March 15, 1932. A. YURKOVITCH 1,849,415

PNEUMATIC SOUNDING DEVICE

Filed Aug. 11, 1931 2 Sheets-Sheet 1

Fig. 1.

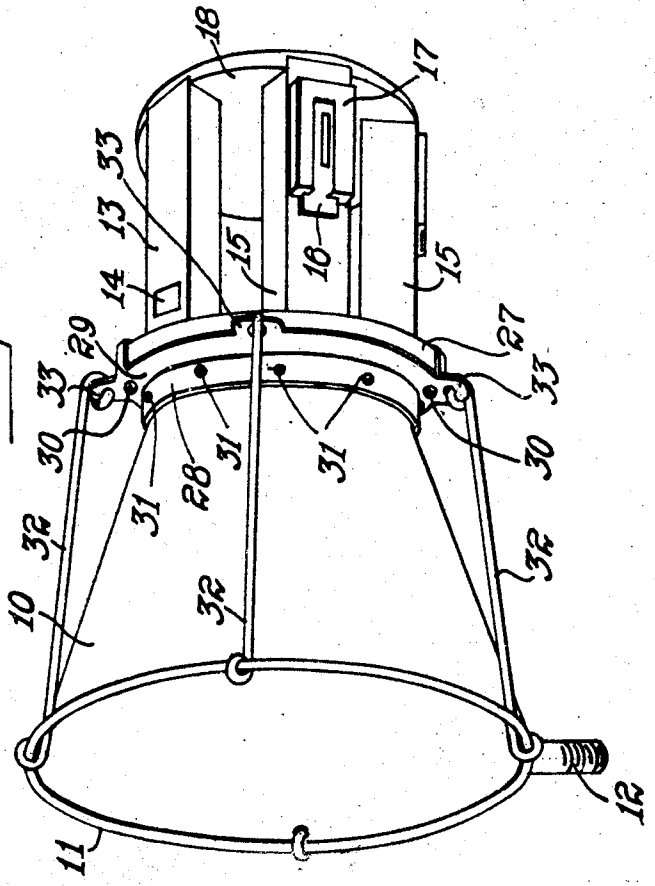
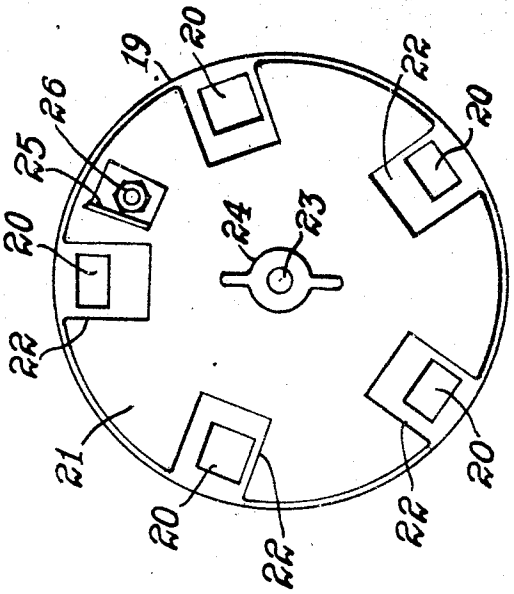


Fig. 2.



INVENTOR

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His Attorneys

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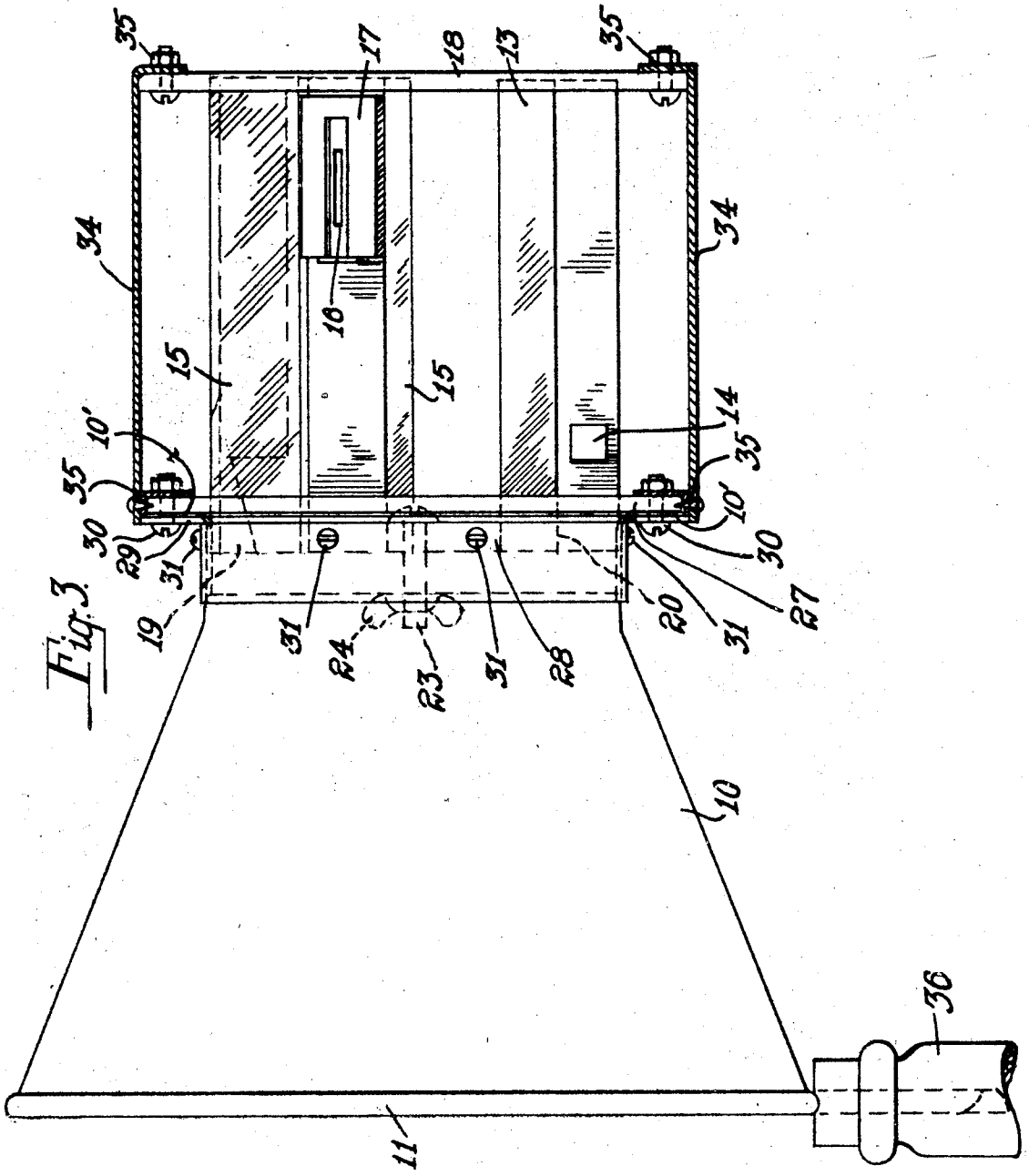

Fig. 3

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UNITED STATES PATENT OFFICE

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PNEUMATIC SOUNDING DEVICE

Application filed August 11, 1931. Serial No. 556,394.

This invention relates to a device adapted to sound musical notes by means of air pressure and particularly to a device which may be attached to the radiator cap of an automobile or which may be used as a toy.

One of the objects of the present invention is to provide a simple, sturdy and attractive device which will receive air and distribute it to note sounding elements.

Another object is the provision of a simple device adapted to be attached where it will receive currents of air so that the air will be distributed to sounding devices.

A further object is to provide a device of the type indicated in which the musical notes can be varied.

A still further object is the provision of a toy which will provide amusement and instruction and which at the same time is inexpensive to make and harmless to use.

Other and further objects and advantages will either be pointed out hereinafter or will be understood from the following specification.

In the accompanying drawings:—

Figure 1 is a perspective view of a device embodying the present invention.

Fig. 2 is a detail of the means for varying the musical notes and

Fig. 3 is a longitudinal cross section with a casing member applied thereto.

Similar numerals designate corresponding parts throughout the various views.

The device consists of a wind or air receiving member 10 which may be made of any suitable material and for example, may be a flexible material such as parchment, oilskin, textile fabric, rubber or the like or if desired, may be relatively stiff material. As will be seen from the drawings, the member 10 is substantially of frusto-conical shape and a metallic ring or rim 11 is suitably fastened to the forward edge of the material, as shown. The other end of the frusto-conical member is secured to the sounding elements as will be explained hereinafter. A suitable connecting member such as a screw or bolt 12 is connected suitably to the ring member 11 for suitable attachment as to an automobile radiator cap for example, and it may be so mounted as to turn if so desired, that is, it may be swivelly mounted.

The wind collecting frusto-conical member directs the collected air to the sounding members which may be of any suitable kind and disposition and as shown are reed and whistle members alternately arranged. These sounding members are, of course, hollow and the whistle members 13 have a suitable whistle opening 14 near the forward end thereof, whereas the reed members 15 have the sounding reeds 16 mounted in receivers 17 near the rearward end of the hollow columns or members on which they are mounted. The rearward end of the sounding members is closed by the plate or disk member 18 and the sounding elements may be suitably secured thereto as by cutting out the material thereof or by welding, gluing, riveting, etc., depending upon the particular materials involved, which may be in a given case stamped out of metal or which if preferred, may be of wood. Opposite the plate member 18 and at the forward ends of the sounding members is another disk 19 provided with holes or cut-out portions 20 to receive the ends of the sounding members 13 and 15 in flush disposition. Superposed upon said last named disk is the member 21 having cut-outs 22 registering with the holes in the ends of the sounding members, but this latter disk may be varied as to its position so that the ends of the sounding members may be more or less exposed to the wind directed thereinto by the frusto-conical receiving and directing member. The adjustment of this disk may be secured, for example, by means of the screw 23 and wing nut 24 upon loosening of which the member 21 may be rotated. A handle member 25 is secured at 26 to the disk 21 to assist in obtaining the desired rotated position. When set in a proper position, the wing nut is again tightened and the members held in adjusted position thereby.

A ring member 27 is secured as shown near the forward ends of the sounding members to a collar member 28 which has a flange 29 abutting said ring member. The flange and ring may be suitably secured together as by screws or bolts 30. The flange portion of the

collar member is secured as at 31 to the disk member 19, the flexible material of the frusto-conical member being previously inserted beneath said collar and extending between the flange and ring as is clearly shown at 10′ in Fig. 3. Where the material of the frusto-conical member is comparatively flexible or non-rigid, stiffening rods or bolts 32 may be provided which at one end are bent around the ring member 11 and at the other end are bent into the perforated ears 33 of the flange of the collar member.

In Fig. 3, the construction is the same as that already described, except that a cylindrical casing 34 is fastened at points 35 around the disk members 18, 19 so that when it is used as a toy and swung around on a string or stick, for example, the sounding members will be protected.

From the foregoing, it will be understood that the device shown in Figs. 1 and 2 is adapted to be attached to the radiator cap of an automobile and the forward motion of the automobile causes air to enter the frusto-conical receiving member and to be guided and directed to the sounding members. The pressure of the air is ample to operate said sounding members and the sounds emitted may be varied by varying the plate 21, as above explained. In Fig. 3, the slightly different embodiment is adapted to be held by a handle 36 or may be attached to a cord which is attached to said handle and swung about in the air with the same effect as in the other modification. In either case, the sounding members are so chosen and/or regulated that a series of pleasing sounds are emitted.

It is understood that the above is intended as illustrative only and not in a limitative sense as the device may be varied considerably in appearance, proportion and arrangement, without, however, departing from the fundamental principles hereinabove explained. Any suitable materials may be used and any other sounding members may likewise be used so long as they are so selected and/or regulated that pleasing tones are emitted.

What I claim as new and desire to secure by Letters Patents is:—

1. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, and means for holding said member and elements in operative association, said wind-collecting member being frusto-conical in shape.

2. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, and means for holding said member and elements in operative association, said wind-collecting member being frusto-conical in shape and of rigid material.

3. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, and means for holding said member and elements in operative association, said wind-collecting member being frusto-conical in shape and flexible.

4. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, means for holding said member and elements in operative association, said wind-collecting member being frusto-conical in shape and flexible, and means for supporting the whole by said member.

5. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, and means for holding said member and elements in operative association, said wind-collecting member being frusto-conical in shape and flexible, stiffening bars maintaining it normally extended.

6. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, and means for holding said member and elements in operative association, said wind-collecting member being frusto-conical in shape and flexible stiffening bars maintaining it normally extended, said bars being connected around the member at spaced points.

7. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, means for holding said member and elements in operative association and means for varying the distribution of the wind to said sounding elements.

8. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, means for holding said member and elements in operative association, said wind-collecting member being frusto-conical in shape and flexible, and means for varying the distribution of the wind to said sounding elements.

9. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, means for holding said member and elements in operative association, said wind-collecting member being frusto-conical in shape and flexible, stiffening bars maintaining it normally extended and means for varying the distribution of the wind to said sounding elements.

10. A device of the kind described including a wind-collecting member, sounding elements to which said wind is distributed, means for holding said member and elements in operative association, said wind-collecting member being frusto-conical in shape and flexible, stiffening bars maintaining it normally extended, said bars being connected around the member at spaced points and means for varying the distribution of the wind to said sounding elements.

11. A pneumatic sounding device including an assemblage of spaced sounding elements, a wind collecting and directing member secured to said assemblage so that the collected wind is directed to said sounding elements, and means for maintaining said member in predetermined position, said sounding elements being hollow and their open ends being accessible to said wind.

12. A pneumatic sounding device including an assemblage of spaced sounding elements, a wind collecting and directing member secured to said assemblage so that the collected wind is directed to said sounding elements, and means for maintaining said member in predetermined position, additional means being provided for varying the amount of wind received by said sounding elements.

13. A pneumatic sounding device including an assemblage of spaced sounding elements, a wind collecting and directing member secured to said assemblage so that the collected wind is directed to said sounding elements, and means for maintaining said member in predetermined position, said sounding elements being hollow and their open ends being accessible to said wind, additional means being provided for varying the amount of wind received by said sounding elements.

In testimony whereof, I have hereunto subscribed my name this 8th day of August, 1931.

ANTON YURKOVITCH.