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TOY STETHOSCOPE

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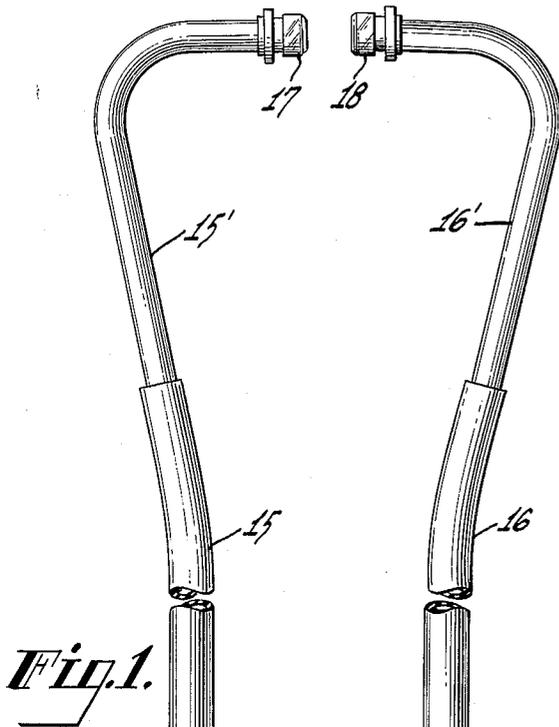


Fig. 1.

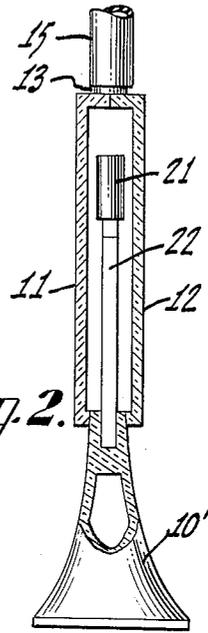


Fig. 2.

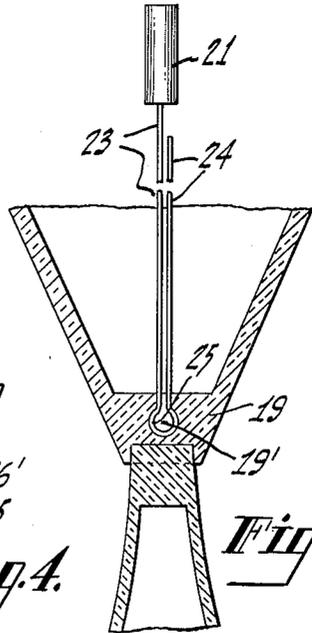
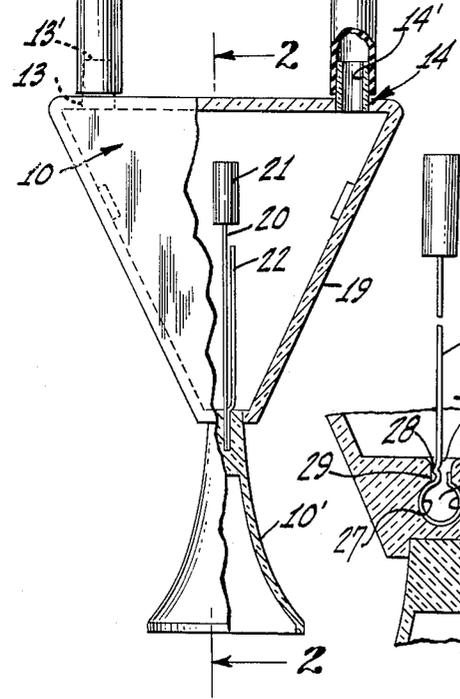


Fig. 3.

Fig. 4.

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TOY STETHOSCOPE

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6 Claims. (Cl. 46—175)

My invention relates to a toy, more particularly to a toy stethoscope capable of producing a ticking or thumping sound to simulate a heart beat.

Various efforts have been made to simulate various human activities and sounds in connection with dolls and the like, such as animated animal toys. These devices have in many cases been complicated and required spring actuated mechanisms. This of course complicated structure and increased the cost of the toy. The introduction of sound-producing devices into toys which are already in existence is of course in most cases impossible. Realistic sounds such as heart beats which are of a thumping nature have not heretofore been realized.

It is therefore an object of my invention to provide a toy stethoscope of simple construction and capable of producing sound realistically simulating the heart beats.

It is also an object of my invention to provide such a device which eliminates the need for spring motors or complicated mechanical parts for simulating or producing sound.

A further object of my invention is to provide such a toy which may be utilized with all types of figures, whether dolls or otherwise not previously provided with sound producing devices.

A further object of my invention is to provide a device which will reflect the produced sound and guide it primarily along desired elements to increase the sound effect at the desired termination.

More specifically, an object of my invention is to provide a toy stethoscope in which the sound produced by the sound-producing elements is focused and concentrated in the tubular members of the toy and terminating in the ear pieces.

Other objects of the invention will appear in the following description with reference to the drawing, in which:

Fig. 1 is a plan view partially in section of a toy stethoscope incorporating my invention;

Fig. 2 is a longitudinal section along the line 2—2 of Fig. 1;

Fig. 3 is a partial longitudinal section showing a modification of the sound-producing structure used in the form of my invention shown in Figs. 1 and 2; and

Fig. 4 is a partial longitudinal section showing a further modification of improved form and incorporating my invention.

Referring to the drawings, the toy stethoscope is provided with a generally triangular-shaped hollow body member 10 having at one end the simulated pick-up cone 10' and having attached thereto the tubular members 15, 16 which can be made of plastic, rubber or like material to produce flexibility. At their ends are attached the curved, ridged tubular members 15', 16' terminating in ear pieces 17 and 18. The body portion may be made of two molded parts cemented together.

Within the hollow body member 10 is an elongated spring element 20 having one end fixed, for example, to the cone 10' mounted at the end of the body member of smallest transverse section. A weight 21 is mounted

at the other end of element 20 to maintain the spring element 20 oscillating when set into motion, the energy stored within the weight being transferred back and forth between the weight and the spring until internal stresses and losses cause the element to stop vibrating.

Mounted adjacent to the spring element 20 an slightly spaced therefrom is a second spring element 22 of shorter length. As the spring 20 oscillates or vibrates back and forth it periodically strikes the end of member 22 producing a clicking or ticking noise.

The hollow body member is provided with a pair of openings 13 and 14 in which are mounted the tubular members 14' and 13' to which are attached the flexible tubular members 15 and 16.

The sound produced by the sound-producing element 20, 22 is concentrated and focused in the manner of a megaphone into the apertures 13 and 14, the sound thus being magnified by preventing dispersion and traveling along tubular elements 15, 16 to the ear pieces 17 and 18.

In use, the ear pieces are positioned within the ears of the user and motion produced by placing the pick-up cone against the toy figure causes the vibrating element 22 to go into oscillation producing sound so that it stimulates the sound heard when a stethoscope is applied to a living creature.

A modified form of the sound producing mechanism is shown in Fig. 3. The housing may be enlarged at 19 and provided with a recess or cavity 19' which receives the rounded portion 25 of the member having the two separate spring arms 23 and 24, the weight 21 being placed at the free end of the longer arm 23. The operation is otherwise identical to that of the structure shown in Fig. 1.

While the forms shown in Figs. 1 and 3 produce the desired effects, I have found that the sound of a thumping heart can be more realistically produced by the modification shown in Fig. 4.

In this form the casing 25 may be provided with a cavity 25' in the form of a cylindrical chamber having a throat 30 opening into the interior of the body member 25.

The spring member 26 terminates in a loop 26'. Adjacent the loop is a dimple or small bend 28 which contacts the wall of the throat at 29. In this form the spring 26 does not contact the other side of the loop. The dimple 28 moves away from and toward wall 29 as the spring oscillates. I have found that this causes a thumping sound and more nearly simulates the sound of a heart beat.

The length of the spring and the weight can be adjusted so that the period of oscillation can be varied, and thus the frequency of the sound.

What I claim is:

1. A toy stethoscope comprising a hollow body member increasing in cross-section from one portion to another, a sound-producing mechanism mounted within said hollow body member and comprising an elongated spring member fixed at one end to the hollow body member at its portion of smaller cross-section, a weight mounted at the free end of said spring member, and an element adjacent the spring member to be contacted thereby to produce a sound, said hollow body member having a plurality of openings in the portion of larger cross-section and a plurality of tubular members fixed to said hollow body member and communicating with said openings.

2. A toy stethoscope comprising a hollow body member, a sound-producing device mounted therein comprising an elongated spring element within said body member, said hollow body member being provided with a cavity, said spring terminating in a portion formed to fit into said cavity, said portion being fixed in said cavity, said spring element being weighted at the free end, said cavity being formed so that a wall portion thereof is periodically con-

tacted by said spring element for producing a sound when said spring element is vibrated, said body member having at least one opening and a tubular member having one end fixed to said hollow body member and communicating with said opening whereby sound travels from said hollow body member through said opening and said tubular member.

3. A toy stethoscope comprising a hollow body member increasing in cross-section from one portion to another, a sound-producing mechanism mounted within said hollow body member and comprising an elongated spring member having a portion fixed to the body member and having a free end, a weight mounted at the free end of said spring member, said body member having a cavity therein adjacent the portion of smaller cross-section, the portion of said spring fixed to said body member having a shape fitting into and being received within said cavity, said cavity having a throat communicating with the interior of said hollow body member, the wall of said throat being periodically contacted by said spring member to produce a sound when said spring member is oscillated, said hollow body member having a plurality of openings in the portion of larger cross-section and a plurality of tubular members fixed to said hollow body member and communicating with said openings.

4. A toy stethoscope comprising a hollow body member, a sound-producing device mounted therein and comprising an elongated spring element within said body member and having a portion fixed to said body member and a weighted end free to oscillate, said body member having a cavity therein, said cavity having a restricted throat communicating with the interior of said hollow body member, the portion of said spring element fixed to said body member being received within said cavity and extending through said throat into the interior of said hollow body member, said spring element being so formed as to contact the wall of said throat periodically for producing a sound when said spring element is vibrated, said body member having at least one opening and a tubular member having one end fixed to said hollow body member and communicating with said opening whereby sound travels from said hollow body member through said tubular member.

5. A toy stethoscope comprising a hollow body member increasing in cross-section from one portion to another,

a sound producing mechanism mounted within said hollow body member and comprising an elongated spring member fixed at one end to the hollow member at its portion of smaller cross-section, a weight mounted at the free end of said member, and a second spring member of shorter length and adjacent the elongated spring member to be contacted thereby to produce a sound, said hollow body member having a plurality of openings in the portion of larger cross-section and a plurality of tubular members fixed to said hollow body member and communicating with said openings whereby sound is concentrated by the interior of said hollow body member and directed into said openings and said tubular members.

6. A toy stethoscope comprising a hollow body member increasing in cross-section from one portion to another, a sound-producing mechanism mounted within said hollow body member and comprising an elongated spring member having a portion fixed to the hollow member at its portion of smaller cross-section, a weight mounted at the free end of said spring member, said hollow body member having a cavity provided with a throat communicating with the interior of said hollow body member, the portion of said spring fixed to said hollow body member being received within said cavity and extending through said throat into the interior of said hollow body member, said elongated spring member being provided with a deformation which periodically contacts the wall of said throat when said spring is oscillated to produce a sound, said hollow body member having a plurality of openings in the portion of larger cross-section and a plurality of tubular members fixed to said hollow body member and communicating with said openings.

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