electromagnetic valve air inlet port 43, the electromagnetic coil port 44, a first spring 46, a piston 47, an electromagnetic coil 49, and a shift fork 48.

[0046] As shown in the accompanying drawing, in the present application, the electromagnetic valve housing is of a shell-shaped structure, and a cavity is disposed in the electromagnetic valve housing. The electromagnetic valve air outlet port is disposed on the electromagnetic valve housing and connected to the air outlet of the electromagnetic valve. The electromagnetic valve air inlet port is disposed on the electromagnetic valve housing and connected to the air inlet of the electromagnetic valve. The electromagnetic coil port 44 is electrically connected to the electromagnetic coil 49 by the wire 45.

[0047] The first spring, the piston, the shift fork and the electromagnetic coil are all disposed in the electromagnetic valve housing. The electromagnetic valve housing 41 is provided with a piston slide rail 50 and an air passage 53. The air passage is respectively connected to the air outlet of the electromagnetic valve and the air inlet of the electromagnetic valve. The axial centerline of the piston slide rail is perpendicular to the axial centerline of the air passage, so as to ensure that the piston can completely close the air passage and prevent leakage of air.

[0048] The piston is movably disposed in the piston slide rail. An end of the first spring is abutted against the inner wall of the electromagnetic valve housing, and another end thereof is abutted against an end of the piston. The air passage is opened, closed or partially opened by sliding the piston.

[0049] A shift fork slide rail 52 and an electromagnetic coil accommodating portion 51 are further disposed in the electromagnetic valve housing. The shift fork slides in the shift fork slide rail, and the electromagnetic coil is disposed in the electromagnetic coil accommodating portion.

[0050] An end of the shift fork is clamped and connected with the piston, and another end of the shift fork is movably attracted to the electromagnetic coil.

[0051] The outer surface of the piston is provided with a circle of groove 471 which is perpendicular to the axial centerline of the piston. In this way, it can be ensured that the piston does not shift when moving along the piston slide rail and the instability of airflows is avoided.

[0052] An opening 482 is disposed in the end of the shift fork where the shift fork is clamped and connected with the piston. The opening is clamped and connected in the groove. An iron sucking disk 484 is disposed in the position of the shift fork corresponding to the electromagnetic coil. The iron sucking disk is made of an iron material and can be

CLAIMS

1. A truck air horn system with an adjustable sound volume, characterized in that the truck air horn system comprises: an air horn, a horn air inlet pipe, an air volume-controlling electromagnetic valve, an electromagnetic valve air inlet pipe and a sound volume-controlling switch, wherein

the sound volume-controlling switch is connected to an electromagnetic coil port of the air volume-controlling electromagnetic valve by a wire; an end of the electromagnetic valve air inlet pipe is connected to an air source, and another end thereof is connected to an air inlet of the air volume-controlling electromagnetic valve; an end of the horn air inlet pipe is connected to an air outlet of the air volume-controlling electromagnetic valve, and another end of the horn air inlet pipe is connected to an air inlet of the air horn.

2. The truck air horn system with an adjustable sound volume according to claim 1, wherein the air volume-controlling electromagnetic valve comprises an electromagnetic valve housing, an electromagnetic valve air outlet port, an electromagnetic valve air inlet port, the electromagnetic coil port, a first spring, a piston, an electromagnetic coil and a shift fork;

the electromagnetic valve air outlet port is disposed on the electromagnetic valve housing and connected to the air outlet of the electromagnetic valve, the electromagnetic valve air inlet port is disposed on the electromagnetic valve housing, and connected to the air inlet of the electromagnetic valve; the electromagnetic coil port is electrically connected to the electromagnetic coil by a wire;

the first spring, the piston, the shift fork and the electromagnetic coil are all disposed in the electromagnetic valve housing; an air passage is disposed in the electromagnetic valve housing, and the air passage is respectively connected to the air outlet of the electromagnetic valve and the air inlet of the electromagnetic valve; the air passage is opened or closed by sliding the piston;

a piston slide rail is disposed in the electromagnetic valve housing, the piston is movably disposed in the piston slide rail, an end of the first spring is abutted against an inner wall of the electromagnetic valve housing, and another end thereof is abutted against an end of the piston;

a shift fork slide rail and an electromagnetic coil accommodating portion are disposed in the electromagnetic valve housing; the shift fork slides in the shift fork slide rail, and the

electromagnetic coil is disposed in the electromagnetic coil accommodating portion; and

an end of the shift fork is clamped and connected with the piston, and another end of the shift fork is movably attracted to the electromagnetic coil.

3. The truck air horn system with an adjustable sound volume according to claim 2, wherein an outer surface of the piston is provided with a circle of groove, the groove is perpendicular to an axial centerline of the piston, an opening is disposed in the end of the shift fork where the shift fork is clamped and connected with the piston, the opening is clamped and connected in the groove, and an iron sucking disk is disposed in the position of the shift fork corresponding to the electromagnetic coil.

4. The truck air horn system with an adjustable sound volume according to claim 3, wherein the shift fork comprises a shift fork body, an upper end of the shift fork body is provided with the opening, and the opening is arc-shaped and cooperates with the groove; and

each of two sides of the shift fork body is disposed with one guide sliding block, the guide sliding blocks slidably cooperate with the shift fork slide rail, the shift fork body and the two guide sliding blocks form a cross shape, and the iron sucking disk is disposed at the center of the cross shape.

5. The truck air horn system with an adjustable sound volume according to claim 4, wherein the shift fork body is perpendicular to the axial centerline of the piston.

6. The truck air horn system with an adjustable sound volume according to claim 1, wherein the sound volume-controlling switch comprises a controlling switch connector, a first electrode, a second electrode, a second spring, and a wire post; the first electrode and the second electrode are both connected to the controlling switch connector by a wire, wherein the first electrode is a movable end, the second electrode is a fixed end, the second electrode is a hollow tube structure of which an end is closed and another end is subjected to

drawing down, the spring is disposed in the hollow tube of the second electrode, an end of the wire post is disposed in the hollow tube of the second electrode, and another end of the wire post extends from the hollow tube of the second electrode and is movably connected to the first electrode.

7. The truck air horn system with an adjustable sound volume according to claim 6, wherein a longitudinal section of the wire post is approximately trapezoidal, the wire post comprises a base and a binding post, and a circumscribed circle diameter of the base is larger than that of the binding post; the base is electrically connected to the binding post; and

a top end of the binding post is electrically connected to the first electrode, and the base is electrically connected to an inner side surface of the second electrode.