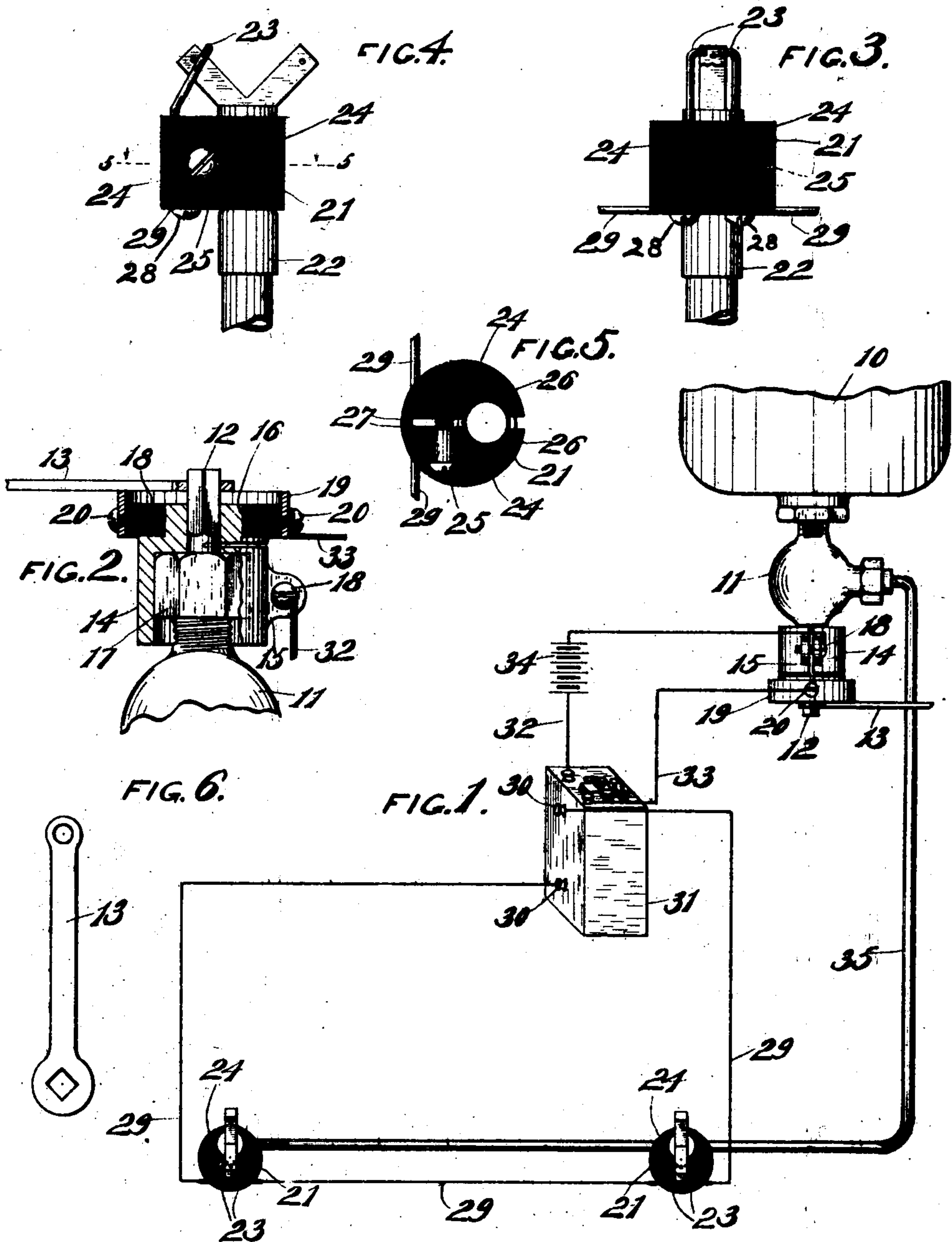


C. L. HAASE, JR.
GAS IGNITER.
APPLICATION FILED MAY 29, 1909.

957,951.

Patented May 17, 1910.



WITNESSES

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CHARLES L. HAASE, JR., OF MILWAUKEE, WISCONSIN.

GAS-IGNITER.

957,951.

Specification of Letters Patent.

Patented May 17, 1910.

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To all whom it may concern:

Be it known that I, CHARLES L. HAASE, Jr., residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Gas-Igniters, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to improvements in means for igniting gas issuing from burners in lamps particularly adapted for use in connection with lighting systems for automobiles motor boats etc., in which gas is stored in tanks under pressure and when used the gas is turned on by opening valves which control the discharge of gas from the tanks.

One of the objects of this invention is to provide a gas igniter which is automatic in its operation to the extent that when the gas valve with which the tank is provided is turned on the gas will be ignited at the burners by means of a secondary circuit of an induction coil or other means for producing a jump spark between terminals positioned adjacent to each burner.

A further object of this invention is to provide a gas igniter which is simple in construction, and is adapted to be easily attached to the ordinary lighting systems now in general use.

A further object of this invention is to provide a gas igniter in which the primary circuit of the induction coil is completed by means of the wrench or lever used in turning the valve controlling the gas serving as a switch.

With the above, and other objects in view, the invention consists of the gas igniter, its parts, and combination of parts, and all equivalents thereof.

In the accompanying drawing in which the same reference characters indicate the same parts in all of the views; Figure 1 is a diagrammatical view of the complete apparatus shown connected to two burners and to a fragment of a gas tank; Fig. 2 is a side view of a fragment of the gas valve and its operating wrench or lever and part of the igniting attachment connected thereto; Fig. 3 is a front view of a gas burner with the jump spark terminals connected thereto, part of the burner broken away to show the terminals; Fig. 4 is a side view of the parts

shown in Fig. 3; Fig. 5 is a horizontal section view taken on line 5—5 of Fig. 4; and Fig. 6 is a side view of an ordinary wrench used for turning on the gas valve and which also serves as a switch to close a gap in the primary circuit.

Referring to the drawing the numeral 10 indicates a tank which is adapted to contain an illuminating gas under pressure or it may represent a generating tank adapted to contain calcium carbid, or other gas producing means. The tank is provided with a controlling valve 11 of ordinary construction and its squared end valve stem 12 is adapted to be turned to control the flow of gas by means of a wrench or lever 13 provided therefor.

A clamping collar 14 provided with a split clamping portion 15 and a reduced end 16 is securely clamped to the stuffing nut 17 of the valve by means of a clamping screw 18 engaging the projecting lips of the split portion of the collar.

The reduced end 16 of the collar has rigidly mounted thereon a fiber insulating bushing 18 and a contact collar 19 surrounding the bushing and extending beyond the face thereof is fastened thereto by screws 20. The edge of the contact collar is so positioned with relation to the squared stem of the valve that when a wrench or lever is positioned to engage the valve stem it will also contact with the insulated contact collar and connect the collar to the stem electrically.

An insulating electrode block 21 adapted to be clamped to each gas burner 22 is provided with jump spark terminals or electrodes 23 which are positioned adjacent to the burner openings. The electrode blocks are formed of insulating material and are in two sections 24, 24 which are adapted to be clamped together by a clamping screw 25 which pass loosely through an opening in one of the sections and is threaded to the other section. The sections are provided with semicircular recesses 26 to accommodate the burner tube. The recesses are located to one side of the center of the block and the clamping screw 25 is located between said recesses and engaging shoulders 27 formed on the sections so that when the clamping screw is tightened the block will be securely clamped to the burner tube. The jump spark terminals extend through openings provided in the block and at the bot-

tom of the block are bent at right angles and continue as electrical conductors. These terminals are held rigidly to the block by means of holding screws 28, the heads of which engage the bent portions of the terminals.

The bent portions 29 of the terminals extend from the electrode blocks to the binding posts 30 of the secondary circuit of an induction coil 31 and as many burners as desired may be included in this circuit.

Wires 32 and 33 extend from the binding posts 34, 34 of the primary circuit to and are connected to the contact collar 14 and the clamping collar 19 respectively. A battery 34 included in the primary circuit is adapted to excite the induction coil when the primary circuit is completed by the wrench.

A gas supply pipe 35 extends from the tank to the burners and is adapted to supply the burner with gas when the valve is opened.

The operation of the invention is as follows: When it is desired to light the lamp burners the wrench is positioned on the squared end of the valve stem so that the side of the wrench is in contact with the contact collar. In this position the gap in the primary circuit is bridged by the wrench and the circuit completed through the induction coil and the current in the secondary coil will be induced thereby and jump across from one spark terminal to the other and produce a series of sparks. The wrench is now turned to supply the burners with gas which will be ignited by the sparks. The handle is then removed to prevent waste of current and the burners will continue to burn as long as they are supplied with gas.

From the above description, it will be seen that the burners are automatically lighted when the gas is turned on.

The apparatus is simple in construction and inexpensive to maintain and may be easily connected to the ordinary burners now in use.

It is to be understood that this invention is not limited to any specific form or arrangement of parts except insofar as such limitations are specified in the claims.

What I claim as my invention is:

1. A gas igniter, comprising a valve controlling a gas supply, a burner connected to said valve, an induction coil, an open primary circuit connection between the coil and the valve and provided with an electric current supply, jump spark terminals connected to the burner by an insulating block, a secondary circuit connection between the spark terminals and the induction coil, and a wrench for operating the valve to control the flow of gas from the supply and to simultaneously close in the primary circuit to

produce a spark between the spark terminals for igniting the gas.

2. A gas igniter, comprising a valve controlling a gas supply, a collar connected to said valve and provided with a contact collar insulated therefrom, a burner connected to said valve, an induction coil, a primary circuit connection between the coil and the valve and the contact collar and including an electric current supply, jump spark terminals connected to the burner by an insulating block, a secondary circuit connection between the spark terminals and the induction coil, and a means for operating the valve to control the flow of gas from the supply and to simultaneously engage the contact collar to complete the primary circuit and produce a spark between the spark terminals for igniting the gas.

3. A gas igniter, comprising a valve controlling a gas supply, a clamping collar provided with a split clamping portion and a contact collar mounted on the clamping collar and insulated therefrom, a burner connected to said valve, an induction coil, a primary circuit connection between the coil and the valve and the contact collar and including an electric current supply, jump spark terminals connected to the burner and insulated therefrom, a secondary circuit connection between the spark terminals and the induction coil, and a wrench for operating the valve to control the flow of gas from the supply and to simultaneously engage the contact collar to complete the primary circuit and produce a spark between the spark terminals for igniting the gas.

4. A gas igniter, comprising a valve controlling a gas supply, a removable collar connected to said valve and provided with a contact collar insulated therefrom, a burner connected to said valve, an induction coil, a primary circuit connection between the coil and the valve and the contact collar and including an electric current supply, jump spark terminals removably connected to the burner by an insulating block, a secondary circuit connection between the spark terminals and the induction coil, and removable means for operating the valve to control the flow of gas from the supply and to simultaneously engage the contact collar to complete the primary circuit and produce a spark between the spark terminals for igniting the gas.

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

CHARLES L. HAASE, JR.

Witnesses:

C. H. KEENEY,

ANNA F. SCHMIDTBAUER.