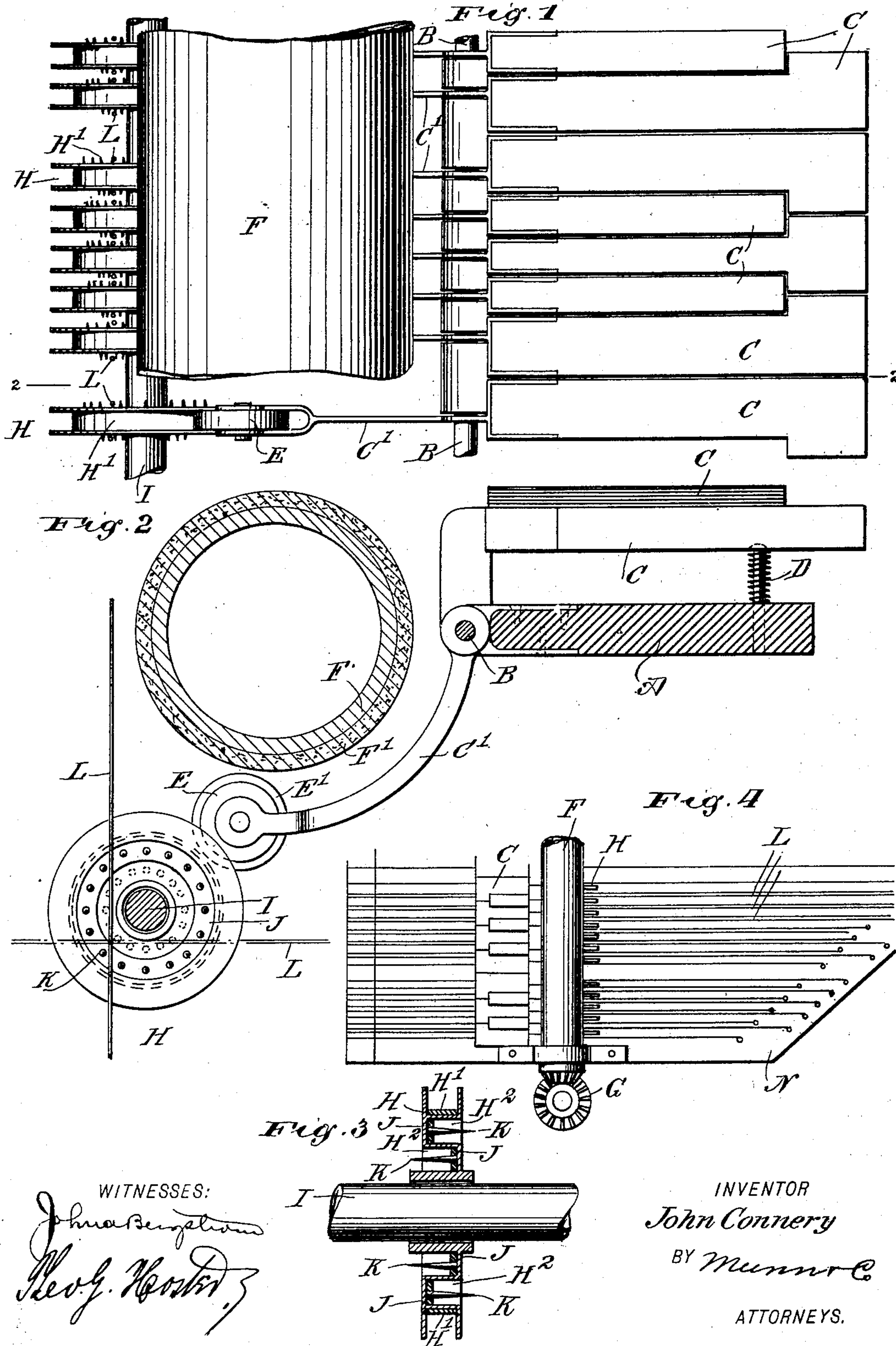


No. 730,611.

PATENTED JUNE 9, 1903.

J. CONNERY.  
MUSICAL INSTRUMENT.  
APPLICATION FILED AUG. 20, 1902.

NO MODEL.



WITNESSES:  
*John Connery*  
*Geo. H. H. H.*

INVENTOR  
*John Connery*  
BY *Munn & Co.*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JOHN CONNERY, OF CORNING, NEW YORK.

## MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 730,611, dated June 9, 1903.

Application filed August 20, 1902. Serial No. 120,306. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN CONNERY, a citizen of the United States, and a resident of Corning, in the county of Steuben and State of New York, have invented a new and Improved Musical Instrument, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved musical instrument which is simple and durable in construction and arranged to enable a player to sound the strings or other sounding devices in a very simple and effective manner on the player actuating the corresponding keys of a keyboard.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement. Fig. 2 is a sectional side elevation of the same on the line 2 2 of Fig. 1. Fig. 3 is an enlarged cross-section of one of the picker-wheels, and Fig. 4 is a plan view of the improvement applied to a zither.

On the base-board A of a keyboard is held a pivot-pin B, on which are mounted to swing independently one of the other a plurality of keys C, preferably arranged the same as the keys of a piano or organ. The keys C are normally held in an uppermost position by springs D, interposed between the keys and the base-board A, as plainly indicated in Fig. 2.

Each of the keys C is provided with a rearward extension-arm C', on which is journaled an intermediate wheel E, adapted to move simultaneously in contact with the covering F' of a driver F in the form of a wheel, rotated continuously by the player actuating a pedal mechanism connected by a gearing G or other means with the said driver F. The wheel E is also adapted to move in contact with the peripheral covering H' of a picker-wheel H, mounted to rotate loosely on a stationary shaft I, carried by the framework (not shown) of the instrument, it being understood that when a key C is in its normal

resting position, as shown in Fig. 2, then its intermediate wheel is out of contact with both the picker-wheel H and the driver-wheel F, and consequently the picker-wheel remains at a standstill; but when the key is pressed by the player then the intermediate wheel E swings simultaneously in contact with the peripheral surfaces of the driver-wheel F and the picker-wheel H to rotate the latter from the driver-wheel.

Each of the picker-wheels H is provided in its face with concentric grooves H<sup>2</sup>, each containing a ring J, of rubber or other suitable elastic material, and on the rings J are secured pickers K, extending sidewise out of the grooves H<sup>2</sup> beyond the corresponding faces of the picker-wheels to engage with the outer end a string L, stretched over the sounding-board N of the instrument, as indicated in Fig. 4. Now when a picker-wheel H is rotated from the driver F on pressing the corresponding key C then the pickers K of said wheel simultaneously engage and pick the string L to sound the same as many times as desired—that is, as long as the picker-wheel H is made to rotate from the driver-wheel F on the operator keeping the key C pressed. The pickers K are preferably placed equidistantly apart, as shown in Fig. 2; but by leaving pickers in groups at regular intervals tremolo sounds are produced.

It is understood that the peripheral surface of the intermediate wheel E is covered by a rubber band E' to engage the rubber covering F' and the rubber covering H' to reduce all noise of the contacting parts to a minimum, so that the sounds from the sounding devices remain harmonious and are not disturbed by undesirable noises.

When a picker-wheel H is rotated, then the picker-pins K move in contact with the string L and press the same to one side until the picker-pins finally glide off the string to allow the latter to vibrate, and thereby produce the desired sound to which the string is tuned. The pickers K are mounted on the yielding bands J to insure a gradual picking of the string, and thereby prevent harsh sounding of the same.

The device is very simple and durable in construction and can be readily actuated by the player pressing the keys C and turning



the driver-wheel F. If desired, the latter may be driven by mechanical or other means, and the keys C may be actuated by note-sheets and the like.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

10 1. A musical instrument having revoluble pickers for actuating the sounding devices, a driver, and keys carrying intermediate wheels for simultaneously engaging the said driver and the said pickers, to actuate the sounding devices, as set forth.

15 2. A musical instrument comprising a revoluble driver, revoluble picker-wheels having yielding pickers extending beyond the side faces of the wheels, and keys mounted to swing and carrying intermediate wheels for simultaneously engaging the said driver and  
20 a corresponding picker-wheel, as set forth.

3. A musical instrument having a picking device, comprising a revoluble wheel and pickers yieldingly mounted thereon, as set forth.

25 4. A musical instrument having a picking device comprising a revoluble wheel and pickers yieldingly mounted thereon and project-

ing sidewise from the face of the wheel, as set forth.

5. A musical instrument having a picking device comprising a wheel carrying elastic bands and pickers secured thereon, as set forth.

6. A musical instrument having a picking device comprising a wheel having a concentric groove, an elastic band set in the said groove, and pickers attached to the said band and projecting sidewise from the face of the wheel, as set forth.

7. A musical instrument having a picking device comprising a revoluble wheel formed with concentric grooves on opposite faces of the wheel, elastic bands set in the said grooves, and pickers secured to each band, projecting through the grooves beyond the  
45 faces of the wheel, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN CONNERY.

Witnesses:

THOS. GORSUCH,  
EDWIN C. ENGLISH.