

[54] **WHISTLE DEVICE**

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[22] Filed: **Nov. 24, 1972**

[21] Appl. No.: **309,169**

[52] U.S. Cl. **116/137 R**, 46/179

[51] Int. Cl. **G10k 5/00**

[58] Field of Search 116/137, 142, 67, 112;
46/178, 179, 180, 181; 181/26, 27 R, 27 C;
84/280, 330, 379, 384, 468, 453

[56] **References Cited**

UNITED STATES PATENTS

951,801 3/1910 Chevers 46/179 X

1,586,251	5/1926	Lang	84/453 X
2,053,982	9/1936	Weiss	84/330 X
2,242,912	5/1941	Healy	84/330 X
2,496,134	1/1950	Scully	116/112
3,670,452	6/1972	Turner	46/178

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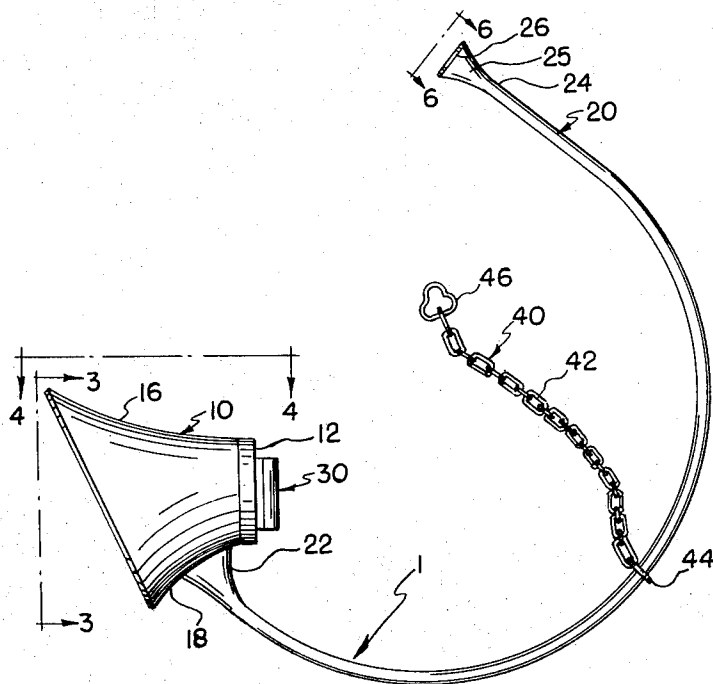
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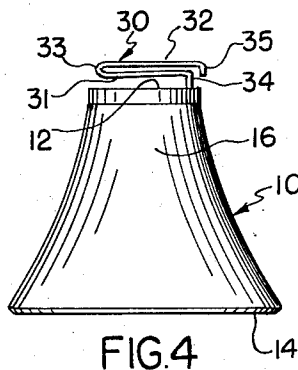
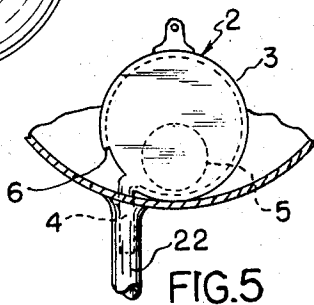
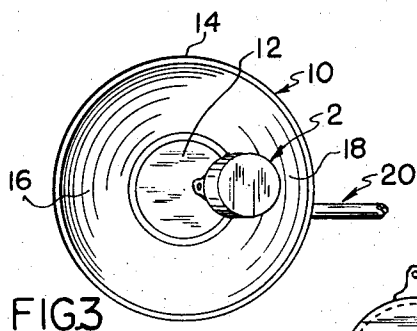
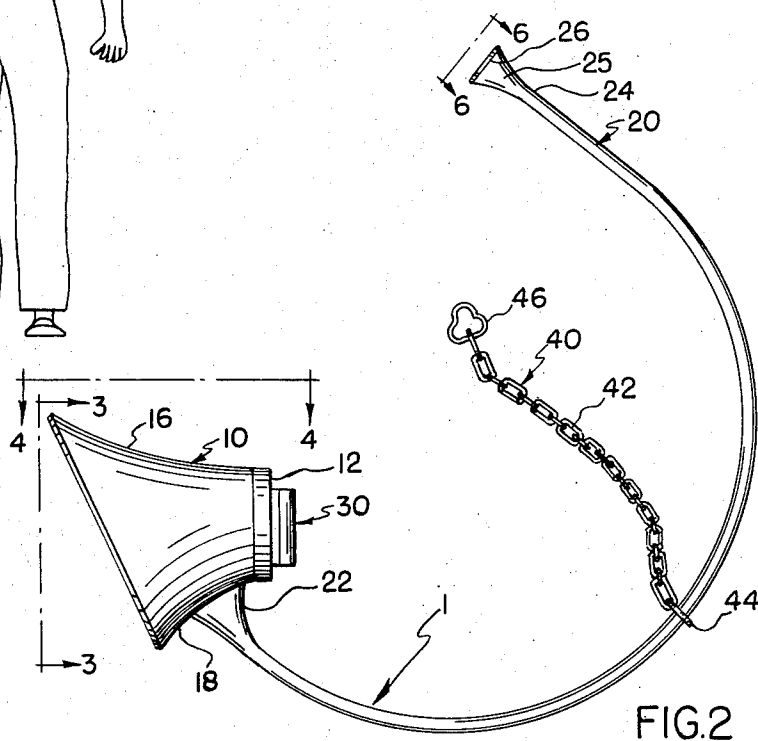
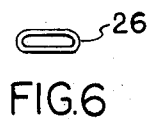
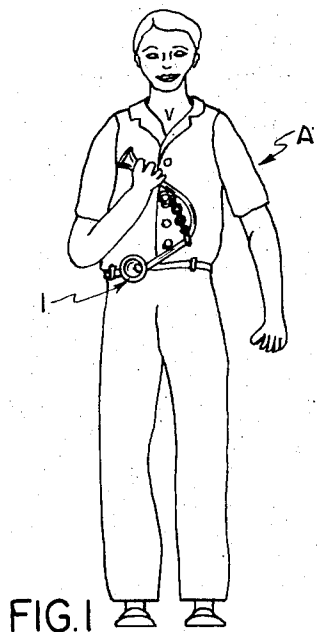
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ABSTRACT

The disclosed whistle device comprises a whistle mounted within a sound-directing megaphone which is actuated through a flexible conduit and supported by a clip so that the whistle can be actuated at a distance from the operator's ear and the resulting sound directed in the general direction he is facing.

12 Claims, 6 Drawing Figures





WHISTLE DEVICE

BACKGROUND OF THE INVENTION

The present invention relates to devices for making sound — particularly whistle devices for use in sports events.

In the past, whistles have been used for signalling during sports events, such as in officiating. Previously, officiating whistles were attached to a lanyard around the official's neck so that it would not be misplaced. The whistle was gripped by the lips or teeth and blown to create a sound signal. Because the sporting event usually required a loud signal, the official was repeatedly assaulted by a loud noise within inches of his ears. Not only was this irritating and fatiguing, it was deafening since the official's hearing was impaired during the noise and he could not hear other sounds emanating from the sporting event very well. In addition, the sound was undirected and thereby dissipated over a wide range, rather than being directed at the recipients of the signal whom the official was normally facing.

SUMMARY OF THE INVENTION

The whistle device of the present invention seeks to reduce the irritating, fatiguing, and deafening effect of a whistle used during a sport event. The present invention also seeks to direct the sound signal toward the sport participants that the official is facing, thereby making the signal more effective.

The whistle device of the present invention preferably comprises

- a sound-directing means,
- a sound-generating whistle disposed within the sound-directing means,
- a primary support means on the sound-directing means which is adapted for mounting on an operator's clothing, and
- a flexible conduit having one end attached to the whistle and another end adapted for placement in the operator's mouth.

A secondary support means can be attached to the conduit to support at least a portion of the conduit.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front elevation view, on a reduced scale, of a whistle device 1 of the present invention and the user A;

FIG. 2 is a top plan view of the device 1 of FIG. 1;

FIG. 3 is a fragmentary front elevation view, partially in section, of a portion of the device 1 of FIG. 2 taken along the line 3—3 in FIG. 2;

FIG. 4 is a side elevation view, of a portion of the device 1 of FIG. 2 taken along the line 4—4 of FIG. 2;

FIG. 5 is a fragmentary, front elevation view, partially in section, of a portion of the device 1 of FIG. 2; and

FIG. 6 is a front elevation view of a portion of the device 1 of FIG. 2 taken along the lines 6—6 of FIG. 2.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

In a preferred embodiment of the whistle device 1 of the present invention (FIGS. 1 and 2), the device 1 includes a sound-generating whistle 2 (FIGS. 3 and 5)

mounted within a sound-directing megaphone 10 (FIG. 3) so that the sound emanating from the whistle 2 is channeled in a desired direction. The operator A actuates the whistle 2 by blowing into a flexible tube or conduit 20 (FIGS. 1 and 2) which is attached at one end to the whistle. This tube 20 permits the user A to space the megaphone 10 and the whistle 2 away from his head and to mount them in a desired orientation. A belt clip 30 acts as a primary support for mounting and orienting the megaphone 10 and the whistle 2 in their preferred placement — at belt level facing forward. A flexible chain 40, attached to the tube 20 and the operator's shirt, provides secondary support to the tube 20 so that the tube 20 is easily reached for actuating the whistle 2.

The whistle 2 preferably comprises a hollow body 3 with a mouthpiece stem 4 extending out from it and a freely movable ball 5 contained within it. The body 3 has a generally cylindrical configuration so that the spherical ball 5 can roll within it and circulate. The body 3 has a longitudinal slit or aperture 6 adjacent to the junction of the body 3 and the stem 4. When air is blown through the stem 4, a portion of the air pushes the ball around the cylindrical wall of the body 3 as sound is generated by the remainder of the air passing over the slit 6. Preferably, the whistle 2 is mounted within the megaphone 10 with the slit 6 facing downwardly. Since this disposes the whistle in an inverted, or upside-down, position, saliva which otherwise might collect in the whistle 2 during extended use is automatically and continuously drained from the whistle. Also, the stem 4 should extend generally horizontally and laterally through the side of the megaphone 10. Since the stem 4 extends through the wall of the megaphone 10, the whistle 2 can be held in place by fitting one end of the tube 20 over it so that the end engages the outer surface of the megaphone 10 and clamps the whistle in place.

Generally, as shown in FIGS. 2 and 4, the megaphone 10 has a conical configuration in which the smaller end is terminated by a planar rear wall 12 and the larger end is open, in order to project the whistle's sound to the front of the operator A. While the rear wall 12 is generally perpendicular to the longitudinal central axis of the megaphone 10 the open end 14 is not perpendicular to the longitudinal central axis. This provides a truncated configuration in which, when the device 1 is in operation, a distal side 16 to the megaphone 10 is longer than a proximal side 18. This, in turn, directs sound more on the distal side than the proximal and projects it more effectively to the front of the user A. Preferably, the whistle 2 is mounted on the proximal side 18 of the megaphone to augment this effect and for convenient mounting of the tube 20. While the megaphone may be composed of a rigid material, it is often highly desirable to form it from a resilient and pliable material for use in sports in which the user A and his megaphone 10 may be struck.

Since the whistle 2 is actuated by air from the user's lips and the whistle 2 and megaphone 10 are preferably mounted at belt level, the tube 20 conducts actuating air from the user's lips to the whistle 2. The tube 20 is generally circular in transverse cross section with sufficient wall thickness to withstand the pressure of the air passing through it. At its lower end 22 (FIG. 2), it is enlarged in transverse cross section so that it will fit over and clampingly engage the whistle stem 4 (FIG. 5).

Preferably, the tube 20 is composed of a resilient polymeric material which is sufficiently pliable to provide the tube 20 with flexibility and sufficiently resilient to clamp and frictionally secure the whistle stem 4. This is particularly true in view of the fact that the whistle 4 is held in place by abutting the end 22 of the tube 20 against the outer surface of the megaphone 10 and the cylindrical body 3 against the inner surface of the megaphone 10. In the alternative, the whistle 2 may be glued or molded in place in the megaphone and/or the end 22 glued or molded onto the stem 4. The upper end 24 of the tube 20 is formed into a flat integral mouthpiece 25 by tapering the transverse cross sectional configuration from a circular configuration to an oblate, or lozenge, configuration (FIG. 6). This also provides a tapered mouthpiece 25. Preferably, the mouthpiece 25 is provided with a ridge 26 which serves as a lip — or tooth — grip for holding the tube 20 in the user's mouth. The resilient construction of the tube 20 facilitates this gripping while preventing possible injury if the operator A is struck with the mouthpiece 25. However, the mouthpiece 25 should be sufficiently rigid to prevent collapse when the whistle is actuated. While the mouthpiece is shown as being integral, it may be a separate component with one end attached to the tube 20.

The belt clip 30 serves as the primary support for the device 1 by detachably mounting the megaphone 10 on the operator's belt or waistband. As shown in FIG. 4 in side elevation, the clip 30 has a generally U-shaped configuration with a pair of planar legs 31 and 32 interconnected by a curved bight portion 33. Both legs 31 and 32 extend in generally parallel relation to the planar rear wall 12 of the megaphone 10 and to each other. Legs 31 and 32 each terminate in fingers 34 and 35, respectively, which extend perpendicularly from each of their associated legs in a direction toward the rear wall 12. The finger 34 of the proximal leg 31 attaches to the rear wall 12 and serves as the mount for the clip 30. The overlying distal leg 32 extends beyond the proximal leg 31 so that its associated finger 35, which is approximately the length of bight portion 33, can close the slot formed by the legs 31 and 32 and the bight portion 33. Preferably, the clip 30 is made of a resilient sheet material, such as spring steel strap, so as to both grip the user's belt (or waistband) and flex if the megaphone 10 is struck.

In order to support the tube 20 when user A releases the mouthpiece 25 from his mouth, a secondary support 40 may be provided. In the form shown in FIG. 2, this support 40 comprises a length of flexible chain 42 with a circular slide ring 44 at one end slidably encompassing the tube 20 and a trilobate ring 46 at the other end for engaging a button on the user's shirt front. In this way, the mouthpiece 25 is always close at hand for actuating the whistle 2 rather than dangling beside the user's legs and interfering with them.

In use, the user A attaches the megaphone 10 and its associated whistle 2 to his belt by slipping the clip 30 up under his belt with the gripping finger 35 facing up and a leg (31 and 32) on each side of the belt. If the belt is wider than the distance from the bight portion 33 to the gripping finger 35, the finger 35 holds the megaphone 10 and whistle 2 frictionally. If it is narrower, the finger 35 abuts the belt and forms a closed slot. With this mounting geometry, if the user A falls forward and strikes the ground with forward motion,

the clip 30 disengages the device 1 and prevents further injury.

After attaching the clip 30, the user A loops the trilobate ring 46 over a button on his shirt front and the device 1 is completely mounted. If he wishes to actuate the device 1, the user A simply places the mouthpiece 25 in his mouth and blows through the tube 20 actuating the whistle 2 at a distance from his own ear. The megaphone 10 directs the resulting sound in the general direction that the user is facing, with the greater length of distal side 16 compensating for any misaiming of the megaphone 10 which may result from the curvature of the user's torso.

By the foregoing arrangement of component features and their interrelationships, the device 1 of the present invention provides a sport signal which is directed toward the desired respondent of the signal while not being fatiguing or irritating to its user. In addition, the device 1 is constructed to minimize injury in the event that its user either is struck or falls.

I claim:

1. A whistle device for use in sporting events comprising,

a sound-directing megaphone having an open front end for directing sound therefrom,

a sound-generating whistle mounted within said megaphone including a hollow body for receiving air to activate said whistle,

an elongated, flexible conduit having one end connected in fluid communication with said whistle and having a mouthpiece at its opposite end for holding in the mouth of a user for transmitting air blown into said conduit by said user into said whistle, and

a primary support means on said megaphone member for detachably connecting and retaining said megaphone in a position on the user's torso away from the user's ears so the user may not be subjected to loud, irritating, and fatiguing noise from the whistle during user thereof.

2. A whistle device in accordance with claim 1, wherein

said open front end of said megaphone defines a plane which is disposed at an acute angle with respect to the longitudinal central axis of said megaphone.

3. A whistle device in accordance with claim 1, wherein

said primary support means comprises a clip for attachment to the belt or waistband of the user.

4. A whistle device in accordance with claim 1, wherein

said megaphone includes a generally conical side wall and a generally planar rear wall disposed in generally perpendicular relation to the longitudinal central axis of said megaphone, and

said primary support means comprises a clip mounted on said rear wall.

5. A whistle device according to claim 4, wherein said clip comprises

a pair of generally parallel legs and an interconnecting bight portion.

6. A whistle device according to claim 5, wherein one of said legs terminates in a perpendicular finger which attaches said clip to said rear wall, and the other of said legs terminates in a perpendicular gripping finger.

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7. A whistle device according to claim 1, wherein the device further comprises

a secondary support means attached to the conduit to support at least a portion of the conduit.

8. A whistle device according to claim 7, wherein said secondary support means comprises a flexible support.

9. A whistle device according to claim 8, wherein said flexible support comprises,

a pair of rings and
and interconnecting chain,
one of said rings encompassing said conduit,
the other of said rings being adapted for attachment to the user's clothing.

10. A whistle device in accordance with claim 1, wherein said megaphone includes a generally conical side wall, and said whistle is mounted on said side wall.

11. A whistle device in accordance with claim 10, wherein said side wall includes an opening therein, said whistle includes a hollow body having an elongated stem for connection in fluid communication to said conduit for transmitting air to said body, and

said body of said whistle is mounted internally of said megaphone and said stem extends through said opening for connection to said conduit exteriorly of said megaphone.

12. A whistle device in accordance with claim 11, wherein

said one end of said conduit is composed of a resilient, pliable polymeric material, and is fitted over and frictionally and clampingly engages said stem.

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