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SOUNDING AND ILLUMINATED FIGURED INFANT'S TOY

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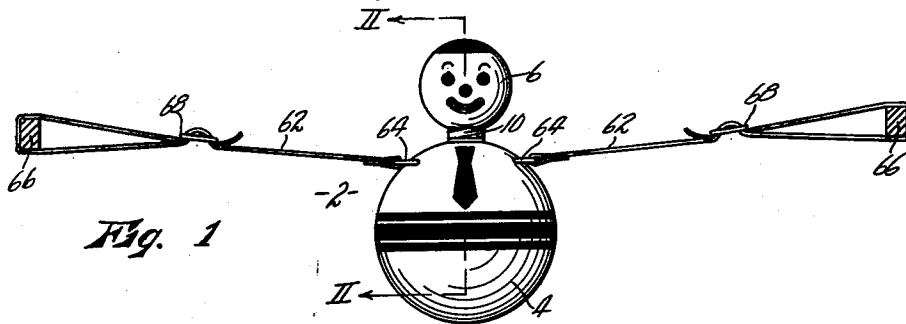


Fig. 1

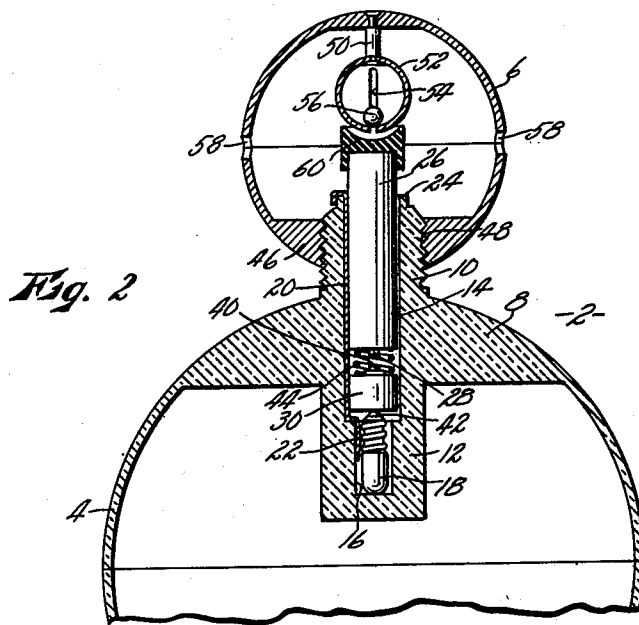


Fig. 2

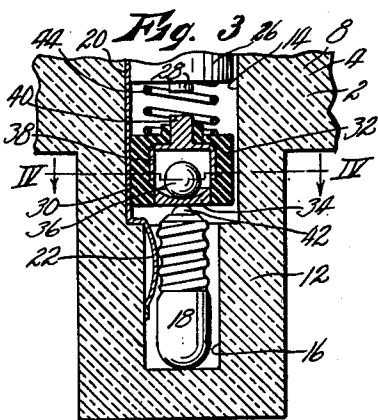


Fig. 3

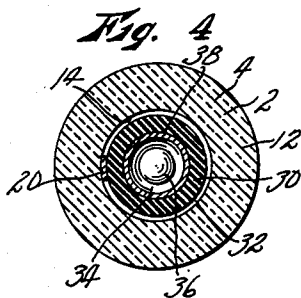


Fig. 4

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SOUNDING AND ILLUMINATED FIGURED
INFANT'S TOY

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This invention relates to new and useful improvements in infants' toys, and has as its principal object the provision of a toy adapted to be suspended in an infant's crib or the like and adapted when agitated to sound either an audible signal such as the tinkling of a bell, or to emit a visible signal such as the flashing of a light, and means for selectively setting either of said signals in operation. The audible signal is intended for use in the daytime, and the visible signal for use at night when a noisy toy would distract the infant and keep him awake, and annoy others who might be sleeping nearby.

Another important object is the provision in a toy of the character described having audible and visible signal generating means, of a single operating means whereby as one signal generating means is actuated the other signal generating means is automatically deactuated.

Other objects are simplicity and economy of construction, dependability, durability, and adaptability for general use as a toy.

With these objects in view, as well as other objects which will appear in the course of the specification, reference will be had to the drawing, wherein:

Fig. 1 is an elevational view of an infant's toy embodying the present invention, shown suspended in its operative position.

Fig. 2 is an enlarged fragmentary section taken on line II—II of Fig. 1, with certain parts, including the electrical tilt switch, left in elevation.

Fig. 3 is an enlarged fragmentary view similar to Fig. 2, showing details of the electrical tilt switch.

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

Like reference numerals apply to similar parts throughout the several views and the numeral 2 applies to a housing having generally the form of a doll, with a spherical body portion 4 and a smaller spherical head portion 6. The body portion 4 may be made of any suitable material which is transparent or translucent and which has electrical insulating properties. Plastic is preferred. Said body portion has the form of a hollow sphere, with a thickened portion 8 at the top thereof. An integral cylindrical neck 10 extends upwardly from the body member, and an extension 12 extends downwardly from thickened portion 8 into the interior of the body member. Extension 12 is coaxial with neck 10. Neck 10 is externally threaded, and a bore 14 extends axially through neck 10 from the upper end

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thereof. Said bore extends downwardly into extension 12, and is provided at its lower end with a portion 16 of reduced diameter, in which is placed a small electric lamp 18 with its base up.

A thin metallic conductor strip 20 extends along one side of bore 14, being bowed inwardly adjacent its lower end as at 22 for resiliently engaging the threaded base of lamp 18, and having its upper end over a lip 24 formed at the upper end of neck 10.

Lamp 18 is operated by a dry cell 26 which is carried slidably in bore 14 with its central or positive terminal 28 at the lower end thereof. Interposed between dry cell 26 and lamp 18 is a tilt switch 30 shown in detail in Figs. 3 and 4. It comprises a substantially cylindrical hollow housing 32 made of insulating material, a metallic contact plate 34 fitted in the lower end of said housing and having a concave upper surface, a spherical metallic ball 36 carried within said housing and supported on said concave surface, an inverted metallic cup 38 forming the side and top interior walls of said housing and spaced apart from plate 34 and a contact member 40 attached to cup 38 and extending through the upper end of said housing. Said switch is adapted to be inserted in bore 14, plate 34 thereof contacting the center terminal 42 of lamp 18. Dry cell 26 is urged upwardly to maintain terminal 28 thereof out of contact with contact 40 of the tilt switch by a spring 44 sufficiently strong to overcome the weight of the dry cell. Contact strip 20 rests in sliding contact with the housing of dry cell 26, said housing forming the negative terminal of the cell. The paper casing in which such dry cells are usually furnished is removed for use in this toy. Dry cell 26 extends above the upper end of neck 10.

Head portion 6 of the toy is of hollow spherical form, with a thickened portion 46 at the bottom thereof. An internally threaded bore 48 is formed through said thickened portion for screw engagement with neck 10 of the body portion, whereby said head and body portions may be moved relatively closer or farther apart. Fixed in head portion 6 by means of rivet 50 is a bell 52. Said bell is disposed in axial alignment with bore 14 of the body portion, and comprises essentially a hollow metallic sphere slitted diametrically at 54 and having one or more metallic balls 56 carried therein. Holes 58 are formed in head 6 for the escape of the sound of the bell.

Fitted over the upper end of dry cell 26 is a cap 60 made of soft rubber or other similar material. The upper surface of said cap is con-

cave to conform to the curvature of bell 52, and said bell may be moved to and from contact with said cap by moving head 6 along neck 10.

The toy is suspended by a pair of straps 62 extending oppositely therefrom. Said straps are secured at one end to brackets 64 molded in the thickened top 8 of body 6, and at their opposite ends to any suitable support such as side rails 66 of an infant's crib, whereby the toy will be suspended within easy reach of the infant's hands and feet. Each strap is provided with a buckle 68 whereby its effective length may be adjusted. Brackets 64 are disposed at the top of the body 4 in order that the toy when suspended will normally assume a position with its axis substantially vertical.

The operation of the toy is substantially as follows. The operating circuit for lamp 18 is positive terminal 28 of dry cell 26 through contact 40 of switch 30, cup 38, ball 36 (when the toy is tilted or agitated), plate 34, lamp 18, and contact strip 20 to the negative terminal or housing of dry cell 26. When head 6 is advanced upwardly on neck 10, bell 52 is moved out of contact with pad 60 and spring 44 urges dry cell terminal 28 away from tilt switch terminal 40, thereby breaking the lamp circuit. When the toy is tilted or agitated by the infant, ball 36 will be shaken about in bell 52 to cause a pleasant ringing sound. When head 6 is screwed downwardly on neck 10 toward body 4, bell 52 comes into contact with pad 60, which effectively deadens said bell. As said head is moved downwardly still farther, bell 52 forces dry cell 26 downwardly against spring 44 till terminal 28 thereof touches contact 40 of the tilt switch, thereby completing the lamp circuit except for the tilt switch. Then when the toy is tilted or agitated by the infant, ball 36 will be caused to roll toward the edges of concave plate 34 and to touch cup 38. When said ball touches said plate and cup simultaneously, the lamp circuit is complete and the lamp will burn. The lamp will light only intermittently however, since it constantly seeks a vertical position wherein ball 36 will roll to the center of plate 34 and away from cup 38.

Thus it is apparent that I have invented a toy having certain advantages. It provides, in a toy having both audible and visible signalling means, a single operating means whereby either signalling means may be actuated selectively, and the other deactuated, or whereby both signalling means may be deactuated. It interrelates the two signalling means as described even though one is mechanical and the other electrical. The toy is very simple in construction, all working parts are easily made accessible for repair or replacement simply by separating the head and body portions.

While I have shown a specific embodiment of my invention, it is apparent that many minor changes of construction and operation could be made without departing from the spirit of the invention.

What I claim as new and desire to protect by Letters Patent is:

1. A toy comprising a housing adapted to be suspended, an electrical circuit including a lamp carried in said housing, a manually operable switch disposed in said circuit, means for manually operating said switch, a tilt responsive switch disposed in said circuit, mechanical noise making

means carried in said housing and adapted to be actuated by manual agitation of said housing, and means for securing said noise making means against operation, said securing means and said switch operating means being mechanically interrelated in such a manner that said lamp and said noise making means cannot function simultaneously.

2. A toy comprising a housing adapted to be suspended in a freely hanging position, an electric apparatus carried in said housing and forming an operative circuit including a lamp and source of electric power, a tilt responsive switch disposed in said circuit, a manually operable switch disposed in said circuit, means urging said manually operable switch open, a manually movable operating member for closing said manually operable switch, and a bell carried in said housing and adapted to be operated by manual agitation of said housing, said bell having manually movable relative to said manual switch to engage said switch operating means to close said switch, whereby said switch operating member dampens said bell.

3. A toy comprising a housing adapted to be suspended in a freely hanging position, an electric apparatus carried in said housing and forming an operative circuit including a lamp and source of electric power, a tilt responsive switch disposed in said circuit, a manually operable switch disposed in said circuit, means urging said manually operable switch open, a manually movable operating member for closing said manually operable switch, a bell damper member carried on said switch operating member, and a bell carried in said housing and adapted to be operated by manual agitation of said housing, said bell being manually movable to engage said damper whereby said switch operating member is caused to close said switch, and whereby said bell is damped.

4. A toy comprising a housing adapted to be suspended in a freely hanging position, said housing having head and body portions threadably joined whereby the distance between centers thereof may be adjusted, an electric circuit carried in said body and including a lamp, a tilt responsive switch disposed in said circuit, a manual switch disposed in said circuit, a member carried movably by said body member for operating said manual switch, means normally urging said switch operating member to its open position, a bell carried by said head and adapted to be operated by manual agitation of said housing, and a bell damping member carried by said switch operating member, whereby as said head and body are relatively moved said bell will be moved to and from operative contact with said damping member, whereby said switch operating member is caused to open or close said manual switch.

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