J. F. YOUNG.

LEAF TURNER.

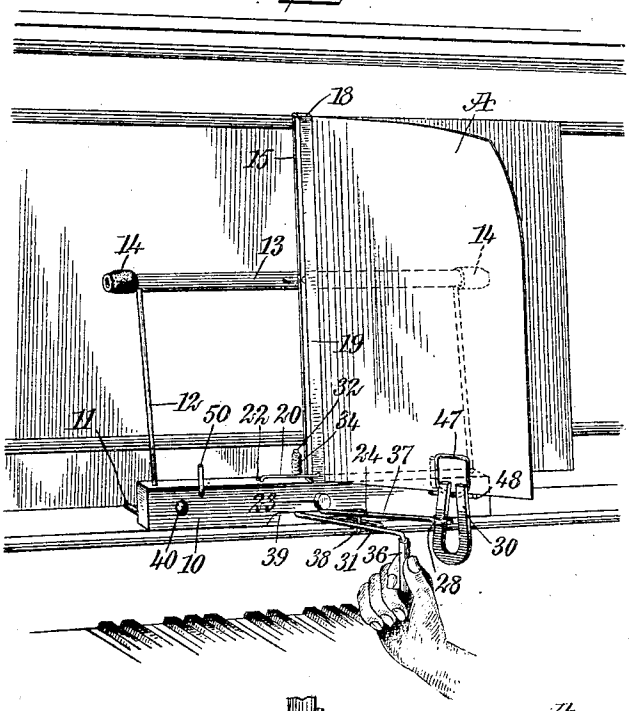
APPLICATION FILED MAY 21, 1908.

921,496.

Patented May 11, 1909.

2 SHEETS—SHEET 1.

Fig. 1



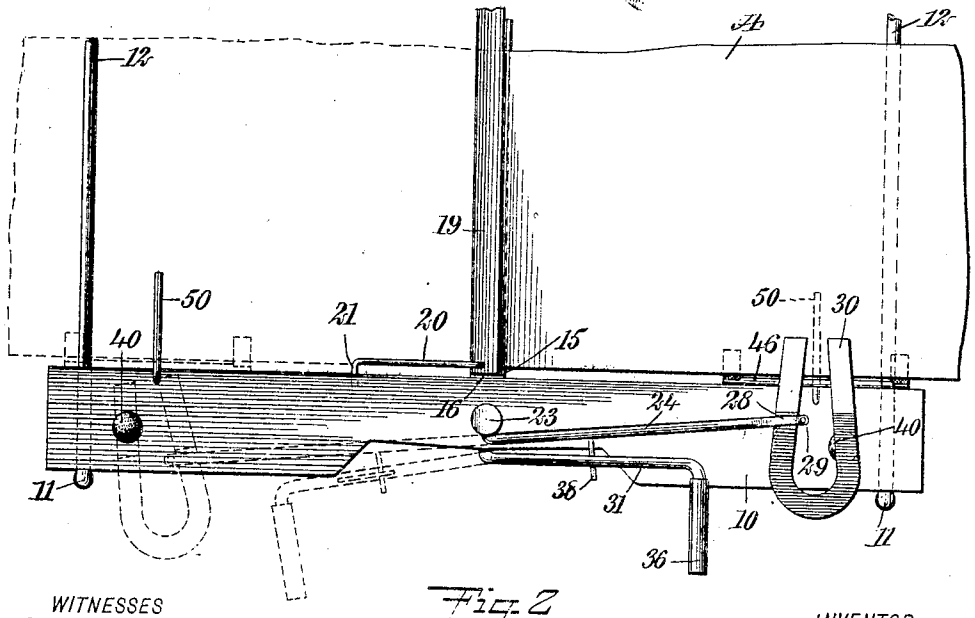


Fig. 2

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 3

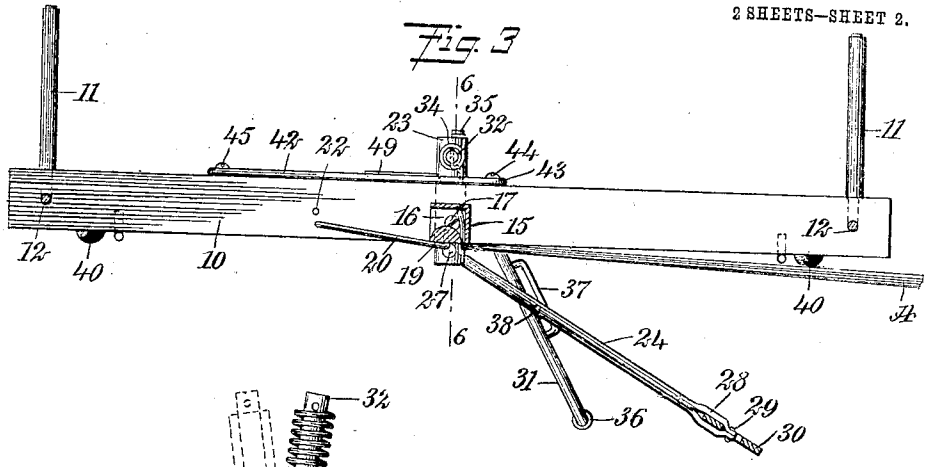


Fig. 4

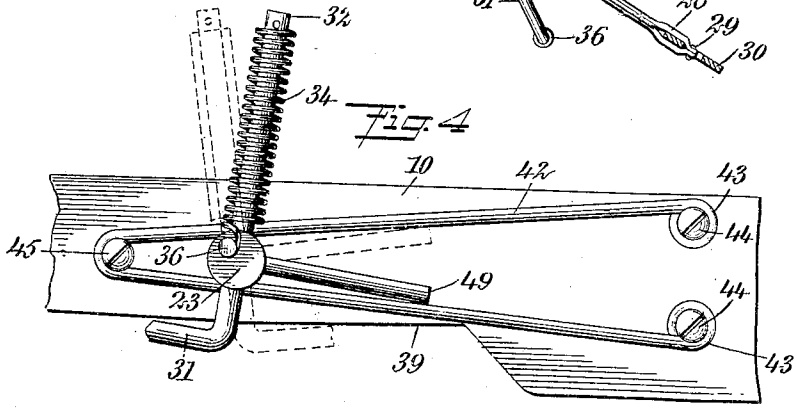


Fig. 5

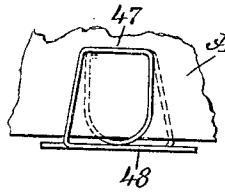
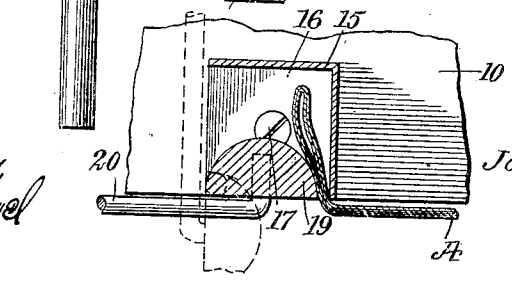


Fig. 6

Fig. 7



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UNITED STATES PATENT OFFICE.

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LEAF-TURNER.

No. 921,496. Specification of Letters Patent. Patented May 11, 1909.

Application filed May 21, 1908. Serial No. 434,028.

To all whom it may concern:

Be it known that I, JOSEPH F. YOUNG, a citizen of the United States, and a resident of Morristown, in the county of Morris and State of New Jersey, have invented a new and Improved Leaf-Turner, of which the following is a full, clear, and exact description.

This invention relates to turners for music and other folio leaves, and more particularly to a music leaf turner in which is employed a manually operable, swinging arm having a magnet adapted to contact with clips carried by the leaves and fashioned from metal or other material capable of magnetic attraction, so that a leaf is turned as the arm is swung from one position to another, the arm being arranged gradually to become disengaged from the leaf as it swings, so that when the leaf itself has been completely turned, the arm is free to return to the initial position, without carrying the leaf back with it.

An object of the invention is to provide a simple and efficient music or other leaf turner which is inexpensive to manufacture, and in which the leaf turning arm is provided with a magnet adapted to engage metal clips carried by the leaves, whereby the danger of tearing or otherwise injuring the leaves in turning them is obviated.

A further object of the invention is to provide a leaf turner by means of which folio or other leaves can be turned in either direction, and in which the leaves can be removably but firmly held in position for the operation of the turner.

The invention consists in the construction and combination of parts to be more fully described hereinafter, and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a perspective view showing my invention as applied to a piano; Fig. 2 is an enlarged front elevation of the lower portion of the device, showing certain of the parts in different positions in dotted outline; Fig. 3 is a longitudinal section of the leaf turner; Fig. 4 is an enlarged rear view of the lower central part of the stand shown in Figs. 1 and 2. Fig. 5 is a front elevation showing one form of the clips which are attached to the leaves and are capable of magnetic attraction; Fig. 6 is an enlarged transverse section on the line 6—6 of Fig. 3; and Fig. 7 is an enlarged transverse section of the means for holding the leaves in position, showing certain of the parts in different positions in dotted outline.

Before proceeding to a more detailed explanation of my invention, it should be clearly understood that while I have shown, for example, a music leaf turner adapted to be removably used in connection with a piano or other musical instrument, the invention can also be employed for other purposes, for instance, as an attachment for reading purposes, wherein it serves to turn the leaves of a book or the like. Any suitable form of clip can be removably applied to the leaves to be turned, provided the clip is capable of magnetic attraction, so that the magnet carried by the swinging leaf-turning arm can engage the clip and hold it with sufficient strength to permit the leaf to follow the movement of the arm. The arm is so arranged that as it swings from one position to another it moves downward, and thus gradually the magnet slides out of engagement with the clip; consequently, when the leaf has reached its turned position, the magnet has moved out of contact with the clip, and the arm is free to return without carrying the leaf back. The arm is adjustable and can be arranged to turn leaves in either direction; that is, from right to left or from left to right, in each instance, after being suitably adjusted, operating to release the leaf automatically, by the time it has attained the turned position.

Referring more particularly to the drawings, I employ a frame, consisting of a base 10 fashioned from wood or other suitable material and having feet 11 by means of which the frame can be held in a proper upright position, as is shown for example in Fig. 1, upon the music-board of a piano, or upon any other suitable support. The frame has posts 12 consisting of metal rods or the like, and preferably slanted backward to a slight degree so that the folios or leaves can rest properly thereupon. A cross-bar 13 mounted at the upper ends of the posts, has the extremities projecting laterally therebeyond. Upon the projecting extremities of the cross-bar 13 are sleeves 14 of rubber or other resilient material, to obviate the danger of injuring the piano or other

support. Near the center, the base carries an upright holder 15, consisting preferably of an angle of metal having at the bottom a laterally disposed flange 16 secured to the base by means of a screw 17 or the like. At the upper end, the holder has a second flange 18. A clamping bar 19 is pivoted between the flanges 16 and 18 and is preferably of semi-circular section, having the rounded side disposed normally at the inside of the angle iron. A locking rod 20 is secured to the clamping bar 19, for example, by having a laterally disposed end inserted in an opening of the clamping bar, and serves to hold the latter in a plurality of positions by means of a laterally disposed extremity 21 which can be positioned in openings 22 of the base. The holder 15 and the clamping bar 19 constitute the means for positioning the leaves. The latter are held at the folds, as is shown most clearly in Fig. 7, being clamped between the holder and the clamping bar, thus leaving the leaves free to be turned in either direction. To release the leaves it is merely necessary to lift the locking rod out of engagement with one of the openings 22 and to swing the clamping bar aside, as is indicated in dotted outline in Fig. 7.

The base 10 has a transverse opening underneath the leaf-holding means, and has pivotally mounted therein a pintle 23 which extends beyond the base at the front and back thereof. An arm 24 is pivotally secured at the forwardly projecting end of the pintle, by means of a laterally disposed extremity 25 arranged in a transverse opening 26 of the pintle, and held in position by a head 27. The free end 28 of the arm is bifurcated and has secured between the sides by means of a rivet 29 or the like, a magnet 30 which may be of any suitable form, for example, as shown, of the ordinary horseshoe type. An operating member 31 is arranged underneath the base and has an upwardly disposed portion 32 arranged in a transverse opening 33 at the rearwardly projecting end of the pintle. The upwardly disposed portion 32 extends above the pintle and has mounted thereon a helical spring 34. The latter has one end secured to the portion 32 of the operating member and the other end fastened by means of a pin 35, to the pintle. At the free end, the operating member is laterally disposed to form a handle 36 which may be of any form adapted to be grasped by the hand. An offset bracket 37 is rigidly carried by the operating member and engages a stud 38 of the swinging arm, whereby the operating member controls the arm.

The base 10 has a cut-away portion 39 which permits the free movement of the operating member 31. Cushions 40 of rubber or other suitable material, are carried by the parts and serve to protect the base from the impact of the magnet thereagainst, as is shown most clearly in Fig. 2.

The pintle 23, at the rear end, and adjacent to the back of the base 10, has an annular groove 41 which receives the opposite sides of a bifurcated spring keeper 42. The latter is fashioned from resilient wire or other suitable material bent upon itself to form a V-shaped member having at the extremities, eyes 43 formed to receive screws 44 or the like to hold the keeper in position. At the bend, a further screw 45 is employed to mount the keeper upon the base. The keeper frictionally engages the pintle and to hold the same in any one of a plurality of positions, though permitting it to be manually or otherwise adjusted into the different positions for a purpose which will appear more clearly hereinafter.

It is of course necessary to secure to each of the leaves to be turned, a part or member capable of magnetic attraction so that the magnet can temporarily attach to the leaf. Any desired attachment can be employed; as shown, for example, in Fig. 2, a bar 46 of metal, pasted or otherwise secured in place, can be used. I prefer however, to employ a clip 47 fashioned from wire or the like and having separable resilient sides between which the edge of the leaf is received, and provided, further, with crossbars 48 adapted for engagement with the magnet.

The operation of the leaf turner is as follows: The folio A consisting of any desired number of leaves, is placed between the holder and the clamping bar, and is thus positioned for use, each of its leaves having been previously provided with a clip 47 or other similar attachment. When the leaves are to be turned from the right to the left, as is shown in Fig. 1, the swinging arm and the operating member are arranged as is shown in Fig. 2, with the pintle 23 turned so that a stop 49 rigid with the pintle engages the lower side of the spring keeper. In other words, the arrangement is such that as the arm swings from right to left it gradually moves downward as is indicated in dotted outline in Fig. 2. Consequently, in turning a leaf from right to left, the magnet is gradually disengaged from the clip and when the leaf reaches the turned position the magnet is free to return without carrying the leaf back with it. The spring 34 serves to return the swinging arm, through the operating member, to a normal position at the right hand side of the base. When it is desired to turn the leaves from left to right, the pintle is rotated until the stop 49 engages the upper side of the keeper 42, that is, until the magnet when at the left side of the base, is in its highest position. Consequently,

when the arm is swung from left to right, the magnet gradually descends so that when the leaf has reached the right-hand side of the frame the magnet is disengaged from the same.

If so desired, the cross-bar 13 may be weighted, to assist in securely positioning the device against the piano or other support.

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

1. In a leaf turner, means for holding a plurality of leaves, a swinging arm adapted to engage each leaf and operable to turn the leaf, said arm being adjustable to swing in a plurality of planes whereby when being swung in each plane it is operable to turn a leaf and at the same time gradually to disengage itself from the leaf.

2. In a leaf turner, means for holding a plurality of leaves, a swinging arm adapted to engage each leaf, and means for operating said swinging arm to turn the leaf, said arm being adjustable to swing in a plurality of planes whereby when turning leaves from left to right or from right to left, said arm automatically moves downward to disengage itself from the leaf while the latter is being turned.

3. In a leaf turner, means for removably holding a plurality of leaves, a swinging arm having a magnet adapted to engage armatures on said leaves to turn the same, and an operating member controlling said arm to swing the same, said arm being pivotally mounted whereby when swinging from right to left or from left to right, it simultaneously moves in a different direction to disengage said magnet gradually from a leaf as it is being turned from one position to the other.

4. In a leaf turner, means for holding a plurality of leaves, an arm adapted to be swung about an axis transverse of its length and having means for engaging the leaves to turn the same, said arm further being pivotally adjustable about an axis at an angle with the first axis, an operating member controlling said arm, and means controlling said operating member whereby said arm tends to maintain a normal position.

5. In a leaf turner, means for removably holding a plurality of leaves, a member pivotally adjustable about a longitudinal axis, means for limiting the adjustment of said member, an arm pivotally carried by said member and adapted to swing about an axis transverse of the length of said member, a pivotally operable member carried by said first member and controlling said arm, and means on said arm for engaging the leaves to turn the same.

6. In a leaf turner, means for holding a plurality of leaves, a pintle adjustable about its longitudinal axis, means for limiting the adjustment of said pintle, an arm pivoted upon said pintle and adapted to swing about an axis transverse of the length of said pintle, an operating member pivoted upon said pintle and arranged to swing about an axis transverse of the longitudinal axis of said pintle and controlling said arm, resilient means for controlling said operating member whereby said arm is held in a normal position, and means on said arm for removably engaging the leaves to turn the same.

7. In a leaf turner, a frame having means for holding a plurality of leaves each provided with an attachment capable of magnetic attraction, a pintle pivotally mounted upon said frame, a spring keeper engaging said pintle and having an arm at each side thereof, a stop rigid with said pintle and adapted to engage the sides of said keeper whereby the adjustment of said pintle is limited, a swinging arm pivotally mounted upon said pintle and adapted to swing about an axis transverse of the axis of said pintle, an operating member pivotally carried by said pintle and adapted to swing about an axis transverse of the length of said pintle, said operating member having an extended portion, a spring upon said extended portion and secured to said member and said pintle whereby said member is held in a normal position, a bracket on said member, a stud on said arm engaging said bracket whereby said member controls said arm, and a magnet carried by said arm and adapted to engage the attachment of said leaves, said keeper resiliently resisting the adjustment of said pintle.

8. In combination, resilient clips capable of magnetic attraction and each adapted to be secured removably to a leaf, a swinging arm having a magnet adapted to engage said clips to turn the leaves, and means for operating said swinging arm, said arm being adjustable to swing in a plurality of planes whereby when turning leaves from left to right or from right to left said arm automatically moves downward to disengage itself from the leaf while the latter is being turned.

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

JOSEPH FREDRICK YOUNG.

Witnesses:

JOHN FRANCIS HOLLOWAY,

HERBERT C. WILDEY.