

Jan. 8, 1946.

L. Z. PLEBANEK

2,392,547

TOY

Filed Dec. 8, 1943

Fig. 1.

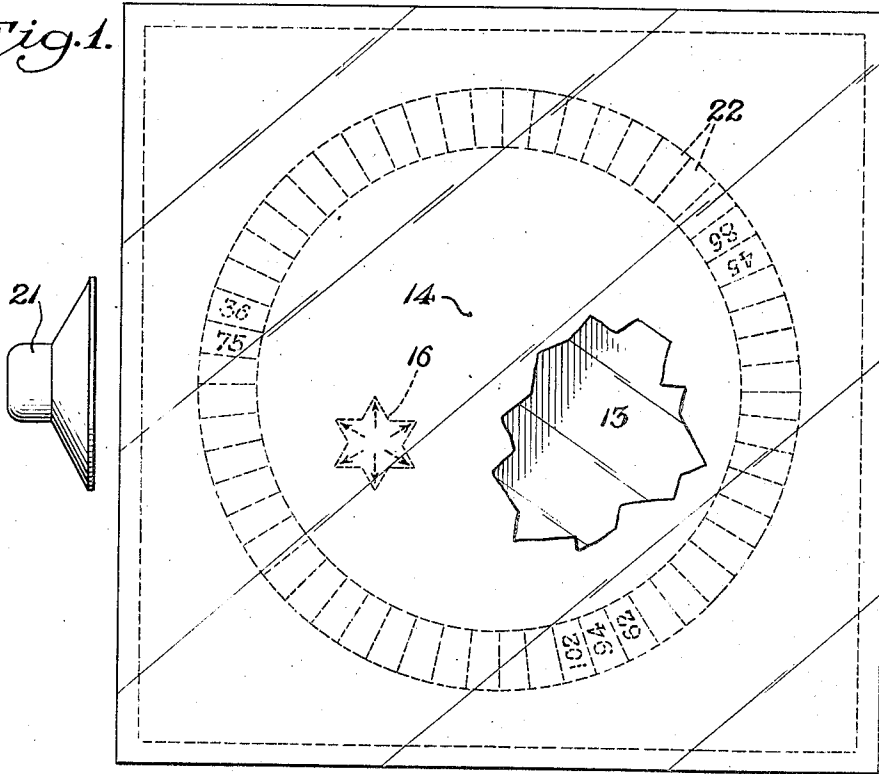


Fig. 2.

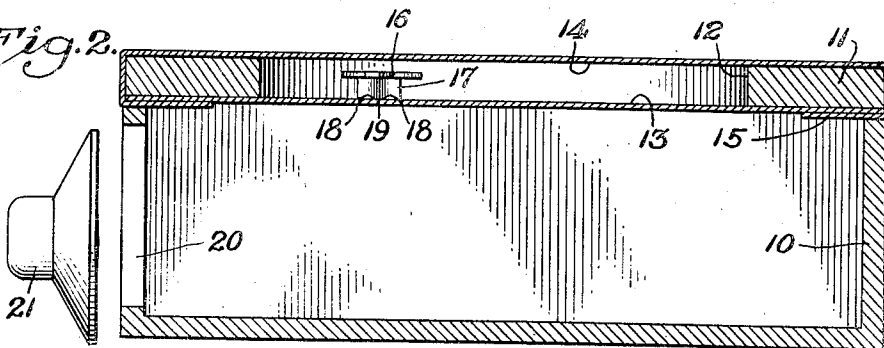


Fig. 3.

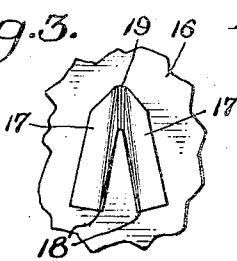


Fig. 4.

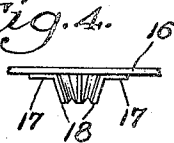
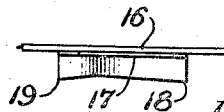


Fig. 5.



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UNITED STATES PATENT OFFICE

2,392,547

TOY

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Application December 8, 1943, Serial No. 513,648

7 Claims. (Cl. 273-138)

This invention relates to a toy and concerns itself with a structure wherein a movable index or pointer is actuated in an attractive and interesting manner by means of sound waves. In the present instance, the toy is shown constructed and arranged to be actuated by sound waves emitted by a radio loud speaker.

The invention comprises the novel structure and combinations of parts hereinafter described and more particularly pointed out and defined in the appended claims.

In the accompanying drawing which illustrates a preferred form of this invention and in which similar reference numerals refer to similar features in the different views:

Fig. 1 is a top plan view of an apparatus embodying this invention.

Fig. 2 is a vertical transverse section of the same.

Fig. 3 is an enlarged partial bottom plan view of the movable index.

Fig. 4 is a transverse section taken thru the index.

Fig. 5 is a side view of the index.

The embodiment of the invention illustrated in the drawing comprises a box-like structure or enclosure 10 which may conveniently be made of wood, cardboard or the like. The enclosure 10 is provided with a cover member 11 which may be made conveniently of similar material and is provided as shown with a central circular opening or aperture 12. The lower end of the aperture 12 is closed by a transparent diaphragm 13 preferably of waterproof Cellophane or similar material stretched tightly across the underside of the cover member 11. An upper cover sheet 14 of the same material is stretched tightly across the cover member 11, the ends 15 being folded over the edges thereof and secured over the edges of the diaphragm 13 as indicated. A movable figure or index 16 which may be conveniently made of cardboard or other like material is arranged as indicated within the space between the diaphragm 13 and the cover sheet 14. The figure 16 is provided with a plurality of spaced point supports, three in the present instance, on the diaphragm 13 by means of stiff paper strips 17 pasted on the bottom of the figure 16 and having upturned flanges shaped as shown to provide three supports 18 and 19 resting upon the diaphragm as shown.

At one side of the enclosure 10, there is provided an opening 20 thru which sound air waves may be transmitted from any suitable source such as the radio loud speaker 21. The sound

air waves entering the enclosure 10 will cause vibration of the diaphragm 13.

The edge of the opening 12 is surrounded by radiating numbered spaces 22 as shown which may be termed indicating means with which the index 16 is adapted to cooperate scoring points.

When the device is desired to be used in connection with a radio loud speaker, it is positioned with the opening 20 opposite a loud speaker such as illustrated at 21 so that the radio sound waves emitted from the loud speaker will enter the enclosure 10 and cause vibration of the diaphragm 13. Vibration of the diaphragm will cause the index or figure 16 to travel about on the diaphragm 13 until one of its indicating points touches the edge of the opening 12 opposite one of the numbered spaces 22 and the numbers thus indicated by chance may be utilized as scoring points or for other purposes as may be desired. Obviously, the movable figure may be provided with various ornamental designs and configurations and the device may be utilized simply through movements of such an ornamental figure in various ways.

It will be appreciated that the device is susceptible of affording splendid amusement to a person or persons while listening to a radio especially since it requires no attendant or operator; it operates automatically thru the air wave influence of the radio.

While I have illustrated and described the preferred form of construction for carrying the invention into effect, this is capable of modification and variation without departing from the spirit of this invention. I therefore do not propose to limit the patent granted thereon otherwise than necessitated by the prior art and appended claims.

I claim as my invention:

1. A device of the class described comprising a horizontally arranged flat vibratory diaphragm, a transparent cover for said diaphragm arranged in spaced relation thereto, a movable figure in the enclosed space above said diaphragm and loosely supported thereon, and means for directly subjecting said diaphragm to the action of sound air waves.

2. A device of the class described comprising a horizontally arranged flat vibratory diaphragm a wall surrounding the same, a transparent cover for said diaphragm arranged in spaced relation thereto on said wall, a movable figure in the enclosed space above said diaphragm and loosely supported thereon and a radio loud speaker ar-

ranged to directly subject said diaphragm to the action of sound air waves.

3. A device of the class described comprising a horizontally arranged flat vibratory diaphragm, a movable figure having a plurality of spaced points of support on said diaphragm, and means for directly subjecting said diaphragm to the action of air waves.

4. A device of the class described comprising a box-like enclosure, a cover for said closure provided with a central opening, a vibratory diaphragm secured to the underside of said cover and stretched across the lower side of said opening, a transparent cover member extending across the top of said cover member and enclosing a space above said diaphragm, a movable figure arranged in said space and having a three point support on said diaphragm and means for introducing sound air waves into said enclosure.

5. In a device of the class described, indicating means, a movable index for co-operating with said means, a vibratory diaphragm for supporting said index and means directly for transmitting sound

air waves against said diaphragm for causing movement of said index.

6. In a device of the class described, means defining an enclosed box-like chamber having an auxiliary chamber, a vibratory member forming the bottom of said auxiliary chamber, a movable member on said vibratory member, said device having an opening and means for directly transmitting sound air waves thru said opening into said box-like chamber for vibrating said vibratory member and causing movement of said movable member.

7. In a device of the class described, a hollow structure defining a chamber having a surrounding wall with an opening adapted for receiving sound air waves, a flat vibratory diaphragm extending across the upper part of said chamber and adapted to be directly vibrated by said sound air waves and a movable object upon said diaphragm adapted for traveling movements thereon.

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