

No. 777,580.

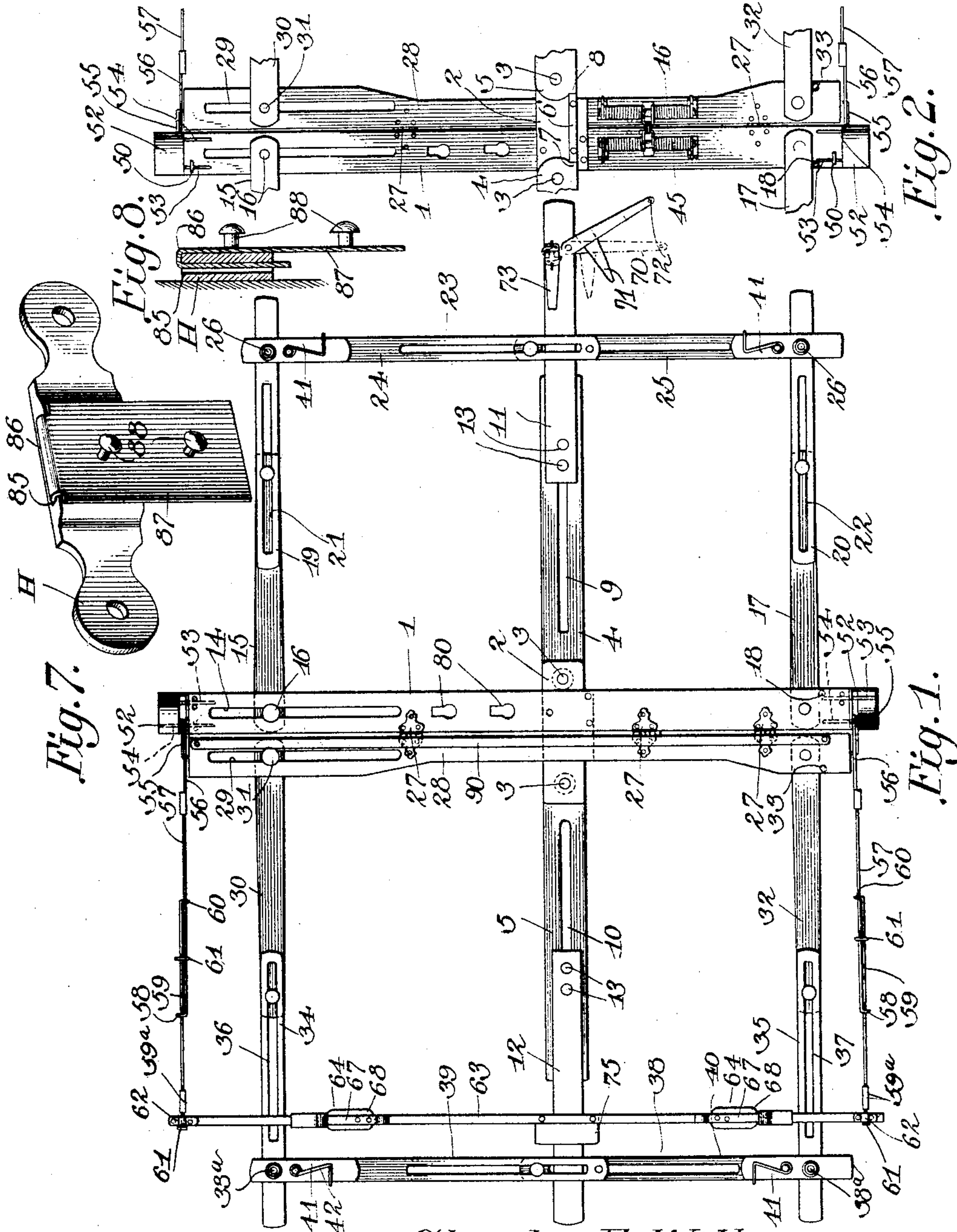
PATENTED DEC. 13, 1904.

C. E. WILLIAMS.
MUSIC RACK.

APPLICATION FILED DEC. 29, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
E. Stewart
Dexter Morton

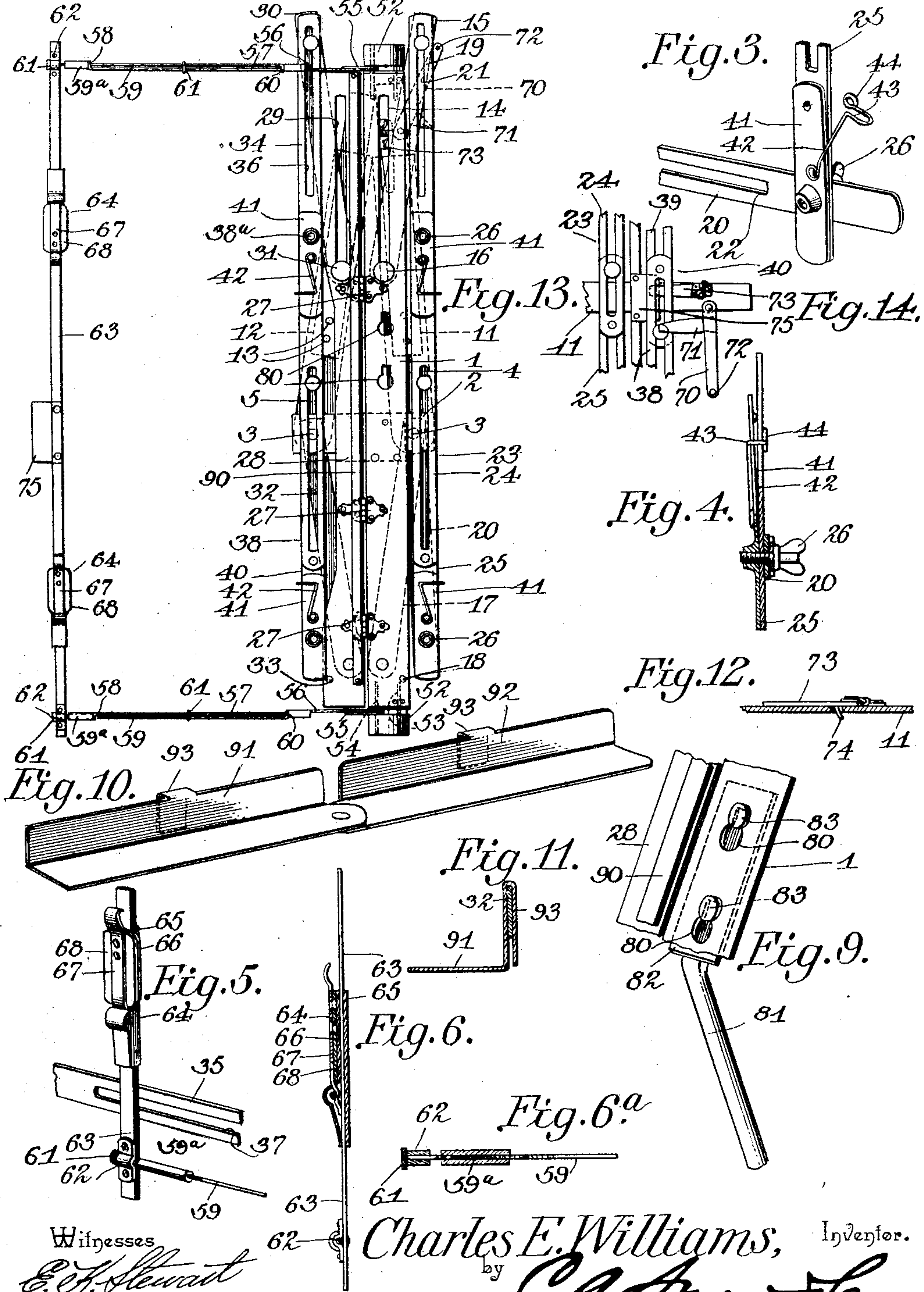
Charles E. Williams, Inventor
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Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES E. WILLIAMS, OF LEROY, ILLINOIS, ASSIGNOR OF ONE-HALF
TO WILLIAM B. LIST, OF LEROY, ILLINOIS.

MUSIC-RACK.

SPECIFICATION forming part of Letters Patent No. 777,580, dated December 13, 1904.

Application filed December 29, 1903. Serial No. 187,030. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. WILLIAMS, a citizen of the United States, residing at Leroy, in the county of McLean and State of Illinois, have invented a new and useful Music-Rack, of which the following is a specification.

This invention relates to music-racks, and has relation more particularly to that type of music-racks in which one or more leaf-turners are provided to turn the leaves of a piece of music by means of power supplied by springs or other suitable devices.

The principal object is to provide a device of the character specified which is adapted for adjustment to conform to pieces of music of different sizes, which can be folded into a small space when not in use, which is adapted to be readily attached to a piano or other musical instrument, and which has the leaf-turning devices provided with improved means for positively gripping the several leaves of the piece of music.

With the object above mentioned and others in view, which will appear as the invention is fully disclosed, the same consists in an improved form of music-rack hereinafter fully described, illustrated in preferred form in the accompanying drawings, and having the novel features thereof particularly pointed out in the appended claims.

In the drawings, Figure 1 is a view in elevation of the music-rack extended in operative position. Fig. 2 is a view in rear elevation of the members 1 and 28, with portions of the structures attached thereto. Fig. 3 is a detail in perspective of one of the leaf-clamps and the structures adjacent thereto. Fig. 4 is a detail view in section through the clamp and other members shown in Fig. 3. Fig. 5 is a detail view of another type of leaf-clamp and a portion of the intermediate leaf-turner. Fig. 6 is a sectional detail view of the members shown in Fig. 5. Fig. 6^a is another sectional detail view of members shown in Fig. 5. Fig. 7 is a perspective view of the devices employed in securing the music-rack upon a piano. Fig. 8 is a sectional detail view of the members shown in Fig. 7. Fig. 9 is a perspective view of another form of support-

ing device. Fig. 10 is a perspective view of an attachment to be placed at the bottom of the music-rack. Fig. 11 is a sectional view showing the relative position of the attachment shown in Fig. 10 to the music-rack. Fig. 12 is a detail view of the device employed to hold the intermediate-leaf turner against the tension of its turning-springs. Fig. 13 is a view in front elevation of the music-rack folded. Fig. 14 is a detail view illustrating portions of two leaf-carrying members turned to the right and held by individual holders.

Referring to the drawings, in which corresponding parts are designated by similar characters of reference, 1 designates a member which forms the base or main support of the apparatus. The member 1 consists, preferably, of a metal bar of suitable width and thickness having rigidly attached thereto intermediate of its ends and projecting on either side thereof a transverse member 2. The member 2 has pivoted thereto at 3 3 arms 4 and 5, each of which is limited in its pivotal movement by contact with the end of a rib 6, secured upon the back of the member 2, the members 4 and 5 being provided with shoulders 7 and 8, respectively, for engagement with said rib. The members 4 and 5 are longitudinally slotted, as shown at 9 and 10, and extensions 11 and 12 are slidably connected with the arms 4 and 5 by studs 13, attached to the said extensions and arranged in pairs, as shown. The studs 13 extend through the slots 9 and 10 and prevent pivotal movement of the extensions 11 and 12, while permitting free sliding movement of said extensions.

Near the upper end of the member 1 it is provided with a longitudinal slot 14, and an arm 15 is connected with the member 1 by means of a stud 16, which extends through said slot. Near the bottom the member 1 has pivoted thereto a member 17, whose pivotal movement is limited by a small stud or boss 18. The arms 15 and 17 are provided at their free ends with extensions 19 and 20, respectively, both of said extensions being longitudinally slotted, as shown at 21 and 22, respectively, and being connected with the arms by

means of studs fixed at the extremities of said arms and passing through said slots 21 and 22.

The outer ends of the extensions 19 and 20 are connected by means of an extensible member 23, consisting of slotted bars 24 and 25, connected by studs engaging said slots, as shown. The member 23 is connected with the extensions 19 and 20 by means of thumb-screws 26, passing through openings provided therefor in said extensions and engaging threaded openings in the ends of the member 23.

The structure disclosed in the foregoing paragraph may be generally included under the term "supporting portion" to differentiate that part of the music-rack from the leaf-turners, which are now to be described.

Hinged to the member 1, at the left thereof, by means of hinges 27 is a bar 28, provided near its upper end with a slot 29, as shown, and having an arm 30 attached thereto by means of a stud 31, extending through said slot. Near the lower end the bar 28 has pivotally attached thereto an arm 32, whose downwardly pivotal movement is limited by a small stud 33. The arms 30 and 32 are provided with extensions in the form of slotted members 34 and 35, connected with the arms by means of studs passing through slots 36 and 37, provided therefor in said extensions. The extensions are connected by an extensible member 38, consisting of slotted bars 39 and 40, connected by studs engaging the slots, as shown. The member 38 is substantially the same in construction as the member 23, above described, and is secured into position by thumb-screws 38^a.

Upon the member 23 and the member 38 leaf-clamping devices are provided at the upper and lower ends of said members. The leaf-clamping devices may be of various forms, but that which I prefer and have illustrated consists in each case of a spring plate or tongue 41, attached at one end to the member upon which it is mounted and having the other end free and normally sprung outward from said member. To force the spring plate or tongue into engagement with a leaf of music, a clip 42, presenting jaws 43 and 44, is pivotally mounted at the fixed end of the spring plate or tongue, and the jaws are separated by just sufficient space to permit the spring-tongue and the member upon which it is supported to enter between them. As each of the leaf-clamps upon the members 23 and 38 is of exactly the same construction, description of one of said clamps is regarded as sufficient.

When the music-rack is in position for use and the music is open, the leaf-turner, consisting of the bar 28 and the members carried thereby, will occupy the position shown in Fig. 1, and the member 38 will contact with and be supported by the extension 12 of the member 5. This is the normal position of the leaf-turner, being held in such position by means

of springs 45 and 46, attached to the rear surfaces of the bars 1 and 28 in the manner shown.

Another leaf-turner is shown in the form of the invention illustrated, and it is to be understood that the number of leaf-turners may be increased without departing from the spirit of the invention. The additional leaf-turner referred to is of different structure from that already described and is detachably connected with the member 1.

Upon the back of the member 1, at each end thereof, an eye 50 is provided, and each of said eyes 50 affords means for securing at the end of the member 1 a housing 52, which is held against rotative movement by means of a pin 53, entering the eye 50, and a pin 54, lying in contact with the back of the member 1. The pin 54 in each housing is wound with a spring 55, which is connected with an arm 56, pivotally mounted on the pin 54 and held by the spring 55 in the position indicated in Fig. 1. The arm 56 has rigidly attached thereto at the end an extension 57, terminating in a loop 58, and a second extension 59 extends through the loop 58 and is connected with the extension 57 by means of a loop 60 engaging said extension. A small collar 61, consisting of a coil of wire or other suitable structure, embraces both of the extensions between the loops 58 and 60 and forms means whereby said extensions may be locked in adjusted position. Each extension 59 is provided at its outer end with an internally-screw-threaded socket 59^a, the outer open end of which is engaged by the threaded portion of an adjusting-screw 61, which is freely rotatable within an unthreaded bearing 62, carried upon the adjacent end portion of an upright bar 63. By this construction the bar 63 may be conveniently removed from the members 59 for convenience in folding and storing the device, and the screw-threaded connection between the screws and the sockets 61 permits of the required adjustment to properly fit the bar 63 to the upper and lower members 59. Upon the bar 63 are slidable leaf-clamps of peculiar structure. Each of the clamps 64 consists, preferably, of a sleeve 65, slidably engaging the bar, a plate 66, rigidly attached to said sleeve, a spring-tongue 67, and a plate 68, attached to the tongue and adapted to cooperate with the plate 66.

Before beginning to play from music supported upon the rack the leaf-turners will be turned to the right, and in order to hold the leaf-turners in that position separate retention devices are provided upon the extension 11 of the arm 4, as shown at the right-hand side of Fig. 1 and also in Fig. 14. For engagement with the leaf-turner first described a latch 70, having a laterally-projecting lug 71, is pivotally mounted upon the extension 11, and a small handle or finger 72 is provided at the free end of the latch to swing it into and out of operative position. The leaf-turner last described is held in the posi-

tion above described by means of a spring-pressed member 73, pivotally mounted on the extension 11 and provided with a curved lug 74, as shown in Fig. 12, which passes through an opening provided therefor in the extension and serves as a guide for said member. The member 73 is adapted for engagement with a plate 75, which is rigidly attached to the light bar 63 for that purpose.

For the support of the music-rack upon a stand of the ordinary type used by musicians I provide buttonhole-slots 80 in the member 1, and also provide a stem 81, having at the end thereof and disposed at an oblique angle thereto a plate 82, provided on its forward surface with headed studs 83, adapted to enter said buttonhole-slots and obtain a positive hold upon the member 1 when said studs are forced into the narrower portions of said slots. For supporting the device upon a piano or organ I preferably provide upon some suitable portion of the piano a holder H of the form shown, which presents a slot 85, adapted to receive a bent tongue 86 at the end of a plate 87, provided with headed studs 88 for engagement with the buttonhole-slots 80.

In order to prevent the music from bulging forward in the median line when the leaf-turners operate, a strip of thin sheet metal 90 is attached at its ends to the bar 28, as shown, and the music placed upon the rack is passed under the said strip. This strip holds the middle portion of the piece of music against the bar 28 and prevents the music from bulging forward at the middle in the manner common in music-turners as ordinarily constructed.

When the music-rack is kept open and it is not desired to use the leaf-turners, a detachable structure may be employed upon the lower portion of the rack to afford a convenient support for the lower edges of the leaves of music in the ordinary fashion. This detachable structure consists, preferably, of two angular members 91 and 92, pivotally connected, as shown, and provided with hooks 93 at the back thereof, which are adapted for engagement with the arms 32 and 17. When, however, the leaf-turners are to be brought into play, the members 91 and 92 must of necessity be detached from the rack to permit the leaf-turners to operate.

From the foregoing description it will have been noted that the supporting structure of the rack and the leaf-turners are adjustable laterally and longitudinally to conform to leaves of music of different sizes. All of the arms of the supporting structure and the leaf-turners are extensible, as fully explained, and the members 23 and 38 are also extensible to conform to different lengths of the leaves of music. In the turner provided for the intermediate leaf of music the bar 63 is not extensible; but the adjustment to correspond to music-leaves of different lengths is effected by

sliding the leaf-clamps upon the bar 63. It is of course to be understood that the engagement of the studs with the slotted bars of the rack is accompanied by a certain amount of friction to cause the parts to remain in any adjustment in which they are placed, and a certain amount of stiffness is provided for by set-screws connecting the members 23 and 38 with the arms to which they are attached.

When the rack is in use, it is supported directly upon a musical instrument or upon a suitable standard by means of the devices already described, and the supporting structure, comprising the base and the arms attached thereto, is adjusted to correspond to the dimensions of the piece of music to be held by the rack. The music is placed in position upon the rack by passing the front cover-leaf under the flexible strip of metal 90, attached to the leaf-turner for the front cover-leaf, and the margins of the two cover-leaves are gripped securely by means of the clamping devices over the members 23 and 38. The intermediate leaf of the music, if there be one, is gripped at its outer margin by means of the clamps slidably mounted upon the bar 63 and is held at its inner margin by being slipped under the flexible metal strip 90. The leaf-turners may then be turned over upon the supporting structure, the intermediate-leaf turner being held by the spring-pressed member 73 and the front-cover-leaf turner being engaged by the lug 71 upon the pivoted latch 70. When it is desired to begin playing and the music must be opened to expose the inner page of the front cover-leaf, the pivoted latch 70 will be swung in the direction indicated in Fig. 1, so leaving the leaf-turner previously engaged by the lug 71 free to swing under the influence of the springs provided on the back of the base of the rack. When all of the music exposed by the turning of the turner for the front cover-leaf has been played, the spring-pressed member 73 will be lifted with the thumb or finger, and the springs governing the movement of the turner for the intermediate leaf will instantly turn that leaf to expose the notes upon the rear page thereof and upon the inner page of the rear cover-leaf.

As by far the greater portion of the sheet-music published comprises only two cover-leaves and an intermediate leaf to each piece of music, provision is made in the rack above described for that number of leaves only; but it will be obvious that the structure of the rack may be modified without departing from the spirit of the invention to provide for the turning of a larger number of leaves by merely increasing the number of turners of the type described for intermediate leaves of music. There would obviously be no reason for providing additional turners of the type provided for the front cover-leaf, as the turner of that type is provided primarily to

serve in conjunction with the supporting structure of the rack after the front cover-leaf is opened to balance the weight of the supporting structure and form an extension thereof on the left side of the base, so that the movement of the intermediate leaf or leaves when turned by the devices provided for that purpose will be arrested at the proper point.

When it is not desired to use the apparatus any longer and it becomes necessary to fold it for convenience in carrying, all the extensible arms may be shortened as much as possible, and the members pivoted to the base 1 and the leaf-turner member 28 may be folded into approximate parallelism therewith. At the same time the arms connected with the base 1 and the member 28 by means of studs and slots will be moved toward the lower ends of said slots, and the side members 23 and 38 of the structure will be contracted to correspond, so that the pivoted arms will not project beyond the upper ends of the members 1 and 28 when the structure is folded. The intermediate-leaf turner may be contracted by shortening the arms thereof, the sliding connection of the two members of each arm being readily adapted for that purpose; but I have deemed it inadvisable in so light a structure to provide pivotal connection of the parts in order to permit the folding thereof in manner similar to the supporting structure and front-cover-leaf turner. When the rack is folded for convenience in carrying, it is of course detached from the standard or bracket employed to hold it in proper position when in use, and the entire structure when folded presents the appearance illustrated in Fig. 13.

In the construction of the music-rack metal, preferably steel, is the material which I have found most satisfactory, as greater strength is obtained with a small bulk and moderate weight than is obtained by the use of any other material. If, however, it is desired to employ wood, celluloid, or other material, it may be done by varying the proportions of the parts, and a structure of similar capability of operation will be obtained.

While I have described and illustrated a preferred form of embodiment of the invention, it will be obvious that various changes in the details of construction may be made without departing from the spirit of the invention or sacrificing any of the advantages thereof, and I do not, therefore, limit myself to the exact construction shown, but reserve the right to make changes therein within the scope of the appended claims.

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

1. In a structure of the character specified, the combination with a supporting structure composed of extensible members adjustable to conform to leaves of different lengths and

widths, of a leaf-turner including a member hinged to said structure, extensible arms pivotally mounted upon said hinged member, and an extensible member pivotally connected with said arms at their outer ends.

2. In a structure of the character specified, the combination with a supporting structure adjustable to conform to leaves of different lengths and widths, of a leaf-turner also adjustable to leaves of different lengths and widths and including a member hinged to said supporting structure and having a longitudinally-arranged slot therein, an arm pivoted at one end of said hinged member, a second arm pivoted in said slot, and an extensible member adjustably connected with said arms at their outer ends.

3. In a structure of the character specified, a leaf-turner including a hinged member, extensible arms pivotally attached to said hinged member and adjustable to and from each other, an extensible member connecting said arms at their outer ends, and positive leaf-clamping devices provided upon said extensible member.

4. In a structure of the character specified, a leaf-turner including a hinged member, pivoted extensible arms projecting from said hinged member and adjustable toward and from each other, an extensible member connecting the outer ends of said arms, positive leaf-clamping devices upon said extensible member, and means for positively clamping said extensible member to said arms.

5. In a structure of the character specified, a leaf-turner including a leaf-supporting structure and leaf-clamping means, said leaf-clamping means consisting of a spring-tongue fixed at one end upon the supporting structure and having the other end normally out of contact therewith, and a clip pivotally mounted on said supporting structure and having jaws spaced apart sufficiently to receive between them the spring-tongue and the adjacent portion of the leaf-supporting structure and adapted to hold said spring-tongue in engagement with a leaf.

6. In a structure of the character specified, a leaf-turner including a leaf-supporting structure and leaf-clamping devices, said leaf-clamping devices being slidable on the supporting structure and each consisting of a sleeve arranged to slide on the supporting structure, a plate fixed upon said sleeve to serve as a gripping-jaw, and a spring-pressed jaw also mounted on said sleeve and adapted to oppose said plate.

7. In a structure of the character specified, a leaf-turner including a hinged member and arms projecting from said hinged member, and a strap extending longitudinally of said hinged member and attached thereto at the ends only under which leaves may be slipped to be held in position when the leaf-turner operates.

8. In a structure of the character specified,

a supporting structure, a leaf-turner hinged thereto at one side thereof, and a strap attached at its ends to the leaf-turner adjacent to the hinges connecting it with the supporting structure, whereby music mounted upon the supporting structure and leaf-turner may be held at the middle.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHAS. E. WILLIAMS.

Witnesses:

LESLIE J. OWEN,
C. O. CLARK.