K. S. ASLAND.

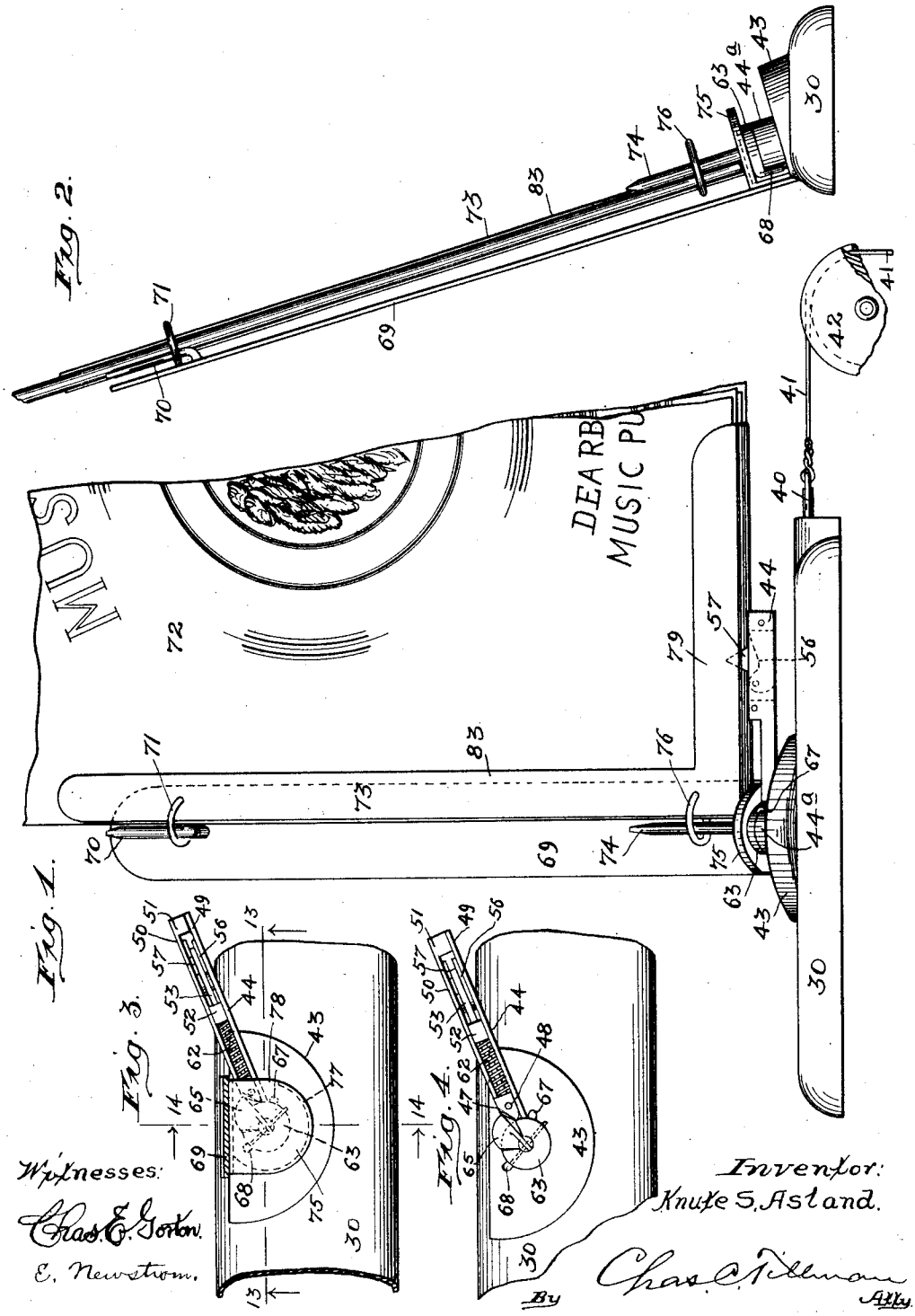
MUSIC LEAF TURNER AND HOLDER.

APPLICATION FILED NOV. 13, 1911.

1,038,818.

Patented Sept. 17, 1912.

4 SHEETS—SHEET 1.



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E. Newstrom.

Inventor:
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Atty

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4 SHEETS—SHEET 2.

Fig. 5.

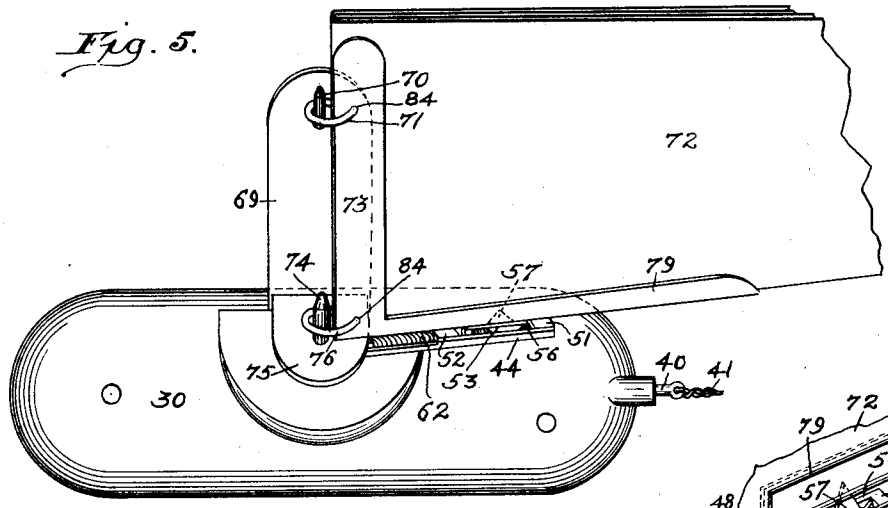


Fig. 6.

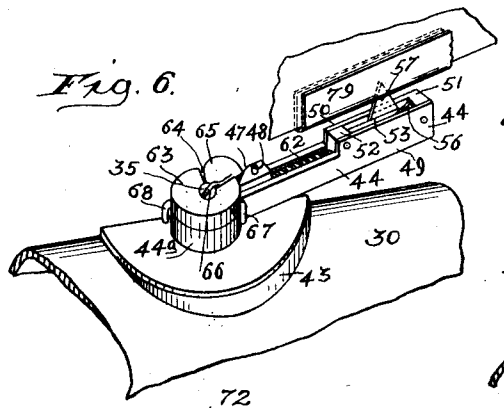


Fig. 7.

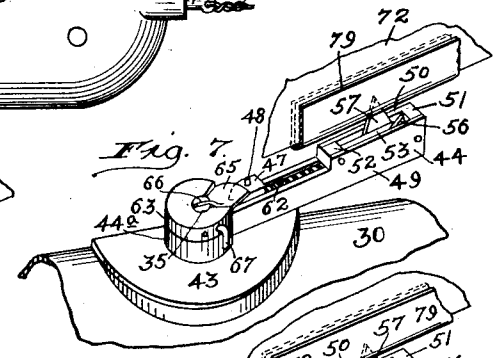


Fig. 8.

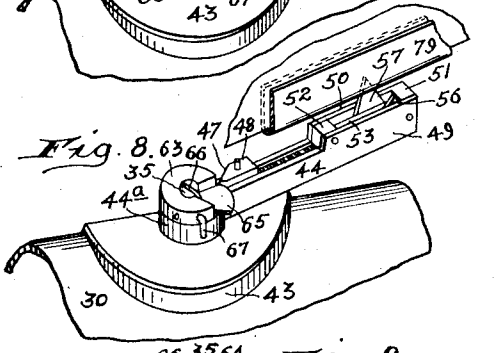


Fig. 10.

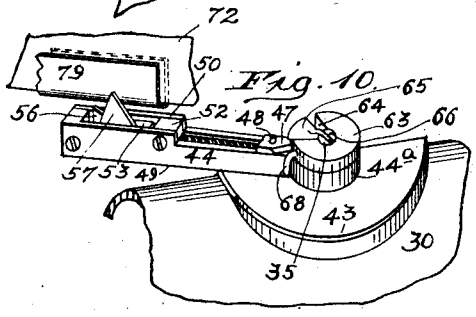
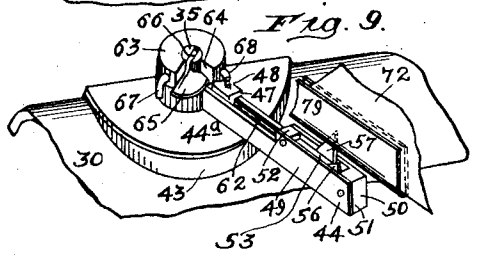


Fig. 9.



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4 SHEETS—SHEET 3.

Fig. 11.

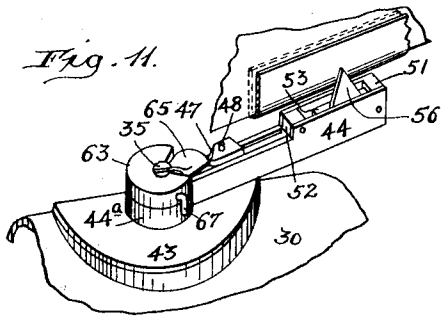
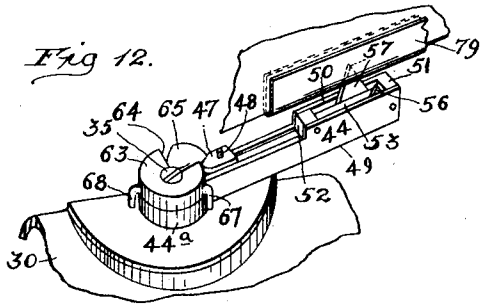


Fig. 12.



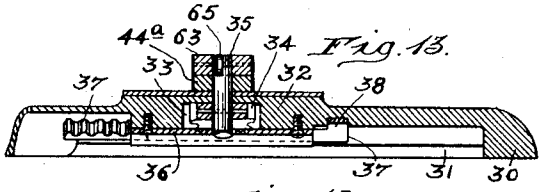


Fig. 13.

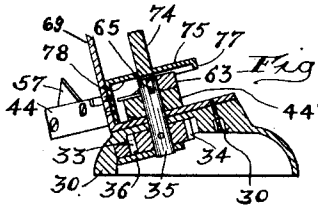
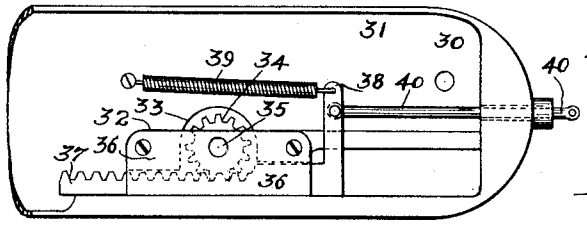


Fig. 14.

Fig. 15.



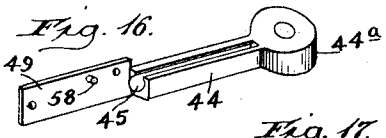


Fig. 16.

Fig. 17.

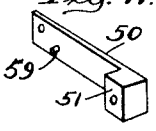


Fig. 18.

Fig. 22.

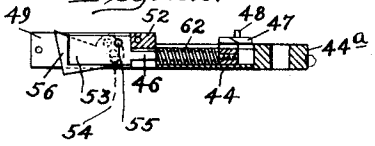


Fig. 20.

Fig. 19.

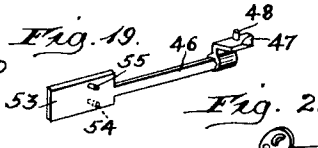


Fig. 21.

Fig. 24.

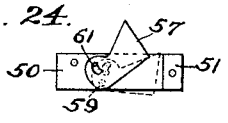


Fig. 23.

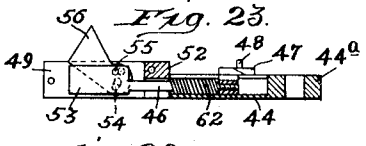


Fig. 26.

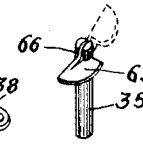
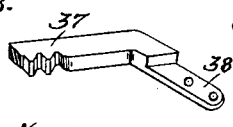


Fig. 27.

Fig. 25.

Fig. 28.



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4 SHEETS—SHEET 4.

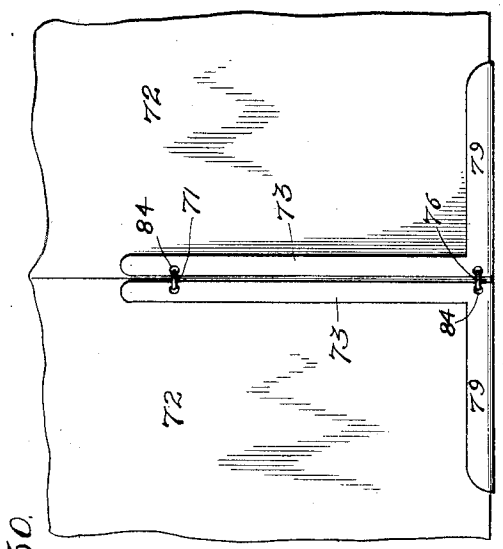

Fig. 30.

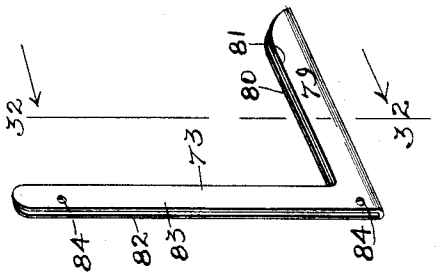

Fig. 31.

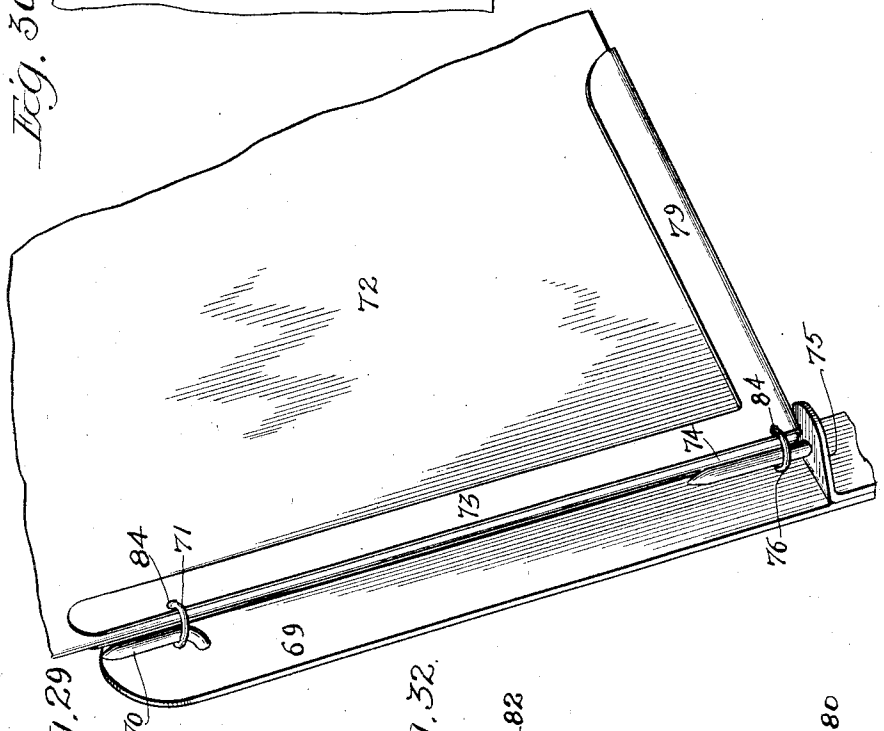

Fig. 29.

Fig. 32.

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UNITED STATES PATENT OFFICE.

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MUSIC-LEAF TURNER AND HOLDER.

1,038,818. Specification of Letters Patent. Patented Sept. 17, 1912.

Application filed November 13, 1911. Serial No. 659,999.

To all whom it may concern:

Be it known that I. KNUTE S. ASLAND, a subject of the King of Norway, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Music-Leaf Turners and Holders, of which the following is a specification.

This invention relates to improvements in a device to be used for holding and turning the leaves of sheet music, and while it is more especially intended to be used in connection with pianos and organs, for holding and turning sheets of music, while the same is being played on such instruments, yet it is applicable for use by members of orchestras and other musicians, and in such instances can be supported on the music racks or stands ordinarily used by them, and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide a music leaf turner and holder which shall be simple and inexpensive in construction, strong, durable, and efficient in operation, and so made that it can be mounted on a suitable support such as a piano, or organ, or music rack, and can be operated by a pedal or lever which may be pressed by the foot or the knee of the musician.

Another object of the invention is to provide means whereby the sheets of music may be separately turned on the holder from one side of the music support to the other.

Still another object is to so construct the device that the arm and fingers of the apparatus employed for engaging and turning the sheet will be automatically moved to its initial position and engage the sheets one at a time automatically, thus requiring pressure or power to operate the turning or throwing arm in one direction only.

Various other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which the invention pertains, to make and use the same I will now proceed to describe it referring to the accompanying drawing in which—

Figure 1, is a front view in elevation of a music leaf holder and turner embodying the invention, showing a portion of a group of music sheets mounted on the holder and illustrating the device in engagement with the front sheet of said group ready to turn the same to the opposite side of the holder. Fig. 2, is a side elevation of the device. Fig. 3, is a plan view showing a portion of the base broken away and illustrating the upright support for the sheets as being removed or in section. Fig. 4, is a like view of similar parts with the upright support and also the pintle carrying bracket for the lower part of the sheets removed. Fig. 5, is a plan view of the device showing a number of music sheets mounted thereon with the parts in their initial positions. Fig. 6, is a fragmental perspective view of the base of the device with the upright support and pintle carrying bracket omitted, illustrating the mechanism for operating the music sheet engaging fingers in its initial position. Figs. 7, to 10 inclusive, are similar views of like parts showing the different positions certain members of the mechanism will occupy in the operation of turning a sheet from one side of the upright support to the other. Fig. 11, is a fragmental perspective view of the base of the device with the upright support and pintle carrying bracket or cap omitted, illustrating the position parts of the mechanism will occupy when the turning arm has been returned to almost its initial position with the rearwardly pressing finger about to be tripped and the forwardly pressing finger about to be raised. Fig. 12, is a similar view of like parts showing the positions they will occupy just after the rearwardly pressing finger has been tripped on the return movement of the arm and the forwardly tripping finger raised to engage the sheet. Fig. 13, is a longitudinal sectional view of the base of the device taken on line 13—13, of Fig. 3, looking in the direction indicated by the arrows, but showing the upright support and pintle carrying bracket or cap removed. Fig. 14, is a cross sectional view taken on line 14—14, of Fig. 3, looking in the direction indicated by the arrows. Fig. 15, is a bottom plan view of the device. Fig. 16, is a detached perspective view of a portion of the leaf or sheet turning arm. Figs. 17, to 21 inclusive, are detached perspective views of parts of the turning arm. Fig. 22, is a longitudinal sectional view of the turn-

ing arm detached from its shaft showing one of the fingers thereof in its lowermost position. Fig. 23, is a similar view of like parts showing one of the fingers raised. Fig. 24, is a side view of a portion of one of the fingers showing it mounted on one side of the turning arm. Figs. 25, to 28 inclusive, are perspective views of detailed parts of the mechanism. Fig. 29, is a perspective view of a music sheet holder showing it mounted on an upright support. Fig. 30, is a face view of two members of the sheet holder showing sheets supported thereby and in their open positions. Fig. 31, is a perspective view of one of the sheet holding members, and Fig. 32, is a view partly in elevation and partly in section taken on line 32, of Fig. 31.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The base of the device is designated as a whole by the reference numeral 30, and is made of metal and preferably elongated in form as shown in Figs. 1, and 5, of the drawings, so that it may be placed longitudinally on a piano frame just above the keyboard thereof or may be mounted on a music stand or rack and secured in position thereon if desired. The base 30, is provided with a cavity 31, in its lower surface for the reception and operation of certain parts of the mechanism as will be presently explained. As is shown in Figs. 13 and 14, the base 30, is provided near its central portion with an enlargement 32, which extends into the cavity 31, and said enlargement is formed with a circular cavity 33, for the reception and operation of a pinion or gear 34, which is fixed to a shaft 35, which is extended vertically through the upper portion of the base 30, and is journaled at its lower end in a suitable opening in a plate 36, which is secured to the lower surface of the enlargement 32, of the base. Located within the cavity 31, of the base and between the rear wall of the latter and the enlargement 32, is a rack 37, which engages the pinion or gear 34, and has at one of its ends an arm 38, which extends forwardly of the base and has connected to its free end a spring 39, which spring is secured at its other end to the base and is employed to retract the rack. Loosely connected to the arm 38, near its connection with the spring 39, is a rod or connection 40, which is extended through a suitable opening in one end of the base and may have connected thereto a cord or connection 41, to pass over a pulley 42, (see Fig. 1, of the drawings) which pulley may be mounted on the support for the device. The cord or connection 41, may be attached to a pedal or lever (not shown) which can be operated by means of the foot or knee of the musician.

As shown in the different views of the drawings, the base 30, is provided on its upper surface at about its middle with an enlargement 43, through the central portion of which is extended the shaft 35, which shaft has loosely mounted thereon at one of its ends the turning or throwing arm for the music sheets which arm is designated as a whole by the reference numeral 44, and is provided with a longitudinally extended groove 45, (see Fig. 16,) for the reception and operation of a plunger 46, (see Fig. 19) which carries at its end adjacent to the head 44ª, of the throwing arm a cam bracket 47, which is provided on its upper surface with a pin 48, and which bracket lies on the upper surface of the arm 44, when the plunger 46, is in place within the groove 45, of said arm. As shown in Fig. 16, the arm 44, is provided at its end opposite the head 44ª, with a plate 49, to which another plate 50, having a head 51, on its inner surface at its outer end is secured, the other end of the plate 50, being secured to a recessed block 52, which is located at the outer or free end of the groove 45, and between the plates 49, and 50, so that its recess will stride the reduced portion of the plunger 46, which plunger is provided at its end opposite that on which the cam bracket 47, is mounted, with a flat extension 53, which is provided on opposite sides with pins 54, and 55, to engage the cam slots of the music sheet engaging fingers 56, and 57, respectively. The finger 56, is pivotally mounted on a pin 58, on the inner surface of the plate 49, of the throwing arm, and the finger 57, is similarly mounted on a pin 59, on the inner surface of the plate 50, of said arm, and as the flat extension 53, of the plunger extends between said fingers, it will be understood that the pin 54, on the extension 53, will fit in the cam slot 60, of the finger 56, while the pin 55, on the extension 53, will fit in the cam slot 61, of the finger 57. The reduced portion of the plunger 46, has located therearound a coiled spring 62, which rests at one of its ends against the cam bracket 47, and at its other end against the recessed block 52, said spring being located in the groove 45, of the turning arm. As the cam slots 60 and 61, of the fingers 56, and 57, respectively, are located one below the bearing point and the other above the bearing point of said fingers it is apparent that as the plunger 46, is reciprocated, these fingers, will have alternate movement so that they will project one at a time above the upper surface of the throwing or turning arm, to the end that, one of said fingers, to-wit, 56, will act to retard or hold the sheet in front thereof, while the other finger 57, will engage its rear surface and continue in contact with said surface during the operation of turning the sheet. Fixed to the shaft 35, above

the head 44ª, of the throwing arm is a collar 63, which is provided with a cut out portion or recess 64, which recess communicates with the opening in said collar which receives the upper portion of the shaft 35, and is for the reception and operation of a wing trigger 65, which has at its inner portion a projection 66, extended into a slot in the upper end of the shaft 35, in which end said projection is pivoted so as to permit of the upward and downward movement of the trigger 65, as will be readily understood by reference to Fig. 26, of the drawings. The collar 63, is provided on each side of the recess 64, therein, with downwardly extended projections 67, and 68, which projections are located on opposite sides of the turning arm 44, and will permit the collar 63, to be moved independently of the arm 44, until restricted by said projections.

As shown in different views of the drawings, the raised or enlarged portion 43, on the base 30, is segmental in shape, and has secured to its rear and straight portion an upright 69, which has on its front surface near its upper and lower ends forwardly and upwardly extended projections or pintles 70 and 74, to engage rings 71 and 76 respectively, employed in the upper and lower portions of the music sheets 72, and the upper and lower portions of the stiffeners 73, for said sheets, which stiffeners may be made of metal or other stiff material and placed near the side and lower edges of each of said sheets to render them less flexible at said portions so that they may be more readily supported by the pintles 70, and 74, on the upright support 69, and turned by the turning arm 44, when desired. Secured to the lower portion of the upright 69, and extended forwardly above the collar 63, and if desired, so as to rest lightly thereon, is a bracket or cap 75, which carries an upwardly extended pintle 74, to engage a ring 76, passed through the sheets 72, and the stiffeners 73, therefor, at their edges adjacent to said pintle. The bracket or cap 75, has on its lower surface at its perimeter a downturned flange 77, (see Figs. 3, and 14) which flange is cut away as at 78, in its portion adjacent to the initial position of the turning arm, and is for the purpose of acting as a lock or restriction to engage the pin 48, on the cam bracket 47, which pin engages the inner surface of said flange after the arm 44, has been turned a certain distance in the operation of turning a sheet, and so as to prevent the outward movement of the plunger 46, and the actuation of the fingers 56, and 57, until the turning arm has been returned almost to its initial position.

From the foregoing and by reference to the drawings, it will be readily understood and clearly seen, that, assuming the parts are in the positions shown in Figs. 1, 2, 3, and 6, of the drawings, and that the device is mounted on the ledge of a piano or organ above the keyboard thereof, or is supported on a music stand or rack, and that connections 40, and 41, of the rack 37, are operated by a lever (not shown) and that the connection 41, is passed over a pulley 42, it is obvious that by applying pressure in the proper direction to said lever, the spring 39, will yield sufficiently to allow the rack 37, to be moved in such a way as to cause the pinion or gear 34, and the shaft 35, thereon, to be turned in the opposite direction, in which operation it will be understood that as the arm 44, is loosely mounted on the shaft 35, and the collar 63, is fixed on said shaft, that the shaft will be turned a slight distance independently of the turning arm, in which action the wing trigger 65, will be caused to travel from the position shown in Fig. 6, and by reason of the bevel of the cam bracket 47, to ride over the latter as shown in Fig. 7, until the collar 63, and the wing trigger 65, reach the positions shown in Fig. 8, when it is apparent that the wing trigger will drop in front of the bracket 47, and the projection 68, on the collar 63, will strike the rear portion of the arm 44, thus causing the arm and collar to rotate with the shaft 35, until the music leaf is turned from its initial position to the opposite side of the support 69, when by releasing the pressure on the lever or means for operating the connections 40, and 41, of the rack 37, it is manifest that the spring 39, will retract the rack 37, in which operation the pinion or gear 34, will be turned in the opposite direction from that of the movement of the rack, which operation will cause the arm 44, to be returned toward its initial position, the collar 63, and the wing trigger 65, also being returned in unison with the arm, until the pin 48, on the cam bracket 47, has reached the end of the flange 77, on the bracket or cap 75, at which time the curved portion of the wing trigger 65, will be caused by the pressure of the spring 39, through the instrumentality of the rack 37, shaft 35, and pinion 34, to force the bracket 47, and plunger 46, outwardly from the said shaft, thus causing the rear finger 57, to be depressed and the front finger 56, to be raised so that the latter will rest against the front surface of the music sheet and press the same rearwardly when by slight further movement of the arm 44, actuated by the spring 39, the wing trigger 65, will be released from the cam bracket 47, when the spring 62, will force said bracket and plunger 46, toward the shaft 35, thus causing the finger 57, to be raised rearwardly of the music sheet so as to engage the stiffeners 73, thereon when by again pressing the lever or operating the means for actuating

the connections 40, and 41, with the rack 37, the above described operation will be repeated.

An important feature of the invention is the music sheet holder fully illustrated in Figs. 29 to 32 inclusive, and consists of one or more sheet holding members 73, each of which is made of any suitable material but preferably of sheet metal, and bent at its lower or horizontal portion to form a channeled member 79, (see Fig. 31,) for the reception of the lower edge of the music sheet, that is to say, the piece out of which the member 79, is formed, is bent so as to provide two parallel portions 80, and 81, which are spaced apart sufficiently to receive the lower portion or edge of a sheet of music. Extended upwardly from each of the portions 80, and 81, and at one of their ends are parallel members 82, and 83, respectively, which are provided with openings 84, to receive the rings 71, and 76, which, when the holder is placed in position on the upright 69, will encircle the pintles 70, and 74, thus allowing the stiffeners or holders 73, to be freely turned from one side of the support to the other. When the piece of music comprises more than one sheet, a holding member 73, is used on each sheet and will embrace the lower adjacent corners as well as the adjacent edges of the sheets and will be loosely connected together by means of the rings 71, and 76, which as before stated, are passed through the openings 84, in the members 82, and 83, as well as through openings in the music sheets, thus binding them together in a group which can be supported on the pintles 70, and 74, of the upright so that they can be turned thereon one at a time as desired.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is—

1. In a device of the character described, the combination with a supporting frame including a base and an upright, of means on the upright to pivotally support one or more sheets of music, a sheet turning arm pivoted at one of its ends on said base at the lower end of the upright, means engaging said pivot whereby it and the arm may be turned in one direction, a spring engaging said means to actuate it and said arm in the opposite direction, a pair of fingers pivotally supported on the arm to alternately engage a sheet and each having a cam-slot, a spring-pressed plunger on the arm and extended between said fingers, pins on the plunger engaging the slots of the fingers, a cam-bracket on the plunger, a wing-trigger pivoted for vertical movement on said pivot and adapted to actuate the cam-bracket and plunger in one direction and thereby cause said fingers to automatically engage a sheet.

2. In a device of the character described, the combination with a supporting frame including a base and an upright, of means on the upright to pivotally support one or more sheets of music, a shaft extended upwardly and downwardly through the base at the lower end of said upright, a pinion on the lower portion of said shaft, a spring-actuated rack engaging said pin, means to move the rack in one direction, a sheet turning arm pivoted at one of its ends on said shaft and having a longitudinally disposed opening, a pair of fingers pivotally supported on the inner surface of the walls of the opening in said arm and each having a cam slot, a spring actuated plunger located in the opening of said arm and extended between said fingers, pins on the plunger engaging the slots of the fingers, a cam bracket on the end of the plunger adjacent to said shaft, a wing-trigger mounted for vertical pivotal movement on said pivot and adapted to actuate the cam bracket and plunger in one direction and thereby cause said fingers to automatically engage a sheet.

3. In a device of the character described, the combination with an upright support having forwardly and upwardly extended pintles thereon, of a music sheet holder comprising a channeled portion to receive the lower edge of the music sheet and a pair of spaced apart members extended in parallelism with one another and at right angles from one end of the walls of the channeled portion to receive and support the vertical edge of the sheet, rings loosely secured to the said parallel members and encircling the pintles on the support, a sheet turning arm pivotally mounted at one of its ends at the lower portion of said upright and having means to automatically engage the channeled portion of the music sheet holder, means to turn said arm in one direction, and a spring connected to said means to reverse the movement of said arm and to return it to its initial position.

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