April 26, 1955 W. L. YOUNG 2,706,926

REVISED DECATONIC KEYBOARD

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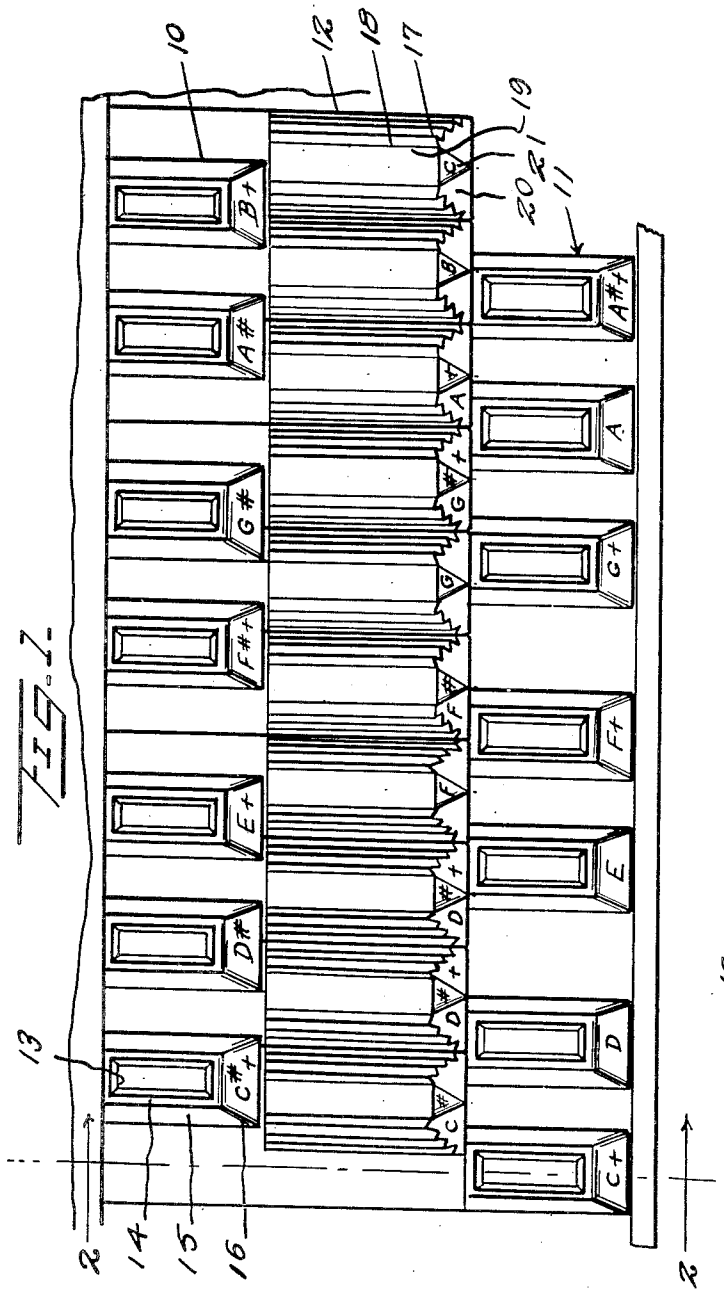

FIG. 1.

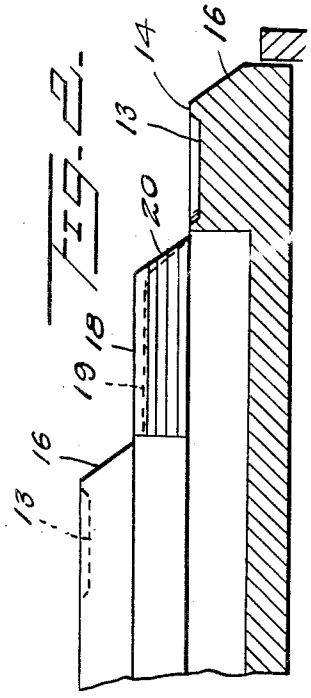

FIG. 2.

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REVISED DECATONIC KEYBOARD

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2 Claims. (Cl. 84—451)

This invention relates to an improved keyboard arrangement for musical instruments.

An object of this invention is to provide an improved keyboard for musical instruments wherein the keys are arranged in three tiers and 24 digitals are provided for each octave. The keys or digitals of each octave are arranged with seven digitals each in the upper and lower tiers, and with ten digitals in the intermediate tier. The ten digitals in the intermediate tier form the decatonic scale which is comprised of semi-tones and three-quarter tones, whereas the upper and lower tiers form the septonic scale which is formed of whole tones and three-quarter tones.

Another object of this invention is to provide an improved decatonic keyboard which can be fingered with ease by an adult hand, the formation of the keys being such that the fingers are prevented from slipping while in motion.

A further object of this invention is to provide an improved decatonic keyboard which includes improved conceptions as to tonality through the unique arrangement of the keys in tiers.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawing and specification, and then more particularly pointed out in the appended claims.

In the drawings—

Figure 1 is a fragmentary plan view of a keyboard for musical instruments constructed according to an embodiment of this invention,

Figure 2 is a fragmentary sectional view taken on the line 2—2 of Figure 1.

Referring to the drawing, the numerals **10** and **11** designate generally upper and lower series of keys or digitals and the numeral **12** designates generally an intermediate row of keys or digitals. The upper and lower series or tiers of keys **10** and **11** form the septonic scale, whereas the intermediate tier or series of keys **12** form the decatonic scale. The upper and lower tiers of keys are similar as to the configuration of the keys and each key is formed with a horizontal or flat upper surface **14** having an elongated and longitudinally extending recess **13** disposed therein.

The opposite longitudinal sides of the upper and lower keys are beveled or flared downwardly as indicated at **15**, and the outermost end of each key of the upper and lower tiers is also formed with a downwardly inclined forward end **16**. The recesses **13** are provided so that the fingers will not slip off of the upper surface of the keys when the fingers are in movement, and the keys are spaced apart sufficient so that there will be ample room for the fingers of an adult as well as of a child.

The decatonic keys in the intermediate tier or scale **12** are formed with an arcuate or convex upper side and the convex upper side of each key in the decatonic scale **12** is formed with a plurality of longitudinally extending grooves **17**. The top of each key in the decatonic scale **12** is substantially flat, as indicated at **18**, and a longitudinal recess **19** is formed in the top of each intermediate key in the decatonic scale **12**. The forward end of each key in the decatonic scale is downwardly and forwardly inclined, as indicated at **20**, and a V-shaped recess **21** extends downwardly from the recess **19** and is formed in the forward end of each key in the decatonic scale.

As shown in the drawing, each octave which is complete as herein shown, is formed of seven upper and lower keys in the septonic scale, and is also formed of ten intermediate keys in the decatonic scale. The keys in the upper and lower scales **10** and **11** respectively, intone whole and three-quarter tone steps and the keys in the intermediate or decatonic scale **12** intone semitone and three-quarter steps. By providing the intermediate keys of a different configuration than the upper and lower keys, the player can, by feel of the keys, determine the position of his fingers and the keys in the intermediate or decatonic scale are not only formed with the longitudinal recess **19** to centrally position a finger on the key, but the longitudinal grooves **17** form longitudinal ribs which tend to prevent sliding of the fingers from the surface of the decatonic scale keys **12**.

I do not mean to confine myself to the exact details of construction herein disclosed, but claim all variations falling within the purview of the appended claims.

What is claimed is:

1. A musical instrument keyboard comprising upper and lower tiers of keys and an intermediate tier of keys, said intermediate tier forming a decatonic scale of ten digitals and said upper and lower tiers forming a septonic scale of seven digitals, the keys of said upper and lower tiers being of truncated triangular configuration in transverse section with a longitudinal depression in the flat top thereof forming marginal ridges on the upper surface, the keys of said intermediate tier being of generally arcuate configuration in transverse section with longitudinal ribs formed on the convex surfaces and with a longitudinal depression in the top surface thereof forming marginal ridges on the upper surface, the tones intoned by said keys being arranged in progression from said lower tier through said intermediate tier to said upper tier at an oblique forwardly inclined angle, the decatonic scale comprising semi-tones and three-quarter tones, and the septonic scales comprising whole tones and three-quarter tones.

2. A musical instrument keyboard comprising an octave embraced in upper and lower tiers of keys each forming a septonic scale of seven digitals, and an intermediate tier of keys forming a decatonic scale of ten digitals, the upper and lower tiers of keys of each octave embodying a group of two adjacent spaced pairs of keys and a group of three spaced keys, the groups in the lower tier being arranged with the two pairs and the three keys disposed in the ascending scale, and the groups in the upper tier being reversed with respect to the groups in the lower tier.

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