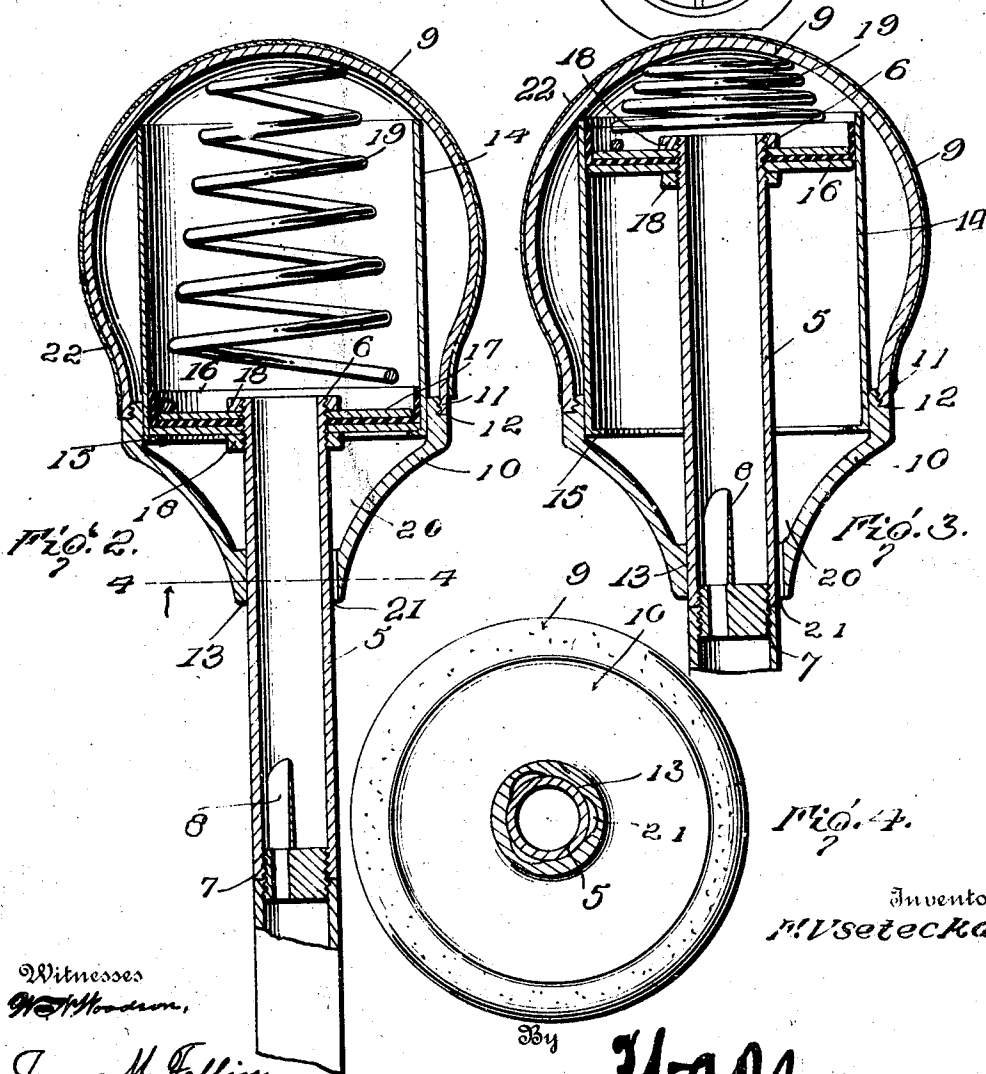
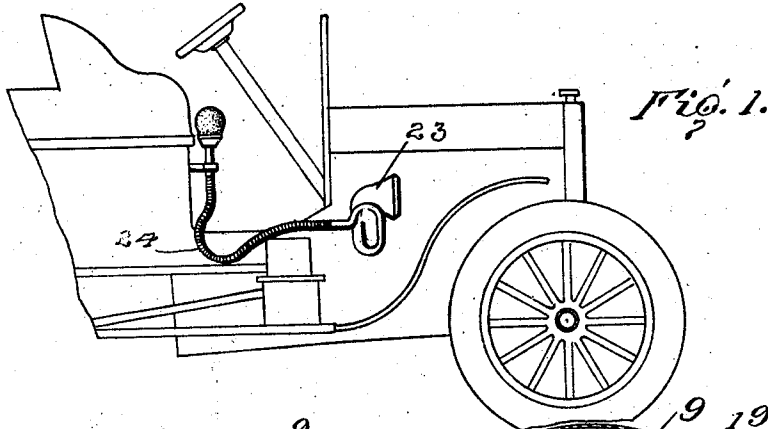


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1,001,101.



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UNITED STATES PATENT OFFICE.

FRANK VSETECKA, OF WAUCOMA, IOWA.

AUTOMOBILE-HORN.

1,001,101.

Specification of Letters Patent. Patented Aug. 22, 1911.

Application filed December 3, 1909. Serial No. 531,183.

To all whom it may concern:

Be it known that I, FRANK VSETECKA, citizen of the United States, residing at Waucoma, in the county of Fayette and State of Iowa, have invented certain new and useful Improvements in Automobile-Horns, of which the following is a specification.

This invention relates to pneumatic signals and more particularly to a horn especially adapted for use on automobiles and the like.

The object of the invention is to provide a comparatively simple and thoroughly efficient device of the character described, designed to take the place of the ordinary rubber bulb and so constructed that the same may be readily taken apart to effect any necessary repairs thereto.

A further object is to provide a horn in which the vibrating reed is actuated to sound an alarm by sliding the bulb or cap longitudinally on the air conductor.

A further object is to provide an automobile horn including a sliding cap or bulb having a cylinder disposed within the same for the reception of a stationary plunger, there being a coil spring interposed between the plunger and cap for returning the latter to normal position after said cap is depressed.

A still further object of the invention is generally to improve this class of devices, so as to increase their utility, durability and efficiency, as well as to reduce the cost of manufacture.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of a portion of an automobile provided with a horn constructed in accordance with my invention; Fig. 2 is a vertical sectional view of the horn bulb showing the cap piece in normal position; Fig. 3 is a similar view of the bulb or cap piece depressed to sound an

alarm; Fig. 4 is a transverse sectional view taken on the line 4-4 of Fig. 2 and looking in the direction of the arrow.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The device comprises a tubular member or air conductor 5 having its upper end threaded at 6 and its lower end operatively connected with a coupling 7 carrying a vibrating reed or other sound producing element, indicated at 8.

Slidably mounted on the air conductor 5 is a bulbous cap-piece or actuating member preferably formed of metal and constructed in two sections 9 and 10. The upper section 9 is substantially spherical in contour and is provided at its lower end with interior threads 11 for engagement with the correspondingly threaded end of the lower section 10, there being an annular shoulder 12 formed on said lower section for engagement with the adjacent end of the upper section 9, as shown. The lower section 10 is preferably inclined or tapered in the direction of the air conductor 5 and is provided with a centrally disposed opening 13 to permit the passage of said conductor, thus to allow the cap to slide freely on the conductor when it is desired to actuate the reed 8 to sound an alarm. Disposed within the upper section 9, is a cylinder 14, the lower end of which extends within the section 10 and is welded or otherwise rigidly secured thereto, the lower or fixed end of the cylinder 14 being provided with an inwardly extending stop flange 15 for engagement with the plunger 16. The plunger 16 comprises spaced disks or plates 17 having a strip of leather, rubber or other yieldable material interposed between the same and retained in position by means of clamping nuts 18 bearing against the disks 17 and engaging the threaded end 6 of the conductor 5, as best shown in Fig. 2 of the drawings.

A coil spring 19 is interposed between the plunger 16 and the upper end of the cap section 9 for the purpose of returning the cap to normal position after the same has been depressed to actuate the sounding element 8.

In order to permit the escape of air from the chamber 20 when the cap is released, the walls of the opening 13 are formed with a plurality of spaced grooves or recesses 21

through which the air is forced when the cap is moved to extended position by the action of the coil spring 19.

The upper section 9 of the cap is preferably covered with a strip of leather, rubber or other yieldable material 22 so as to permit the operator to readily grasp the cap when operating the device.

Thus it will be seen that when a downward pressure is exerted on the cap, the latter will slide longitudinally on the air conductor 5 and the air in the upper section 9 will be forced through said air conductor 5 and against the reed 8 so as to vibrate the same and sound an alarm, the spring 19 serving to return the cap to extended or normal position after the hand has been released from said cap.

The horn proper, indicated at 23 may be connected directly with the coupling member 7 or through the medium of a flexible conductor 24 with said coupling member 7, as shown in Fig. 1 of the drawings.

By removing the upper section 9 and detaching the coupling member 7, the lower section 10 of the bulb carrying the cylinder 14, may be removed from the air conductor 5 so as to expose the plunger 16 and its associated parts when it is desired to effect any repairs thereto.

It will here be noted that the construction of the device is such that the cap will work equally as well in cold weather as in warm weather, which is a very important feature in this class of signals.

Having thus described the invention, what is claimed as new is:

1. An automobile horn including an air conductor, a sound producing element disposed within the conductor, a plunger carried by said conductor, a cap surrounding the plunger, a cylinder secured to and entirely housed within the cap and bearing against said plunger for guiding the cap, said cap and cylinder being movable longitudinally of the conductor for forcing a current of air through said conductor to the sound producing element, and a spring disposed within the cylinder and having one end thereof bearing against the cap and its other end engaging the plunger.

2. An automobile horn including an air conductor, a sound-producing element disposed within the conductor, a plunger secured to the air conductor, a cap having an inner wall fitting around the plunger and movable with said cap longitudinally of the conductor for directing a current of air through one end of the conductor to the sound-producing element, said cap having an opening therein for the reception of the conductor, there being a series of spaced grooves formed in the wall of the opening and communicating with the interior of the cap, and means interposed between the plunger and cap for returning said cap to normal position.

3. An automobile horn including an air conductor, a sound producing element disposed within the conductor, a plunger carried by said conductor, a cap movable longitudinally of the conductor and formed of detachably connected sections, a cylinder carried by one of the cap sections and forming a guide for the plunger, and means interposed between the plunger and the upper section of the cap for returning said cap to normal position.

4. An automobile horn including an air conductor, a sound producing element disposed within the conductor, a plunger threaded on the upper end of said conductor, a cap movable longitudinally of the conductor and formed of mating sections having interengaging parts, one of said sections being provided with an opening for the reception of the conductor and having a series of grooves formed in the walls thereof and communicating with the interior of the cap, a cylinder carried by one of the cap sections for guiding the plunger and having its lower end provided with an inwardly extending stop flange, and a spring interposed between the plunger and the upper section of the cap.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK VSETECKA. [L. s.]

Witnesses:

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