Sept. 26, 1967 J. M. WIESZECK 3,343,776

PAGE TURNING DEVICE

Filed Sept. 27, 1965 2 Sheets-Sheet 1

FIG. 1

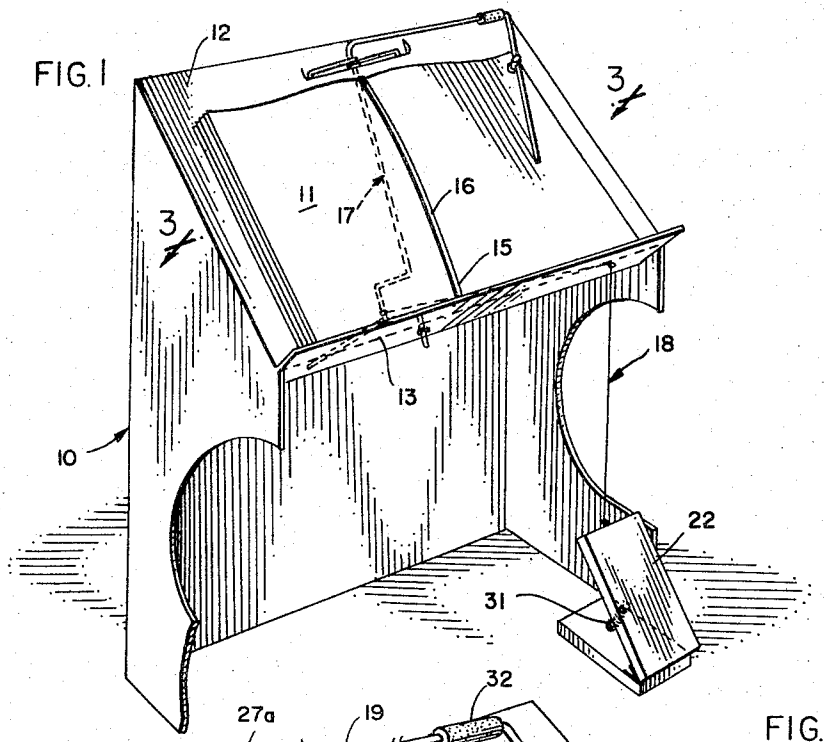



FIG. 2

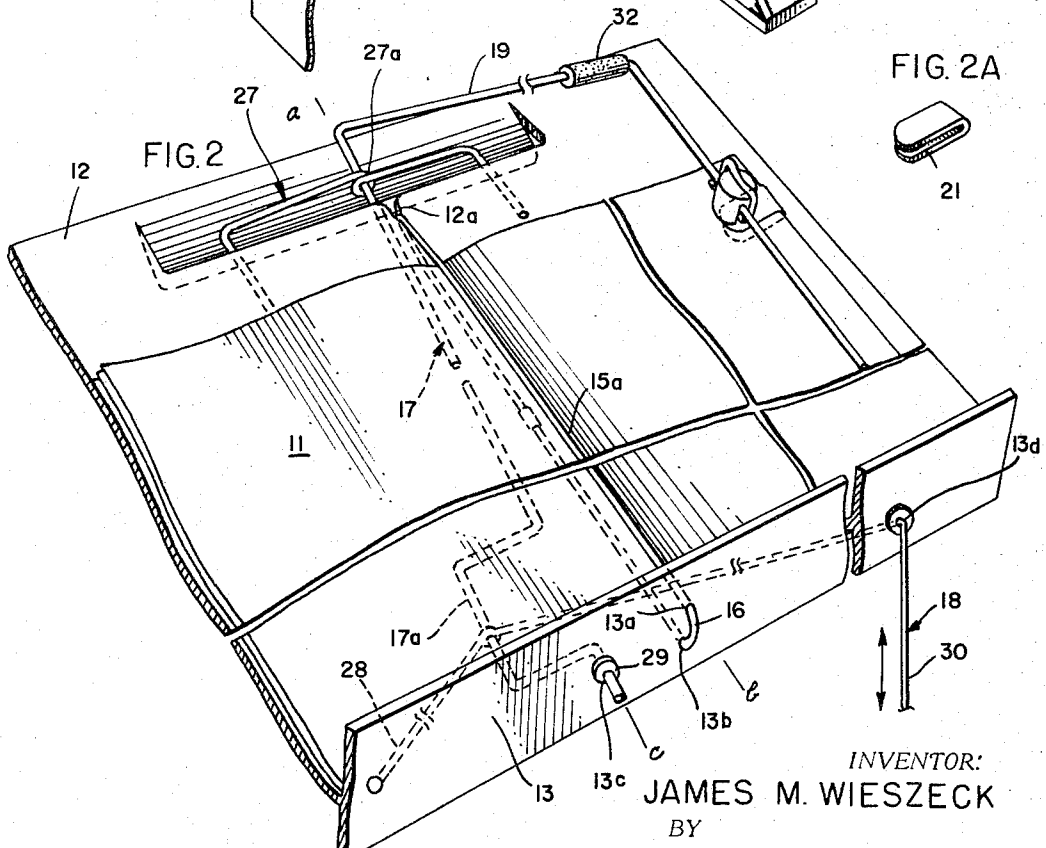



FIG. 2A




INVENTOR:
JAMES M. WIESZECK
BY
Dawson, Tilton, Fallon, Lungmus & Alexander
ATT'YS

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FIG. 3

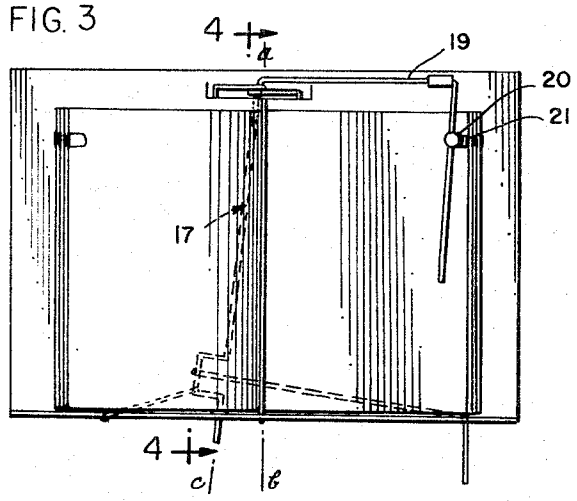



FIG. 4

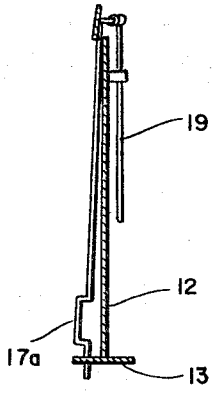



FIG. 5

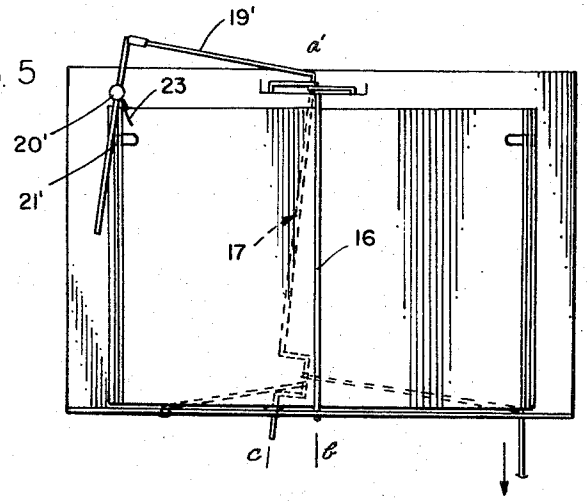



FIG. 6

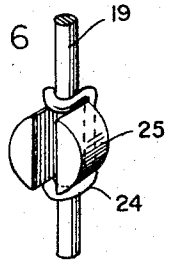
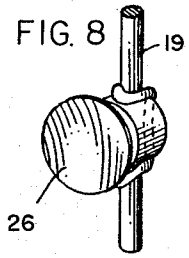



FIG. 7




FIG. 8




INVENTOR:
JAMES M. WIESZECK
BY
Dawson, Tilton, Fallon, Lungmus & Alexander
ATT'YS

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3,343,776

# PAGE TURNING DEVICE

James M. Wieszeck, P.O. Box 175,
Salem, N.H. 03079

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10 Claims. (Cl. 248—441)

## ABSTRACT OF THE DISCLOSURE

A page turning device. The device includes a platform adapted to support an open book and an elongated member journaled under the platform and having its length disposed at a minor acute angle with respect to the binding of the book. Attached to one end of the member is an L-shaped arm which carries a magnet adapted to overlie a clip secured to a page of the book. The member includes a crank which is operatively connected to a pedal, whereby depression of the pedal rotates the crank and causes the L-shaped arm to rotate.

This invention relates to a page turning device and finds utility in connection with the turning of pages of music.

In the specified utilitarian environment, it will be appreciated that a musician often has difficulty in turning pages of music without losing time. The invention solves this problem and besides has utility in other environments where page turning is required or desired—other than by hand. The non-manual turning of pages of a book, brochure, etc., thus constitutes an important object of this invention.

## SUMMARY OF THE INVENTION

The inventive device permits the pages of a book to be readily turned by the reader without the use of his hands. A magnet-carrying L-shaped arm is caused to rotate through an arc of approximately 180° by an elongated member which is disposed at an angle of about 15° with respect to the axis of the book binding and which includes a crank operatively connected to a foot pedal. The crank-equipped member is journaled beneath the book platform so that it is not readily observable and so that it does not interfere with the book reader's movements or the page turning operation.

Another object of this invention is to provide a novel music stand arrangement whereby the pages of music can be turned through manipulation of a foot pedal.

Still another object of the invention is to provide a page turning device utilizing an elongated element arranged at a small acute angle to the binding of the book or pamphlet containing the page whereby rotation of the elongated member initially turns the page and thereafter automatically detaches itself from the page turned. Still another object of this invention is to provide a page turning device that is suited to and may remain a part of a collapsible music stand. Other objects and advantages, both general and specific, may be seen in the details of construction and operation set down in this specification.

The invention is explained in conjunction with an illustrative embodiment in the accompanying drawing, in which—

FIG. 1 is a perspective view of a music stand equipped with the page turning device of the instant invention;

FIG. 2 is an enlarged fragmentary perspective view of the upper portion of FIG. 1 and FIG. 2A is a perspective view of a clip provided as part of the showing in FIG. 2;

FIG. 3 is a plan elevational view of the apparatus of FIG. 1;

FIG. 4 is a sectional view taken along the sight line 4—4 applied to FIG. 3;



FIG. 5 is a view similar to FIG. 3, but with the parts thereof in a different operative position;

FIG. 6 is a fragmentary perspective view of a portion of the page turning device of FIG. 2;

FIG. 7 is a clip associated with the showing in FIG. 6 and FIG. 8 is a showing similar to that in FIG. 6 but with the addition of a magnet constituting the page-attracting means utilized in the illustrative embodiment of the invention.

The numeral **10** designates generally a music stand on which a book **11** is placed in open condition. For supporting the book, the stand **10** is equipped with an upwardly inclined platform **12** having at its lower edge an outstanding lip **13** to confine and stabilize the book **11**. Although the invention is explained in conjunction with a music stand, it will be appreciated that other uses will be apparent to those skilled in the art.

The book **11** has the usual central binding **15** and is restrained against movement on the platform **12** by means of an elongated clip **16** (see FIG. 2 for additional details).

The page turning apparatus includes an elongated member generally designated **17** along with a pedal linkage system generally designated **18** for rotating the member **17**.

### *Operation in general*

Before going into the details of the invention, reference is made to FIGS. 3 and 5 which show the two principal operating conditions of the apparatus—for acquainting those skilled in the art generally with a basic operation of the invention. The showing in FIG. 3 is essentially that seen in FIG. 1 and it will be noted that the elongated member **17** is equipped with an integral L-shaped extension **19** carrying a magnet **20**. Each page is equipped with a clip **21** (see FIG. 2A). The upper half of clip **21** is iron (magnetic), while the lower half is aluminum (non-magnetic) and shielding the underlying clip from the effects of the magnet when the magnet touches the iron upper half and becomes adhered thereto. The magnet **20** contacts the uppermost magnet **21** to attract the page toward the L-shaped portion **19**. Upon depressing the pedal **22** (see FIG. 1) associated as part of the linkage **18**, the elongated member **17** is pivoted through an approximate 180° arc to position the L-shaped portion as designated at line **19'** in FIG. 5. This turns the associated page through the same approximate 180° arc but because of the angular relationship between the clip **16** and the elongated member **17**, the arc of the magnet **20** is different from that of the clip **21** (the ultimate positions of these two elements being designated respectively by the numerals **20'** and **21'** in FIG. 5). Thereafter, the elongated member **17** is repivoted to the FIG. 3 condition and the apparatus is once again in condition for turning another page.

From the foregoing brief description, it will be seen that the invention provides an advantageous detachment of the page turning device from the page as an incident of the final portion of the turn—the upward movement of the magnet **20** being designated by an arrow **23** in FIG. 5 which indicates the departure of the magnet **20** from the arc followed by the clip **21**. I find it advantageous to make this departure of the order of about 15°—this initially residing in the angular relation between the elongated member **17** and the clip **16** securing the binding **15** of the book **11** in place on the platform **12**.

## DETAILED DESCRIPTION OF CONSTRUCTION

Now turning to FIG. 2, it will be seen that the previously mentioned clip **16** is essentially loop-shaped and overlies the interior of binding **15A** of the book **11**. The underside of the clip **16** passes under the platform **12** and for this purpose the lip **13** is apertured as at **13A** and **13B**.

Also, the platform **12** is apertured as at **12A** to complete the loop of the clip **16**. The elongated member **17** is seen to have an L-shaped extension **19** (previously referred to) at its upper end. The extension **19** is seen in enlarged scale in FIGS. 6 and 8 and is equipped with a clip **24** (see FIG. 7). The clip **24** clamps a magnet holder **25** in which a permanent magnet **26** (see FIG. 8) is mounted. Where the invention is practiced utilizing a magnet **26**, the clip **21** is constructed of magnetic material such as iron on top and aluminum underneath.

The elongated member **17** is journaled adjacent its upper end in a bearing-providing element generally designated **27** (see FIG. 2). The element **27** is essentially C-shaped having a terminal portion underlying the platform **12** by virtue of passing through the opening **12A**. Centrally of its length, the element **27** is curved on itself to form a circular bearing **27A** in which the elongated member **27** is journaled.

Adjacent its lower end, the member **17** is equipped with a crank portion designated **17***a*. The crank portion is coupled to the lip **13** by means of an elongated spring **28**. Most of the length of the elongated member **17** and particularly the crank portion **17A** thereof underlie the platform **12**. Thus, the elongated spring **28** is secured to the underside of the platform **12**—in the portion thereof adjacent to lip **13** which is seen to depend below as well as extend above the platform **12**. The extreme lower end of the elongated member **17** is journaled in an opening **13C** in the lip **13** and for this purpose a washer **29** may be installed as seen in FIG. 2. As mentioned previously, rotation of the elongated member **17** is provided through the pedal-equipped linkage **18**. In FIGS. 1 and 2, it will be seen that a flexible cord **30** is connected at one end to the crank portion **17A** and, after passing through an opening **13D** (FIG. 2) in the lip **13** is secured at its lower end to the foot pedal **22**. The foot pedal **22** may be of any desired construction. In the illustration given, it is a two part hinged member urged into the position seen in FIG. 1 by means of a spring **31**.

In the operation of the device, depression of the foot pedal **22** pivots the crank portion **17A** under the control of the elongated spring **28** so as to rotate the elongated member **17** through about the 180° arc. Inasmuch as the L-shaped extension **19** is inter-rolled with the elongated member **17** is also follows through the same arc. During this motion, the magnet **20** attracts the clip **21** and causes the page equipped with the clip **21** to follow the movement of the magnet **20**. This proceeds through a substantial portion of the arc adjacent the terminal portions of the 180° arc of movement, the magnet **20** is translated upwardly as well as to the left (in proceeding from the showing in FIG. 3 to that of FIG. 5) so as to disengage the clip **21** and permit the same to assume the position designated **21'**. Return of the device to its FIG. 3 position is achieved through the coaction of the springs **28** and **31**.

Where the elongated member **17** is about 15° to the left of the music page axis (as shown) the disengagement of the magnet **20** from the clip **21** occurs after about three-quarters of the possible turning movement of the extension **19**, i.e., about 135°. This permits the page to fall freely the remainder of the 180° arc. The return may be snap-like and to preclude any sound resulting from the contact of the extension **19** with the platform **12**, I provide a bumper as at **32** (see FIG. 2) and constructed of resilient, sound-deadening material, i.e., cord, plastic, etc., which is slidable on arm **19** for purposes of optimum location under windy conditions, etc.

While in the foregoing specification, a detailed description of an embodiment of the invention has been put down for the purpose of illustration, many variations of the details herein given may be made by those skilled in the art without departing from the spirit and scope of the invention.



I claim:

**1.** A page turning device comprising a stand providing an inclined platform having a book confining lip along its lower edge, an open book supported on said platform, an elongated member journaled under said platform and having its length disposed at a minor acute angle to the binding of said book, said member being equipped with a loop-bearing element releasably clipped to said platform, said platform having an aperture adjacent its upper end with said member passing through said aperture, said member adjacent to the platform lower end having a crank portion, a pedal-equipped linkage coupled to said crank portion for rotating said member, a spring interconnected between said platform on the underside thereof and said crank portion, said member adjacent the upper end of said platform being equipped with an L-shaped arm, said arm being coupled to said member at one arm end and the other arm end being equipped with a magnet slidably positioned thereon and adapted to overlie a portion of a page of said open book, iron and aluminum clip means secured to said page portion whereby rotation of said member moves said magnet through an arc different from the arc of said clip means to release said clip when said page is substantially turned.

**2.** The structure of claim **1** in which said arm is equippped with a weight and shock absorber.

**3.** The structure of claim **1** in which said minor acute angle is of the order of about 15°.

**4.** A page turning device comprising a stand providing an inclined platform having a book confining lip along its lower edge, an open book supported on said platform, an elongated member under said platform having its length disposed at a minor acute angle to the binding of said book, said member being journaled adjacent the the upper and lower edges of said platform, said platform having an aperture adjacent its upper end with said member passing through said aperture, said member having a crank portion, a pedal-equipped linkage coupled to said crank portion for rotating said member, a spring interconnected between said platform on the under side thereof and said crank portion, said member adjacent the upper end of said platform being equipped with an L-shaped arm, said arm being coupled to said member at one arm end and the other arm end being equipped with a magnet slidably positioned thereon and adapted to overlie a portion of a page of said open book, a clip secured to said page portion whereby rotation of said member moves said magnet through an arc different from the arc of said clip to release said clip when said page is substantially turned.

**5.** The structure of claim **4** in which said minor acute angle is of the order of about 15°.

**6.** The structure of claim **4** in which said member is equipped with a loop-bearing element releasably clipped to said platform.

**7.** The structure of claim **4** in which one end of said member is journaled in the lower portion of said book confining lip.

**8.** A page turning device comprising a stand providing an inclined platform having a book confining lip along its lower edge, an open book supported on said platform, an elongated member journaled under said platform and having its length disposed at a minor acute angle to the binding of said book, said member being equipped with a loop-bearing element releasably clipped to said platform, said platform having an aperture adjacent its upper end with said member passing through said aperture, said member having a crank portion, a pedal-equipped linkage coupled to said crank portion for rotating said member, a spring interconnected between said platform on the underside thereof and said crank portion, said member adjacent the upper end of said platform being equipped with an L-shaped arm, said arm being coupled to said member at one arm end and the other arm end being equipped with a magnet slidably

positioned thereon and adapted to overlie a portion of a page of said open book, iron and aluminum clip means secured to said page portion whereby rotation of said member moves said magnet through an arc different from the arc of said clip means to release said clip when said page is substantially turned.

**9.** The structure of claim **8** in which said arm is equipped with a weight and shock absorber.

**10.** The structure of claim **8** in which said minor acute angle is of the order of about 15°.



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CHANCELLOR E. HARRIS, *Primary Examiner.*