Claims

1. A gas valve timing shut-off device for gas stove, characterized in that it comprises:

DC stabilized power supply (1) and voltage feedback circuit (2); the said voltage feedback circuit (2) receives a DC voltage change value outputted by DC stabilized power supply (1), and after having the DC voltage change value outputted by DC stabilized power supply (1) processed, outputs it to DC stabilized power supply (1) so as to stabilize the output DC voltage of DC stabilized power supply (1); and the DC voltage outputted by DC stabilized power supply (1) provides DC working voltage to the following devices; and

Display driver (3), key input unit (4), LED display (5), central processing unit (6), alarm (7), and execution circuit (8); wherein, the said display driver (3) receives time signals inputted by key input unit (4), and after having the signals processed, outputs them to LED display (5) and central processing unit (6), the said central processing unit (6), after having the signals inputted by display driver (3) processed, inputs the signals to execution circuit (8), the said execution circuit (8), after having the signals inputted by central processing unit (6) processed, controls solenoid valves of gas stove, and the display driver (3) also receives the signals inputted by central processing unit (6), and after having the signals processed, outputs them to LED display (5) to be displayed;

wherein the said display driver (3) comprises a display driver chip (IC2), Capacitors 10-13 (C10-C13), Resistors 14-16 (R14-R16) and Electrolytic Capacitor 5 (E5); the model of the said display driver chip (IC2) is SM1635, and it totally has 16 pins; the model of the said LED display (5) is LED-4302, and it totally has 10 pins; after Capacitor 10 (C10), Capacitor 11 (C11) and Electrolytic Capacitor 5 (E5) are connected in parallel, one end is connected to +5V DC voltage outputted by DC stabilized power supply (1), Pin 13 of display driver chip (IC2) and one end of Resistor 16 (R16) respectively, and the other end is

grounded; the other end of the said Resistor 16 (R16) is connected to one end of Resistor 15 (R15) and Pin 14 of display driver chip (IC2); one end of the said Resistor 14 (R14) is connected to Pin 15 of display driver chip (IC2), and the other end of Resistor 14 (R14) and Resistor 15 (R15) are connected to central processing unit (6) respectively; Pin 16 of display driver chip (IC2) is connected to the output end of key input unit (4), Pins 2-10 of display driver chip (IC2) are connected to Pin 4, Pin 3, Pin 1, Pin 9, Pin 8, Pin 7, Pin 6, Pin 5, Pin 2 and Pin 10 of LED display (5) respectively.

2. The gas valve timing shut-off device for gas stove according to Claim 1, is characterized in that the said key input unit (4) comprises a key chip (IC3), reset key (SW0), Key 1 (SW1), Key 2 (SW2), Resistors 18-24 (R18-R24), Capacitors 14-17 (C14-C17), and Triodes 2-4 (Q2-Q4); wherein, the model of the said key chip (IC3) is WTC6104ASI, and it totally has 16 pins; the output end of the said reset key (SW0) is connected to Pin 6 of key chip (IC3) through Resistor 20 (R20), the output end of the said Key 1 (SW1) is connected to Pin 5 of key chip (IC3) through Resistor 19 (R19), and the output end of Key 2 (SW2) is connected to Pin 4 of key chip (IC3) through Resistor 18 (R18); after the said Capacitor 14 (C14) and Capacitor 15 (C15) are connected in parallel, one end is connected to Pin 7 of key chip (IC3), and the other end is grounded, and Pin 8 of key chip (IC3) is also grounded; one end of the said Capacitor 16 (C16) is connected to Pin 11 of key chip (IC3) and one end of Resistor 24 (R24) respectively, and the other end of Capacitor 16 (C16) is grounded; one end of Capacitor 17 (C17) is connected to the other end of Resistor 24 (R24), Pin 1 of key chip (IC3), Pin 12 of key chip (IC3) and +5V DC voltage outputted by DC stabilized power supply (1) respectively, and the other end of Capacitor 17 (C17) is grounded; Pin 13 of key chip (IC3) is connected to the base electrode of Triode 2 (Q2) through Resistor 21 (R21), the emitter electrode of Triode 2 (Q2) is connected to Pin 6 of display driver chip (IC2), and the collector electrode of Triode 2 (Q2) is connected to Pin 16 of display driver chip (IC2); Pin 10 of key

chip (IC3) is connected to the base electrode of Triode 3 (Q3) through Resistor 22 (R22), the emitter electrode of Triode 3 (Q3) is connected to Pin 7 of display driver chip (IC2), and the collector electrode of Triode 3 (Q3) is connected to Pin 16 of display driver chip (IC2); Pin 9 of key chip (IC3) is connected to the base electrode of Triode 4 (Q4) through Resistor 23 (R23), the emitter electrode of Triode 4 (Q4) is connected to Pin 8 of display driver chip (IC2), and the collector electrode of Triode 4 (Q4) is connected to Pin 16 of display driver chip (IC2).

3. The gas valve timing shut-off device for gas stove according to Claim 1 or 2, is characterized in that the said central processing unit (6) comprises a master chip (MCU), crystal (Y), Resistors 25-33 (R25-R33), Capacitors 18-20 (C18-C20) and Electrolytic Capacitor 6 (E6); wherein, the model of the said master chip (MCU) is 2501B, and it totally has 14 pins; one end of the said Resistor 25 (R25) is connected to Pin 2 of the master chip (MCU), and the other end is connected to the other end of Resistor 14 (R14); one end of the said Resistor 26 (R26) is connected to Pin 1 of the master chip (MCU), and the other end is connected to the input end of the alarm (7); one end of the said Resistor 27 (R27) is connected to Pin 3 of the master chip (MCU), and the other end is connected to the other end of Resistor 15 (R15); the said Resistor 33 (R33), Electrolytic Capacitor 6 (E6) and Capacitor 18 (C18) are connected in parallel between Pin 4 and Pin 11 of the master chip (MCU), Pin 4 of the master chip (MCU) is also connected to +5V DC voltage outputted by DC stabilized power supply (1), and Pin 11 of the master chip (MCU) is grounded; one end of the said Resistor 28 (R28) is connected to Pin 14 of the master chip (MCU), one end of the said Resistor 29 (R29) is connected to Pin 13 of the master chip (MCU), one end of the said Resistor 30 (R30) is connected to Pin 12 of the master chip (MCU), one end of the said Resistor 31 (R31) is connected to Pin 10 of the master chip (MCU), one end of the said Resistor 32 (R32) is connected to Pin 9 of the master chip (MCU), and the other end of Resistor 28 (R28), Resistor 29 (R29), Resistor 30 (R30), Resistor 31 (R31), and Resistor 32 (R32) all are

connected to the input end of their respective execution circuit (8); one end of the said crystal (Y) is connected to one end of Capacitor 19 (C19) and Pin 6 of the master chip (MCU) respectively, the other end of the crystal (Y) is connected to one end of Capacitor 20 (C20) and Pin 5 of the master chip (MCU), and the other end of Capacitor 19 (C19) and the other end of Capacitor 20 (C20) both are grounded.

4. The gas valve timing shut-off device for gas stove according to Claim 1, is characterized in that the said execution circuit (8) comprises a driver chip (IC4) and Relays 1-5 (J1-J5); wherein, the model of the said driver chip (IC4) is ULN2004, and it totally has 16 pins, Pin 1, Pin 2, Pin 3, Pin 4 and Pin 5 of the driver chip (IC4) are connected to the other end of Resistor 28 (R28), Resistor 29 (R29), Resistor 30 (R30), Resistor 31 (R31), and Resistor 32 (R32), and Pin 8 of the driver chip (IC4) is grounded; Pin 16 of the driver chip (IC4) is connected to one end of Relay 1 (J1), the other end of Relay 1 (J1) is connected to +5V DC voltage outputted by DC stabilized power supply (1), the normally open and normally closed common contact of Relay 1 (J1) is connected to one input end of Thermocouple 1 (V1), and the other normally open contact of Relay 1 (J1) is connected to one end of Solenoid Valve 1 (SYM1); Pin 15 of the driver chip (IC4) is connected to one end of Relay 2 (J2), the other end of Relay 2 (J2) is connected to +5V DC voltage outputted by DC stabilized power supply (1), the normally open and normally closed common contact of Relay 2 (J2) is connected to one input end of Thermocouple 2 (V2), and the other normally open contact of Relay 2 (J2) is connected to one end of Solenoid Valve 2 (SYM2); Pin 14 of the driver chip (IC4) is connected to one end of Relay 3 (J3), the other end of Relay 3 (J3) is connected to +5V DC voltage outputted by DC stabilized power supply (1), the normally open and normally closed common contact of Relay 3 (J3) is connected to one input end of Thermocouple 3 (V3), and the other normally open contact of Relay 3 (J3) is connected to one end of Solenoid Valve 3 (SYM3); Pin 13 of the driver chip (IC4) is connected to one end of Relay 4 (J4), the other end

of Relay 4 (J4) is connected to +5V DC voltage outputted by DC stabilized power supply (1), the normally open and normally closed common contact of Relay 4 (J4) is connected to one input end of Thermocouple 4 (V4), and the other normally open contact of Relay 4 (J4) is connected to one end of Solenoid Valve 4 (SYM4); Pin 12 of the driver chip (IC4) is connected to one end of Relay 5 (J5), the other end of Relay 5 (J5) is connected to +5V DC voltage outputted by DC stabilized power supply (1), the normally open and normally closed common contact of Relay 5 (J5) is connected to one input end of Thermocouple 5 (V5), and the other normally open contact of Relay 5 (J5) is connected to one end of Solenoid Valve 5 (SYM5).