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2,072,985

MUSICAL INSTRUMENT

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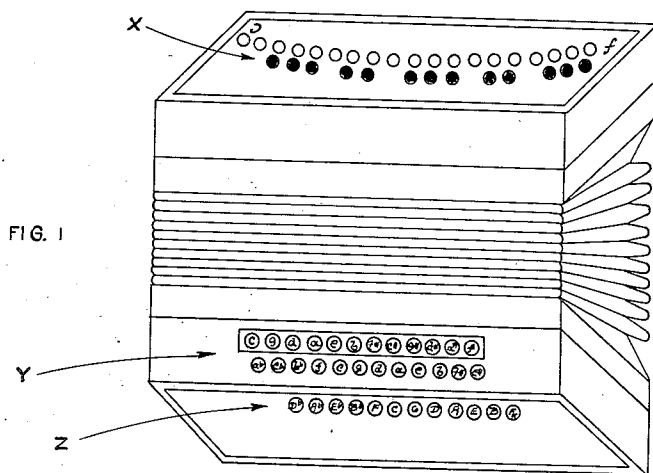


FIG. 1



FIG. 3



FIG 4



FIG. 5

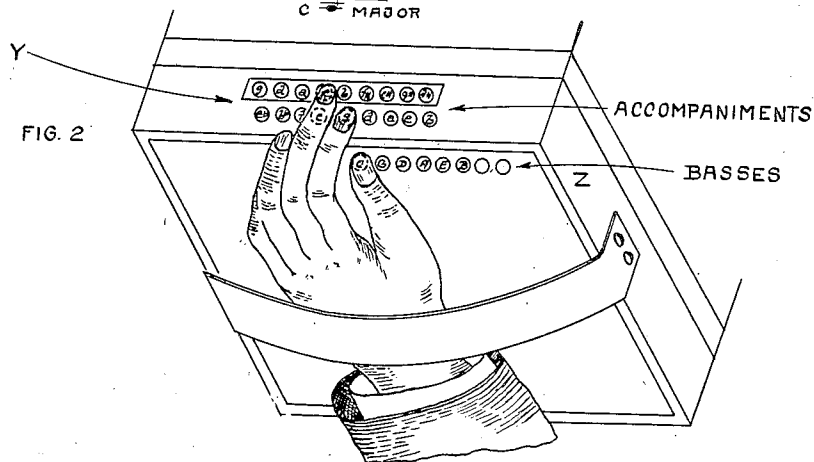


FIG. 2

ACCOMPANIMENTS

BASSES



Fd G. 6

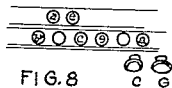


FIG. 8



FIG. 7

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MUSICAL INSTRUMENT

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The object of my invention is to provide keyed musical instruments for producing both melody and harmony by utilizing keys and reeds, the reeds being enclosed in a combination of box and bellows. The keys on this instrument are placed in two separate arrangements for keys, said arrangements being commonly considered keyboards; one keyboard being for the melody, as in the treble clef for piano music; the other keyboard being for basses and accompaniments, as in the bass clef for piano music.

In the accompanying drawing, Figure 1 is a plan view of the new musical instrument, shown without belts and hand rests; Figure 2, the lower portion of the same instrument, (with one-fourth of the keys less) and a hand playing a chord and bass; Figure 3, two "C chords" in the treble clef, one within the limits of a sixth, the other extended four steps beyond an octave; Figure 4, the "C major chord" and bass C as played by the hand in Figure 2; Figure 5, an example of a sustained bass effect; a bass note sounding, while changing harmonies are played at the same time by the one hand; Figure 6, the "fifths" as employed on the violin; Figure 7, the same "fifths", as in Figure 6, as employed in accompaniment section Y and bass section Z, of the new instrument shown in Figure 1 and Figure 2; Figure 8, the basses C and G, and the accompaniment keys "a" and "e" in the top row, and the keys "b flat", "c", "g" and "a" in the lower row.

This new musical instrument resembles, in outward appearance, an accordion and a concertina, and is played in a somewhat similar manner. In construction, the reeds and bellows are similar to those of the piano-accordion, a similar action is used with only minor changes necessary; but instead of the old principle of the fixed chord, from which the accordion derives its name, a new principle of theoretical fifths is used in the bass and accompaniment section, by which harmonic chords are obtained by the depression of keys, in successive parallel series. Since there is a new name needed for this new instrument, and the name should emphasize the principle of the "fifth", called a "Quint", this new instrument may be called a "Quint-Organett", and the keyboards Y and Z, shall be called the "Quintaphone Keyboards", until better names are found.

In the key arrangement of Figure 1, section X measures ten inches from "f", at the right, to "c", at the left edge, and the top of the case measures 13 x 7½ inches.

In the plan view of the new instrument, the "Quint-Organett", in Figure 1, section X is an

arrangement of keys for melody, on the top cover of the instrument. Section Y, in Figure 1, shows an arrangement of keys in two rows, the top row being raised one-eighth of an inch above the lower row, each key controlling one note only, the corresponding sounding devices being successively tuned in "theoretical fifths", as indicated in Figure 7; the highest in pitch being the note "g" in Figure 7, all others being lower, but mostly within one octave.

Section Z, in Figure 1, shows a row of keys, with the arrangement of basses, tuned in "fifths"; section Z being situated at the bottom of the instrument.

The notation, above keyboard X, in Figure 1, points to two "c's", which form an octave; the distance between these two keys being less than 5 inches. On a piano keyboard, an octave takes up 7½ inches. The advantage of this keyboard, section X, is shown in Figure 3, the extended "C chord" being easily played by the fingers of the right hand of the player. It is possible to reach even further than the extended "C chord". It is claimed that this keyboard is a better arrangement of keys for playing melody, than any other system known, on similar instruments.

As to bass and accompaniment, sections Y and Z, it is necessary to explain the principle of the "theoretical fifth." The "fifths" form a sort of a cycle, every thirteenth "fifth" being the same as the first "fifth" by its call letter, regardless of the pitch. This is parallel to the keys of the piano, every thirteenth key being known by the same call letter as the first key. This cycle of "fifths" is as follows; "C", "G", "D", "A", "E", "B", "F sharp", "D flat" (or "C sharp"), "A flat", "E flat", "B flat", "F", "C"—and then again "g", "d", "a",—and so on.

Figure 2 shows the lower part, the bottom of the "Quint-Organett", with sections Y and Z (the Quintaphone keyboards), and a hand playing the "C chord" and bass as shown in notes set out alongside of Figure 2, in Figure 4. This key arrangement contains only nine keys in each row, which is amply sufficient for the average player. This number of keys enables him to play in more than six major and minor keys; and it is not necessary to have all the 36 or more keys.

As stated above, Figure 8 shows the position of keys which produce a major chord. These major chords run in parallel series, corresponding to their tonic basses. Figure 8 shows keys small "a", "e" in the top row, and the keys "b flat", "c", "g" and "a" in the second row in section Y. The keys "e", "c" and "g" produce a major chord;

and if the "b flat" is added (played with the fourth finger) to either "c" and "e", or "c" and "g", or to all three, a chord of the "seventh" is produced. The keys "a", "e" and "c" produce a minor chord, and this minor chord can be played in two ways or positions, either with the "a" in the upper row, or with the "a" in the lower row, above and between basses "C" and "G".

The keyboard or key arrangement Y and Z is different in operation and effect from keyboards on other instruments, and is qualified to produce distinct and original accomplishments in musical harmony equal, if not in some cases superior, to standard instruments. One example of this is the sustained bass effect, as in Figure 5.

This arrangement of basses and accompaniments, the sections Y and Z, as outlined above, could be built into instruments with several different systems of melody keyboards, like the piano-accordion and others, with good effects.

It is useful to have the keys, in the upper row of section X, Figure 1, which correspond to the white keys of the piano, colored white; and the lower row, corresponding to the sharps and flats, as on the piano, in section X, colored black. For the guidance of the player, some of the keys in the Quintaphone keyboard of section Y, should also be colored black. It would be appropriate if every second key be black; or that three keys in symmetrical positions be so colored.

What I claim as new and desire to secure by Letters Patent is:

1. A bass keyboard for a wind instrument comprising: a group of keys arranged in rows controlling tones in fifths alternating with fourths in each row, and an additional group of keys arranged in three rows controlling tones of the

chromatic scale, said groups of keys being arranged closely adjacent each other and the rows of one group parallel with those of the other, whereby both groups of keys may be reached by the fingers of the left hand.

2. A wind instrument comprising a keyboard for the melody and a separate keyboard for the basses and accompaniments, said first-mentioned keyboard having keys in chromatic arrangement and the individual keys being so closely spaced that the player can reach over an octave and a half with the fingers of one hand, said second-mentioned keyboard comprising a group of keys arranged in rows controlling tones in fifths alternating with fourths successively in each row and an additional group of keys arranged in three rows controlling tones of the chromatic scale, said groups of keys being arranged closely adjacent each other and the rows of one group parallel with those of the other, whereby both groups of keys may be reached by the fingers of the left hand.

3. A wind instrument comprising a keyboard for the melody and a separate keyboard for the basses and accompaniments, said last-mentioned keyboard having a group of keys arranged in rows controlling tones in theoretical fifths successively in each row and an additional group of keys arranged in three rows controlling tones of the chromatic scale, one of said rows being for the basses and the other two rows for the accompaniments, said groups of keys being arranged closely adjacent each other and the rows of one group parallel with those of the other, whereby both groups of keys may be reached by the fingers of the left hand.

JOSEPH HOFBAUER.