No. 815,183. PATENTED MAR. 13, 1906.

F. G. LAVIN.

LEAF TURNER.

APPLICATION FILED MAY 26, 1905.

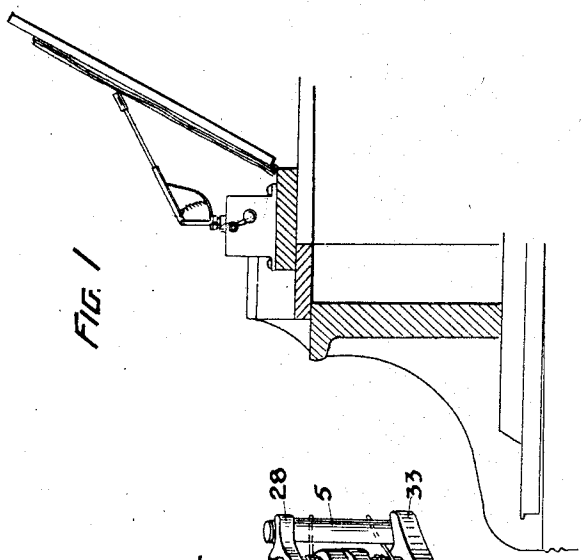


FIG. 1

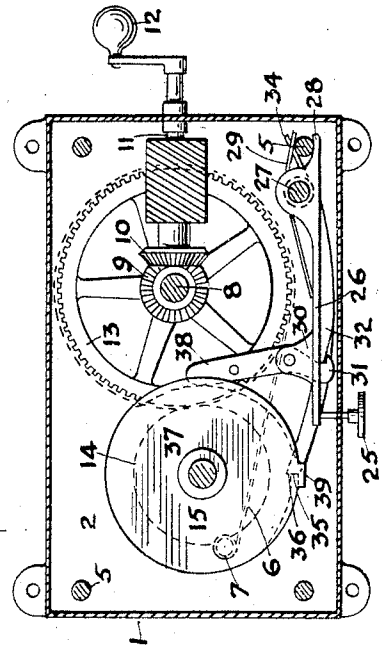


FIG. 2

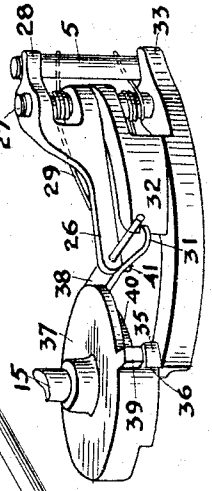


FIG. 5

FIG. 3

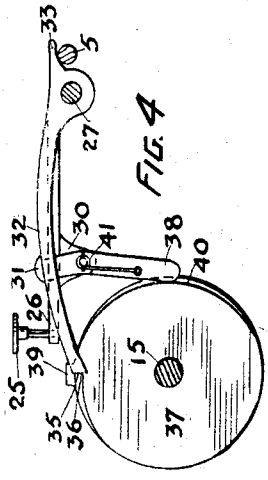


FIG. 4

WITNESSES:

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LEAF-TURNER.

No. 815,183. Specification of Letters Patent. Patented March 13, 1906.

Application filed May 26, 1905. Serial No. 262,509.

To all whom it may concern:

Be it known that I, FRANCIS G. LAVIN, a citizen of the United States, residing at Haywards, in the county of Alameda and State of California, have inventd certain new and useful Improvements in Leaf-Turners, of which the following is a specification.

This invention relates to leaf-turners, and is especially adapted for turning sheets of music on a piano or music-stand.

The object of the invention is to provide a device of this character which will be cheap and simple in construction, effective in operation, and which can readily be applied and adjusted to different forms of music-stands.

In the accompanying drawings, Figure 1 is a vertical section of portions of a piano, showing the apparatus applied thereto. Fig. 2 is a horizontal section of the apparatus, taken below the top plate. Fig. 3 is a front elevation of the apparatus, the front wall thereof being broken away. Fig. 4 is a bottom plan view of the collar, the hook, and the latch, certain vertical shafts being shown in section. Fig. 5 is a perspective view of certain of the parts detached.

Referring to the drawings, 1 represents a suitable frame comprising the lower plate 2, adapted to be secured to any suitable base 3, the upper plate 4, and the posts 5. Between said lower plate and base is a coiled main spring 6, one end of which is secured to the lower plate, as shown at 7, and the other end is secured to a vertical shaft 8, which carries a bevel-gear 9, meshing with a bevel-gear 10 on a horizontal shaft 11, operated by a handle 12. By means of this handle and these bevel-gears the main spring may be wound up. Upon the vertical shaft 8 is secured a gear-wheel 13, which meshes with a pinion 14 upon a shaft 15, extending vertically between the two plates and carrying at the upper end a block 16, which carries a post 17, to which is pivoted to swing vertically, as shown at 18, a socket 19 for an arm 20, said arm carrying on its end a rubber finger 21. Said arm 20 can be adjusted in the socket 19 by means of a set-screw 22, and the socket 19 rests upon a bracket 23, being drawn down thereto by a coiled spring 24. This rubber finger contacts with a sheet of music or other leaf, and it is by the rotary movement of the arm that the leaf is turned. This rotary movement is imparted thereto by the uncoiling of the main spring when permitted, as follows: In front of the apparatus is provided a push-button 25 on an arm 26, swinging upon a vertical shaft 27 and pressed outward against a stop 28 by a coiled spring 29. Said arm carries a bracket 30, to which is pivoted a hook 31, engaging a latch 32, which swings horizontally upon the same vertical shaft 27, being normally pressed outward against a stop 33 by means of a coiled spring 34. When said push-button is pressed inward, carrying with it the hook 31, said hook draws inward the latch 32, and thereby removes inward a lug 35 on the end of said latch out of engagement with a flange 36, depending from a collar 37, secured upon the vertical shaft 15. The rotation of the shaft 15 was prevented by the engagement of said lug 35 with the end of said flange 36, and as soon as said lug is moved inward out of engagement with the flange the vertical shaft rotates, causing the finger to swing from right to left and turning the sheet of music or other leaf. The arm 20 as it swings is permitted to rise on its pivot, but is drawn down at the end of its swing by means of the coiled spring 24. As the vertical shaft 15 rotates the lug 35 remains within the flange 36, which passes around it, until the lug comes to the end of the flange, when the latch moves outward under the action of its spring. This outward movement is permitted by the disengagement at this time of the hook from the latch, said disengagement being caused by the end of the arm 38 of the hook pressing against a boss 39 on the circular collar; but as the collar rotates a receding portion 40 thereof comes opposite to the end of the arm 38, which is then permitted to swing inward, which it does by reason of a coiled spring 41, thereby moving the hook 31 into position to engage the latch 32 in readiness for the next operation. At about the same time the end of the flange 36 abuts against the lug 35 on the end of the latch, arresting the rotary movement of the end of the arm.

It will be seen that the operation of the device is very simple. All that is necessary is to press the push-button, whereupon the arm with the finger thereon automatically turns a sheet and then assumes the proper position for turning the succeeding sheet. Since the power required to turn a sheet is very small, a very large number of sheets can be so turned with one winding of the main spring. The device readily permits music to be placed in position and removed therefrom and when made of suitable material and design does

not detract from the appearance of the piano or music-stand.

I claim—

1. In a leaf-turner, the combination of a rotary vertical shaft, an arm operatively connected to said shaft to permit said arm to swing vertically while rotating therewith, a main spring, an operative connection between said spring and vertical shaft, a latch for opposing the movement of said shaft, means for removal of said latch out of its operative position, and automatic means for returning said latch to its position to arrest the shaft on making a complete revolution, substantially as described.

2. In a leaf-turner, the combination of a rotating vertical shaft, a socket pivoted thereon to swing vertically, an arm adjustable in said socket, a main spring, an operative connection between said spring and vertical shaft, a latch for opposing the movement of said shaft, means for removal of said latch out of its operative position, and automatic means for returning said latch to its position to arrest the shaft on making a complete revolution, substantially as described.

3. In a leaf-turner, the combination of a rotating vertical shaft, a socket pivoted thereon to swing vertically, an arm adjustable in said socket, a finger of yielding material upon said arm, a main spring, an operative connection between said spring and vertical shaft, a latch for opposing the movement of said shaft, means for removal of said latch out of its operative position, and automatic means for returning said latch to its position to arrest the shaft on making a complete revolution, substantially as described.

4. In a leaf-turner, the combination of a rotating vertical shaft, a socket pivoted thereon to swing vertically, an arm adjustable in said socket, a spring for normally depressing said arm, a finger of yielding material upon said arm, a main spring, an operative connection between said spring and vertical shaft, a latch for opposing the movement of said shaft, means for removal of said latch out of its operative position, and automatic means for returning said latch to its position to arrest the shaft on making a complete revolution, substantially as described.

5. In a leaf-turner, the combination of a rotating vertical shaft, a socket pivoted thereon to swing vertically, a bracket extending from said shaft, said socket resting upon said bracket, a spring for drawing said socket down to said bracket, an arm adjustable in said socket, a finger of yielding material upon said arm, a main spring, an operative connection between said spring and vertical shaft, a latch for opposing the movement of said shaft, means for removal of said latch out of its operative position, and automatic means for returning said latch to its position to arrest the shaft on making a complete revolution, substantially as described.

6. In a leaf-turner, the combination of a shaft, an arm carried thereby, a main spring, an operative connection between said spring and shaft, a collar carried by said shaft having a projection or boss, and having a flanged portion, a latch having a lug adapted to abut against the flanged portion to arrest the collar, a push-button, a hook secured thereto and engaging said latch to move said lug out of engagement with the end of the flange, a spring for returning said latch to its original position, the hook having an arm engaged by the collar to permit said latch to so return, and the collar being formed with a receding portion permitting the arm to move into the position where the hook can engage the latch for a succeeding operation, substantially as described.

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

FRANCIS G. LAVIN.

Witnesses:

FRANCIS M. WRIGHT,

BESSIE GORFINKEL.