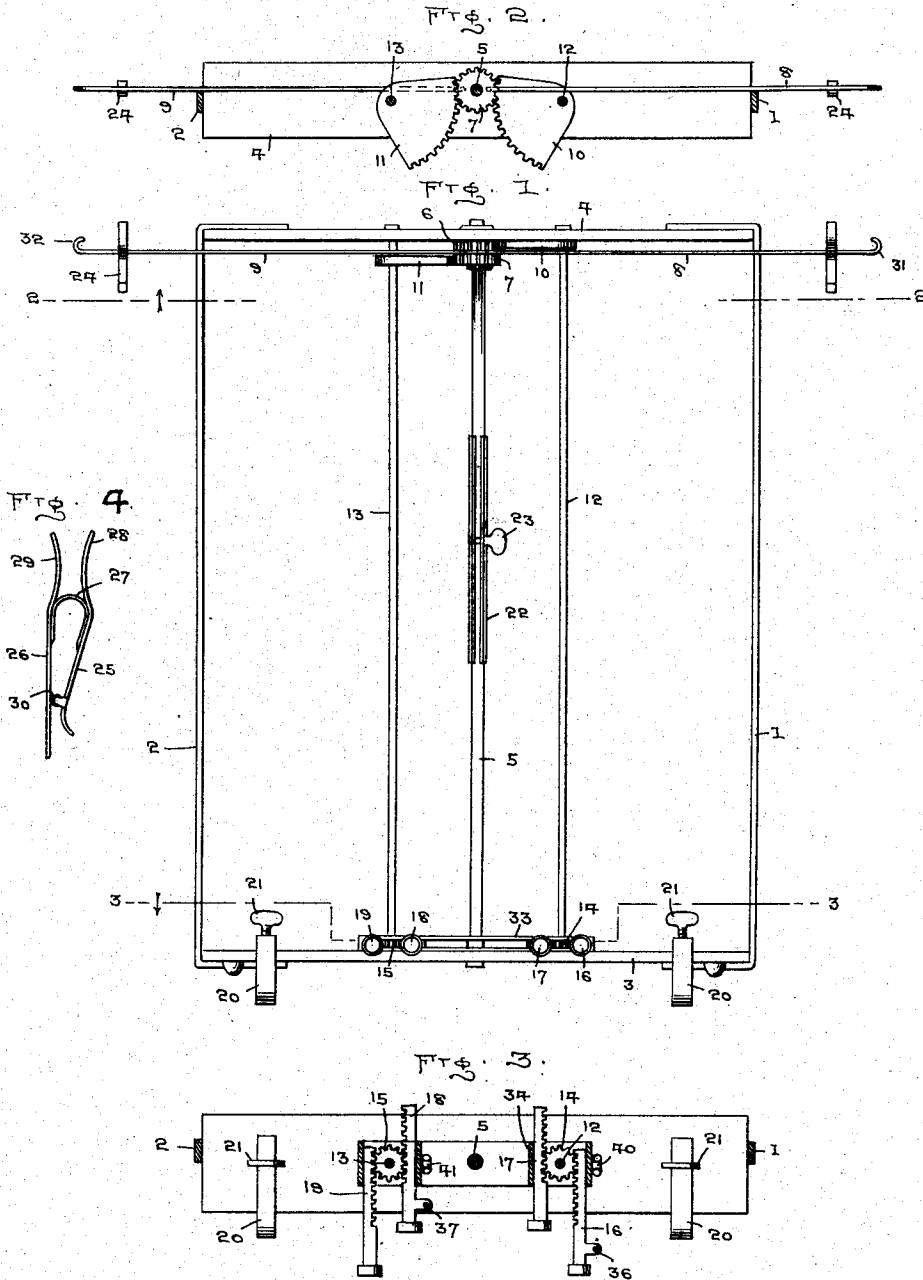


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MUSIC LEAF TURNER.
APPLICATION FILED JULY 7, 1915.

1,175,767.

Patented Mar. 14, 1916.

2 SHEETS—SHEET 1.



Inventor.

A. Ineich

Witnesses

Thor. W. Riley

C. S. Frye

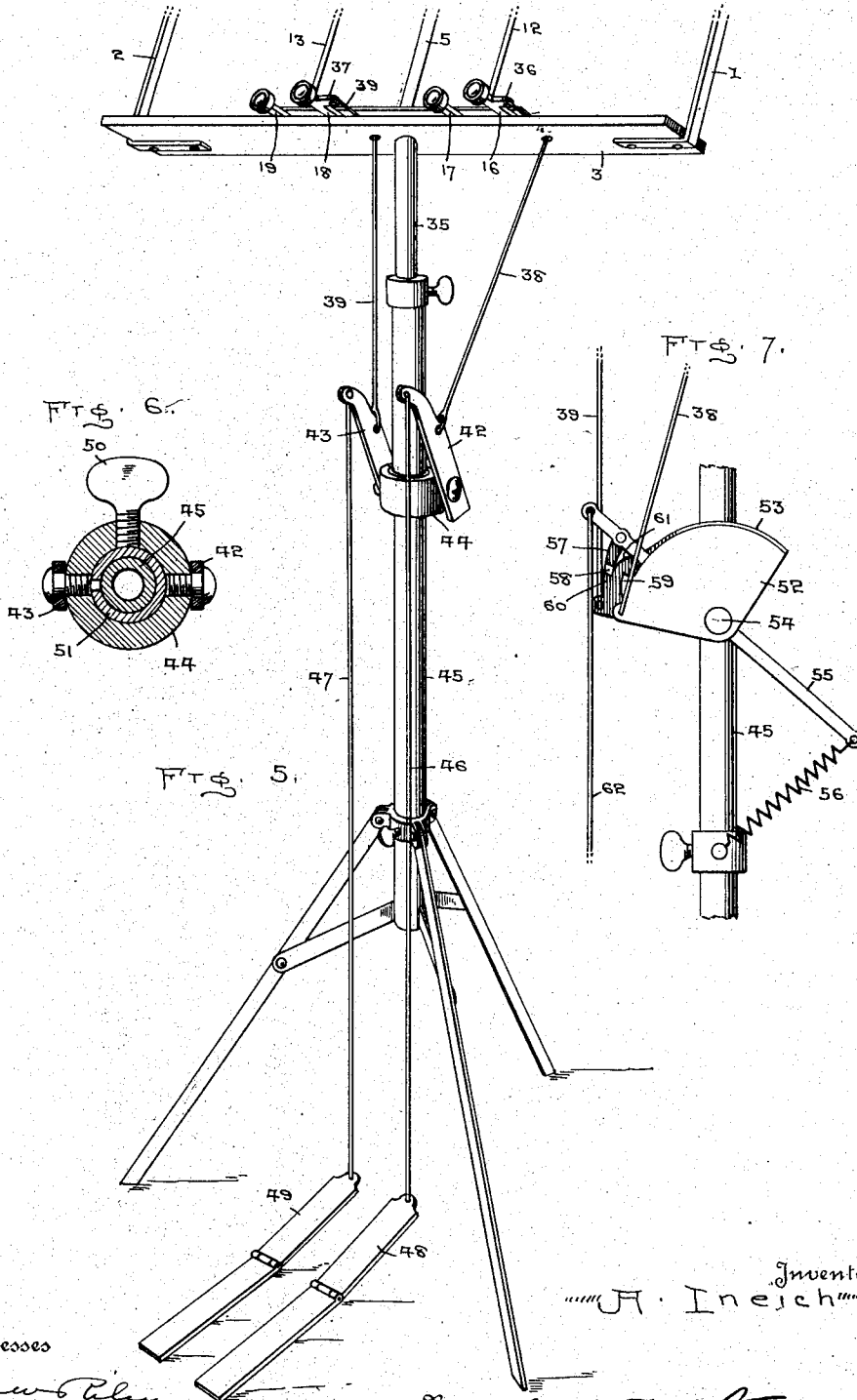
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By W. J. FitzGerald
Attorney

UNITED STATES PATENT OFFICE.

ALBERT INEICH, OF ILION, NEW YORK.

MUSIC-LEAF TURNER.

1,175,767.

Specification of Letters Patent.

Patented Mar. 14, 1916.

Application filed July 7, 1915. Serial No. 38,411.

To all whom it may concern:

Be it known that I, ALBERT INEICH, a citizen of the United States, residing at Ilion, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Music-Leaf Turners; and I do hereby 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.

My invention relates to new and useful improvements in music leaf turners and my object is to provide means for successively turning the leaves of the sheet music and one that can be placed directly upon the usual form of shelf as provided upon a piano or similar musical instrument or upon a music rack.

A further object is to provide means whereby the sheets of the music may be turned instantly, one at a time and moved in either direction.

A further object is to provide suitable clips for engaging the sheets of music with the arms of the turning device. And a further object is to provide suitable attachments in connection with the turner when placed upon a music rack for operating the same from pedals.

Other objects and advantages will be hereinafter set forth and more particularly pointed out in the accompanying specification.

In the accompanying drawings which are made a part of this application, Figure 1 is a front elevation of the turner ready to be applied to use in connection with a piano or similar instrument, one of the leaf turning rods resting in operated position. Fig. 2 is a plan view looking toward the upper end of the turner as seen on line 2—2 of Fig. 1. Fig. 3 is a sectional view looking downwardly as seen on line 3—3 of Fig. 1. Fig. 4 is an edge elevation of a clamp used for engaging the sheets of music to the turning arms. Fig. 5 is a perspective view of the ordinary music rack showing the manner of attaching my improved turner thereto. Fig. 6 is an enlarged transverse sectional view through the rack, and Fig. 7 is detailed elevation of a modified form of attachment for operating the turner when positioned upon the music rack.

Referring to the drawings in which similar reference numerals designate corre-

sponding parts throughout the several views, 1 and 2 indicate the side members of the frame of the turner, 3 the bottom section thereof and 4 the top section, the side members 1 and 2 having lateral extensions which are attached to the top and bottom sections in any preferred manner. Extending vertically through the center of the frame and finding bearings at its ends in the upper and lower sections thereof is a shaft 5, upon the upper end of which are rotatably mounted a pair of gears 6 and 7, said gears having arms 8 and 9 respectively attached thereto and adapted to rotate therewith. In order to swing said arms from side to side of the frame, segmental gears 10 and 11 are positioned to mesh with the gears 6 and 7 respectively, said segmental gears being fixed to shafts 12 and 13 mounted at their ends in the upper and lower sections of the frame. The shafts 12 and 13 and the segmental gears 10 and 11 carried thereby are rotated in either direction by placing pinions 14 and 15 on the shafts 12 and 13 adjacent their lower ends with which cooperate racks 16 and 17 and 18 and 19 respectively, racks 16 and 17 being positioned on diametrically opposite sides of the pinion 14, while the racks 18 and 19 are similarly positioned on opposite sides of the pinion 15, one of said racks of each set being employed for rotating its respective shaft in one direction and the other rack to swing the same in the opposite direction. The frame of the turning device is held in position for operation by means of the clamps 20, having binding screws 21 for securing the clamp over the bottom section of the frame and any suitable part of the musical instrument. With this form of device, the various sheets of music are entered edgewise between a clamp 22 on the shaft 5 and are secured therebetween by means of a thumb screw 23, the upper ends of the sheets being suspended from the arms 8 and 9 by means of spring clips 24, said clips comprising a pair of straps 25 and 26 which are secured together adjacent their upper ends by means of a bowed spring 27, the extreme upper ends of the straps terminating in handle sections 28 and 29 respectively, while the lower end of the strap 25 is curved outwardly at its lowermost extremity, so that the sheets of music can be readily introduced between the straps, a pressure roller 30 being carried by the strap 25 and adapted to impinge the

sheets of music against the strap 26. After the clips have been properly attached to the sheets of music, they are entered over the ends of their respective arms 8 and 9, said arms passing between the bowed spring and the roller, the extreme ends of the arms having hook members 31 and 32 respectively which prevent the clips from casually leaving the arm. As the clips can be freely moved lengthwise of the arms 8 and 9, any size sheet of music may be readily accommodated. After the sheets of music have been properly engaged with the turning device, all of the arms are moved to the right of the frame, and when it is desired to turn the first sheet, pressure is applied to the outer end of the rack 18 and as said rack moves inwardly, the pinion 15 will be rotated, thus operating the segmental gear 11 to rotate the gear 7 and consequently move the arm 9 and the sheet of music carried thereby to the left side of the frame or to the position shown in Figs. 1 and 2, the same operation causing the rack 19 to move outwardly.

When it is desired to turn the sheet of music carried by the arm 8, inward pressure is directed on the rack 16 which rotates the pinion 14 and the segmental gear 10 causing said segmental gear to rotate with the gear 6 and swing the arm 8 to the left side of the frame, this action also causing the rack 17 to move outwardly. If it is desired to again play the same music, pressure is directed inwardly on the racks 17 and 19, reversing the rotation of the two segmental gears and returning both of the arms to the right hand side of the frame, and these operations can be repeated as often as is necessary.

The pairs of racks are mounted upon the bottom section in any preferred manner as by introducing the same between plates 33, the racks 16 and 19 being positioned between their respective pinions and the ends of said plate, while the racks 17 and 18 are positioned between their respective pinions and ribs 34 carried by said plates. In order to operate the turning device from a music rack, the upper ends of the standard 35 of the rack is attached to the bottom section 3 of the frame in any suitable manner, said frame taking the place of the usual form of support employed in connection with the music rack. To adapt the same for operation through the medium of pedals, the racks 16 and 19 are provided with ears 36 and 37 respectively, to which are attached cables 38 and 39, said cables extending over sheaves 40 and 41 in the bottom section 3, thence through openings in said bottom section 3, the lower ends of said cables being attached to rocking arms 42 and 43 respectively. The cables 38 and 39 are attached to the rocker arms at a point substantially

at their longitudinal centers, one end of the rocker arms being pivotally secured to a collar 44 on the extension sleeve 45 of the rack, the opposite ends of the rocker arms having pull cords 46 and 47 attached thereto and extended downwardly to a point adjacent the base of the rack where they are attached to foot operated pedals 48 and 49 respectively.

The collar 44 is adjustably secured to the sleeve 45 by means of a binding screw 50, a bushing 51 preferably having spring tension being introduced between the collar and the sleeve, the binding screw 50 being pressed against said bushing to securely clamp the collar to the sleeve. In this form of device it is but necessary to direct downward pressure upon the pedals 48 and 49 to operate the parts of the leaf turner to swing the arms from the right to the left side of the frame, but the racks will have to be manually operated in order to return the arms to their initial positions.

In Fig. 7 of the drawings, I have shown a still further modified form of device to be used for operating the turner when applied to a music rack, and in this instance, the rocker arms 42 and 43 are dispensed with, and a pair of segmental disks 52 and 53 are pivotally attached to the sleeve 45 of the rack, the cables 38 and 39 being attached to the forward edges of said disks.

Mounted upon the pivot 54 employed for securing the segmental disks to the sleeve is a bar 55, one end of the bar having attached thereto one end of a spring 56, the opposite end of the spring being attached to the sleeve 45 in any suitable manner. The opposite end of the bar extends between the disk for a distance beyond the edges, and has pivotally secured thereto a latch 57, the free end of the latch having a cross head 58, the ends of which are adapted to engage with projections 59 and 60 on the peripheral edges of the segmental disks 52 and 53 respectively, the projection 60 being in a plane above the projection 59 so that the cross head 58 will pass over the projection 59 when the disk 53 is operated to operate the rack 18, the peripheral edge of the disk 53 having a curved extension 61 in the rear of the projection 60 which normally holds the latch out of the path of the projection 59. When the latch has operated the disk 53 and returns to its initial position, it will move off of the extension 60 and into the path of the projection 59, whereby when an additional downward pull is given to the free end of the bar 55, the segmental disk 52 will be rotated and the rack 16 operated. In this instance but a single pull cord 62 is required which is attached to the free end of the bar 55. When the disks 52 and 53 are in their initial or inoperative position the latch rests upon the extension 61 and

engages the projection 60, and in operating the device, a downward pull is given the pull cord 62 which swings the segmental disk 53 on its pivot and directs the downward pull on the cable 39. As soon as the lever has traveled its full downward stroke and pressure is released from the cord 62, the spring 56 immediately swings the bar in the opposite direction until the latch 57 moves into engagement with the rear edge of the projection 59, when by giving an additional downward pull upon the cord 62, the cable 38 will be operated. Upon releasing the pull upon the cord 62, the lever 55 will be returned to its initial position, the latch resting upon the edges of the disk until inward pressure is directed against the racks 17 and 19 which will return said disks to their initial positions and engage the latch 57 with the projection 60, said latch riding upwardly on the curved extension 61 and out of the path of the projection 59.

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

1. In a music leaf turner, the combination with a support, of a frame, a central shaft mounted thereon, gears rotatable on said shaft, side shafts on said frame, segmental gears on said side shafts and meshing with said first mentioned gears, arms on said gears adapted to rotate therewith,

pinions on said side shafts, racks on said frame arranged in pairs and cooperating with said pinions, one rack of each pair formed with an ear, cables attached to said ears, and means on said support for actuating the racks to swing said arms from one side of the frame to the other.

2. A music leaf turner comprising a frame, a support for said frame, a central shaft mounted on said frame, gears rotatable on said shaft, side shafts on said frame, segmental gears on said side shafts and meshing with said first gears, arms fixed on said first mentioned gears and adapted to rotate therewith, pinions on the side shafts, racks operating with said pinions and arranged in pairs, one rack in each pair having an ear, rocker arms on said support, cables extending from said rocker arms to the ears of said racks, a pedal operating means connected to said rocker arms to move the last mentioned racks inwardly to rotate said pinions to swing the first mentioned arms in one direction.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT INEICH.

Witnesses:

JENNIE G. MILLS,
GUSTAVE ROSS.

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