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PEDAL BOARD FOR MUSICAL INSTRUMENT

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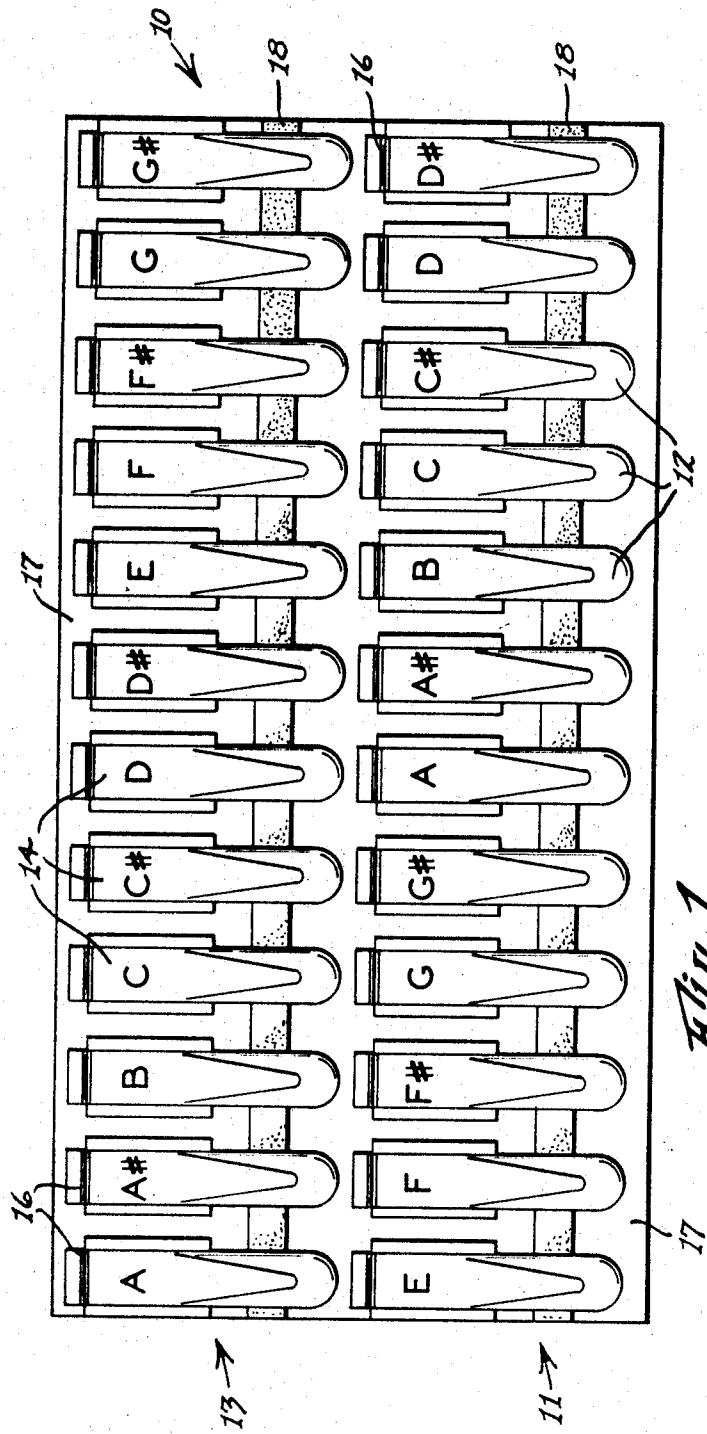


Fig. 1

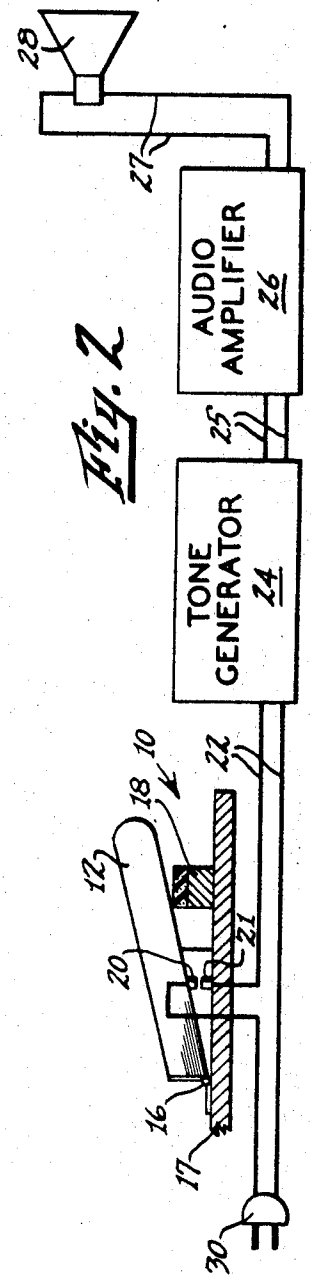


Fig. 2

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PEDAL BOARD FOR MUSICAL INSTRUMENT

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This invention relates to a pedal board for a musical instrument, and more particularly to a novel pedal or key arrangement to facilitate playing a variety of musical selections.

One object of this invention is to provide a pedal board for a musical instrument, and particularly an electronic musical instrument, in which the pedals are arranged in a longitudinal row for successively producing tones in the chromatic scale.

Another object of this invention is to provide a pedal board for a musical instrument incorporating two longitudinal rows of pedals, the pedals in each row being arranged according to the chromatic scale.

A further object of this invention is to provide a musical pedal board including two rows of pedals, the pedals in each row being arranged according to the chromatic scale, and the pedals in one row being transversely aligned with the pedals in the other row, the aligned transverse pedals being musically separated by a perfect fourth interval.

Another object of this invention is to provide a novel pedal board with any type of electronic musical instrument capable of producing musical tones electronically when electrical switches are closed by corresponding pedals.

Further objects and advantages of the invention will be apparent from the following description taken in conjunction with the drawings, wherein:

FIG. 1 is a plan view of a musical pedal board made in accordance with this invention; and

FIG. 2 is a schematic circuit diagram of one form of electronic musical instrument electrically connected to one of the pedals in the pedal board disclosed in FIG. 1.

Referring now more particularly to the drawings, FIG. 1 discloses a pedal board **10** made in accordance with this invention including a first or front longitudinal row **11** of identical, uniformly spaced pedals **12**. Each pedal **12** is substantially large enough to be depressed by the foot of the operator, and sufficiently spaced from the adjacent pedals **12** that the operator may easily depress one pedal at a time without depressing the adjacent pedals, unless depression of adjacent pedals is intended.

The pedal board **10** further includes a second longitudinal row **13** of uniformly spaced pedals **14**, each pedal **14** being identical in size and construction to the pedals **12** and having the same uniform longitudinal spacing as the pedals **12** in the first row **11**. Moreover, the second longitudinal row **13** is parallel to the first row **11** and spaced laterally adjacent thereto and sufficiently close to permit the operator's foot to easily move and depress any single pedal **14** or **12** without the unnecessary or inconvenient movement of the operator.

It will be further noted in FIG. 1, that each pedal **12** in the first longitudinal row **11** corresponds to a musical note or tone, and the values of the successive pedals **12** reading from left to right progressively increase according to the chromatic scale. In a similar manner, the pedals **14** in the second longitudinal row **13** correspond to musical notes increasing from left to right according to the chromatic scale.

Furthermore, FIG. 1 discloses each pedal **14** transversely aligned with a pedal **12** in the first row **11**, and the musical values of each transversely aligned pair of pedals **12** and **14** differ by a perfect fourth interval. Therefore, the arrangement of the keyboard **10** is such that not only may the operator depress any single key **12** or **14** in either row, but may easily depress successive keys **12** or **14** in either row **11** or **13** in order to produce a chromatic run of notes. Furthermore, the operator may easily depress pairs of transversely aligned keys **12** and **14** by spanning his foot across both rows **11** and **13** in order to easily and rapidly produce musical fourth tones in the instrument.

As disclosed in FIG. 2, each pedal **12** is pivotally mounted by hinge **16** to the baseboard **17** of the pedal board **10** to swing in a vertical plane and rest upon a cushioned stop **18** adapted to yield to the depression of the pedal **12** by the operator's foot.

An electrical switch, perferably of the make-end-break type, is adapted to be normally open, but closed by the depression of the pedal **12**. As disclosed in FIG. 2, the switch may include a pedal electrode or contact **20** and a stationary electrode or contact **21** fixed to the baseboard **17**. In the normal inoperative position of the pedal **12** disclosed in FIG. 1, the contacts **20** and **21** will be separated to open the switch and the circuit **22**. However, when the pedal **12** is depressed against the yieldable stop **18**, the contact **20** will engage the contact **21** to close the circuit **22** to an electronic tone generator **24** of any conventional type. Although the pedal **12** is disclosed in FIG. 2, it will be understood that each pedal **14** is constructed in the identical manner, and each pedal **14** will have a separate switch, such as **22–21**, connected by a circuit, such as **22**, to the tone generator **24**. Thus, the tone generator **24** will produce the tone corresponding to the depressed pedal **12** or **14** or a combination of depressed pedals **12** and **14**.

The tone or tones produced by the generator **24** will be transmitted through the circuit **25** to the audio-amplifier **26**, and the amplified tones or signals will be transmitted through the output circuit **27** to an electro-audio transducer, such as the loud speaker **28**, in order to convert the amplified audio-electrical signals into audible tones or sounds. The power for the circuit may, of course, be supplied from any convenient source, such as a house circuit, through the plug or connection **30**.

A pedal board **10** made in accordance with this invention for use with a musical instrument, and particularly an electronic musical instrument, may be easily played by a musician to produce a variety and breadth of musical tones with a minimum of effort and practice. Moreover, the pedal board **10** is designed for optimum pedal arrangement to facilitate playing chromatic tones as well as musical fourths.

What is claimed is:

1. A pedal board for an electronic musical instrument comprising:

(a) a first longitudinal row of spaced pedals,

(b) a second longitudinal row of spaced pedals laterally adjacent said first row, so that each pedal in said first row is transversely aligned with a pedal in said second row,

(c) electronic sound producing means,

(d) electrical switch means connecting each pedal to said sound producing means so that said switch means are normally open in inoperative position and closed in operative position by the depression of said pedals to produce a tone in said sound producing means,

(e) the tones produced by the successive pedals in said first row corresponding to the notes in the chromatic scale,

(f) the tones produced by the successive pedals in said second row corresponding to the notes in the chromatic scale, and

(g) the tone produced by each pedal in said second row being a perfect fourth musical interval above

the tone produced by the transversely aligned pedal in said first row.

2. The invention according to claim 1 in which said electronic sound producing means comprises a tone generator, an audio-amplifier and an electro-audio transducer.

3. The invention according to claim 1 in which said electrical switch means comprises a make-and-break electrical switch connected to each pedal.

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