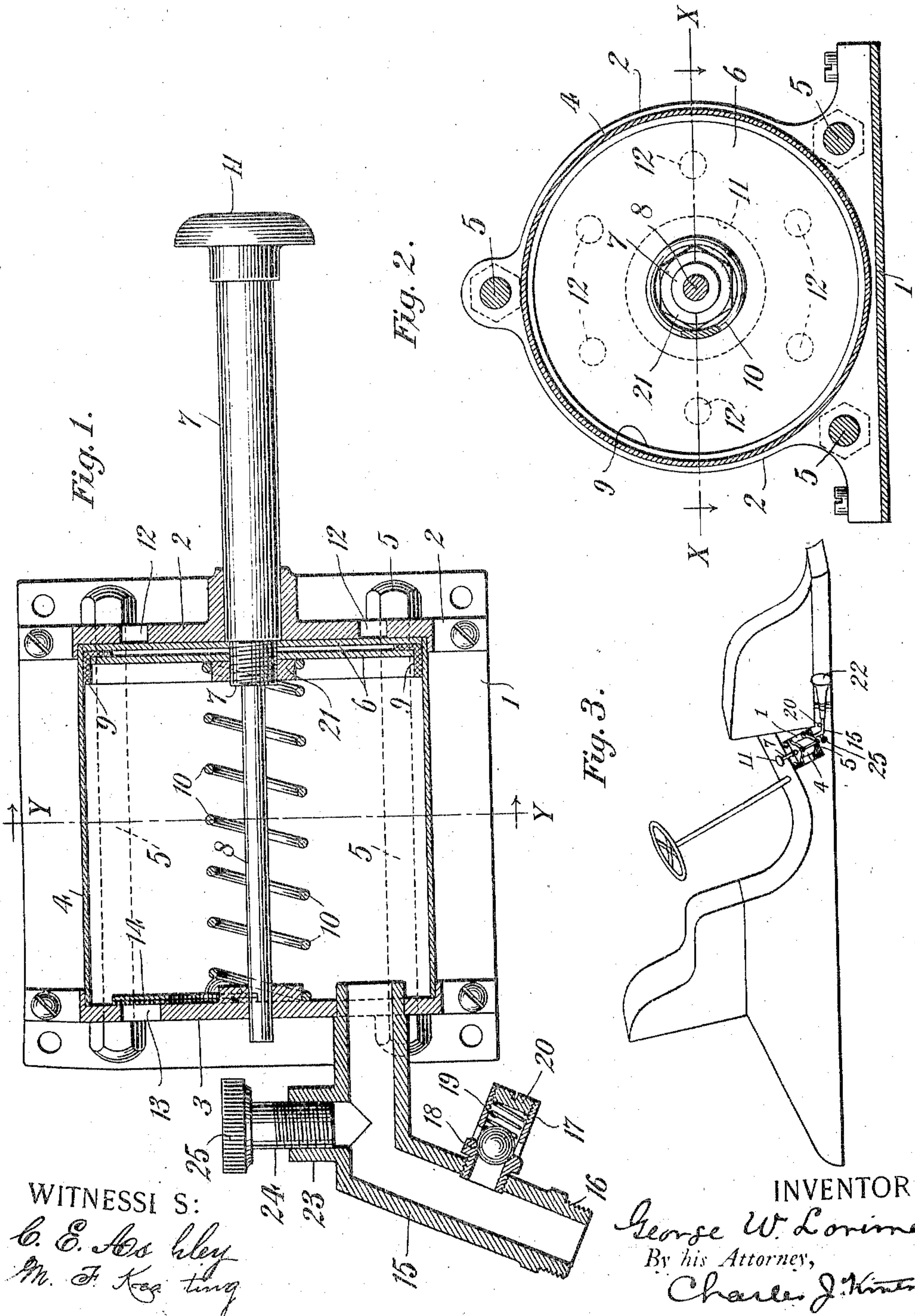


No. 817,125.

PATENTED APR. 3, 1906.

G. W. LORIMER.  
MEANS FOR BLOWING AUTOMOBILE HORNS.

APPLICATION FILED DEC. 12, 1904.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

GEORGE W. LORIMER, OF PIQUA, OHIO.

MEANS FOR BLOWING AUTOMOBILE-HORNS.

No. 817,125.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed December 12, 1904. Serial No. 236,564.

*To all whom it may concern:*

Be it known that I, GEORGE W. LORIMER, a citizen of the United States, residing at Piqua, county of Miami, State of Ohio, have made a new and useful Invention in Means for Blowing Automobile-Horns, of which the following is a specification.

My invention is directed particularly to improvements in means for operating vibrating reed-horns, such as are now in general use upon automobiles or equivalent power-impelled vehicles; and it has for its object to provide means whereby such horns or alarms may be actuated by the foot of the chauffeur or user and additional means whereby the certainty of operation of the horn may be effected and the sound thereof modified or regulated as desired.

Horns of the nature referred to and now in general use are attached to the body of the machine and are provided with operating-bulbs usually of soft rubber designed to be actuated by the hand of the chauffeur or user. Such means, however, are open to the objections, first, that in order to operate them it is necessary for the user to compress the bulb with the hand, thereby often necessitating the use of the hand at times when it should be otherwise properly engaged in controlling the movements of the machine itself; second, the operating-bulbs of such horns being made usually of soft rubber soon become deteriorated by frequent use, crack, and are rendered worthless, necessitating the replacing of the worn-out or cracked bulbs with new ones. They are also limited as to capacity.

Foot-actuated alarms, both of the whistle and reed type, have heretofore been devised, as disclosed in United States Patent to Bowen *et al.*, No. 486,438, granted November 10, 1901, and United States Patent to Cordeau, No. 711,940, granted October 28, 1902, and my invention is directed especially to an improvement upon the device disclosed in the last-named patent, which is provided with a rubber bulb around the reed for regulating the flow of air to the horn. Such a rubber-bulb form of regulating device is open to the objection above stated with relation to the hand-operated bulbs. They quickly deteriorate and are subjected to cracks or breaks, which render the device inoperative.

With my improvement a foot-operated air-

pump is devised which possesses the greatest possible strength and by reason of the ball-valve regulating device is adapted for indefinite use.

For a full and clear understanding of the invention, such as will enable others skilled in the art to construct and use the same, reference is had to the accompanying drawings, in which—

Figure 1 represents a longitudinal sectional view taken through the body of the pump on the line X X, Fig. 2, and as seen looking thereat from the top toward the bottom of the drawings in the direction of the arrows, the base or support to which it is attached, an operating-plunger, and the controlling-valve being shown in plan view. Fig. 2 is a transverse sectional view taken through the body of the pump and its base or support on the line Y Y, Fig. 1, and as seen looking thereat from left to right in the direction of the arrows. Figs. 1 and 2 illustrate an actual working pump, full size. Fig. 3 is a perspective view of the body of an automobile or motor-driven vehicle, illustrating my improvement as applied thereto with the foot-plunger of the pump in easy access to the foot of the chauffeur or user.

Referring to the drawings in detail, 1 represents a metal supporting-base provided with screw-holes and adapted to be secured to one side of the body of the vehicle or in any preferred manner, so as to be easy of access to the chauffeur.

2 3 represent the heads of the pump, having integral legs secured directly to the base by screws, and 4 the cylindrical body thereof, the same being adapted to be secured between the heads 2 and 3 by three side bolts 5, provided with nuts and so arranged that when secured in the manner shown the body portion of the pump will be air-tight.

6 6 represent two metallic plates which constitute the piston of the pump, the same being secured directly to a screw-threaded part of the plunger 7 by a nut 21, as shown.

8 is a diminished portion of the plunger extending through the head 3, and 10 is a strong spiral retractile spring which surrounds the diminished interior portion 8 and is seated at one end around an internal projection of the head 3 and at the other around the nut 21.

9 is a leather or other washer which is se-



cured between the outer edges of the plates 6 6, so as to constitute with said plates an air-tight piston.

11 is the plunger-head, and 12 12 12 are air-inlets in the upper metal head 2.

13 is an air-inlet in the lower metal head 3, and 14 is a flexible flap-valve adapted to normally close said inlet.

15 is an outlet-pipe secured to the lower head 3, and 16 a screw-threaded nipple at the outer end thereof for securing thereto the usual flexible tube, 17 being a valve-tube inclosing a ball-valve 18, provided with an adjusting-spring 19 and adjusting-screw 20, it sometimes occurring with horns of this nature that if too sudden a blast be given the reed fails to operate, such a valve making it possible to so regulate the outflow of air by adjusting the spring 19 and set-screw 20 as to obtain the best results.

23 is a screw-threaded neck supporting a regulating-screw 24, having a milled operating-head 25.

The operation will be obvious, it being apparent that the chauffeur or user only need apply his foot to the head 11 of the foot-plunger 7, causing the piston to be forced suddenly forward against the force of the retractile spring 10, thereby forcing the air out of the pump by way of the outlet-pipe 15 through the flexible connecting-tube to the horn 22. When the foot is removed from the head 11, the spring 10 restores the piston to its normal position, and the valve 14 allows of the admission of sufficient air within the pump through the air-inlet 13 to supply the place of that which was formerly forced forward to the valve and horn. At the same time the air which was drawn in through the air-inlets 12 behind the piston is again forced out through said inlets. Should it be found that the reed of the horn 22 fails to operate upon too sudden a blast from the piston, regulation may be effected by adjusting the set-screw 20 so as to diminish the pressure of the

regulating-spring 19 upon the ball-valve 18. For the purpose of regulating the loudness of the noise made by the horn the flow of air may be increased or diminished as desired by the regulating-screw 24 and milled head 25. 50

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

An automobile-alarm embracing the following elements: an air-pump having a cylinder open at both ends; two heads therefor provided with longitudinal bolts adapted to secure said heads firmly against the ends of the cylinder, said heads being provided with legs or extensions for securing the pump in place; a piston located within the cylinder and secured at the approximate center of a plunger one end of which extends through one cylinder-head and constitutes operating means for the foot of the user, the other end thereof extending through the opposite cylinder-head; a spiral spring surrounding the latter portion of the plunger and resting one end against the cylinder-head and the other against the piston; an air-inlet in one cylinder-head and air-outlets in the other; in combination with a reed-horn connected to the cylinder by an outlet-pipe having a ball-valve seated in a valve-seat connected with the outlet-pipe and provided with adjustable means for varying the flow of air there-through; together with a regulating-screw located also in the outlet-pipe, the arrangement being such that the reed of the horn will vibrate for sudden pressures of the piston and the loudness thereof may be regulated as desired. 75 80

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. LORIMER.

Witnesses:

G. A. VAUGIER,  
R. H. MALLOCH.