

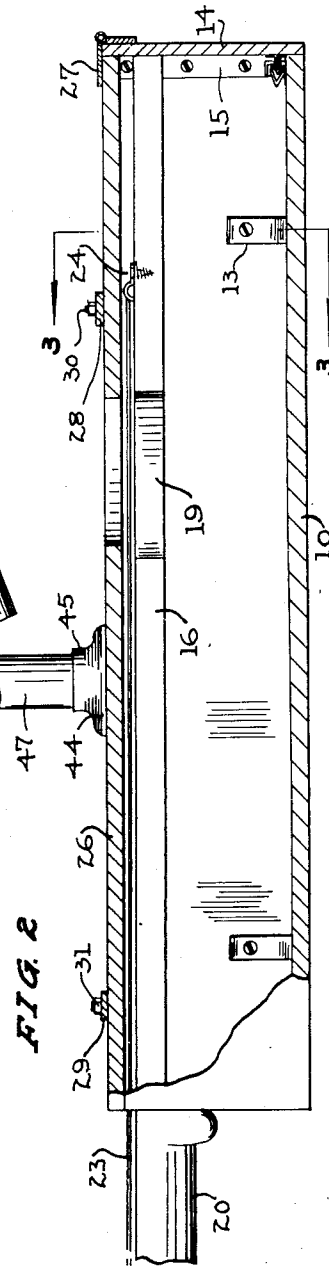
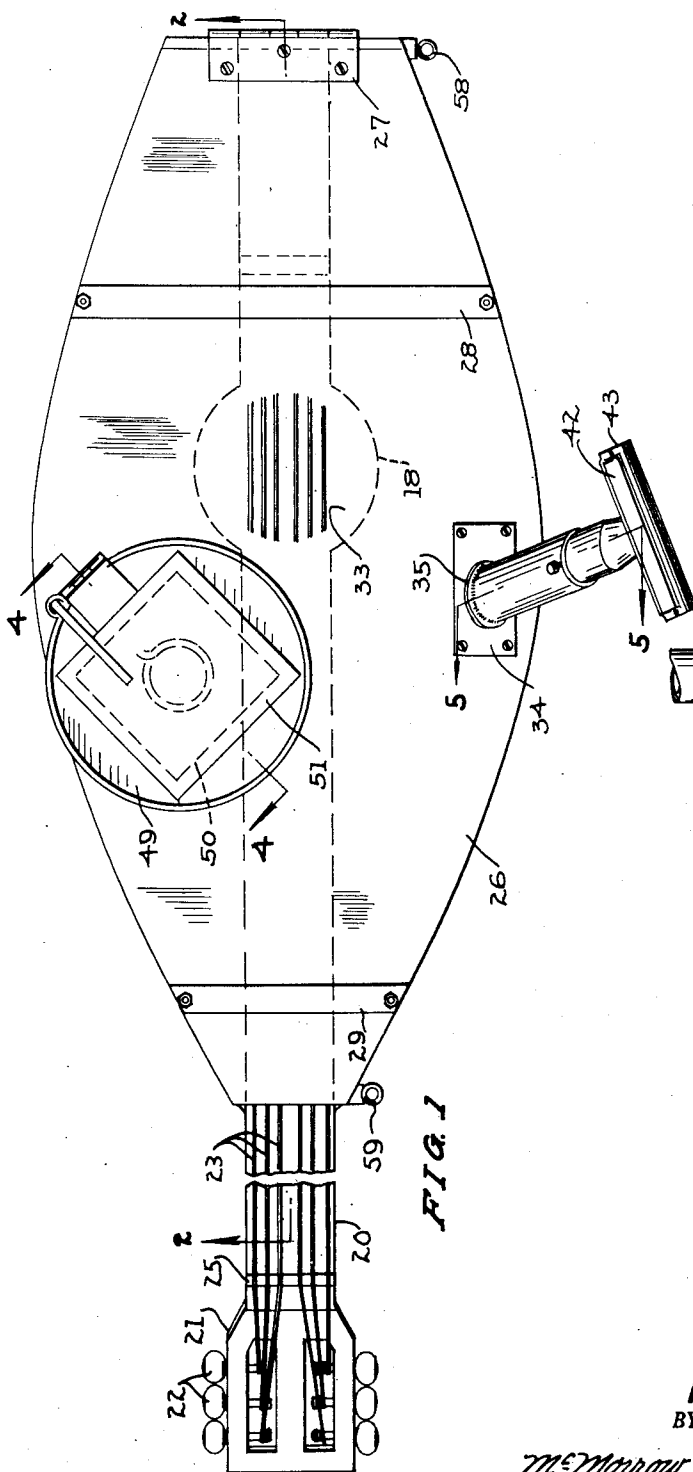
Oct. 23, 1951

W. L. SHIRLEY
MUSICAL INSTRUMENT

2,572,207

Filed Oct. 27, 1950

2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

FIG. 3

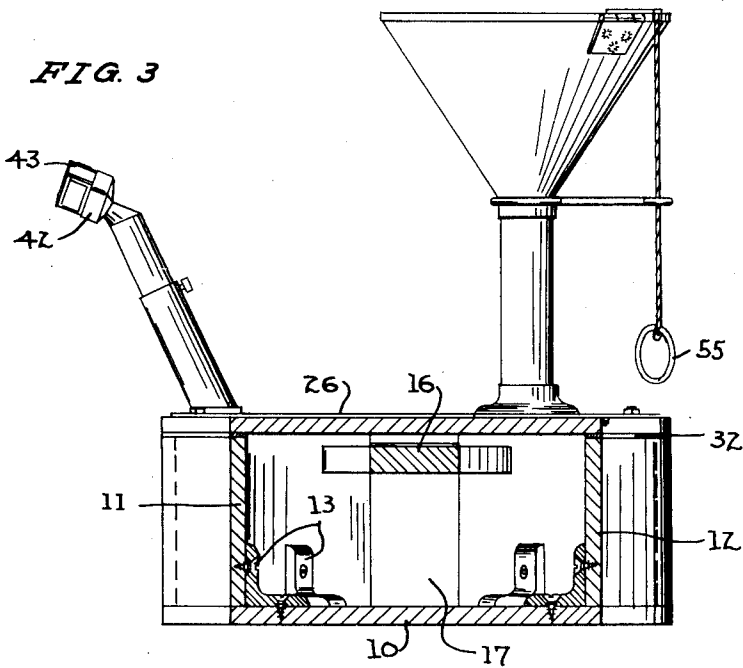


FIG. 4

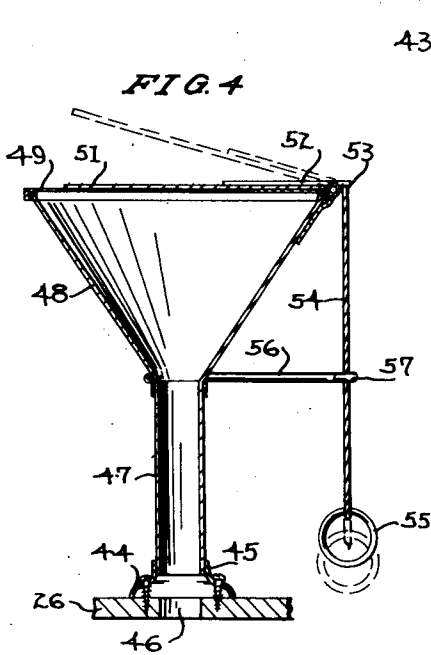
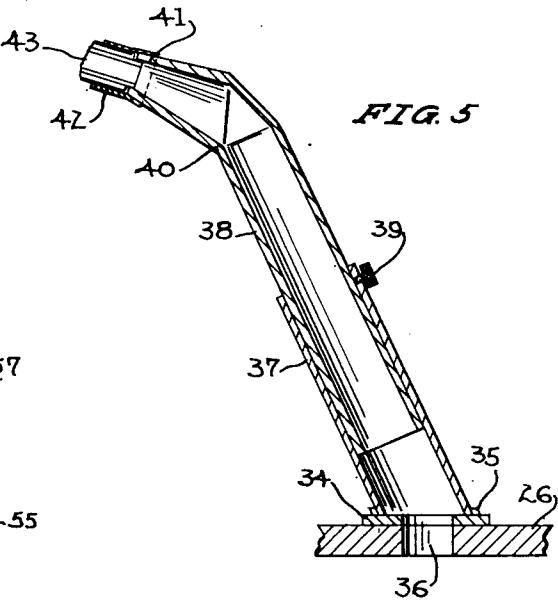


FIG. 5



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MUSICAL INSTRUMENT

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4 Claims. (Cl. 84-170)

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This invention relates to musical instruments and more particularly to a musical instrument including a sound box for modifying the sound of a harmonica and adding other sounds thereto.

It is among the objects of the invention to provide an improved musical instrument including a sound box having a tubular harmonica support thereon so that the harmonica will be supported at a convenient position for playing when the sound box is held in the hands of the player, which sound box modifies the sound of the harmonica and is provided with a manually operated means for varying the volume of the sound as desired, which is provided with means, such as strings, to be manually plucked, for imposing other sounds onto the sound of the harmonica, and which is simple and durable in construction, economical to manufacture, and neat and attractive in appearance.

Other objects and advantages will become apparent from a consideration of the following description and the appended claims in conjunction with the accompanying drawings wherein:

Figure 1 is a top plan view of a musical instrument illustrative of the invention;

Figure 2 is a longitudinal cross sectional view on the line 2-2 of Figure 1;

Figure 3 is a transverse cross sectional view on the line 3-3 of Figure 2;

Figure 4 is a cross sectional view on the line 4-4 of Figure 1; and

Figure 5 is a cross sectional view on the line 5-5 of Figure 1.

With continued reference to the drawings, the sound box is a flat hollow body of elongated, rectangular cross sectional shape tapering symmetrically in width from its mid-length location to its opposite ends. This box has a flat bottom wall 10 formed of a plate of wood or similar material and has two side walls 11 and 12 marginally engaging the bottom wall 10 and secured to the latter by angle brackets 13 disposed internally of the sound box and a straight rear end wall 14 overlapping the rear ends of the bottom wall and side walls and secured thereto by suitable angle strips, as indicated at 15 in Figure 2.

A straight bar 16 of elongated, rectangular cross section is disposed in substantially parallel relationship to the bottom wall 10 of the sound box and spaced from this bottom wall so that the surface of the bar remote from the bottom wall is slightly within or below the edges of the side walls and rear end wall remote from the

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bottom wall of the box. This bar is secured at one end to the rear end wall 14 of the sound box and extends through the front end of the sound box between the adjacent ends of the side walls 11 and 12, the space from the bottom wall 10 to the adjacent surface of the bar and between the front edges of the side walls being closed by a suitable front wall or block 17.

Intermediate the length of the sound box the bar 16 is provided with a rounded enlargement 18 having a circular opening 19 therethrough and the portion of the bar projecting beyond the front end of the sound box is shaped to provide a stringed instrument neck 20 and a head 21 at the end of the neck remote from the sound box. A plurality of tuning keys 22 are mounted in the head 21 and strings 23 extend longitudinally of the bar in position spaced from the surface of the bar remote from the bottom wall 10 of the sound box. These strings are secured at corresponding ends to a tailpiece 24 mounted on the bar 16 between the opening 19 and the rear wall 14 of the sound box and are individually connected at their opposite ends to the tuning keys 22. A nut 25 is mounted on the neck 20 at the end of the neck adjacent the head 21 to support the strings in spaced apart relationship above the adjacent surface of the neck and, if desired, a fret board may be mounted on the neck between the nut 25 and the adjacent end of the sound box.

A cover 26 in the form of a flat plate of wood or similar material and having a shape substantially the same as the shape of the bottom wall 10 of the sound box is hingedly connected at one end to the rear wall 14 of the sound box at the edge of the rear wall remote from the bottom wall 10 by a hinge 27.

Reinforcing bars 28 and 29 extend transversely across the outer surface of the cover one near the hinge 27 and one near the front end of the cover and apertures are provided through the cover and these reinforcing bars one near each end of each bar. Suitable screws, as indicated at 30, are secured to the side walls of the sound box and extend through the apertures in the cover and the reinforcing bars and nuts, as indicated at 31, are threaded onto these screws and bear against the outer sides of the reinforcing bars 28 and 29 to hold the cover firmly against the edges of the side walls 11 and 12 remote from the bottom wall 10. Suitable gaskets, as indicated at 32, formed of felt or similar material, are interposed between the cover 26 and the adjacent edges of the side walls of the sound box

to provide a soundproof connection between the cover and the side walls of the box.

The cover is provided with a circular opening 33 which registers with the opening 19 in the bar 16 and provides access to the strings 23 for plucking the strings.

A rectangular plate 34 is mounted on the cover 26 adjacent the mid-length location and near one side of the cover, this being the upper edge or side of the cover when the instrument is held in playing position by a right-handed player. The plate 34 is provided with an upstanding boss 35 of circular shape on the side of the plate remote from the cover 26 and the cover is provided with an opening 36 registering with the interior of the boss 35. A tube 37 of cylindrical shape has one end disposed within the boss 35 and secured to the plate 34, this tube being inclined relative to the cover 26 in a direction outwardly of the cover and away from the edge of the cover remote from the plate 34. A second tube 38 is telescopically received in the tube 37 and projects from the end of this tube remote from the cover 26 and a set screw 39 threaded through a tapped hole in the tube 37 engages the inner tube 38 to hold this inner tube in adjusted positions rotationally and longitudinally of the outer tube 37.

At a location spaced from the outer end of the tube 37 the tube 38 is provided with an elbow bend 40 extending through an angle of approximately 22 degrees and at its end remote from the tube 37, the tube 38 is reduced and flattened, as indicated at 41 in Figure 5.

A harmonica holding clip 42 of channel shaped cross section has at the mid-length location of its web portion an opening receiving the reduced and flattened end 41 of the tube 38 and this clip is rigidly secured to the tube 38 by suitable means, such as soldering or welding.

A harmonica 43 is placed in the clip 42 and, when the harmonica is played, the sound from the harmonica will be directed by the clip 42 into the adjacent end of the tube 38 and will be conducted by the tubes 38 and 37 through the opening 36 in the cover into the interior of the sound box of the instrument.

The tubes 37 and 38 and the clip 42 provide a tubular support for holding the harmonica 43 in convenient position to be played by a person holding the musical instrument in playing position.

An annular structure 44 providing a boss 45 of circular shape is mounted on the cover 26 near the mid-length location of the cover and near the side of the cover remote from the plate 34 and the cover is provided with an opening 46 registering with the interior of the boss 45.

A tube 47 is secured at one end in the boss 45 and extends from the structure 44 substantially perpendicular to the surface of the cover 26. A conically shaped bell 48 is secured at its smaller end to the outer end of the tube 47 and the tube 47 and bell 48 together constitute a horn for the instrument.

A cover plate 49 is secured to the bell 48 at the larger end thereof and this cover plate is provided with a rectangular opening 50 occupying the major portion of the area of the plate.

A flapper 51 in the form of a flat rectangular plate, is pivotally connected at one edge to the outer end of the bell 48 by a hinge 52 in position to overlie the opening 50 in the cover plate 49.

An extension 53 on the portion of the hinge 52 secured to the flapper 51 projects outwardly of the rim or edge of the bell 48 at the larger end of the bell and a cord 54 is secured at one end to this extension and extends towards the cover 26.

A ring 55 is secured to the other end of the cord and a guide bracket 56 secured to the smaller end of the bell 48 and extending perpendicularly from the tube 47 at the corresponding end of the latter is provided at its end remote from the tube 47 with an eye 57 through which the cord 54 extends and which provides a guide for the cord.

By inserting a finger in the ring 55 a player can pull on the cord 54 to raise the flapper 51 away from the cover plate 49 and uncover the opening 50 as desired. The flapper returns to a position in which it is superimposed on the plate 49 by its own weight or by a suitable return spring incorporated in the hinge 52.

With this arrangement, when the instrument is held in playing position the mouth of the player may be applied to the harmonica 43 held in the clip 42 and the sound of the harmonica will be transmitted through the tubular harmonica support into the sound box. One finger of the right hand of the player may be engaged in the ring 55 to control the flapper 51 while the thumb and forefinger of this hand may hold a pick for plucking the strings 23 in the opening 33. The left hand of the player grasps the neck 20 of the instrument to press the strings 23 against the neck or fret board in a manner to provide the desired notes or chords from the strings.

The flapper 51 will control the volume of the sound produced by both the harmonica and the strings and may be used to give a rhythmic effect to the combined sounds.

Suitable rings or eyes 58 and 59 are provided one at each end of the sound box for the attachment of the ends of a shoulder strap to the instrument.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are, therefore, intended to be embraced therein.

What is claimed is:

1. A musical instrument comprising an elongated sound box, a bar extending longitudinally through said sound box and projecting from one end thereof to provide a neck and a head at the distal end of the neck, tuning keys mounted in said head, strings mounted on said bar and connected each at one end to a corresponding tuning key, a cover secured to said sound box and covering said bar and the portions of said strings extending from the end of said neck remote from said head, said cover having spaced apart apertures therein one of which is disposed over said strings to provide access to the latter for plucking the strings, a tubular support secured at one end to said cover in registry with a second aperture in the latter, a harmonica holding clip of channel shaped cross section secured to the other end of said tubular support and having an opening therein communicating with the interior of said support, a tubular horn secured at one end to said cover in registry with a third aperture in the cover and including a bell at its outer end, a plate covering the mouth of said bell and having an opening therein, a flapper hinged to said bell in position to cover said opening, and hand operated means secured to said flapper for moving the latter away from said plate.

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2. A musical instrument comprising a sound box having a detachable cover, a bar extending through said sound box adjacent said cover and projecting from said sound box to provide a neck and a head, strings mounted on said bar and disposed between said bar and said cover, said cover having an opening therein providing access to said strings, a tubular harmonica support mounted at one end on said cover for supporting a harmonica at its other end, a horn having a bell on one end mounted at its other end on said cover at a location spaced from said harmonica support, said cover having openings therein respectively communicating with the interior of said harmonica support and with the interior of said horn, and a manually operated flapper movably mounted on the bell of said horn to control the mouth opening of the latter.

3. A musical instrument comprising a sound box having a detachable cover, a bar extending through said sound box adjacent said cover and projecting from said sound box to provide a neck and a head, strings mounted on said bar and disposed between said bar and said cover, said cover having an opening therein providing access to said strings, a tubular harmonica support mounted at one end on said cover for supporting a harmonica at its other end, a horn having a bell on one end mounted at its other end on said cover at a location spaced from said harmonica support, said cover having openings therein respectively communicating with the interior of said harmonica support and with the interior of said horn, and a manually operated flapper movably mounted on the bell of said horn to control the mouth opening of the latter, said harmonica support comprising an apertured plate secured to said cover, a first tube secured at one end to said plate in registry with the aperture in the latter, a second tube slidably and rotatably re-

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ceived at one end in the other end of said first tube, said second tube having an elbow bend intermediate its length and having its other end reduced and flattened, a channel shaped harmonica supporting clip supported intermediate its length to said other end of said second tube and having an opening therein communicating with the interior of said second tube, and means carried by said first tube and engaging said second tube to secure said tubes in selected positions of adjustment relative to each other.

4. A musical instrument comprising a hollow sound box having a detachable cover, a bar extending through said sound box adjacent the inner side of said cover and projecting from said sound box at one end of the latter to provide a neck and a head at one end of said bar, tuning keys carried by said head, strings mounted on said bar and disposed between said bar and said cover, each of said strings being connected at one end to a corresponding tuning key and at its other end to said bar at a location adjacent the other end of the latter, said cover having an opening therein intermediate the length thereof providing access to said strings for plucking the latter, and said bar having an opening therein substantially in registry with the opening in said cover.

WILLIE LEE SHIRLEY.

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