

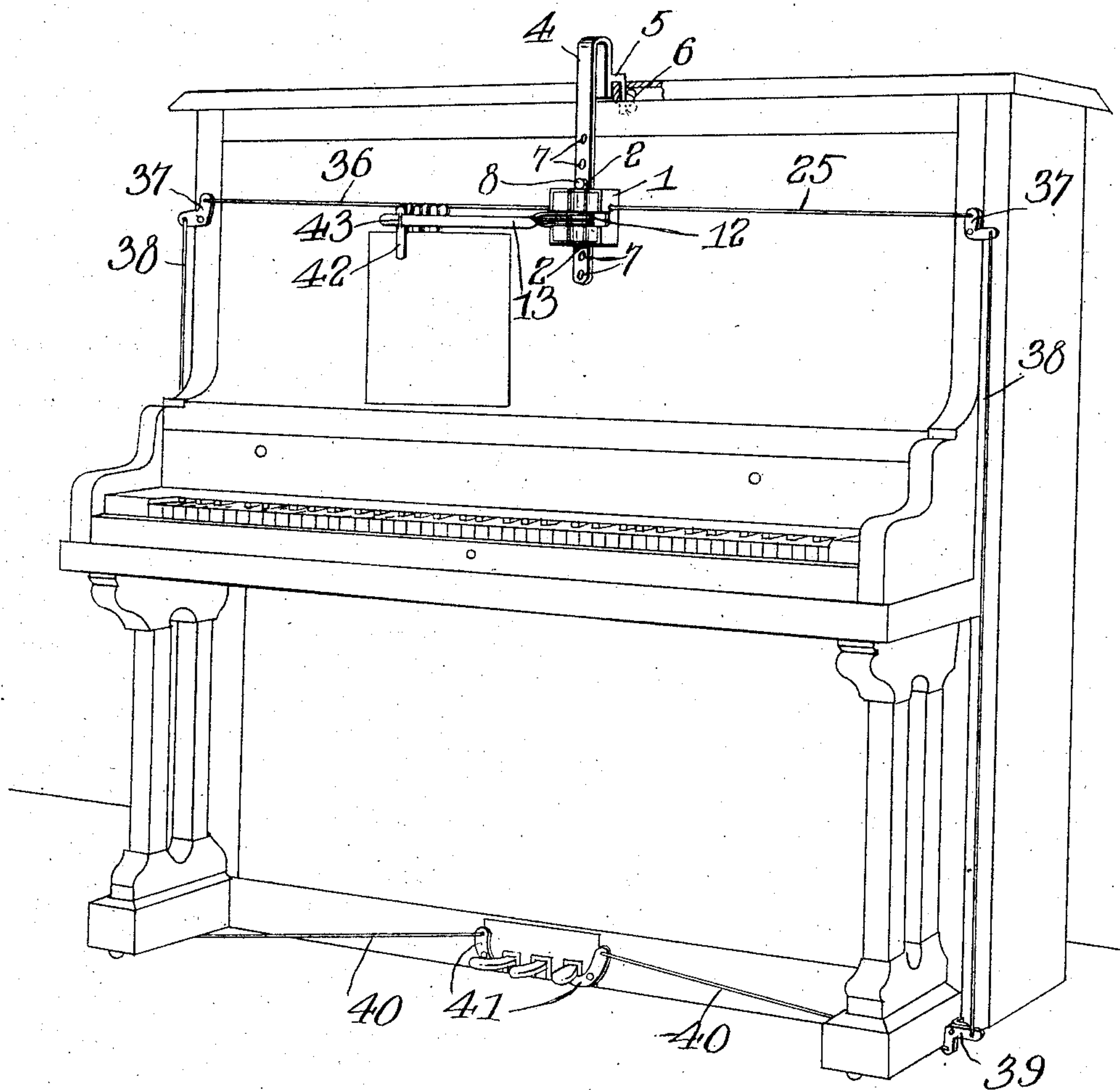
No. 882,036.

PATENTED MAR. 17, 1908.

H. H. WEST.
MUSIC LEAF TURNER.
APPLICATION FILED SEPT. 12, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



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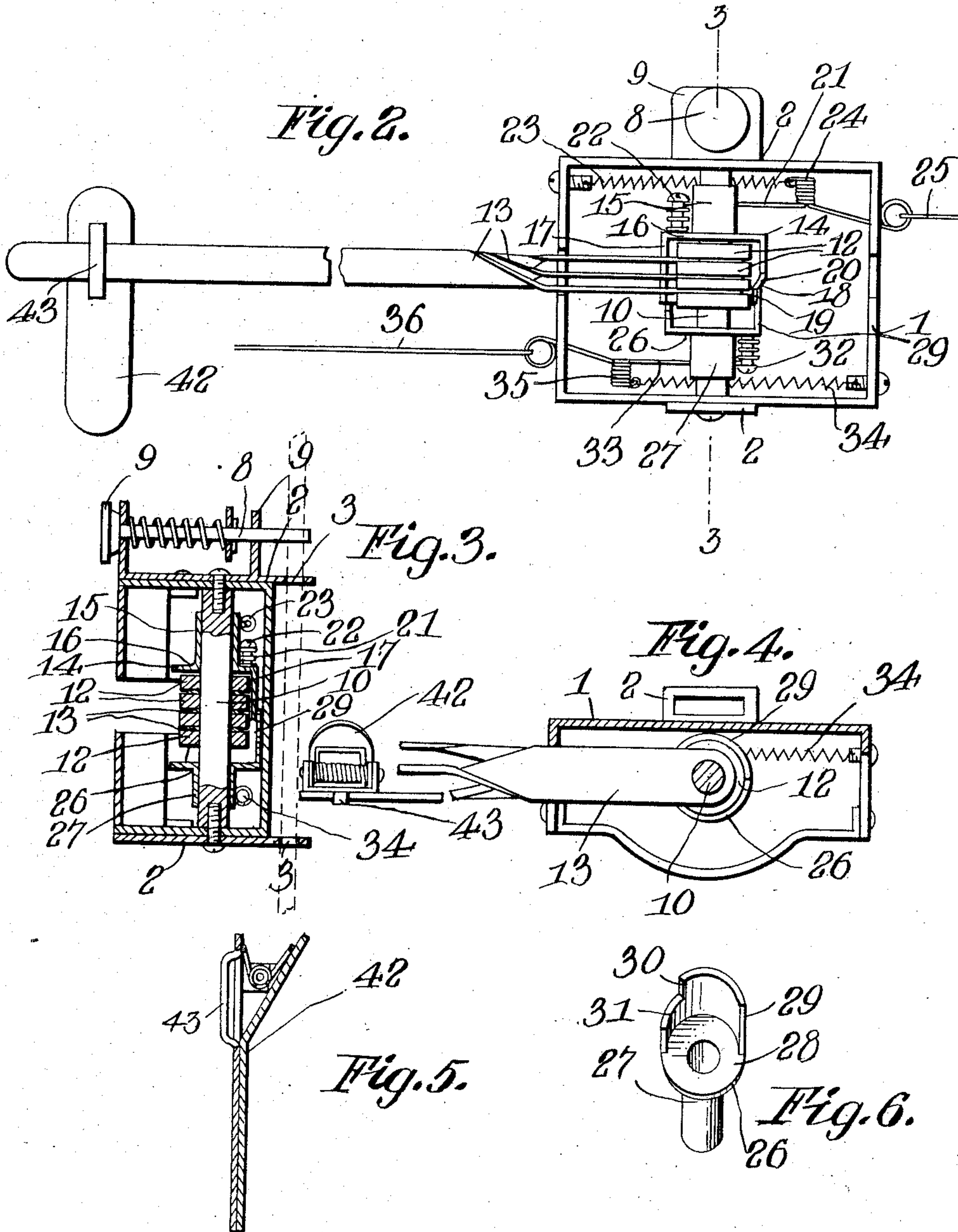
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UNITED STATES PATENT OFFICE.

HARRY H. WEST, OF PLYMOUTH, PENNSYLVANIA.

MUSIC-LEAF TURNER.

No. 882,036.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed September 12, 1907. Serial No. 392,544.

To all whom it may concern:

Be it known that I, HARRY H. WEST, a citizen of the United States, residing at Plymouth, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Music-Leaf Turners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in music leaf turners.

The object of the invention is to provide a music leaf turner adapted to be connected to a piano or music stand, and to be operated by the feet of the performer.

With this object in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is an outline perspective view of a piano showing the application of the invention; Fig. 2 is a front view of the leaf turning arms and their operating mechanism, the cover or front plate of the casing being removed; Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2; Fig. 4 is a horizontal sectional view taken on a line with one of the leaf turning arms; Fig. 5 is a cross sectional view through one of the leaf turning arms showing the arrangement and construction of the leaf attaching clips; and Fig. 6 is a detail perspective view of one of the cams which operate the leaf turning arms.

In the embodiment of the invention I provide a casing 1, which is rectangular in shape and is provided on its upper and lower sides with centrally disposed, rearwardly projecting plates, 2, in which are formed aligned slots, 3, by means of which the casing is engaged with a supporting bar, 4, the upper end of which is bent downwardly upon itself and has secured thereto a right-angularly formed clip, 5, provided with a set screw, 6, whereby the same is secured to a piano or other support, as shown in Fig. 1 of the drawing. In the bar 4 is formed a series of apertures, 7, with one of which is adapted to be engaged a spring projected supporting pin, 8, which is slidably mounted in lugs, 9, formed on the upper plate, 2, of the casing, said pin being

adapted to support the casing in adjusted position on the bar, 4, by engagement with the apertures 7 formed therein.

In the casing 1 is arranged a central vertically disposed shaft, 10, on which, midway between the upper and lower sides of the casing, is rigidly secured a series of supporting disks, 12, between each of which is arranged a leaf-turning arm, 13, the inner ends of which are pivotally mounted on the shaft, 10, whereby said arms may be swung from one side to the other of the casing, the outer side and ends of which are slotted to provide for the movement of the arms.

The turning arms 13 are adapted to be swung around from one side of the casing to the other by suitable operating devices arranged on the shaft 10, above and below the disks, 12. The upper operating device, 14, by means of which the arms are swung from right to left, consists of a sleeve, 15, which is slidably mounted upon the upper portion of the shaft 10, and is provided on its lower end with a radially disposed flange, 16, around the outer edge of which is integrally formed a depending flange, 17, the lower edge of which, adjacent to one end, is provided with a notch or recess, 18, which forms a shoulder, 19. The edge, 20, of the notch is formed on an angle, whereby when the same is engaged by the turning arms, the operating device, 14, will be moved upwardly on the shaft, 10, so that said arms may be swung back into engagement with the shoulder, 19. The operating device, 14, is held down into engagement with the arms, 13, by means of a spring-actuated bar, 21, the inner end of which is pivotally connected to the flange, 16, by means of an eccentrically disposed stud, 22, whereby when said bar 21 is pulled outwardly, the operating device 14 will be turned or revolved upon the shaft 10, thus causing the shoulder 19 on the flange 17 to swing the upper arm around toward the other side of the casing. After each arm has been swung around by the shoulder 19, the operating device is turned back to its normal position by means of a coiled spring, 23, which is connected to an offset, 24, formed on the bar 21. After the device has been turned back by the spring, 23, the spring metal bar 21 will force the same downwardly into engagement with the next lower turning arm so that the next time said operating de-

vice is turned, the shoulder 19 will engage this arm and swing the same around. The outer end of the bar 21 projects through one end of the casing and is provided with an eye to which is attached an operating rod or wire, 25.

On the lower portion of the shaft 10, below the disks 12, is arranged an operating device 26, adapted to swing the turning arms back from left to right or in a direction opposite to that to which they were swung by the upper operating device. The operating device, 26, is constructed in the same manner as the operating device, 14, and consists of a sleeve, 27, which is slidably engaged with a lower portion of the shaft 10, and has on its upper end a radially disposed flange, 28, around the outer edge of which is an integrally formed upwardly projecting segmental flange, 29, which is provided adjacent to one end with a notch which forms a shoulder, 30, and a beveled or inclined edge, 31, which is successively engaged by the turning arms, which force the device 26 downwardly on the shaft in position to permit the shoulder 30 to engage the lowermost arm.

On the outer side of the flange 28 is arranged an eccentrically disposed stud, 32, to which is pivotally connected the inner end of a spring metal operating bar 33, which corresponds to the bar 21, which operates the upper device 14, and by means of which the device 26 is moved upwardly after each revolution to engage the shoulder 30 with the next adjacent arm. The flange 29 on the device 26 is adapted to slide upwardly within the flange 16 to the device 14 when moved upwardly by the bar 33. The operating device 26 is restored to its normal position after each revolution by means of a coiled spring 34, which is connected to an offset 35 formed on the bar 33. The outer end of the bar 33 projects through the adjacent side of the casing and is provided with an eye to which is connected an operating wire, 36.

The operating wires 25 and 36 extend through opposite sides of the piano and are connected at their outer end with bell crank levers, 37, which are secured to the outer forward edges of the sides of the piano by clips or other suitable fastening devices. To the opposite arms of the bell crank levers, 37, are connected the upper ends of depending wires 38, the lower ends of which are connected to bell crank levers, 39, which are secured to the lower forward portion of the piano by clips or other suitable fastening devices. To the opposite arms of the bell crank levers 39 are connected rods, 40, the inner ends of which are connected to bell crank levers 41, the opposite arms of which are adapted to be engaged by the foot pedals of the piano.

On each of the turning arms, 13, is slidably mounted a leaf engaging clip, 42, said clips being adjustably secured to the arms 13 by

fastening straps, 43, which are preferably struck out from the material forming one member of the clip, as shown.

In operation, the casing 1 is arranged on the supporting bar, 4, in position to permit the clips, 42, to be engaged with the top of each sheet of music to be turned, after which the arms 13 are swung around to the right so that the first page of the music will be in position to be read by the performer. When it is desired to turn the first sheet the right-hand pedal is pressed downwardly, thereby rocking the bell crank lever 41 with which the same is engaged and thus drawing upon the operating wires which connect said lever with the operating bar 21 and thus causing said bar to turn the operating device 14, which operation will successively swing the arms 13 around to the left, thereby turning each leaf when desired. The arms 14 are operated to swing the leaves in the opposite direction by pressure upon the left-hand pedal, which will cause the operating bar 33 to turn the operating device 26 in the manner hereinbefore described.

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

1. In a music leaf turner, a casing, means to adjustably connect said casing with a suitable support, a shaft arranged in said casing, leaf turning arms pivotally mounted on said shaft, arm turning devices, shoulders on said devices, and spring metal operating bars connected to said turning devices whereby the same are operated to turn on said arms and whereby the shoulders on said devices are successively engaged with said arms, substantially as described.

2. In a music leaf turner, a casing, means to adjustably connect said casing with a suitable support, a shaft arranged in said casing, leaf turning arms pivotally mounted thereon, arm turning devices, said devices comprising sleeves pivotally mounted on said shaft, radially projecting flanges on the inner ends of said sleeves, inwardly projecting operating flanges on said radial flanges, arm engaging shoulders on said operating flanges, and means whereby said arm turning devices are operated, substantially as described.

3. In a music leaf turner, a casing, means to adjustably connect said casing with a suitable support, a shaft arranged in said casing, leaf turning arms pivotally mounted thereon, arm turning devices, said devices comprising sleeves pivotally mounted on said shafts, radially projecting flanges on the inner ends of said sleeves, inwardly projecting operating flanges on said radial flanges, arm engaging shoulders on said operating flanges, and spring metal operating bars connected to said turning devices whereby the same are operated to turn said

arms and whereby the shoulders on said operating flanges are successively engaged with said turning arms, substantially as described.

5 4. A music leaf turner comprising a casing, means to adjustably support said casing on a piano, a vertically disposed shaft arranged in said casing, a series of spacing disks rigidly secured to said shaft, a plurality of turning arms pivotally mounted on the shaft between said disks, upper and lower arm turning devices slidably mounted on said shaft, operating shoulders formed on said devices, means whereby said shoulders are successively engaged with said arms to turn the same, operating bars connected to said devices whereby the latter are caused to turn said arms, retracting springs connected to said bars whereby said operating devices are restored to their normal positions, and means connected to said operating bars whereby the same are actuated by the pedals of the piano, substantially as described.

25 5. A music leaf turner comprising a casing, means to adjustably support said casing on a piano, a shaft arranged in said casing, a series of spacing disks rigidly mounted on said shaft, a plurality of leaf turning arms pivotally connected to the shaft between said disks, upper and lower operating devices adapted to be successively engaged with said turning arms to swing the same in one direc-

tion or the other, said operating devices comprising sleeves slidably mounted on said shaft, radially disposed flanges on the inner ends of said sleeves, inwardly projecting segmental flanges formed on said radially disposed flanges, arm engaging shoulders formed on said segmental flanges, eccentrically mounted studs arranged on the outer sides of the annular radial flanges of said operating devices, spring metal operating bars pivotally connected at their ends to said studs, whereby said operating devices are turned on said shaft and forced inwardly to successively engage the shoulders thereon with the turning arms, springs connected to said operating bars whereby the same are retracted to restore said operating devices to their normal positions after each operation, a series of operating rods connected to said bars, bell crank levers connecting said bars together and to the pedal of the piano whereby the movement of said pedal is communicated to the operating device of said casing to swing said arm in one direction or the other, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HARRY H. WEST

Witnesses:

C. W. HONEYWELL,
THOMAS WEST.