

J. SWEENEY.
MUSIC RACK.

APPLICATION FILED JULY 22, 1909.

954,358.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.

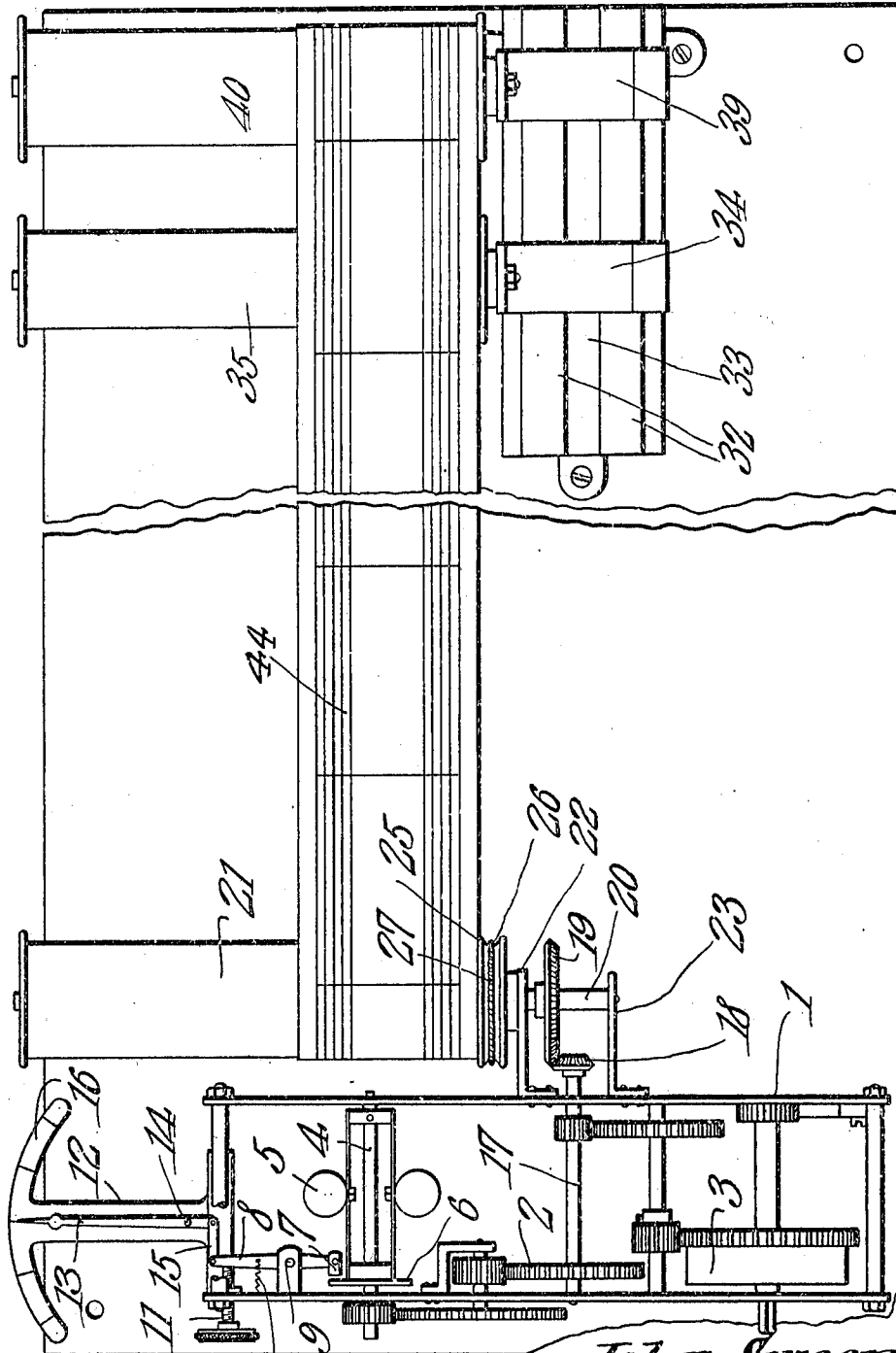


Fig. 1.

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Witnesses

Robert Lawson
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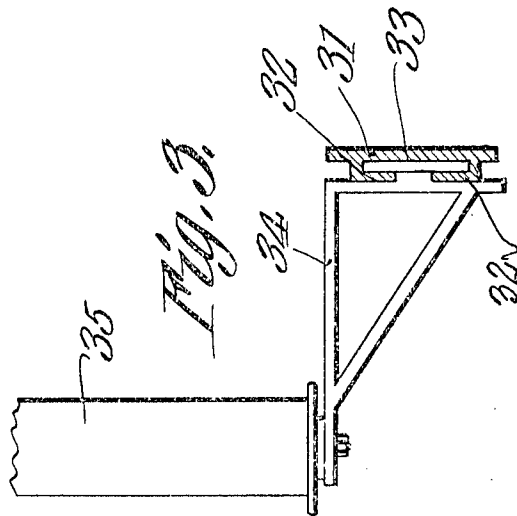
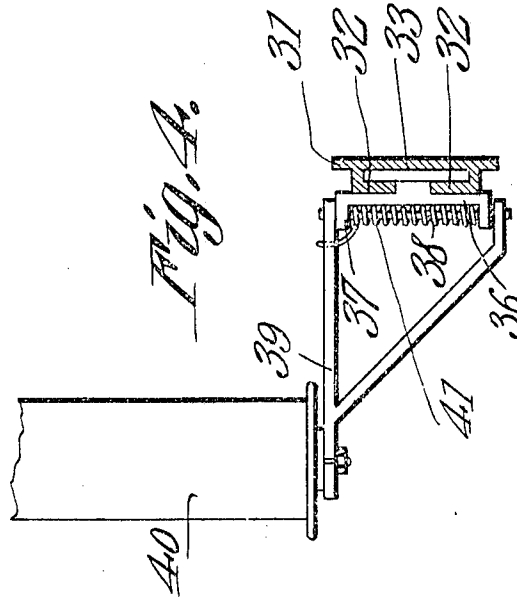
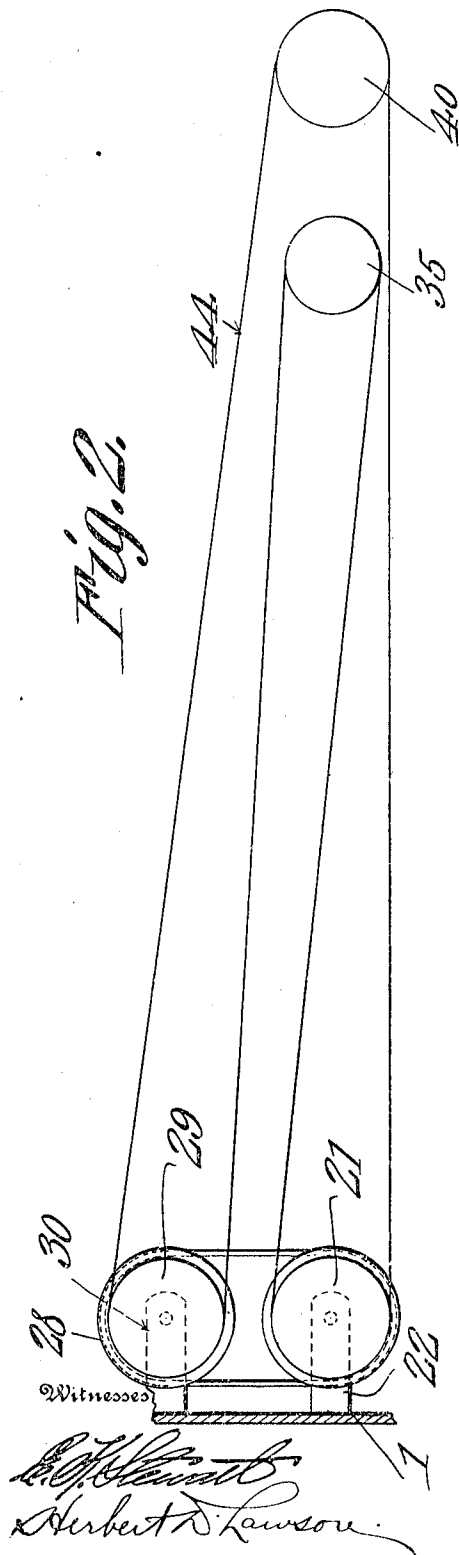
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UNITED STATES PATENT OFFICE.

JOHN SWEENEY, OF JOHNSTOWN, PENNSYLVANIA.

MUSIC-RACK.

954,358.

Specification of Letters Patent.

Patented Apr. 5, 1910.

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To all whom it may concern:

Be it known that I, JOHN SWEENEY, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Music-Rack, of which the following is a specification.

This invention relates to music racks of that type designed to utilize endless belts of printed music.

One of the objects of the invention is to provide simple mechanism for actuating the belts placed upon the rack, means being utilized whereby said belts can be operated at any desired speed.

Another object is to provide a novel arrangement of spools for holding the belts of music, said spools being designed to hold belts of different lengths and widths and to maintain them taut under all conditions while in use.

With these and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a front elevation of apparatus embodying the present improvements, a portion thereof being broken away. Fig. 2 is a plan view of the spools and a music-belt thereon, a portion of one wall of the motor casing being shown in section. Fig. 3 is a side elevation of one of the spools and its supporting bracket, the guide for said bracket being shown in section. Fig. 4 is a view similar to Fig. 3, but showing another spool and its bracket.

Referring to the figures by characters of reference 1 designates a motor casing in which is located a train of gears 2 designed to be actuated by means of a spring 3, which may be wound in the same manner as a clock spring. One of the gears of the train is secured upon a shaft 4 carrying a centrifugal governor 5, the sliding head 6 of which is designed to bear against a shoe 7 carried by one end of a controlling lever 8, which is fulcrumed at an intermediate point, as indicated at 9. A spring 10 connects one arm of the lever 8 with one wall of the casing 1 and serves to hold the shoe 7 normally out of contact with the head 6. An adjusting

screw 11 is mounted within the casing 1 and is movable against lever 8 so as to shift the shoe 7 in the direction of the head 6. A standard 12 extends from the casing 1 and has an index 13 fulcrumed thereon as indicated at 14, one end of the index being connected to one end of lever 8 by a link 15. An arcuate scale 16 is carried by the standard and the point of the index is designed to move thereover during the adjustment of the lever 8 by the screw 11.

The gears 2 actuate an intermediate shaft 17 one end of which projects beyond the casing 1 and has a beveled gear 18 secured to it. This gear meshes with another beveled gear 19 secured to a trunnion 20 extending downwardly from an upstanding roller 21, which is supported upon a bracket 22 secured to the casing 1, there being another bracket 23 within which the lower end of the trunnion 20 is journaled. The lower end of roller 21 is provided with a wheel 25 having a peripheral groove 26, this wheel being formed with or secured to the roller 21 so as to move therewith. A belt 27 is seated within the groove 26 and is also seated within a grooved wheel 28 formed at the lower end of a second roller 29, which is journaled at its lower end upon a bracket 30 extending from the casing 1. It will be apparent therefore that when the roller 21 is driven by the gears 18 and 19, motion will be transmitted therefrom through the belt 27 to the roller 29, and both rollers will therefore be caused to rotate simultaneously in the same direction.

An elongated supporting strip 31 is preferably extended from the housing or casing 1 and is provided, upon its front face, with opposed guide cleats 32, forming a groove or channel therebetween for the reception of a head 33 formed on the back end of a substantially triangular bracket 34, on the front end of which is journaled an upstanding roller 35. A bar 36 also has a head 33 in the channel and this bar has terminal ears 37 through which extends a pintle 38. This pintle projects into the ends of the upper and lower arms of a bracket 39, there being an upstanding roller 40 journaled upon this bracket 39. The roller 40 and its bracket are preferably located adjacent one end of the supporting strip 31, and a spring 41 may be attached to the bracket 39 and bar

36 and constantly tends to swing the bracket 39 in the direction of the adjoining end of the strip 31.

The apparatus herein described is designed to be used in connection with belts 44, of paper, cloth, or any other suitable material on which the music is printed, the staff being extended in the direction of the length of the belt, so that the music can be read continuously as the belt is moved in the direction of its length by the rollers. Obviously the belts can be of different widths, this being dependent upon the number of staves in a brace.

When it is desired to use the apparatus the diametrically opposed portions of the belt are placed upon the adjoining rollers 21 and 29 while the middle portions of the two plies of the belt are placed upon the rollers 35 and 40, it being apparent, by referring to Fig. 2, that the roller 35 is nearer the casing 1 than is the roller 40. As the spring 41 constantly pulls upon the swinging bracket 39, it will be seen that the roller 40 will hold the belt taut under all conditions. After the belt has thus been placed in position the spring motor can be wound and set in motion, the screw 11 being first adjusted so as to control the operation of the governor 4, the speed of the belt being indicated by the cooperating gage 16 and index 13. Motion will be transmitted from the motor through gears 18 and 19 to trunnions 20 and the roller 21 will therefore be actuated and drive the belt 44. Motion will also be transmitted from the roller 21, through belt 27 to roller 29, the belt being thus positively driven at two points. As the belt travels toward the left, the characters printed thereon can be read successively, and, after the belt has completed one circuit, the characters upon the next lower staff or brace can be read. It will be apparent that, if desired, more than one brace can be printed upon the belt, this being necessary particularly where very long compositions are printed on the belt.

It is of course to be understood that various changes may be made in the construction and arrangement of the parts without departing from the spirit or sacrificing the advantages of the invention. The brackets 34 and 39 are obviously adjustable longitudinally along the supporting strip 31, the

frictional contact between the head 33 and the cleats 32 being sufficient to hold them in any position to which they may be adjusted.

Should it be desired to drive the mechanism by means of an electric motor one of the gears for transmitting motion to shaft 17 from spring 3 may be loosened upon its shaft and the motor connected to the projecting end of the shaft 4.

What is claimed is:—

1. A device of the class described including simultaneously rotatable upstanding driving rollers, a motor for actuating the same, a guide, brackets slidably mounted within the guide, upstanding idler rollers adjustably supported by the brackets, an endless belt mounted on all of the rollers, and having a series of music indicating characters extending in the direction of the length thereof, and means connected to one of the idler rollers for holding the belt taut.

2. A music rack for holding endless belts of music, including a supporting strip, guides thereon, heads adjustably mounted between the guides, a bracket fixedly connected to one of the heads, a bracket pivotally connected to the other head, means connected to said pivoted bracket for automatically shifting it in one direction, idler rollers upstanding from said brackets, driving rollers, and a motor for actuating the driving rollers, all of said rollers constituting supports for the music belt.

3. A device of the class described including a supporting strip, guides thereon, heads adjustably mounted between the guides, a bracket fixedly connected to one of the heads, a bracket pivotally connected to the other head, means connected to said pivoted bracket for automatically shifting it in one direction, idler rollers upstanding from said brackets, driving rollers, a motor for actuating the driving rollers, all of said rollers constituting supports for an endless belt, means for controlling the operation of the motor, and an indicator for disclosing the speed of a belt mounted on the rollers.

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

JOHN SWEENEY.

Witnesses:

CHAS. EDWARDS,
G. R. VAUGHEN.