March 5, 1957 D. A. JONES 2,784,252

INDIVIDUAL SPEAKER SYSTEM FOR OUTDOOR THEATERS

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Fig. 1

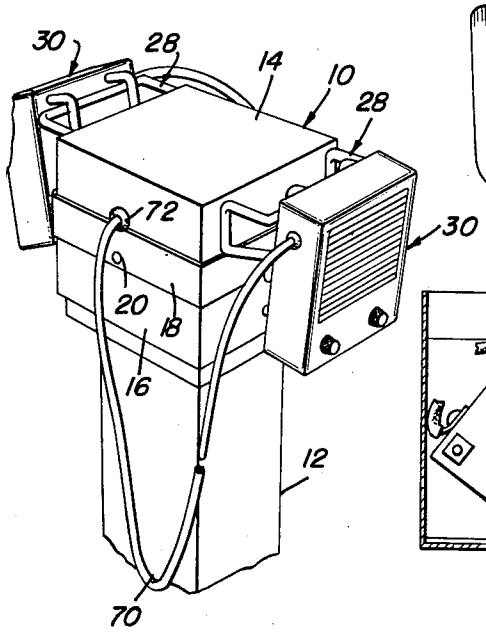


Fig. 3

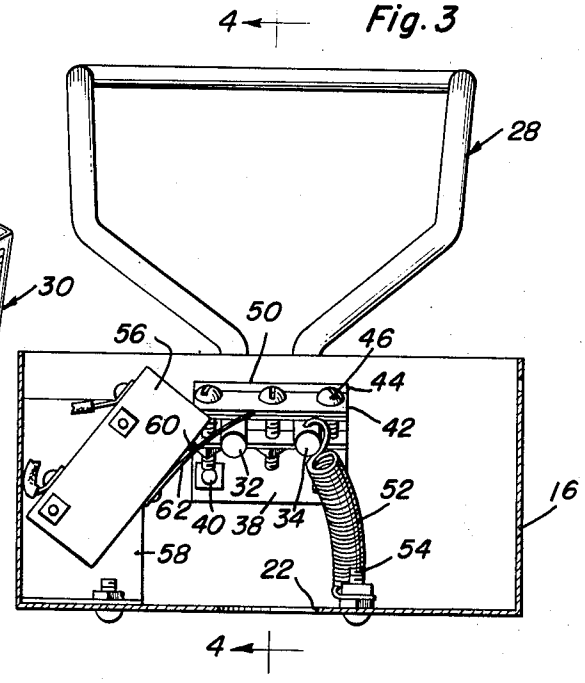


Fig. 4

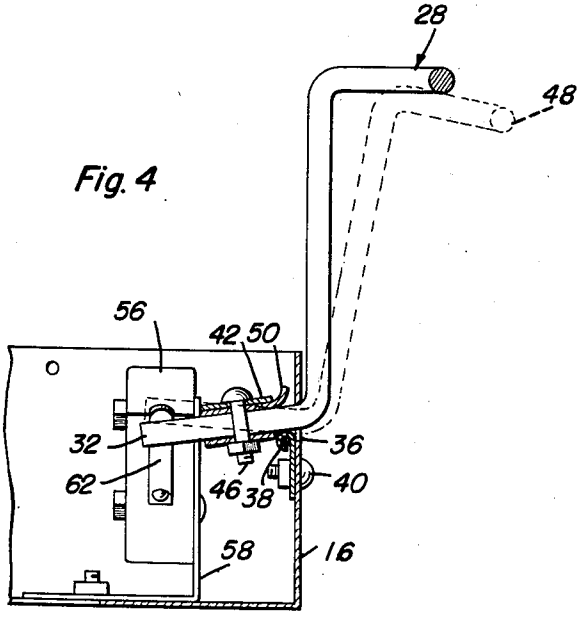
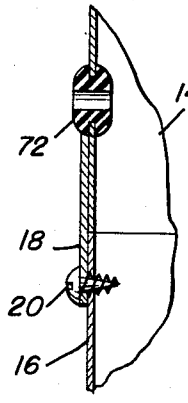


Fig. 5



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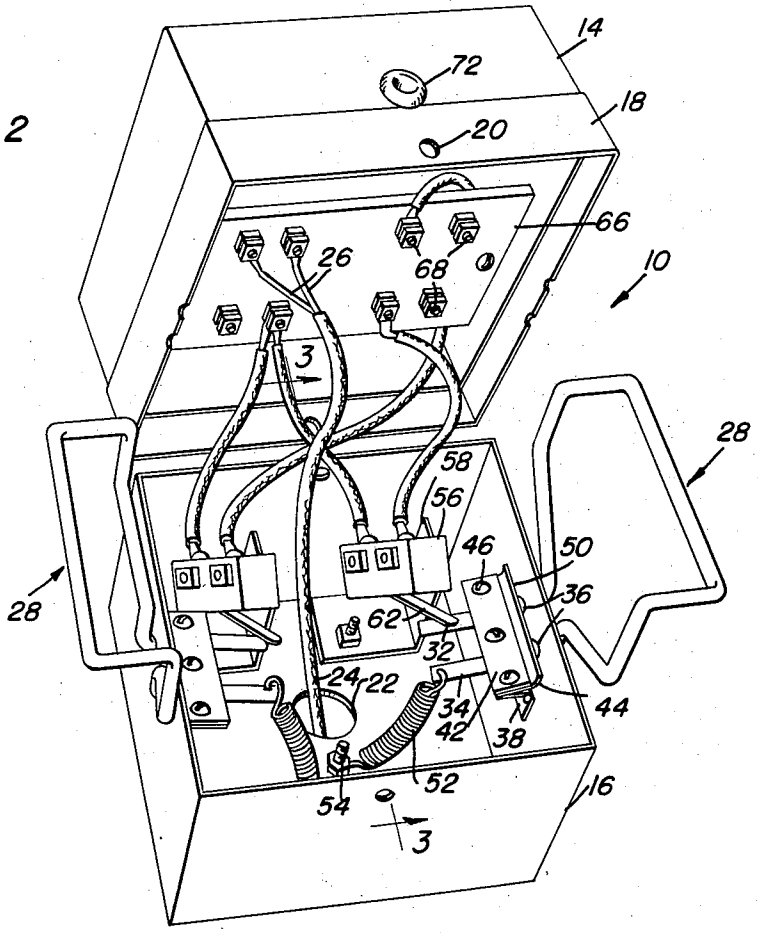
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Fig. 2



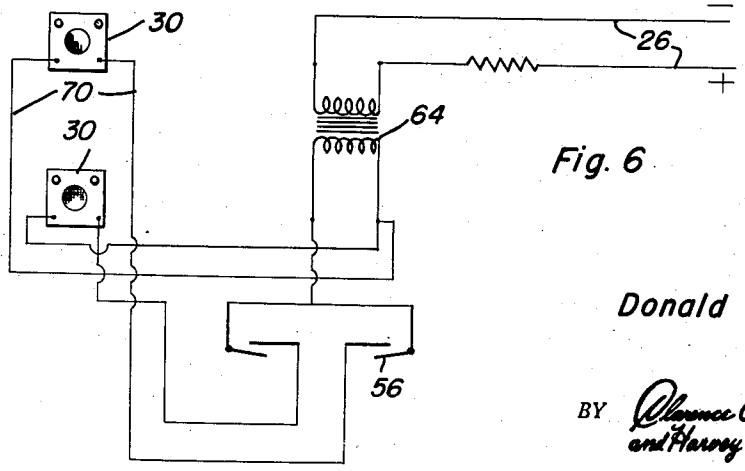


Fig. 6

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2,784,252

INDIVIDUAL SPEAKER SYSTEM FOR OUTDOOR THEATERS

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Application September 24, 1951, Serial No. 247,954

4 Claims. (Cl. 179—1)

This invention relates to new and useful improvements and structural refinements in individual speaker systems for outdoor theaters, and primarily the invention concerns itself with the customary junction box and hangers for portable speakers. Ordinarily, stationary hangers are provided to receive the speakers when they are not in use, but the disadvantage of such an arrangement is that the speaker remains energized even though it is inactively supported by the hanger.

The instant invention seeks to prolong the life of the speaker mechanism by automatically de-energizing the same when it is applied to the hanger after use, an important feature of the invention, therefore, residing in the provision of a novel hanger structure in conjunction with a switch for breaking the amplifier circuit to the speaker when the latter is applied to the hanger.

Some of the advantages of the invention reside in its simplicity of construction and in its dependable operation.

With the above more important objects and features in view, and such other objects and features as may become apparent as this specification proceeds, the invention consists essentially of the arrangement and construction of parts as illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of the invention;

Figure 2 is a perspective view of the junction box in an open position;

Figure 3 is a vertical sectional view of the bottom portion of the junction box, this view being taken substantially in the plane of the line 3—3 in Figure 2;

Figure 4 is a fragmentary sectional view, taken substantially in the plane of the line 4—4 in Figure 3;

Figure 5 is a fragmentary sectional detail illustrating the connection of the upper and lower junction box sections, and

Figure 6 is a wiring diagram of the electrical components of the invention.

Like characters of reference are employed to designate like parts in the specification and throughout the several views.

Referring now to the accompanying drawings in detail, the general reference 10 designates a junction box mounted upon the usual supporting standard 12.

The box 10 is composed of upper and lower sections 14, 16 respectively, the upper section having a depending flange 18 which overlaps the lower section and thereby excludes weather from the interior of the box. The two sections are separably connected together by a plurality of screws 20 extending through the flange 18 and the bottom of the lower section is provided with an opening 22 whereby a conductor 24, carrying the amplifier circuit wires 26, extends through the standard 12 into the box, as will be clearly understood.

The junction box 10 is provided with a pair of hangers 28 for two portable speakers 30, but since the wiring of the two speakers and the structural arrangement of the

two hangers is substantially the same in each case, it is believed that a description of one will suffice for both.

Each of the hangers 28 preferably assumes the form of a wire loop which has spaced parallel end portions 32, 34 freely extended through a pair of openings 36 in a side wall of the bottom section 16 of the box, while a conventional hinge 38 is secured by screws 40 to the side wall under the openings 36 and has the wire portions 32, 34 secured thereto by clamping plates 42, 44 and screws 46.

In this manner the hanger 28 is depressibly mounted, in the sense that it may be swung downwardly from its initial position shown by the full lines in Figure 4 to a depressed position shown by the dotted lines 48. The hanger is depressed by the weight of the speaker 30 positioned thereon, and excessive downward movement of the hanger is prevented by an upturned flange 50 which is provided on the clamping plate 44 and abuts the inner surface of the box in the full depressed position of the hanger.

Resilient means are provided for urging the hanger to its raised position, these means consisting of a tension spring 52 which is connected at one end thereof to the wire portion 34, while the other end of the spring is anchored to a bolt 54 in the bottom of the box, as will be clearly apparent.

An electrical switch, preferably a "micro-switch" 56 of any conventional type is mounted by means of an angle bracket 58 in the lower portion 16 of the box, the switch having a depressible pin 60 which is contacted by a resilient actuating arm 62. This arm bears against the wire portion 32 of the hanger 28 and when the hanger is in its raised position, the button 60 is projected outwardly from the switch and the switch is closed. However, when the hanger is depressed, the wire portion 32 bearing upwardly against the resilient arm 62, causes the arm 62 to press the button 60 into the switch and the switch is opened. Consequently, by simply placing the speaker on the hanger, the switch will break the amplifier circuit to the speaker, it being noted that the switch is in series with the speaker in the amplifier circuit which is of any conventional design and also includes a power transformer 64 suitably mounted upon a panel 66 in the upper portion 14 of the junction box. The panel 66 is also provided with a plurality of terminals 68 to which the various electrical connections may be taken.

The electric conductor 70, extending to the speaker 30, is taken outwardly from the junction box through a suitable grommet 72 in the wall of the upper section 14 of the box, as will be clearly understood.

It is believed that the advantages and use of the invention will be readily apparent from the foregoing disclosure and accordingly, further description thereof at this point is deemed unnecessary.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that minor changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

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

1. The combination of a junction box including a side wall provided with a pair of transversely spaced openings, a horizontal hinge secured to the inner surface of said side wall under said openings, a depressible hanger comprising a wire loop disposed exteriorly of said box and including a pair of spaced end portions projecting inwardly through the respective openings, means securing said end portions to said hinge, a switch mounted in said box and including a resilient actuating arm operatively

engaging one of the end portions of said wire loop, a tension spring mounted in the box and connected to the other end portion whereby to urge said hanger upwardly, a portable speaker receivable on said hanger to depress the same, and an amplifier circuit for said speaker having said switch connected in series therein.

2. The device as defined in claim 1 wherein said means include a clamping plate attached to said hinge, the end portions of said wire loop being disposed between the hinge and said clamping plate.

3. In an individual speaker system for outdoor theaters, the combination of a junction box including a side wall provided with a pair of transversely spaced openings, a horizontal hinge secured to the inner surface of said side wall under said openings, a depressible hanger comprising a wire loop disposed exteriorly of said box and adapted to removably support a speaker, said hanger including a pair of spaced end portions projecting inwardly through the respective openings, means securing said end portions to said hinge, a switch for deenergizing a speaker

mounted in said box and including a resilient actuating arm operatively engaging one of the end portions of said wire loop, and a tension spring mounted in said box and connected to the other end portion of said wire loop whereby to urge said wire loop upwardly, said switch mounted in series with an amplifier circuit for a speaker.

4. The device as defined in claim 3, wherein said means includes a clamping plate attached to said hinge, and said end portions of said wire loop being disposed between the hinge and said clamping plate.

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