

G. SWEATT.
Music-Leaf Turners.

No. 148,151.

Patented March 3, 1874.

Fig. 1.

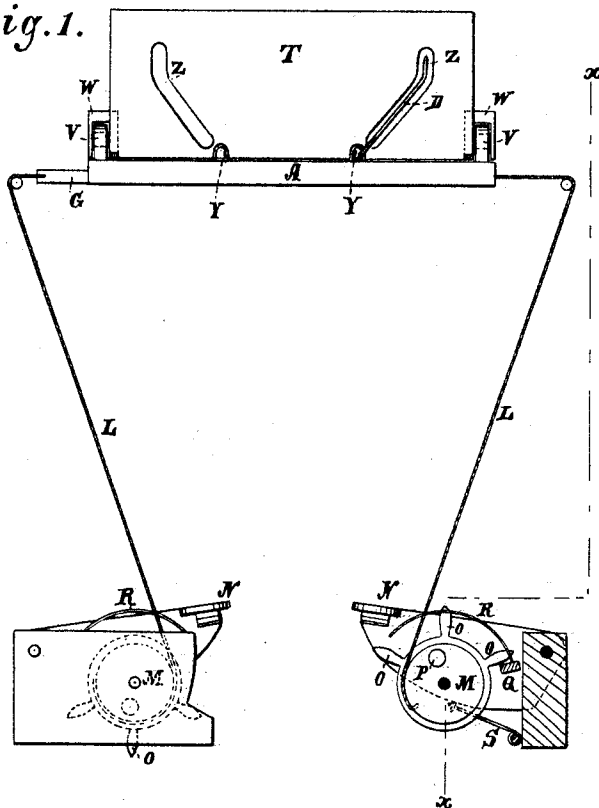


Fig. 2.

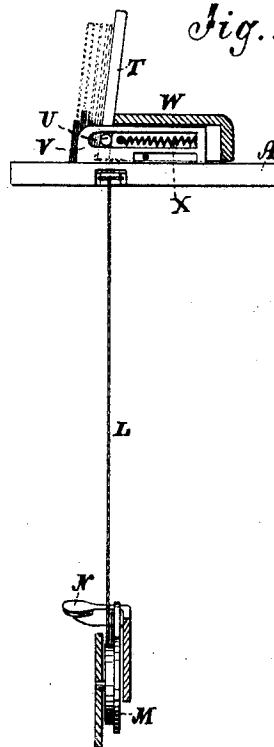


Fig. 3.



Fig. 4.

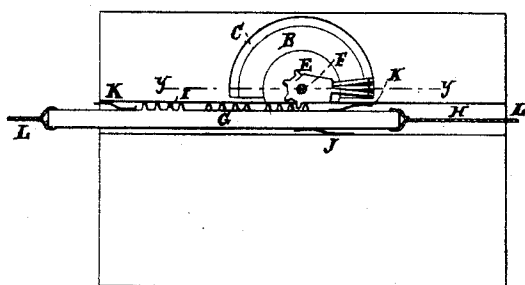
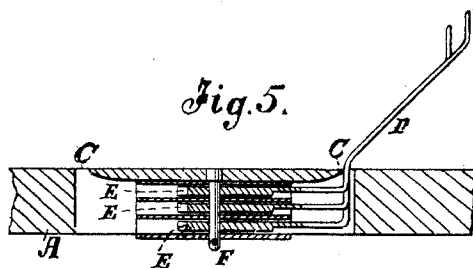


Fig. 5.



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GEORGE SWEATT, OF LEBANON, NEW HAMPSHIRE.

IMPROVEMENT IN MUSIC-LEAF TURNERS.

Specification forming part of Letters Patent No. **148,151**, dated March 3, 1874; application filed January 5, 1874.

To all whom it may concern:

Be it known that I, GEORGE SWEATT, of Lebanon, in the county of Grafton and State of New Hampshire, have invented a new and Improved Music-Turner, of which the following is a specification:

My invention consists of fingers, for turning the sheets, provided with a circular toothed base, and arranged, one above another, on a vertical pivot in a chamber, in or below the music-board, along which a toothed bar is made to slide for throwing the fingers, said bar having a row of teeth for each finger arranged to operate them successively. My invention also consists of foot-treadles, for sliding the toothed bar forward and backward with pulleys, to be turned by them, and cords connecting said pulleys with the bar to move it by being pressed on them, one treadle and pulley being to pull the bar to the right, for turning the leaves from right to left, and the other being to turn them back again, when it may be required to do so. My invention also consists of a music-rack, adjustable forward and backward, relatively to the fingers, for turning the leaves, and held up to them by springs, so that the leaves between are always held in the proper relation to the fingers, whether the book be thick or thin.

Figure 1 is a front elevation of a music-rest and rack of a piano or organ, also a side elevation of one of the treadle-motions, and a sectional elevation of the other, contrived according to my invention. Fig. 2 is a section of Fig. 1 on the line *x x*. Fig. 3 is a side elevation of the toothed rack for actuating the fingers. Fig. 4 is a plan of the music-rest inverted, and Fig. 5 is a longitudinal section of Fig. 4 on the line *y y*.

Similar letters of reference indicate corresponding parts.

A represents the music board or rest of the instrument. It has a semicircular cavity or chamber, B, in the under side, at the outer edge of which is a slot, C, of the same form, extending up through the board to allow the fingers D to extend up from said chamber, wherein they are mounted, by the horizontal toothed disks or wheels E, on the vertical pivot F, to be turned by the sliding toothed rack-bar G, arranged behind them in a longi-

tudinal groove, H, in the said board, said bar having a series of teeth, I, for each disk or wheel, which are, in different planes, corresponding to the wheels, which are placed one above another in the lengthwise direction of the bar, so as to turn the fingers in succession, beginning with the front finger whichever way the bar may be moved. The bar has springs J on its side opposite to the teeth, which bear against the wall of the groove H to hold it in gear with the disks, and also to allow the bar to spring back a little for the last tooth of each series to pass by the tooth of the pinion or disk with which it works, which, in order to be caught by the rack properly at the beginning of the back motion, is required to be stopped a little before turning so far as to allow the last tooth on the bar to escape without springing back. Said springs, also other springs, K, on the other side of the bar, prevent it from rattling against the sides of the groove. This bar is connected by a cord, L, at each end with a pulley, M, arranged along with the treadles of the instrument, one on each side, and having a treadle, N, for turning it by pressing down on the radial points or tappets O, when it is pressed down by the feet of the performer. These pulleys are of suitable size to turn, say, three fingers, D, by a half-revolution, or thereabout, and they are weighted at P to cause them to turn down after being raised a little by the upward movement of the treadle, which throws them up in passing the tappets O, so that said tappets will be caught when the treadle goes down again. Said weight is only sufficient to turn the pulley till the cord is taut, but not to move the bar G. The pulleys are held by a stop, Q, in the right position for the beginning, and they have a little friction-spring, R, to prevent them from turning too readily. The treadles are raised by a spring, S. The fingers D extend horizontally from their disk to the slot C, through which they pass vertically; then they incline outwardly from the axis, and upwardly for the most part of their length; and, finally, a short distance from the end, turn upright, or nearly so. Their shape, above the music-rest A, is more advantageous, in respect of turning the leaves without folding, crumpling, or breaking them, than straight ones are,

because by bearing on different parts of the leaves in different directions, the bend of the paper in one direction, caused by one part of the finger, is stiffened by another bend, formed by another part crossing it, so that the leaves are much more certain to be laid over smooth and flat.

The plan can be extended by other bends of the fingers, but the shape here shown is thought to be sufficient.

The music-rack T is fixed with studs or pivots U in slotted stationary blocks V, so that it, and its back support W, can slide forward and backward, and springs X are arranged to push it forward against stops Y, so that it will be adjustable for thick or thin books. The board is provided with slots Z, to allow it to turn down frontwise past the fingers D for closing the instrument-case.

The music-case may be arranged perpendicular, or slightly inclined backward. In the latter case, the pivot F will probably be arranged parallel to it, and the bar may be arranged in a plane at right angles to it; or it may be horizontal and be beveled to fit the disks.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a music-leaf turner, the turning-fingers D, provided each with a toothed base, E, arranged in co-operative relation to a sliding rack-bar, G, having its teeth located in groups above each other for successively operating the turning-fingers, as herein shown and described.

2. The combination of the treadles N, pulleys M, and cords L with said toothed sliding bar and the fingers, arranged as specified.

3. The weighted lappet-pulley M, cord L, treadle N, and spring S, combined and arranged substantially as specified.

4. The stops Q and friction-spring R, in combination with the weighted lappet-pulley M, treadle N, and cord L, substantially as specified.

5. The music-rack arranged to slide backward and forward relatively to the fingers D, and provided with springs for pressing it forward, substantially as specified.

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Witnesses:

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