Oct. 13, 1953 E. LEVAY 2,655,071

DRUM

Filed Nov. 7, 1951

Fig. 1.

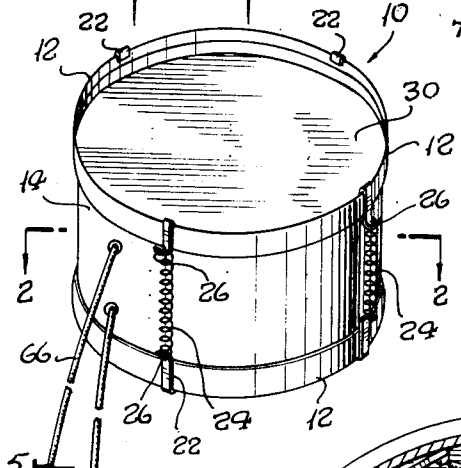



Fig. 5.

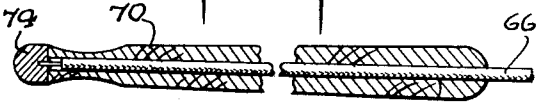
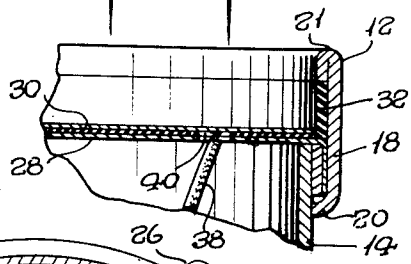



Fig. 4.



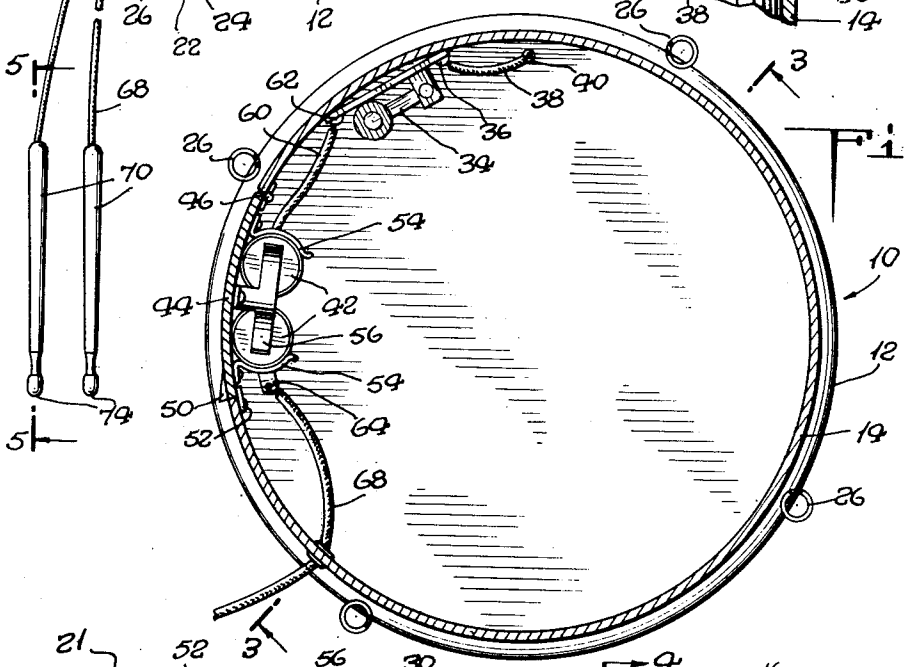




Fig. 2.

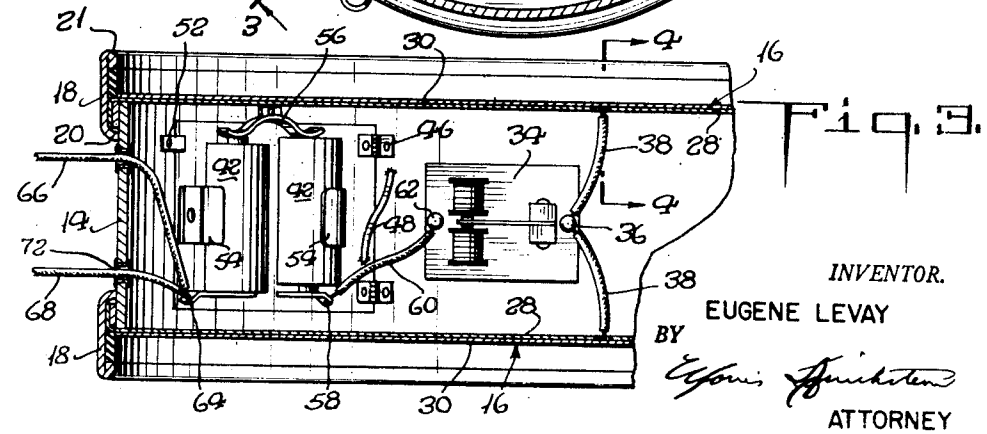



Fig. 3.

INVENTOR.
EUGENE LEVAY
BY
ATTORNEY

Patented Oct. 13, 1953

2,655,071

# UNITED STATES PATENT OFFICE

2,655,071

## DRUM

Eugene Levay, New York, N. Y.

Application November 7, 1951, Serial No. 255,190

3 Claims. (Cl. 84—422)

1

This invention relates to drums.

It is an object of the present invention to provide a drum capable of electrically producing a sound which is drumlike in origin and quality.

It is another object of the present invention to provide a drum of the character described which can be operated with a minimum of effort and experience on the player's part.

It is another object of the present invention to provide a drum of the character described which is durable and can withstand rough treatment.

It is another object of the present invention to provide a drum of the character described which can be operated by merely touching drumsticks to drumheads.

It is another object of the present invention to provide a drum of the character described which is inexpensive and simple to manufacture.

It is an ancillary object of the present invention to provide a drum of the character described which is simple for children to operate.

Other objects of my invention will in part be obvious and in part will be pointed out hereinafter.

My invention accordingly consists in the features of construction, combinations of elements and arrangements of parts which will be exemplified in the device hereinafter described and of which the scope of application will be indicated in the appended claims.

In the accompanying drawings in which is shown one of the various possible embodiments of my invention,

Fig. 1 is a perspective view of a drum embodying the present invention;

Fig. 2 is an enlarged sectional view taken substantially along the line 2—2 of Fig. 1;

Fig. 3 is a fragmentary sectional view taken substantially along the line 3—3 of Fig. 2;

Fig. 4 is an enlarged sectional view taken substantially along the line 4—4 of Fig. 3; and

Fig. 5 is an enlarged fragmentary sectional view taken substantially along the line 5—5 of Fig. 1.

Referring now in detail to the drawings, the reference numeral 10 denotes a drum constructed in accordance with the present invention. The drum comprises two drumheads 12 disposed at opposite ends of a hollow open-ended body 14.

Each drumhead includes a tympan 16 and an annular metal rim 18. Said rim has its bottom and top edges inwardly retroverted to form flanges 20, 21. The inner diameter of the flange 20 is such that it snugly receives the upper end of the drum body 14.

2

The two drumheads are held on the drum body by hooks 22 and tension springs 24. The hooks are adapted to grip the top edge of the rim and to hang along the sides thereof with a spring anchoring ear 26 projecting away from the drum. Several hooks are placed on each drumhead, with each hook on one drumhead being lined up with a hook on the other. The springs connect the lined up ears and pull the drumheads towards each other, thereby holding the drumheads to the body. The drum can be disassembled by disengaging the hooks.

Each tympan comprises a sheet of material, the edge of which is held between the flange 20 and the body of the rim by riveting, gluing or clamping.

As thus far described the drum is conventional and is capable of being played in the conventional manner.

Pursuant to the present invention, at least a substantial portion of the outer surface of one or both of the drum head tympans is made electrically conductive. This may be accomplished by impregnating the customary parchment used as a typmpan with electrically conductive material or by fabricating the tympan itself from electrically conductive material or by superimposing electrically conductive material on the tympan.

As shown herein, the tympan comprises a sheet of parchment 28 or other suitable non-conductive material. A strip of metal foil 30 is cemented to the surface of the parchment facing away from the drum body and substantially covers all of said surface, except that it does not reach the rim which is insulated therefrom by non-conductive material, for example, a cardboard sleeve 32.

In further pursuance of the present invention, an electrically energizable sound-producing means, for example a conventional electric buzzer 34, is placed inside the drum body. The buzzer is secured in any conventional manner, for example by rivets, to the inner wall of the drum body. One terminal 36 of the buzzer is electrically connected to the foil of each tympan by insulated wires 38, a hole 40 being provided in each parchment to permit a wire to contact the foil.

A source of electric energy is provided, preferably inside the drum, said source comprising either a step-down transformer usable with conventional house current, or a portable source of electric power. In the embodiment shown, a pair of batteries 42 are employed, said batteries being located inside the drum body.

The drum body has an opening covered by a

door 44 which is secured to the body by hinges 46. The door is biased to closed position by a spring 48, and a thumb opening 50 is provided to enable one to swing the door outwardly. Inward movement of the door is limited by an abutment 52.

The batteries are oppositely mounted in spring holders 54 on the inner side of the door 44. This permits easy access to the batteries for replacement purposes. A bridging clip 56 at one pair of ends of the batteries connects the batteries in series. A terminal 58 engages the other end of one of the batteries and is connected by an insulated wire 60 to the other buzzer terminal 62. Another terminal 64 engages the other end of the other battery and is electrically connected by long insulated wires 66, 68 to drumsticks 70 whereby to permit freedom of movement of the drumsticks. The wires pass through openings 72 in the drum body and extend axially through the drumsticks to electrically conductive tips 74 of the latter, the ends of the wires being in electrical contact with the tips.

The drumsticks and foil act as a switch. When they are touched together, the circuit of batteries and buzzer is completed and a sound issues from the inside of the drum.

It thus will be seen that there is provided a device which achieves all the objects of the invention and is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein described, or shown in the accompanying drawings, is to be interpreted as illustrative and not in a limiting sense.

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

1. A hollow drum body, a drumhead secured thereto, the drumhead having at least a substantial portion of its outer surface electrically conductive, electrically energizable sound-producing means disposed inside the drum body, two terminals adapted to be connected to a source of electrical energy, a drumstick, and means to electrically connect the sound-producing means and terminals in series between the drumstick and conductive portion of the drumhead, whereby when the drumstick is touched to the conductive portion the sound-producing means will be energized so that a sound will be emanated from the drum body.

2. A hollow drum body, a pair of drumheads secured thereto, each drumhead having at least a substantial portion of its outer surface electrically conductive, electrically energizable sound-producing means disposed inside the drum body, a battery inside the drum body, a pair of drumsticks, and means to electrically connect the sound-producing means and battery in series between the drumsticks and conductive portions of the drumheads, whereby when a drumstick is touched to a conductive portion the sound-producing means will be energized so that a sound will be emanated from the drum body.

3. A hollow drum body, a pair of drumheads secured thereto, each drumhead having at least a substantial portion of its outer surface electrically conductive, electrically energizable sound-producing means disposed inside the drum body, two terminals adapted to be connected to a source of electrical energy, a pair of electrically non-conductive drumsticks, each drumstick having an electrically conductive tip, and means to electrically connect the sound-producing means and terminals in series between the drumstick tips and conductive portions of the drumheads, whereby when a drumstick tip is touched to a conductive portion the sound-producing means will be energized so that a sound will be emanated from the drum body.

EUGENE LEVAY.

**References Cited** in the file of this patent

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 965,435 | Brauer | July 26, 1910 |
| 1,007,232 | Palmer | Oct. 31, 1911 |
| 1,646,061 | Lifshitz | Oct. 18, 1927 |
| 2,516,579 | Leonardson | July 25, 1950 |