Jan. 1, 1946. F. L. PHILLIPS ET AL 2,392,184

ELECTRICAL MULTIPLE INSTRUMENT SYSTEM

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Fig. 1.

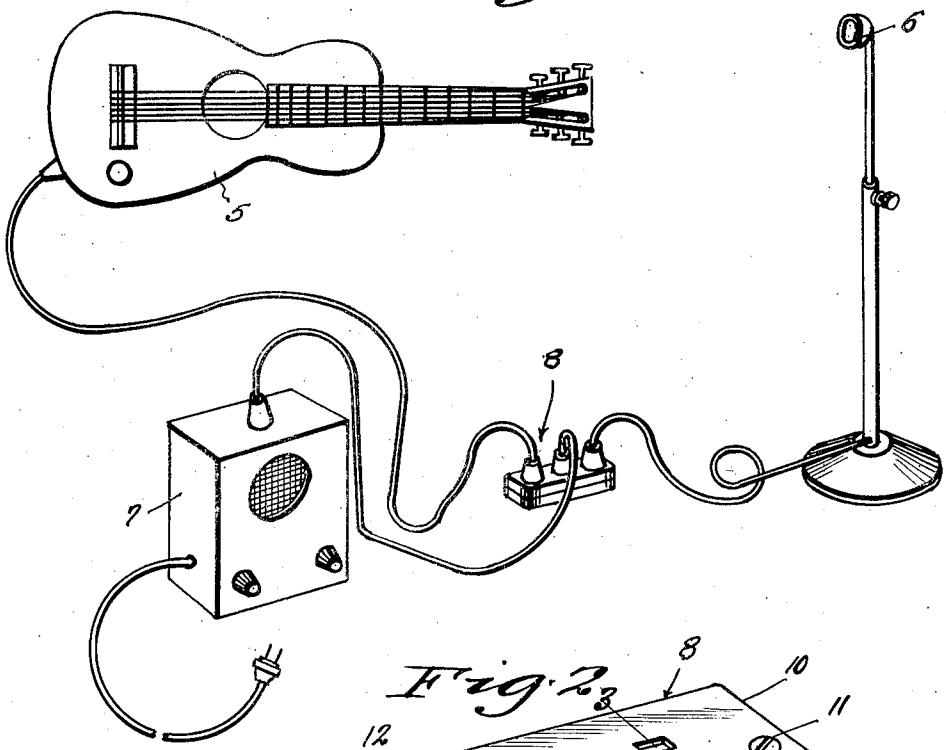


Fig. 2.

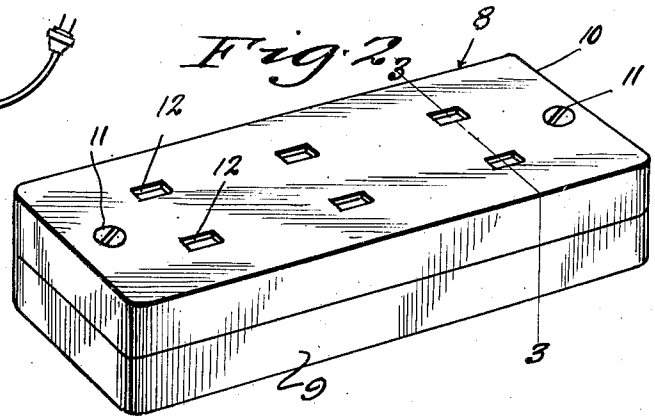
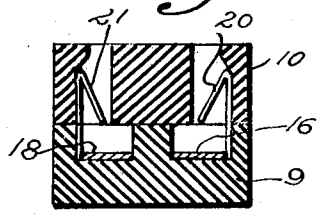


Fig. 3



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Fig. 4.

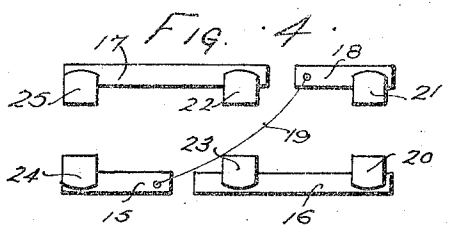


Fig. 5.

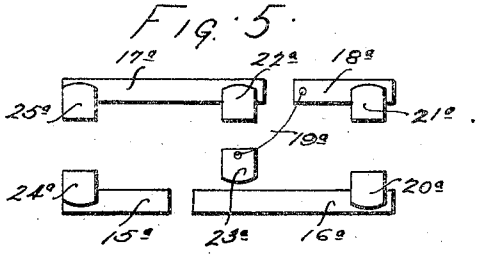
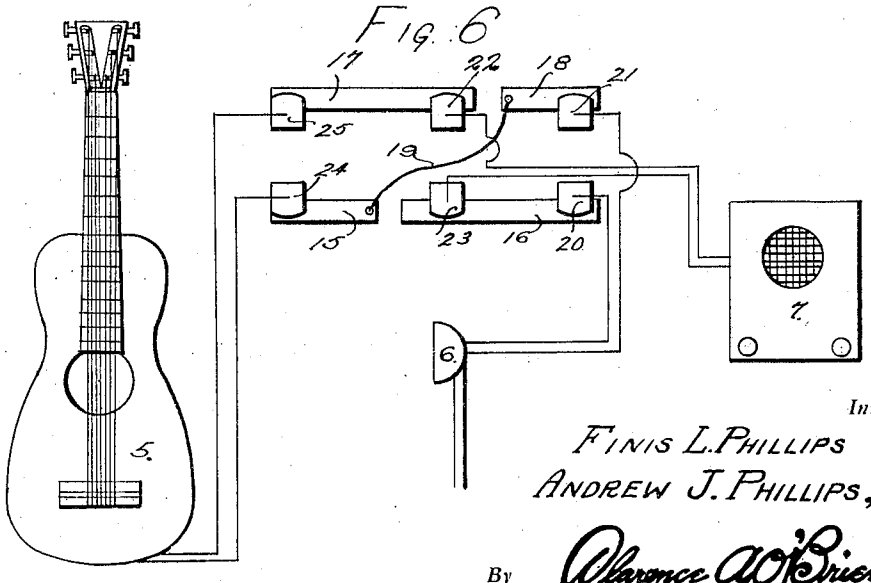


Fig. 6



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ELECTRICAL MULTIPLE INSTRUMENT SYSTEM

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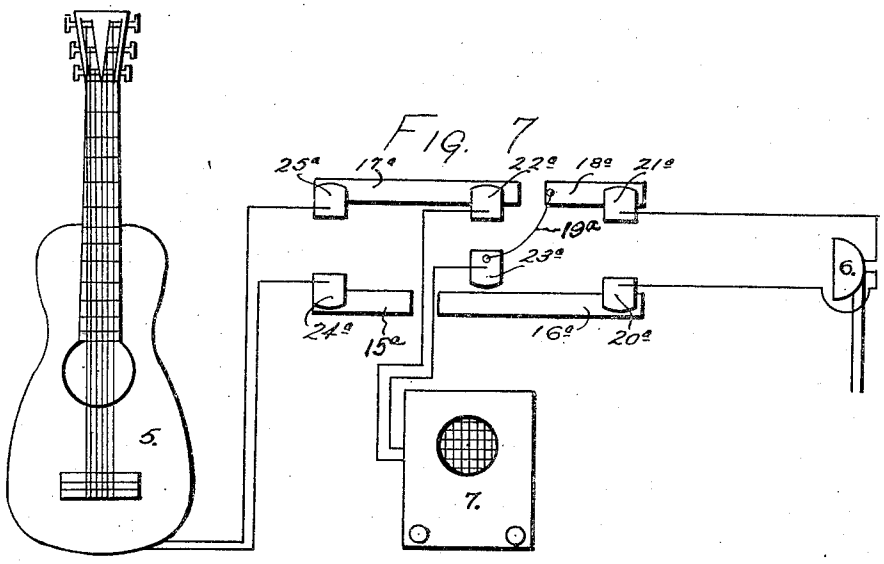


FIG. 7

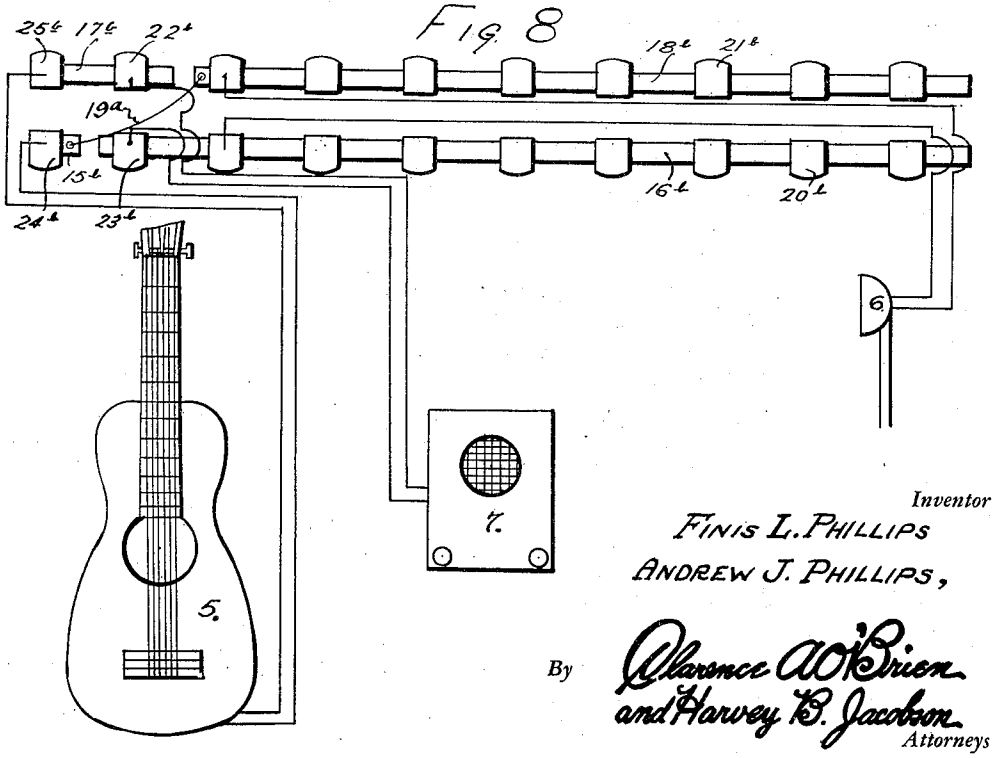


FIG. 8

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2,392,184

ELECTRICAL MULTIPLE INSTRUMENT SYSTEM

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Application June 1, 1944, Serial No. 538,226

3 Claims. (Cl. 179—1)

The present invention appertains to new and useful improvements in the art of electric music instruments and systems thereof, the principal object here being to provide an electrical system which proposes a special connector and means for connecting a plurality of musical instruments, a loud speaker and a microphone for orchestral reproduction with a harmonious effect of the utilized instruments.

An important object of the invention is to provide an electrical connector for connecting musical instruments, microphones and loud speakers in various required ways and wherein connections can be quickly made and changed as the occasion demands.

Other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawings—

Figure 1 is a diagrammatic view showing the connector having connected therewith, a microphone, a loud speaker and a guitar.

Figure 2 is a perspective view of the special connector.

Figure 3 is a cross section taken on the line 3—3 of Figure 2.

Figure 4 is a plan view of the contacts, contact strips and one type of connection.

Figure 5 is a plan view showing the contacts, contact strips and a second type of connection.

Figure 6 is a diagrammatic view showing the connector wired as shown in Figure 4 and accommodating the instrument as represented in Figure 1.

Figure 7 is a diagrammatic view showing the instrument employed with the connector as wired in Figure 5.

Figure 8 is a diagrammatic view showing the connector in multiple form, that is, extended to accommodate a multiplicity of instruments, this form being spacedly constructed in accordance with the wiring shown in Figure 4.

Referring to the drawings wherein like numerals designate like parts, it can be seen that broadly speaking, a guitar 5, a microphone 6, a loud speaker 7 and the improved connector 8 are shown in electrical connection.

The connector 8 is preferably constructed of a base 9 and a cover 10, these sections being secured together by screws 11, 11.

The cover 10 is formed with electric plug prong-receiving openings 12 to accommodate the plugs of the several instruments, loud speaker and amplifier.

Figure 4 shows one modification of the connector. This view shows the elements of the connector, which consists on one side of a pair of aligned conductor strips 15, 16 and on the other side of a second pair of aligned conductor strips 17, 18. In this form of the invention the strips 15, 18 are connected as shown at 19. The strips 16, 18 have opposed plug prong contacts 20, 21. There is a pair of opposed contacts between the strips 17, 16 denoted by numerals 22, 23 and a third pair of contacts between the strips 15, 17 denoted by numerals 24, 25. The pairs of contacts above stated are arranged under the openings 12 of the cover section 10 (see Figure 2) and are accessible through these openings. The base section 9 is grooved to receive the strips 17, 18, 15 and 16 and the contacts on these strips project upwardly and into the pockets 12 in the cover 10.

Figure 5 shows an arrangement whereby instead of having the contact strips 15 and 18 bridged, an auxiliary contact 23*a* is employed and is connected by a strap 19*a* to the strip 18*a*. Strips 17*a*, 15*a*, 16*a* and contacts 20*a*, 21*a*, 24*a*, 25*a* and 22*a* corresponding to like elements of Figure 4 are employed in the same manner.

Figure 6 shows diagrammatically the use of the connector shown in Figure 4 and just how the instruments, the microphone and loud speaker are connected with the contacts thereof.

Figure 7 is a diagrammatic view showing the form of connector shown in Figure 5. This view showing the guitar, loud speaker and microphone plugged in.

Figure 8 is a diagrammatic view and this view shows a form of connector similar to Figure 4 on one side but provided with extensions for parallel connection on the other side.

In this form, strips 17*b* and 18*b* are aligned and in parallel relation to aligned strips 15*b* and 16*b*, it being observed that the strips 18*b* and 16*b* are considerably longer than the strips 18 and 16 in Figure 4, this because of the provision for parallel connection for more instruments. The strip 17*b* has contacts 25*b* and 22*b* thereon opposed to contacts 24*b* and 23*b* on the strips 15*b* and 16*b*. The balance of the strips 15*b* and 16*b* have a plurality of contacts 21*b* and 20*b*, respectively, arranged thereon in longitudinally spaced manner. A number of instruments may be connected in parallel for use in unison.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing

from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

1. In an arrangement for musical production with cooperating tone and sound producing elements, such as musical elements and a microphone, and with an amplifying device and loud speaker, a connector for rapid change of connection of said tone and sound producing elements with the amplifier, said connector comprising means for making series and parallel connections with said amplifier by means of two pronged plugs connected with the aforesaid elements, said means consisting of pairs of contact springs, with the members of each pair connected with contact strips arranged on opposite sides with at least one direct connection between adjacent strips and at least one cross connection between the strips of members of the pair arranged on opposite sides.

2. In an arrangement for musical production with cooperating tone and sound producing elements, such as musical elements and a microphone and with an amplifying device and loud speaker, a connector for rapid change of connection of said tone and sound producing elements with the amplifier, said connector comprising means for making series and parallel connections with said amplifier by means of two pronged plugs connected with the aforesaid elements, said means consisting of pairs of contact springs, with the members of each pair connected with contact strips arranged on opposite sides with at least one direct connection between adjacent strips and at least one independent auxiliary contact cross connected with contact strips connected with the members of the opposite side.

3. In an arrangement as specified in claim 1, pairs of contacts adopted for two prong plug connections with the tone and sound producing instruments and the amplifier, with contact strips, arranged on opposing sides, connecting in parallel a plurality of contact members of the pair on one side, forming a group, a second independent strip on the same side, a further group formed by a contact strip on the opposing side and connecting the contacts of the pairs on the other side, at least one separate strip on the said opposing side and at least one cross connection between strips on opposite sides.

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