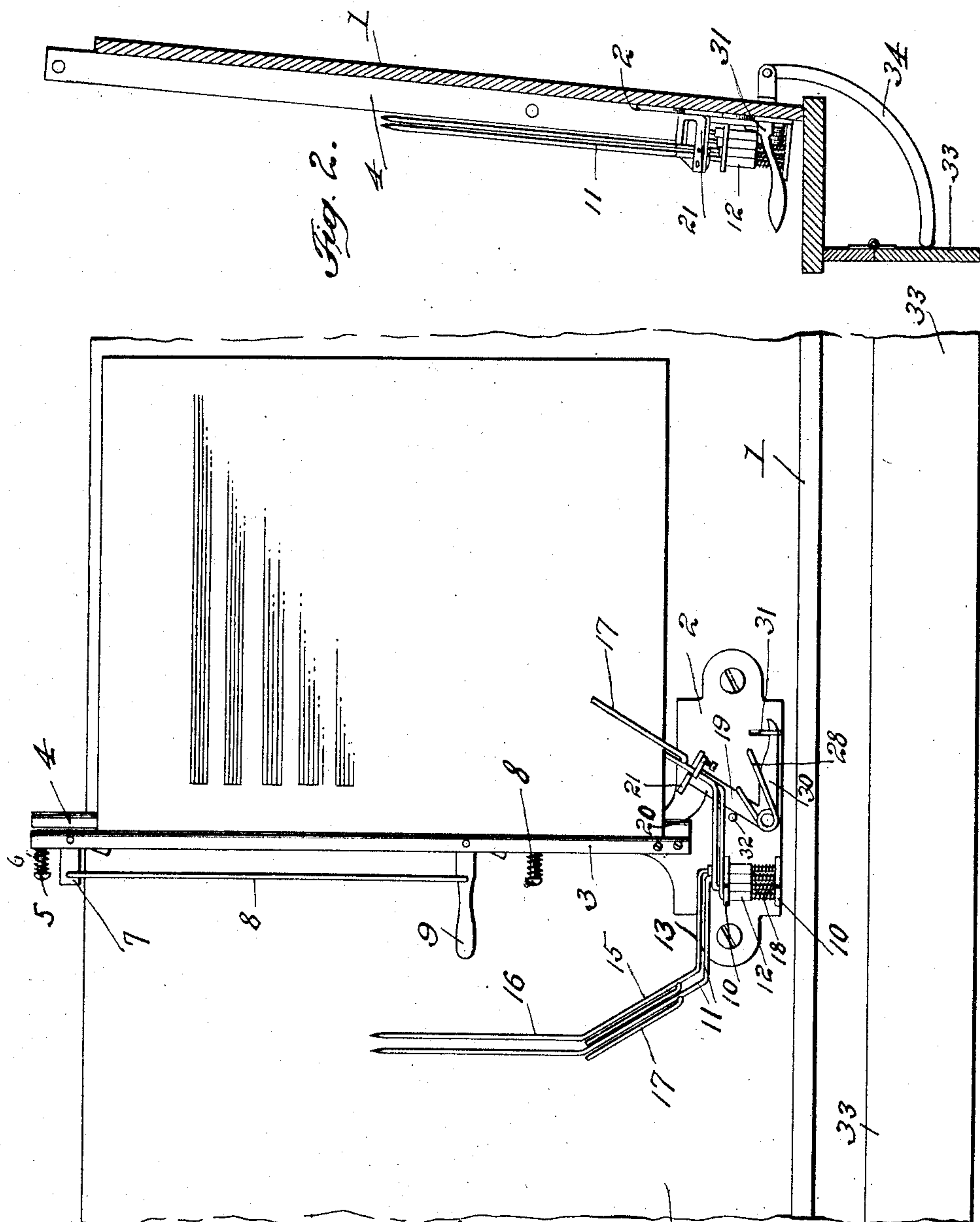


E. SCARDACCIONE.
MUSIC LEAF TURNER.
APPLICATION FILED NOV. 17, 1909.

986,764.

Patented Mar. 14, 1911.

3 SHEETS-SHEET 1.



WITNESSES:
Julius H. Smith
C. Kaufmann

Fig. 1.

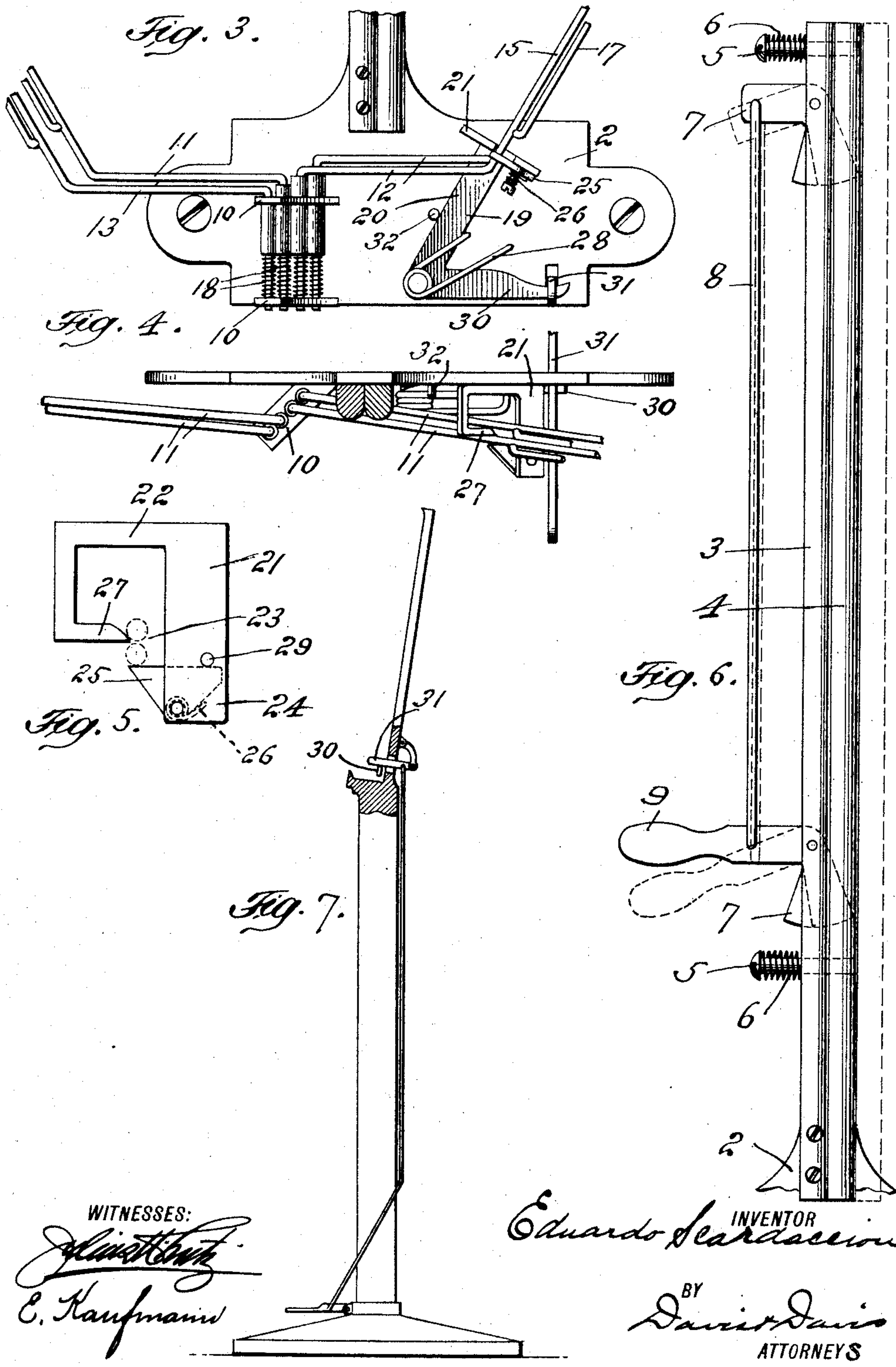
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3 SHEETS—SHEET 3.

Fig. 8.

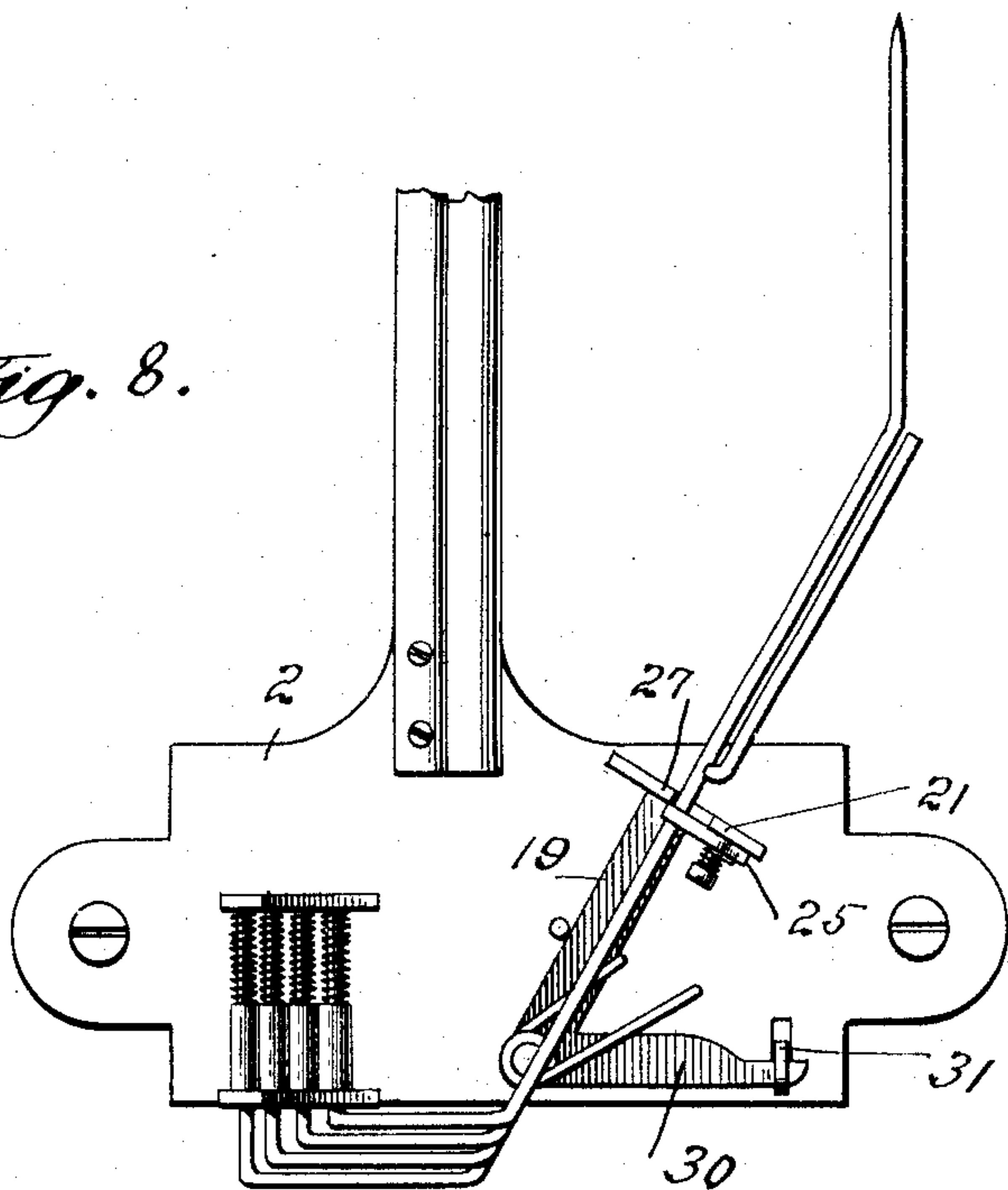
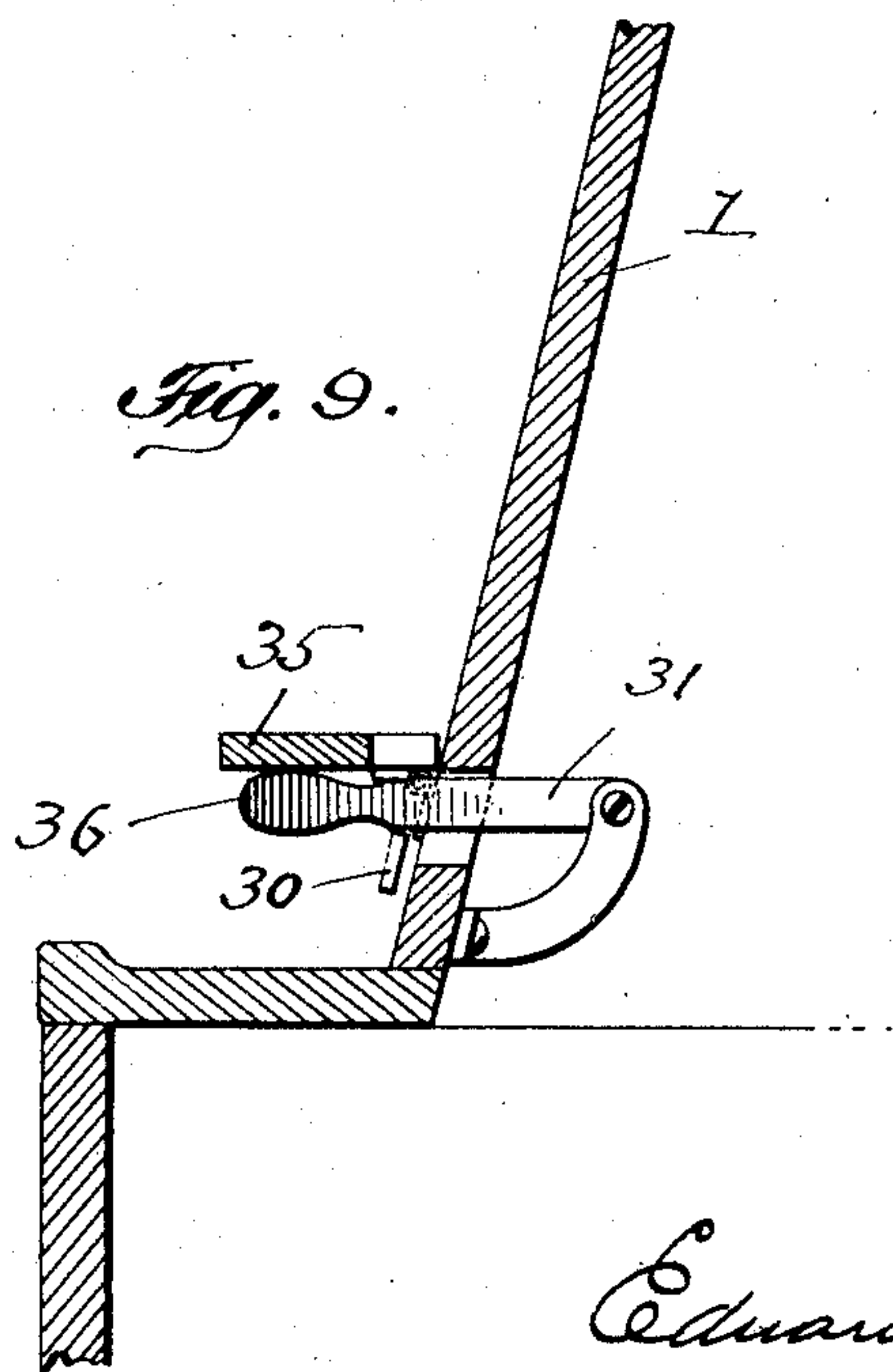


Fig. 9.



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UNITED STATES PATENT OFFICE.

EDUARDO SCARDACCIONE, OF NEW YORK, N. Y.

MUSIC-LEAF TURNER.

986,764.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed November 17, 1909. Serial No. 528,478.

To all whom it may concern:

Be it known that I, EDUARDO SCARDACCIONE, a subject of the King of Italy, and resident of the borough of Manhattan, city, county, and State of New York, 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 drawings, in which—

Figure 1 is a front elevation showing the apparatus in position on a music support; Fig. 2 a side elevation of the apparatus, the music support being in vertical sectional view; Fig. 3 an enlarged front elevation of the main operating portion of the apparatus; Fig. 4 a plan view of the apparatus, the music clamp being shown in horizontal sectional view; Fig. 5 a detail plan view of the escapement device; Fig. 6 an enlarged front elevation of the music clamp; Fig. 7 a diagrammatic side elevation showing the method of operating the apparatus when applied to a music stand, a portion of the stand being shown in sectional view; Fig. 8 a front elevation of a portion of the apparatus showing the leaf-turning arms reversed from the position shown in Fig. 3, the apparatus being otherwise of the same construction as that shown in Figs. 1 and 3; and Fig. 9 a detail vertical sectional view showing another means for operating the apparatus.

One of the main objects of this invention is to provide a music leaf turner of simple construction which may be readily attached to a music support of any form and which may be readily and easily operated to turn the leaves, one by one, through the operation of a single releasing device.

Another object of the invention is to provide a music leaf turner adapted to be operated from any suitable and convenient point to release the leaf-carrying devices, one by one, by means of an escapement.

A further object of the invention is to provide a device wherein the music leaves or sheets will be fastened down by the turning device, said turning device sliding on the leaves for this purpose after the leaves are turned and during the turning operation.

Another object of the invention is to pro-

vide a simple and efficient music leaf clamp for securing the music leaves to the holder and in position to be operated upon by the turning devices.

Other important objects and advantages of the invention will appear more fully hereinafter.

The invention consists essentially of a plurality of spring-operated leaf turning arms adapted to engage the leaves, an escapement device for releasing said arms, one by one, and a clamp to hold the music upright in proper position with respect to the leaf-turning arms. The escapement device may be operated in any convenient manner. When the device is used on a piano the escapement-operating device may be arranged at any convenient position near the keys, or it may be arranged on the music holder. When the device is used on a music stand for violinists the escapement may be operated from the bottom of the stand by means of any suitable foot-operating device. I, therefore, desire it understood that I do not wish to be limited to any particular set of devices for operating the escapement as these devices may be varied to suit the position of the leaf-turning means and the instrument or music stand and holder to which it is attached.

Referring to the various parts by numerals, 1 designates the music holder or support of a piano. To this support the leaf-turning mechanism is secured, said mechanism being carried by a plate 2 screwed or otherwise secured to the support. This plate is preferably secured to the lower edge of the support and carries the rigid bar 3 of the music clamp, said clamp being preferably arranged at the middle of the music support. Supported on said rigid member of the clamp is the movable member 4 thereof, said movable member being carried by pins 5, and held yieldingly against the rigid member by the spring 6 around said pins. To force the movable member away from the rigid member I provide pivoted cams 7 connected together by a vertical rod 8 and operable through a handle 9. It will be seen that by depressing the handle the cams will force the movable member away from the rigid member so that the bound or folded

edge of the music sheet may be placed within the clamp.

On the base support at the left hand side of the music clamp are formed two forwardly projecting bearing plates 10, said bearing plates placed at the left. Mounted in these bearing plates are the leaf turning arms 11, each of said arms consisting of the vertical bearing part 12 adapted to engage the bearing plates; the horizontal portion 13; the upwardly and outwardly inclined leaf-engaging portion 15 and the vertical end portion 16. On the inclined portions 15 is secured a leaf-engaging clip 17 between which and the main body of the arm the leaf to be turned is placed. The arms are journaled in the bearing plates in a line inclining outwardly and toward the left hand side of the holder and the bearing portions of the arms gradually increase in height above the upper bearing plate from the outer arm to the inner one, the outer arm having the shortest bearing portion and the inner one the longest. The horizontal portions of the arms are preferably all of equal length as shown in Fig. 1 and the angle of the upwardly and outwardly inclined portion 15 of the arm is such that when the arms are swung to their right hand position all of said inclined portions of said arms will lie in the same plane and be in line with each other when viewing the device from the front. Surrounding the bearing portions of the leaf-turning arms are springs 18, one end of each of said springs being connected to its arm and its other end being connected to one of the bearing plates, said spring being so coiled as to normally throw the leaf-turning arms to the left hand side and against the music support. It is not necessary that the horizontal portions 13 of the arms be of equal length provided their pivotal points are so arranged that the upwardly extending portions 15 will strike the escapement dog at the same point when swinging into the escapement, as shown in Figs. 3 and 8. I prefer to make the arms of the same length, however, as indicated in Fig. 1 of the drawings, in order that said arms may be bent or stamped out with the same tool or die.

Pivoted on the base support is an escapement lever 19 having an escapement arm 20 which inclines upwardly and toward the right hand side of the music holder. On the end of this arm is an outwardly extending head 21 provided with the opening 22 adapted to receive the leaf-turning arms, said arms being passed into said opening through the entrance passage way 23. The escapement head is provided with a forwardly projecting extension 24 on which is pivoted one of the escapement dogs 25, said dog being held in its outwardly-extending

arm-retaining position by means of a spring 26. This escapement dog extends across the entrance way 23 and is spaced outwardly from said entrance a distance equal to the thickness of one of the leaf-turning arms. A rigid escapement dog 27 forms the outer wall of the opening in the escapement head, said dog extending inwardly slightly beyond the outer or free edge of the pivoted escapement dog, said rigid dog being beveled inwardly as shown. A spring 28 holds the escapement lever normally in its upward position and forces said lever upwardly and toward the left in order to hold the pivoted escapement dog in engagement with the outermost leaf turning arm and to thereby hold the leaf-turning arms at the right hand side of the music clamp. A stop shoulder 29 is provided to limit the movement of the escapement dog and to prevent the release of the leaf-turning arms until the escapement lever is depressed, as will be hereinafter described. The operating arm 30 of the escapement lever extends outwardly in a substantially horizontal position and is adapted to be depressed by a pivoted arm 31, said arm being suitably mounted on the back of the music support. It will thus be seen that by depressing the operating arm of the escapement lever the escapement head will move downwardly and toward the right hand side of the holder, and that as it moves downwardly the leaf-turning arm which is in engagement with the pivoted dog will be released from said dog and the next adjacent arm will be caught by the rigid escapement dog, thus permitting the outermost arm to swing to the left. When the operating arm is released the escapement head will be moved upwardly to its normal position, thereby freeing the remaining leaf-turning arms from the rigid dog and permitting them to move outwardly until the outermost one is in engagement with the pivoted dog. By again depressing the escapement head the said outermost arm will be released, and so on until all the arms have been released from the escapement. The upward movement of the escapement lever is arrested by means of a stop 32.

It will be readily understood that many forms of escapement may be employed and I do not wish to be limited in this respect to the exact form of escapement shown.

I prefer to arrange the bearings for the leaf-turning arms at the left of the music clamp in order to cause the said arms to have a sliding movement with respect to the music leaf which they engage, said sliding movement of the leaf serving to smooth the leaf and flatten it against the music support in the same manner as is usually done with the hands when turning music leaves in the ordinary way. It will be seen

that the leaf-turning arms when in their right hand position engage the music quite close to the music clamp, but that when they are swung to their left hand position they will swing a considerable distance beyond said clamp because of the fact that said arms are journaled at the left hand side of said clamp. It will, therefore, be seen that as the arms swing from the escapement to their left hand position against the music support they necessarily slide outwardly on the music sheet and this sliding movement of the arms on the sheet tends to flatten the sheet and to hold it against the music support. It will also be seen that by this arrangement of the leaf-turning arms excellent results will be obtained without the necessity of making said arms unduly long.

The arm 32 for depressing the operating arm 29 of the escapement lever may be operated from any suitable point on the music support or from any suitable place on the piano and I desire it understood that I do not wish to be limited to any particular form of operating means. I have shown several arrangements of devices for operating the escapement lever and it is to be understood that these devices may be varied to suit the position of the apparatus and the instrument to which the apparatus is to be applied.

In Fig. 2 I have shown the front board of the piano hinged to form an operating plate 33, said plate engaging on its rear side the lower end of a lever 34, said lever being connected to the arm 31 so that by pressing inwardly the operating plate the escapement will be actuated. The plate 33 is designed to extend laterally across the piano above the keys so that it may be touched by the operator from any convenient point on the keyboard.

In Fig. 9 I have shown a horizontally-arranged operating plate 35 pivoted to the music holder, said plate extending outwardly over and engaging an extension 36 of the operating arm 31. This operating plate may be touched by the operator at any convenient point along the music holder. It will thus be seen that by slightly depressing the operating plate 35 the escapement will be actuated to release the leaf-turning arms one by one.

Instead of arranging the leaf-turning arms as shown in Fig. 1, they may be reversed, as shown in Fig. 8. In this position the horizontal portions of the arms extend from the lower ends of the bearing portions thereof. This form of the device is desirable in many cases where it is necessary to place the said arms near the lower end of the music support. In this form of the device the operation of the escapement is the same as described with respect to the arrangement shown in Fig. 1.

It will, of course, be understood, that in adapting the apparatus to a music stand for the use of violinists, and the like, an operating plate may be arranged at the base of the stand in position to be depressed by the operator's foot, suitable connections being provided between said plate and the operating arm 31, as shown in Fig. 7. It will also be apparent that the operating plate may be arranged in front of the piano below the key-board, or in any other way to suit the convenience of the player and to adapt the device to the construction of the piano to which it is to be applied. It is also to be understood that while I have described my invention for use as a music leaf turner it is applicable to other uses and for that reason I do not wish to be limited to the use of the device merely as a music leaf turner.

From the foregoing it is manifest that I provide a simple, compact music leaf turner which may be readily applied to any form of music support without in the least marring the same except to receive the attaching screws which hold the base plate in position and the screws to secure the support which carries the operating arm, these latter screws engaging the rear side of the music support. It will also be manifest that I may employ as many leaf-turning arms as may be desired and that said arms may be of any desired length.

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

A music leaf turner comprising a base plate, a series of leaf turning arms journaled on said plate, said journals being arranged in an outwardly and laterally extending line and each of said arms being formed with a vertical bearing part, a horizontal part connected to one end of the said bearing part, and an upwardly extending part connected to the outer end of the horizontal part, a coil spring surrounding the bearing part of each of said arms and normally swinging said arm toward the left, an escapement mounted on said base plate at the right of the pivotal points of the arms and adapted to be engaged by the upwardly extending portions of said arms, said escapement consisting of a pivoted lever carrying a rigid escapement dog and a pivoted escapement dog oppositely disposed, the pivoted dog being spaced outwardly from the rigid dog a distance equal to the thickness of one of the leaf turning arms, a stop to prevent the outward movement of the pivoted dog, means to yieldingly hold said dog against said stop, the horizontal portions of the leaf turning arms being of such length that the upwardly extending parts thereof will engage the pivoted escapement dog at the same point,

means for swinging the escapement lever to release the arm in engagement with the pivoted dog and to bring the rigid dog into engagement with the remaining arms, and
5 means for returning the escapement lever to its normal position after each releasing movement.

In testimony whereof I hereunto affix my signature in the presence of two witnesses this 16th day of November 1909.

EDUARDO SCARDACCIONE.

Witnesses:

E. H. KAUFMANN,

F. R. MILLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
