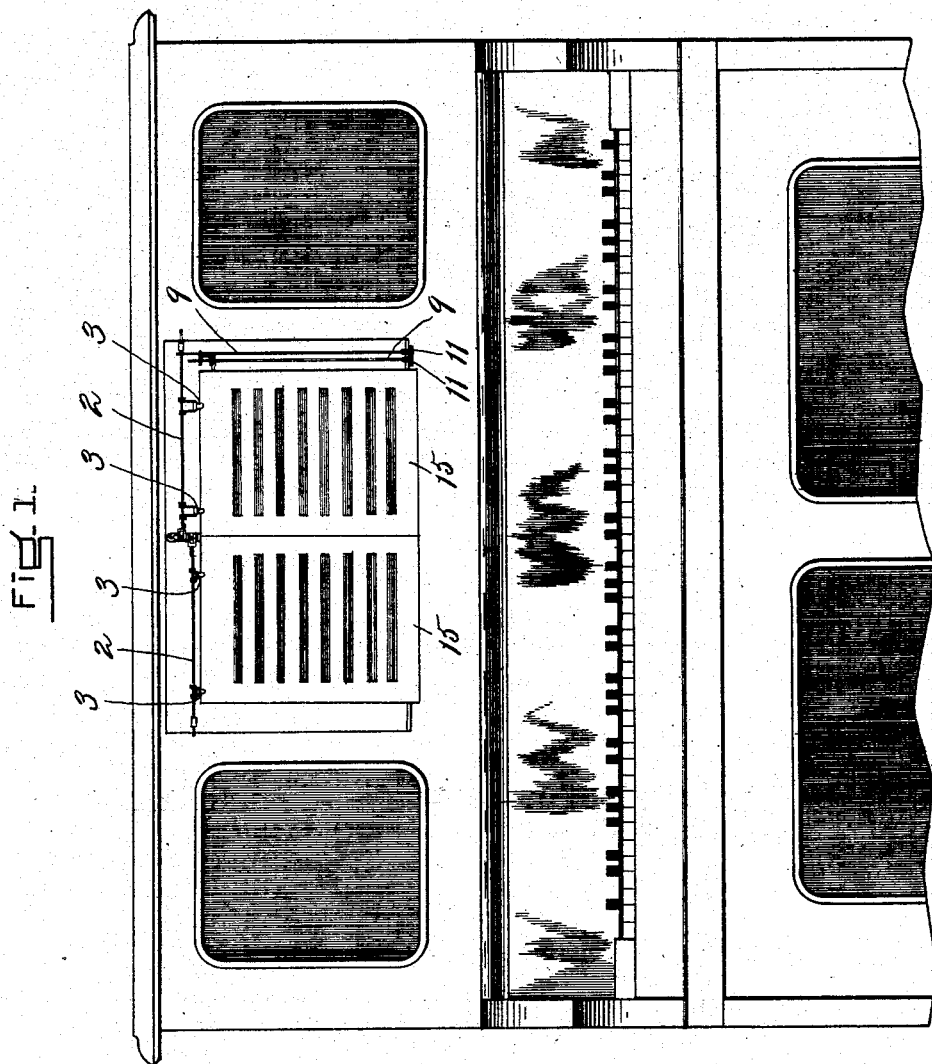


F. S. DUELL.  
MUSIC LEAF TURNER.

(Application filed Mar. 8, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES.  
*P. H. Pizzetti*  
*E. Satchel*

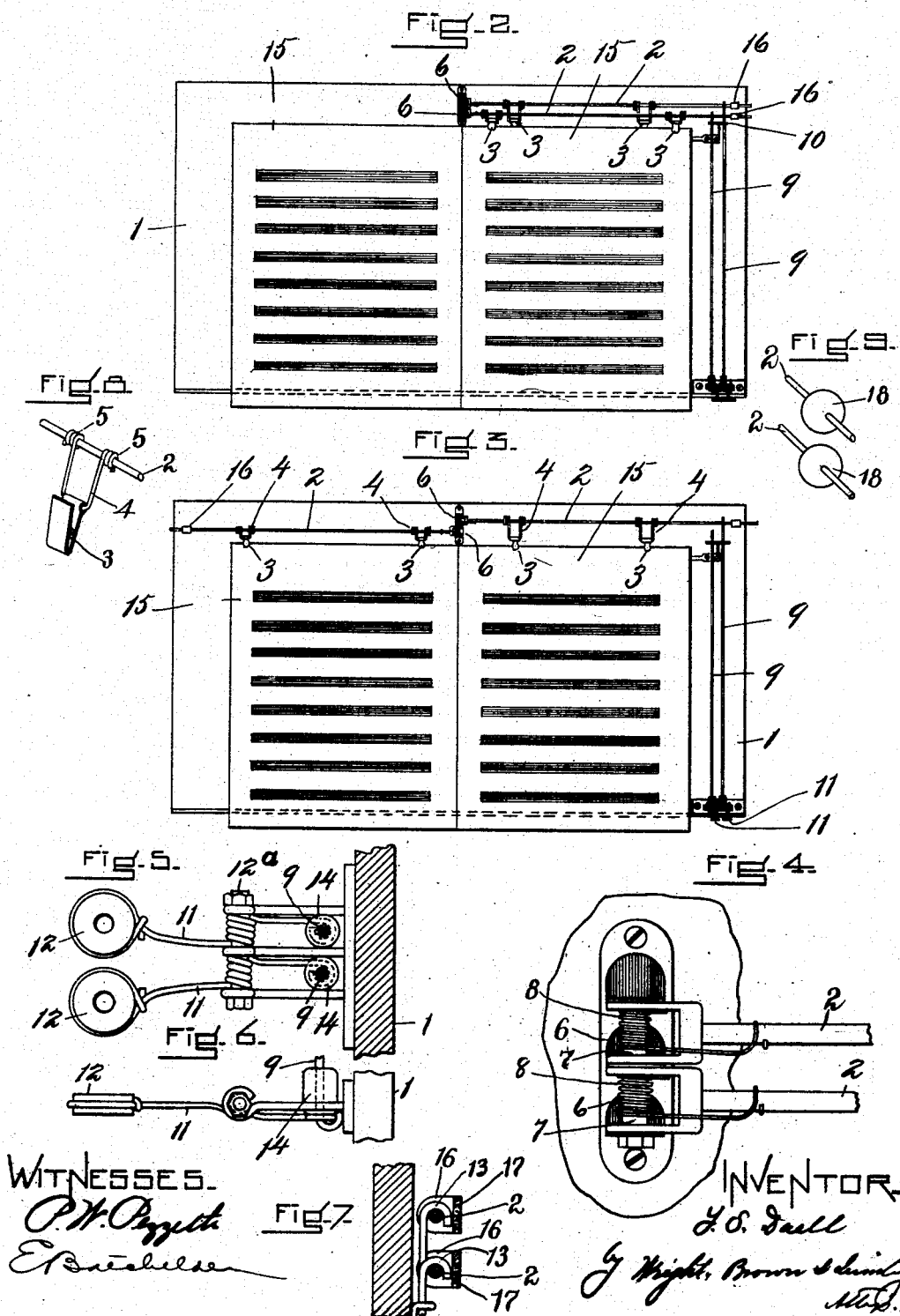
INVENTOR  
*F. S. Duell*  
*By Wright, Brown & Smith*

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**MUSIC LEAF TURNER.**

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**2 Sheets—Sheet 2.**



# UNITED STATES PATENT OFFICE.

FRANK SEDGWICK DUELL, OF ABINGTON, MASSACHUSETTS.

## MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 676,737, dated June 18, 1901.

Application filed March 8, 1901. Serial No. 50,288. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK SEDGWICK DUELL, of Abington, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Music-Leaf Turners, of which the following is a specification.

This invention relates to music-leaf turners; and it consists in certain novel features of construction and arrangement, which I shall now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a front elevation of my improved device in position on a piano. Fig. 2 represents a front elevation of the device, showing the parts in a certain position. Fig. 3 represents a similar view showing the parts in another position. Fig. 4 represents a detail front elevation of the hinges at the inner ends of the arms. Fig. 5 represents a horizontal section showing the levers for operating the trip-rods. Fig. 6 represents a side elevation of said levers. Fig. 7 represents a section showing the upper ends of the rods. Fig. 8 represents a detail perspective view of one of the leaf-engaging clips. Fig. 9 represents a detail view showing a modification.

The same reference characters indicate the same parts in all of the figures.

Referring to the drawings, 1 represents a back or support, which may be the back-board of the music-rack on a piano or other instrument or may be a member separate from the instrument, and 2 2 represent two arms hinged to swing horizontally and provided with clips 3 3, here shown as two in number on each arm, said clips being adapted to fasten to the sheets or leaves of the musical composition along the upper edges of said leaves. In the drawings two arms 2 are shown, as this number will suffice to turn the leaves of ordinary sheet-music, but a greater or less number may be provided if desired. Each of the clips 3 is mounted upon a U-shaped wire frame 4, whose ends 5 5 are coiled around the arms 2, which latter are preferably cylindrical in form and may be made of wire of the desired stiffness. The frames 4 are adapted to rotate about the arms 2 and may also be adjusted longitudinally of said

arms to different positions, corresponding to the different sizes of music-sheets.

The piece of music is so attached to the device that when its leaves are opened out their center line substantially coincides with the hinges 6 6 at the inner ends of the arms 2. Each hinge-pintle 7 is surrounded by a spring 8, one end of which engages the base-plate of the hinge, while the other end engages the arm 2 at a suitable distance from the hinge-axis. The tension of these springs is exerted in such a direction as to tend to throw the arms 2 2 over from right to left.

At 9 9 on the right of the support 1 are mounted two substantially vertical trip-rods, whose upper portions are slidingly mounted in a guide member 10, while their lower ends are engaged with the inner ends of two substantially horizontal finger-levers 11 11, pivoted at 12<sup>a</sup> near the lower edge of the support 1. These levers have heads or keys 12 12 at their outer ends, adapted to receive the pressure of the performer's finger. The trip-rods 9 9 are provided with hooked upper ends 13 13, adapted to take over the arms 2 2 near the outer ends of the latter, and the lower ends of the trip-rods are provided with weights 14 14, which normally depress the trip-rods into engaging position. The arms 2 2 are of sufficient flexibility so that when brought over to a right-handward position, as shown in Fig. 2, they may be slightly bent down and inserted underneath the hooks 13 13 on the trip-rods, which hooks are turned forward, as shown in Fig. 7, and when thus engaged with trip-rods the arms 2 2 will be held against the tension of their springs 8 in the described right-handward position. When it is desired to release one of the arms 2, the corresponding lever 11 is struck somewhat sharply to depress its outer end and elevate the corresponding trip-rod 9, so as to release the said arm 2 and permit it to swing over to a left-handward position, as shown in Fig. 3, and thus turn the music-sheet 15, to which it is secured by its clips 3. When the trip-rod 9 has released the arm 2, its weight 14 returns the trip-rod and lever 11 to their normal positions. As many trip-rods 9 and levers 11 are provided as there are arms 2, and the arms are released one at a time by depressing

the corresponding levers so as to turn the music-leaves in succession. Each of the arms 2 is provided at its outer end with a buffer 16, having a soft facing 17, of felt or other  
5 suitable material, adapted to strike against the base 1 and arrest the left-handward movement of the arms 2 with as little noise as possible and without injury to any of the parts. In Fig. 9 the buffers are represented in the  
10 form of soft-rubber balls 18 18, affixed to the arms 2.

Owing to the fact that each of the arms 2 is horizontal and straight, the clips may be slid along thereon to accommodate sheets of  
15 varying sizes, and since each horizontal arm is controlled by its individual vertical trip-rod, which in turn has its own finger-lever for actuating it, there can be no possibility of releasing more than one of the arms 2,  
20 provided only one lever 11 is actuated. Since the levers 11 engage the lower ends of the vertical rods, said levers will actuate the rods with certainty to the full extent necessary to release the swinging arms, and since each arm  
25 2 carries its own buffer 16 the buffers cannot get out of place even if the rods should become somewhat bent.

I claim—

1. In a music-leaf turner, a support or back,  
30 a plurality of straight horizontal arms hinged to the upper part thereof and each having one or more leaf-engaging clips, springs normally throwing said arms in a left-handward direction, a vertically-moving trip-rod for  
35 each arm extending from the lower to the upper part of said back and at its upper end adapted to hold said arm in a right-handward position and means engaging the lower end  
40 of each of said rods to elevate the same and release an arm.

2. In a music-leaf turner, a support or back, a plurality of straight horizontal arms hinged to the upper part thereof and each having one or more leaf-engaging clips, springs nor-

mally throwing said arms in a left-handward 45 direction, a vertically-moving trip-rod for each arm extending from the lower to the upper part of said back and at its upper end adapted to hold said arm in a right-handward position a weight normally depressing said 50 rod, and pivoted finger-levers engaging the lower ends of said rods and adapted to be independently actuated to elevate the rods to release the arms.

3. In a music-leaf turner, a support or back, 55 a plurality of straight horizontal arms hinged to the upper part thereof and each having one or more leaf-engaging clips, springs normally throwing said arms in a left-handward direction, a vertically-moving trip-rod for 60 each arm extending from the lower to the upper part of said back and having a hooked upper end adapted to engage an arm and hold it in a right-handward position, and means engaging the lower end of each of said rods 65 to elevate the same to release the arms.

4. In a music-leaf turner, a support or back, a plurality of straight horizontal arms hinged to the upper part thereof and each having a plurality of leaf-engaging devices mounted 70 on it, each of said devices comprising a U-shaped clip-suspending frame composed of wire having its ends coiled around the arm and a clip mounted to swing on said frame, springs normally throwing said arms in a left- 75 handward direction, a vertically-moving trip-rod for each arm extending from the lower to the upper part of said back and at its upper end adapted to hold said arm in a right-handward position and means engaging the lower 80 end of each of said rods to elevate the same and release an arm.

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

FRANK SEDGWICK DUELL.

Witnesses:

CHAS. A. CUSHMAN,  
FRED A. LEWIS.