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MUSICAL DEVICE

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5 Claims. (Cl. 84—104)

The present invention relates generally to a musical device and is particularly directed to a novel and amusing combination of sound producing components to provide a one-man band arrangement.

Toy musical devices have long been a favorite with children and particularly those toy instruments or devices which require very little talent or concentrated effort to play. The present invention is particularly concerned with providing a combination of toy musical instruments, which are readily and easily playable with virtually no skill involved and which provide a one-man band type of device that is operated by one person. A further object of the invention is to provide such a combination of musical instruments, which has incorporated therewith means for selectively varying the tempo of a plurality of percussion instruments in the combination. Still another object of the invention is to provide a combination of musical sound producing devices including a plurality of percussion instruments, wherein one or more of the percussion instruments can be locked out of the operation as desired. It is also an object of this invention to provide a musical device as described above which can be easily supported on a flat surface, as desired. Other objects and advantages will become apparent from the following description of the embodiment of this invention as illustrated in the drawings wherein:

FIGURE 1 is a perspective view of the musical device; FIGURE 2 is an enlarged elevational view; and

FIGURE 3 is an exploded perspective view of a portion of the operating mechanism for the device, with parts broken away.

With reference to FIGURES 1 and 2 of the drawings, it will be seen that the selected embodiment of the invention comprises a musical device 8 including a novel arrangement of a plurality of sound making devices supported on a frame structure 10 which is generally in the form of simulated plumbing fixtures, such as pipes, joints, elbows, etc. The device includes a plurality of percussion instruments or tempo producing devices, including a pancake turner 12 in position to strike against a frying pan 14, a spoon 16 in position to strike against a tin can 18, a tooth brush 20 in position to rub against a simulated washboard 22, and a hammer 24 in position to strike against a pan lid 26. A crank 28 provides the means for sounding each of the percussion instruments automatically as a main drive shaft 30 is rotated, and the percussion instruments can be locked out of operation as desired by movement of levers adjacent opposite ends of the rotatable shaft. In addition, there is provided a plurality of wind instruments or sound making devices which can be selectively operated by blowing through any one of the wind instruments. The latter include a double whistle 32 having a single mouth piece 34 and adapted to simultaneously produce two different tones, a kazoo 36 including a mouth piece 38, a conventional horn 40 of the reed type, and a ball whistle 42. Consequently, the tempo is provided by rotating the crank 28 to sound the percussion instruments, and the melody is provided by the operation of the kazoo, with intermittent sounding of the whistles and the horn, as desired.

More particularly, the supporting frame structure 10 for the musical device is of plastic or other suitable material and includes a plurality of simulated pipes 44 joined together by elbows 46, couplings etc. to provide a gen-

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erally rectangular open frame work. The lower portion of the frame includes a pair of laterally extending leg portions or brackets 48 to provide stability for supporting the device on a generally flat surface. In addition, means for carrying the instrument is provided by a strap 50 connected to the upper end of the frame by a pair of brackets 52 and adapted to be placed around the neck of the person playing the device. A second strap 54 at the lower end of the frame, having opposite ends extending into slots 56 in the base member 58 is adapted to be placed around the waist of the player and adjustably fixed in position by means of a series of holes 60 in one end of the strap and a rivet or stud 62 projecting upwardly from the base frame member. A pair of intermediate transverse brace members 64, 66, in position to provide support for certain of the percussion instruments, completes the frame structure.

The simulated frying pan 14, which may be all metal, plastic or other suitable material, is mounted on the lower end of the frame by means including a pin 68 and yoke support 70 at one end and a fastener 72 on the other end. The simulated pancake turner 12 is rotatably mounted on the frame member 64 by means of a sleeve 74 at the free end of the handle portion engaging a cylindrical boss or shaft 76 formed on the transverse frame member. A coil spring 78 is fixed in position between the frying pan handle and the pancake turner handle, so as to bias the latter into a position of engagement with the frying pan. The free end of the handle includes a vertically extending arm 80 in position for engagement by a cam 82 on the rotatable shaft which is disposed within a box 84. As seen particularly in FIGURE 3, the arm-engaging portion of the cam 82 is of a predetermined configuration, so that as the shaft 30 is rotated the arm 80 is moved downwardly to raise the pancake turner 12 which is then suddenly dropped as a drop-off portion 86 of the cam moves past the arm. Consequently, for each rotation of the handle 28 through 360 degrees there is provided one beat of the pancake turner 12 against the frying pan 14.

Also enclosed within the box 84 on the right of the musical device is a cam 90 for effecting operation of the spoon 16. This cam includes three drop-off portions 92 about its peripheral cam surface which is positioned for engagement with a depending arm 94 on a lever 96, so as to raise the lever and then permit it to fall three times during a single revolution of the shaft. The lever 96 is biased into a downward position affording engagement with the cam 90 by suitable means, such as a spring 98 disposed between the lever and an interior wall 84a of the box or enclosure. The lever 96 is pivotally mounted on the box 84 at one end by means including a stub shaft 100, and the opposite end of the lever is connected with an intermediate portion of the spoon by means of a rod or wire 102. The spoon 16 is pivotally mounted on a bracket 104 at the upper end of the frame, with the bowl portion 106 in position for engagement with the top of the can 18. The end of the handle of the spoon 16 has loosely mounted thereon a concave metal piece 108 simulating a cymbal, so that operation of the spoon provides a sound as the bowl 106 strikes the can 18 and also a sound resulting from movement of the cymbal 108 relative to its support.

The tooth brush and washboard instrument 20, 22 is also automatically operated through rotation of the shaft 30 by means including a third cam 110 on the shaft, a cam lever 112 pivotally mounted at its forward end on a wall of the box enclosing the cam, as previously described with respect to lever 96, and a rod or wire 114 which is pivotally interconnected between the lever and one end of the tooth brush 20. An intermediate portion of the tooth brush handle is pivotally fixed on a bracket 116 carried by the frame, and the bristle portion of the brush

is positioned for wiping or brushing engagement with the corrugated portion of the washboard. The operating cam 110 for the tooth brush includes a single drop-off section 118, and an upwardly extending bracket or arm 120 on the lever is in position for engagement by the cam to effect raising and lowering of the lever 112 and, consequently, an up and down movement of the brush 20 across the washboard 22. A spring element 122 on the end of the lever 112 is positioned with respect to the cam enclosure or box 124, so as to urge the lever upwardly to place the arm 120 in engagement with the cam 110. Consequently, for each 360 degree rotation of the handle 28 and shaft 30 there results a motion of the tooth brush 20 across the washboard 22.

The hammer and lid device at the left of the instrument is similarly operated by means of a cam 130 on the shaft 30 engaging a lever 132 which is operably connected with the hammer 24. The cam 130 is essentially identical with the cam 90 for operating the spoon, but in this instance the cam operated lever 132 is disposed beneath the cam 130. More particularly, the lever 132 is pivoted at its forward end on the box 124 and biased to a raised position by means of a spring 134 disposed between the lever and the box. The free end of the lever is pivotally connected with a projecting arm 136 on the hammer by means of a rod or wire 138. The hammer is rotatably mounted on the frame by means of a sleeve or journal portion 140 engaging a cylindrical boss or shaft on the frame. Consequently, as the lever 132 is operated through movement of the cam 130 the hammer 24 is drawn away from the lid 26 a predetermined distance and then released to strike against the lid as the lever portion 142 hits a drop-off point 144 on the cam. The lid 26 is a relatively large concave member of metal and is supported on the frame at its center by means including a bracket 146 extending inwardly from the frame structure.

It will be noted particularly in FIGURE 2 that each of the levers 96, 112, 132 have a handle portion projecting outwardly of their box enclosures through a stepped slotted opening. The pivotal mounting for the levers within the box provides for some lateral movement of the levers, so that the levers can be moved into and out of position of engagement with their respective cams. Thus, each lever can be placed in the "on" or "off" positions indicated in FIGURE 2 to render the associated instrument operative or inoperative, respectively, in response to turning of the rotatable shaft. Further, since the cams 82, 110 provide a single beat per revolution and the remaining cams 90, 130 provide three beats per revolution, there is afforded means for varying the tempo of the instruments as well as the sound effect produced. For example, in the illustrated embodiment the pancake turner 12 always strikes against the frying pan 14 once for each rotation of the shaft 30 and thereby provides a basic beat or tempo. With the spoon 16 operating there is provided the additional sounds of the spoon striking the can 18 and of the cymbal 108, and such sounds are produced three times for each rotation of the shaft. With the tooth brush 20 in operation there is provided still another sound which occurs once during each revolution of the shaft 30. The sound of the hammer 24 striking the lid 26 can be added to the sound of the frying pan, or to the sound of the frying pan and spoon, or to the sound of the frying pan and brush, or to the sound of the frying pan, spoon and brush to thereby give further variations in the overall sound effect and in the tempo of such sounds.

As indicated previously, the melody is provided by the player by humming through a generally conventional kazoo 36 which is pivotally supported on the free end of an arm 150, which in turn is adjustably positionable relative to a supporting bracket 152 by suitable means, such as the facing toothed or ribbed surface of cylindrical members 154 and 156 which are spring biased into en-

gagement with each other. Attached to opposite sides of the kazoo are the double tone whistle, and the horn and ball whistle.

Consequently, it is seen that there is provided a combination of musical instruments and/or sound making devices which are integral with a single frame structure for easy portability, wherein the tempo is produced automatically by rotation of the crank, and the tempo and sounds are selectively variable through a wide range of choices by means of the lock-out levers so as to provide an amusing one-man band arrangement. Although shown and described with respect to particular structure, it will be apparent that various modifications might be made without departing from the principles of this invention.

What we claim is:

1. A musical device comprising a supporting frame structure adapted to be carried and supported by the body of the person operating said device, a plurality of percussion instruments mounted on said supporting frame, each of said percussion instruments including a sounding means movably mounted on said frame, actuating means mounted on said frame and operable to actuate said instrument sounding means in a predetermined sequence, and means for selectively locking out one or more of said instruments from operation by said actuating means.

2. A musical device comprising a supporting frame structure adapted to be carried and supported by the body of the person operating said device, a plurality of percussion instruments mounted on said supporting frame and each including a striking means movably mounted on said frame, actuating means mounted on said frame and operable to actuate said instrument striking means in a predetermined sequence, and means for selectively locking out one or more of said striking means to thereby vary the tempo of the sounds produced.

3. A musical device comprising a supporting frame structure adapted to be carried and supported by the body of the person operating said device, a plurality of percussion instruments mounted on said supporting frame, each of said percussion instruments including a sound producing device and a striking element movably mounted on said frame in position for engagement with the sound producing device, actuating means mounted on said frame and operable to actuate said striking elements in a predetermined sequence, and means for selectively locking out one or more of said striking elements from operation by said actuating means to thereby vary the tempo of the sounds produced as said actuating means is operated.

4. A musical device comprising a supporting frame structure, a plurality of percussion instruments mounted on said supporting frame, each of said instruments including a striking means movably mounted on said frame in position for engagement with the sound producing portion of the instrument, operating mechanism for said striking means comprising a rotatable shaft, means for rotating said shaft, a plurality of cam means fixed on said shaft for rotation therewith, each cam means being in position for operation of one of said striking means, manually operable means for selectively rendering each of said cam means inoperative, whereby all of said percussion instruments can be sounded in a predetermined sequence upon rotation of said shaft, and whereby less than all of said percussion instruments can be sounded to thereby selectively vary the tempo of the sounds produced.

5. A musical device comprising a supporting frame structure adapted to be supported by the body of a person, a plurality of percussion instruments mounted on said supporting frame and each including a sound producing portion and a striker element, each of said striker elements being movably mounted on said frame in position for engagement with the sound producing portion of one of said instruments, operating mechanism for said

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striker elements comprising a rotatable shaft carried by said frame, a crank for manually rotating said shaft, a plurality of cam means fixed on said shaft for rotation therewith, a lever connected with each of said striker elements and pivoted on said frame, each cam means being in position for engagement with one of said levers to effect swinging movement thereof, means for selectively locking each of said levers out of the path of movement of the associated cam means, whereby all of said

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percussion instruments can be sounded in a predetermined sequence upon rotation of said crank when said levers are in their operative position, and whereby less than all of said percussion instruments can be sounded to thereby selectively vary the tempo of the sounds produced by locking out one or more of said levers.

No references cited.

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