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3,439,572

PERCUSSION INSTRUMENT

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FIG. 1

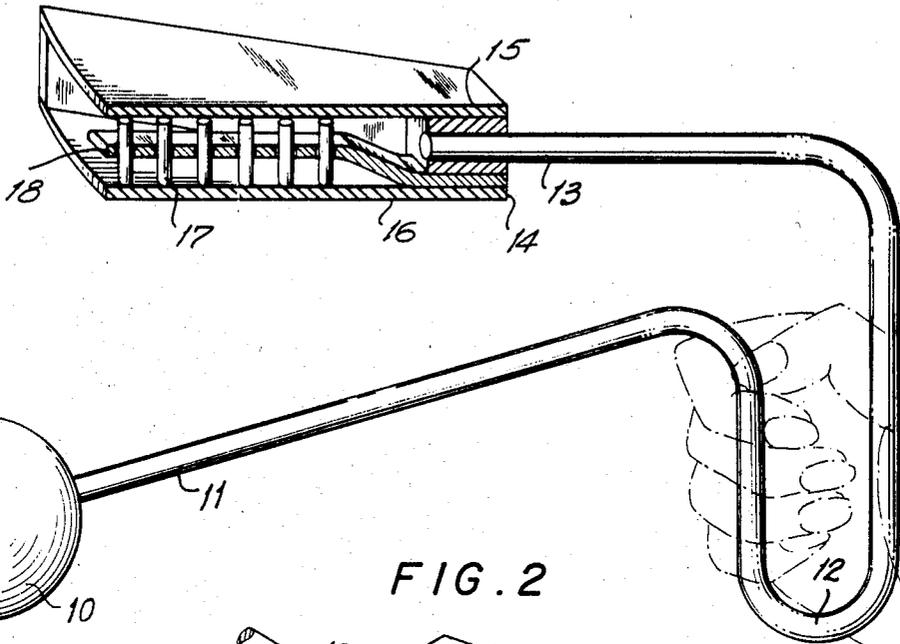


FIG. 2

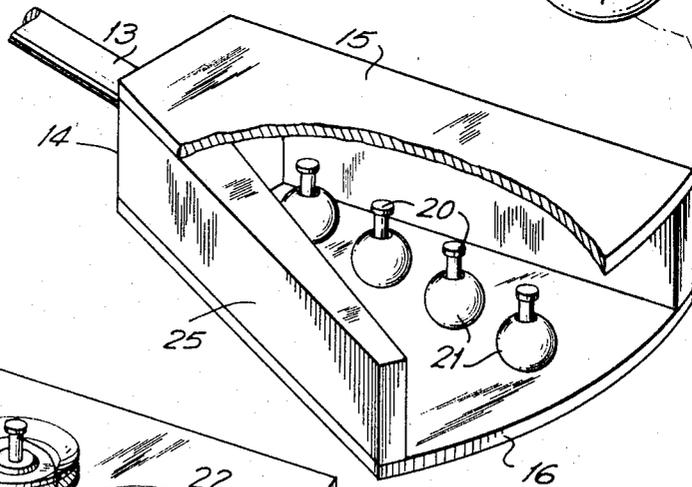
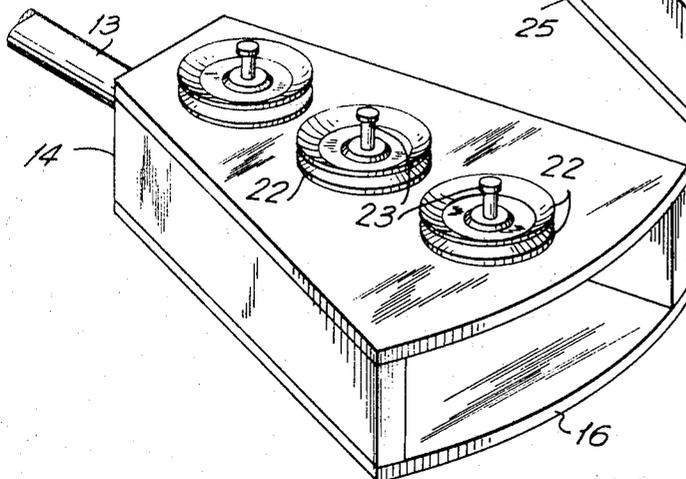


FIG. 3



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**PERCUSSION INSTRUMENT**

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8 Claims

**ABSTRACT OF THE DISCLOSURE**

A percussion instrument for simulating the sound of a natural animal jawbone, having a sound chamber containing an open cavity and a plurality of loosely coupled elements demountably restrained within the cavity. One end of a rod member is secured to the closed end of the sound chamber. A striking ball is secured to the other end of the rod member so that when the ball is struck, the rod member will vibrate the elements within the sound chamber and produce percussion-like sound.

This invention relates to an apparatus for simulating the sound of a Latin American percussion instrument.

More specifically, this invention relates to a novel device for simulating the sound of a jawbone percussion instrument.

In the accompaniment of Latin American music, various percussion instruments are employed to add rhythm to the music. One of these instruments commonly found in many Latin American bands is the jawbone. The jawbone consists of the jaw of an animal, such as a horse or jackass. After the jawbone is dried, the teeth become loose so that when the musician holds the entire jawbone by the chin in one hand, and strikes the cheek with the other, the teeth will rattle within the hollow chamber of the jaw to produce a percussion-like sound. One of the disadvantages of using a natural jawbone to produce the percussion sounds is its inherent weakness at its chin portion. Moreover, natural jawbones are not readily obtainable in great quantities and are often difficult to replace when they become broken.

The apparatus according to the invention provides an instrument capable of simulating the sound of a natural jawbone as well as providing variations in the sound qualities while being played as a percussion instrument. The apparatus is constructed from readily available materials and unlike its natural counterpart, may be mass-produced in large quantities. Moreover, the instrument according to the invention, is constructed in such a way as to be almost unbreakable and to provide long life and utility during its use by musicians.

The percussion instrument according to the invention includes a sound chamber secured to the end of a rod and capable of transmitting vibration from its free end to the sound chamber. The sound chamber includes a cavity having a plurality of demountably coupled elements adapted to strike one or both sides of the chamber during vibration. The rod connected to the sound chamber is bent into a U-shaped configuration so that it may be held by one hand. One may then strike the free end of the bar with his other hand or against a flat object to play the instrument. A striking ball is secured to the free end of the rod to facilitate being struck against a flat surface. The vibration imparted to the rod and transmitted to the sound chamber may be dampened by the musician squeezing his hand around the rod while the instrument is played.

The percussion instrument according to the invention may also include one or more tambourine jingles demountably secured against the walls of its sound chamber. When the instrument is in use, the elements which vibrate

within the sound chamber produce at the mouth of the chamber a sound which more closely simulates that of its natural counterpart. Moreover, the magnitude and duration of vibration transmitted by the sound chamber may be more carefully controlled by the musician during the playing of the instrument.

It is therefore an object according to the present invention to provide a percussion instrument which simulates the sound of a natural jawbone percussion instrument.

It is another object according to the present invention to provide a percussion instrument for use in Latin American music which simulates the sound of a natural jawbone and is constructed from readily available materials.

It is another object according to the present invention to provide a percussion instrument which simulates the sound of a natural jawbone and which is simple in design, easy to manufacture and which provides a long operating life.

Other objects and features of the present invention will become apparent from the following detailed description considered in connection with the accompanying drawings which disclose the embodiments of the present invention. It should be understood, however, that the drawings are designed for the purpose of illustration only, and not as a definition of the limits of the invention as to which reference should be made in the appended claims.

In the drawings wherein similar reference characters denote similar elements throughout the several views:

FIG. 1 is a perspective view of one embodiment of the percussion instrument according to the invention;

FIG. 2 is a perspective view, partly in cross-section of another embodiment of the instrument according to the invention; and

FIG. 3 is a perspective view of the sound chamber of still another embodiment of the instrument according to the invention.

Referring to FIG. 1 there is shown one embodiment of the instrument according to the invention having a sound chamber 14 secured to the end 13 of a rod 11. Sound chamber 14 includes a V-shaped section 25 forming an open cavity between walls 15 and 16. Supported within the cavity intermediate walls 15 and 16 is bar 18. Bar 18 includes along its length a plurality of equally-spaced holes into which are slidably mounted an equal number of pins 17. The length of pins 17 has been designed to be slightly less than the space between walls 15 and 16 to permit the ends of the pins to strike against both internal wall surfaces.

Secured to the opposite end of rod 11 is a striking ball 10 which when struck against a flat surface imparts vibrational energy to sound chamber 14. Midway along rod 11 is a U-shaped portion 12 which serves as a hand grip for the musician playing the instrument. U-shaped portion 12 also serves as an extension of rod 11 over which the musician may apply damping to the vibrational energy transmitted along the rod by squeezing its hand tightly against the surface of rod 11. Rod 11 may be constructed from any rigid material, such as metal, capable of transmitting vibrational energy to sound chamber 14. Striking ball 10 may also be constructed from any hard material, such as wood, plastic or metal. Sound chamber 14 may be constructed from materials such as wood, plastic or metal which display good acoustical qualities. Likewise, support 18 and pins 17 may be constructed of similar materials capable of producing percussion sound within the cavity of chamber 14. Sound chamber 14 may be formed from a single integral construction comprising V-shaped member 25 and walls 15 and 16. The base of V-shaped member 25 has an increased thickness in order

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to rigidly secure the sound chamber to end 13 of rod 11 so as to permit substantially all of the energy imparted to the rod to transfer into the sound chamber 14.

Referring to FIG. 2, there is shown another embodiment of the sound chamber according to the invention secured to the end of rod 11, utilizing a plurality of spaced elements 21, slidably secured to studs 20. Elements 21 are free to vibrate against the internal surface of wall 16 of sound chamber 14. The flat heads on the ends of studs 20 prevent elements 21 from becoming disengaged during the playing of the instrument. Elements 21 may be constructed as cylinders or other objects capable of striking against wall 16.

In another embodiment of the instrument according to the invention, tambourine jingles may be secured against one of the walls of sound chamber 14, as shown in FIG. 3. Each of the studs 23, secured to wall 15, include a pair of tambourine jingles 22 which are free to strike the surface of wall 15 or the head of stud 23. Tambourine jingles 22 may be secured to either of the embodiments of FIG. 1 and FIG. 2 to provide additional percussion sound during the playing of the instrument. Tambourines 22 may also be silenced by the insertion of a restraining device such as a spring clip or pad between the tambourine and the surface of wall 15.

In an actual embodiment of the invention the sound chamber was constructed with a length of 3½ inches and a depth of approximately 1 inch. The opening of the cavity was approximately 3 inches and tapered down along the length of the sound chamber to a width of 1 inch at its connection to rod 11. Rod 11 was constructed from ¼ inch diameter bar stock. Upon striking the end of bar 11, the instrument was found to produce a percussion sound consisting of a rattling noise simulating that of a natural jawbone and having an undamped duration of approximately 2 to 3 seconds.

Aside from the instrument's obvious use as a percussion device to accompany Latin American music, it may also be utilized as a toy, sound prop, or decorative device. The instrument, being simply constructed, may be easily mass produced and sold at a cost considerably less than that of its natural counterpart.

What is claimed is:

1. A percussion instrument comprising, a sound chamber, having a cavity with at least one open portion, support means secured to said chamber within said

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cavity, a plurality of spaced-apart elements slidably coupled to said support means and adapted to strike at least one wall of said chamber, and a vibratory rod member secured to, and external of said sound chamber, and having a hand grip along its length, for imparting sustained vibrations to said chamber.

2. The instrument as recited in claim 1, wherein said support means is a bar having a plurality of spaced holes, and said elements are pins contained within said spaced holes and adapted to strike at least one wall of said chamber.

3. The instrument as recited in claim 1, wherein said support means are a plurality of studs secured to at least one wall of said chamber, and said elements are masses slidably impaled on said studs and in contact with said wall.

4. The instrument as recited in claim 1, wherein said rod member additionally comprises a striking ball secured to its opposite end.

5. The instrument as recited in claim 4, wherein said rod member includes a U-shaped section integrally formed along its length, said section having a length sufficient to serve as a hand grip for the instrument.

6. The instrument as recited in claim 5 wherein said sound chamber comprises a V-shaped section.

7. The instrument as recited in claim 1 additionally comprising at least one pair of tambourine jingles secured to the walls of said sound chamber.

8. The instrument as recited in claim 7 additionally comprising means for restraining the movement of said tambourine jingles.

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U.S. Cl. X.R.

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