

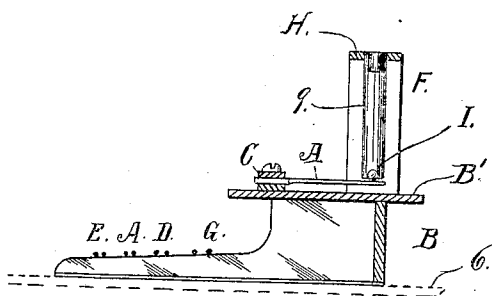
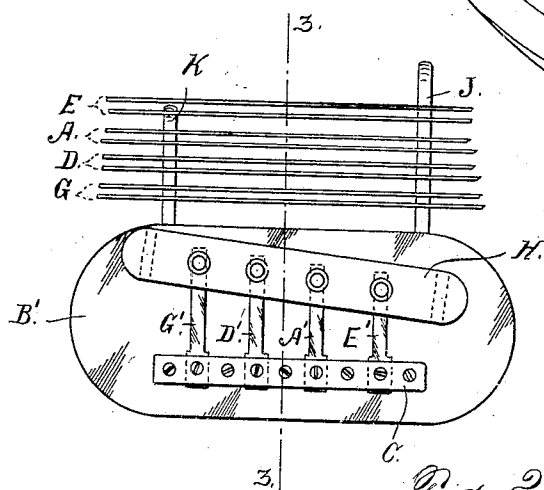
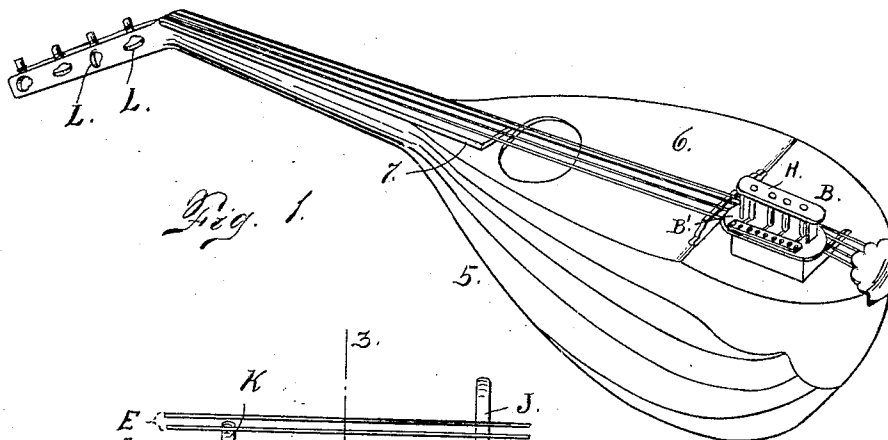
No. 841,384.

E. E. ENGLAND.

PATENTED JAN. 15, 1907.

TUNING DEVICE FOR STRINGED INSTRUMENTS.

APPLICATION FILED FEB. 13, 1906.



Witnesses
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TUNING DEVICE FOR STRINGED INSTRUMENTS.

No. 841,384.

Specification of Letters Patent.

Patented Jan. 15, 1907.

Application filed February 13, 1906. Serial No. 300,919.

To all whom it may concern:

Be it known that I, EMMETT E. ENGLAND, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Tuning Devices for Stringed Instruments; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in tuning devices for stringed instruments, being more especially intended for use in tuning mandolins. It is believed, however, to be equally valuable in tuning guitars, and perhaps a number of other stringed instruments.

The distinguishing feature of my invention is a device whereby when a string of the instrument is properly tuned the fact will be visually indicated. In other words, with my improved device a stringed instrument may be tuned by a deaf person, since it is only necessary that the movement of the balls within the tubes be observed in order to properly accomplish the tuning operation.

Having briefly outlined my improved construction, as well as the function it is intended to perform, I will proceed to describe the same in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a perspective view of a mandolin, showing my improved device in position for tuning. Fig. 2 is a top plan view of the device, shown on a larger scale and in connection with the strings to be tuned. Fig. 3 is a section taken on the line 3 3, Fig. 2.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a mandolin considered in its entirety; 6, the sounding-board; 7, the finger-board, and the letters G, D, A, and E the different pairs of strings with which the instrument is provided.

As shown in the drawings, my improved device consists of a suitable frame B, supporting a top platform B', to which is secured a bar C, composed of two members, between

which are clamped tongues, which I will designate G', D', A', and E', respectively, in order to identify them with the strings G, D, A, and E, since the tongues are respectively regulated to vibrate in unison with the strings of corresponding names when the latter are properly tuned.

Mounted on the platform B' is an upright frame member F, having a top part H, from which are suspended the various tubes 9, preferably composed of glass. The upper extremities of these tubes are closed, while their lower extremities are open. Each tube contains a small ball I, which rests upon one of the reeds. The number of tubes corresponds with the number of tongues.

The framework of the device is preferably provided with two lateral projections J and K, which when pressed beneath the strings of the instrument in the rear of the bridge are engaged by the strings with sufficient force to hold the device securely in place during the tuning operation. In this event it is evident that the frame B rests upon the sounding-board, which is indicated by the dotted lines in Fig. 3. The strings of the instrument are also shown in place in the last-named view.

From the foregoing description the use and operation of my improved device will be readily understood. In order to tune the instrument, the device constructed as shown or in any other suitable manner is mounted upon the sounding-board in the rear of the bridge projections J and K, extending beneath the strings. The operator then proceeds to turn the keys L in the usual manner in order to give the strings the desired tension. In testing any string by picking it in the usual manner the vibration of the string will act upon the tongue corresponding with the string, and when the latter is properly tuned it will vibrate in harmony with its corresponding tongue, and the vibration of the latter will cause the ball I within the tube beneath which the reed projects to rise upwardly to the top or approximately to the top of the tube. The operator then knows that the string is tuned and proceeds with the next.

Having thus described my invention, what I claim is—

1. A tuning device for stringed instruments comprising tongues, movable bodies

arranged to be acted on by the tongues, and guides for the said bodies during the tuning operation.

2. A tuning device comprising a suitable frame, tongues mounted on the frame, tubes supported above the tongues and having open lower extremities, and movable bodies located in the tubes and resting on the tongues whereby motion is imparted to the said bodies by the vibration of the tongues.

3. A tuning device for stringed instruments comprising tongues, movable bodies arranged to be acted on by the tongues for visually indicating the proper tuning of the strings, and guides for retaining the said bodies, said guides being adapted to expose the said bodies during the tuning operation.

4. A tuning device comprising a suitable frame, tongues, guides supported above the tongues, and movable bodies controlled by

the guides, said bodies resting on the tongues whereby motion is imparted thereto by the vibration of the tongues.

5. A tuning device for stringed instruments, comprising tongues, a frame forming a support for the tongues, transparent tubes mounted on the frame and open at their lower extremities which occupy positions immediately above the respective tongues, and small balls located in the tubes and resting on the tongues whereby as the latter are vibrated the movement will be imparted to the balls.

In testimony whereof I affix my signature in presence of two witnesses.

EMMETT E. ENGLAND.

Witnesses:

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