(No Model.) 2 Sheets—Sheet 1.

G. B. CREWS.

MUSIC LEAF TURNER.

No. 442,596. Patented Dec. 9, 1890.

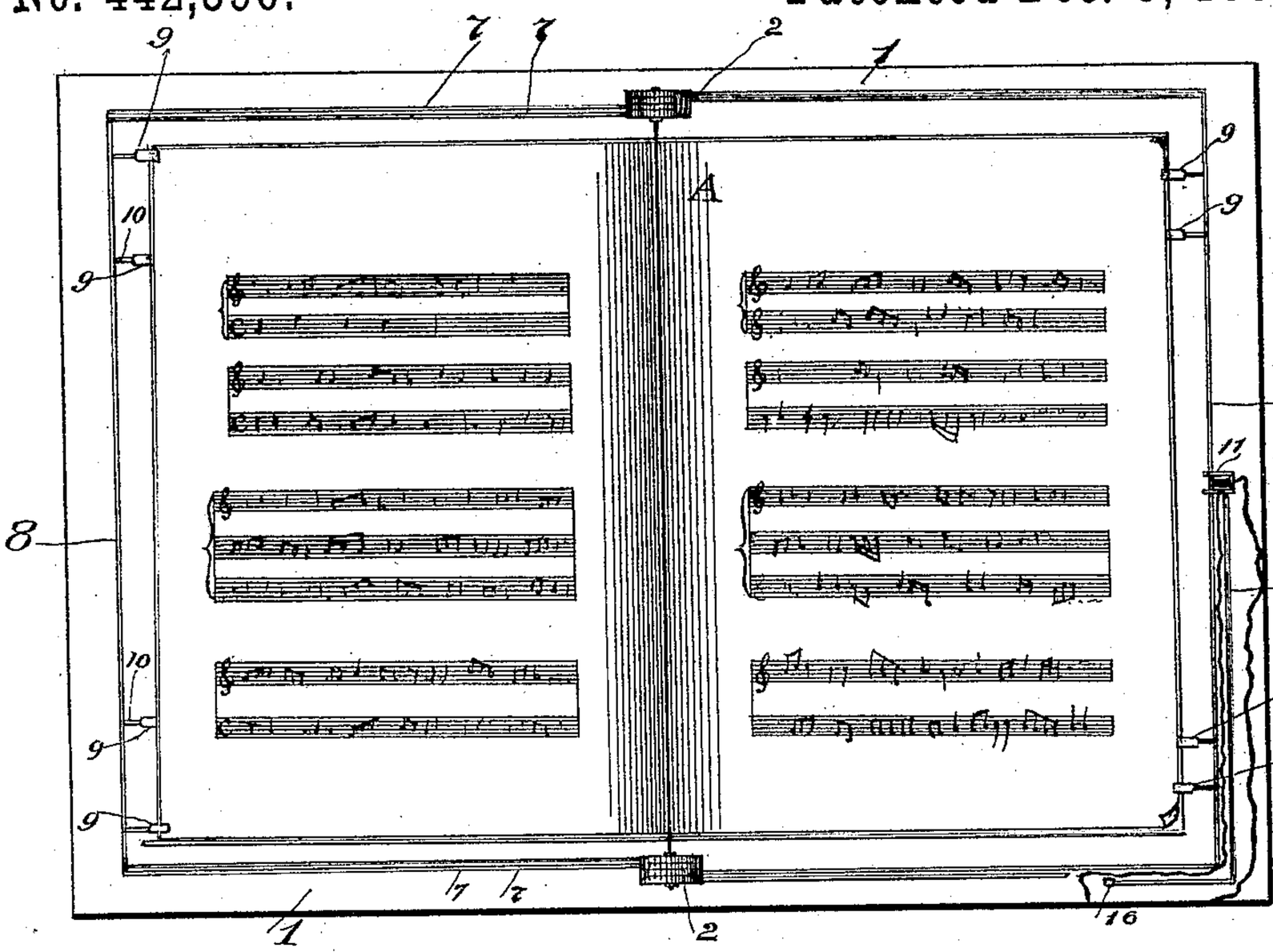

FIG. 1

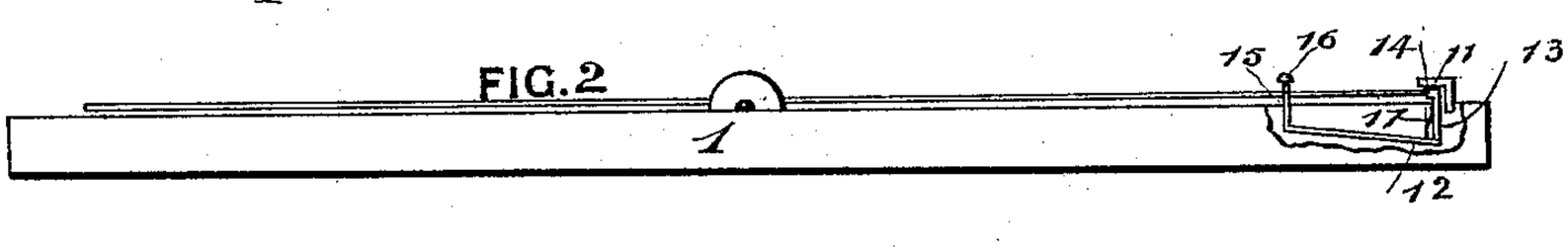

FIG. 2

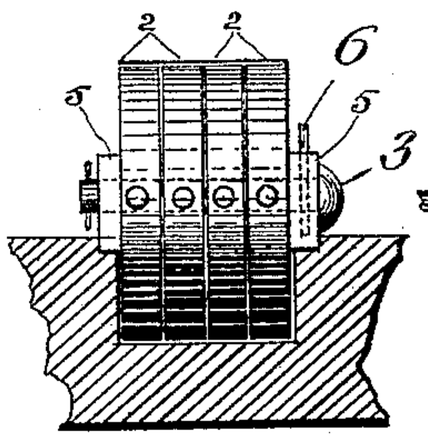

FIG. 3

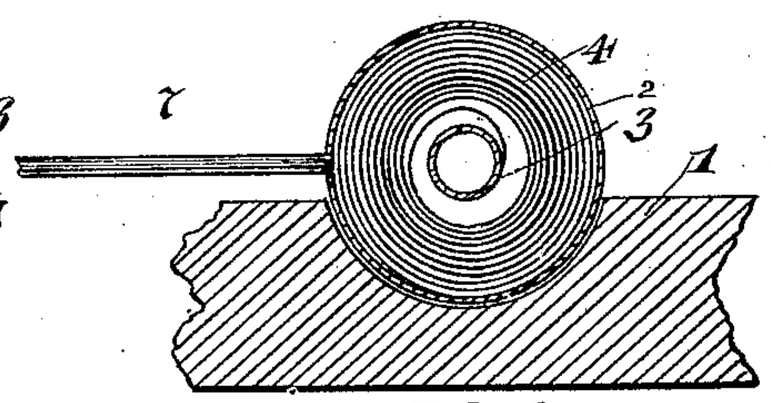

FIG. 4

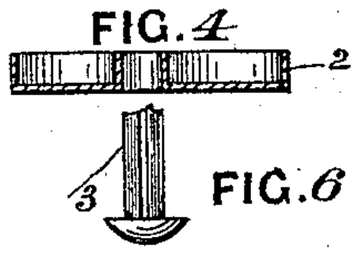

FIG. 6

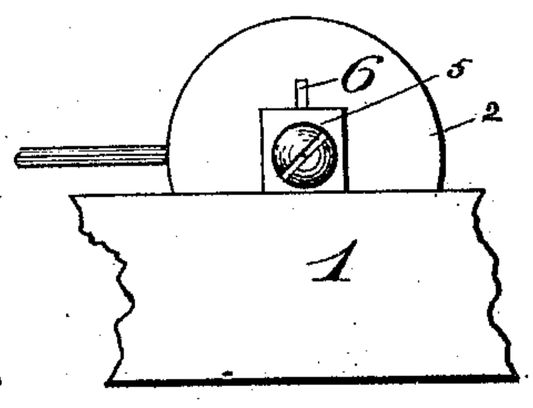

FIG. 5

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

G. B. CREWS.

MUSIC LEAF TURNER.

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FIG. 7

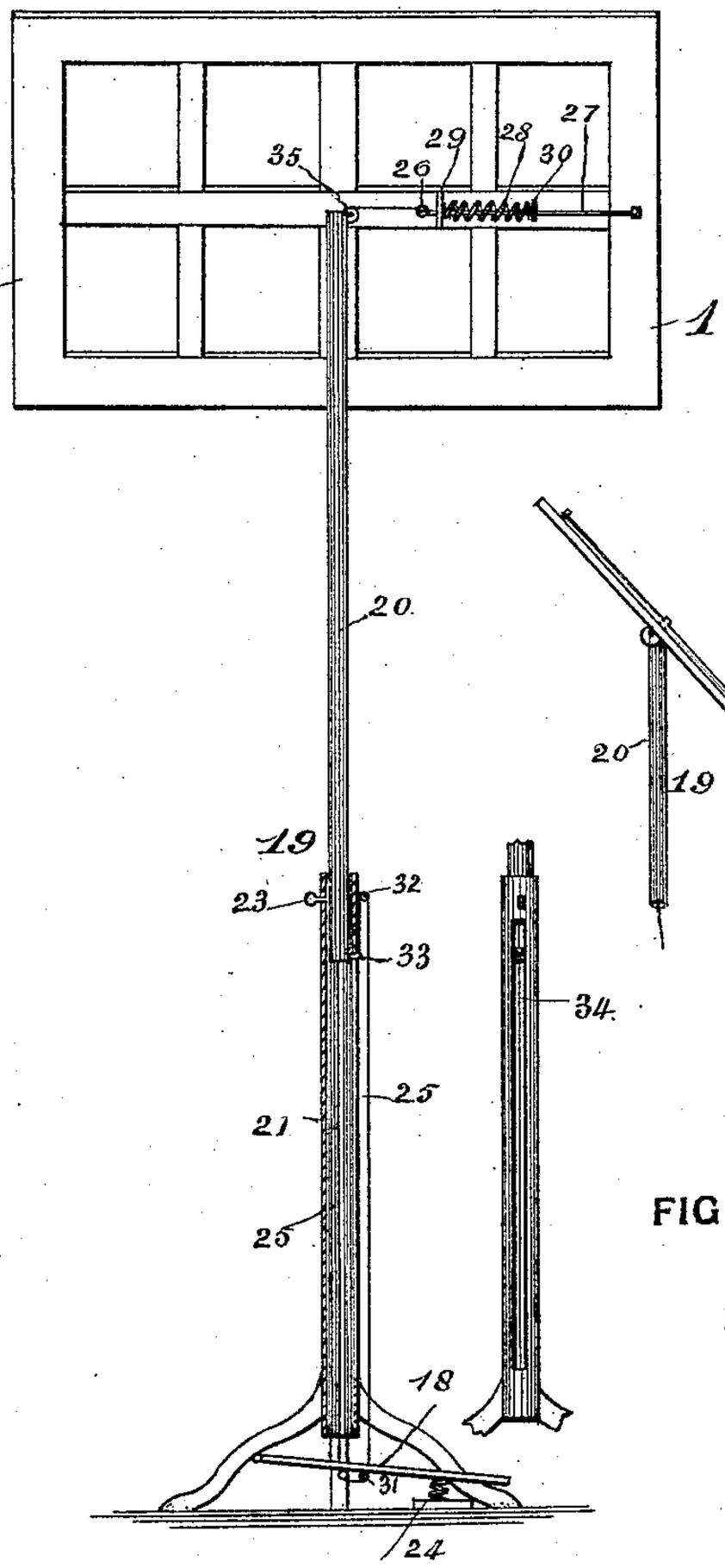

FIG. 8

FIG. 9

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE B. CREWS, OF DENVER, COLORADO.

MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 442,596, dated December 9, 1890.

Application filed October 31, 1889. Serial No. 328,867. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. CREWS, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Devices for Turning the Leaves of Sheet-Music; 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in music-leaf turners; and the object of my improvement is to provide a device whereby the operation either on the piano-forte or a stringed instrument may by touching a key or pressing lightly upon a treadle with the foot turn the leaves of the music without interruption and annoyance, a device of the class stated which shall be simple, cheap, and ornamental, being at the same time highly useful and thoroughly practicable, durable, and efficient; to which ends my invention consists of the features, arrangements, and combinations hereinafter described and claimed.

In the drawings is illustrated an embodiment of my invention, in which drawings—

Figure 1 is a top or plan view of the invention. Fig. 2 is a front edge view of the same. Figs. 3, 4, 5, and 6 are detail views illustrating the construction of the spring rotating disks. Fig. 7 is an elevation illustrating a modified form of the device adapted to be operated by the foot. Figs. 8 and 9 are details of Fig. 7.

In the views let the reference-numeral 1 indicate a suitable frame large enough for the double open leaves of sheet-music to lie upon, leaving a sufficient margin for the mechanism hereinafter described. There are two sets of hollow disks, the disks of each set being each designated by the numeral 2. Each set of disks is centrally pivoted within the frame 1 midway between its ends, the frame being cut out at these points to receive about half of the body of the disks which are held in position on the frame by a pin secured within journal-boxes 5, made fast to the frame, upon which pin the shells of the disk are free to turn. Each disk of each set is separate and distinct from each other disk of the set and has a coil-spring 4, which has one of its extremities made fast to the pin 3, around which it is coiled, as shown, its outer extremity being made fast to the inner surface of the disk's rim.

Pin 3 is provided with a head containing a suitable slot, and may be turned to give the springs 4 the proper tension, being afterward locked by a key 6 passing through a suitable aperture in box 5 and into a corresponding aperture in the pin, as shown by dotted lines in Fig. 3.

To the disks 2 are secured the wire racks, each rack being composed of two opposite end pieces 7 7 and a side piece 8, connecting the end pieces and rigidly secured thereto. The free extremity of each opposite end piece 7 is made fast to the periphery of a rotary disk 2. In the drawings there are shown four disks in each set and a corresponding number of these wire racks. Any greater number, however, may be used. The wire racks are somewhat larger than the sheets to be retained by them, as shown in Fig. 1, the piece of music thereon shown consisting of two double or four single sheets, or one single sheet for each of the wire retaining-racks. In placing the music in the device the double open sheets are placed upon the frame 1, beneath an elastic band 4, stretched across the frame and connecting the two sets of disks. The sheets may then be folded over in the desired position on the left-hand side of the frame, or the side where the wire racks are carried when left free to be acted upon by the spring-disks, the springs of the disks being coiled, as shown in Fig. 4, and the end piece 7, in Fig. 4, being on the left-hand side. Each sheet of music is then secured in any suitable manner to one of the wire racks, so that the sheet will move with the rack. In the drawings are shown small clasps 9, attached to the side bars 8 by small pieces 10 of some flexible fabric, preferably elastic. By means of these clasps the sheets of music are secured to the wire racks. I do not, however, limit myself to this means of se-

curing the sheets to the racks, since many other devices may be employed for this purpose.

A piece of music having been secured to the racks in the manner described, all the racks, or as many of them as are provided with the music-leaves, are turned over upon the right-hand side of the rack and placed under a suitable retaining-catch 11, secured to the frame and of sufficient height to permit all the side pieces 8 to lie thereunder, one on top of the other.

Within the frame, which is cut away for that purpose, is secured a device for releasing the wire racks from the catch 11, one rack only being released at a time. This releasing device is shown in Figs. 1 and 2, the covering of the frame being torn away in both figures to show the device. This releasing device consists of a rod 12, lying within a suitable groove of the frame, and extending from a convenient point in the front side of the frame, around one corner thereof, and about halfway down one end of the frame to a point directly beneath the catch 11. At this point rod 12 is provided with a vertical projection 13, rigidly secured to the upper portion of the rod. This part 13 extends up through the frame and beneath the catch 11, and is provided with a short journaled projection 14, which, when at rest and in its normal position or uninfluenced by the connecting parts, remains just back of the top wire 8 of one of the racks when held beneath the catch, as before described. To the opposite extremity of rod 12 is rigidly secured another vertical projection 15, extending up through the rack, its upper end being provided with a suitable pressure key or button 16. The portion of rod 12 upon the front side of the frame, or that portion to which the vertical part 15 is attached, is inclined upward above the bottom of the slot in the frame, within which it is secured, and is held in this position by a small leaf-spring 17, secured within the frame and adapted to press against the vertical part 13 of the releasing device. Thus it will be observed that by pressing upon button 16 the shorter arm of rod 12 will be lowered and the longer arm turned sufficiently to drive the projections 14 against a wire 8 and release said wire from the catch. The rack being released, returns to the opposite side of the frame under the influence of its spring-actuated disk 2. The top wire being released, the wire 8 of the rack next beneath rises to the former place of the one released, the tension of the springs of the disks being always sufficient to keep the top wire 8 in contact with the under side of the catch 11 and just in front of the projection 14 of the releasing device, which projection is just the width of the diameter of a wire 8, so that only one rack shall be released at the same time or at the same forward movement of the projection 14.

In Fig. 7 is shown another reliable device or another means of actuating the projection 14 and releasing the wire racks. This consists of a short bar 18, secured to the bottom of an adjustable standard 19, the under side of the frame 1 being pivoted to the top of this standard, as shown in Fig. 8. Standard 19 consists of an upper part 20, adapted to telescope within a lower part 21, the two parts being adjustable by means of a set-screw 23. One extremity of bar 18 is pivoted to the base of the standard, said bar being supported near its opposite extremity by a spring 24. One extremity of cord or wire 25 is secured to an eye 26, formed upon one extremity of a rod 27, surrounded by a spiral spring 28, one end of said spring resting against a stationary stop 29, secured to the frame, the other extremity of the spring resting against a stationary shoulder 30, secured to and made fast upon rod 27. The outer extremity of rod 27 is made fast to the lower end of the vertical projecting rod 13, (shown in Fig. 2,) rod 13 extending through a suitable aperture in the bottom of the frame to permit this connection. The opening through which rod 13 extends to the under side of frame 1 is slightly elongated to permit a sufficient forward movement of rod 13 to enable its forward projection 14 to release the wires 8 from catch 11. From eye 26 cord 25 passes over pulley 35, secured to the upper extremity of part 20, down through standard 19 and under pulleys 31, secured to bar 18, said cord passing thence upward and over another pulley suitably secured to part 21 of the standard 19, and thence downward a short distance, where it is secured to a pin 33, made fast to part 20 of the standard, and extending through a slot 34 in part 21 thereof. By pressing upon bar 18 with the foot sufficient power is applied to cord 25 to draw rod 27 toward the standard 19 far enough to release wires 8 from the catch 11 by virtue of the relation of the parts heretofore described.

Having thus described my invention, what I claim is—

1. A device for turning the leaves of sheet-music, said device consisting of a suitable frame 1 and two sets of spring-actuated rotary disks suitably journaled within the frame, one on each side thereof, in combination with a number of wire racks equal to the number of disks on each set, each rack being secured to a pair of oppositely-disposed disks, means for securing the leaves to the wire racks, a catch 11 for securing the racks in position until released, and suitable mechanism for releasing the racks and turning the sheets thereon, substantially as described.

2. A device for turning the leaves of sheet-music, said device consisting of two oppositely-disposed sets of rotary disks, pins 3, forming journals for the disks, means of locking pins 3, each disk being provided with a coil-spring 4, secured to a pin 3 at one extremity and to the outer rim of the disk at the opposite extremity, wire racks having the inner extremities of their end pieces rigidly

secured to a pair of oppositely-disposed disks, means for securing the leaves of the music upon the wire racks, means for holding the racks in position until released, and means for releasing the racks at will and turning the music thereon, substantially as described.

3. A device for turning the leaves of sheet-music, said device consisting of a suitable frame, two sets of rotary disks mounted upon the frame, pins 3, securing the disks within boxes 5, secured to the frame, means of locking pins 3 within their bearings, coil-springs 4 within the disks, one end of each spring being secured to the pin 3, the opposite end of the spring being secured to the outer rim of the disk, and an elastic band A, stretched across the frame between the two sets of disks, wire racks, each rack having its end piece secured to a pair of oppositely-disposed disks, suitable clasps 9 for holding the leaves upon the racks, a catch 11 for holding the racks in position upon one side of the frame, and means of releasing the racks from the catch and turning the leaves thereon, substantially as described.

4. A device for turning the leaves of sheet-music, said device consisting of a suitable frame 1, wire racks for holding the sheets of music, two sets of spring-actuated disks oppositely disposed and suitably journaled upon the frame, means of holding the wire racks in position upon one side of the frame until released, means of releasing the racks, said means consisting of a rod 12, secured within a suitable slot in the frame, said rod terminating in an exposed pressure-button at one end and in a forward-projecting part 14 at the opposite end, said part 14 being normally located just behind the upper wire of the series held in position by the catch upon the frame, substantially as described.

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

GEORGE B. CREWS.

Witnesses:
J. B. WILLSEA,
WM. MCCONNELL.