(No Model.) 2 Sheets—Sheet 1.

J. FLETCHER.

MUSIC LEAF TURNER.

No. 582,050. Patented May 4, 1897.

Fig. 1,

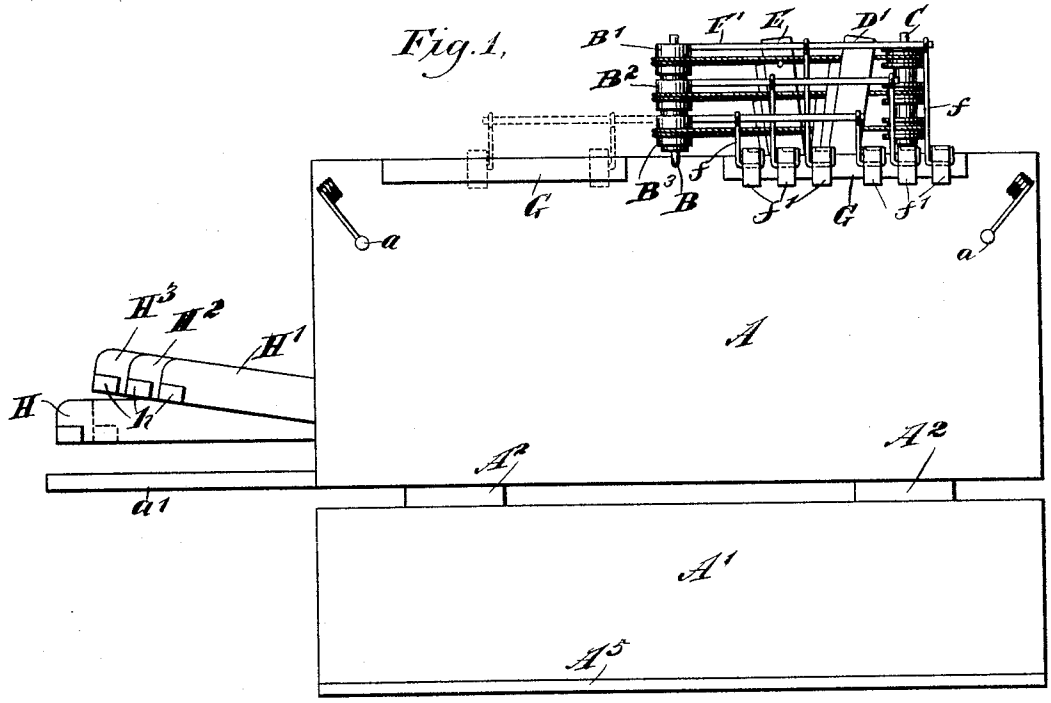
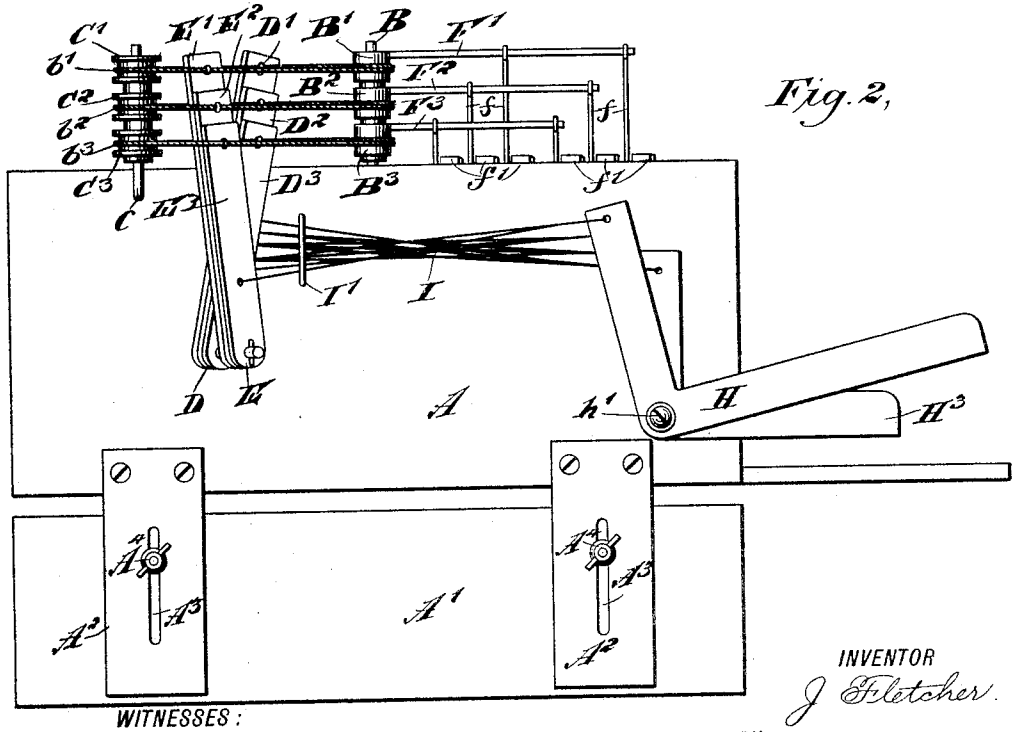


Fig. 2,



WITNESSES:

Edward Thorpe.
H. L. Reynolds.

INVENTOR
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BY
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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No. 582,050. Patented May 4, 1897.

Fig. 3.

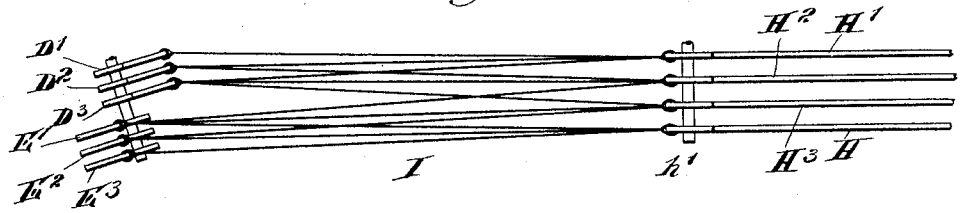
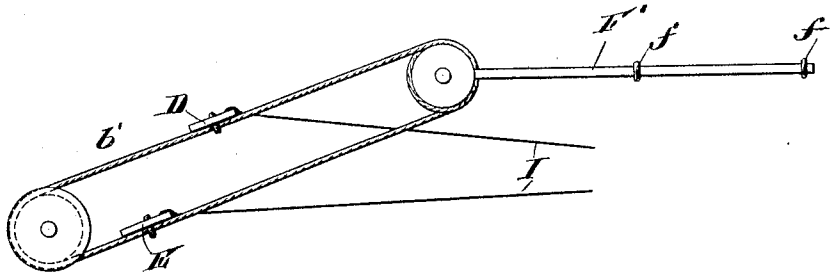


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES FLETCHER, OF CHAUNCEY, NEW YORK.

MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 582,050, dated May 4, 1897.

Application filed October 24, 1896. Serial No. 609,897. (No model.)

To all whom it may concern:

Be it known that I, JAMES FLETCHER, of Chauncey, in the county of Westchester and State of New York, have invented a new and Improved Music-Leaf Turner, of which the following is a full, clear, and exact description.

My invention relates to improvements in music-leaf turners adapted to turn one or more leaves of music without the delay ordinarily caused when the same is done by hand.

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 figures.

Figure 1 is a front elevation of the device. Fig. 2 is a rear elevation thereof. Fig. 3 is a diagram showing the manner of connecting the operating-levers with the pivoted arms for operating the turner, and Fig. 4 is a diagram or plan view of the sheet-turning mechanism.

The object of my invention is to provide a device which may be readily operated by the player without delay to turn one or more sheets of music, as desired. A stand for holding the music, consisting of two portions A and A′ and having a ledge A^5 at the bottom, upon which music-books may rest, is provided. This is made adjustable in height to accommodate different heights of music-books by having slats A^2 fastened at each end of one piece and adjustably fixed to the other portions by the slot A^3 and the thumb-screw A^4. This is requisite in using music of varying heights, as it is necessary to have the upper edge of the music always in approximately the same position. This holder is provided with spring-clamps *a* at the upper corners for holding down the outer sheets or the pages of the music or book which are not to be turned. This portion of the mechanism may be supported in any way desired, either placed upon a musical instrument or upon a special stand. The particular support used with the same is something which has no necessary connection with my invention.

At the center of the upper portion of the holder is fixed a pivot B. This pivot carries a number of rollers B′ B^2 B^3. I have herein shown three rollers, but this number may be increased or decreased, as desired. Separated from this pivot and upon the rear side of the holder is a second pivot C, which is likewise provided with the same number of rollers C′, C^2, and C^3, which rollers and cylinders are mounted loosely upon their pivots and are connected together by a cord, belt, or other flexible connector *b′* b^2 b^3.

The rollers B′, B^2, and B^3 are provided with horizontal arms F′, F^2, and F^3, one upon each roller. These horizontal arms have depending arms *f*, to the lower end of which are attached clamps *f′* or other devices for holding the sheets of music. The arms F′, F^2, and F^3 may be bent down at their ends, taking the place of one of the depending arms *f*. The clamps shown in the drawings are the ordinary spring-clamps used for holding clothing. Any device which will clamp the sheet of paper may be used instead of this. Two of these clamps have been shown as attached to each one of the arms. Each sheet of music to be turned is attached to the clamps of one of the arms.

The central rollers B′, B^2, and B^3 have the cords passing one complete turn around them in order that they may be secured thereon by a staple or other device to prevent slipping. As this is not necessary for the opposite rollers, the cord simply passes about the same. Connected to these cords or belts upon opposite sides are the levers D and E, which are pivoted to the back side of the holder. There are three levers D and E represented, respectively, by D′, D^2, and D^3 and E′, E^2, and E^3. The levers E′ and D′ are connected to opposite sides of the same cord. The same is true of the other sets of levers.

The levers E and D are connected by other cords I to operating-levers H H′ H^2 H^3, which are pivoted at *h′* to the back side of the holder. These levers are shown as bell-crank levers and are provided at their outer ends, which project beyond the end of the holder, with keys *h*, adapted to be engaged by a finger of the hand. A rigid arm *a′*, projecting from the same end of the holder, is located just below the ends of these levers. In operating the levers the thumb may be placed beneath the arm *a′* and a finger engage one of the levers, thus operating the device by a closing

or pressing of the fingers together and in this way obviating any tendency to shake or move the holder.

The cords connecting the bell-crank-operating levers and the pivoted arms D and E are connected thereto in a peculiar manner. Each of the cords attached to the levers H H′, &c., is divided in three parts. These are connected to the levers D and E in such a way that each of the levers H H′, &c., is connected to three of the levers D and E. As indicated in the diagram Fig. 3, the cords from the lever H are connected to the three levers E′, E^2, and E^3. The cords from the lever H^3, which is next to the lever H, are connected to the levers E^2, E′, and D^3. The cords from the other levers are similarly connected to three successive arms D or E, moving over one arm for each lever. This results in having the cord from the lever H′ connected to the three levers D′, D^2, and D^3. When one of the arms D or E is drawn forward by the operation of one of the levers H, the other arm is pulled back by reason of its common connection to the same cord or belt *b*. The lever H or the outer one of the operating-levers is the lever which reverses all of the sheet-holding arms F′, F^2, and F^3. It will be seen by referring to the diagram Fig. 3 that the cords from this operating-lever are connected to the levers E. The lever next to this, or H^3, it will be understood, is not connected to the outer one of the levers E, but is connected to the outer one of the levers D. This results in pulling over the lever D^3. It will have no effect upon the levers E′ and E^2, because the same have been previously pulled over by the operation of the lever H.

When the third lever H^2 is operated, the lever D^2 is pulled over and the arm E^2 returned. In a similar way, when the arm D′ is operated by the lever H′ the arm E′ is returned to its position. If one of the latter levers H′ or H^2 be operated before a preceding lever, as H^3, the result would be that the multiple connection from the lever H′ would pull over all of the levers D and thus return all of the levers E. In this way one or more pages may be turned at once, if desired, and by reason of the connection to both sides of the cord or belt *b* the turning may be accomplished in either direction.

To prevent noise when turning leaves, a cushion G, consisting of a strip of rubber, felt, or other suitable material, is placed on each side where the clamps strike the back A. If the sheets are turned quickly, the clamps might otherwise cause a noise which would be disturbing.

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

1. In a music-leaf turner, the combination of a pivot having a plurality of cylinders loosely pivoted thereon, an arm fixed to each of these cylinders and provided with leaf-holding devices, with an auxiliary pivot separated from the first pivot, complementary rollers thereon coöperating with the cylinders, belts passing about said cylinders and rollers, and levers connected to the side of said belts, substantially as described.

2. In a music-leaf turner, the combination of a pivot having a plurality of cylinders loosely pivoted thereon, an arm fixed to each of these cylinders and provided with leaf-holding devices, an auxiliary pivot separated from the first pivot, complementary rollers thereon coöperating with the cylinders, belts passing about said cylinders and rollers, with a pivoted arm attached to each of said belts, and an operating-lever and connections attached to each of said pivoted arms, substantially as described.

3. In a music-leaf turner, the combination of a pivot having a plurality of cylinders loosely pivoted thereon, an arm fixed to each of these cylinders and provided with leaf-holding devices, an auxiliary pivot separated from the first pivot, complementary rollers thereon coöperating with the cylinders, belts passing about said cylinders and rollers, with a pivoted arm attached to each side of each belt, operating-levers one in excess of said belts, and separate flexible connections from each of said operating-levers to one-half the pivoted arms, said connections being to successive arms and to different ones for each operating-lever, substantially as described.

4. In a music-leaf turner, the combination of a pivot having a plurality of cylinders loosely pivoted thereon, an arm fixed to each of these cylinders and provided with leaf-holding devices, an auxiliary pivot separated from the first pivot, complementary rollers thereon coöperating with the cylinders, belts passing about said cylinders and rollers, and levers connected to opposite sides of said belts, whereby the arms may be turned in either direction, substantially as described.

JAMES FLETCHER.

Witnesses:
WM. CLAUS,
GEORGE JOHNSON.