Oct. 19, 1926. 1,603,920

A. O'MALLEY

STRING TYPE MUSICAL INSTRUMENT

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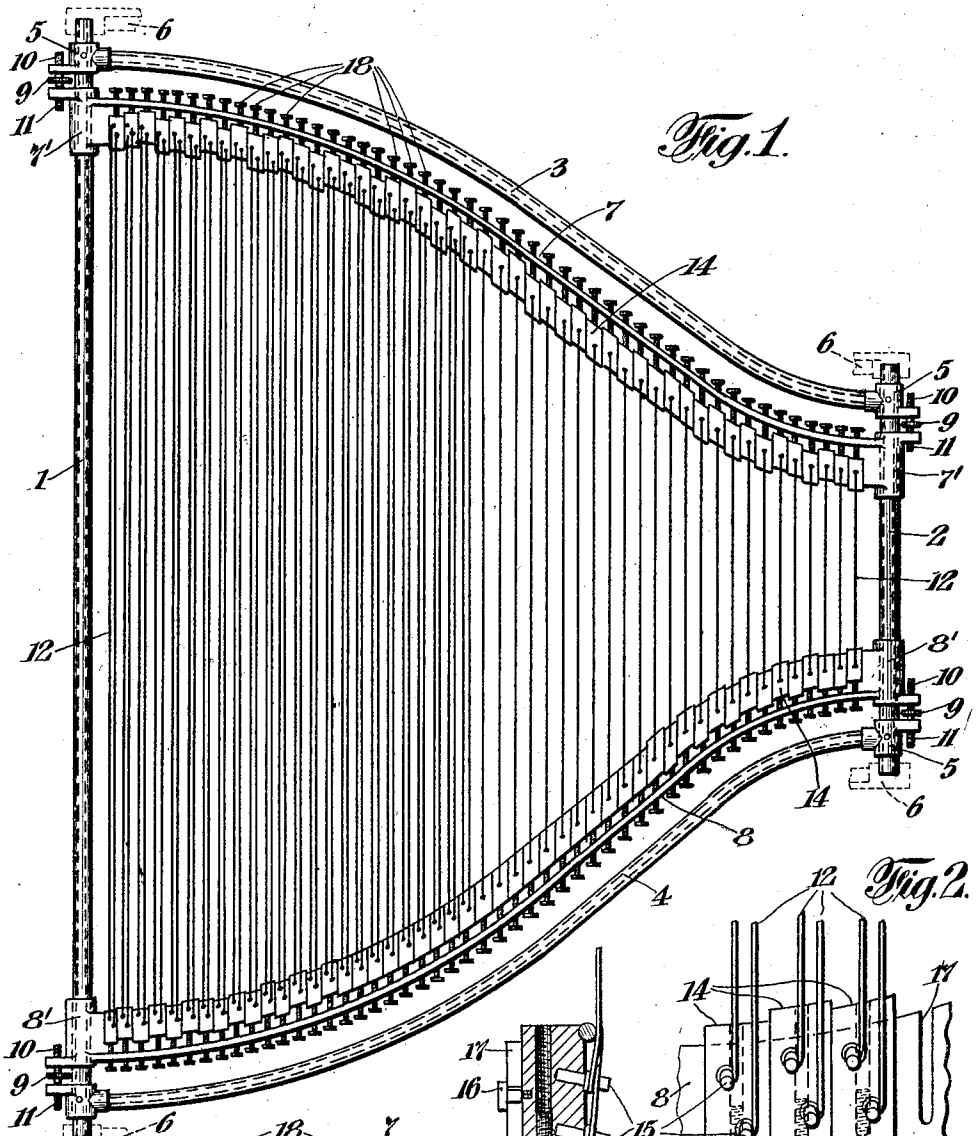


Fig. 1.

Fig. 2.

Fig. 3.

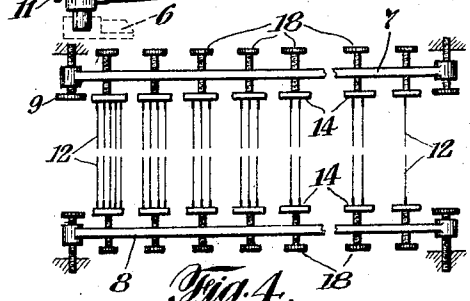


Fig. 4.

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Fig. 5.

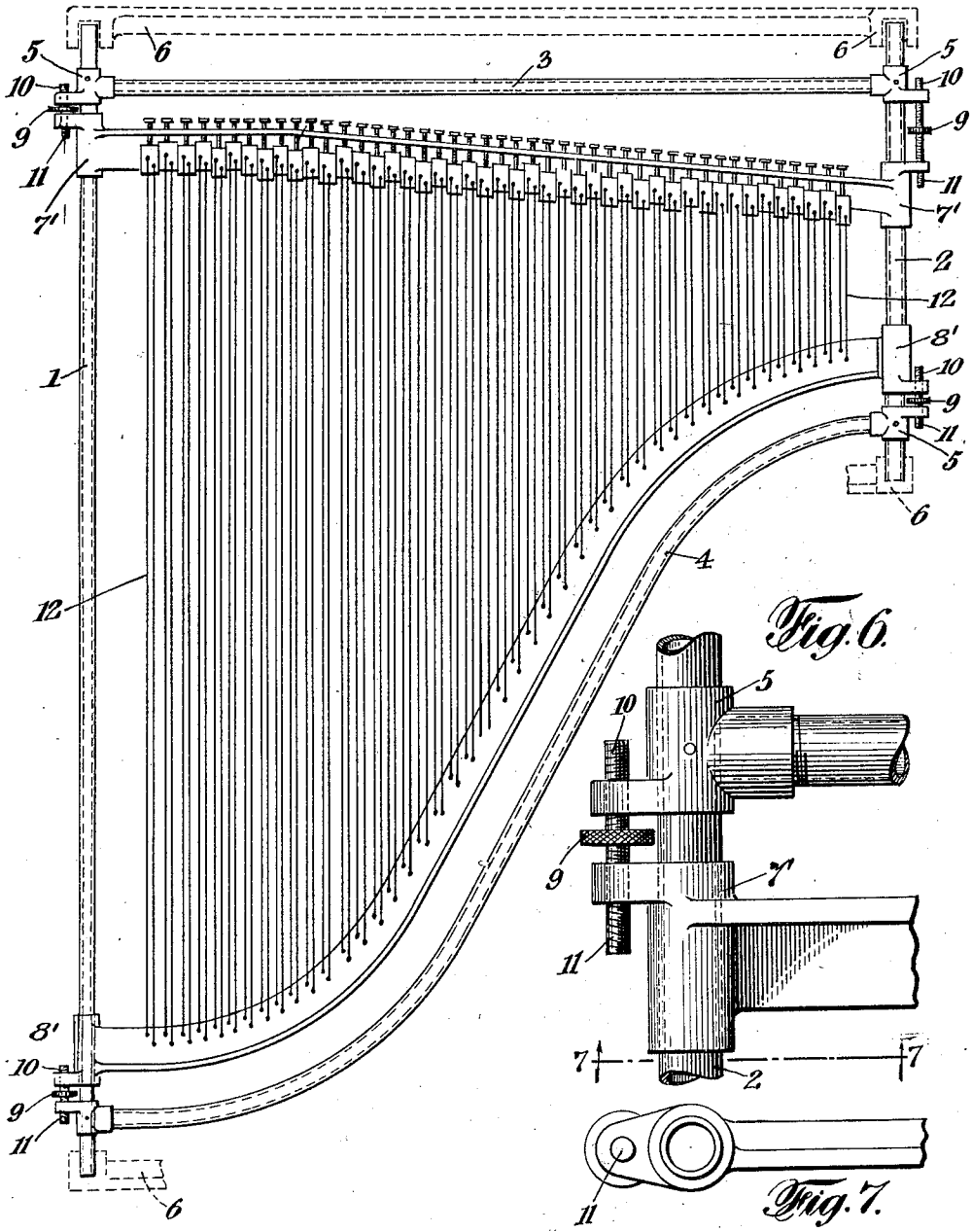


Fig. 6.

Fig. 7.

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UNITED STATES PATENT OFFICE.

ANTHONY O'MALLEY, OF NEW YORK, N. Y.

STRING-TYPE MUSICAL INSTRUMENT.

Application filed February 14, 1925. Serial No. 9,127.

My invention relates to improvements in musical instruments of the string type, as pianos, harps, etc. The objects of my invention are:

First: To produce musical instruments of the string type, whose individual group of tone producing strings can be adjusted, regulated, and set for any desired tone pitch, by specially provided adjusting and regulating means.

Second: To provide means by which all of the tone producing strings can be adjusted to any higher or lower tone pitch, at one and the same time.

Third: To produce a simplified construction of a string supporting frame, whose individual members are so designed as to be easily assembled and disassembled, thus materially reducing the cost of production.

Fourth: To arrange and design the complete string supporting frame equipment in such manner as to constitute a self contained unit permitting an easy and quick removal or interchange with another similar unit whenever desired.

A typical embodiment of my invention is represented in the accompanying drawings forming a part of this specification in which:

Figure 1, represents a front elevation of a complete string supporting frame, embodying my invention.

Figure 2, represents an enlarged view of a portion of the individual string supporting and regulating members.

Figure 3, represents a sectional side elevation of Figure 2, along lines 3—3.

Figure 4, represents a diagrammatical arrangement of the string regulating arrangement.

Figure 5, represents a front elevation of a complete string supporting frame of modified construction.

Figure 6, represents an enlarged view of the adjusting arrangement of the main string supporting bar.

Figure 7, represents a bottom view of Figure 6, along lines 7—7.

Similar characters refer to similar parts in all the views.

In Figure 1, a rigidly arranged frame structure comprising the vertical members 1 and 2, and the horizontal members 3 and 4, these members preferably made of light steel tubing and joined by suitable fittings 5, constitute the main supporting frame. Members 1 and 2, project beyond fittings 5, at the upper and lower extreme ends so as to provide proper supports, intended to fit into suitable sockets 6, of the instrument body or casing.

Cross-bars 7 and 8, suitably shaped to conform with the characteristic of the instrument, are slidably arranged upon the vertical frame members 1 and 2, this being accomplished by suitable sleeves 7′ and 8′, forming part of the cross-bars 7 and 8. These cross-bars, as shown in Figures 6 and 7, can be adjusted and set by specially arranged adjusting screws 9, provided with a right and left hand thread 10 and 11, engaging similar threads cut in lug extensions forming part of fittings 5, and sleeves 7′ and 8′.

The individual groups of tone strings 12, as shown in Figures 2 and 3, are mounted upon individual sliding blocks 14, and held in position by string pins 15. Sliding blocks 14, are movably arranged upon cross-bars 7 and 8, and conveniently held in place by guide posts 16, slidingly arranged in suitable slots 17, provided for that purpose in cross-bars 7 and 8. Adjusting screws 18, mounted upon cross-bars 7 and 8, engaging corresponding threads provided in sliding blocks 14, serve the purpose of individual adjustment and regulating tone strings 12. The principles of adjustment are more readily understood by referring to the simplified and diagrammatical illustration shown in Figure 4. In Figure 5, a modified construction of a complete string frame is shown emphasizing the possible variation in shape and form of such a frame, and also utilizing the individual string adjusting feature on one end only, while the other ends of the tone strings may be fastened in the commonly known and customary way.

Thus having described and illustrated an embodiment of my invention, I do not wish to limit myself to any specific form of construction, it being apparent that there may be considerable variations in utilizing the principles disclosed without departing from the spirit of my invention.

What I claim to be new and desire to secure by Letters Patent is:

1. In musical instruments of the character described, the combination of suitable movable tone string supporting means, slidably arranged upon a suitable frame, and

suitable adjusting means for setting said slidable tone string supporting means in any desired position.

2. In musical instruments of the character described, the combination of suitable tone string supporting means, said tone string supporting means slidably and adjustably arranged upon a suitable frame, and individual tone string adjusting means movably arranged upon said slidable tone string supporting means.

3. In a musical instrument of the character described the combination of a slidably and adjustably arranged tone string supporting member, a plurality of suitable individual tone string mounting members, said individual tone string mounting members adjustably arranged upon said slidably supporting member, and individual tone string tension and regulating means for said individual tone string mounting members.

4. In musical instruments of the character described the combination of slidably and adjustably arranged tone string supporting members, a plurality of suitable individual tone string mounting members, said individual tone string mounting members adjustably arranged upon said slidably supporting members, and a plurality of tone string tension and regulating means for said plurality of individual tone string mounting members.

5. In musical instruments of the character described the combination of a stationary frame, a slidably supporting bar adjustably arranged upon said stationary frame, a plurality of individual tone string supports, said tone string supports movably and adjustably arranged upon said slidably supporting bar, and suitable regulating and adjusting members for each of the individual tone string supports.

6. In a musical instrument of the string type, a rigid supporting structure, said rigid supporting structure so arranged as to rest in suitable receptacles provided within the body of said musical instrument in such manner as to permit the removing or replacing of said rigid supporting structure without removing or disturbing any of the other parts of said musical instrument.

7. In a musical instrument of the string type, a rigid tubular supporting structure, suitable prongs extending from said tubular supporting structure, said prongs so arranged as to engage in suitable pockets provided within the body of said musical instrument, said pockets and said prongs so proportioned as to easily engage and disengage without disturbing any of the other parts of said musical instrument.

8. In musical instruments of the character described, the combination of a plurality of individual tone string carrying plates, said tone string carrying plates movably mounted upon a suitable common support, suitable guide pins forming part of said carrying plates engaging suitable slots provided in said common support, a plurality of suitable tone string tightening pins adjustably mounted upon said tone string carrying plates, and suitable regulating screws engaging said tone string carrying plates and said common support for the purpose of varying the tension of said tone strings.

Signed at New York, in the county of New York and State of New York, this 24th day of January A. D. 1925.

ANTHONY O'MALLEY.