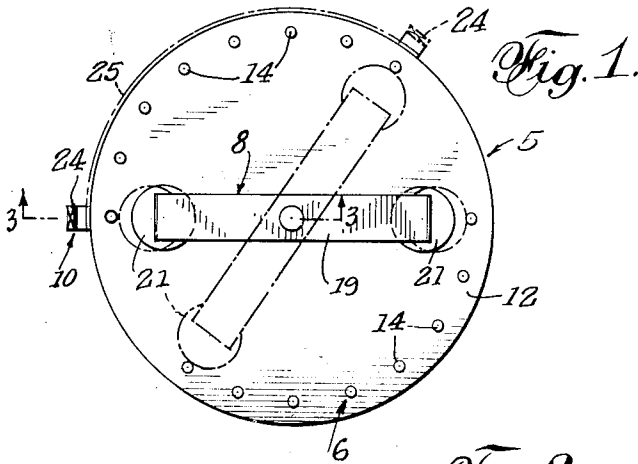
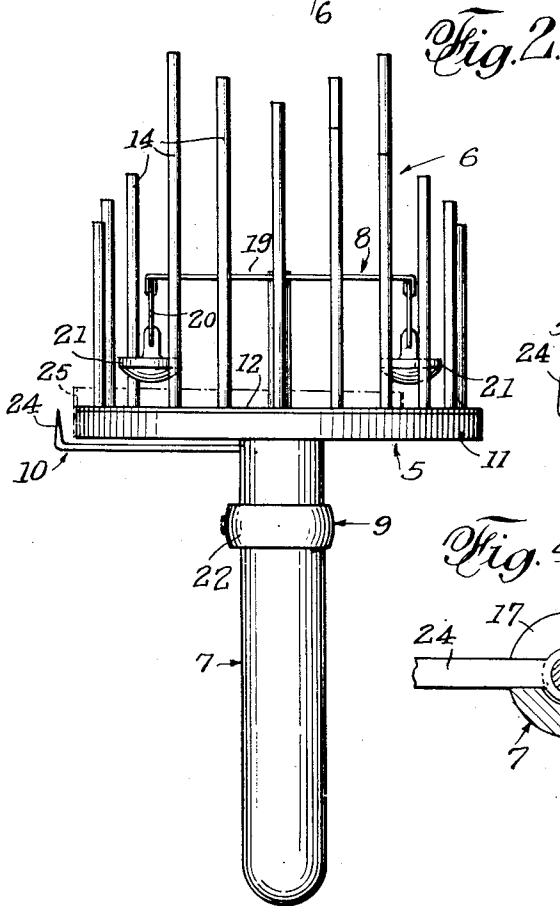
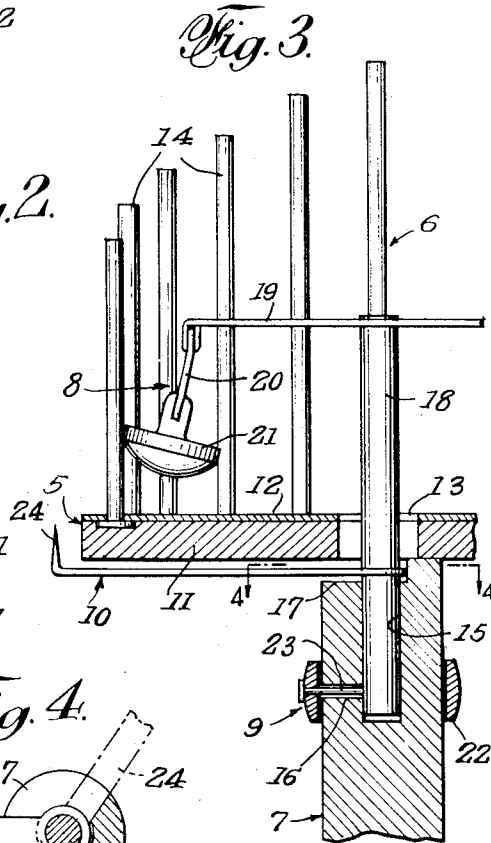
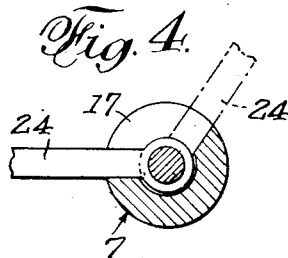


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SHOJI KATO
MUSICAL INSTRUMENT
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MUSICAL INSTRUMENT

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This invention relates to a musical instrument and deals more particularly with a simple musical sound-producing device that may advantageously be constructed as a toy.

An object of the present invention is to provide a musical instrument of the percussive type that is of unitary construction in that the same unitarily embodies both the music-producing elements and the percussive means.

Another object of the invention is to provide an instrument of the character referred to that has a complement of musical elements of different pitch and embodies manually adjustable percussive means to strike said elements, as desired, to produce a musical composition.

A further object of the invention is to provide an instrument in which the musical elements are arranged in ring or circular form and the percussive means is disposed to be adjusted around the center or axis of the elements for positioning, as desired, relative to the respective elements to strike them.

A still further object of the invention is to provide an instrument of the type referred to in which the percussive means is in the form of a clapper that is operable, by shaking the instrument in its entirety, to strike the musical elements.

The invention also has for its objects to provide such means that are positive in operation, convenient in use, easily installed in a working position and easily disconnected therefrom, economical of manufacture, relatively simple, and of general superiority and serviceability.

The invention also comprises novel details of construction and novel combinations and arrangements of parts, which will more fully appear in the course of the following description. However, the drawing merely shows and the following description merely describes, one embodiment of the present invention, which is given by way of illustration or example only.

In the drawing, like reference characters designate similar parts in the several views.

Fig. 1 is a top plan view of a musical instrument according to the present invention.

Fig. 2 is a side elevational view thereof.

Fig. 3 is an enlarged vertical sectional view as taken on line 3-3 of Fig. 1.

Fig. 4 is a cross-sectional view as taken on line 4-4 of Fig. 3.

The musical instrument that is illustrated comprises, generally, a base 5, a complement of differently pitched musical elements 6 carried by said base, a handle 7 connected to the base and by means of which the same may be moved or shaken, clapper means 8 carried by the handle, manual means 9 for adjustably moving the clapper means relative to the elements 6, and means 10 to indicate the adjusted position of the clapper means.

The base 5 is shown as a preferably circular base plate 11 on which is affixed a plate 12. Both plates are provided with a central aperture 13.

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The complement of musical elements 6 are suitably carried by plate 12. In this instance, said complement of elements comprises rods 14 affixed to plate 12 and extending from the outer face of said plate. Also, in this instance, said rods are of different lengths to have different musical pitch when struck. Eight such rods are provided to enable sounding of a full octave of a musical scale. By arranging the same-pitched rods in diametrically opposed relationship, two groups of eight rods are provided in respective opposed relationship, as shown. The rods representing do, re, mi, etc. are respectively in opposed relationship, thereby providing for a circular arrangement of the rods with the aperture 13 at the center of generation of such circular arrangement.

It will be realized that the rods that are illustrated are all of the same diametral size and have pitch that varies according to the length. Such difference of pitch may be achieved by using rods of the same length but of different diametral size, or a combination of different length and diameter rods. The rods 14 that are shown are, therefore, exemplary of musical elements that may be used, since, instead of such rods, tubes, blocks, bars, etc., may be used.

The material of the musical elements may vary also, metal and wood being preferred examples. Further, the elements may be loosely carried by the base, rather than being firmly affixed as shown.

The handle 7 preferably extends from the center of base 5 and oppositely to the direction of extent of the elements 6. Thus, it will be seen that the toy may be manipulated by moving the same, as by short reciprocative strokes, although such movement may be varied by the user. As seen best in Figs. 3 and 4, the end of the handle adjacent to the base 5 is formed to have an axial bore or seat 15 and sector-shaped grooves 16 and 17 that open onto said bore and are disposed in longitudinal spacing along the handle 7. Said grooves have an angular range that is commensurate to the angular range on which each group or octave of elements 14 is arranged.

The clapper means 8 is shown as an axial member 18 having one end disposed in bore 15 and extending through aperture 18 into the area surrounded by the musical elements 14. Said member 18 constitutes a support for a bridge member 19 that is secured to the top of said member and extends equally on either side of its connection to support member 18. The opposite ends of bridge member 19 are provided with a flexible piece 20, and a clapper 21 is connected to each said piece to hang pendent from the bridge member and be adapted to swing toward and from the musical elements 14, as the toy is reciprocated or shaken by means of its handle.

The means 9 for adjustably moving the clapper means is shown as a loose ring 22 around the handle 7 and a pin 23 disposed in groove 16, connecting the member 18 and said ring. It will be seen that the fingers of the hand in which handle 7 is held may be used to rotationally adjust said ring, and thus rotationally adjust the clappers 21 relative to the musical elements 14. Therefore, while the instrument is being shaken, the mentioned adjustments may be made, as desired, to play a melody according to the skill of the user.

The means 10 is provided so that the adjusted positions of the clappers can be readily seen, although such skill may be achieved as to enable playing a melody without such aid. The means 10 is shown as an index or pointer 24 that is affixed to member 18 to rotationally move therewith, the index tending radially through groove 17 and limited by the circumferential extent of said groove (Fig. 4). A suitable chart or scale 25 may be carried by the periphery of the base and read in connection with said index. Said chart may designate the notes of the scale

and is particularly useful, if an enclosing cover is provided over the musical elements, to aid the user in adjusting the clappers rotationally.

It will be clear that a melody may be played by reciprocally shaking the instrument and rotationally adjusting the clappers according to the pitch of the different notes of the melody while so shaking the instrument.

The range may be increased to two octaves by setting the rods closer together and providing fifteen in each group instead of eight. Also, half notes may be incorporated in the scale in substantially the same manner.

While the foregoing has illustrated and described what is now contemplated to be the best mode of carrying out the invention, the construction is, of course, subject to modification without departing from the spirit and scope of the invention. It is, therefore, not desired to restrict the invention to the particular form of construction illustrated and described, but to cover all modifications that may fall within the scope of the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A musical instrument comprising a base provided with a handle by means of which said base is adapted to be reciprocally shaken, a complement of differently pitched musical rods carried by the base in circular arrangement, a bridge member rotatably mounted centrally of the musical rods, a pendent clapper attached to each end of said bridge member adjacent to the musical rods and adapted to strike the same when the instrument is shaken, and means to rotationally adjust the bridge member to bring the clappers into selective striking position with said rods.

2. A musical instrument comprising a base provided with a handle by means of which said base is adapted to be reciprocally shaken, a complement of differently pitched musical rods carried by the base in circular ar-

range, a bridge member rotatably mounted centrally of the musical rods, a pendent clapper attached to each end of said bridge member adjacent to the musical rods and adapted to strike the same when the instrument is shaken, means to rotationally adjust the bridge member to bring the clappers into selective striking position with said rods, and ring means engaged with the handle and adapted to be manipulated by the fingers of the hand grasping said handle to effect the mentioned rotational adjustment of the bridge member.

3. A musical instrument according to claim 2: the last mentioned means comprising a ring around said handle, and a visual indicator connected to and movable with the bridge member to indicate the adjusted position of the clappers.

4. In a musical instrument having a circular base with a plurality of upright rods mounted about the periphery thereof, said rods being of varying pitch, the improvement therewith comprising a bridge member centrally disposed in respect to the upright rods, said member being rotatably mounted in a plane transverse to the axis of said rods, and a clapper freely hanging from each end of said bridge member, said clappers being adapted to strike said rods upon movement of said base.

5. In a musical instrument according to claim 4: means to rotate said bridge member to, thereby, select the percussive position of said clappers in respect to said rods.

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