

June 21, 1927.

S. HALMI

1,633,408

MUSIC SHEET TURNER

Filed Sept. 10, 1925

3 Sheets-Sheet 1

FIG. 1.

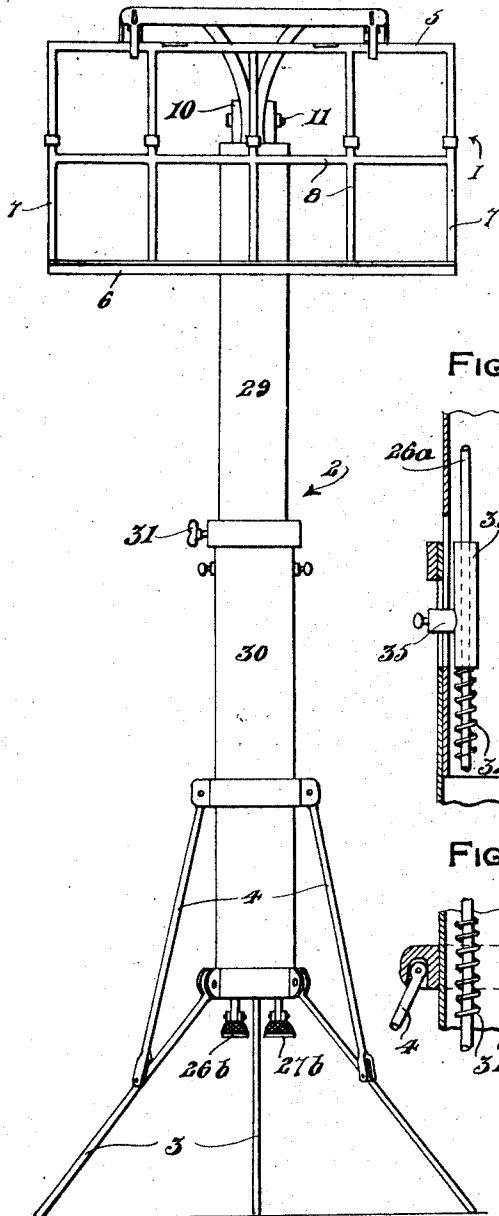


FIG. 2.

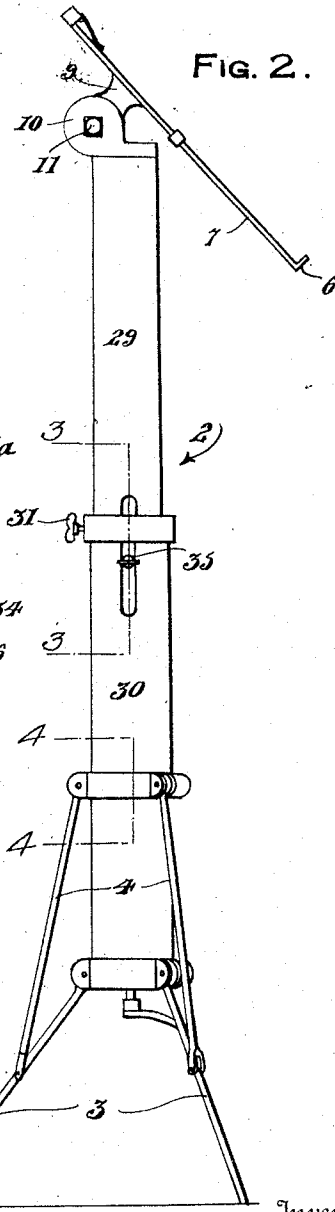


FIG. 3.

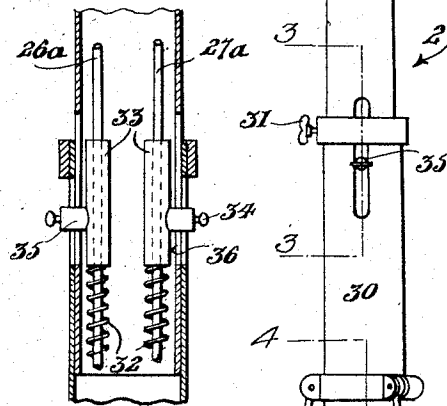
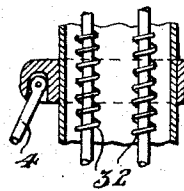


FIG. 4.



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3 Sheets-Sheet 2

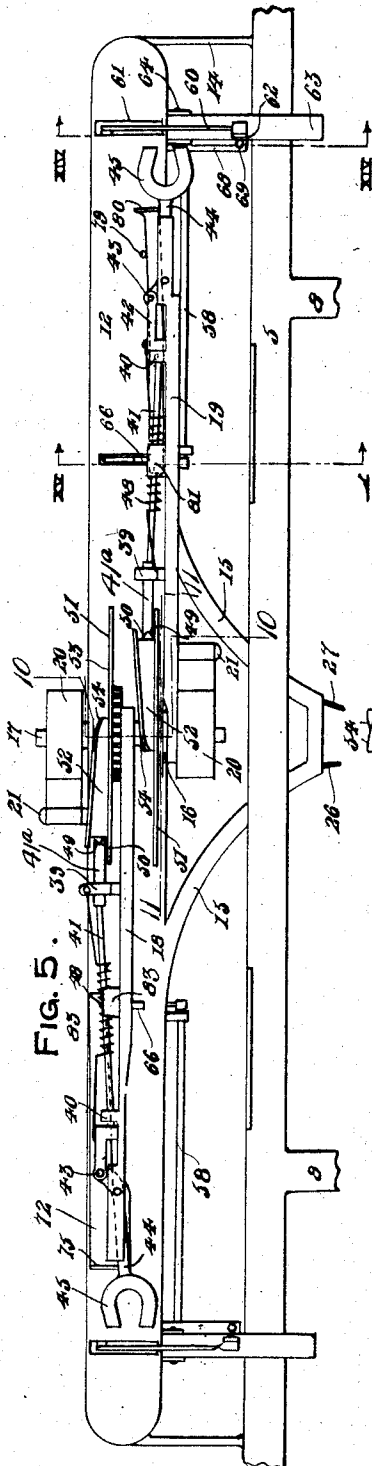


FIG. 5.

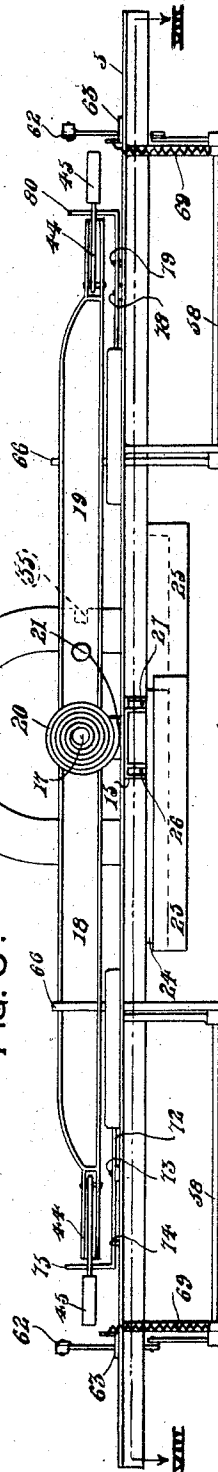


FIG. 6.

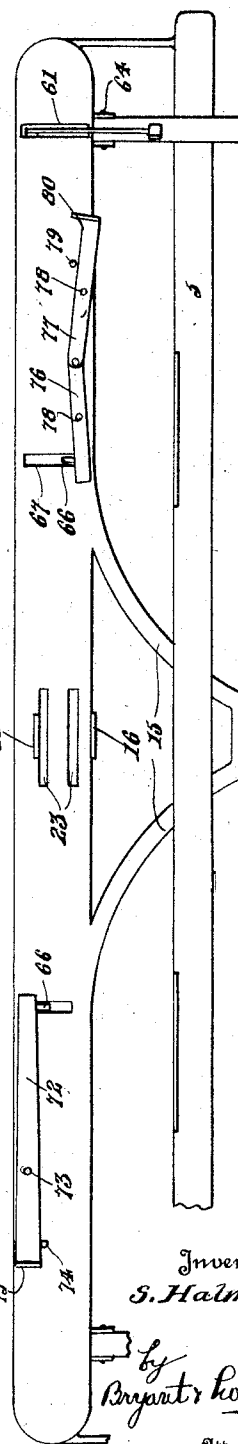


FIG. 7.

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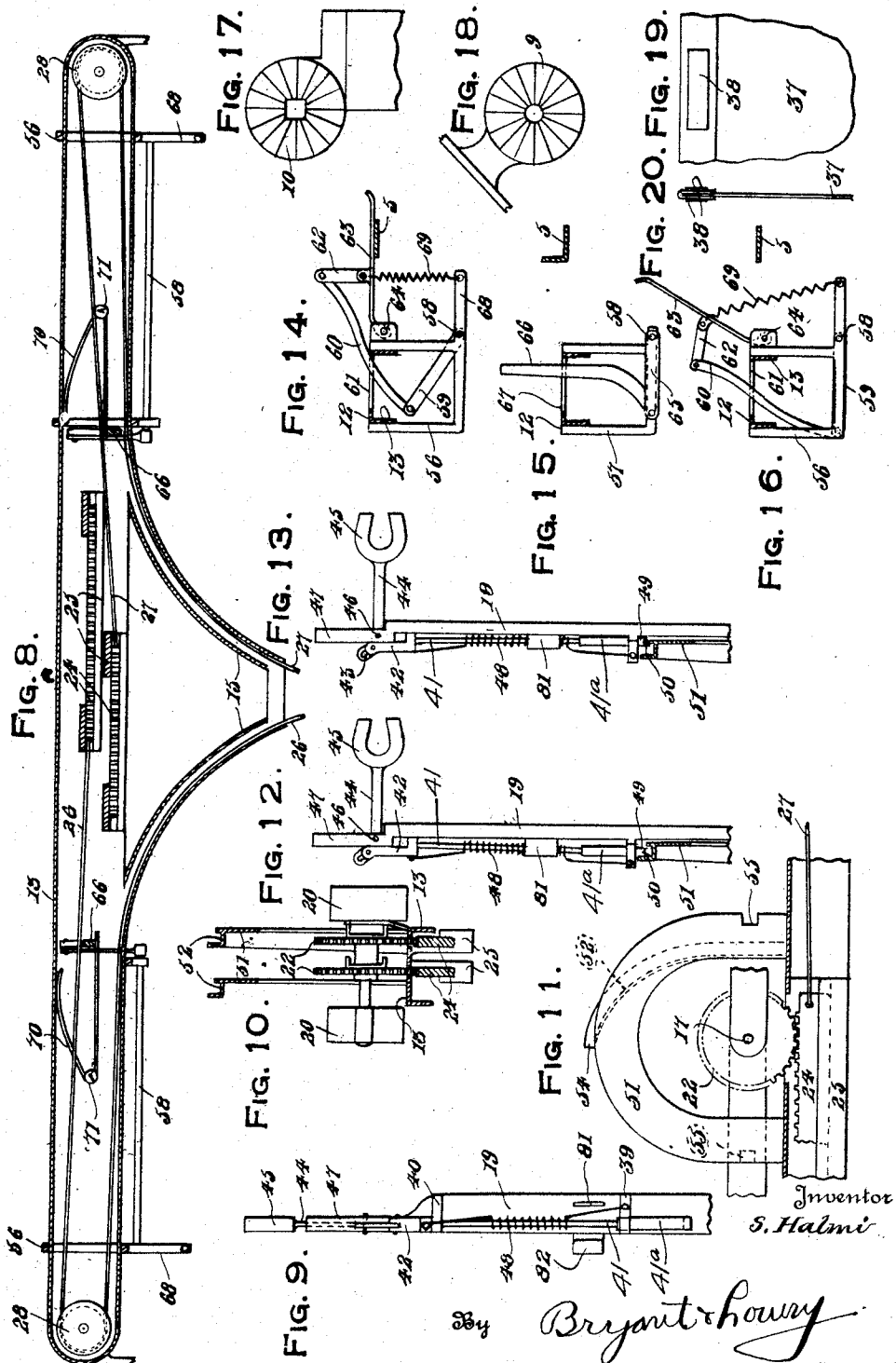
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1,633,408

MUSIC SHEET TURNER

Filed Sept. 10, 1925

3 Sheets-Sheet 3



UNITED STATES PATENT OFFICE.

STEVE HALMI, OF YONKERS, NEW YORK.

MUSIC-SHEET TURNER.

Application filed September 10, 1925. Serial No. 55,516.

This invention relates to certain new and useful improvements in music sheet turners of the type wherein pivotally supported arms that are manually operated are adapted to be moved into engagement with an edge of a music sheet for swinging or moving the music sheet from one side of a stand rack or the like to the other side.

An object of the invention is to provide a music leaf turner wherein a pair of pivotally supported lever arms associated with a music sheet rack are normally tensioned in opposite directions for lying adjacent the rack with manually operated devices for the sheet turning arm to selectively move the same to the opposite side of the rack to engage the free swinging edge of a music sheet to turn or transfer the latter to the other side of the rack.

A further object of the invention is to provide in a music leaf turner of the type above described, a tensioned pivotally supported magnet upon the outer end of each sheet turning arm having devices associated therewith for shifting the magnet to a position at right angles to the longitudinal axis of the arm during movement of the arm from its normal position of rest to its operative position at the opposite side of the rack to cause the magnet to contact a metallic clip carried by the upper free swinging side edge of a music sheet, the magnet constituting the sheet gripping means with the devices for operating the magnet further causing the latter to assume its normal position longitudinally aligned with the sheet turning arm when the latter approaches its normally inoperative position.

A still further object of the invention is to provide a clasp or gripping finger for the free swinging edges of the music sheet to hold the same properly positioned upon the music rack, the sheet clamp or gripping finger being operated to release the music sheet when the magnet is moved into position for contact with the metallic clip on the music sheet.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists of the novel form, combination, and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings, wherein like reference

characters designate corresponding parts throughout the same,

Figure 1 is a front elevational view of a music stand and rack constructed in accordance with the present invention with the sheet turning mechanism diagrammatically illustrated therein,

Figure 2 is a side elevational view of the stand and rack,

Figures 3 and 4 show fragmentary longitudinal sectional views of the music stand showing the tensioned rod carrying the operating pedals and to which rods cords or cables for operating the sheet turning arms are connected,

Figure 5 is a top plan view of the music sheet turning mechanism attached to the upper edge of a music sheet rack showing the tensioned swinging sheet moving arms, the pivotally supported magnet at the outer ends of the arms and the cam members and tensioned rods for shifting the magnet into operative and inoperative positions,

Figure 6 is a front elevational view of the music sheet turning mechanism,

Figure 7 is a top plan view of the mechanism with the sheet turning arms removed and showing the levers that control operation of the music sheet retaining or gripping fingers,

Figure 8 is a longitudinal sectional view showing the under side of the sheet turning mechanism and illustrating the manually operated cords for shifting the sheet turning arm,

Figure 9 is a fragmentary side elevational view of one of the sheet turning arms showing the magnet extended in alinement with the arm,

Figure 10 is a vertical detail sectional view showing the cam members with which the turning arms are associated and the manually slidable racks engaging the pinions carried by the turning arm for operating the latter,

Figure 11 is a fragmentary longitudinal sectional view showing the rack and pinion for operating the sheet turning arms and the cam guides for the devices that shift the magnets,

Figure 12 is a fragmentary top plan view showing the magnet head of the tensioned rod that is attached to the magnet riding on the flat wall between the cam edges with which the tensioned rod head is associated,

Figure 13 is a similar detail view showing the tensioned rod head shifted onto one of the cam edges,

Figure 14 is a detail sectional view taken on line XIV—XIV of Fig. 5 showing the tensioned music sheet gripping finger for retaining the music sheet upon the rack.

Figure 15 is a detail sectional view taken on line XV—XV of Fig. 5 showing the trigger rod associated with the music sheet clamping finger to operate the same and which in turn is engaged by the sheet turning arm,

Figure 16 is a detail sectional view, similar to Fig. 14 showing the sheet gripping finger in its open or releasing position,

Figures 17 and 18 show side views of the adjustable clamping head between the music stand and rack, and

Figures 19 and 20 show fragmentary front and edge elevational views of a music sheet with a metallic clip upon the upper edge thereof to be engaged by the magnet.

Referring more in detail to the accompanying drawings, there is illustrated a music sheet turner associated with a sheet rack, generally designated by the reference numeral 1 that is angularly adjustable upon a standard 2 that is supported by folding legs 3 that are braced by the rods 4 extending between the same and the standard as shown in Figs. 1 and 2. The music sheet rack 1 is in the form of a skeleton frame having upper and lower horizontal rails 5 and 6 respectively, and rails 7 and intermediate brace and sheet supporting rails 8. As shown in Figs. 2, 17 and 18 the music rack 1 is capable of angular adjustment upon the upper end of the standard 2, the rack and standard carrying cooperating blocks 9 and 10 having interengaging ratchet faces that are secured in adjusted angular positions by the bolt 11 passing therethrough.

The music sheet turning mechanism embodies a pair of tensioned arms that are manually operated through the medium of cords attached thereto and extend into the standard 2 for attachment to tensioned rods which carry pedals at their lower ends below the standard and spaced above the floor or other support. To support the sheet turning arms and the mechanism associated therewith, there is provided a channel frame having an upper wall 12 carrying a depending edge flange 13, the opposite ends of the supporting frame having arm connections 14 with opposite ends of the upper rail 5 of the music sheet rack. Arcuate channel guides 15 extend from the supporting frame 12 to the upper end of the standard 2 for purposes presently to appear.

As shown in Fig. 5, a pair of spaced bearing supports 16 project upwardly from the wall 12 of the channel frame that supports

a shaft 17 adjacent the upper ends thereof above the wall 12 and upon which shaft the inner ends of a pair of music sheet turning arms 18 and 19 are journaled. The arms 18 and 19 normally occupy positions adjacent to and parallel with the wall 12, the same being tensioned to occupy such positions by the band springs 20 coiled around the shaft 17 with the inner ends thereof secured to said shaft while the outer ends are anchored to pins 21 carried by the sides of the sheet turning arms.

The mechanism for moving or swinging the arms 18 and 19 from the normal positions shown in Fig. 5 to the opposite sides of the supporting frame wall 12 is shown more clearly in Figs. 8, 10 and 11 wherein the inner journaled end of each turning arm 18 and 19 is provided with a pinion 22 extending downwardly through elongated slots 23 formed in the wall 12 of the supporting frame as shown in Fig. 7 for meshing engagement with rack bars 24 slidably mounted in hanger guides 25 depending from the lower face of the frame wall 12. Operating cords 26 and 27 are attached to the sliding rack bars 24, the cords 26 and 27 being directed outwardly and confined by the channel supporting frame to pass over guard pulleys 28 and returned inwardly for passing through the channel guards 15 for attachment at their other ends to the upper ends of rods 26^a and 27^a that are slidable in the standard 2.

As shown in Figs. 1 to 4, the standard 2 is formed of extensible sections 29 and 30 held in adjusted positions by the screw 31 while the poll rods 26^a and 27^a extend downwardly through openings in the bottom of the standard section 30 and are provided with pedals 26^b and 27^b respectively. In order to retain the pedals 26^b and 27^b at their limits of upward movement and also permitting the music sheet turning arms 18 and 19 normally to occupy their inoperative positions as shown in Fig. 5, the rods 26^a and 26^b are surrounded by expansion coil springs 32 disposed between the bottom wall of the standard section 30 and collars 33 that are adjustably secured to the rods 26^a and 27^a by set screws 34, the bearings 35 for the set screws extending through registering slotted openings 36 formed in the telescoping parts of the standard sections 29 and 30 to permit longitudinal shifting movements of the rods 26^a and 27^a. It will also be understood that by adjusting the collars 33 upon the rods 26^a and 27^a, slack in the cords 26 and 27 may be taken up to insure perfect operation of the sheet turning arms 18 and 19 when the pedals 26^b and 27^b are lowered.

A music sheet, such as a book or the like is mounted upon the rack 1 with the upper edges of the sheet lying adjacent the upper

5 rail 5 of the rack, each sheet 37 as shown in Figs. 19 and 20 carrying a metallic clip or plate 38 at each side of the upper edge for cooperation with a magnet associated
 10 with the sheet turning arms 18 and 19. As shown more clearly in Figs. 5 and 9 to 13, each of the arms 18 and 19 is provided with a pair of spaced apertured guide brackets 39 and 40 through which a rod 41 is slidably
 15 mounted. An angle arm 42 is fixed to the other end of each rod and has a pin and arcuate slot connection 43 with the inner end of the leg 44 of the magnet 45, the leg 44 of the magnet being pivoted as at 46
 20 within the channel arm extension 47 of each sheet turning arm. A coil spring 48 surrounds the rod 41 between the bracket bearings 39 and 40, one end of the spring being attached to the bracket bearing 39, while
 25 the other end thereof is attached to the angle arm 42 for normally holding the leg 44 of the magnet within the channel extension arm 47 and in alinement with the carrying sheet turning arm. A head 41' is carried
 30 by the inner end of each rod 41 and has the free end thereof forked or bifurcated to provide relatively long and short fingers 49 and 50 for cooperation with cam surfaces to be described.

35 A cam device is associated with each head 41' of the tensioned rods 41 to cause longitudinal movement of the rods relative to the supporting sheet turning arms 18 and 19 when the latter are moved for moving
 40 the legs 44 of the magnet upon their pivotal mountings 46 to dispose the magnet legs at right angles to the longitudinal axis of the carrying arm and to position the magnet 55 for contact with the metallic clip 38 upon
 45 the music sheet 37 to carry or turn the music sheet from one side of the rack 1 to the other side thereof. The cam devices are shown more clearly in Figs. 5, 6, 10 and 11 and include arcuate cam strips 51 having
 50 their lower ends secured to the wall 12 of the supporting frame at opposite sides of the bearing brackets 16 for the shaft 17. When the sheet turning arms 19 are in their inoperative positions shown in Fig. 5 the
 55 heads 41' upon the tensioned rod 41 extend inwardly of and adjacent to the arcuate cam strips 51 with the inner forked ends thereof engaging the arcuate cam walls 52 which extend upwardly from the wall 12 and terminate
 60 at a point substantially midway the ends of the cam strip. The inner edge of each cam wall 52 carries an upstanding guide flange 53 having the end 54 thereof terminating at the end of the cam wall 52 and slightly bent toward the adjacent cam strip 51. The upper end of the cam wall 52 approaches the edge of the cam strip 51 while the inturned end of the flange 54 projects above the guide cam strip. It will, therefore, be seen that when either of the sheet

turning arms 18 or 19 is operated by swinging the same upon the supporting shaft 17, the block 41' upon the tensioned rod 41 will ride upwardly upon the cam wall 52 and when the longer finger 49 upon the
 70 bifurcated end of the head 41' engages the inturned end 54 of the guard flange, the head 41' is laterally shifted with the short finger 50 thereof passing over the edge of the cam strip 51 to cause the bifurcated end 75
 of the block to straddle the cam strip and at which time the rod 41 will be projected to dispose the magnet leg at right angles to the longitudinal axis of the carrying arm as shown in Figs. 12 and 13. The magnet 80
 leg will remain at right angles to the carrying sheet turning arm until the latter assumes the position adjacent the wall 12 and at which time the cutout portion 55 at the lower end of the cam strip 51 will permit
 85 the coil spring 48 upon the rod 41 to shift the latter and the block 48 to the position shown in Fig. 5 and to longitudinally extend the magnet leg in alinement with the arm.

To hold the music sheet in position upon the rack 1, there is provided a clamp arm carried by each end of the wall 12 of the supporting frame that engages the upper
 90 rail 5 of the rack to clamp the upper edges of the music sheet onto the rack and said clamping arms are operated to be moved to releasing positions when the magnet 55 engages the music sheet for turning the same.
 95 The music sheet holding devices include a pair of rectangular frames 56 and 57 disposed respectively at the outer ends of the frame wall 12 and at points spaced inwardly thereof with a shaft 58 journaled in the rectangular frames 56 and 57 as shown in Figs. 14 to 16. As shown in Fig. 14, a lever 59
 100 has one end thereof pivoted to the adjacent end of the shaft 58 while the other end of the lever 59 is pivotally connected to a link 60 that extends upwardly through a slotted opening 61 in the frame wall 12 while the other end of the link 60 is pivotally attached to an arm 62 that has its lower end fixed to the clamp arm 63. This clamp arm is pivotally supported as at 64 upon the adjacent side flange 13 of the supporting frame with the free end of the clamping arm 63 overlying and engaging the upper rail 5 of the rack 1. The other end of each shaft 58 has a lever 65 fixed thereto as shown in Fig. 15 while a plunger rod 66 is fixed to the free end of the lever 65 and extends upwardly through the slotted opening 67 in the frame wall 12. As shown in Fig. 14, an arm 68 projects forwardly of the rectangular frame 56 and a coil spring 69 connects the outer end of the arm 68 to the clamping arm 63 for normally holding the clamping arm in position upon the rail 5 of the rack 1 and with the plunger rod 66 at its limit of upward
 130

movement. A plunger rod 66 is disposed adjacent each sheet turning arm 18 and 19 and a leaf spring 70 anchored as at 71 to the under side of the frame wall 12 engages the plunger rods 66 for normally forcing the same to the ends of the slots 61 and 67 to dispose the upper ends of the plunger rod directly beneath the sheet turning arms so that when the latter moves in directions toward the frame wall 12, the plunger rods 66 will be lowered to operate the shaft 58 and elevate the respective clamping arms 63.

The plunger rods 66 being in the path of movement of the sheet turning arms when the latter are moved toward the frame wall 12, devices are associated with the plunger rods and magnet legs 44 to laterally shift the plunger rods against the tension of the springs 70 to position the plunger rods laterally of the sheet turning arms and to permit the music sheet clamping arms 63 to be moved to closed position, such devices being shown more clearly in Fig. 7. A lever 72 pivoted as at 73 upon the frame wall 12 is engaged by one of its ends by the adjacent plunger rod 66, pivotal movement of the opposite end of the lever being limited by the stop pin 74. The end of the lever 72 adjacent the stop pin 74 carries a perpendicular extension finger 75, and a similar structure embodying a pair of levers 76 and 77 pivoted together at their adjacent ends and also pivoted intermediate their ends as at 78 has the lever 76 engaged by the adjacent plunger rod 66 while the lever 77 cooperates with the stub pin 79 and further carries an upstanding extension finger 80. For purposes presently to appear, the sheet turning arm 19 carries a pair of laterally directed flanges 81 and 82 at the upper and lower sides of the arm at opposite sides of the tensioned rod 41, while a similar flange 83 shown in Fig. 5 is carried by the lower side edge of the arm 18 and projects laterally therefrom.

When the music sheet turning arms 18 and 19 are in the position shown in Fig. 5, the plunger rods 66 project upwardly and laterally of the adjacent sheet turning arm against the tension of the springs 70 associated therewith, the plunger rods being then disposed in the path of movement of the remote sheet turning arms. It being understood that the music sheets are supported upon the lower rail 6 of the rack 1 with the upper edges of the music sheets engaged by the clamping arms 63 overlying the upper rail 5 of the rack, and it being desired to turn or shift a music sheet from the left side of the rack to the right side thereof, the pedal 27^b is engaged by the foot of a person to be compressed to lower the rod 27^a against the tension of the spring 32 and to pull upon the cord 27 attached to the associated rack bar 24. Movement of the rack bar 24 operates the pinion 22 to move the sheet turning

arm 19 upon the shaft 17. When the arm 19 is slightly raised to become disengaged from the adjacent plunger rod 66, the spring 70 associated with the plunger rod moves the same to the opposite end of the slot adjacent the free swinging end of the trip lever 76 as shown in Fig. 7. During continued movement of the arm 19, the block or head 41^a upon the tensioned rod 41 rides over the cam surface 52 and when the block 41^a reaches the end of the cam surface 52, the rod 41 will have been projected to dispose the leg 44 of the magnet 55 at right angles to the longitudinal axis of the arm 19. At this moment, the slightly inturned end 54 of the bell flange 53 carried by the inner side of the cam surface 52 will engage the block 48 upon the tensioned rod 41 to shift the same laterally and the shorter finger 50 of the bifurcated end of the block 41^a will pass over the edge of the cam strip 51 to cause the bifurcated end of the block 41^a to straddle the cam strip and ride thereon with the magnet maintained in its angularly disposed position. Continued movement of the arm 19 will cause the flange 81 carried by the side thereof to engage the plunger rod 66 associated with the sheet turning arm 18 to lower the plunger rod and operate the shaft 58 and through the system of links and levers above described, the sheet clamping arm 63 will be elevated to free a sheet of music therefrom. The magnet 55 being then moved into engagement with the metallic clip 38 upon the music sheet 37 will carry the music sheet to the other side of the rack when pressure on the pedal 27^b is relieved and at which time the coil springs 32 associated with the rod 27^a will lower the rod and pull upon the cord 27 to return the arm 19. Also, the band spring 20 associated with the arm is placed under tension when the arm is moved to its sheet gathering position and cooperates with the spring 32 for returning the arm to its original position shown in Fig. 5. It being understood that the plunger rod 66 associated with the arm 19 has been moved to the end of the slot 67 adjacent the lever 76, the same is in the path of movement of the flange 82 upon the arm 19. The flange 82 upon the arm 19 engaging the plunger rod 66 will operate the shaft 58 to raise the clamping arm 63 so that the sheet of music carried over by the arm 19 will be disposed beneath the clamping arm. When the arm 19 reaches a position in proximity of the frame wall 12, the head 41^a upon the tension rod 41 will escape through the cutaway portion 55 of the cam strip 51 and the spring 48 will move the head 41^a into engagement with the cam wall 52 and at which time the leg 44 of the magnet 55 will swing upwardly to a position aligned with the arm 19 and in so doing will strike the finger 80 upon the lever 77 and pivotal move-

ment of the lever 76 that engages the adjacent plunger rod 66 will cause the latter to be shifted and disposed laterally of the sheet turning arm 19 and permit the plunger rod to be elevated through the slot 67 and a consequent lowering to its operative position of the clamping arm 63. This plunger rod 66 is then in position to be engaged by the side wall of the sheet turning arm 18.

Substantially the same operation is effected in moving the sheet turning arm 18, the pedal 26^b being operated for moving said arm and when the arm 18 approaches the arm 19, the side of the arm 18 engages the plunger rod 66 associated with the arm 19 to lower the same and elevate the clamping arm 63. The leg 44 of the magnet 55 carried by the sheet turning arm 18 is thrown to its angular position when riding over the cam surfaces and engages the metal clip at the upper end of the sheet to turn the same from the right hand side of the rack to the left hand side thereof. When the arm 18 is swung upwardly, the plunger rod 66 associated therewith is moved by the spring 70 to the opposite end of the slot to be in a position for contact by the flange 83 upon the arm 18 for operating the adjacent sheet clamping arm 63 and the plunger rods 66 associated with the sheet turning arm 18 is restored to the full line position shown in Fig. 5 and the magnet leg 54 is shifted by its spring 48 to engage the finger 75 upon the lever 72 and cause the lever to throw the plunger rod 66 toward the opposite end of the slot so that the plunger rod may be elevated by the spring 69 that closes clamping arm 63. The sheet turning arm 19 is employed for transferring sheets of music from the left side of the rack to the right side thereof while the sheet turning arm 18 is employed for moving the music sheet from the right hand side of the rack to the left side thereof and the sheet turning arms 18 and 19 are independently operated by the pedals 26^b and 27^b.

From the above detail description of the invention, it is believed that the construction and operation thereof will at once be apparent, and while there is herein shown and described the preferred embodiment of the present invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

What is claimed is:—

1. In a music sheet turner, the combination with a music rack, of a pair of sheet turning arms, operating cords associated with the arms, a magnet carried by each arm to contact a metallic clip on a music sheet to move the sheet from one side of the rack to the other side, said magnet normally occupying a position aligned with the carrying arm, said magnet being pivotally sup-

ported, a tensioned sliding rod attached to the magnet and slidable on the arm and a stationary cam device associated with the rod for moving the magnet.

2. In a music sheet tuner, the combination with a music rack, of a pair of sheet turning arms, operating cords associated with the arms, sheet clamping means at each end of the rack, operating means for the clamping means separate from the sheet turning arms at each end of the rack and a part of the operating means being arranged in the path of movement of the arms to be operated thereby.

3. In a music sheet turner, the combination with a music rack, of a pair of sheet turning arms, operating cords associated with the arms, sheet clamping means at each end of the rack, operating means at each end of the rack for the clamping means and a part of the operating means being arranged in the path of movement of the arms to be operated thereby, a pivoted magnet carried by each arm and a cam device associated with the arm and magnet to cause the magnet to be moved into contact with a metallic clip on a music sheet during movement of the arm and said magnet being releasable from the cam to move the part of the operating means out of the path of movement of the arm and permit closing of the sheet clamping means.

4. In a music sheet turner, the combination with a music rack, of a pair of sheet turning arms, operating cords associated with the arms, sheet clamping means at each end of the rack, operating means at each end of the rack for the clamping means and a part of the operating means being arranged in the path of movement of the arms to be operated thereby, a pivoted magnet carried by each arm adapted to be moved into contact with a metallic clip on a music sheet during movement of the arm and releasable to move the part of the operating means out of the path of movement of the arm and permit closing of the sheet clamping means, the operating means for the magnet comprising a cam device including a cam track and rod interposed between the track and magnet for operating the magnet and further constructed to permit the return movement of the magnet when the arm reaches its limit of movement over the cam track during the turning of a music sheet.

5. In a music sheet turner, the combination with a music rack, of a pair of tensioned sheet turning arms, a shaft pivotally supporting the same, a pinion fixed to each arm and journaled on the shaft, a sliding rack bar meshing with each pinion, operating cords attached to the rack bars, a sheet clamp at each end of the music rack, separate operating means for each clamp, a part of the operating means being arranged

in the path of movement of the arms and a sheet carrying magnet carried by each arm adapted to engage said part of the operating means to move the same transversely of the arm and permit closing of the sheet clamp.

6. In a music sheet turner, the combination with a music rack, of a pair of tensioned sheet turning arms, a shaft pivotally supporting the same, a pinion fixed to each arm and journaled on the shaft, a sliding rack bar meshing with each pinion, operating cords attached to the rack bars, a sheet clamp at each end of the music rack, separate operating means for each clamp, a part of the operating means being arranged in the path of movement of the arms, a sheet carrying magnet carried by each arm adapted to engage said part of the operating means to move the same transversely of the arm and permit closing of the sheet clamp, the magnet being pivotally supported on the arm, a tensioned rod on the arm connected to the magnet and a cam device associated with the rod for moving the magnet into sheet engaging position and permitting return thereof for operating the part of the operating means.

7. In a music sheet turner, the combination with a music rack, of a pair of sheet turning arms, operating cords associated with the arms, sheet clamping means at each end of the rack, operating means at each end of the rack for the clamping means and a part of the operating means being arranged in the path of movement of the arms to be operated thereby, a pivoted magnet carried by each arm adapted to be moved into contact with a metallic clip on a music sheet during movement of the arm and releasable to move the part of the operating means out of the path of movement of the arm and permit closing of the sheet clamping means, the operating means for the magnet comprising a cam device for operating the magnet constructed to permit the return movement of the magnet when the arm reaches its limit of movement during the turning of a music sheet, the operating means including a journaled shaft, a frame supporting the same, a lever and link connection between the shaft and sheet clamp, a spring for normally holding the clamp onto the sheet rack and said part of the operating means in the path of movement of the arm embodying a plunger rod having a lever connection with the shaft.

8. In a music sheet turner, the combination with a music rack, of a pair of tensioned sheet turning arms, a shaft pivotally supporting the same, a pinion fixed to each arm and journaled on the shaft, a sliding rack bar meshing with each pinion, operating cords attached to the rack bars, a sheet clamp at each end of the music rack, sep-

arate operating means for the clamp, a part of the operating means being arranged in the path of movement of the arms, a sheet carrying magnet carried by each arm adapted to engage said part of the operating means to move the same transversely of the arm and permit closing of each sheet clamp, the operating means including a journaled shaft, a frame supporting the same, a lever and link connection between the shaft and sheet clamp, a spring for normally holding the clamp onto the sheet rack and said part of the operating means in the path of movement of the arm embodying a plunger rod having a lever connection with the shaft.

9. In a music sheet turner, the combination with a music rack, of a pair of tensioned sheet turning arms, a shaft pivotally supporting the same, a pinion fixed to each arm and journaled on the shaft, a sliding rack bar meshing with each pinion, operating cords attached to the rack bars, a sheet clamp at each end of the music rack, separate operating means for each clamp, a part of the operating means being arranged in the path of movement of the arms, a sheet carrying magnet carried by each arm adapted to engage said part of the operating means to move the same transversely of the arm and permit closing of the sheet clamp, the magnet being pivotally supported on the arm, a tensioned rod on the arm connected to the magnet, a cam device associated with the rod for moving the magnet into sheet engaging position and permitting return thereof for operating the part of the operating means, the operating means including a journaled shaft, a frame supporting the same, a lever and link connection between the shaft and sheet clamp, a spring for normally holding the clamp onto the sheet rack and said part of the operating means in the path of movement of the arm embodying a plunger rod having a lever connection with the shaft.

10. In a music sheet turner, the combination with a music rack, of a pair of sheet turning arms, pedal operated cords associated with the arms, sheet clamping means at each end of the rack, operating means at each end of the rack for the clamping means and a part of the operating means being arranged in the path of movement of the arms to be operated thereby, a pivoted magnet carried by each arm adapted to be moved into contact with a metallic clip on a music sheet during movement of the arm and releasable to move the part of the operating means out of the path of movement of the arm and permit closing of the sheet clamping means, the operating means for the magnet comprising a cam device for operating the magnet constructed to permit the return movement of the magnet when the arm reaches its limit of movement during the turning of a music sheet, the operating

means including a journaled shaft, a frame supporting the same, a lever and link connection between the shaft and sheet clamp, a spring for normally holding the clamp onto the sheet rack and said part of the operating means in the path of movement of the arm embodying a plunger rod having a lever connection with the shaft, and a lever adapted to be engaged during the return movement of the magnet to transversely displace the plunger rod.

11. In a music sheet turner, the combination with a music rack, of a pair of tensioned sheet turning arms, a shaft pivotally supporting the same, a pinion fixed to each arm and journaled on the shaft, a sliding rack bar meshing with each pinion, operating cords attached to the rack bars, a sheet clamp at each end of the music rack, separate operating means for each clamp, a pair of the operating means being arranged in the path of movement of the arms, a sheet carrying magnet carried by each arm adapted to engage said part of the operating means to move the same transversely of the arm and permit closing of the sheet clamp, the operating means including a journaled shaft, a frame supporting the same, a lever and link connection between the shaft and sheet clamp, a spring for normally holding the clamp onto the sheet rack, said part of the operating means in the path of movement of the arm embodying a plunger rod having a lever connection with the shaft, and a lever adapted to be engaged during the return movement of the magnet to transversely displace the plunger rod.

12. In a music sheet turner, the combination with a music rack, of a pair of tensioned sheet turning arms, a shaft pivotally supporting the same, a pinion fixed to each arm and journaled on the shaft, a sliding rack bar meshing with each pinion, operating cords attached to the rack bars, a sheet clamp at each end of the music rack, separate operating means for each clamp, a part of the operating means being arranged in the path of movement of the arms, a sheet carrying magnet carried by each arm adapted to engage said part of the operating means to move the same transversely of the arm and permit closing of the sheet clamp, the magnet being pivotally supported on the arm, a tensioned rod on the arm connected to the magnet, a cam device associated with the rod for moving the magnet into sheet engaging position and permitting return thereof for operating the part of the operating means, the operating means including a journaled shaft, a frame supporting the same, a lever and link connection between the shaft and sheet clamp, a spring for normally holding the clamp onto the sheet rack and said part of the operating means in the path of movement of the arm embodying a plunger

rod having a lever connection with the shaft, and a lever adapted to be engaged during the return movement of the magnet to transversely displace the plunger rod.

13. In a music sheet turner, the combination with a music sheet rack, of a pair of sheet turning arms, a shaft upon which the arms are journaled, a supporting frame for the arms, a spring associated with each arm for normally holding the same in inoperative positions adjacent the frame, a rack bar and pinion associated with each arm, an operating cord attached to each rack bar, a pivotally mounted sheet clamping arm at each end of the music rack, separate operating means for each clamping arm including a spring pressed plunger rod projecting upwardly through the supporting frame, there being a slot in the supporting frame for the passage of the plunger rod, a spring associated with each plunger for normally moving the same toward one end of the slot and to position the plunger rod beneath the adjacent sheet turning arm when the latter is moved away from the supporting frame during operation, and cooperating means carried by the arm and supporting frame to shift the plunger rod to a position laterally of the sheet turning arm after opening movement of the clamping arm to permit upward movement of the plunger rod and closing movement of the clamping arm and to position the plunger rod in the path of movement of the other sheet turning arm.

14. In a music sheet turner, the combination with a music sheet rack, of a pair of sheet turning arms, a shaft upon which the arms are journaled, a supporting frame for the arms, a spring associated with each arm for normally holding the same in inoperative positions adjacent the frame, a rack bar and pinion associated with each arm, an operating cord attached to each rack bar, a pivotally mounted sheet clamping arm at each end of the music rack, separate operating means for each clamping arm including a spring pressed plunger rod projecting upwardly through the supporting frame, there being a slot in the supporting frame for the passage of the plunger rod, a spring associated with each plunger for normally moving the same toward one end of the slot and to position the plunger rod beneath the adjacent sheet turning arm when the latter is moved away from the supporting frame during operation, cooperating means carried by the arm and supporting frame to shift the plunger rod to a position laterally of the sheet turning arm after opening movement of the clamping arm to permit upward movement of the plunger rod and closing movement of the clamping arm and to position the plunger rod in the path of movement of the other sheet turning arm, said cooperating means including a magnet piv-

otally carried by the sheet turning arm, a tensioned rod slidably carried by the sheet turning arm connected to the magnet and a cam device carried by the supporting frame cooperating with the tensioned rod.

15. In a music sheet turner, the combination with a music sheet rack, of a pair of sheet turning arms, a shaft upon which the arms are journaled, a supporting frame for the arms, a spring associated with each arm for normally holding the same in inoperative positions adjacent the frame, a rack bar and pinion associated with each arm, an operating cord attached to each rack bar, a pivotally mounted sheet clamping arm at each end of the music rack, separate operating means for each clamping arm including a spring pressed plunger rod projecting upwardly through the supporting frame, there being a slot in the supporting frame for the passage of the plunger rod, a spring associated with each plunger for normally moving the same toward one end of the slot and to position the plunger rod beneath the adjacent sheet turning arm when the latter is moved away from the supporting

frame during operation, cooperating means carried by the arm and supporting frame to shift the plunger rod to a position laterally of the sheet turning arm after opening movement of the clamping arm to permit upward movement of the plunger rod and closing movement of the clamping arm and to position the plunger rod in the path of movement of the other sheet turning arm, said cooperating means including a magnet pivotally carried by the sheet turning arm, a tensioned rod slidably carried by the sheet turning arm connected to the magnet, a cam device carried by the supporting frame cooperating with the tensioned rod, said cam device embodying an arcuate cam wall over which the tensioned rod rides and an arcuate cam strip associated with the cam walls to receive the tensioned rod and retain the magnet in its shifted position with the tensioned rod released from the cam strip when the sheet turning arm is returned to a position adjacent the supporting frame.

In testimony whereof I affix my signature.

STEVE HALMI.