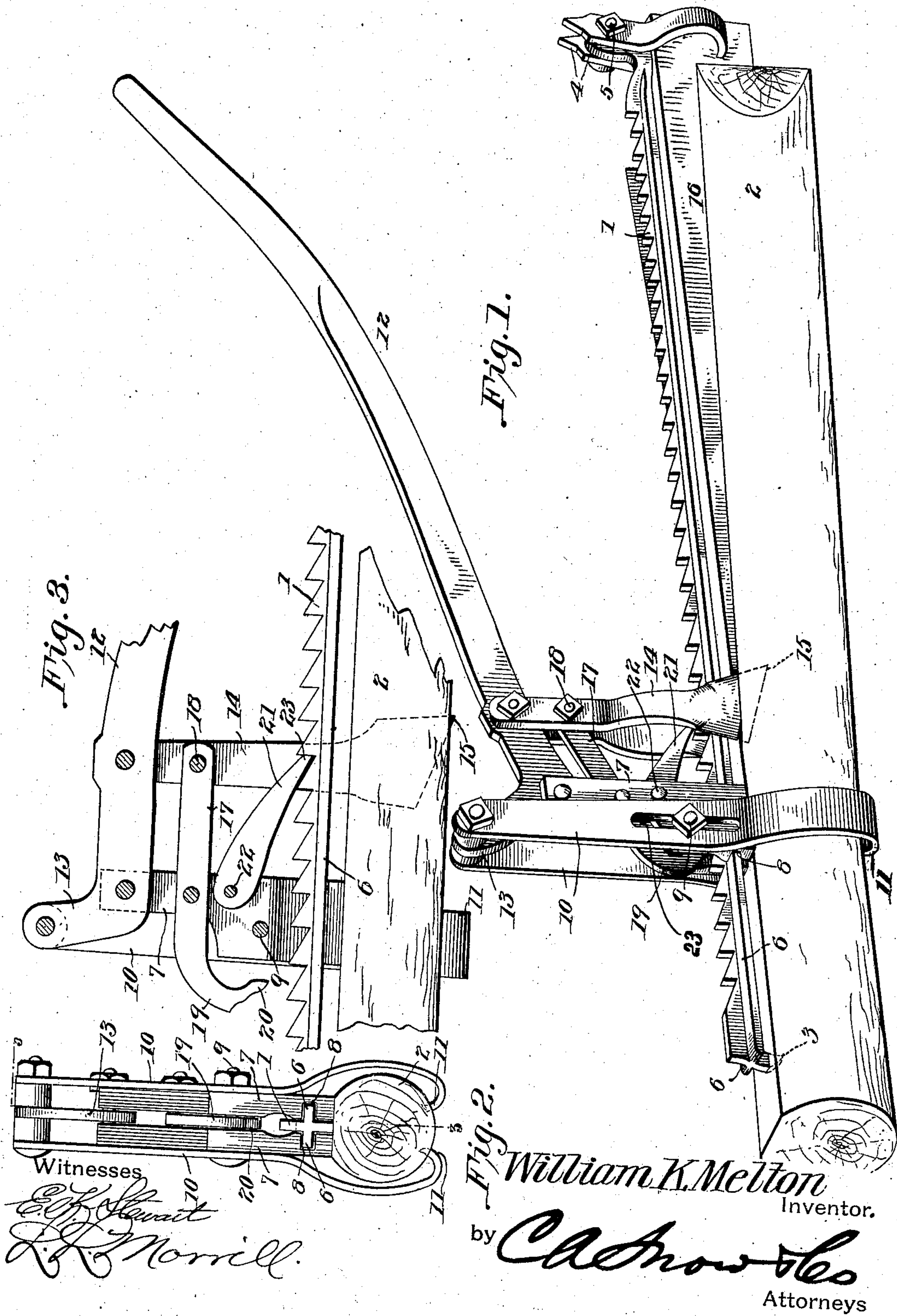


No. 827,251.

PATENTED JULY 31, 1906.

W. K. MELTON.  
TIMBER HEWING MACHINE.

APPLICATION FILED JULY 17, 1905.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## TIMBER-HEWING MACHINE.

No. 827,251.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed July 17, 1905. Serial No. 270,094.

*To all whom it may concern:*

Be it known that I, WILLIAM K. MELTON, a citizen of the United States, residing at Bivins, in the county of Cass and State of Texas, have invented a new and useful Timber-Hewing Machine, of which the following is a specification.

My invention relates to woodworking-machines, and especially to machines for hewing timbers or railroad-ties.

The object of my invention is to provide a device of the class described which may be easily transported and which is designed to operate upon the work at the place where the timber lies.

It is well known that in railroad construction hewed ties are regarded as more durable than sawed ties, but are objected to on account of their usual inequalities.

It is an object of my invention to provide a machine which may be cheaply constructed and operated by one man and which will produce faces upon a tie substantially plane and parallel and possess the advantages of a hewed tie.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportions, size, and minor details may be made without departing from the spirit or sacrificing any of its advantages.

In the drawings, Figure 1 is a perspective view of my improved timber-hewing machine mounted in operative position upon a log. Fig. 2 is a view of my improved timber-hewing machine in end elevation. Fig. 3 is a longitudinal sectional view of my improved timber-hewing machine, taken on line 3-3 of Fig. 2.

Like characters of reference designate corresponding parts throughout the several views.

In the preferred embodiment of my invention I mount an elongated rack-bar 1 upon a log 2 by driving a laterally-extending point 3 into the wood. The rack 1 is further secured by clamping members 4 engaging the end of the tie opposite the point 3 and rigidly secured by the bolt 5. When mounted as above, the rack-bar 1 extends longitudinally of the work

and is provided with the flanges 6, extending throughout its length.

Slidable upon the rack 1 are mounted guides 7, having grooves 8 engaging the flanges 6. The guides are connected by a transverse pin 9, upon which are slidably mounted reciprocating chock members 10, having their lower ends upturned and provided with cutting edges 11, which at each upward movement of said members enter the kerf or slit in the bottom of the log produced by the knives 14 and serve to space the adjacent split edges of the log apart to permit the free passage of said knives and also to assist in holding the machine in position on the log during the cutting operation. Pivoted between the vertically-disposed guides 7 is an operating-lever 12, the curved end 13 of which is pivoted to the chock members 10, as shown. Pivoted to the lever 12 at the rear of the guides 7 are the knives 14, the latter being provided with obliquely-disposed cutting edges 15 and so arranged that when vertically reciprocated by the lever 12 they will cut the timber to form oppositely-disposed plane surfaces 16. A feed-pawl 17 is pivoted at 18 to the knives 14 and is also pivoted at an intermediate joint between the guides 7, as shown. The free end of the pawl 17 is curved downwardly at 19 and terminates in a tooth or spur 20, adapted to engage the teeth on the rack 1, so that when the free end of the lever 12 is elevated the spur 20 will be forced into engagement with rack and advance the knives and chock members longitudinally of the log the distance of one tooth. As a means for preventing rearward movement of the chock members 10 a locking-pawl 21 is pivoted at 22 between the guide members 7 with its free end disposed between the knives 14 and in position to engage the teeth on the rack-bars at the rear of said chock members, as shown. The adjacent sides of the chock members 10 are formed with oppositely-disposed slots 23, the walls of which engage the adjacent ends of the pin 9 and serve to guide said members and permit vertical movement of the same.

The operation of the machine is as follows: One end of the log is first hewed with an adz or other suitable tool for a short distance and the rack 1 then secured to the log by driving the spur 3 into the top of said log, after which the members 4 are clamped to the hewed end



of the log by means of the bolt 5 and the chocking members carrying the lever 12 placed in position with the flanges 6 engaging the grooves 8, as shown. The free end of the lever 12 is then depressed, which causes the knife-edges 15 to cut downwardly through the log in parallel planes and at the same time causes the cutting edges of the chocking members 10 to enter the kerf or slit produced by the knives 14 and force the adjacent split edges of the timber apart, so as to permit the free passage of said knives and prevent the latter from wedging in the timber. When the free end of the operating-lever is elevated, it releases the chocking members from engagement with the kerf or slit and at the same time causes the spur 20 to engage the teeth on the rack 1, thereby moving the chocking members and knives 14 longitudinally of the log, the locking-pawl 21 by engagement with the teeth on the rack at the rear of the chocking members preventing rearward movement of the device.

It will be understood that the initial downward movement of the lever 12 causes the cutting edges of the chocking members to cut or score the bottom of the log, so as to cause the latter to split straight, the free ends of the chocking members being forced within the kerf or slit caused by the knives 14 on a subsequent downward movement of said lever. It will also be understood that a continued movement of the operating-lever will advance the chocking members and knives 14 with a step-by-step movement until the entire log has been cut or severed.

Having thus described the invention, what is claimed is—

1. In a timber-hewing machine, a plurality of knives disposed in parallel planes and adapted to engage the adjacent surface of the work, and means for advancing the knives longitudinally of the work.

2. In a timber-hewing machine, a plurality of reciprocating knives disposed in parallel planes and adapted to engage the adjacent surface of the work, and means for advancing the knives longitudinally of the work.

3. In a timber-hewing machine, a plurality of reciprocating knives disposed in parallel planes and adapted to engage the adjacent surface of the work, and means for advancing the knives with a step-by-step movement.

4. In a timber-hewing machine, a plurality of knives disposed in parallel planes and adapted to engage the adjacent surface of the work, chocking members disposed in advance of the knives, and means for advancing said knives and chocking members longitudinally of the work.

5. In a timber-hewing machine, a knife adapted to engage the adjacent surface of the work, a chocking member adapted to enter

the kerf formed by the knife, and means for advancing said knife and chocking member longitudinally of the work.

6. In a timber-hewing machine, a cutting-blade adapted to engage the adjacent surface of the work, a chocking member disposed in advance of the cutting-blade and adapted to enter the kerf formed by the latter, and means for simultaneously advancing the cutting-blade and chocking member longitudinally of the work.

7. In a timber-hewing machine, a cutting-blade adapted to engage the adjacent surface of the work, a chocking member adapted to enter the kerf formed by the cutting-blade, means for simultaneously moving said blade and chocking member into engagement with the work, and means for advancing said cutting-blade and chocking member longitudinally of the work.

8. In a timber-hewing machine, a plurality of cutting-blades disposed in parallel planes and adapted to engage the adjacent surface of the work, spaced chocking members adapted to enter the kerfs formed by the cutting-blades, means for simultaneously moving the cutting-blades and chocking members into engagement with the work, and means for advancing said blades and chocking members longitudinally of the work.

9. In a timber-hewing machine, a plurality of cutting-blades disposed in parallel planes and adapted to engage the adjacent surface of the work, chocking members adapted to enter the kerfs formed by the cutting-blades, a hand-operated lever pivotally connected with the cutting-blades and chocking member for simultaneously moving the same into engagement with the work, and means for advancing the cutting-blades and chocking members longitudinally of the work with a step-by-step movement.

10. In a timber-hewing machine, a rack-bar, a supporting-frame mounted for longitudinal movement thereon, a plurality of cutting-blades disposed in parallel planes and adapted to engage the adjacent surface of the work, chocking members disposed in alignment with the cutting-blade and adapted to enter the kerfs formed by the latter, a pivotal connection between the supporting-frame and the cutting-blades and chocking members for simultaneously moving said blades and members into engagement with the work, and a pawl adapted to engage the rack-bar for advancing the blades and chocking members longitudinally of the work.

11. In a timber-hewing machine, a rack-bar provided with guiding-flanges, a supporting-frame mounted for longitudinal movement on the rack-bar and provided with guideway-recesses for the reception of said flanges, cutting-blades disposed in parallel planes and adapted to engage the adjacent surface of the work, chocking members adapted



ed to enter the kerfs formed by the cutting-  
 blades, a lever pivoted to the supporting-  
 frame and pivotally connected to the cutting-  
 blades and chocking members, respectively,  
 5 a pawl pivoted to the supporting-frame and  
 movable into engagement with the rack-bar  
 by the movement of said lever for advancing  
 the cutting-blades longitudinally of the work,  
 and a pawl adapted to engage said rack-bar  
 10 for preventing backward movement of said  
 cutting-blades.

12. In a timber-hewing machine, a rack-  
 bar, means for clamping the rack-bar to the  
 work, a supporting-frame mounted for longi-  
 tudinal movement on the rack-bar, a plural-  
 15 ity of spaced cutting-blades disposed in par-  
 allel planes and adapted to engage the adja-  
 cent surface of the work, chocking members  
 disposed in alinement with the cutting-blades  
 20 and adapted to enter the kerfs formed by the  
 latter, a pawl pivoted to the blades and sup-  
 porting-frame, respectively, and adapted to  
 engage the rack for advancing the blades lon-  
 gitudinally of the work, means for prevent-  
 25 ing backward movement of the blades, and a  
 lever pivoted to the supporting-frame and  
 pivotally connected with the chocking mem-  
 bers and cutting-blades, respectively, for si-  
 multaneously moving the same into engage-  
 30 ment with the work.

13. In a timber-hewing machine, a longi-  
 tudinally-disposed guide, a supporting-frame  
 mounted for sliding movement on said guide,  
 a plurality of cutting-blades disposed in par-  
 35 allel planes and adapted to engage the adja-  
 cent surface of the work, pins extending lat-  
 erally from the supporting-frame, chocking  
 members adapted to enter the kerfs formed  
 by the cutting-blades and provided with slots  
 40 for the reception of said pins, a lever pivoted  
 to the frame and pivotally connected to the  
 cutting-blades and chocking members, re-  
 spectively, for simultaneously moving the  
 same into engagement with the work, and

means for advancing said blades and chock- 45  
 ing members longitudinally of the work.

14. In a timber-hewing machine, a plural-  
 ity of knives disposed in parallel planes and  
 having inclined cutting edges adapted to en-  
 50 gage the adjacent surface of the work, chock-  
 ing members disposed in alinement with the  
 cutting-blades and adapted to enter the kerfs  
 formed by the cutting-blades, a pivotal con-  
 nection between the blades and chocking  
 members for simultaneously moving the 55  
 same into engagement with the work, and  
 means for advancing said blades and chock-  
 ing members longitudinally of the work.

15. In a timber-hewing machine, a rack-  
 bar having lateral guiding-flanges and pro- 60  
 vided with a depending spur adapted to be  
 driven into the work, clamping members car-  
 ried by the rack-bar, a supporting-frame slid-  
 ably mounted on the guiding-flanges, cutting-  
 blades disposed in parallel planes and adapt- 65  
 ed to engage the adjacent surface of the  
 work, chocking members mounted for verti-  
 cal movement on the frame and provided  
 with upwardly - extending cutting edges  
 adapted to enter the kerfs in the base of the 70  
 work formed by the cutting-blades, a lever  
 pivoted to the frame and pivotally connected  
 with the cutting-blades and chocking mem-  
 bers, respectively, a pawl pivoted to the cut-  
 ting-blades and adapted to engage the rack- 75  
 bar for advancing the blades longitudinally  
 of the work, and a pawl pivoted to the frame  
 and adapted to engage said rack-bar at the  
 rear of the chocking members for preventing  
 backward movement of said frame. 80

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

WILLIAM K. MELTON.

Witnesses:

JNO. J. ELLINGTON.  
 F. R. BLADES.