

No. 692,229.

Patented Feb. 4, 1902.

G. P. BENTON.
MUSIC RACK AND TURNER.

(Application filed Mar. 20, 1901.)

(No Model.)

2 Sheets—Sheet 1.

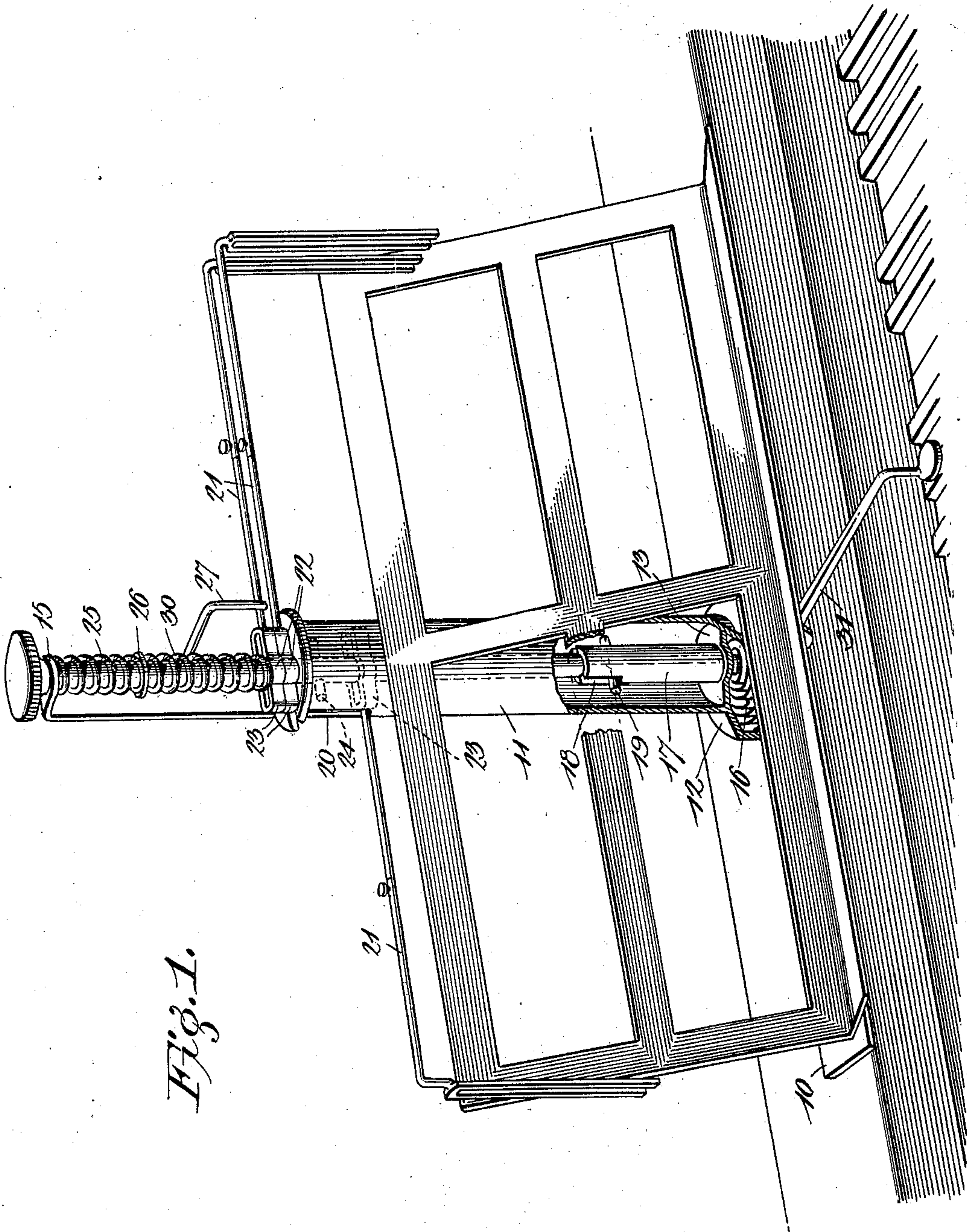


Fig. 1.

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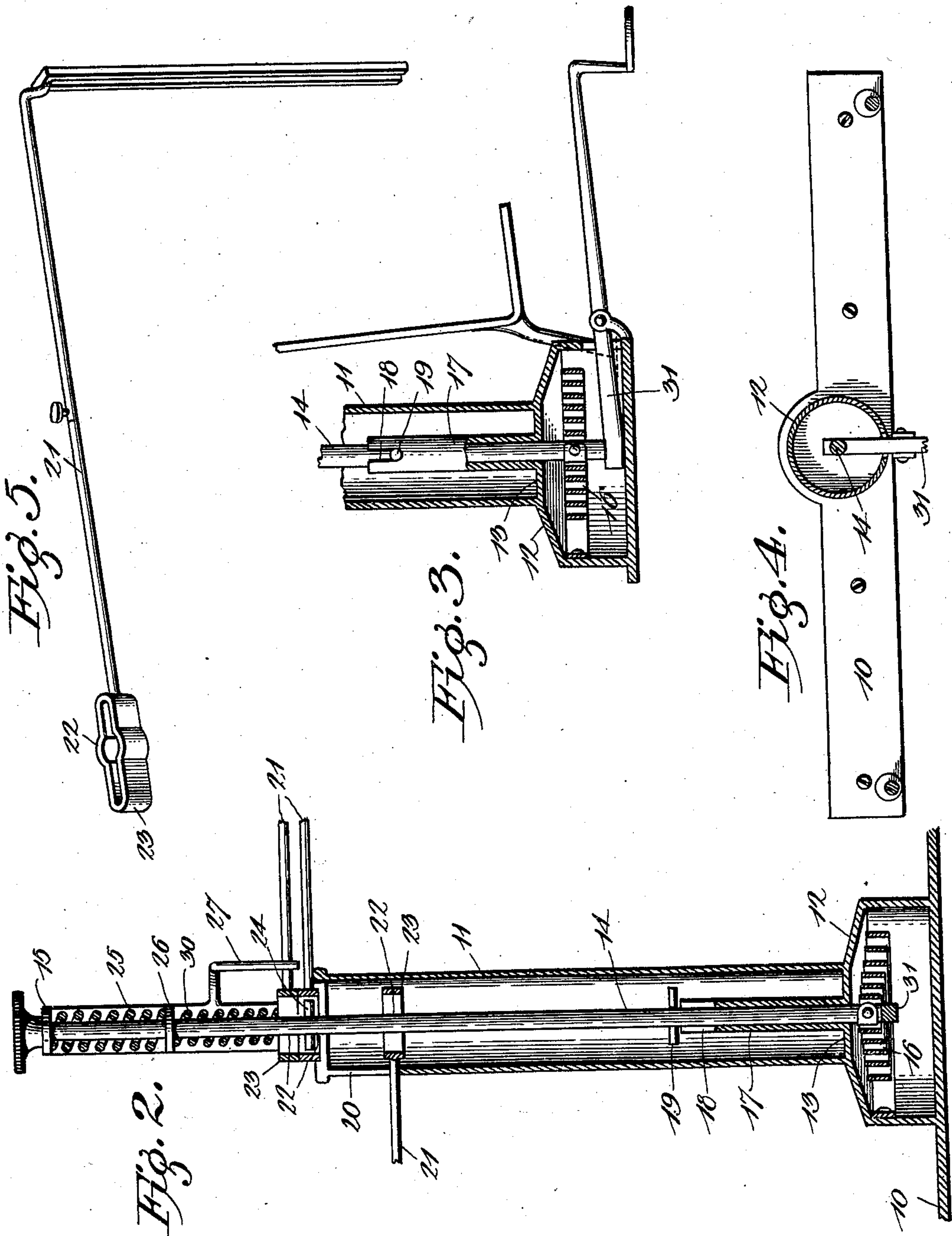
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2 Sheets—Sheet 2.

(No Model.)



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UNITED STATES PATENT OFFICE.

GEORGE P. BENTON, OF MATTAWAN, MICHIGAN, ASSIGNOR OF ONE-HALF
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MUSIC RACK AND TURNER.

SPECIFICATION forming part of Letters Patent No. 692,229, dated February 4, 1902.

Application filed March 20, 1901. Serial No. 52,001. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. BENTON, a citizen of the United States, residing at Mattawan, in the county of Van Buren and State of Michigan, have invented a new and useful Music Rack and Turner, of which the following is a specification.

This invention relates to music-leaf turners; and it has for its object to provide a simple and efficient construction which may be secured above the keyboard of a piano to receive the music-sheets and which by depression of a key will operate to turn the leaves or sheets of music successively.

specification, and in which like numerals of In the drawings forming a portion of this reference indicate similar parts in the several views, Figure 1 is a perspective view of the device, a portion of the casing being broken away to show the interior structure. Fig. 2 is a central vertical section through the casing, portions of the apparatus being shown in elevation. Fig. 3 is a detail sectional view of the lower portion of the casing with parts in elevation, the section being taken in the plane of the release or operating key. Fig. 4 is a horizontal section through the bottom of the casing and showing the position of the shift-rod upon the release key or lever. Fig. 5 is a detail perspective view of one of the turning-arms.

Referring now to the drawings, the present device includes a rack consisting of a frame 10 of any suitable construction and which is adapted for attachment to the frame of a piano or organ above the keyboard, although it will be understood that it may be supported upon a stand, if desired. In the rear of the rack is erected a casing including an upper cylindrical body 11, having an enlarged and hollow base 12, separated therefrom by a diaphragm 13, in which is journaled one end of a shift-rod 14 for sliding movement and rotation, the upper end of the rod extending above the casing and having a bearing in a bracket 15, which projects above the casing and has a forwardly-projecting upper end. A spiral spring 16 is disposed in the base 12, and one end thereof is attached to the shift-rod, while the opposite end is attached to the

inner face of the wall of the base, so that the rod may be rotated and will be spring-retained. Upon the diaphragm 13 is a sleeve 17, which closely surrounds the shift rod or shaft, and in the upper end thereof is a longitudinal slot 18, adapted to receive a transverse pin 19 in the shift-rod to hold the latter against rotation, said pin being moved from the slot when the rod is moved longitudinally upward.

The top of the body portion 11 of the casing is closed, excepting for a slot 20, formed diametrically thereof and which is continued from the upper end of the body longitudinally thereof for a short distance, and upon the upper end of this body portion are disposed a series of arms 21, each including a hub portion 22, mounted rotatably upon the shift-rod and having radiating lugs 23, which are slotted longitudinally and from one of which lugs the arm extends. The arms lie with their hubs one on top of another. The slots of the lug of the hubs are adapted to aline with the slot in the top of the body of the casing, so that the hub resting directly upon the top of the body 11 may receive a transverse pin 24, engaged with the shift-rod when said rod is moved upwardly to carry said pin through the slot in the top of the body of the casing, the rod being held in lowered position normally and yieldably and with said pin within the casing by a helical spring 25 disposed upon the rod and bearing at its ends against lower flange 26 on the rod and the upper end of the bracket 15. A finger 27 on the bracket 15 extends forwardly and then downwardly to lie in front of all of the arms but the lowermost arm when they are in their retracted positions, and it will be seen that if the shift-rod be moved upwardly its upper pin 24 will be engaged with the hub of the arm resting directly on the top of the casing, and subsequent to the initial engagement of said pin with the hub the lower pin will be moved from the slot of the sleeve 17, and the rod being thus released the spiral spring 16 will act to rotate said rod and will carry the arm to the opposite position. When the arm has reached the opposite position, it will lie in registry with the slot in the top and side of

the body 11 of the casing, when the pressure of the spring 30 will force it downwardly into the slot to the position shown in Figs. 1 and 2 and from engagement with the pin 24.

5 The helical spring 30, referred to, is disposed upon the shift-rod and rests with its ends against the uppermost arm and the flange 26, respectively. This downward sliding movement of the arm is of course prevented in the
10 other positions of the arm, owing to the fact that said arm rests against the upper end of the body 11. When the lowermost arm is dropped, as described, the arm next above moves downwardly to rest upon the upper
15 end of the casing, the spring 30 insuring downward movement of the entire series of arms. As each arm moves into position against the upper end of the casing 11 it of course moves from behind the retaining-fin-
20 ger 27.

To raise the shifting rod or shaft, a key-lever 31 is provided and is pivoted to the front of the casing, the inner end of said lever extending into the base of the casing and supporting the lower end of the rod, so that when
25 the outer end of the lever is depressed the rod is raised, and when the lever is released the upper helical spring moves it downwardly again.

30 The spiral spring 16 is under continuous tension, and when the turning arms are moved to their retracted positions the tension of the spring is increased to such an extent that as the arms are successively released they will
35 be quickly turned by the spring.

It will be noted that in the return movement of the shift-rod from its upper to its lower position the lower pin engages the slot of the sleeve before the upper pin leaves the
40 slot of the hub, and thus lost motion of the spring and consequent unwinding is prevented.

The outer ends of the arms are provided with spaced fingers, as shown, between which
45 the leaves of sheets of music are received, and each arm furthermore includes two telescopically-connected sections which permit of adjustment of the lengths of the arms.

In practice modifications of the specific construction shown may be made, and any suitable materials and proportions may be used for the several parts without departing from the spirit of the invention.

What is claimed is—

55 1. A device of the class described comprising a series of pivoted arms, a rotatable shifting rod movable longitudinally into engagement with the arms successively, potential means for rotating the rod, means for holding the rod against the influence of the po-
60 tential means when disengaged from the arms, and means for moving the rod from the holding means and into engagement with the arms.

65 2. A device of the class described compris-

ing a pivoted arm, a rotatable rod movable into and out of engagement with the arm, potential means for rotating the rod, means for holding the rod against the influence of the potential means when disengaged from
70 the arm, and means for moving the rod from engagement with the holding means and into engagement with the arm.

3. A device of the class described comprising a casing having a rod mounted therein
75 for reciprocation and rotation, said rod having spaced pins, a slotted sleeve disposed to receive one of the pins in its slot to hold the rod from rotating, and a series of pivoted arms adapted for engagement successively
80 by the second pin when the first pin is moved from the slot of the sleeve to permit rotation of the rod, and a spring connected with the rod for rotating it when released.

4. A device of the class described comprising a casing having a longitudinal slot, a shift-rod mounted in the casing for rotation and reciprocation, arms mounted rotatably upon
85 the rod and adapted for successive precipitation into the slot of the casing, means for holding the rod against rotation, means for
90 engaging the rod with the arms successively when the rod is moved from its holding means, means for rotating the rod when released, and means for raising the rod, said arms being
95 movable from engagement with the rod when precipitated into the slot of the casing.

5. A device of the class described comprising a casing having a longitudinal slot, a rod mounted in the casing for rotation and re-
100 ciprocation, a plurality of arms mounted rotatably upon the rod and adapted to rest with the lowermost arm upon the casing, said arms being adapted for successive precipitation into the slot of the casing, a fixed sleeve in-
105 closing a portion of the rod and having a longitudinal slot, a pin carried by the rod for engagement with the slot of the sleeve to hold the rod against rotation, a second pin carried by the rod for engagement with the lower-
110 most arm upon the upper end of the casing, means for rotating the rod when released, and means for moving the rod to draw its first-named pin from the slot of the sleeve to re-
115 lease the rod.

6. A device of the class described comprising a casing having a longitudinal slot in its upper end, a rod rotatably and reciprocally mounted in the casing and having spaced
120 pins, a sleeve inclosing a portion of the rod and having a slot to receive a pin of the rod to hold the rod from rotation, arms mounted upon the rod and adapted to rest with the lowermost arm against the end of the casing and having slotted hubs adapted to suc-
125 cessively receive the second pin of the rod to lock the rod thereto, means for rotating the rod, means for moving the rod from engagement with the sleeve and into engagement with the lowermost hub, means for rotating
130

the rod when released from the sleeve, said
arms being adapted for successive precipita-
tion into the slot of the casing, and a retain-
ing-finger disposed to hold the arms that are
5 above the lower arm against the top of the
casing from rotation.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in
the presence of two witnesses.

GEORGE P. BENTON.

Witnesses:

D. O. RIX,

A. H. CAMPBELL.