C. P. SCOGNAMILLO.

AUTOMOBILE HORN.

APPLICATION FILED MAR. 31, 1914.

1,139,233. Patented May 11, 1915.

Fig. 1.

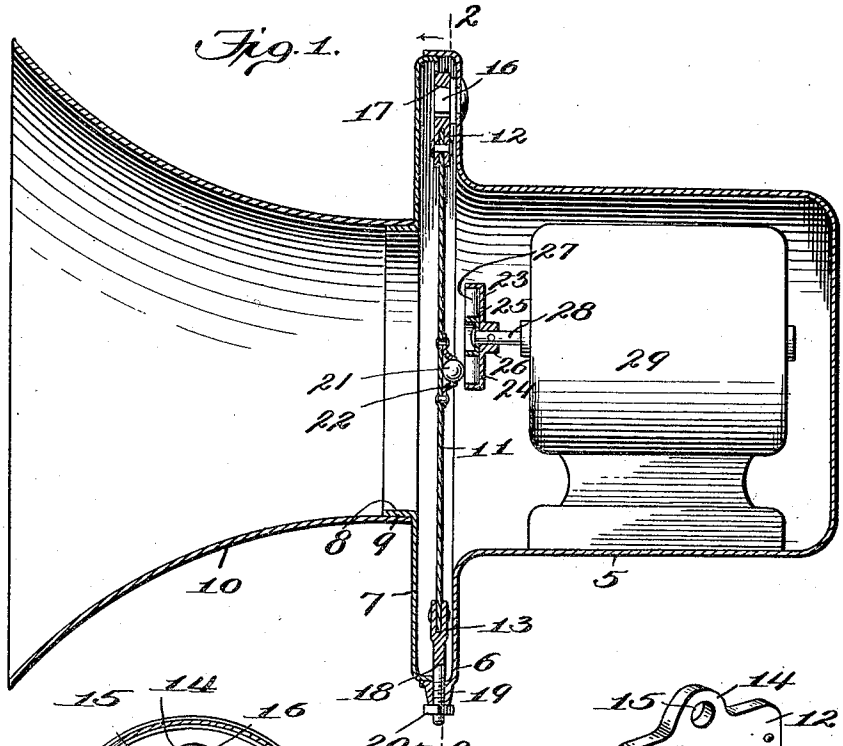


Fig. 2.

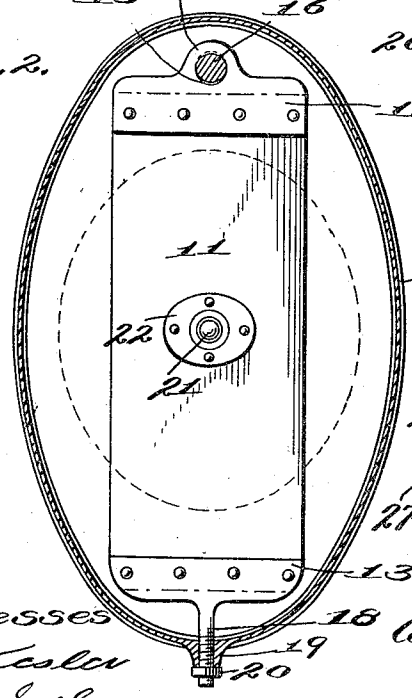


Fig. 3.

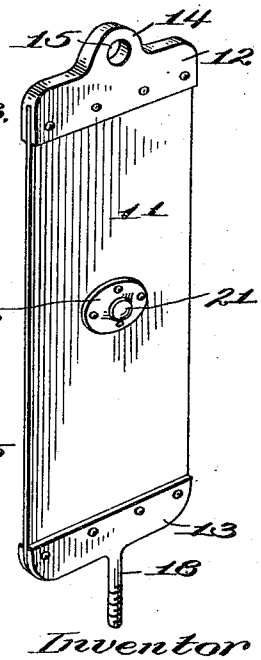
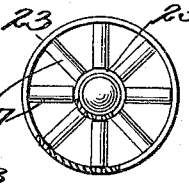


Fig. 4



Witnesses

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UNITED STATES PATENT OFFICE.

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AUTOMOBILE-HORN.

1,139,233. Specification of Letters Patent. Patented May 11, 1915.

Application filed March 31, 1914. Serial No. 828,617.

To all whom it may concern:

Be it known that I, CONCETTA PASCALE SCOGNAMILLO, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Automobile-Horns, of which the following is a specification.

This invention relates to signaling devices or horns for automobiles, motorboats and the like, and the primary object of the same is to dispense with the use of the ordinary form of diaphragm confined at its periphery and to utilize in lieu thereof a vibrating medium in the form of a resilient strip which is unconfined at its side edges and has a vibrating device coöperating therewith to cause the emission of an alarm tone or sound.

A further object of the invention is to provide a horn of the class specified with a vibrating medium of a type materially differentiated from the ordinary form of peripherally confined diaphragm and to utilize with the improved vibrating medium means for varying the tension thereof to cause a modification or change in the character of the tone or noise emitted therefrom.

A still further object of the invention is to provide a horn of the class specified of a simple and durable character that may be cheaply manufactured and wherein the number of parts is reduced to a minimum.

With these and other objects and advantages in view the invention consists in the preferred form of the device which will be more fully hereinafter described and claimed and subject to such variations in proportions, dimensions and general structure as fairly fall within the scope of the appended claims.

In the drawing: Figure 1 is a longitudinal vertical section of a signaling device or horn embodying the features of the invention. Fig. 2 is a transverse vertical section taken in the plane of the line 2—2, Fig. 1. Fig. 3 is a detail perspective view of the vibrating medium. Fig. 4 is a detail elevation of the device for setting up a vibration of the vibrating medium.

The numeral 5 designates a casing of suitable dimensions having an annular flange 6 at its inner extremity, and connected thereto is a front flanged plate 7 provided with a central opening 8 surrounded by an annular flange 9 to which a resonator 10 of any suitable structure is applied. The casing 5, plate 7 and resonator 10 are all oval in cross-section, as indicated by Fig. 2, so as to condense the extent of the entire horn laterally and also give it a more unique and artistic appearance.

A vibrating medium 11, consisting of a resilient or spring strip of suitable metal, is held at its opposite extremities between the flange 6 and the plate 7 across the rear portion of the opening 8, and in order to readily mount the vibrating medium 11 in operative position within the casing and complemental parts as explained, said strip has heads 12 and 13 respectively secured to the opposite ends thereof, the head 12 being provided with a central lug or ear 14 having an opening 15 therein to fit over the shank of a stud, rivet or analogous device 16 secured to or extending through a portion of the flange 6. The shank of the stud 16 is recessed or grooved, as at 17, to provide a suitable angular structure that will prevent the head 12 from becoming accidentally disengaged therefrom when the vibrating medium is applied in operative position.

The head 13 has a screw-stem 18 extending therefrom and through a boss or enlargement 19 on a part of the periphery of the flange 6, and the exterior end of the said shank 18 is engaged by an adjusting nut 20 whereby the tension of the vibrating medium may be readily regulated.

At the center of the vibrating medium 11 a ball 21 is held by a suitable bracket or socket plate 22 secured to the said vibrating medium, the ball projecting from the rear side of the latter. The ball or projection 21 carried by the vibrating medium 11 is engaged by an actuating device or rotary head or element 23 embodying a shell-like body 24 with a center annulus 25 and a rearwardly projecting hub 26.

The shell-like body 24 is closed at its rear side and open at the front, and in the open front is a plurality of radially arranged rollers 27 which have bearing at their ends in the annulus and periphery of the shell-like body 24.

The rollers 27 engage the ball or projection 21 and the fixed position of the actuating device 23 as a whole is maintained by securing the hub 26 on the armature shaft 28 of a rotary motor 29 of any suitable type, said motor being secured to the casing 5, as

shown by Fig. 1, and supplied with current from any suitable source. The actuating device 23 is rotated and the rollers 27 are successively brought into engagement with the ball or projection 21 and the medium or spring strip 11 is rapidly vibrated.

It will be understood that an antifrictional contact is set up between the actuating device 23 and the ball or projection 21 owing to the provision of the rollers 27 and in view of the ball or spherical projection 21 the wear between the parts of the actuating device and the ball will be reduced to a minimum.

The vibrating medium or spring strip 11 is unconfined at its side edges, and hence the durability of the said vibrating medium or spring strip is increased in view of the fact that deterioration of the vibrating medium or strip, due to constant vibration thereof, is materially reduced as the confinement of the said strip is not effected in all directions as in the ordinary or usual form of circular diaphragm and a relief ensues at the opposite sides of the vibrating medium or strip 11. By varying the tension of the vibrating medium or strip 11 through the adjustment of the nut 21, the tone or sound emitted by the said medium or strip may be readily differentiated or the pitch modified as may be desired.

From the foregoing it will be seen that the several parts of the improved signaling device or horn may be readily assembled and the horn as an entirety will be found exceptionally effective as a signaling device.

What is claimed is:

1. In a signaling device or horn, a resonator, an inclosure, a vibrating flat strip in the inclosure adjacent to the resonator, said flat strip having securing means at opposite extremities and being free at opposite sides, the said flat strip constituting the diaphragm of the device or horn and the sole sound producing vibrating means, and mean intermediately and directly engaging and causing said strip to vibrate.

2. In a signaling device or horn, a resonator, an inclosure, a vibrating flat strip within the inclosure adjacent to the resonator and having the sides free and the opposite extremities secured, the flat strip constituting the diaphragm means of the device or horn and one of the extremities provided with an adjusting means to vary the tension and the tone quality of the strip, the inclosure on opposite sides of the free sides of the strip being fully open to the resonator, and rotary means intermediately and directly engaging a portion of and causing the said strip to vibrate to produce a loud signaling sound.

3. In a signaling device or horn, a resonator, an inclosure to which the resonator is attached, a resilient vibrating strip within the inclosure adjacent to the resonator and constituting the diaphragm of the device or horn, the said strip having opposite free sides and retained ends and provided with a projection between its sides and ends, means for changing the tension of the strip to vary the sound emitted thereby, and means directly engaging said projection for causing the strip to vibrate.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CONCETTA PASCALE SCOGNAMILLO.

Witnesses:
JOSEPH ALLIEN,
JOSEPH DE LEO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."