

EXTRACT

The invention relates to a tone volume control for digital stringed instruments with the aim in the initial phase, unlike traditional instruments like guitar, bass, violin, cello and bass, easier to play.

This is achieved through the neck of the instrument standing keys by pressing a pushbutton its tone from a tone generator, passes it on to a light sensor. This was confirmed in a dark room with a hole closed by a light valve rigidly attached to a lever at the other end a string of art to which, when plucked with the fingers or coated with a bow, the string or art depending on the intensity of this does much or little from storage. With the short end above the pivot point on the string or art to this outcome through the long end of the lever below the pivot reinforced passed to the light valve and depending on the intensity of the light sensor little or a lot of light transmitted from a light or LED located above the valve is in, then the tone from a speaker or headphones, mild or strong does sound.

Volume control for digital tone strings

The invention relates to a digital device for stringed instruments with the aim in the initial phase, unlike traditional instruments like guitar, bass, violin, cello and bass, easier to play. Authentic stringed instruments for beginning students and especially difficult to agree with string, it is difficult for the fingers on the string in the key of the neck in such a position, that when ironing or strumming the strings of a pure tone.

On the neck of the invention are keys that sit on the very spot where as a pure tone when pressing the fingers of a chord with an authentic instrument. The keys can be distributed around the neck but the instrument is not too expensive to make in my example, I twenty-eight buttons in the violin and thirty keys in the guitar. This is an average student enough to start this a few years to play. These buttons are controlled by a General MIDI tone generator when pressing a pushbutton on tone sends a tone volume control and the ironing or strum them and depending on the intensity of the tone from a speaker or headphones mild or strong does sound. It is noted that, as in an authentic instrument, in a tone of a free string no finger on the string of the neck is pressed but it sounds to rub or pluck.

Such a device is already in use with an electric guitar from Yamaha publication number JP2002258866. This instrument is intended for a guitar easier to play through it, otherwise as an authentic guitar, no longer need to be tuned. This instrument also has an extensive tutorial with illuminated push buttons on the neck so as to indicate chord grips for easy start for the student to understand and take his fingers.

The invention aims to string all authentic instruments which mimic or art to each string that is coated or plucked, and depending on the intensity of this, a pure soft or strong tone. According to the invention can be achieved by an instrument sitting tone generator when pressing a pushbutton on the neck or the use of a free string tone sends a tone volume control who control them, ironing or strumming and the intensity, tone does sound through a speaker or headphone output and controls in strength from mild to strong.

The tone volume control is there a version for string instruments with the strings as high relative to the cabinet like a guitar or bass, and a version for string instruments by the shape of the cam different height of the strings has relative to the cabinet as string in which they noted that the principle of the tone volume control is the same. The operation of the tone volume control is based on strengthening the results of the string coated or strummed through an on string and art to mounted lever with a pivot point where the short end of the lever above is included in the string and the long end under the hinge point. Then there is a light valve comprising an area with a hole in it close and when blooming by strumming or lowering of the string, including enhanced deflection and light transmission through the hole by means of a lamp or LED above the valve seat and is collected by a standing light sensor beneath the tone depending on the amount of light through a speaker or headphones does sound soft or strong.

The invention will be set put figures on the basis of the functioning and performance capabilities of the invention.

FIG 1 shows a guitar with a closet with a neck on neck with two buttons thirty three strings attached to the tone volume control and 4 attachment point 5. The strings all have the same voltage and do not need to be tuned. 7 Furthermore, a speaker and a headphone jack 6.

Fig. 2 shows a violin neck with a cabinet with eight buttons on the neck twenty-eight 9 tone volume control 10 a loudspeaker 11 and a headphone jack 12.

Fig. 3 shows a tone volume control for a guitar with a diameter of a front view, top view and a side view.

Fig. 4 shows a tone volume control for a violin with a diameter of a front view, top view and a side view.

In the figures, corresponding parts with the same reference numeral.

Description and operation of the figures.

The cabinet with a neck in Fig.1. includes a tone generator, when a push button 2 is pressed, a tone to the tone and volume control 4 sends it through a light sensor 13 in FIG. 3 is processed as the strumming of a corresponding string 15 according to the intensity of this lever 14 and below confirmed the light valve 16 strongly or less strongly moves so that the light much or little light or LED 18 through the hole 19 is in the dark space 20 and 13 falls on the sensor and the tone from a loudspeaker 7 Fig. A mild or strong or headphones do sound. The springs 21 in FIG. 3, attached to the dark room 20 and the levers 14, adjust the resistance when strumming or iron and determine the result of the light valve 16 and allow the light valve 16 after picking back position is and the hole 19 in space 20 exit.

The tension spring 22 lifts the tension of the string 15 attached to the lever 14 so that the hinge 17 of lever 14 is taxed less.

Because due to the string up little space in the tone volume control are long sections in the hinge 17 of the levers 14 staggered into three long sections of the levers 14A front and three long sections of the levers behind 14B.

The tone of the violin Fig. 2 is created in the same way as for the guitar Fig. A tone and volume control Fig. 3 except that the violin strings but not string art 23 in Fig. 4 is directly attached to the levers 24 and not just plucked but can be ironed with a bow. The shape of a comb, which the strings rest on a traditional violin, imitating all the levers 24 Fig. 4 in accordance with art 23 strings installed. Because this creates even more space, the long parts of the lever 24 times staggered four 24A, 24B, 24C and 24D.

CONCLUSIONS

1. Authentic digital device for string instruments to mimic it so easy for beginning students and pure tone to play and not have to be tuned. Through the neck of the instrument standing keys, in exactly the same in position as where a pure tone when pressing the fingers of a chord with an authentic instrument by pressing a pushbutton its tone coming a tone generator to transmit a light sensor. This was confirmed in a dark room with a hole closed by a light valve rigidly attached to a lever at the other end a string of art to which, when plucked with the fingers or coated with a bow, the string or art depending on the intensity of this does much or little from storage. With the short end above the pivot point on the string or art to this outcome through the long end of the lever below the pivot reinforced passed to the light valve and depending on the intensity of the light sensor little or a lot of light transmitted from a light or LED located above the valve is in, then the tone from a speaker or headphones, mild or strong does sound.
2. Device according to claim 1, characterized in that tension springs, attached to the dark areas and the levers, the resistance is controlled by the strumming of iron and thus the result of the light valves determine the resting establish and to not touch it art of the string or strings translucent hole shut.
3. Device according to claim 1 and 2, characterized in that, in imitation of string, the crest and the position of art with strings attached levers, get exactly the same place and position as the strings of a stringed instrument authentic.
4. Device according to claim 1 wherein a spring, mounted between the box and lever, a lever attached to the string tension accordingly the pivot of the lever lifts.

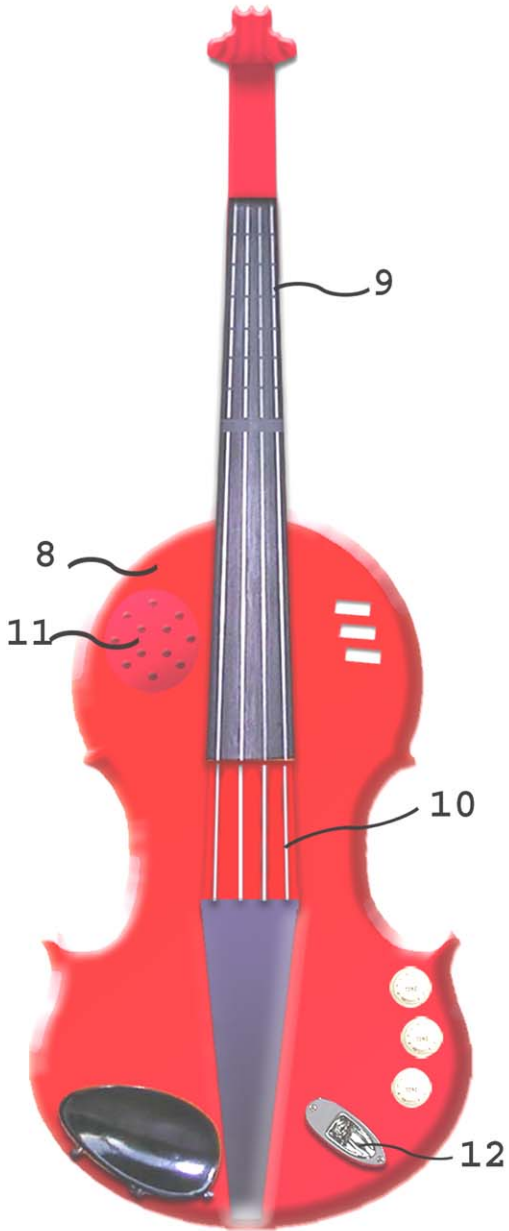


Fig. 2

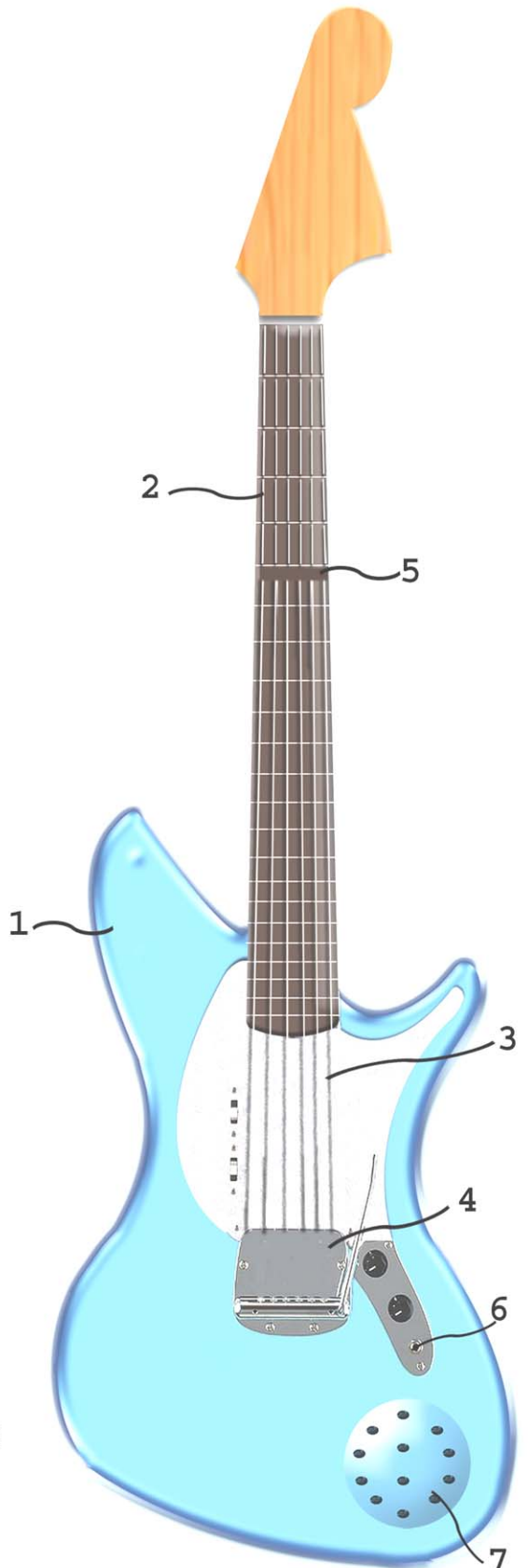


Fig. 1

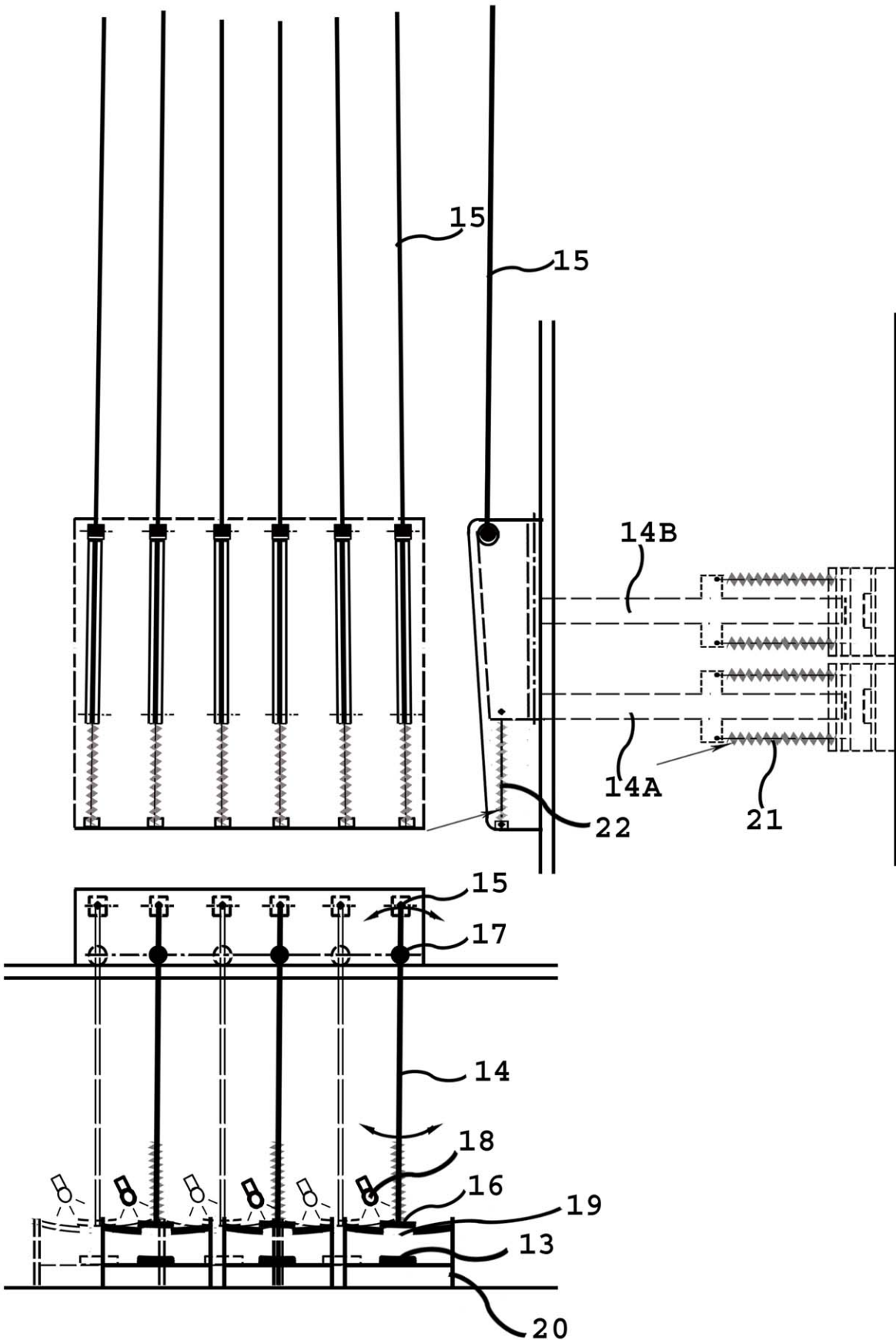


Fig. 3

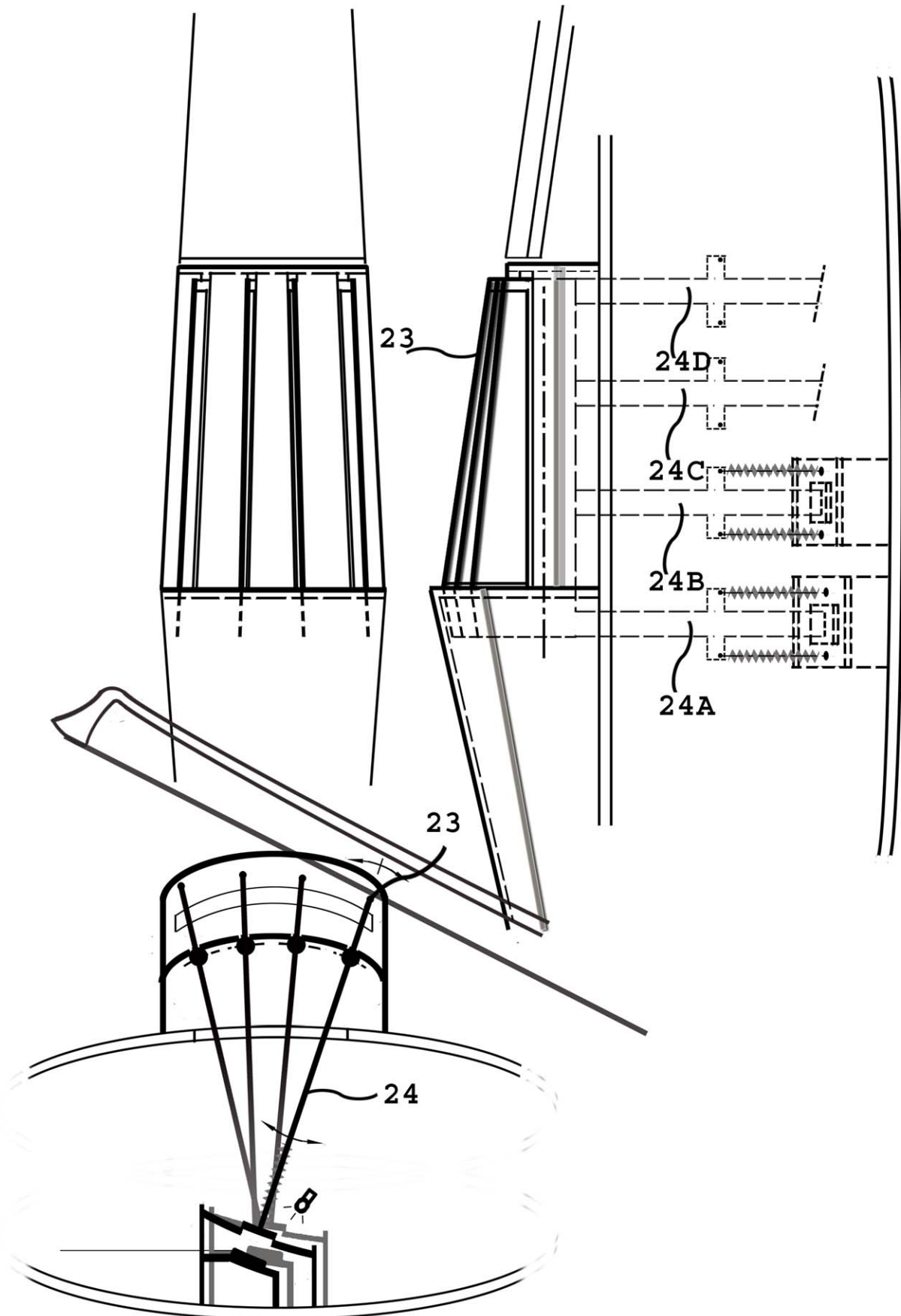


Fig. 4