(No Model.)

B. F. WALLACE.

SHEET MUSIC TURNER.

No. 523,420. Patented July 24, 1894.

Fig. 1.

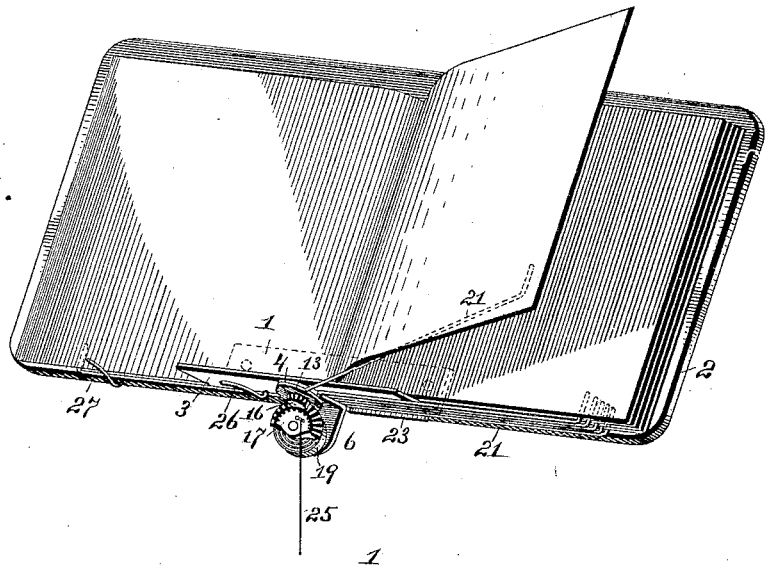

Fig. 2.

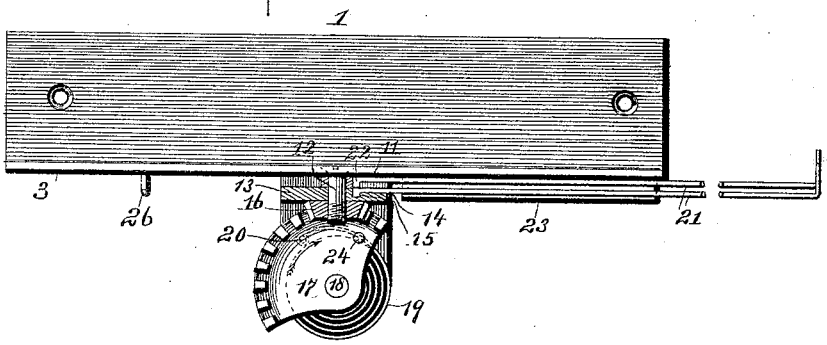

Fig. 3.

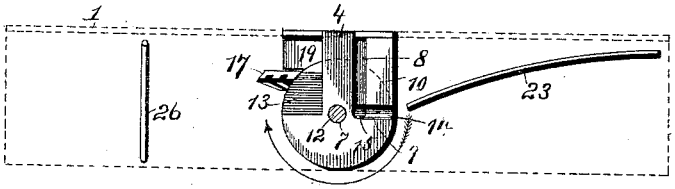

Fig. 6.

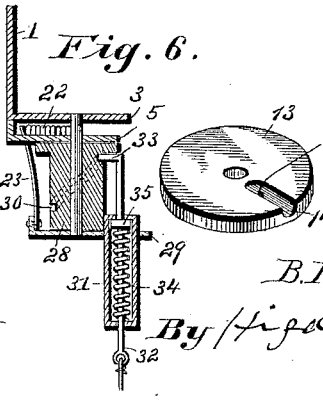

Fig. 4.

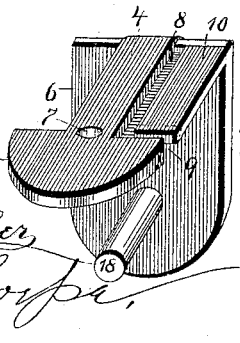

Fig. 5.

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UNITED STATES PATENT OFFICE.

BENJAMIN F. WALLACE, OF INDEPENDENCE, MISSOURI.

SHEET-MUSIC TURNER.

SPECIFICATION forming part of Letters Patent No. 523,420, dated July 24, 1894.

Application filed March 16, 1894. Serial No. 503,887. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. WALLACE, of Independence, Jackson county, Missouri, have invented certain new and useful Improvements in Sheet-Music Turners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to music turners, and has for its object to produce a device of this character which is simple and inexpensive of construction, and positive and reliable in operation.

With this object in view, the invention consists in certain peculiar and novel features of construction and combinations of parts, as hereinafter described and claimed.

In order that my invention may be fully understood, reference is to be had to the accompanying drawings, in which—

Figure 1. is a perspective view of a music turning device constructed in accordance with my invention, and showing, in operative position relative to said device, a sheet of music. Fig. 2. is a vertical sectional view of the device on an enlarged scale. Fig. 3. is a horizontal sectional view. Figs. 4 and 5. are detail perspective views of parts of the device, and Fig. 6. is a vertical sectional view of a slightly modified form of construction.

In the said drawings, 1 designates a plate which is secured detachably to the music rack 2 of a piano or organ, or to a violin or other music stand, and projecting forwardly from and at right angles to said plate 1, is the flange 3. Secured transversely to the under side of this flange and centrally thereof, is a plate 4, terminating at its forward end in the semicircular head 5, and at its rear end in the portion 6, which depends at right angles to the portion 4. The portion 4 is formed axially of the semicircular head with a vertically extending perforation 7, and at one side of this perforation, with a longitudinally extending groove 8 in its upper side; said groove extending from the rear end of the portion 4, to the semicircular-head 5, and communicating at its front end with the transversely extending recess or slot 9, which is arranged radially to the perforation 7.

The portion 10 of the plate 4, which is located between the groove 8 and the recess or slot 9, is of reduced thickness, its upper surface occupying a lower plane than the upper surface of the semicircular-head 5, so as to form a space 11 between the upper side of the portion 10 and the adjacent or lower side of the flange 3, as clearly shown in Fig. 2.

A short shaft or screw-bolt 12 extends vertically through the flange 3 and the opening 7, and mounted rigidly thereon, and bearing against the under side of the semicircular-head 5, is a disk or circular plate 13, and this plate is formed with a radial groove 14 in its upper side, which terminates at its inner end in a circular recess 15, and this groove 14, when the disk or circular plate 13 occupies its normal position, registers with the recess or slot 9 of the plate 4, and the circular recess 15, at the inner end of the groove 14, occupies a position vertically below the junction of the groove 8 and the recess or slot 9, as clearly shown in Fig. 3.

Mounted rigidly upon the lower end of the shaft or bolt 12, and bearing at its under side against the disk or plate 13, is a beveled gear-pinion 16, which meshes with the toothed segment 17, which is mounted rotatably upon a stub-shaft 18, projecting forwardly from the depending portion 6 of the plate 4.

A coil spring 19 is mounted upon the shaft 18, and is secured at its outer end to a pin 20, projecting rearwardly from the toothed segment, and at its opposite end to the stub-shaft 18; the tendency of said spring being to hold the toothed segment in position as shown in Fig. 2.

A number of music turning arms 21, which are provided with upturned outer ends which engage the leaves of the music, occupy at their inner ends the space 11 between the portion 10 of the plate 4 and the flange 3; said arms fitting snugly in said space, and at their extreme inner ends these arms are provided with depending portions or hooks 22, which engage the longitudinally extending groove 8.

A spring 23, is secured to the under side of the flange 3, and bears at its inner end against the rear or innermost of the music-turning arms and serves to force these arms forward in the space 11, so that they shall successively clear the front margin of the portion 10 and drop through the recess or slot 9 into the

groove 14, of the disk or plate 13; the depending end 22 of the arm, of course, engaging the circular recess 15. This recess and groove is of sufficient depth to allow a single music turning arm to fit snugly therein, and so that its upper side shall be slightly below the plane of the lower side of the semicircular-head 5, so as to allow of the turning of the disk, as hereinafter explained.

To the right of the stub-shaft 18, as viewed from the front, a pin 24 projects from the front side or face of the toothed segment 17, and depending therefrom is a cord or other flexible connection 25, which may be attached to the foot, or in any other suitable manner may be arranged so that a downward pull upon the cord or flexible connection 25, will overcome the resistance of the coil spring, and, rotating the toothed segment in the direction of the arrow, Fig. 2, cause the pinion 16 to rotate the disk or plate 13 in the direction of the arrow, Fig. 3, about one hundred and eighty degrees, so that the music-turning arm resting in the groove 14 and recess 15, will be transferred to the opposite side of the vertical shaft 12, and in order to disengage this arm from the groove 14 and the recess 15, when it has reached this position, a lift-arm 26 is provided; this lift-arm projecting forwardly from the flange 3 in a plane corresponding to the plane of the disk 13, and adjacent to said disk, and has its forward end inclined downwardly slightly below the plane of the said disk, so that it shall engage the under side of the music-turning arm, and cause the same, as it travels up said incline, to be elevated bodily at its inner end and disengaged from the said groove and recess so that it shall rest loosely upon the upper side of the disk. In order to support the said arm in its horizontal position until it is again needed, a supporting-arm 27 projects outwardly from the music rack and bears against the lower side of said music-turning arm near its outer end. Immediately the pull or pressure upon the flexible conection 25 is relaxed sufficiently, the spring rotates the disk back to its original position, and immediately the groove 14 reregisters with the recess or slot 9, a second music-turning arm drops down and operatively occupies the said groove and recess.

From the foregoing, it will be apparent that each time the toothed segment is operated in the proper direction its full distance, a music-turning arm and the leaf engaged thereby, is transferred from one side to the other.

In Fig. 6, I have shown a modification of the device. In this instance, a spool 28 is substituted for the disk 13, and bears against the lower side of the semicircular head 5, and rests at its lower end upon a supporting plate 29. The spring 23 may be carried by the flange 3, as before described, or may be carried by the plate 29, as shown in this figure. The spool 28 is formed with a groove 30, which extends spirally downward and to the rear about half way around the spool. A tube 31 is carried by the plate 29, adjacent to the front side of the spool, and extending vertically through said tube is a rod 32, the upper end of which is provided with an inwardly extending arm or hook 33, which engages the spiral groove 30. Cap-plates cover the upper and lower ends of said tube, and spirally encircling the rod 32 within the tube is an expansion spring 34, which bears against the lower end of the tube and the under side of the collar 35 secured upon the rod 32; the tendency of this spring being to hold the rod in its elevated position, and with the upper end of the arm 33 engaging the end of the spiral groove. A flexible connection corresponding to the connection 25, depends from the lower end of the rod 32, and a downward pull upon said connection causes the arm 33, in the groove 30, to rotate the spool, so as to transfer the music-turning arm from one side to the other, as before explained with reference to the disk 13. Immediately the connection is released, the spring 34 forces the rod upward, and causes the spool to rotate back to its original position, as will be readily understood.

From the above description, it will be seen that I have produced a music turner which is simple and inexpensive of construction, and which is positive and reliable in operation.

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

1. A music turner, comprising a base-plate, a plate secured thereto and recessed in its upper side to form a space therebetween, a disk mounted below the last-mentioned plate and having a radial groove, music turning arms mounted in the space between the said plates, and in the groove of the disk, and means to rotate said disk so that the music-turning arms carried thereby shall be transferred to the opposite side of the axis of said disk, substantially as set forth.

2. A music turner, comprising an angle-plate upon which the sheet-music rests, a plate secured to the under side of said angle-plate and recessed to form a space therebetween, and having a radial slot at the front end of said recess, a disk operatively mounted below the last-mentioned plate, and having a radial groove registering with the slot of the said plate, music-turning arms occupying said space between said plates, and also occupying the groove of said disk, and means to rotate said disk to transfer the arm carried thereby to the opposite side of its axis, and a lift arm to engage the under side of said arm and disengage it from the groove of the disk after it has been turned about one hundred and eighty degrees, and a second arm to support the said music-turning arm in its horizontal and inoperative position, substantially as set forth.

3. A music turner, comprising a plate upon which the sheet-music rests, and a second plate secured to the under side of the first-

mentioned plate, and recessed at one side to form a space therebetween, and grooved at the inner margin of said space, and slotted at the front end of said recess and groove, and a disk rotatably mounted beneath the last-mentioned plate and having a radial groove registering with the slot of the said plate and having a recess at the inner end of said groove, which registers with the front end of the groove of said plate, in combination with a series of music-turning arms, having upturned outer ends which engage the leaves of the music, and which occupy the space between said plates, and portions depending from their inner ends, engaging the groove at the inner margin of said space, a spring bearing against the innermost of said music-turning arms and forcing the same forward so that one shall always rest in the groove and recess of the disk, means to rotate said disk to transfer the arm carried thereby from one side to the other, and thereby turn the leaf of music, and means to disconnect the said arm from the disk, substantially as set forth.

4. In a music turner, the combination with a supporting plate for music, a plate secured to the under side of the first-mentioned plate, and having a longitudinally extending space and groove, and a transverse slot at the forward end of said space and groove, a shaft extending vertically through said plates, a disk mounted thereon and provided with a radial groove in its upper side, terminating at its inner end in a recess, and a gear-pinion mounted upon the lower end of said shaft, of a series of music-turning arms fitting in the space and groove between the said plates, and engaging the leaves of music, and a spring bearing against the innermost of said arms and exerting a pressure which forces them successively to drop into the groove and recess of the disk, a stub-shaft, a toothed segment mounted loosely thereon and engaging the gear-pinion, means to rotate the same to turn the leaf of music, and a spring mounted upon said stub-shaft and engaging the same at one end and the toothed segment at its opposite end, so as to return the disk to its original position after the sheet of music has been turned, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN F. WALLACE.

Witnesses:
G. Y. THORPE,
M. R. REMLEY.