

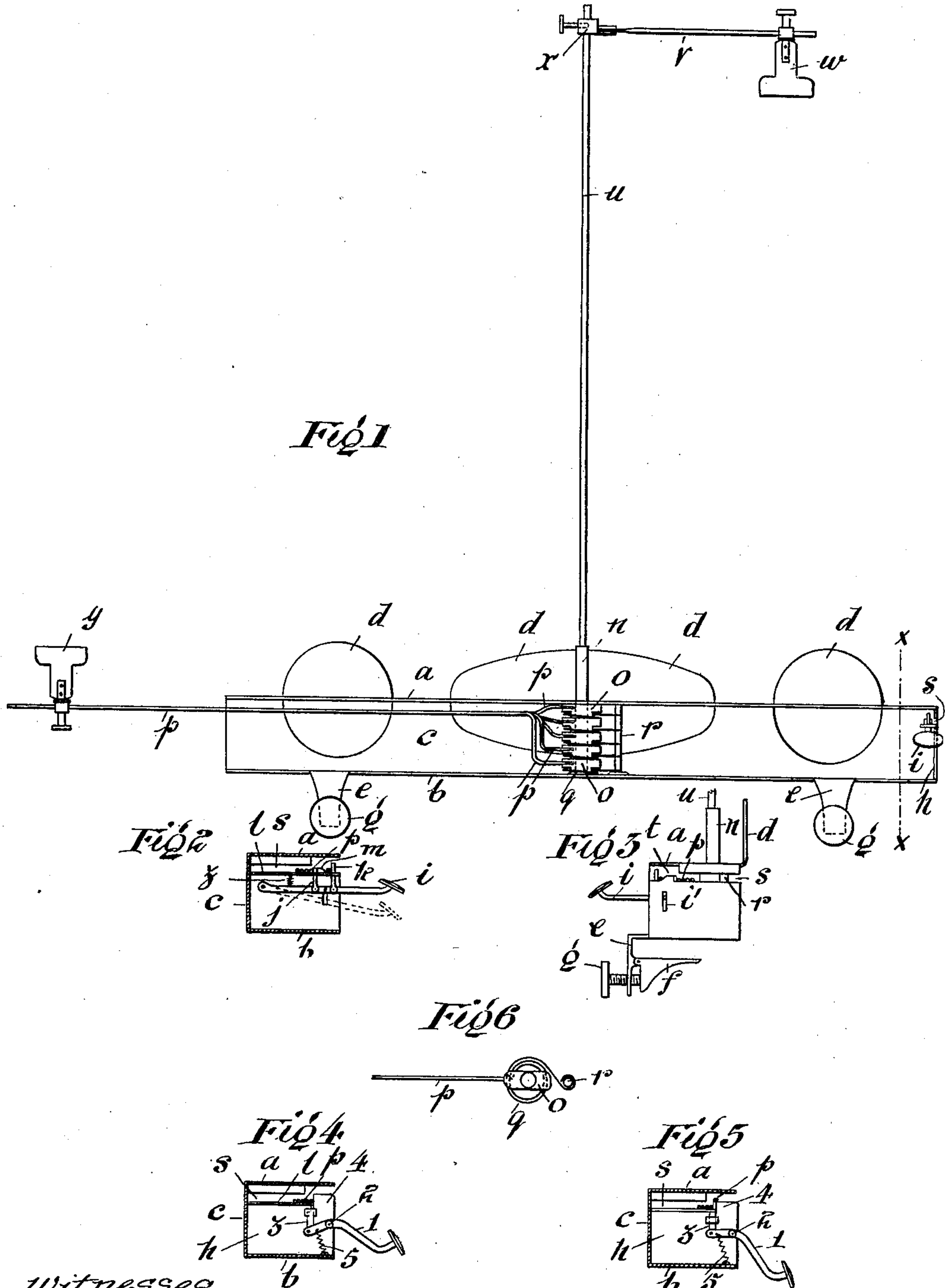
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L. G. GILES.

LEAF TURNING APPARATUS FOR BOOKS, MUSIC, &c.

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UNITED STATES PATENT OFFICE.

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LEAF-TURNING APPARATUS FOR BOOKS, MUSIC, &c.

No. 827,970.

Specification of Letters Patent.

Patented Aug. 7, 1906.

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To all whom it may concern:

Be it known that I, LEONARD GILBERT GILES, a subject of His Majesty the King of Great Britain, and a resident of 24 Eastern street, Aylesbury, county of Buckingham, England, have invented certain new and useful Improvements in Leaf-Turning Apparatus for Books, Music, and the Like, (for which I have made application for patent in Great Britain, No. 1,742, dated January 28, 1905,) of which the following is a specification.

This invention relates to an improved construction of apparatus for turning over the leaves of books, music, and the like.

In the accompanying sheet of drawings I have illustrated and will describe with reference thereto a form of construction which I have found to work well.

Of the drawings, Figure 1 is a front elevation of the apparatus. Fig. 2 is a sectional side view taken upon the line $x x$ of Fig. 1. Fig. 3 is an end view of the apparatus as shown by Fig. 1. Fig. 4 is a view similar to Fig. 2, illustrating a slight variation of arranging the releasing mechanism. Fig. 5 is a like view to Fig. 4, but showing parts in another position, while Fig. 6 is a detail view to be hereinafter referred to.

In carrying my invention into effect I stamp or otherwise produce from sheet metal or other suitable material a frame consisting of an upper platform a and a lower platform b , connected together by a back piece c , which may have portions d cut out and turned over, as shown in Figs. 1 and 3, to provide a back rest at the rear of the upper platform a . The lower platform b has connected to downwardly-projecting portions e thereof hinged clamps or like fastening means f , which, in conjunction with thumb-screws or the like g , are adapted for securing the apparatus to a music desk, stand, or the like.

The right-hand end of the frame $a b c$ is suitably provided with a side piece h , and adjacent to the platforms is pivotally connected the one end of a spring-controlled lever i , having a stud working in a slide i' and carrying a pair of stops, pins, projections, or members j and k of unequal length. If the lever i be pivoted to a lug beneath the lower platform b , such pins or stops may work through the latter; but in practice I prefer to pivot the lever, as shown, to the side h and arrange the pins or members j and k to work through an intumed piece, flange, or plate l of such

side h and at either side of a stop or projection m .

Preferably centrally of the platforms $a b$ is secured a spindle n , on which are mounted so as to be located between the platforms, a number of collars o , each having secured thereto a wire or rod p , carrying at its free end an adjustable spring-clip device q of suitable construction. Each of the wires or rods is independently controlled by means of a coiled spring q , arranged round a reduced part of the collar o and connected at one end to the latter and at the other end to a rod r , substantially as shown at Figs. 1 and 6.

Before release of the wires the free ends thereof are arranged to project through a guide-slot s , formed, as shown, in the end h , and adjacent to the stops $j k$ a recess t is provided to permit the wires in turn to be delivered over the shorter stop j of the operating-lever i to and behind the longer stop k thereof, as shown in Figs. 2 and 3.

The before-mentioned spindle n is for preference formed hollow or partly hollow for receiving in removable connection therewith a rod u for the music or the like to go round, and for use with loose sheets of music a rod v , having an adjustable clip w thereon for holding such loose sheets may be arranged to be fitted onto said rod u and adjusted by the screw x , as shown in Fig. 1.

As a slight modification of the foregoing I may dispense with one of the pins $j k$, as shown by Figs. 4 and 5. In this embodiment of my invention I provide a lever, such as 1, and pivot it at 2 to the side h and connect at its inner end a pin 3, reduced in size at its upper part for working through the intumed piece l just in front of a stop 4, situated at the fore end of the guide-slot s , so that the wires or rods p must be first raised over such stop 4 before they can be released. The lever 1 is normally kept in the position shown in Fig. 4 by the spring 5, but on the free end being depressed, as shown in Fig. 5, the pin 3 raises one of the wires p clear of the stop 4.

In use the clip devices q on the wires or rods p are respectively arranged to grip the leaves in proper order, and each time the operating-lever is depressed one of the wires or rods p is released and by the force of its spring q turns over the leaf connected to its clip. In the arrangement shown by Figs. 2 and 3 the depression of the lever brings both

pins to the level of *l* and allows the wire behind the longer pin to be carried over. During this operation the next following wire has impinged against the stop *m* and is above the shorter pin, which on the return movement of the lever *i* by the spring *z* raises the wire above *m* and delivers it to and behind the longer pin, ready to be released when the lever is again depressed. In the arrangement shown by Figs. 4 and 5 each wire is directly raised above the stop 4 and released, as hereinbefore stated.

In lieu of arranging the vertical parts *d* to form a back rest I may in some cases provide a movable back rest arranged in any well-known way to be fixed substantially horizontal or substantially vertical, according as a large music-book or an ordinary single piece of music, for example, is to be used therewith.

Having now described my invention, what I desire to secure by Letters Patent is—

1. A leaf-turning apparatus comprising a frame, a number of spring-controlled arms pivoted thereto, a stationary stop on the frame for holding said arms in their inoperative position, and means for releasing the arms from the stop, said means consisting of a spring-controlled operating-lever pivoted to the frame and a finger pivoted to the lever and working adjacent to the stop.

2. A leaf-turning apparatus comprising a

frame, a number of spring-controlled arms pivoted thereto, a stationary stop on the frame for holding said arms against the action of the springs and means for releasing said arms from the stop, said means consisting of a lever having one end pivoted to the frame and a long and a short finger on said lever arranged on opposite sides of the stop, the short finger on the upward stroke of the lever raising one arm over the stop and the long finger catching and holding said arm until the lever is depressed.

3. An apparatus for turning the leaves comprising a pair of connected platforms adapted to be secured to a music-stand, a spindle located between said platforms, a number of spring-controlled collars loosely mounted on the spindle, an arm connected to each of said collars, a guide-slot located at one end of said platforms, a stationary stop therein for holding the arms against the tension of the springs, a spring-controlled operating-lever and a pair of members pivoted thereto for releasing the arms one by one from the stop, substantially as described.

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

LEONARD GILBERT GILES.

Witnesses:

LEONARD COULSON,
ALBERT GEORGE BARNES.