A. G. R. GUERARD.

AIR PUMP.

APPLICATION FILED NOV. 6, 1915.

1,255,875.

Patented Feb. 12, 1918.

2 SHEETS—SHEET 1.

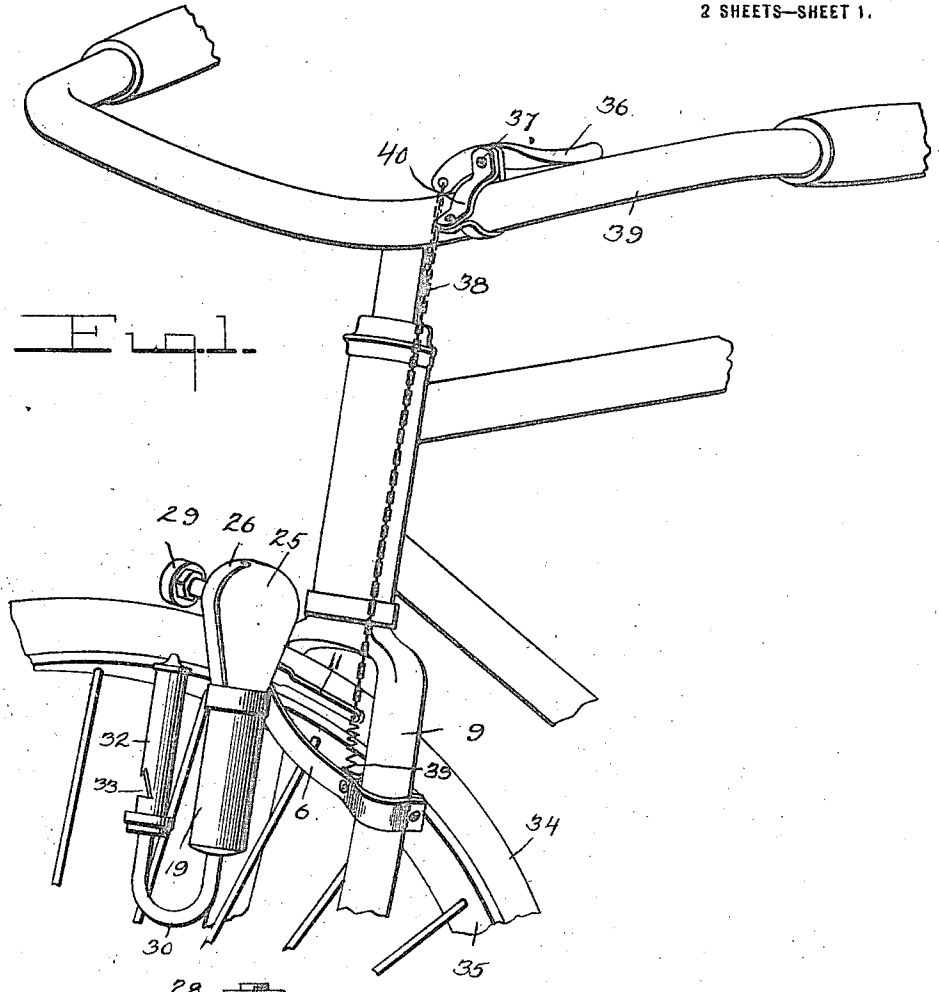


Fig. 1.

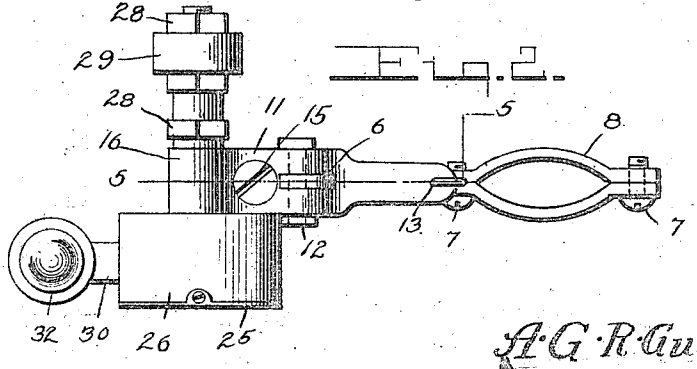


Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

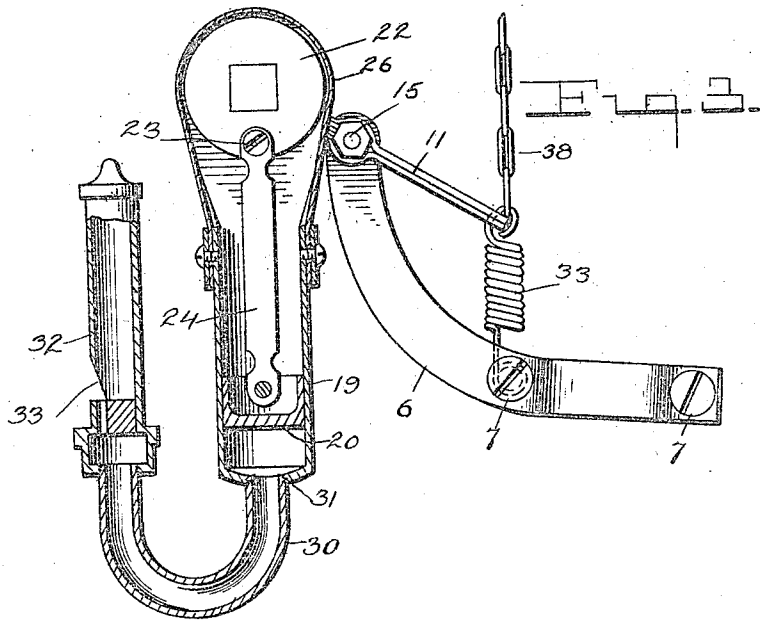


Fig. 3.

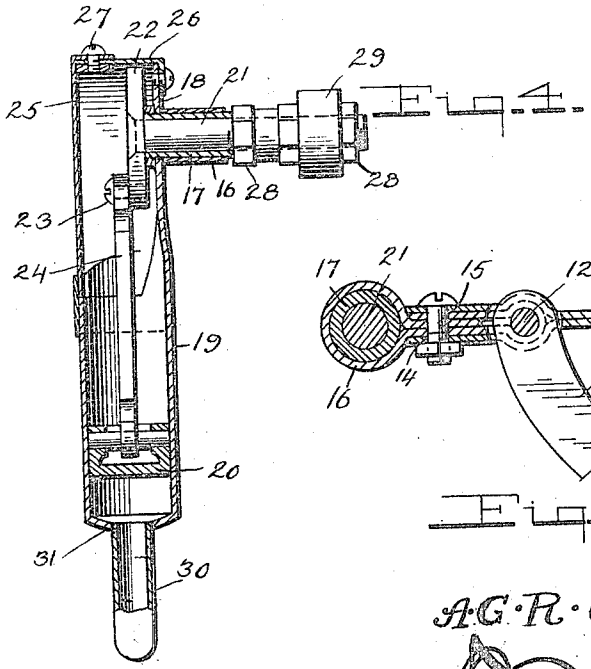


Fig. 4.

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

ARTHUR G. R. GUERARD, OF MULBERRY, FLORIDA.

AIR-PUMP.

1,255,875. Specification of Letters Patent. Patented Feb. 12, 1918.

Application filed November 6, 1915. Serial No. 60,086.

To all whom it may concern:

Be it known that I, ARTHUR G. R. GUERARD, a citizen of the United States, residing at Mulberry, in the county of Polk and State of Florida, have invented certain new and useful Improvements in Air-Pumps; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to vehicle alarms of the whistle type, especially designed for use in connection with two wheeled types of vehicles such as bicycles, and has for its primary object to provide an improved wheel operated pump to sound the whistle.

With this and other objects in view, the invention consists in the novel construction, arrangement and formation of parts as will be hereinafter specifically described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 represents a fragmental perspective view of the front portion of a bicycle, illustrating the alarm applied to use.

Fig. 2 represents a top plan of the alarm removed,

Fig. 3 represents a vertical central sectional view through the alarm,

Fig. 4 represents a vertical sectional view taken at right angles to Fig. 3,

Fig. 5 represents a detail sectional view on the line 5—5 of Fig. 2.

Referring to the drawings in detail, wherein similar reference numerals designate corresponding parts throughout the several views, the numeral 6 indicates a bracket arm having two screws 7 threaded in one end thereof to facilitate adjustment of a clamping plate 8, whereby the curved bracket arm 6 may be secured in proper position to one of the front forks 9 of a bicycle, designated generally by the numeral 10.

A supporting lever 11 is pivotally secured centrally upon a bolt 12 secured transversely through the outer end of the bracket arm 6 and is formed in its inner and outer ends respectively with apertures 13 and 14. A bolt 15 is fitted in the outer apertures 14 and through apertures formed in a strap 16, having a looped medial portion engaging and clamping a sleeve 17 positioned in an opening formed in the upper relatively flat part 18 of a pump cylinder 19, in which is fitted a reciprocable piston 20. A shaft 21 is rotatably mounted in the sleeve 17 and is provided at one end with a disk or wheel 22, in which is eccentrically secured a screw or pin 23, constituting a crank pin, whereby the connecting rod 24 of the piston 20 is connected with the wheel or disk 22. The movement of the sleeve 17 in one direction, with relation to the plate 18, is limited by the looped strap and the inner terminal of the sleeve is threaded and provided with a ring nut 17^a, which secures it against movement in the opposite direction and provides a spacing element for the disk 22. As clearly illustrated in Figure 4 the upper portion of the pump cylinder 19 is cutaway and the remaining portion is flattened to provide the upstanding plate 18. A casing consisting of two parts 25 and 26 is secured to the upstanding plate 18 by screws or equivalent means 27, thereby providing a housing for the wheel 22, crank pin 23, and connecting rod 24. The outer exposed end of the shaft 21 is externally screw threaded and equipped with a pair of locking nuts 28, whereby a friction pulley formed of rubber or other resilient material 29 is non-rotatably secured to the shaft 21.

A substantially U-shaped pipe 30 is connected with the discharge port 31 in the lower end of the pump cylinder 19 and is connected at its opposite end with the inlet port of a suitable type of whistle 32, having the usual discharge port 33 in the front thereof. The cylinder 19, and parts associated therewith, are normally retained in elevated position by the tension of a contractile spring 33^a connected at one end with the bracket arm 6 and at its opposite end in the aperture 13 formed in the inner end of the supporting lever 11. The friction pulley or disk 29 is normally disposed in spaced relation to the circumferential surface of the tire 34 carried by the front wheel 35 of the bicycle and is adapted to be moved into frictional engagement with said tire against the tension of the spring 33 by swinging an actuating lever 36 upon its pivotal axis 37 and thus drawing a flexible connection 38 upwardly, the connection 38 being secured at its lower extremity in the aperture 13 in the inner extremity of the supporting lever 11 and thus effecting a swinging movement of the latter. The pivoted lever 36 is preferably secured in operative position upon the handle bars 39 of the

bicycle by a suitable type of bracket 40, clearly illustrated in Fig. 1.

What I claim is:

A device of the character described including a bracket arm, a pump cylinder having the upper portion cutaway and flattened to provide a supporting plate, a two-part casing detachably secured to the supporting plate, a threaded sleeve positioned in the supporting plate and projecting laterally thereof, a supporting lever pivotally secured to the outer extremity of the bracket arm, a shaft rotatably mounted in said sleeve and projecting into said casing, a wheel carried by said shaft, a nut fitted upon the sleeve engaging the inner surface of the supporting plate and retaining the wheel in spaced relation thereto, a strap having a looped medial portion receiving the exposed end of said sleeve, a bolt positioned through the adjacent ends of the supporting lever and strap and clamping the looped portion of the latter upon the sleeve, a crank pin secured to said wheel, a piston reciprocably mounted in said cylinder, a connecting rod connecting the crank pin with the piston, said wheel, crank pin and connecting rod being inclosed by the housing, and a friction wheel carried by the exposed terminal of the shaft.

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

ARTHUR G. R. GUERARD.

Witnesses:

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A. D. WEST.

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