprocated, causing a reciprocation of the upper end of the lever arm. As the upper end of the arm reciprocates, a segment gear 39, fixed to the pivot pin of the marker block, will be engaged by rack teeth 40 on the arm 41, which is supported at its opposite ends, respectively, by the frame 1 and a bracket 42 mounted on the fixed shaft 20. Such engagement will cause a half rotation of the marker block. As the block rotates, it will engage a plate on the arm 43 extending below the pad face 44, and so swing the pad from horizontal to vertical position. As the vertical position is reached the marking face will come in contact with the pad. The reverse swing of the lever arm 36, of course, causes reverse movement of the marker and completes the marking operation. A loop or hooked arm or rod 45 is extended rearwardly from the yoke and is adapted to engage the rear face of the plate or arm 43, as the upper end of the lever arm 46 swings the marker forward to operative position. In this way, the inking pad will be jerked quickly back to horizontal position, as shown in Fig. 1, in dotted lines. The lever arm 36 is provided with a joint and a leaf spring similar to those used in the arm 17 and for the same purpose. The inking pad 44 may be held in raised position, of course, by simply tightening a thumb nut or the like threaded upon the end of the pivot rod and bearing against the outer face of one branch of the yoke in which it is pivoted, as shown in Fig. 10.

In order to properly position the pieces on the table, end stops 46 and back stops 47 are provided. The end stops, of course, are adapted to slide longitudinally of the table. To this end, they are provided with T slots adapted to receive a cooperating T rail 49 secured to or formed on the front edge of the table. Clamping screws 48 are passed through the heads of the end stops and adapted to engage the T rail to hold the end stop in adjusted position. The back stops are formed with dove-tail bases adapted to slide freely in dove-tail grooves 50 formed in the table. In order to clamp the back stops in position, clamping screws 51

are provided. These screws are passed through elongated slots 52 and secured in the bases of the back stops and tightening nuts 53 are threaded thereon. In this way, the end stops and back stops may all be adjusted to suit pieces of different dimensions. When so adjusted, the stops may be securely held in position to receive the pieces for marking. The marking devices so far described are simply designed as means for placing marks on the pieces in order to classify or identify the same.

In a great many constructions, the faces are adapted to be mortised out to receive a cooperating tenon. The mortise usually extends from one face to the other and tapers from face to face. The tenon, of course, is correspondingly tapered, and, in putting the pieces together, is driven through the mortise until the small end comes flush with the opposite face. Therefore, the face through which the tenon is driven does not require to be quite so accurately marked as the opposite face. For marking the face through which the smaller end of the tenon is to be driven, a knife edge 6 is used. This knife edge comprises a plurality of slotted blade sections slidably mounted in a block 54. The blade sections are provided with heads 55, sliding freely in grooves 56, and adapted to receive the thrust of actuating coil springs 57 which are disposed between the heads 55 and the bottoms of the grooves. In order to limit the downward movement of the blades, pins 50¹ are passed through the walls of the block and the slots in the blade sections. By having the mortise and tenon connection between the block 54 and the back of the beam or table, and by means of the tenon, bolt 7, the blocks 54, with their blade sections, the knife edges may be adjusted longitudinally of the table, to any desired point. By forming the blades 6 as a plurality of sections instead of as a single blade, it is possible to mark several pieces of varying thicknesses at the same time. The opposite faces of the pieces, however, will, at all times, be in the same plane. Therefore, a single blade will be sufficient for each of the lower marking devices. The blade of this lower marking device is formed as a saw edge to make a mark which may be clearly distinguished from the mark made by the knife edge on the opposite face of the piece. This blade 58 is seated solidly and immovably in a block 59 provided with a T groove 60 adapted to receive the T rail at the front of the table or beam and to slide longitudinally thereon. In order to clamp the block 59 in its various adjusted positions a thumb screw 61 is provided. This screw is threaded through the wall of the block and engages the T rail. Adjacent the blade 58 is slidably mounted a supporting bar 62. This bar is provided with projecting pins 63,

which slide freely in holes in the top face of the block 59. About the pins 63 are disposed coil springs 64. These springs have one end seated in the bottoms of the holes for the pins 63 and their opposite ends abutting against the under face of the bar 62. By the expansion of the springs 64, the bars 62 are held, normally, somewhat above the top edges of the blades 58. The power of these springs is sufficient to support the pieces of lumber above and out of contact of the blades 58 until the upper marking device is lowered. Downward movement of the upper marking device forces the pieces into engagement with the knife edge sections 6. As soon as this downward movement is stopped by contact with the lumber, the bars 62 will be forced down against the action of the springs 64 and the lower marking blades 58 will be brought into play.

If desired, a miter blade 100 may be substituted for the knife sections 6, for very light work, as shown in Figs. 15 and 16.

When only a single piece is being marked at one time, it is not necessary to use the rear marker. Accordingly, the hub 65 of the slidable eccentric 38 is provided with a groove 66 adapted to receive the fork of a shifting lever 67 which is pivotally mounted on an arm 68 depending from the ordinary frame. The upper end of the lever is provided with a catch adapted to cooperate with a notched arc plate 69 on the frame of the machine. In this way, the lever may be swung to move the eccentric 38 to either operative or inoperative position, and so locked.

The shaft 2 may be driven, through suitable well known gearing, from a fixed pulley 70, which, in turn, is driven by a belt 71 from any suitable source of power. It will be desirable, of course, at times, to stop the operation of the machine. For this purpose, a loose pulley 72 is provided and the belt is shipped to this pulley when it is desired to stop. For shipping the belt to operative position, a rod 73 is slidably mounted in hangers dropped from the fixed shaft 20. To this rod are secured tines 74 adapted to engage the edges of the belt 71 and shift it from the loose to the driving pulley. A lever 75 is fulcrumed on a bracket extending upwardly from the fixed shaft 20 and has loose connections with the rod 73. The rod 73 is provided with collars 76. Between each of these collars and the intermediate hanger are arranged coil springs 77. When the belt has been shipped to the driving pulley as in Fig. 11, one of these springs will be compressed and will tend to return the rod 73 to its original position, moving the belt back again to the loose pulley. To prevent this, the top face of the rod is provided with a notch adapted to receive the edge of a weighted arm or branch 78 of a bell crank treadle lever 79 fulcrumed in a hanger 80

dropped from the fixed shaft 20. By depressing the treadle end of this lever, the weighted arm will be raised from the notch in the rod 73 and the compressed spring will
 5 return the rod to its original position. As the rod returns, of course, the belt will be shipped back to the loose pulley.

It is thought that the operation and use of the invention will be clear from the preceding detailed description.
 10

Changes may be made in the construction, arrangement and disposition of the several parts of the invention, without in any way departing from the field and scope of the same, and it is meant to include all such
 15 within this application, wherein only a preferred form has been disclosed.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—
 20

1. A lumber marking machine comprising a framework, a supporting table adjustably mounted thereon, means for adjusting said table, a vertically reciprocable upper marking device, means for operating the same, a
 25 stationary lower marking device, a front marking device, means for operating the same, a rear marking device, and means for operating the same.

30 2. A lumber marking machine comprising a framework, a supporting table adjustably mounted thereon, means for adjusting said table, a vertically reciprocable upper mark-

ing device, means for operating the same, a stationary lower marking device, a front 35 marking device, means for operating the same, a rear marking device, means for operating the same, and means for rendering the rear marking device inoperative during operation of the front marking device. 40

3. A lumber marking machine comprising a framework, a supporting table mounted therein, a vertically reciprocable upper marking device adapted to operate on lumber placed on the supporting table, means 45 for operating said upper marking device, a swinging front marking device, means for adjusting said front marking device, and means for operating said front marking device. 50

4. A lumber marking machine comprising a framework, a supporting table mounted therein, a vertically reciprocable upper marking device adapted to operate on lumber placed on the supporting table, means 55 for operating said upper marking device, a swinging front marking device, means for adjusting said front marking device, means for operating said front marking device, and means for inking said front marking device. 60

In witness whereof I have hereunto set my hand in the presence of two witnesses.

VICTOR VARIN.

Witnesses:

T. MYNARD,

E. J. GANVISE.