United States Patent

[11] 3,546,995

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[21] Appl. No. **730,072**
[22] Filed **May 17, 1968**
[45] Patented **Dec. 15, 1970**

[54] **BASS CHORD PLAYER**
6 Claims, 7 Drawing Figs.

[52] **U.S. Cl.** **84/444**
[51] **Int. Cl.** **G10c 3/12**
[50] **Field of Search** 84/444, 443, 426, 353, 357, 225, 232, 366, 171; D56/2

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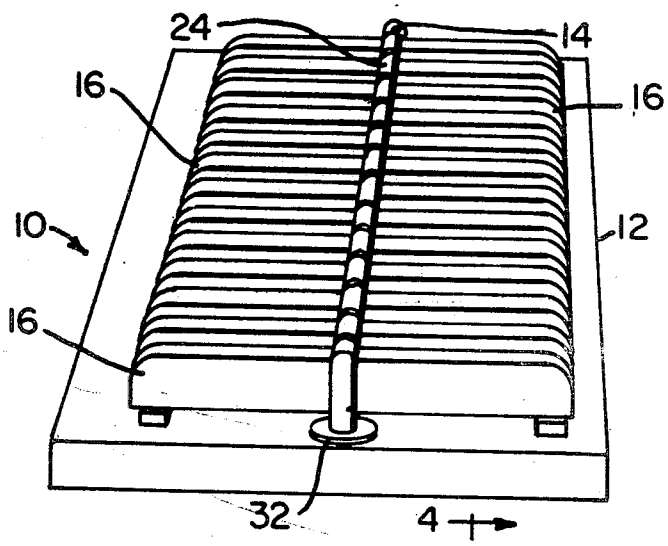
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Assistant Examiner—John F. Gonzales
Attorney—Karl L. Spivak

ABSTRACT: A bass chord player including a movable foot pedal and spaced contacts operatively arranged to play musical notes, and strategically positioned to activate the root or first note of the chord and the fifth note of the chord upon simple pivotal motion of the said foot pedal.



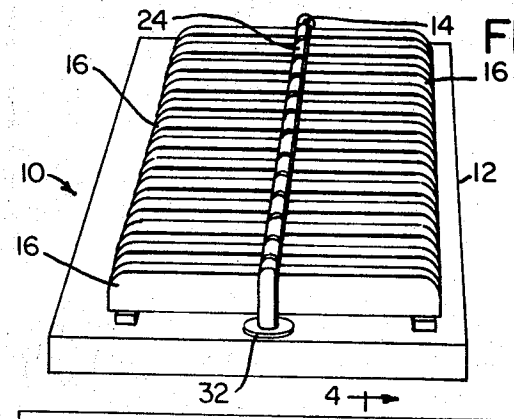


FIG. 1

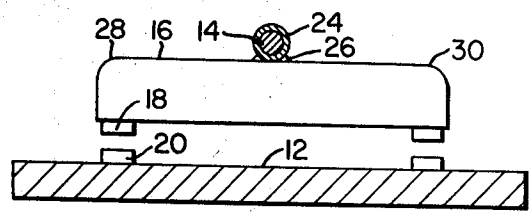


FIG. 4

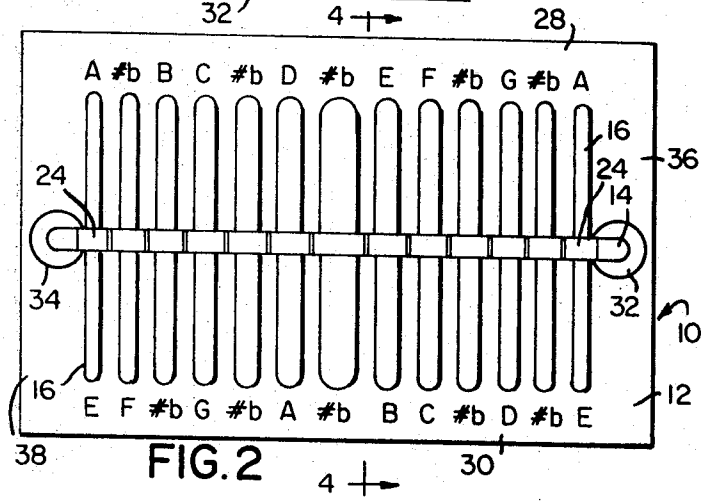


FIG. 2

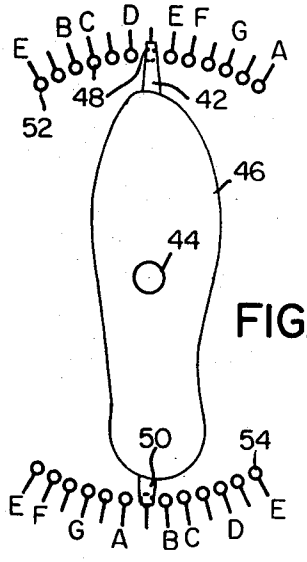


FIG. 5

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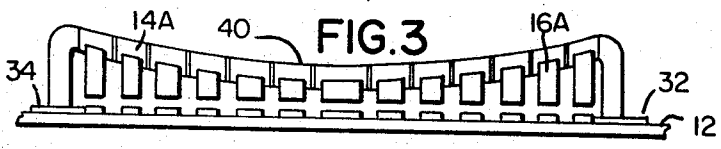


FIG. 3

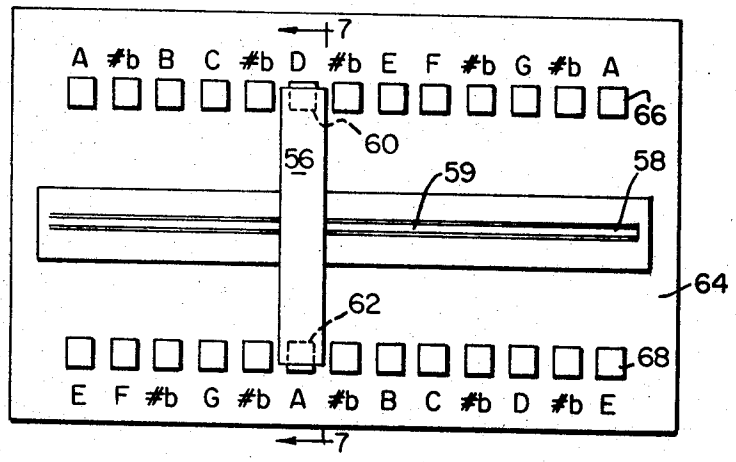


FIG. 6

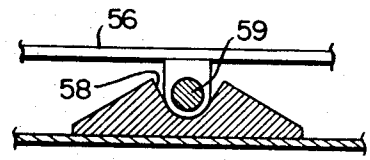


FIG. 7

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BASS CHORD PLAYER

BACKGROUND OF THE INVENTION

This invention relates to the general field of musical instruments, and more particularly, is directed to a bass chord player, including musical contacts for electrically activating bass chords of a remote, electrically operated instrument.

It is the primary purpose and function of this invention to provide an instrument capable of playing bass notes. The correct bass notes to correspond with each musical chord played by another instrument such as a piano or a guitar should be the root, or first note of the chord and the fifth note of the chord. For example, in a musical scale comprising A, B, C, D, E, F, and G, examples of the root and fifth note of the chord would be A to E, B to F0, C to G, and so on until the scale would again repeat itself.

At the present time, the only bass pedals now available are those manufactured in connection with use on an electric organ in the usual manner. The present system is laid out exactly the same as a common piano or organ keyboard; such a layout comprising a group usually of 13 pedals, the long pedals representing the white keys and the short pedals representing the black keys. All of the pedals are fixed in position, are hinged at one end and are spaced parallel to each other. In order for the musician to play the necessary notes, that is, the root to fifth note of the chord, his foot must bypass several pedals each time a chord is played, thereby resulting in considerable foot motion. It should also be noted that when playing sharps or flats, the foot of the musician must travel to the higher level in order to play the short black pedals. Such action further results in effort and excess motion on the part of the musician.

SUMMARY OF THE INVENTION

The present invention seeks to eliminate all of the lost motion on the part of the musician and to facilitate playing the bass notes by providing a novel keyboard and note arrangement whereby the necessary two-note sequence, e.g. first to fifth, may be played simply by rocking a single pedal back and forth, utilizing easy, pivotal foot motion about a stationary foot support construction.

A stationary, transverse bar placed over the contact pedals provides a convenient arch support for the foot while playing, and function to assure utmost accuracy in contacting the pedals by the foot.

It is therefore an object of the instant invention to provide an improved bass chord player of the type set forth.

It is another object of the instant invention to provide a bass chord player incorporating unique note position arrangement in horizontal, juxtaposed relation.

It is another object of the instant invention to provide a novel bass chord player wherein a two-note sequence of first to fifth notes of a chord may be played by simple pivotal motion.

It is another object of the instant invention to provide a novel bass chord player incorporating pivotal pedals spaced beneath a transverse bar foot rest.

It is another object of the instant invention to provide a novel bass chord player wherein a plurality of spaced note operating pedals are positioned in horizontal, juxtaposed relation, and wherein the said pedals vary in width across the keyboard.

It is another object of the instant invention to provide a novel bass chord player incorporating a plurality of foot-operated pedals arranged to operate note contacts wherein the width of the said pedals varies uniformly from the middle transversely to each end, the said pedals being narrower toward the end of the keyboard.

It is another object of the instant invention to provide a novel bass chord player incorporating a plurality of horizontally spaced foot pedals, the said pedals being arranged at varying elevations.

It is another object of the instant invention to provide a novel bass chord player incorporating a plurality of spaced, horizontal foot pedals operating notes of the scale, said pedals being positioned lowest in the center of the keyboard and being positioned at slightly increasing elevations as the foot pedals approach the lateral edges.

It is another object of this invention to provide a bass chord player that is simple in construction, inexpensive in manufacture, and trouble-free when in use.

Other objects and a fuller understanding of the invention will be had by referring to the following description and claims of a preferred embodiment thereof, taken in conjunction with the accompanying drawing wherein like reference characters refer to similar parts throughout the several views, and in which:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front perspective view of the invention.

FIG. 2 is a top plan view thereof.

FIG. 3 is a side elevational view of a modification set forth in FIGS. 1 and 2.

FIG. 4 is a cross-sectional view taken along line 4–4 of FIG. 2, looking in the direction of the arrows.

FIG. 5 is a top plan view of a modified type of construction.

FIG. 6 is a top plan view of a second modified type of construction.

FIG. 7 is a cross-sectional view taken along lines 7–7 of FIG. 6, looking in the direction of the arrows.

DESCRIPTION OF THE PREFERRED EMBODIMENT OF THE INVENTION

Although specific terms are used in the following description for the sake of clarity, these terms are intended to refer only to the particular structure of my invention selected for illustration in the drawing, and are not intended to define or limit the scope of the invention.

Referring now to the drawing, I show in FIG. 1 a bass chord player generally designated 10, designed and constructed in accordance with the novel keyboard arrangement, hereinafter more fully set forth. The device comprises essentially a base or structural support 12 which carries the transverse, stationary foot bar 14 in elevated position spaced above the top of the base 12. A plurality of foot pedals 16 pivotally suspend from the bar 14 and carry a plurality of end contacts 18 for intermittent interaction with the base mounted contacts 20 for completing an electrical musical circuit in well-known manner. The completion of the musical electrical circuit when the contacts 18, 20 meet, energizes an amplifier (not shown) and a connected electrical musical instrument, such as a guitar, piano, or organ (not shown) through an electrical interconnecting cord (not shown) in accordance with established principles of electrical instrument operation.

The foot bar 14 stationarily secures to the top of the base 12 using suitable, sturdy construction, such as end flanges 32, 34 securely bolted to the base as required to furnish adequate support to carry the weight of the musician's foot (not shown) when the foot is employed to rock the foot pedals 16 forwardly and rearwardly about the foot bar 14. Each foot pedal 16 is equipped with a spring (not shown) in any suitable manner to continuously bias each pedal 16 to maintain a horizontal position above the base 12. Referring now to FIGS. 2 and 4, the bar 14 rotatively carries a plurality of collars 24, one collar 24 being provided for each pedal 16. The pedals 16 respectively affix to the exterior of the collars 24 in any suitable manner, such as by fillet welds 26 for rotative motion about the foot bar 14. It is thus seen that the collars 24 serve as bearings to thus permit pivotal movement of the foot pedals 16 about the foot bar 14. The upper and lower contacts 18, 20 respectively positioned both at the front 28 and rear 30 of the base foot pedal 16 which may thus be brought easily into mutual engagement simply by rocking the individual pedals 16 about the foot bar 14.

Referring now to FIGS. 2 and 5, the strategic placing of the notes of the scale is best illustrated. As previously noted, the correct bass notes to correspond with each musical chord played by another instrument such as a piano or guitar should be the first note of the chord and the fifth note of the chord. In order to facilitate playing first and fifth notes with a minimum of foot motion, the respective first and fifth notes are arranged at opposite ends of each foot pedal **16**. Thus, when playing the first to fifth notes, for example, A to E, the extreme left-hand pedal **16** is first forwardly rocked to make contact at note A and then rearwardly rocked to make contact at note E. This pivotal operation of the pedals **16** is similarly employed at all of the other pedals in order to activate the first and fifth notes by simple forward and rearward rocking movement by the foot of the musician In addition to pivotally carrying the foot pedals **16**, the foot bar **14** serves to support the arch (not shown) of the foot of the musician in a resting position whereby the foot may be precisely directed to play the proper pedals **16** without undue tiring or fatigue. It should be noted that forward and rearward positions of the foot pedals **16** may be separated for individual operation of each section of the foot pedal at the forward and rearward contacts if so desired and still fall within the scope and intent of this invention.

As previously noted, the foot bar **14** positions over the pedals **16** to provide a convenient rest for the foot of the musician while playing. Without the support provided by the foot bar **14**, the foot of the musician would clumsily play and wrong notes could easily result. Each pedal **16** need be depressed only with slight pressure at either end to engage the contacts **18, 20**, so that even a slight misstep would result in a wrong note. The bar **14** may be medially transversely positioned as illustrated or optionally, could be installed offcenter should the proper circumstances arise. Various diameter bars may be employed to satisfy such designed criteria as size of instrument, weight to be sustained without deflection, etc. The foot bar **14** need not necessarily pivotally carry single pedals **16** as illustrated, but could also cross between two completely separate longitudinally spaced short pedals, namely a front pedal and a rear pedal, to thereby eliminate the single center pivot pedals and construction without sacrifice of function or utility.

As best seen in FIG. 2 and 3, the pedals positioned in the center of the player **10** are constructed widest and they narrow uniformly toward the lateral ends **36, 38** of the player **10**. This construction compensates for the physical fact that the central pedals are generally positioned close to the musician when in operation in such a manner that the full flat of the foot engages the central pedals when playing the notes. It must be appreciated that in order to play the pedals that are further from the middle, the foot of the musician must slide laterally along the bar **14** and pivot about the ankle in order to play the lateral end notes. Under these conditions, the pedals toward the lateral edges of the player **10** are thus played with the edge of the foot, which of course is narrower, and therefore require less space. In this manner, the overall width of the player may be conveniently reduced by varying the width of the pedals.

Similarly, the construction of FIG. 3 adapts to the position of the foot of the musician when playing central and laterally spaced foot pedals **16***a*. The bar **14***a* bows lowest at the center **40** of the pedal assembly and then gradually rises toward the lateral edges **36, 38** because the musician's leg seemingly becomes shorter in relationship to the end of the pedals. This design will greatly shorten the distance from the center and thereby considerably reduces stretching and reaching on the part of the musician.

The modification of FIG. 5 includes a center contact bar **42** which is free to turn about the central pivot point **44** and carries a convenient foot plate **46** to receive the foot of a musician (not shown). The contact bar **42** carries a forward contact **48** and a rear contact **50** which respectively connect at the front and rear extremities. A plurality of circularly arranged contacts **52** position diametrically opposed to a second series of circularly arranged contacts **54**. As illustrated and as hereinbefore described, it is of the utmost importance to position the root and fifth note of each chord in diametrically opposite position whereby the contact bar **42**, with its connected contacts **50, 48**, overlies the root and fifth of each chord as the foot plate **46** is swiveled about the pivot pin **44** by the musician. It is therefore evident that no matter which way the contact bar **42** is swiveled by the musician, it will position the contacts **48, 50** over the respective contacts **52, 54** to complete the circuit to the first and fifth notes merely by depressing the toe and then the heel of the bar **42**. In this manner, the musician need never take his foot off the foot plate **46**. The only action required is first to pivot the contact bar **42** into position and then to rock it forwardly and then rearwardly to make the required contacts. The root and fifth notes will always be opposite each other for utmost convenience and ease in operation. A spring (not shown) continuously biases the foot plate **46** in a horizontal plane to thereby present engagement of the respective contacts **48, 52** and **50** and **54** until the foot plate is depressed by the musician.

Referring now to FIGS. **6** and **7**, a contact bar **56** laterally slides upon the tract **58** and carries the respective contact **60, 62**. A plurality of forward contacts **66** and rearward contact **68** affix to the player face **64** in the order and arrangement hereinbefore set forth in the description of FIG. **2**. As illustrated, and as previously explained, the first and fifth notes of each chord lie directly opposite each other so that a simple forward and rearward rocking of the contact bar **56** will energize the root and fifth notes of the chord in the manner hereinbefore set forth. The contact bar **56** has both lateral movement and pivotal motion with relation to the track **58**, whereby any desired root to fifth note combination may be played by the musician simply by first sliding the contact bar along the track **58** and then rocking it forwardly and rearwardly to play the desired note arrangement by contact between the respective contacts **60, 62**, and the forward contacts **66**, and rearward contacts **68** to complete the electrical circuits.

It should be emphasized that the arrangement of notes as they lie opposite each other is of utmost importance in this invention. By positioning the notes as hereinbefore described, the root to fifth note of each chord may be conveniently played on one pedal simply by rocking the pedal forwardly and rearwardly. This also means that only one pedal need be played for each chord change. Accordingly, it follows that the musician need only position his foot in one location for each chord change. It is thus demonstrated that the usual manner of playing bass notes has been considerably simplified and various arrangements have been shown wherein the root to fifth note of each chord can be energized with the least possible motion and effort. Each contact **18, 20, 48, 52, 50, 54, 60, 66** and **62, 68** are respectively individually wired to complete electrical circuit in well-known manner when the respective contacts are depressed into mutual engagement to thereby sound the desired bass chord note.

I claim:

1. In a musical instrument designed to be played by the foot of a musician, the combination of:

A. a base;

1. said base having a forward section and a rearward section;

B. a foot bar affixed to the said base;

1. said foot bar transversely overlying the said base and defining a space between the top of the base and the foot bar, and

2. said foot bar being positioned intermediate the said forward section and the said rearward section;

C. a plurality of forward note producing contacts positioned upon the said forward base section;

D. a plurality of rearward note producing contacts positioned upon the said rearward base section; and

E. at least one note producing foot pedal pivotally secured to the foot bar and depending below the foot bar,

1. the said foot pedal being pivotal to a forward contact position and a rearward contact position about and below the said foot bar,
2. the said pedal positioning in the space between the foot bar and the base whereby the foot of the musician rests upon the foot bar while pivoting the note producing pedal forwardly and rearwardly,
3. said pedal having a forward note producing contact and a rearward note producing contact,
   a. said forward contact and said rearward contact overlying one of said forward and rearward base note producing contacts, whereby the said forward base contact and forward pedal contact engage when the pedal is pivoted to the forward contact position and whereby the said rearward pedal contact and rearward base contact engage when the pedal is pivoted to the said rearward contact position.

2. The invention of claim 1 wherein the said forward note producing contacts position upon the said base in juxtaposition to the said rearward note producing contacts to form a plurality of spaced contact pairs.

3. The invention of claim 2 wherein each said pair represents the first note and fifth note of a chord.

4. The invention of claim 1 wherein the said forward contacts are arranged in the ascending order of a musical scale, the said rearward contacts are arranged in the ascending order of a musical scale, the said forward contacts and rearward contacts being positioned in spaced relationship upon the said base to form a plurality of opposed contact pairs, each said pair comprising respectively the first note and the fifth note of a chord.

5. In a foot operated musical instrument, the combination of
A. a base;
   1. said base having a forward section and a rearward section;
B. a foot bar affixed to the said base,
   1. said foot bar transversely overlying the said base in spaced relationship therefrom, and
   2. said foot bar being positioned intermediate the said forward section and the said rearward section;
C. a plurality of forward note producing contacts positioned in the said forward base section;
D. a plurality of rearward note producing contacts positioned in the said rearward base section; and
E. a plurality of note producing pedals pivotally secured to the said foot bar,
   1. each said pedal having a forward note producing contact and a rearward not producing contact,
      a. each said forward contact and each said rearward contact overlying one of said forward and rearward base note producing contacts, whereby the said forward base contact and forward pedal contact engage when the pedal is depressed forwardly and whereby the said rearward pedal contact and rearward base contact engage when the said pedal is depressed rearwardly, and
   2. wherein the said pedals vary in width.

6. The invention of claim 5 wherein the pedals medially positioned upon the said foot bar are widest and wherein the pedals at the transverse ends of the said foot bar are the narrowest.