TOY BOMB WITH NOISE AMPLIFIER

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This invention relates generally to toys, and is particularly directed to toys of the type adapted to detonate conventional wafer-like caps.

The particular embodiment of the present invention, which is illustrated in the drawings, and which will be described hereinafter in greater detail, comprises generally a cap detonating chamber and a megaphone for amplifying the sound of a detonation.

While there are prior cap detonating devices known in the art, such devices have been cumbersome and heavy in construction and unreliable in operation, and thus hazardous for use by young children. In addition, the prior devices required features of construction which prevented true bomb simulation and otherwise marred the general appearance. Furthermore, the detonating devices of the prior art inherently served to muffle the sound of a detonation and thereby considerably lessened the attractiveness of the toy.

Accordingly, it is a principal object of the present invention to provide a detonating toy of the type described which accurately simulates a bomb in both appearance and operation, and which is provided with novel means for amplifying the sound of a detonation to enhance the attractiveness of the toy to a child.

It is another object of the present invention to provide a toy bomb of the type described which is positive in operation and completely safe for use by young children.

A more particular object is to provide a device of the type described which is light in weight but which is constructed so that it will fall freely in a particular disposition for positively effecting operation, and which is further constructed so that the detonation chamber outlet is remote from the point of detonation so that the latter cannot be dangerously approached.

It is a further object of the present invention to provide a toy bomb having the characteristics mentioned in the foregoing paragraphs which is simple in construction and durable in operation, which is effective for its intended purposes and which is adapted for production by inexpensive techniques and with relatively cheap materials.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings which form a material part of this disclosure.

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

In the drawings:
Fig. 1 is an elevational view showing a device constructed in accordance with the present invention.
Fig. 2 is a top plan view of the device of Fig. 1.
Fig. 3 is a sectional, elevational view showing the device of Fig. 1 in enlarged proportions.

Fig. 4 is a sectional view taken substantially on the line 4—4 of Fig. 3.

Referring now more particularly to the drawings, the embodiment of the invention illustrated therein comprises a detonating body 10 having a firing pin projecting from one end. On the other end of the body 10 is a megaphone 11 which carries guiding fins 12 remote from the detonating body.

The body 10 is hollow interiorly, as at 15 and opens upwardly through its upper end 16, best seen in Fig. 3. The internal surface of the hollow body 10 is provided with screw threads 17 for a purpose appearing presently. The lower end 18 of the hollow body 10 is closed by the portion 19 which is provided with a downwardly projecting extension 20. While the hollow body 10 may be fabricated of any suitable material, it is preferred to employ molded plastic, the portion 19 being annularly recessed as at 21. The extension 20 and closure portion 19 are formed with a bore 22 which extends coaxially of the body 10 and which communicates between the interior thereof 18 and the external surface of the body 10.

Slidably mounted in the bore 22 is a firing pin or hammer 25 having its lower end 26 extending outwardly beyond the extension 20. Formed on the other end of the firing pin 25 is a striking head or button 27, disposed interiorly of the body 10. With the device in its vertical position (see Fig. 3), the striking head 27 will rest upon the internal surface of the body 10 and retain the firing pin 25 in the bore 22. Of course, the firing pin 25 and striking head 27 may be shifted upwardly, as will be described hereinafter in greater detail.

The megaphone 11 is generally funnel-like in configuration, tapering from its upper end 30 toward its lower end 31. The lower or smaller end 31 of the funnel 11 is formed with external screw threads 32 adapted to threadedly engage with the internal screw threads 17 of the body 10. Thus, the smaller megaphone end 31 may be inserted into the open upper end 16 of the body 10 and threadedly secured in the latter. The upper end 30 of the megaphone 11 is formed with an external, interrupted peripheral head 33, for a purpose appearing hereinafter.

Arranged coaxially of and within the body 10, and spacedly within the smaller end 31 of the megaphone 11 is an open-ended tubular member 35, which is fixedly secured in position by a plurality of radially extending spokes or webs 36. The spokes or webs extend from the tubular member 35 to the internal surface of the megaphone 11 adjacent the smaller end 31, and may be formed integrally with the tubular member and megaphone. In practice, it is preferred to mold the megaphone 11, tubular member 35 and webs 36 as an integral unit made of flexible, self-sustaining material, such as polyethylene or the like. Such material has inherent resilient qualities which are employed to advantage in the present invention, as will be described hereinafter.

Positioned interiorly of the body 10 is an anvil 40 which includes a shank 41 fixedly secured in the tubular member 35. On the lower end of the shank 41 is an anvil head 42 arranged in facing spaced relation with respect to the striker head or hammer 27. It will be apparent that the striker head 27 is movable into and out of engagement with the anvil head 42 upon depression of the firing pin 25.

Removably secured on the larger end 30 of the megaphone 11 are the guiding fins 12, which include a pair of crossed U-shaped plates or members 50 and 51. The U-shaped plate 50 includes a bight portion 52 and depending legs 53 and 54, the bight portion being formed 70 with an inwardly extending slot 55. Similarly, the other U-shaped member or plate 51 comprises a bight portion 56 and depending legs 57 and 58, the bight portion being...
formed with an outwardly extending cut-out portion or slot 59. The U-shaped members 50 and 51 are arranged so that the cut-out portion of each member receives the portion adjacent to the cut-out portion of the other member. In this condition, the U-shaped members may be fixedly secured together by welding or other appropriate means. Extending between the legs 53, 57, 54 and 58, internally thereof, is an annular member 60, which is formed with an internal groove 61. The annular member is preferably secured to the legs by any suitable means to complete the guiding fin assembly. It is seen that the interrupted bead 33 on the megaphone 11 seats snugly in the groove 61 of the annular member 60, and thus mounts the guiding fins 12 on the megaphone while leaving the larger megaphone end 30 completely open.

To assemble the complete device, it is only necessary to insert the firing pin 25 into the bore 22 from the interior of the body 10. The megaphone 11, with the anvil 40 in position, may then be threadedly inserted in the upper end 16 of the body 10, and the upper end of the megaphone manually compressed for insertion into the annular member 60. The megaphone will then expand to snugly engage the interrupted bead 33 in the groove 61.

In operation, a conventional wafer-like cap (not shown) is inserted on top of the hammer 27 when the body 10 is unscrewed from the megaphone 11, to occupy the space intermediate the anvil head 42 and striker head 27. As the device is constructed with its center of gravity adjacent to the lower end of body 10, it may be thrown upwards and will fall freely with firing pin 25 foremost. The free falling movement is stabilized by the aerodynamic effect of the guiding fins 12. Upon contact with the ground or other surface, the firing pin 25 will be suddenly depressed to cause the hammer to sharply approach the anvil to strike the cap against the anvil head and cause detonation of the cap. The detonation sound waves will pass between the spokes or webs 36, as indicated by the arrows in Fig. 3, and out through the larger megaphone end 30, being greatly amplified thereby.

It will be noted that the device is inoperative unless the smaller end 31 of the megaphone is secured in the body 10 as the anvil head and firing pin are mounted, respectively, in the megaphone and body. Further, the length of the megaphone 11 as well as the guiding fins 12 serve to limit the possible proximity of an operator, so that a child's hand or other body member cannot be injured by accidental detonation of a cap.

From the foregoing, it is seen that the present invention provides a toy which accurately simulates a bomb, both in structure and operation, which fully accomplishes its intended objects, and which is well adapted to meet practical conditions of use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention and the scope of the appended claims.

Having thus described my invention, what I claim as now and desire to secure by Letters Patent, is:

1. A toy bomb comprising a hollow body which has a cap detonating chamber having one open end, a firing pin slideable in the other end of said body, a striking head on said firing pin disposed interiorly of said chamber, a funnel-shaped megaphone having its smaller end screw-threadedly removable engaged with and within said hollow body and in fluid communication with the interior of the chamber for amplifying the sound of detonation, the smaller end of said megaphone extending into the open end of said body, an anvil fixedly mounted within said megaphone adjacent its smaller end and spaced from the inner wall of said megaphone to permit passage of the sound waves from a detonation to pass about said anvil and out through the larger end of said megaphone, said anvil being in the path of movement of said striking head whereby a cap disposed intermediate said anvil and said striking head will be detonated upon movement of the firing pin toward said anvil, and guiding fins for stabilizing the free falling movement of said body and megaphone.

2. A toy bomb as set forth in claim 1, the upper end of said megaphone having thereon an external peripheral bead, said guiding fins comprising crossed U-shaped plates, with the legs of each U embracingly fixed to an annular member having an internal groove seated snugly over said peripheral bead, said megaphone being fabricated of flexible resilient material.

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