June 10, 1930. S. HAWEIS 1,763,518

MUSICAL INSTRUMENT

Filed Jan. 3, 1927

Fig. 1.

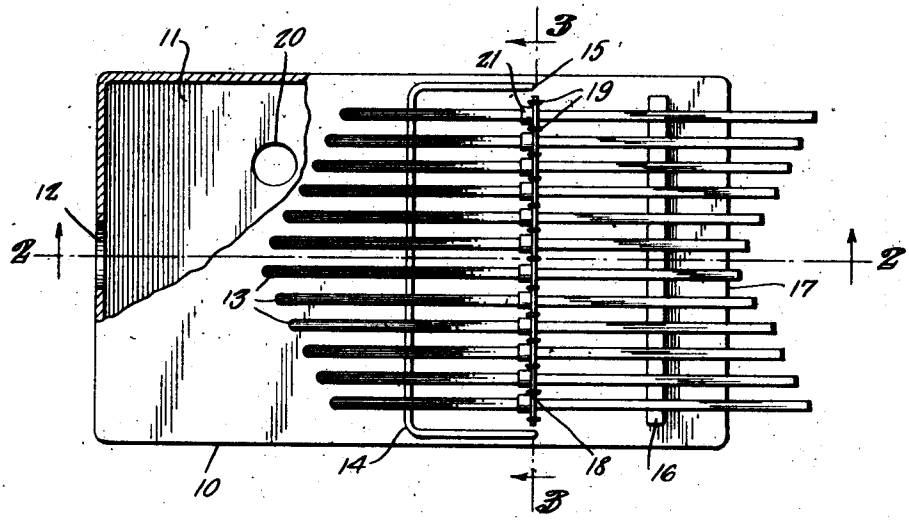


Fig. 2.

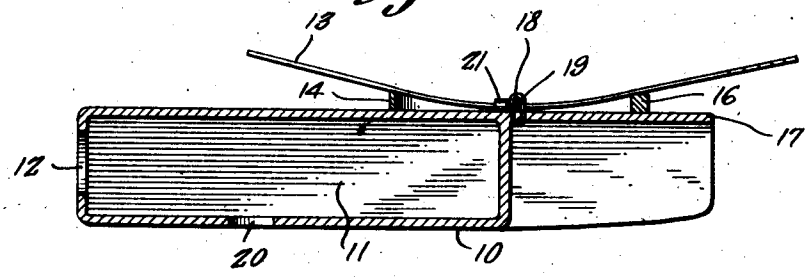
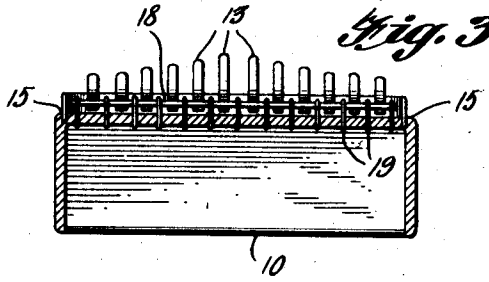


Fig. 3.



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WITNESS:

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UNITED STATES PATENT OFFICE

STEPHEN HAWEIS, OF WASHINGTON, DISTRICT OF COLUMBIA

MUSICAL INSTRUMENT

Application filed January 3, 1927. Serial No. 158,724.

This invention relates to musical instruments and has for an object the provision of an instrument of novel character which is adapted to be played by the fingers or thumbs of the operator to produce clear, pleasing, musical tones.

Another object of the invention is the provision of means whereby the tone producing means may be adjusted to regulate the tones, or to vary the pitch of the instrument.

Another object of the invention is the provision of an instrument of the above character wherein the volume of sound may be regulated.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings:—

Figure 1 is a plan view of a musical instrument constructed in accordance with the invention, parts being broken away to more clearly illustrate the invention.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a similar view on the line 3—3 of Figure 1.

Referring to the drawings in detail wherein like characters of reference denotes corresponding parts, the reference character 10 indicates a hollow member wherein there is provided a sound chamber 11 having a sound escape opening 12. The body 10 may be of any suitable size and configuration, but it is preferred to make the body rectangular in shape as shown and of a width whereby the opposite sides of the body may be grasped by the hands of the operator of the instrument with the fingers upon the bottom of the body, so that the thumbs may be utilized to play the instrument, as will be later apparent.

Mounted upon the body is a plurality of sound bars 13. These bars are arranged parallel and are supported spaced above the member by means of a bridge 14. This bridge extends across the member beneath the bars and has its opposite ends secured to the member. This may be effected in any suitable manner, but it is preferred to make the bridge substantially U-shaped as shown in Figure 1 and to insert the ends of the bridge into the member as shown at 15 in Figure 3. An additional bridge 16 extends across the body beneath the bars. The bridges 14 and 16 are spaced apart and the last mentioned bridge is preferably positioned upon an extension 17 which projects from one end of the member.

Extending across the bars 13 between the bridges 14 and 16 and arranged to place the bars under tension, is a tie bar 18 whose opposite ends are secured to the member in any suitable manner. The bars 13 are made of spring metal, so that when the ends of the bars which extend over the bridge 14 are depressed and released, they will vibrate and produce a pleasing musical tone. The bar 18 is provided with additional securing means in the form of tie elements 19. These elements extend over the bar 18 between the bars 13 and through the member extension 17.

The lengths of the ends of the sound bars 13 which extend beyond the bridge 14 vary and are arranged so as to produce the tones of a musical scale with each alternate note of the scale positioned upon opposite sides of the center of the member. For example, do will be position to the right of the center, ra to the left of the center, mi to the right of the center next to do, fa to the left of the center next to ra, and so forth. This is an important feature of the invention as it facilitates operation of the sound bars by the thumbs of the player. Any convenient number of sound bars may be provided and it is preferred to arrange four or more sound bars between the bars do and ra, or central of the member. These additional sound bars are of a greater length than the other bars of the scale so as to produce low notes.

The body may be provided with an additional opening 20 in the bottom thereof and this opening may be controlled by one of the fingers of the player to vary the volume of the tone.

Also, if desired, each of the sound bars

may have mounted thereon for free movement, a collar 21. When the sound bars are vibrated, these collars will be likewise vibrated and add to the effectiveness of the instrument.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claims.

Having described the invention what is claimed is:—

1. A musical instrument comprising a hollow member defining a sound chamber and having an opening therein and a plurality of spaced parallel sound bars mounted upon the member and arranged to produce different musical tones and sleeves mounted for free movement upon the bars.

2. A musical instrument comprising a hollow member defining a sound chamber and having an opening therein and a plurality of spaced vibratory sound bars mounted upon the member and arranged to produce different musical tones and vibratory elements mounted for free movement longitudinally of the bars.

3. A musical instrument comprising a hollow member defining a sound chamber and having an opening therein, a plurality of sound bars carried by and spaced above the member, spaced means extending across the member beneath the bars to support the latter above the member, means engaging the bars at a point between the bar supporting means to tie said bars to the member whereby the free ends of the bars may be vibrated to produce different musical tones, and metallic sleeves loosely mounted upon the bars between the bar supporting means and the bar tying means.

In testimony whereof I affix my signature.

STEPHEN HAWEIS.