The present invention relates to sound producing toys, and more particularly to toys of the character described which are capable of producing intermittent sounds of uneven duration in a predetermined manner either comical or in imitation of natural sounds, such as the cackling of a hen, or the like.

It is an object of the present invention to provide toys of the character described which are practical and efficient for their purpose, which are of simple and sturdy construction yet economical to manufacture and easy and simple to assemble and operate.

In the accompanying drawing illustrating one embodiment of the present invention, which will produce, when operated, the sound of a hen's cackling,

Fig. 1 is a vertical sectional view taken through the center of the toy and giving an edge view of the operating mechanism of the same; and

Fig. 2 is a similar view of the toy taken at right angles to the view in Figure 1, and giving a view in side elevation of the operating members of the sound producing mechanism of the same.

Referring more specifically to the accompanying drawing, the numeral 10 designates a sounding board which is provided with a vibrating reed, 11, secured to it at approximately its center, in any suitable manner adapted to efficiently produce sound, and extending substantially upwardly from the board. The sounding board may be of any shape and of any suitable material, depending on the nature of the sound desired to be produced, and may be of cardboard, metal, wood or the like. Similarly, the vibrating reed, 11, may be of any suitable material, depending on the quality of sound desired, metal being suitable for most purposes.

A sounding chamber, 12, is mounted upon the sounding board, to magnify and enhance the sound. The sounding chamber or box may be integral with the board, 10, or may be separable therefrom, as shown in the drawing, wherein it is held in place by means of the flange, 13, with which the sounding board is provided.

The reed activating mechanism is housed within the sounding box, 12, at 14 may comprise a wheel, 14, having a serrated edge, 15, adapted to engage with its serrations the edge of the vibrating reed, 11. The wheel, 14, may be fixedly mounted upon a rotatable shaft, 16, running parallel to the sounding board, 10, and perpendicular to the edge of the reed, 11. The shaft, 16, may be mounted by its ends in the brackets, 17, carried on the interior of the sounding box, 12, preferably on a continuous metal band, 18, running vertically along the walls of the sounding box and across its upper end, thus reinforcing the same, from which band all of the necessary brackets may be formed.

The wheel, 14, may carry on one of its faces, at a distance from its edge, a gear segment, 19, and on its other face, in a position away from the gear segment, a series of spaced lugs or teeth, 20, circularly arranged and adapted to be engaged in a manner similar to gear teeth.

On a second rotatable shaft, 21, mounted above the shaft 16 and parallel to and in alignment with it, one of its ends being supported by the bracket 22, formed on the band, 18, its other end passing through the opening 23, in the band 10 and the sound box, exteriorly of the sound box, to form a handle 24, are mounted a second gear segment, 25, adapted to mesh with the gear segment 19, when they register, and an arm, 26, which is mounted by its center, its two ends adapted to engage the teeth, 20, when the shaft, 21, is rotated.

It will now be evident that when the shaft 21 is rotated by the handle, 24, when the wheel, 14, is in the position indicated in the drawing, each of the arms, 26, will encounter one tooth, 20, thus giving two short movements to the wheel, 14, for each of the rotations of the shaft 21, thus producing two short series of vibrations of the reed, 11, resulting in two short intermittent sounds for each complete rotation of the shaft. In the meantime, the segment 25 will rotate freely, without encountering anything, until the wheel 14 is moved around by the arm, 26, to a position where the segment 19, will mesh with the segment 25, when the following rotation of the shaft 21 will, for a part of the rotation move the wheel 14, by means of the meshing segments, for a substantial distance, producing a long continuous vibration of the reed, 11, and yielding a long continuous sound. As soon as the gear segments disengage, motion of the wheel 14 is again provided by the arm 26, for short and intermittent periods. Thus a series of short and one long sound are intermittently produced by the toy of the present invention, in imitation of the cackling of a hen.

It is readily apparent that by varying the size of the segments 19 and 26, or the distance between the teeth or both, or by more than one segment and series of teeth alternating upon the wheel 14, a great variety of intermittent sounds of uneven duration, in imitation of a variety of natural sounds or other effects, may be pro-
duced by the various modified forms of the mechanism of the present invention.
To further reinforce the toy of the present invention, particularly when it is made of cardboard, which is the most economical material, a cover, 27, to fit over the upper opening of the sound box, is provided, which cover has a plurality of openings or holes, 28, to permit the emanation of the sounds produced.

The mechanism supporting metal band, 18, which runs along one wall of the sound box and then across it adjacent its opening and then downwardly along the opposite side of the sound box, also serves as a reinforcement for the sound box, particularly by means of the upturned ends, 35, which fit around the lower edge of the sound box and clamp it, and by means of clamp members 15, which may be soldered on to the horizontal portion of the band 18, or may be split off it, which bend over and clamp the upper edge of the sound box. This construction provides a reinforcement for the sound box as well as fixed rigid supporting means for the mechanism inside of its supporting box.

In view of the numerous variations possible in the construction of the toy of the present invention, it is to be understood that I do not wish to be limited to the embodiment of the same hereinabove described but wish to be covered for any variations in the same that may be made without the use of the inventive faculties and within the spirit and scope of the present invention and the claims hereto appended.

What I claim as my invention is:

1. In a device of the character described, a sounding board, a vibrating reed set into the said sounding board, a serrated disc rotatably mounted above the said sounding board, its serrations engaging the free edge of the said vibrating reed, and means for rotating the said disc intermittently during part of its rotation and continuously during another part of its rotation.

2. In a device of the character described, a sounding board, a vibrating reed set into the said sounding board, a serrated disc rotatably mounted above the said sounding board, its serrations engaging the free edge of the said vibrating reed, and means for rotating the said disc alternately intermittently during part of its rotation and continuously during another part of its rotation.

3. In a device of the character described, a sounding board and a sounding box extending above it, a vibrating reed set into the said sounding board, a serrated disc rotatably mounted within the said sounding box, its serrations engaging the free edge of the said vibrating reed, and means mounted within the said sounding box for rotating the said disc intermittently during part of its rotation and continuously for another part of its rotation.

4. In a device of the character described, a sounding board and a sounding box extending above it, a vibrating reed set into the said sounding board, a serrated disc rotatably mounted within the said sounding box, its serrations engaging the free edge of the said vibrating reed, and means mounted within the said sounding box for rotating the said disc alternately intermittently during part of its rotation and continuously for another part of its rotation.

5. In a device of the character described, a sounding board and a sounding box mounted over it, a vibrating reed set into the said sounding board, a serrated disc rotatably mounted within the said sounding box, its serrations engaging the free edge of the said vibrating reed, and means mounted within the said sounding box for rotating the said disc intermittently for part of its rotation and continuously for another part of its rotation, said rotating means comprising two or more gear segments carried on opposite faces of the said disc, the segments on one face being positioned opposite a free space on the opposite face, and means to engage one or more of the said segments intermittently and the remaining segments continuously during the rotation of the said disc.

6. In a device of the character described, a sounding board and a sounding box mounted above it, a vibrating reed set into the said sounding board, a serrated disc rotatably mounted within the said sounding box, its serrations engaging the free edge of the said vibrating reed, and means mounted within the said sounding box for rotating the said disc intermittently for part of its rotation and continuously for another part of its rotation, said rotating means comprising two or more gear segments carried on opposite faces of the said disc, the segments on one face being positioned opposite a free space on the opposite face, and cooperating gear segments rotatably mounted within the said sounding box, adapted to engage one or more of the said disc gear segments intermittently and the remaining disc gear segments continuously during their rotation.

7. In a device of the character described, combined reinforcing means for the sound box and supporting means for the sound producing mechanism, comprising a rigid band running along one side of the sound box, then across it adjacent its upper edge and then downwardly along the opposite side of the sound box, the ends of the said band being bent outwardly and upwardly to clasp the lower edge of the sound box, and journal brackets adapted to support and journal the rotatable shafts of the said device formed along the vertical portions of the said band.

8. In a device of the character described, combined reinforcing means for the sound box and supporting means for the sound producing mechanism of the device, comprising a rigid band running along one side of the sound box, then across it adjacent its upper edge and then downwardly along the opposite side thereof, the said band having its lower ends bent outwardly and upwardly to clasp the lower edge of the sound box and being provided with clamping members extending from each end of the horizontal portion thereof, bent over the upper edge of the sound box to clasp the same, and journal brackets adapted to support the rotatable shafts of the device formed outside of the sound box and extending from the said band along its vertical portions.

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