May 31, 1960 S. FREIMAUER 2,938,301

REED SOUNDING UNIT

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Fig. 1

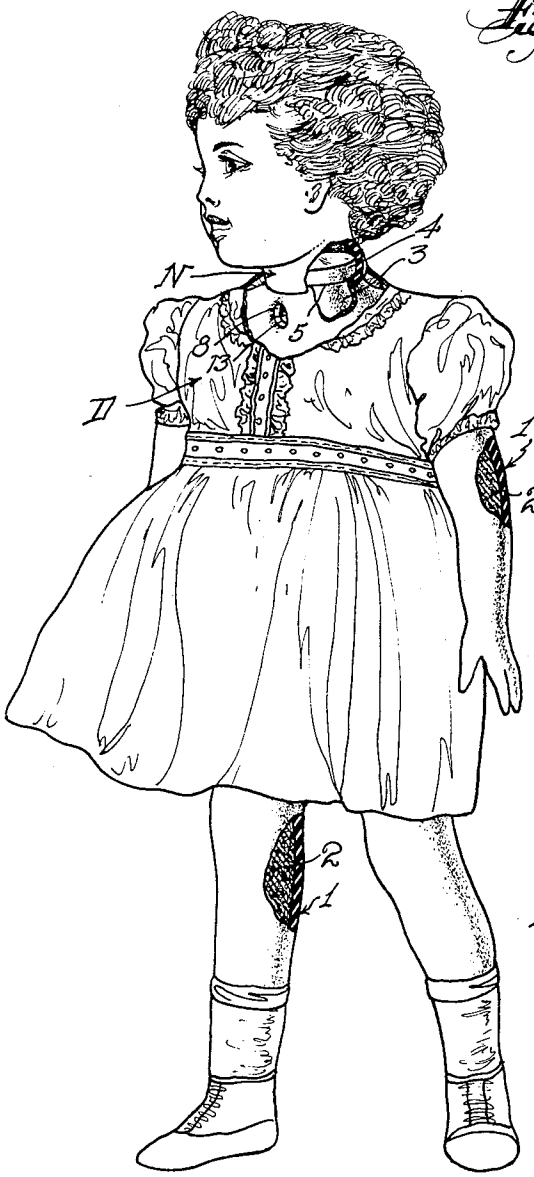
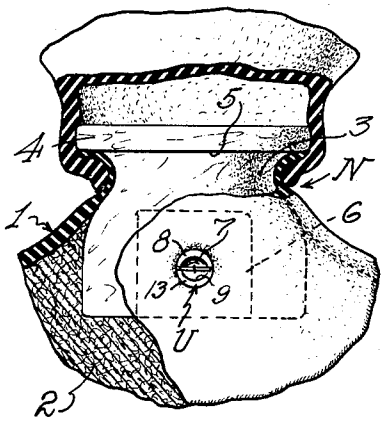


Fig. 2



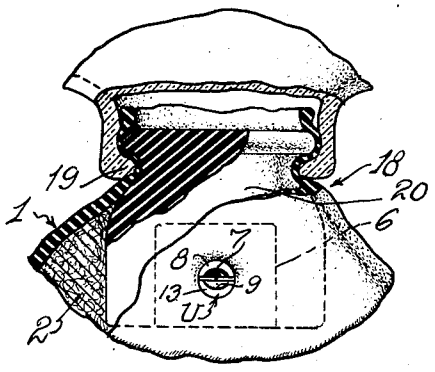


Fig. 3

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REED SOUNDING UNIT

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Fig. 4

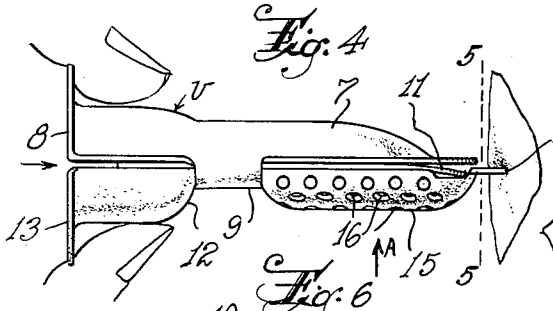


Fig. 5

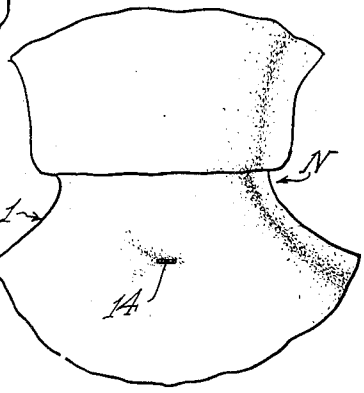


Fig. 6

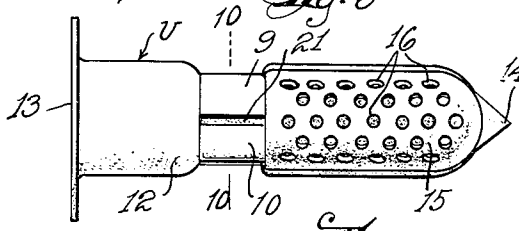


Fig. 7

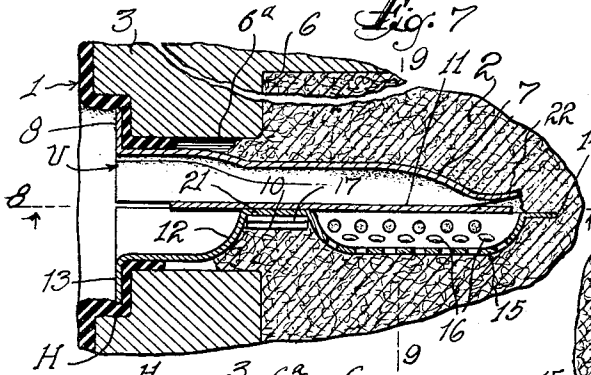


Fig. 9

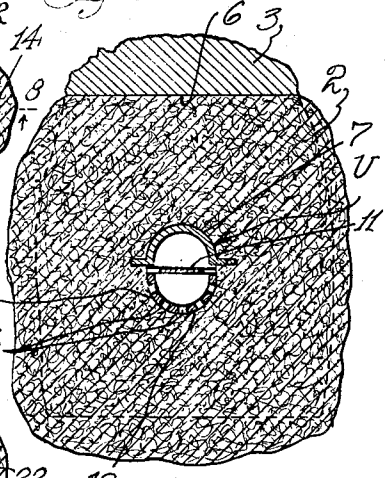


Fig. 8

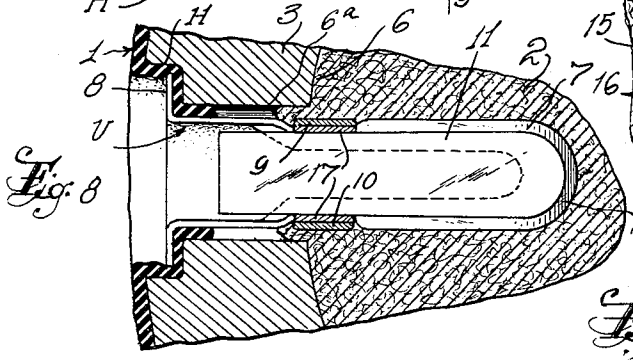


Fig. 10

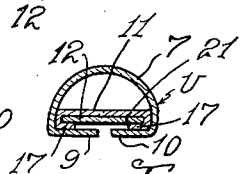
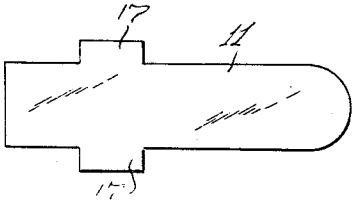


Fig. 11



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REED SOUNDING UNIT

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4 Claims. (Cl. 46—117)

This invention relates to a new form of a reed unit and a means for mounting it in the so called "voice dolls." The principal object of my invention is to provide a new voice making unit especially adapted for use in a "voice doll" but not limited thereto, which unit is cheaper to manufacture and much easier to assemble on a doll and one that is more efficient in its operation.

Other ancillary objects will appear from the description which follows taken in connection with the annexed drawings wherein Figure 1 is a view of a doll with my invention installed therein.

Figure 2 is a view on an enlarged scale of the head part of the doll shown in Figure 1 at the neck portion.

Figure 3 is a view similar to Figure 2 but of a slightly modified form of construction.

Figure 4 shows, on a much enlarged scale, my new voice or sound making unit being installed in a fragmentary portion of the doll.

Figure 5 is a view on the line 5—5 of Figure 4 but showing a larger portion of the doll.

Figure 6 is a view of the unit shown in Figure 4 looking in the direction of the arrow A.

Figure 7 is a sectional view showing the reed unit fully installed as in Figure 1 with some of the doll body filling around the inner end of the unit.

Figure 8 is a view on the line 8—8 of Figure 7.

Figure 9 is a view on the line 9—9 of Figure 7.

Figure 10 is a section on the line 10—10 of Figure 6.

Figure 11 is a plan view of the reed used in the sound unit.

In the various views wherein like numbers referring to the corresponding parts, D is a picture of the doll to which the invention is applicable, the framework or casing of which, is made of some flexible material such as rubber, at least the arms, body and legs of the doll being filled with some soft flexible material 2 which readily responds to pressure applied to the casing. In the neck portion N of the doll is a support member 3 of rigid material such as wood or equivalent, having a circular flange 4 forming a locking surface 5 whereby the flexible material 2 forming the neck of the doll will be forced over the flange 4 into the surface 5 and hold the doll's head in secure position and at the same time locate the position of the support 3. The support 3 has an interior cavity 6, preferably circular to form an air chamber to receive the reed unit U. A small hole 6a at right angles to the longitudinal axis of the cavity 6 is provided to receive the reed unit. The outer end of this hole has a counter bore or recess H to receive the flanges 8 and 13 of the reed unit as shown in Figures 1, 2, 3, 7 and 8.

The unit U has a part 7 with a semi-circular flange 8 at one end, also it has inturned lugs 9 and 10 which serve to engage the lugs 17 on the reed 11 and hold the reed member 11 securely in place on a raised portion 21 on member 12 which also has a semi-circular flange 13 at one end to form in effect a circular flange with the semi-circular flange 8. The member 12 has a sharp pointed

end 14 for the purpose to be later described. The member 12 has its semi-circular forward part 15 provided with a plurality of small perforations 16 to allow air to pass through but not to allow any of the packing material 2 to pass through to interfere with the movement of reed 11 which has, as stated, oppositely disposed lugs 17 to hold it in position between the parts 7 and 12. It will be noted that the reed 11 is normally straight while the inner end 22 of part 7 is slightly bent away from the reed 11 to allow air to pass by the reed but the bend 22 is not enough to allow the packing 2 to pass although in time some of it may find its way into the cavity 6 as shown in Figures 7, 8 and 9.

In prior art construction of reed units for the doll works, an eyelet had to be provided to support a reed construction, the eyelet having a flange to fit into the recess H. To assemble the old style reed in the hole 6a, the rubber 1 had to be punctured by a separate tool in order to insert the reed structure into the hole 6a going into the cavity 6. Also the entrance to the cavity end of the support member 3 had to be covered with a cloth type screen in order to prevent the flexible material 2 from getting into the cavity and stopping the reed from vibrating when pressure was applied to the frame work 1. In our construction the reed unit shown in Figures 4 and 6 can by pressure, applied to the flange portions 8 and 13, force the sharp point 14 through the rubber over the hole 6a as shown in Figures 5, 7 and 8 into the cavity up to the point where the flange sections 8 and 13 enter the recess made for them in the support member 3. From this it will be seen that the time of assembly of the unit in the doll is materially reduced and the whole structure much simplified.

In the modified form shown in Figure 3, the doll's neck portion 18 may be of non-flexible material with an internal flange 19, while the support member 20 in this form may have some flexibility to allow the flange 19 to pass over and around rim 21.

The doll's head may be made of any suitable material, either solid or hollow like the body, legs and arms and filled with the compressible material as described if desired, also the support 3 can be installed when the doll is made as the reed unit can be installed later as described.

Having thus described my invention what I claim is:

1. A reed unit for forcible insertion into a desired structure such as a toy body, said unit being composed of two interlocking parts formed so as to provide an air channel between them, a reed securely held between said parts and extending longitudinally in the channel at the junction of said parts, both of said parts terminating at one end in half-annular flanges forming together a circular flange with a relatively broad surface adapted to be strongly pressed, one of said parts extending at its free end beyond the free end of the other part and the reed, and terminating in a sharp point whereby sufficient pressure applied to the circular flange will drive the sharp point through the body of the toy.

2. A reed unit as set forth in claim 1 further defined in that said unit has one of its parts provided with a plurality of small holes therein for the purpose described.

3. A reed unit as set forth in claim 1 further defined in that the part having the sharp point also has a plurality of small holes therein for the purpose described.

4. A reed unit for forcible insertion into a desired structure such as a toy body, said unit being composed of at least two interlocking parts formed so as to provide an air channel between them, a reed securely held between said parts and extending longitudinally in the channel at the junction of said parts, said unit having a flange at one end which is adapted to be strongly operated on for assembly of the unit into a structure adapted

to receive it, one of said parts extending at its free end beyond the free end of the other part and the reed, and terminating in a sharp point whereby sufficient force applied to said flange will drive the sharp point through the body of the structure adapted to receive it.

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