

April 13, 1926.

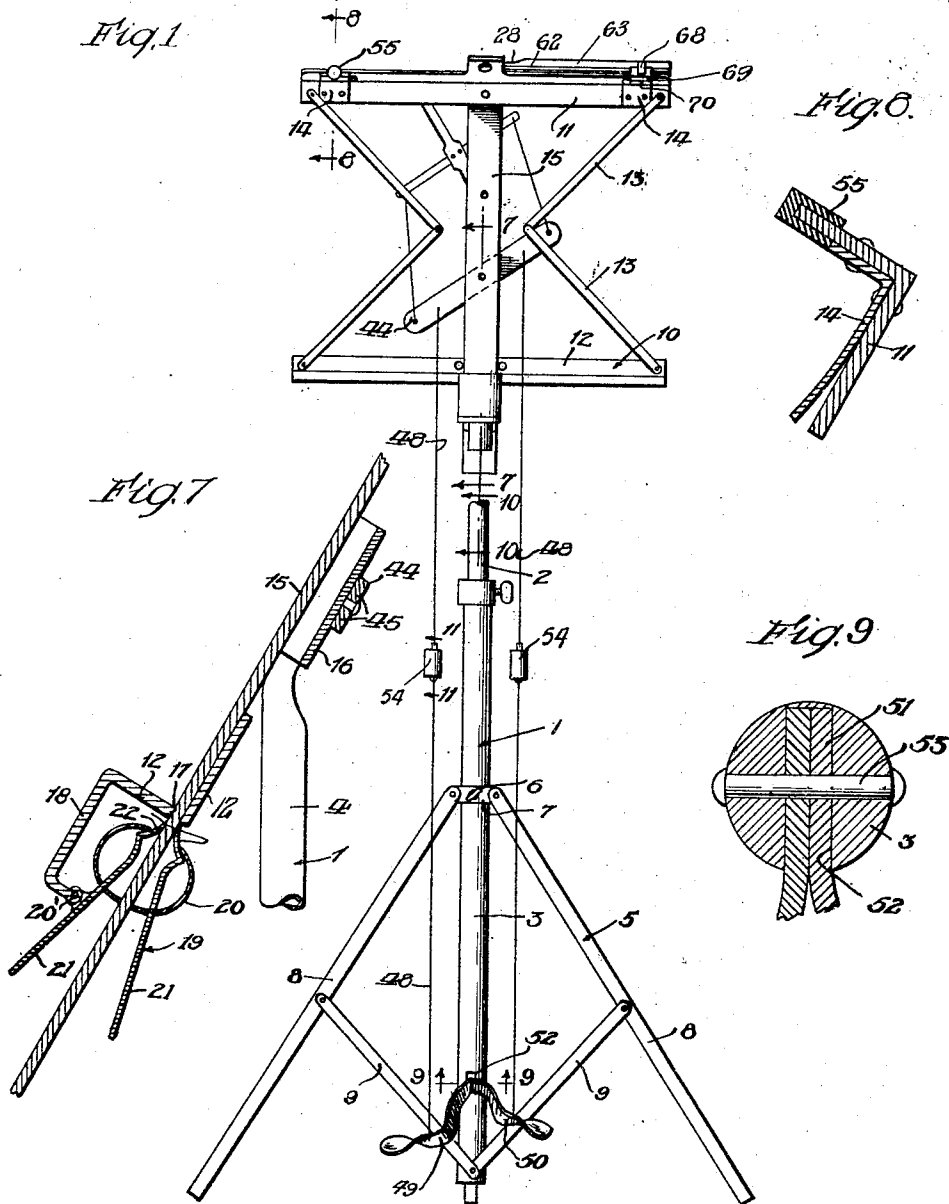
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MUSIC LEAF TURNER

Filed August 20, 1921

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

Fig. 2

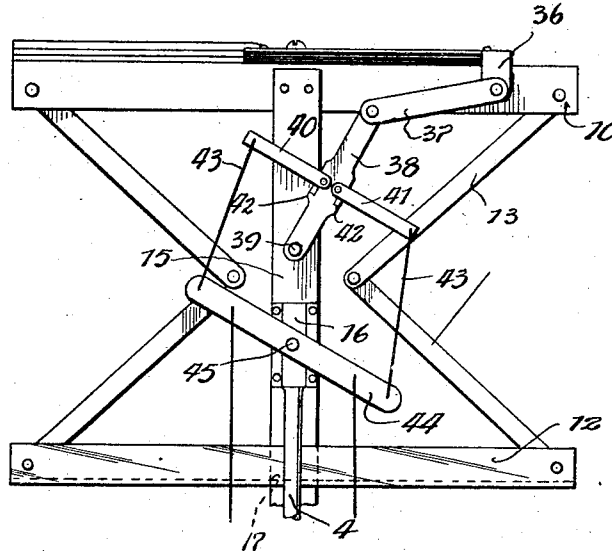


Fig. 3

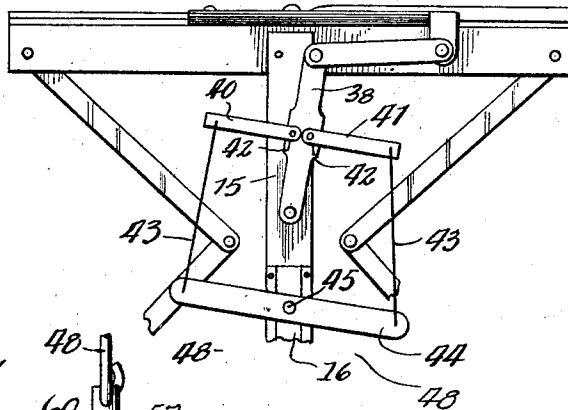


Fig. 10

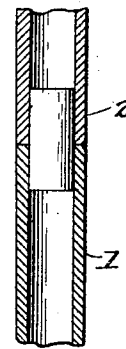
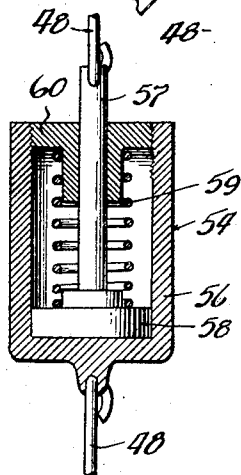


Fig. 11



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Fig. 4

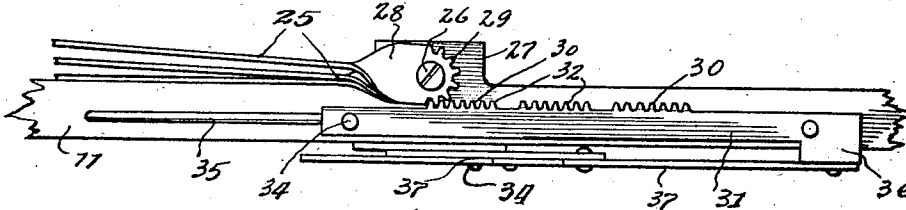


Fig. 5

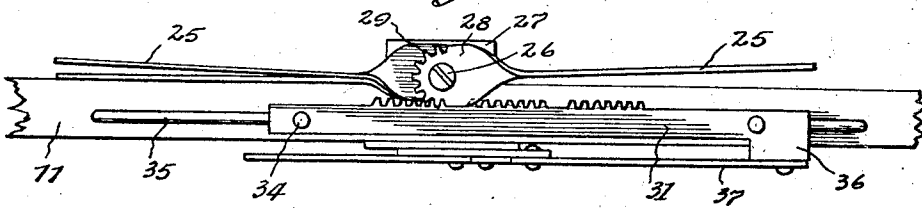


Fig. 6

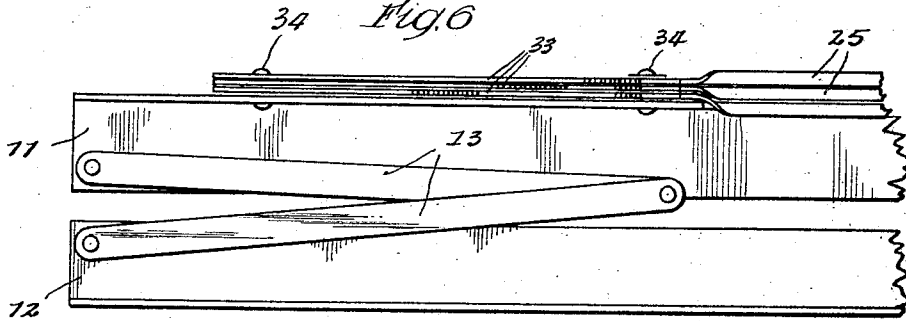


Fig. 12

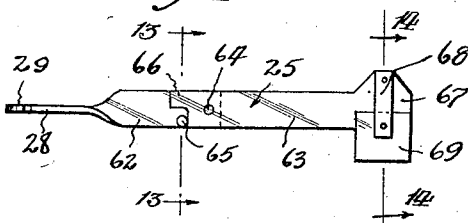


Fig. 14

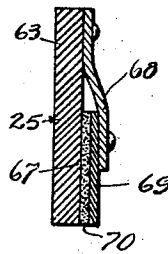
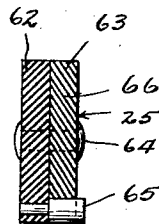


Fig. 13



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UNITED STATES PATENT OFFICE.

WALTER S. LUKAWSKI AND MICHAEL A. ZIELINSKI, OF CHICAGO, ILLINOIS.

MUSIC-LEAF TURNER.

Application filed August 20, 1921. Serial No. 493,960.

To all whom it may concern:

Be it known that we, WALTER S. LUKAWSKI and MICHAEL A. ZIELINSKI, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Music-Leaf Turners, of which the following is a specification.

This invention relates to music leaf turners and an object of the invention is to provide a music stand to permit the turning of the leaves of a book of music or the pages of what is commercially known as sheet music without requiring the use of the hands of the user, permitting him to turn the music at the proper time without in any way interrupting the playing of his instrument.

Another object of this invention is to provide a device as specified which can be collapsed and carried about in a relatively small conveniently handled container thereby adapting the music stand for use by handplayers or analogous musicians when playing at different places.

A further object of this invention is to provide leaf or sheet turning means which is operated by means of foot levers, for turning the leaves or sheets of music and also to embody balancing means in said turning means to provide even turning of the music and prevent undesirable noises during the operation of the device, and also to provide a novel structure whereby the height of the sheet carrying head of the rack may be regulated as desired for properly supporting music sheets of different lengths.

Other objects of the invention will appear in the following detailed description and in the accompanying drawings wherein:

Fig. 1 is a front elevation of the improved music stand and leaf turner.

Fig. 2 is an enlarged rear elevation of the head of the stand showing a portion of the supporting standard and illustrating the turning arms and mechanism for operating the same.

Fig. 3 is a view similar to Fig. 2 showing one of the turning arms having been turned.

Fig. 4 is a fragmentary plan view of the music holding frame or head showing the turning arms in their normal position.

Fig. 5 is a view similar to Fig. 4 only showing one of the turning arms in a turning position.

Fig. 6 is a fragmentary front elevation of a part of the music holding frame or head showing it in its collapsed position.

Fig. 7 is a fragmentary vertical section taken on the line 7—7 of Fig. 1.

Fig. 8 is a cross section taken on the line 8—8 of Fig. 1 illustrating the manner of connecting the cover of the music to the rack.

Fig. 9 is a detail horizontal section on the line 9—9 of Fig. 1 showing the manner of connecting the arm turning operating pedals to the standard.

Fig. 10 is a detail section through the stand taken on the line 10—10 of Fig. 1.

Fig. 11 is a detail section through a cushioning member embodied in the music leaf turning structure taken on the line 11—11 of Fig. 1.

Fig. 12 is a detail view of one of the turning arms.

Fig. 13 is a section through the turning arm taken on the line 13—13 of Fig. 12.

Fig. 14 is a detail section taken on the line 14—14 of Fig. 12 illustrating the manner of connecting the sheets or leaves of music to the turning arms.

Referring more particularly to the drawing the improved music leaf turner and stand structure comprises a standard 1 composed of telescoping parts 2, 3, and 4 which may be telescoped one within the other to permit the stand to be collapsed when not in use. The lower or base section 3 of the standard 1 has a brace structure 5 adjustably mounted thereon and held in position by means of a thumb screw 6 which extends through the sliding collar 7 to which the brace legs 8 are pivoted. The brace legs 8 are in turn braced by diagonal braces 9 which are pivoted to the lower end of the standard section 3. The music frame or head structure 10 is carried at the top of the section 4 and it comprises an upper cross bar 11 and a lower cross bar 12 which are connected at their ends by pivotal connecting bars 13 adapted to fold inwardly towards the axis of the stand 1 to permit movement of the bar 12 towards or from the bar 11 to permit variation of the space between these bars to accommodate sheets of music of different lengths. The bars 11 and 12 are preferably formed of angle material as clearly shown in Fig. 8 of the drawings and the bar 11 has spring clips 14 connected thereto adjacent its ends which are adapted

to engage the backs of music books or the cover and back sheets of sheet music and clamp them securely against the upper cross bar 11. The upper cross bar 11 has a downwardly extending bar 15 attached thereto which carries a socket 16 on its rear surface to which the upper section 4 of the standard 1 is connected. The bar 15 is positioned intermediate the ends of the bars 11 and 12 and the latter bar is slotted as shown at 17 to permit the bar 15 to extend therethrough which permits the angle bar 12 to slide up and down upon the bar 15 to permit regulation of the distance between the bars 11 and 12. The lower bar 12 has an extension 18 formed thereon to which a spring clip structure 19 is pivotally connected as shown at 20'. The spring clip structure 19 may be of any approved form preferably comprising a substantially cylindrical spring member 20 which engages the gripping and operating members 21 forcing their gripping ends 22 into binding engagement with the bar 15 to hold the bottom bar 12 in adjusted positions upon the bar 15. It will be seen from the foregoing description and Fig. 7 of the drawings that an operator may easily and quickly adjust the position of the bar 12 relative to the bar 11 by releasing the clip structure 19 and when the clip structure is released the bar 12 will be securely held in adjusted positions. If it is so desired it is to be understood that the gripping ends 22 of the members 21 may have felt or analogous material attached thereto to provide firm and nonslipping engagement with the bar 15 without departing from the spirit of this invention.

Leaf turning arms 25 are provided which are pivotally connected as shown at 26 to an extension 27 on the bar 11 and they are provided for turning sheets of music when necessary without requiring the use of the hands of the musician. Each of the arms 25 has its inner end 28 twisted at substantially right angles to its major portion and provided with a segmental gear 29 which meshes with rack teeth 30 on a sliding bar 31. By particular reference to Figures 4 and 5 of the drawings it will be noted that the rack teeth 30 are arranged in sets 32, the number of these sets corresponding to the number of turning arms 25. Owing to the fact that the arms 25 are disposed one against the other, it is necessary to position respective sets 32 on the rack teeth 30 in laterally spaced relation and if it is so desired to simplify and expedite manufacture, the bar 31 may be composed of a plurality of bars 33 as clearly shown in Fig. 6 of the drawings connected for synchronous movement by means of rivets 34 which also extend through a suitable slot 35 formed in the substantially horizontal side of the bar 11. The outermost of the bars 33 has an

angle extension 36 formed thereon to which a link 37 is pivotally connected. The link 37 is in turn pivotally connected to a lever 38. The lever 38 is pivotally mounted upon the bar 15 as shown at 39 and it has a pair of arms 40 and 41 pivotally connected thereto, the downward movement of which is limited by ears 42 cut from the lever 38 and bent into the path of the arms 40 and 41. The arms 40 and 41 have connection, by means of wires, cords or analogous flexible members 43, to a bar 44 which is pivotally mounted, intermediate its ends as shown at 45, upon the bar 15 preferably by means of the rivet or pivot 45 which is attached to the socket 16. The bar 44 is connected, by means of chains, wires, or analogous flexible devices 48, to foot pedals 49 and 50 respectively, one of which is connected to the bar 44 upon one side of its pivot while the other is connected to the bar upon the opposite side of its pivot as clearly shown in the drawings, for rocking the bar in opposite directions upon the working of the foot pedals. The foot pedals are bent downwardly and outwardly as clearly shown in Fig. 1 of the drawings and they are provided with substantially horizontal portions 51 which extend into a suitable cut out portion 52 formed in the lower standard section 3 to which they are pivoted by means of a suitable pivot 53. The particular downward and outward bending of the foot pedals 49 and 50 will permit them to be folded upwardly along the standard section 3 when it is desired to collapse the music stand and turner structure.

The wires or flexible members 48 have shock absorbers or cushioning members 54 interposed in their lengths which are provided, in combination with the bar 44 to absorb abrupt action which might be transmitted by the foot pedals to the operation and to insure even steady operation of the turning arms 25 so as to eliminate undesirable noises. Suitable cushions 55 are provided, which are carried by the bar 11, to cushion the movement of the arms and prevent noises during their operation. Shock absorber structures 54 are comparatively simple in construction comprising body shells 56 which are connected to the downwardly extending portions of the wires 48 and which slidably receive therein piston rods 57 which are connected to the upwardly extending lengths of the wires 48. The rods 57 have heads 58 upon their inner ends against which cushion springs 59 engage. The cushion springs 59 also engage against an adjustable nut or head 60 which is adjustably carried by the body shells 56 and provides for regulating the tension of the spring 59.

The turning arms 25 are particularly constructed so as to readily adapt them for

movements to facilitate the attaching of sheets of music thereto, that is, each of the arms 25 is formed of a pair of sections 62 and 63 pivotally connected as shown at 64. 5 The section 62 carries a stop pin 65 which is engaged by a projection 66 on the section 63 to limit the upward pivotal movement of the section 63 and by the end of the section 63 to limit the downward pivotal movement of the latter. 10 The section 63 has an enlarged head 67 on its free end to which a flat spring 68 is attached. The flat spring 68 has a plate 69 of any suitable material, attached thereto to the inner surface of 15 which a sheet 70 of felt or analogous material is attached for gripping a sheet of music and clamping it between the facing surfaces of the felt 70 and head 67, the spring 68 acting to urge the felt 70 in engagement with the head 67. 20 In attaching a sheet of music to one of the turning arms 25 the music is properly placed upon the music frame or head structure 10 and the section 63 is swung upwardly after which the spring 68 is moved outwardly to space the felt 70 from the head 67 and the section 63 is then moved to its normal position in alignment with the section 62 with the sheet of music to be turned gripped between the felt 70 and head 67 after which 30 the spring 68 is released and the felt 70 is forced between the spring into firm clamping engagement with the sheet of music.

From the foregoing description taken in 35 connection with the accompanying drawing it will be apparent that a combined music leaf turner and stand has been provided which is relatively simple in construction, one which will be efficient in its operation 40 and may be operated by a musician with his foot to turn the sheets of music as neces-

sary, without in any way interfering with the playing of his instrument, it being understood that the leaves may be turned in one direction by one of the foot pedals and 45 in the other direction by the other foot pedal and that quick undesirable movement of the turning arms will be prevented owing to the provision of the shock absorbers 54 and bar 44. 50

It is, of course, to be understood that the invention may be constructed in various other manners and the parts associated in different relations and, therefore, we do not desire to be limited in any manner except 55 as set forth in the claim hereunto appended.

Having thus described our invention what we claim is:

In a device of the character described, a rack including upper and lower cross bars, 60 a central bar having its upper end connected to the upper cross bar and means carried thereby whereby the lower cross bar is adjustably mounted thereon, said means comprising an extension formed on the lower 65 cross bar having an opening through which the central bar extends, a spring clip having pivotal connection with the extension, said spring clip including a substantially cylindrical spring member engaging the arms of 70 the clip, gripping ends adjacent the spring member adapted to normally grip the central bar and gripping and operating members extending divergently from the gripping ends whereby to manipulate the gripping 75 ends for adjusting the lower cross bar on the central bar.

In testimony whereof we affix our signatures.

MICHAEL A. ZIELINSKI.
WALTER S. LUKAWSKI.