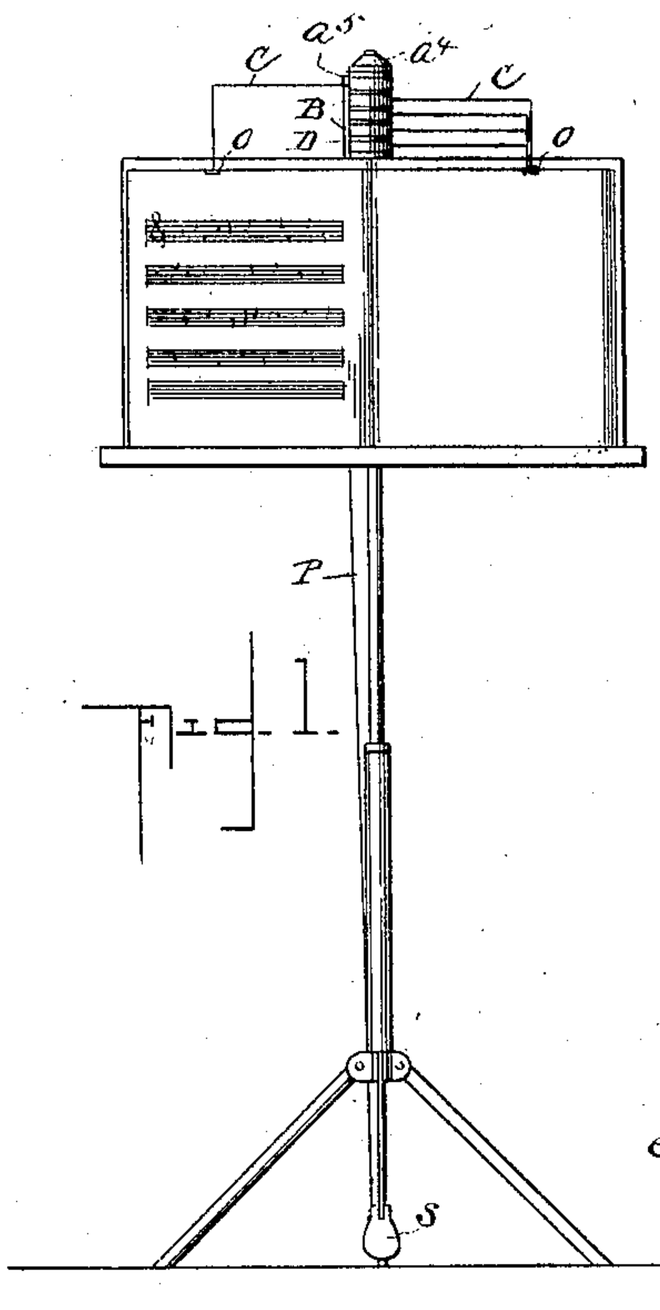
No. 756,848. PATENTED APR. 12, 1904.

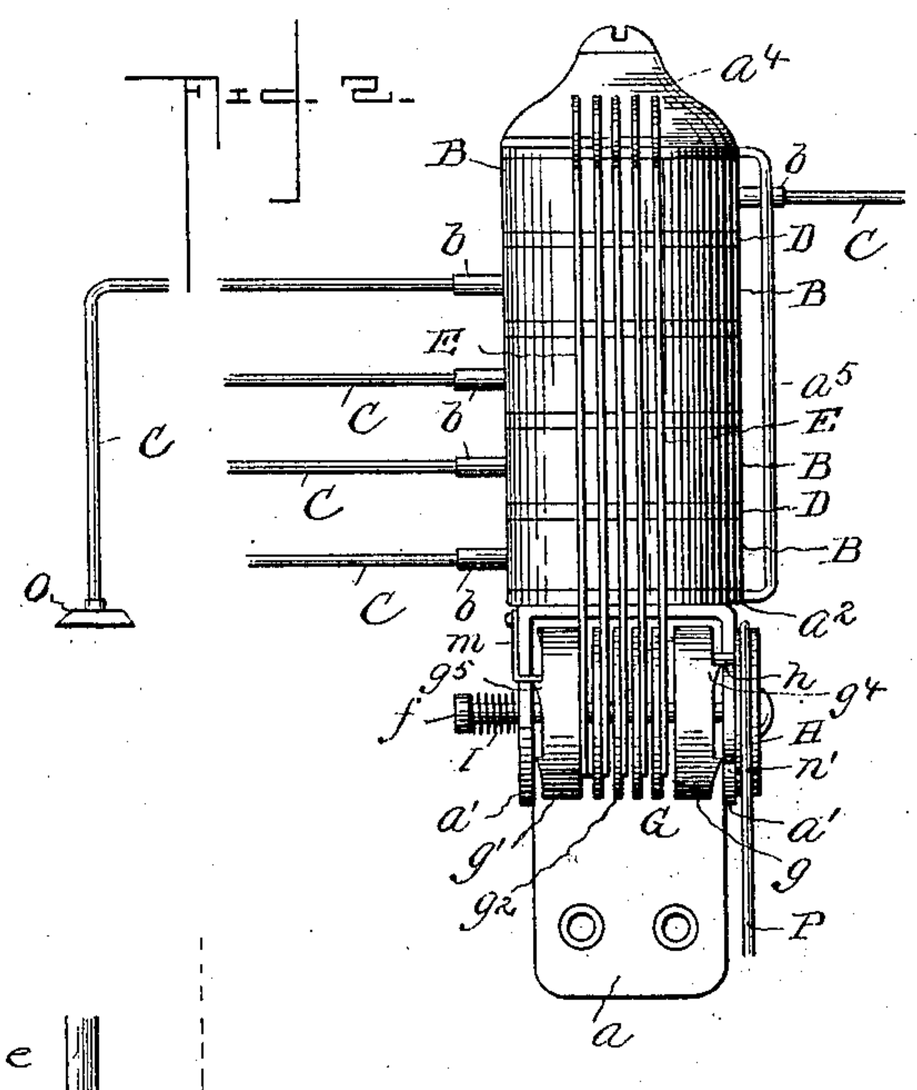
F. GUTH.

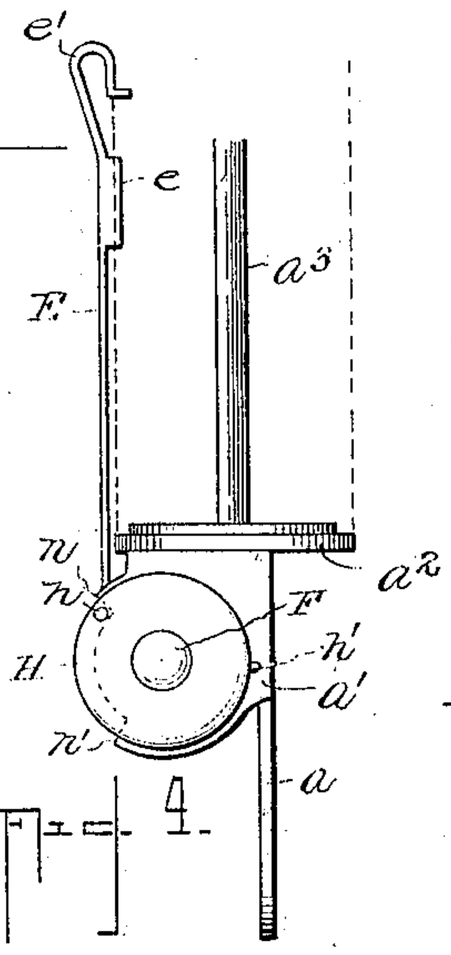
MUSIC LEAF TURNER.

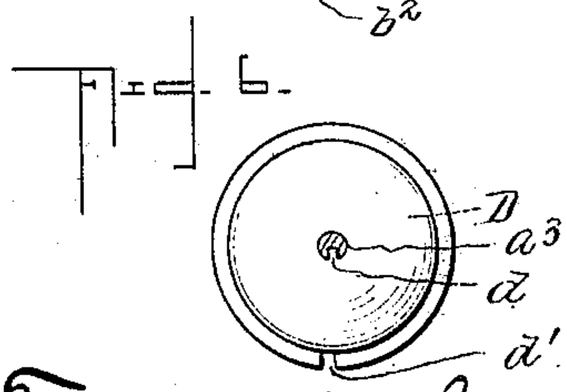
APPLICATION FILED SEPT. 2, 1903.

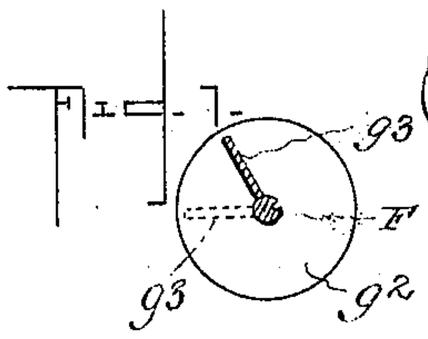
NO MODEL.











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No. 756,848. Patented April 12, 1904.

UNITED STATES PATENT OFFICE.

FREDERICK GUTH, OF LINCOLN, ILLINOIS.

MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 756,848, dated April 12, 1904.

Application filed September 2, 1903. Serial No. 171,690. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK GUTH, a citizen of the United States, residing at Lincoln, in the county of Logan and State of Illinois, have invented a Music-Leaf Turner, of which the following is a specification.

The objects of my invention are to provide a music-leaf turner which shall be simple and compact in construction, easily operated, and adapted for attachment to either a portable or stationary music-rack, whereby the leaves of sheet-music or music-books may be turned successively by the operation of a pedal instead of by hand, as is usual.

With these objects in view the invention contemplates the provision of a device comprising a series of spring-actuated wheels or rings carrying leaf-turning rods and means for releasing said wheels or rings successively by the operation of a pedal, all as will be hereinafter particularly described, and specifically set forth in the appended claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a front elevation showing the application of my invention to a portable music-rack of the conventional style. Fig. 2 is a rear elevation of the device. Fig. 3 is a similar view of the lower portion thereof, the releasing-rods being removed and one of the spring-actuated wheels shown in section. Fig. 4 is a detail side elevation of the supporting-frame of the device and showing one of the releasing-rods. Fig. 5 is a detail plan view of one of the spring-actuated wheels. Fig. 6 is a similar view of one of the interposed stationary disks. Fig. 7 is a transverse sectional view through the tappet-wheel of the tripping device, the section being taken through one of the tappets.

Similar letters of reference indicate similar parts in all the figures of the drawings.

In carrying out my invention I employ, in the first instance, a supporting-frame adapted to be attached to the upper part of the book-rest of an ordinary music-rack and which carries the operating mechanism. This supporting-frame comprises an attaching-plate a, having screw-holes, bearing-ears projecting rearwardly from the upper end of said plate to support the tripping device, a disk a^2 above the bearing-ears, and a spindle a^3, rising from the center of said disk and upon which spindle are mounted the spring-actuated wheels or rings carrying the leaf-turning rods, hereinafter described. The disk a^2 is grooved peripherally at its upper side, forming an annular seat in which rests and is adapted to turn a wheel or ring B, carrying a leaf-turning rod C and for this latter purpose is provided with an outwardly-projecting hub b, in which said rod is secured. This wheel or ring is turned in one direction by means of a helical spring b', Figs. 3 and 5, attached at its inner end to the vertical spindle a^3 and at its outer end to said wheel or ring. Above this wheel or ring B is a disk D, fixed to the spindle by the tongue d, engaging a groove therein and peripherally grooved at opposite sides to receive said ring B, as well as a second similar ring, which latter is mounted thereon. Other similar disks and rings are mounted upon the spindle alternately, the number corresponding with the number of leaf-turning rods desired, and the series are held upon the spindle by means of a cap a^4. The spring b' acts to move the leaf-turning rod in the direction to turn a page—that is to say, from right to left, Fig. 1—and the movement of the rod is limited in this direction by contact with a vertical rod a^5 and attached at its ends to the cap a^4 and lower stationary disk a^2, respectively.

To provide for holding the leaf-turning rods C against the action of the springs or in the position to turn the leaves of a book, vertical releasing-rods E are attached at their upper ends to the cap a^4 and at an intermediate point are each provided with an offset e, Fig. 4, adapted to engage a peripheral notch b^2 in the rings carrying said leaf-turning rods, and to reinforce this engagement said offsets also engage corresponding recesses d' in the adjoining disk D. The upper end of each releasing-rod is bent in the form of a loop, as at e', to permit of a movement of the rod outward to disengage the notch and recess, and the lower ends of said releasing-rods depend in the path of the tripping device, which I shall now proceed to describe.

Loosely journaled in the bearing-ears a' of the supporting-frame and projecting at each

end beyond said ears is a horizontal shaft F, upon which and between the bearing-ears is mounted a tappet wheel or cylinder G, composed of the heads g and g' and intermediate disks g^2, the latter being spaced apart to receive and retain the lower ends of the releasing-rods. Tappets g^3 are located between the disks and are disposed with relation to each other so as to trip the rods E successively upon the rotation of the tappet wheel or cylinder. The shaft is slidably connected to the tappet-wheel, and both are turned by means of a wheel H, fixed to one of the projecting ends of said shaft F and having a laterally-projecting pin h, which is adapted to engage ratchet-teeth g^4 on the outer face of the adjoining head g' of the tappet wheel or cylinder, said pin being held against the teeth to ride over and engage the same by means of a spring I on the opposite end of the shaft and interposed between a head f on the latter and the adjoining bearing-ear a', said spring permitting a lateral movement of the shaft and operating-wheel H, and further serves to return the wheel for engagement with the next tooth. The operating-wheel is grooved peripherally, and over the same is passed a cord P, attached at one end to an eye h' on the wheel, (see Fig. 4,) and is led from the latter to a pedal, as s. (See Fig. 1.) The oscillating movement of the operating-wheel is limited by means of shoulders n and n', formed by cutting away the outer edge of the adjoining bearing-ear, against which shoulders the pin h strikes, and a backward movement of the tappet-wheel is prevented by means of a spring-pawl m, attached to the opposite bearing-ear and engaging ratchet-teeth g^5 on the head g'.

The outer ends of the leaf-turning rods C are bent downward, and at their terminals is attached a clip o, of any approved pattern, by which each rod is attached to a leaf of the book, so that when said rods are swung from one side to the other they will turn the leaves of the book.

In the drawings I have illustrated the device as attached to the upper part of the book-rest of an ordinary portable music-rack, and in this instance the operating-cord P is led to the pedal s, attached to one of the legs of said rack. It is obvious, however, that the device could be attached to a stationary music-rack—for instance, the music-rack of a piano or organ—and in this instance the cord would be carried up over the piano or organ and led down the back of the same to a pedal located thereunder.

The operation of the device is as follows: Supposing all the leaf-turning rods to be turned to the right, Fig. 1, and engaged by their respective releasing-rods, now in this position of the parts a pull upon the cord P will turn the tappét-wheel the extent of one tooth, and the first tappet thereof will trip the first releasing-rod, releasing the corresponding leaf-turning rod, permitting the latter to swing around and turn the page to which it is connected. This operation is repeated to turn the second page, and so on. It will be seen, therefore, that the pages of a book or of sheet-music can be quickly turned in succession by simply depressing the pedal to which the operating-cord is attached, and as said pedal is operated by a foot of the musician his hands are free to play without interruption.

Though I have shown the device constructed to employ five leaf-turning rods, it will be understood, of course, that the number may be increased or diminished—as, for instance, only two may be employed when the device is especially adapted for sheet-music.

The device is very compact and simple in construction, easily operated, effective in use, and is not liable to get out of order.

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

1. In a music-leaf turner, the combination, of a series of leaf-turning rods spring-actuated in one direction, rods for holding and releasing the aforesaid rods, a tappet-wheel for tripping the releasing-rods successively one side of said tappet-wheel having ratchet-teeth, a shaft slidable in the tappet-wheel and spring-actuated in one direction, and a wheel on an end of said shaft having a pin engaging the ratchet-teeth.

2. In a music-leaf turner, the combination, of a series of leaf-turning rods having hubs or rings, the latter provided with notches, springs inclosed in said hubs or rings and adapted to turn the rods in one direction, rods adapted to engage the notches in said hubs or rings to hold the latter against the action of the springs, a tappet-wheel for tripping the last-mentioned rods, ratchet-teeth at one end of said tappet-wheel, a shaft slidable in the latter and spring-actuated in one direction, and a wheel on an end of said shaft having a pin engaging the ratchet-teeth.

3. In a music-leaf turner, the combination, of a series of leaf-turning rods having hubs or rings, springs inclosed in said hubs or rings and adapted to turn the rods in one direction, rods adapted to engage notches in said hubs or rings to hold the latter against the action of the springs, a tappet-wheel for tripping the last-mentioned rods successively, ratchet-teeth on said tappet-wheel, a laterally-movable spring-actuated wheel having a pin adapted to engage the ratchet-teeth to turn the tappet-wheel, and an operating-cord passed over the periphery of the wheel.

4. In a music-leaf turner, the combination, of a vertical spindle, a series of leaf-turning rods loosely mounted thereon and having hubs or rings provided with notches, springs inclosed in said hubs or rings and adapted to turn the rods in one direction, disks fixed to the

spindle between the hubs or rings and having notches with which the aforesaid notches in the hubs are adapted to aline when the leaf-turning rods are set, rods adapted to engage the notches in the hubs and disks, and a tappet-wheel for tripping the last-mentioned rods; together with means for operating the tappet-wheel.

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

FREDERICK GUTH.

Witnesses:
A. D. CADWALLADER,
GEO. D. CORWINE.