No. 890,768. PATENTED JUNE 16, 1908.

G. W. HENDRICKS.

MUSIC LEAF TURNER.

APPLICATION FILED JULY 17, 1907.

3 SHEETS—SHEET 1.

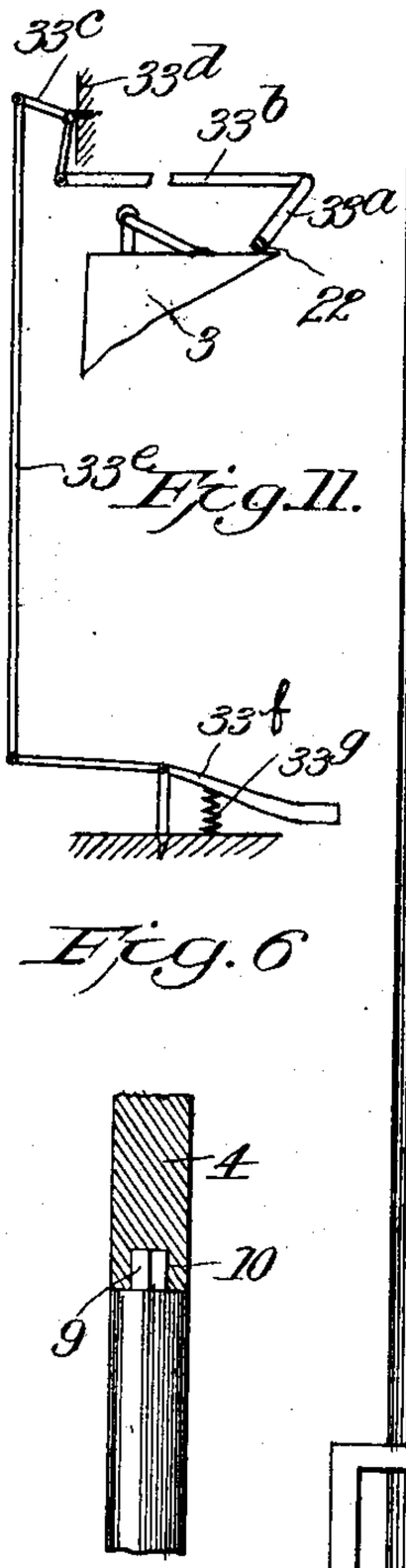

Fig. 11.

Fig. 6

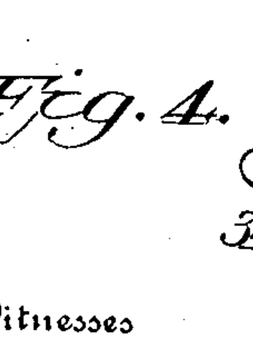

Fig. 1.

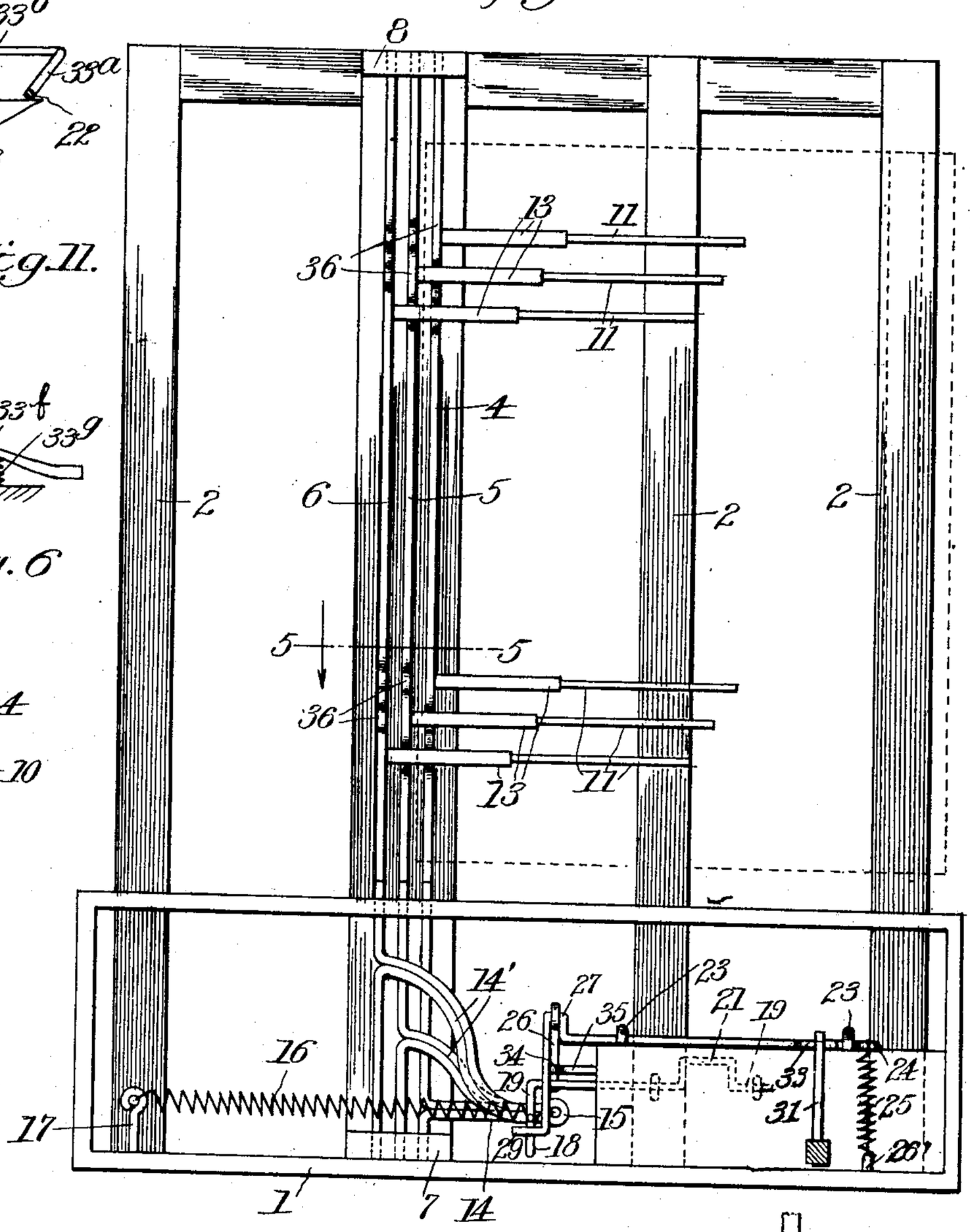

Fig. 4.

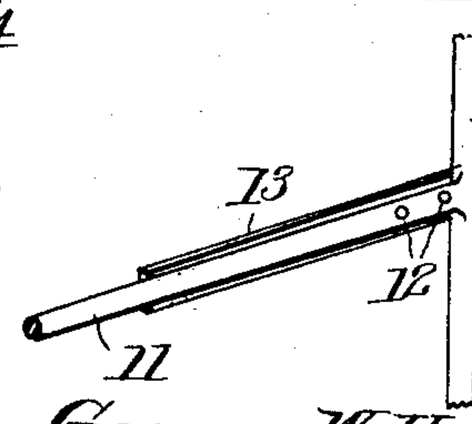

Fig. 7.

Witnesses

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Inventor

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3 SHEETS—SHEET 2.

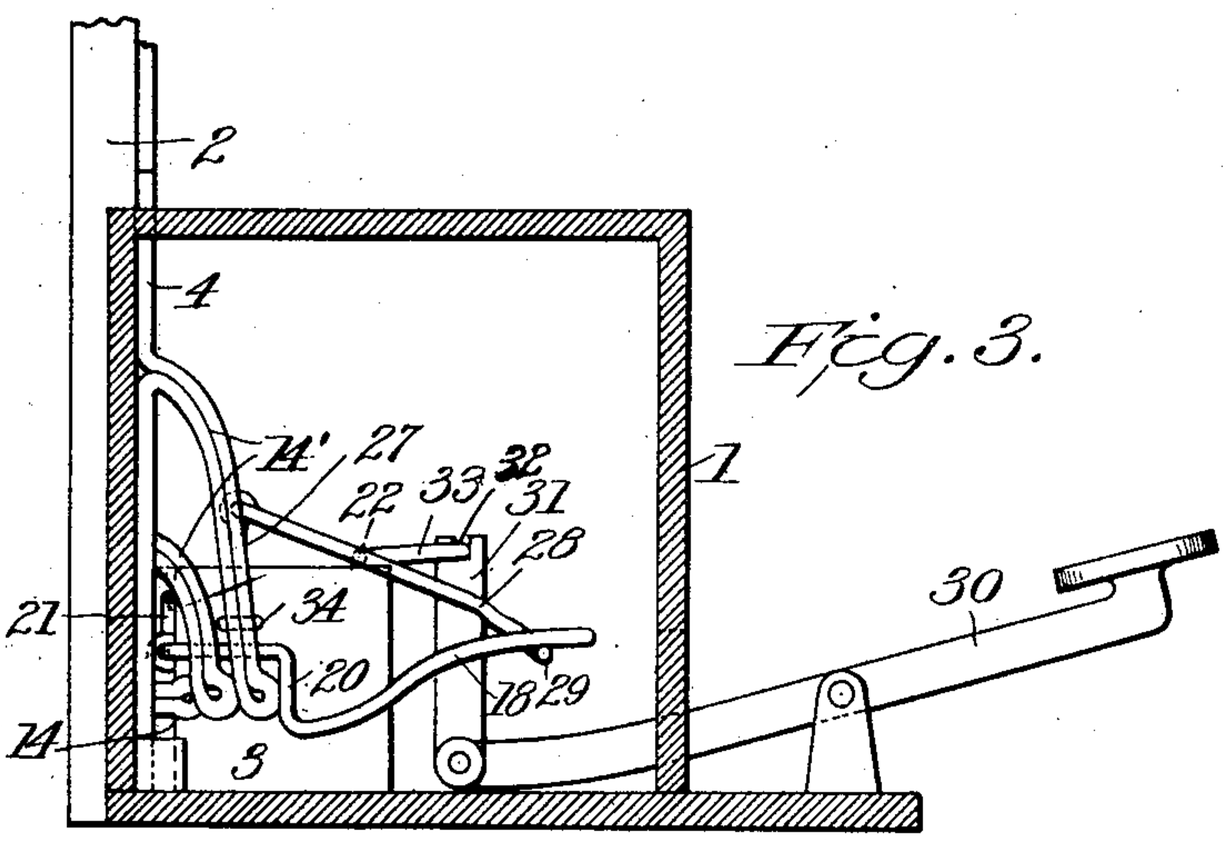


Fig. 2.

Fig. 3.

Fig. 5.

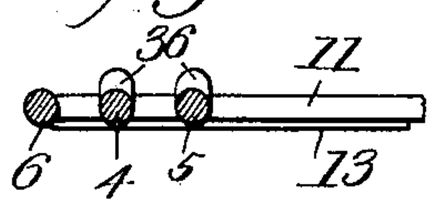


Fig. 5a.

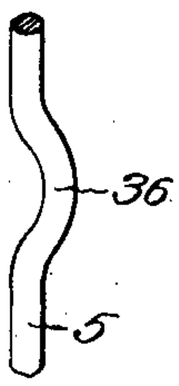
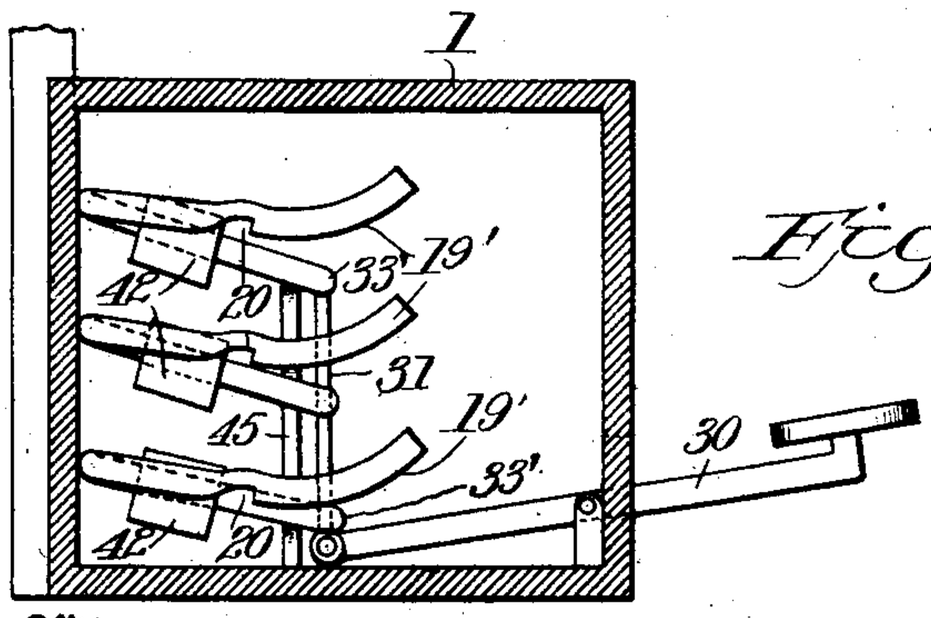


Fig. 9.



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3 SHEETS—SHEET 3.

Fig. 8.

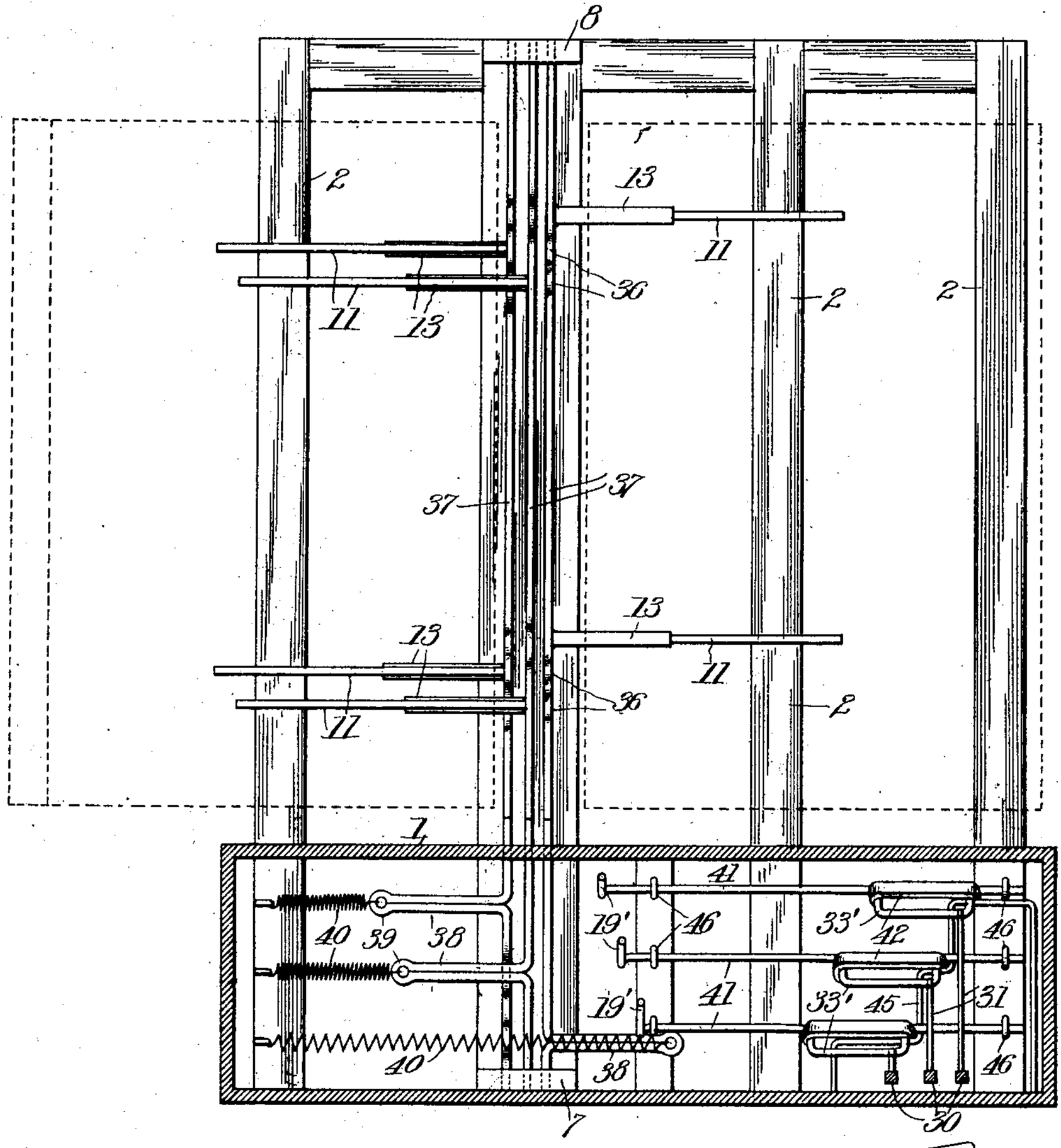
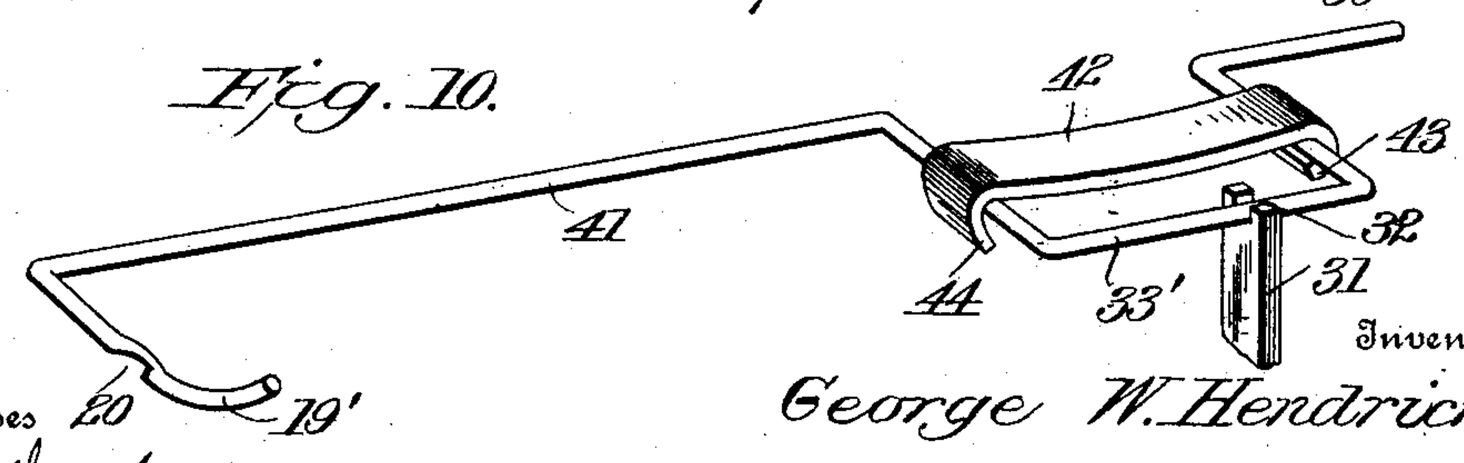


Fig. 10.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. HENDRICKS, OF LITTLE ROCK, ARKANSAS.

MUSIC-LEAF TURNER.

No. 890,768. Specification of Letters Patent. Patented June 16, 1908.

Application filed July 17, 1907. Serial No. 384,183.

To all whom it may concern:

Be it known that I, GEORGE W. HENDRICKS, a citizen of the United States, residing at Little Rock, in the county of Pulaski and State of Arkansas, have invented certain new and useful Improvements in Music - Leaf Turners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in leaf turners, and particularly to music-leaf turners.

The object of the invention is the provision of means for facilitating the turning of leaves.

Another object of the invention is the provision of manually-operated means for mechanically turning the leaves of music, when resting upon a frame, which frame is, preferably, supported upon a piano or organ.

With these and other objects in view, the invention consists of certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the drawings: Figure 1 is a view in elevation of a device constructed in accordance with the present invention. Fig. 2 is a horizontal, sectional view of the structure depicted in Fig. 1. Fig. 3 is a fragmentary, vertical, sectional view, partly shown in side elevation, of the structure depicted in Fig. 1. Fig. 4 is a fragmentary, perspective view of the holder-rods locking device. Fig. 5 is a horizontal, sectional view taken on line 5, 5, Fig. 1, and looking in the direction of the arrow. Fig. 5[a] is a fragmentary view, in side elevation, of one of the holder-supporting rods. Fig. 6 is a fragmentary, enlarged sectional view of one of the holder - rods. Fig. 7 is a fragmentary, sectional view of one of the holder-rods and showing the sheet-attaching means. Fig. 8 is a view, in elevation, of another embodiment of the present invention. Fig. 9 is a fragmentary, sectional view partly in side elevation of the structure depicted in Fig. 8, and looking at the end thereof. Fig. 10 is a perspective view of one of the locking bars depicted in Figs. 8 and 9. Fig. 11 is a fragmentary view, in side elevation, of another embodiment of the present invention.

Referring to Figs. 1 to 7, 1 designates the frame having a back 2, and within frame 1, there is, preferably, positioned a block or other suitable support 3, for the purpose hereinafter specified.

A plurality of holder-supporting rods 4, 5, and 6 are journaled at the lower ends in a bearing 7, and at their upper ends in a bearing 8. Each holder-rod comprises an upper and lower section, the lower section, preferably, provided with a squared tenon or tongue 9, and the upper section is provided, preferably, with a squared recess or compartment 10, into which fits the tongue or tenon 9, see Fig. 6. By means of this sectional structure, the sections of the rods are fixedly secured together against independent, rotary movement, although the upper sections of the rods can be quickly detached from the frame 1 and the back 2, when it is desired to entirely remove the same. By reason of this detachable structure of the upper sections of the holder-rods, said sections can be removed and the music or other sheets or leaves placed against the back and turned by the hand of the operator. It will be obvious that the frame and back can be made ornamental, and attached, by any suitable means, direct to a piano, organ, or other instrument.

Each holder-rod is provided with a laterally-extending arm 11, and fixedly secured, preferably, by rivets 12, to the arm 11, near the rod, is, preferably, a flat spring 13, between which spring and arm 8, a sheet may be easily placed, and, owing to the resiliency of arm 13, said sheet will be held securely in position. It will be noted that by reason of the arms 11 extending beyond the outer end of the spring 13, each arm extends a considerable distance across a sheet, so that in turning the sheet, the action of the rod, in operation, will cause the horizontal arms 11 to bear against approximately the entire back of the sheet, and thereby easily turn the same.

In the preferred structure of the present invention, as illustrated in Fig. 1, the rod 4 is provided with a horizontal finger 14, which is formed by bending parallel portions of the rod; at the outer end of the finger 14, there is formed, preferably, a loop 15. The rod 5 is provided with a downwardly-curved finger 14′, and the rod 6 is also provided with a downwardly-curved finger 14′. Each finger 14′ is formed substantially the same as the finger 14, because it will be noted that these fingers 14′ are formed from two parallel, integral portions of the rod, in each instance, and at the outer, lower end is formed loop 15.

Connected at one end to each loop 15, is, preferably, a coil spring 16, while at the opposite end, each spring is attached to, preferably, a looped member or hook 17, whereby each finger is provided with means normally exerting a pull towards, preferably, the left end of the frame 1. It is also to be noted that the lower, outer end of each finger 14 and 14′ is positioned in substantially the same horizontal plane, so that the lower, outer end of each finger can ride under the curved, outer end 18 of the catch 19; the catch is provided with a vertical portion 20, constituting a stop, for locking the fingers in their parallel position, as seen in Fig. 1. The catch 19 is pivotally mounted upon the inner face of block or support 3, and is provided with a substantially U-shaped portion 21, for preventing the catch from swinging too far up, although its pivotal movement is sufficient for permitting the fingers to pass under portion 18, either when they are moved to a locked position behind the stop or vertical portion 20, or when each is separately released for permitting spring 16 to draw the finger around to the left side of the frame, and thereby rotate the holding-rod. The latch for actuating the catch comprises, preferably, a rod 22, secured at 23, upon, preferably, the top of the block 3, and said rod is provided at its outer end with, preferably, a right-angled extension 24, to which is attached a coil spring or flexible member 25; the flexible member 25 being secured at its upper end to said extension 24, and at its lower end to any suitable means, as for instance, staple 26′, for attaching its lower end to the frame, whereby a downward pull is exerted upon the extension 24 at all times, for holding the plunger 26 in a raised position; the plunger 26 being pivotally mounted upon a substantially U-shaped loop portion 27 of the rod. The U-shaped portion 27 is provided with an extended, outer end 28, which outer end is provided with a right-angled extension 29. The right-angled extension 29 is positioned under portion 18 of the catch, and when said rod 22 is rotated for lifting the catch, the plunger 26 will move downward, for the purpose hereinafter specified. The rod 22 is actuated through the medium of a pivoted finger bar or button 30, which button is provided with a link 31. The upper end of link 31 is, preferably, bifurcated, as at 32, and in this bifurcated portion is positioned a horizontal extension 33 of the rod 22.

It will be noted that when the outer end of the pivoted finger bar or button 30 is pressed down, the rod will be rotated, consequently, raising the end 29 and the outer portion 18 of the rod, thereby releasing the finger of the holder-rod, pressing against the stop or latch-portion 20, which in the present instance, is the finger 14′, formed upon holder-rod 6. Synchronously with the releasing of one of the fingers, the plunger 26, working in the eye 34, formed upon bolt 35 (which bolt is secured to one end of block 3) will be moved down, causing its lower end to be placed in front of the next finger contiguous to the stop 20, constituting a notch, of the catch, thereby preventing the next or second finger from passing beyond the catch until the latch is again operated by pressing down on the outer end of the finger-bar or button 30. While all of the fingers may be placed, at approximately the same time behind the stop or vertical portion 20 of the catch, still, owing to my peculiar structure, only one of the holder-rods is permitted to rotate for turning the sheet, as the operator desires.

It is to be noted that each holder-rod is bent longitudinally, at 36, opposite to the arms 11 and springs 13, carried by the other holder-rod, so that when all of the arms 11 are turned to one side of the holder-rods, Fig. 1, or when part are turned to upon one side and part are upon the other, they will be all placed in substantially the same transverse vertical plane, Fig. 5, so that the music will be held apparently snug and flat against the back or rack 2.

In Figs. 8 to 10, the embodiment is substantially the same, except as noted in the following description: Each holder-rod 37 is provided with a horizontal finger 38. Each finger 38 is formed by placing portions of the rod parallel, as with the embodiment depicted in Fig. 1. To the loop 39 of each finger 38 is connected one end of a spring or flexible member 40. The opposite end is connected to the frame or rack. These springs perform the same function as springs 16. The catch or locking-bars in the embodiment depicted in Fig. 9 are each provided with a body portion 41, and at one end of the body portion, there is formed a hook 19′, which is provided with a notch 20. The notch 20 is adapted to engage a finger, and hold the same until the substantially U-shaped portion 33′ is moved upward by link 31, whereby the finger will be released, and, owing to the tension on the spring, said finger will be drawn towards, preferably, the left-hand end of the frame, and the holder-rod will be rotated. I have, preferably, shown weights 42 carried by the bent portion 33′ for holding the catches or locking bars in an operative position, whereas in the embodiment depicted in Fig. 1, I have shown spring 25 for performing this function. Each weight 42 is provided with a hook 43 at one end, and its opposite end is provided with a hook 44. The hook 44 is not as pronounced as hook 43, so that the weight 44 can be lifted off of the catch or locking-bar first at the end provided with hook 44, and subsequently can be lifted off of the bar at the end provided with hook 43. By means of these hooks, the weight will be normally and securely fastened on the catch or locking-

bar. The locking-bars are supported at portions 33′, by means of a step-structure 45, for preventing the bars from pivoting too far downward. The step-structure 45 is formed, preferably of a wire or rod, bent, as clearly shown in Fig. 8, each locking-bar engaging one of the steps of this structure 45. Each locking-bar or catch is pivotally mounted upon the frame by means of, preferably staples 46.

I employ a separate finger or button 30 and link 31, for actuating each catch or locking bar, Fig. 8, whereas with the embodiment in Fig. 1, a single finger or button will control actuation of the means for permitting rotation of the holder-rods, and consequently, the turning of the leaves or sheets.

Referring to Fig. 11, the extension 33^a of rod 22 is placed in an elevated position with respect to the block 3, and attached to the extension 33^a is a link 33^b, which link is, preferably, connected to the lower end of a bell-crank lever 33^c carried by a fixed support 33^d. Connected to the bell-crank lever 33^c is a vertical rod 33^e, which is also connected to the foot lever 33^f. The foot-lever 33^f is normally pressed upward near its outer end, engaged by the operator, by means of, preferably, a spring 33^g, whereby, when the foot-lever is pressed downward by the operator, the bell-crank lever will be actuated for drawing inward on the extension 33^a, and thus actuating the rod 22, whereby the catch is operated for releasing one of the holders, as hereinbefore described. It will, therefore, be noted that I have provided means, extending through the back of the instrument and actuated by the foot of the operator or player, so that the hands of the player need not be used for actuating my leaf-turner.

What I claim is:

1. In a leaf turner, the combination with a support, of a holder-supporting rod provided with a finger, carried by said support, said finger comprising parallel portions terminating at their outer ends in a loop or eye, flexible means connected to said loop and to said support, for normally exerting a pull upon said holder-supporting rod, and a catch provided with a hook or stop engaging said finger for holding said holder-supporting rod in an adjusted position, and means for actuating said catch for releasing said finger.

2. In a leaf-turner, the combination with a support, of a rod provided with a finger and carrying a leaf holder, pivotally mounted upon said support, of a catch carried by and being capable of rotary movement upon said support and normally engaging said finger, said catch provided with a stop or vertical portion formed thereon, the stop normally engaged by the finger when said rod is in an adjusted position, and means for imparting rotary movement to said catch for releasing said finger.

3. In a leaf turner, the combination with a support, of a sectional rod carried by said support, one of the sections of said rod provided with a squared tenon and the other section provided with a squared recess or socket, the tenon adapted to fit into said recess, means for turning said rod, and means for locking said rod in an adjusted position.

4. In a leaf turner, the combination of a pivotally-mounted, vertical rod, a horizontal arm secured at its inner end to said rod, a flat spring secured near its inner end to said arm and extending parallel therewith, whereby a sheet or page can be inserted or secured between said arm and spring, and means for holding said rod in an adjusted position and automatically rotating the same.

5. In a leaf turner, the combination of a frame and a back, a bearing carried by said frame, a bearing carried by said back, a rod journaled at its lower end in the bearing of said frame and at its upper end in the bearing of said back, said rod comprising an upper and a lower section, the top of the lower section and the bottom of the upper section terminating contiguous to the top of said frame, means for securing said sections against independent, rotary movement, sheet-securing means attached to the rod above said frame, means positioned within said frame for holding said rod in an adjusted position, and means adapted to automatically rotate said rod for bodily moving said sheet-securing means.

6. In a leaf turner, the combination with a support, of sheet-supporting and turning means carried by said support, a locking-device for holding said sheet-supporting means in an adjusted position, said locking-device comprising a catch, a swinging latch coöperating with said catch for actuating the same, a sliding plunger attached to said latch and adapted to permit movement of only one of said sheet-supporting and turning means, means for guiding said plunger in its movement, and means for actuating said latch whereby said plunger and catch are synchronously actuated.

7. In a music-leaf turner, the combination with a support, of a rod carried by said support and carrying a leaf holder, said rod provided with a finger, a catch pivotally mounted upon said support and adapted to be engaged by said finger and to secure said holder-supporting rod in an adjusted position, a latch coöperating with said catch for releasing the finger, said latch comprising a rotatable rod, and said rod provided with means engaging said catch for raising the same when rotary movement is imparted to said rod.

8. In a music-leaf turner, the combination with a support, of a sectional rod carried by said support, means for securing the sections of said rod together against independent ro-

tary movement, means for attaching a sheet to one of the sections of said rod, the other section of said rod provided with a finger, a catch provided with a notch, the finger adapted to engage said notch for retaining the rod in an adjusted position, and means for raising said catch and releasing said finger.

9. In a music-leaf turner, the combination with a support, a rack carried by said support, of a plurality of vertical rods carried by said support and positioned in a plane parallel with the rack, each rod provided with a bent portion, sheet-supporting means positioned in the bent portions, each supporting means secured near one end to a rod, means for holding said rods in an adjusted position, and means for successively releasing said rods.

10. In a music-leaf turner, the combination with a support, of a rotatable rod carried by said support, said rod comprising an upper and a lower section, means for securing said sections against independent rotary movement, sheet-attaching and holding means secured to the upper section, means coöperating with the lower section for holding said rod in an adjusted position, and means for releasing said rod and permitting the same to rotate.

11. In a music-leaf turner, the combination with a support, of sheet-securing and turning means carried by said support, a catch for holding said sheet-securing and turning means in an adjusted position, a latch for lifting said catch and releasing said sheet-securing and turning means, said latch comprising a rotatable rod provided with a portion disposed at right-angles to and in engagement with said catch, and means for rotating said rod for lifting said catch.

12. In a leaf turner, the combination of a plurality of sheet-securing and turning means, of a catch for securing said sheet-securing means in an adjusted position, a latch for lifting said catch, said latch comprising a rod provided with a pair of angularly-disposed portions, one of said angularly-disposed portions engaging said catch, a sliding plunger pivotally connected to the other angularly-disposed portion, a guide, said plunger slidably mounted in said guide, and means for rotating said rod for synchronously actuating said plunger and said catch.

13. In a music-leaf turner, the combination with a support, of a rod carried by said support carrying a leaf holder, said rod provided with a laterally-extending finger, a rotatably-mounted catch provided with a notch or stop carried by said support, the finger adapted to engage said notch or stop for securing said rod in an adjusted position, and a rotatable rod provided with an extension engaging said catch, whereby when said rod is rotated, said catch will be rotated for releasing said finger.

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

GEORGE W. HENDRICKS.

Witnesses:
A. L. Patton,
Taylor J. Downer.