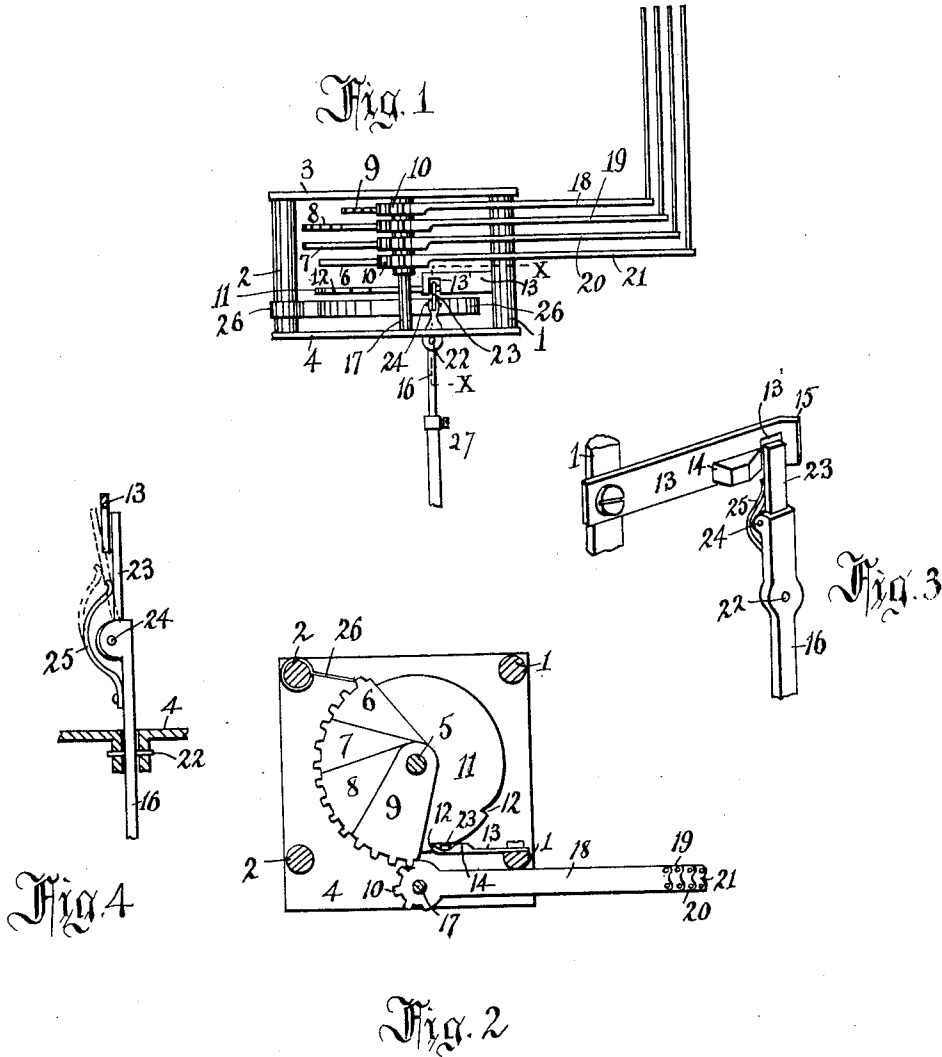


(No Model.)

I. A. SHANTON.
AUTOMATIC MUSIC TURNER AND HOLDER.

No. 596,548.

Patented Jan. 4, 1898.



WITNESSES:
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IRA A. SHANTON, OF MOUNT PLEASANT, MICHIGAN.

AUTOMATIC MUSIC TURNER AND HOLDER.

SPECIFICATION forming part of Letters Patent No. 596,548, dated January 4, 1898.

Application filed August 17, 1896. Serial No. 603,018. (No model.)

To all whom it may concern:

Be it known that I, IRA A. SHANTON, a citizen of the United States, residing at Mount Pleasant, in the county of Isabella and State of Michigan, have invented certain new and useful Improvements in Music Turners and Holders; and I do declare the following to be 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention is a music turner and holder, its object being to provide means for turning the leaves of music by the striking of a key or lever arranged near the keyboard of the instrument, and means for holding the music in the open position and also for turning the leaves back; and it consists in the peculiar arrangement, construction, and combination hereinafter described and shown.

My device is adapted to be placed in a small compass and is secured underneath the music-rack of an instrument by means of springs to engage the rack or by screws firmly securing it in position, or it may be made a part of a secondary rack to be secured on the instrument.

Figure 1 is a front elevation. Fig. 2 is a plan view from the top with the top of the box removed. Fig. 3 is a detail of the operating-lever and spring. Fig. 4 is a detail in part sectional on lines *xx* of Fig. 1.

In the drawings, 1 and 2 are posts, and 3 and 4 the top and bottom of a box supported by the posts, between which the mechanism for operating the turner is arranged.

5 is a central shaft having rigidly secured thereto the segmental gearing 6, 7, 8, and 9, which are all of the same circumferences, so arranged upon the shaft 5 as to follow one another—viz., the first cog of the segment 8 is just the width of one cog from the last cog of segment 9. As will be observed in Fig. 1, these segments are arranged one above the other and independently but rigidly secured to the shaft 5. As will be hereinafter seen, any number of segments may be employed that may be necessary to do the work required.

17 is a shaft in the box parallel to the shaft

5 and having arranged thereon a series of small pinions 10, each pinion being in the same horizontal plane with one of the segments 6, 7, 8, and 9, and as many pinions are required as there are segments—one pinion for each segment. The pinions are loose upon the shaft 17, so as to operate independently. Each pinion carries an arm 18 19 20 21, extending out from the shaft and moved by the pinion as the pinion is revolved, and each arm is provided with two vertical fingers at its end, which fingers are so arranged as to receive between them a leaf or sheet of music.

11 is a wheel secured on the shaft 5, having on its circumferential edge a number of right-angle notches 12, one notch for each segment on the shaft 5.

13 is a flat spring extending from the post 1 inward to the wheel 11 and has a bent end 15, adapted to engage any one of the notches 12 on wheel 11. The spring 13 is engaged by the operating-lever 16 23, which is pivoted at 22 to the bottom of the box and is provided with an extension-arm 27, adapted to extend down to or just above the keyboard of the instrument.

23 is a bar fulcrumed in the upper end of lever 16 by pivot 24, and is adapted to move but one way—viz., outward—as shown in dotted lines in Fig. 4. Spring 25 is placed to resist this movement of the bar 23 and return it when moved.

14 is a lug on the inside of spring 13, having its ends beveled, as shown.

13' is a rectangular slot in the spring 13 just in front of the bar 23 when in its normal position, the slot being wider than the bar, so that it may pass through it, as will hereinafter appear.

The movement of the depending end 27 of the lever to the left, as shown in the drawings, crowds the bar 23 against the lug 14 and pushes the end 15 of spring 13 out of notch 12 and allows wheel 11 to revolve, being propelled by the coiled spring 26, secured to shaft 5 and to frame. The revolving of the wheel 11 revolves the shaft 5 and with it the segments 6, 7, 8, and 9, and one of these segments being in engagement with one of the pinions 10 the pinion in engagement with the segment will be revolved and thereby

carry its arm 18 and with it the fingers and sheet of music between the fingers, the notches 12 being arranged just far enough apart to turn the arm 18 the proper distance to turn the page of music. The releasing of the lever returns the spring 13 and engages the next notch and locks the mechanism and holds the arm in the position that it has been turned. The same operation is repeated with each of the segments 8, 7, and 6, when desired to turn the music-leaf. If for any reason it is desired to turn the music-leaf back, so as to repeat the music, pressing the lever 27 to the right, as shown in the drawings, shoves the spring 13 out of the notch, which will be engaged by the bar 23 of the lever, and as the lever is moved farther to the right the wheel 11 will be turned back by the bar 23 until the spring 13 drops into the next notch 12, thereby holding and locking the wheel, allowing the lever to be released and returned.

In order that the lever may be accommodated to the circumference of the wheel, I have pivoted the bar 23, as described. As the lever is returned it is apparent that it will be upon the outside of the spring 13 until it reaches the slot 13', when the spring 25 pushes the bar 23 through the slot and into its normal position ready to again engage the notch 12 or the lug 14, as before described.

It will be observed that the segmental gearing instead of being formed in segments may consist of a series of cogs upon a large pinion adapted to engage the smaller pinion, but I prefer to use the segments, as it requires less material and less space.

In securing this device to an instrument the securing means may be so arranged as to form also means for holding the music-book open before one of the arms has been turned over. This may consist of a spring-plug adapted to pass down through the frame of the device and into the base of the instrument-rack, the upper end extending upward far enough to receive and hold the end of the book.

I do not wish to confine myself to any particular form or construction of the parts as shown, and therefore any change may be made as comes within ordinary mechanical skill without departing from the principle of my invention.

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

1. In a music turner and holder, the combination with the music-carrying arms journaled on a vertical shaft and having on their rear ends gearing, segmental gearing journaled on a central vertical shaft and adapted to mesh into the gearing of the arms there being a segmental gear-piece for each arm, the segmental gears arranged on their central shaft to engage each its arm in succession, a notched wheel on the central shaft, a coiled spring secured to the central shaft and to the frame, whereby when wound the notched wheel and shaft and gear-arms may be revolved when released, of a pivoted lever in front of and above the keyboard, a spring-pawl engaging and holding the notched wheel and adapted to be engaged by the lever, and when engaged by the lever disengaged from the notched wheel, substantially as and for the purpose set forth.

2. In a music-turner, the device for releasing the turner, comprising the notched wheel 11, the spring-pawl 13 adapted to engage the notches 12 on the wheel 11, the pivoted lever 16 depending in front of and above the keyboard, its upper end engaging the spring-pawl when moved on its pivot in either direction, thereby drawing the spring-pawl out of the notches, substantially as and for the purpose set forth.

3. In a music-turner, means for revolving the arms, carrying the music, in either direction, comprising a notched wheel actuated by a coiled spring, a spring-pawl for engaging the notches on the circumference of the wheel, a pivoted lever in front of and above the keyboard and adapted to engage the spring-pawl for disengaging the spring-pawl from the notches when the lever is moved in one direction, thereby permitting the wheel to revolve and move the arms, and for engaging the notches on the wheel when moved in the opposite direction and thereby push the wheel backward, and with it the arms, and means in the lever, as specified, for permitting the lever to travel on the circumference of the wheel and be returned to its original position when released, substantially as specified.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

IRA A. SHANTON.

Witnesses:

A. H. SWARTHOUT,
TANNIS ROBBINS.