J. M. MADIGAN & D. C. SMITH.

MACHINE FOR DIVIDING LASTS.

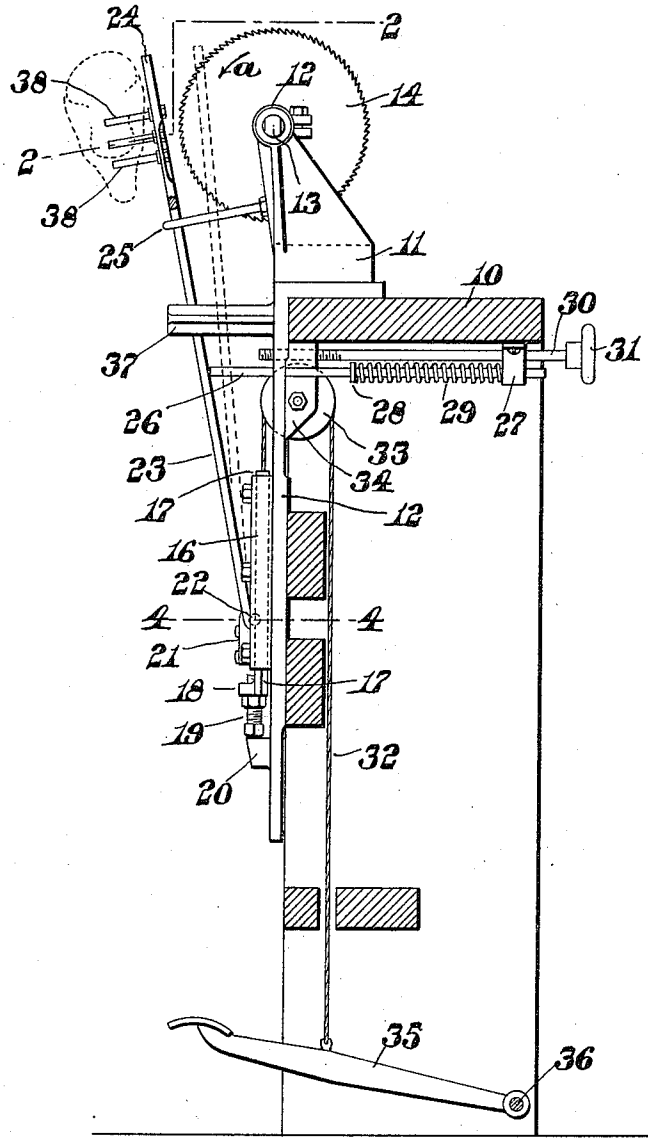
APPLICATION FILED APR. 16, 1915.

1,176,156.

Patented Mar. 21, 1916.

2 SHEETS—SHEET 1.

Fig. 1.



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THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

Fig. 2.

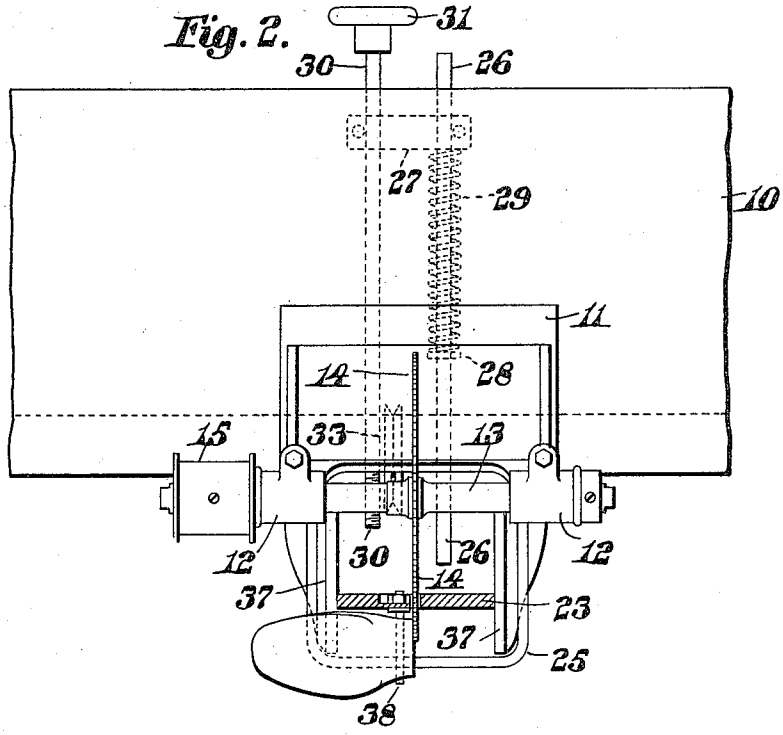


Fig. 5.

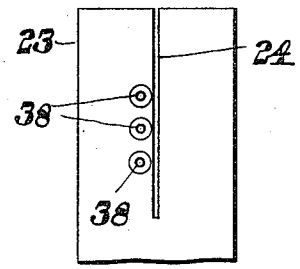


Fig. 3.

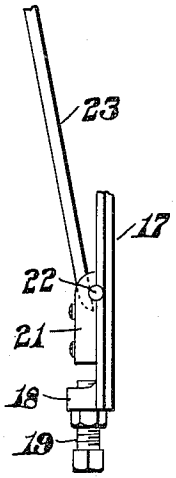
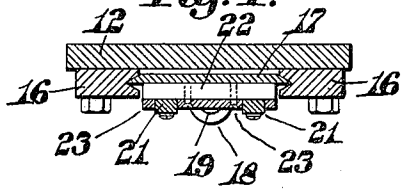


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN M. MADIGAN AND DANIEL C. SMITH, OF LAWRENCE, MASSACHUSETTS.

MACHINE FOR DIVIDING LASTS.

1,176,156. Specification of Letters Patent. Patented Mar. 21, 1916.

Application filed April 16, 1915. Serial No. 22,206.

To all whom it may concern:

Be it known that we, JOHN M. MADIGAN and DANIEL C. SMITH, citizens of the United States of America, and residents of Lawrence, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Dividing Lasts, of which the following is a specification.

This invention relates to machines for transversely dividing lasts to be used in the manufacture of boots and shoes, and has for its object the production of a device of this character in which the last may be accurately positioned during the sawing operation whereby the various lasts will always be divided on the same line.

The invention consists in certain novel features of construction and arrangement of parts which will be fully understood by reference to the description of the drawings and to the claims hereinafter given.

Of the drawings: Figure 1 represents a vertical section through a supporting frame and showing in elevation a sawing device embodying the principles of the present invention. Fig. 2 represents a horizontal section of the same, the cutting plane being on line 2—2 on Fig. 1. Fig. 3 represents an elevation of the lower end of the slide and the lower end of the work supporting plate hinged thereto. Fig. 4 represents a horizontal section, the cutting plane being on line 4—4 on Fig. 1, and Fig. 5 represents an elevation of the upper end of the work supporting plate.

Similar characters designate like parts throughout the several figures of the drawings.

In the drawings, 10 is a bench or other support to which is secured the frame 11 having a downwardly extending plate 12 formed integral therewith. The upper end of the frame 11 is provided with alined bearings 12^x for a revoluble shaft 13 having secured thereto a circular saw 14 intermediate said bearings 12^x, while secured to one end of the shaft is a pulley 15 by which said shaft may be rotated in the direction of the arrow *a* on Fig. 1 of the drawings. Secured to the front face of the plate 12 are parallel guide members 16 between which is mounted a plate 17 adapted to be vertically reciprocated. The lower end of the plate 17 is provided with an ear 18 to which is mounted an adjustable member 19 adapted to coact with a lug 20 on the plate 12 to limit the downward movement of said slide 17. The slide 17 has secured to its outer face blocks 21 forming bearings for a pivot pin 22 secured to the lower end of a work supporting plate 23. The upper end of the work supporting plate 23 is provided with a slot 24 in the same vertical plane with the saw 14. The outward movement of the plate 23 is limited by a bail 25 secured to the frame 11. Normally the plate 23 is held in its outer position by means of a rod 26 mounted in bearings in the downwardly extending plate 12 and a block 27 secured to the under face of the bench 10. This rod 26 has secured thereto a collar or flange 28 between which and the block 27 is a coiled spring forcing the rod 26 outwardly. The rear movement of the plate 23 is limited by the stop member 30 provided with the handle 31 on its rear end, while the front end thereof is threaded to the plate 12 as indicated in Fig. 1 of the drawings. The slide 17 has secured to its upper end a flexible member 32 passing over a pulley 33 mounted in ears 34 on the rear face of the plate 12. The opposite end of the flexible member 32 is connected to a treadle 35 pivoted at 36. When the treadle 35 is depressed the slide 17 will be raised and when the pressure is removed from the treadle the weight of the slide 17 will return it to its normal position with the adjustable stop member 19 resting upon the lug 20.

On either side of the hinged work supporting plate 23 are guide members 37 projecting forwardly from the frame 11 with their inner faces parallel. At one side of the slot 24 the plate 23 is provided with a plurality of outwardly extending pins 38 adapted to pass through holes bored transversely of the fore part of the last. When the last is mounted upon these pins 38 it will be accurately registered thereon and supported during the operation of dividing the last. This is accomplished by the operator pressing against the last and moving the work supporting plate 23 with the last thereon toward the rear of the machine, the saw 14 entering the slot 24 and dividing the last into its fore part and heel part. During this operation preferably the treadle 35 is depressed, thereby leaving a perfectly smooth finish to the adjacent faces of the divided parts of the last. Normally the plate 23 is in front of the saw and is held

in this position by the spring pressed rod 26, the spring 29 thereon being stiff enough to prevent the hinged work supporting plate 23 being accidentally moved to the rear. This normal forward position of the hinged work supporting plate 23 decreases the liability to accidents while the operator is dividing the last. This makes a very simple and effective device for dividing lasts, the work being supported in such a manner on the hinge plate that the line of division will always be made at the same angle and at the desired point intermediate the heel and toe.

It is believed that the operation and many advantages of this invention will be fully understood from the foregoing description.

Having thus described our invention, we claim:

1. The combination of a stationary frame; a circular saw thereon; means for driving the same; a hinged plate movable toward and from said saw and having a slot therein to receive the saw; and a plurality of work supporting pins adjacent one edge of said slot and extending from the front face of said plate, said pins being adapted to prevent movement of the work in a plane parallel with the front face of said plate.

2. The combination of a stationary frame; a circular saw thereon; means for driving the same; a hinged plate movable toward and from said saw and having a slot therein to receive the same; a bail for limiting the outward movement of said plate; yielding means for retaining said plate normally in contact with said bail and in front of said saw; a plurality of pins extending from the front face of said plate at one side of said slot for supporting the work.

3. The combination of a stationary frame; a circular saw thereon; means for driving the same; a hinged plate movable toward and from said saw and having a slot therein to receive the saw; a member to which said plate is hinged adapted to be moved vertically by the operator during the sawing operation; and means on said plate for supporting the work.

4. The combination of a circular saw; means for driving the same; a hinged plate movable toward and from said saw and having a slot therein to receive the saw; a member to which said plate is hinged adapted to slide vertically; treadle mechanism for moving said slidable member upwardly; and means on said plate for supporting the work.

5. The combination of a circular saw; means for driving the same; a hinged plate movable toward and from said saw and having a slot therein to receive the saw; a member to which said plate is hinged adapted to be moved vertically by the operator during the sawing operation; and means for limiting the downward movement of said slidable member.

Signed by us at 4 Post Office Sq., Boston, Mass., this 14th day of April, 1915.

JOHN M. MADIGAN.
DANIEL C. SMITH.

Witnesses:
WALTER E. LOMBARD,
EDWARD F. ALLEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."