

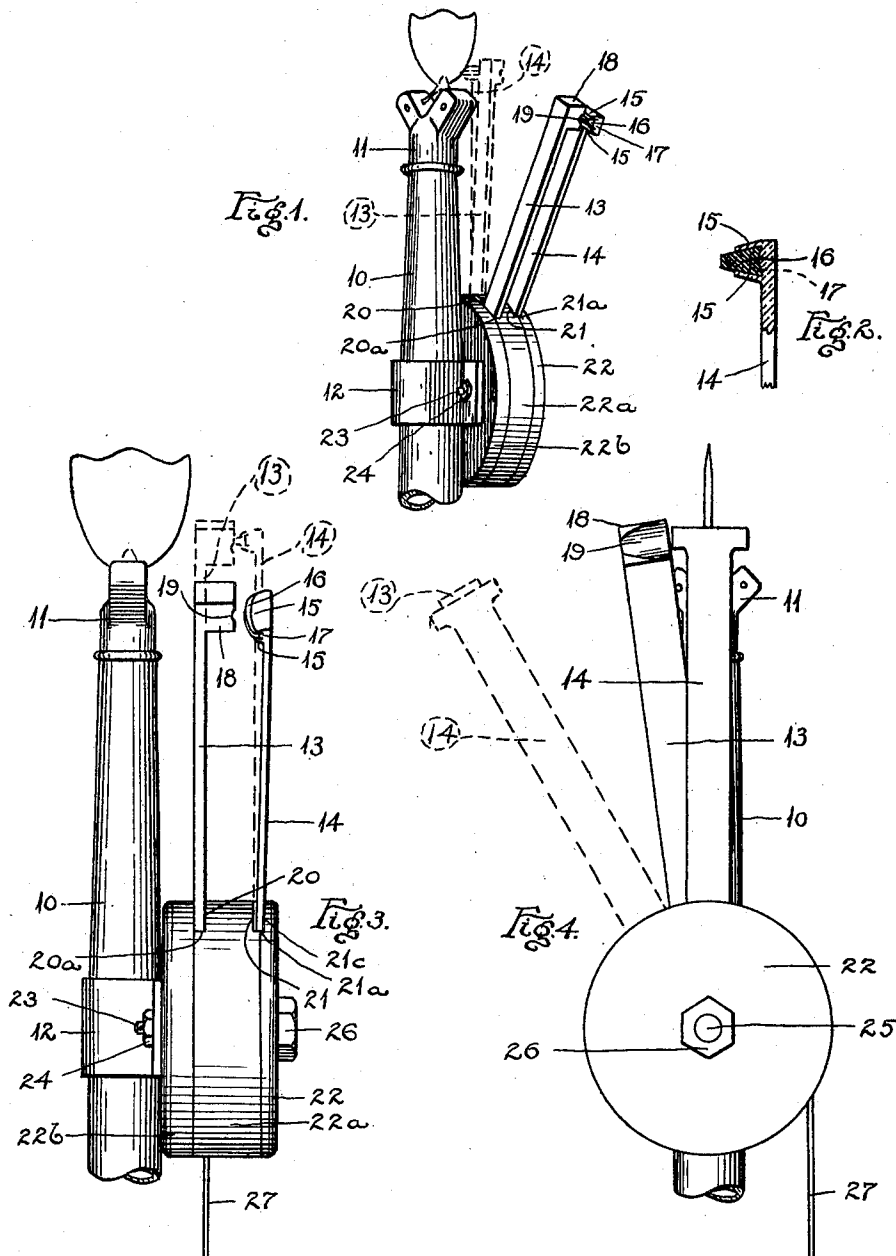
L. A. VOELL.
IGNITING DEVICE.

APPLICATION FILED MAR. 31, 1910.

1,029,158.

Patented June 11, 1912.

2 SHEETS—SHEET 1.



Witnesses:
Monroe E. Miller
Stedman J. Rockwell.

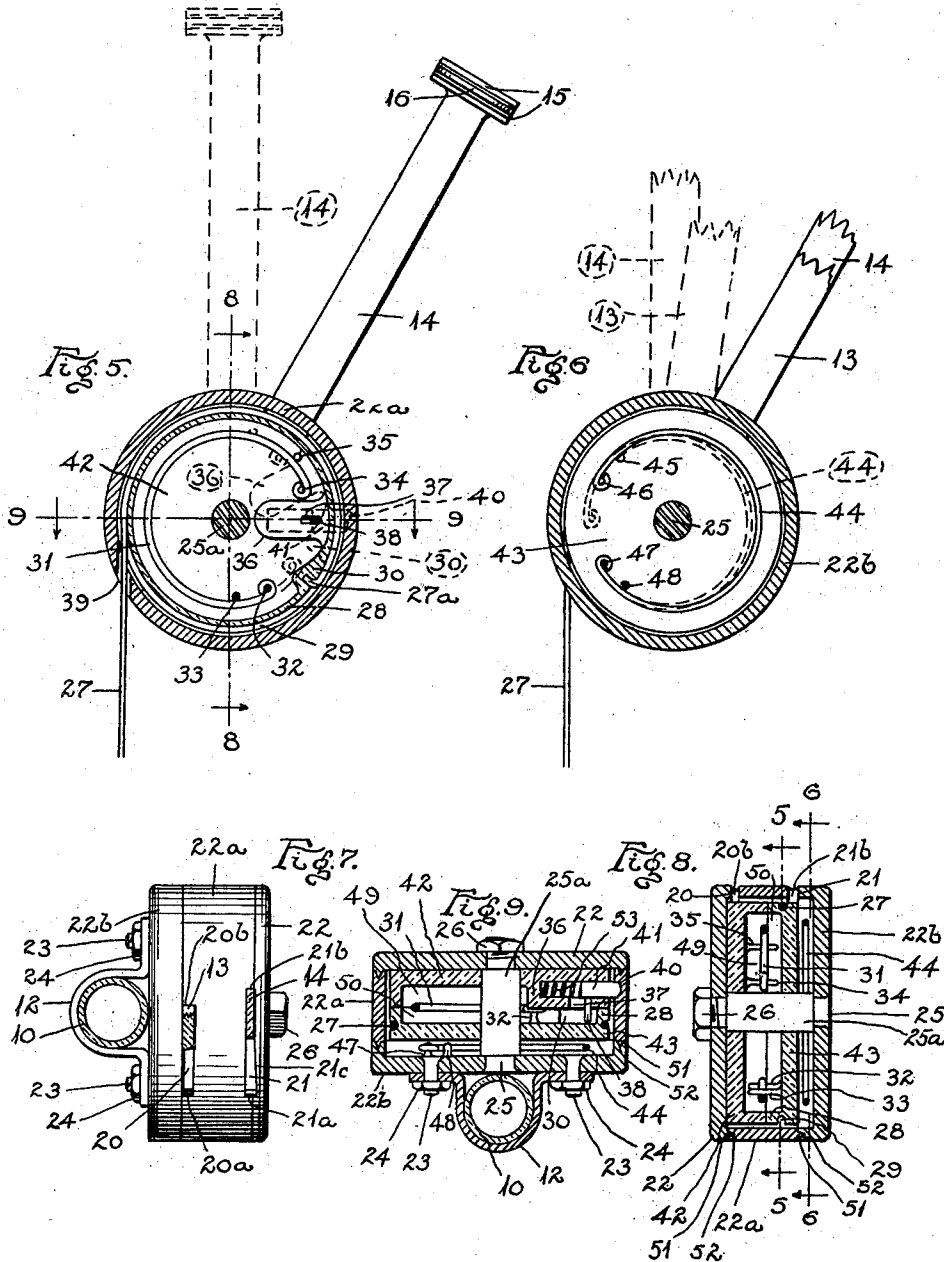
Louis A. Voell, Inventor
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UNITED STATES PATENT OFFICE.

LOUIS A. VOELL, OF FOND DU LAC, WISCONSIN.

IGNITING DEVICE.

1,029,158.

Specification of Letters Patent.

Patented June 11, 1912.

Application filed March 31, 1910. Serial No. 552,599.

To all whom it may concern:

Be it known that I, LOUIS A. VOELL, a citizen of the United States, residing at Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented certain new and useful Improvements in Igniting Devices, of which the following is a specification.

This invention is an igniting device or sparker particularly adapted and intended for lighting gas at a burner, such for example as those used in acetylene and other gas lamps.

The object of the invention is to provide an improved device by means of which the lamp may be lighted without opening the same, and it will be found particularly serviceable on automobiles, and will enable the driver to light the lamps without leaving his seat and without the delay and trouble incident to matches for the purpose of igniting the gas.

The invention comprises means for producing a spark mechanically by means of a steel and an abrasive, one of which will be rubbed across the other to produce a spark adjacent to the gas jet.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a perspective view of the device attached to a gas burner. Fig. 2 is a detail in section of the abrasive member. Fig. 3 is a side elevation of a gas burner with the device applied thereto. Fig. 4 is a similar elevation at a right angle to Fig. 3. Fig. 5 is a section on the line 5—5 of Fig. 8. Fig. 6 is a section on the line 6—6 of Fig. 8. Fig. 7 is a top plan view, the arms which carry the steel and abrasive being shown in section and in position at the completion of the ignition stroke. Fig. 8 is a section on the line 8—8 of Fig. 5. Fig. 9 is a section on the line 9—9 of Fig. 5.

The operating mechanism of the igniter is mainly inclosed in a casing consisting of two end or cap sections 22 and 22^b with an intermediate section or barrel 22^a between the same, the sections being held in fixed relation by lugs 51 on the respective sections fitting in sockets 52 in the others. The sections are held together by a central pin 25 having an enlarged middle part 25^a forming shoulders against which the caps rest, the pin being fastened to the cap 22^b, at one end, and threaded at the other end to receive a nut 26, on removal of which the

parts may be separated. The casing is secured to the pipe 10 of the burner 11 by a clamp consisting of a strap 12, bolts 23 and nuts 24.

Mounted to rotate upon the center pin within the casing, are circular plates 42 and 43 which are flanged at the rim to form cups or spaces 49 and 50 presented toward each other. The plate 42 has an arm 14 projecting therefrom, through a slot 21 in the top of the casing, and the plate 43 has an arm 13 projecting therefrom, through a slot 20 in the casing. These arms have a limited swing between the respective ends 21^a and 21^b and 20^a and 20^b of said slots. Normally, the arms rest against the ends 20^a and 21^a respectively, and the slot 21 has its outer edge slightly inclined, as indicated at 21^c, and the arm 14 has a slight tension which causes it to follow said inclined edge, so that as it swings in its forward or active stroke it will be pressed over toward the arm 13, in order to bring the steel and abrasive block carried by said arms into contact adjacent the burner tip. The outer end of the arm 13 has thereon a block 18 of special steel the face of which is grooved as at 19. The outer end of the arm 14 carries an abrasive block 16, held between the side lips 15 and end lips 17. This block may be cerium alloy, well known for the purpose.

The plate 43 has in its rim a groove 29 which receives a cord 27 which extends partly around the plate from the point 27^a (Fig. 5) where it is fixed to said plate, and passes through a hole 39 in the underside of the casing. By means of this cord the plates are turned and the arms operated. A spring 44 is fixed at one end to the cap 22^b by a pin 47, and at the other end to the outer face of the plate 43 by a pin 46. Pins 45 and 48 assist the action of the spring.

The plate 42 has on the inner face thereof a boss 36 with a radial recess drilled therein to hold a pawl or detent 41 pressed from behind by a spring 53 which normally holds it in engagement with the notch 40 in the barrel of the casing. A pin 38 projects from the pawl through a slot 37 in the boss, into the path of an internal cam 30 carried by or forming a part of the plate 43. A spring 31 is secured at one end to the plate 42 by a pin 34, and at the other end to the plate 43 by a pin 32, with guide pins 33 and 35 to assist the action.

The cord 27 may be passed through the bottom of the lamp and extended to the driver's seat, in automobile use; or otherwise located for convenient manipulation.

5 When the cord 27 is pulled the plate 43 is turned, thereby causing the arm 13 to swing over with the block 18 in position adjacent to the burner tip. The pawl 41 detains the plate 42. Just before the arm 13 reaches the end 20^b of its slot 20 the cam 30 carried by the plate 43 comes against the pin 38 and presses the pawl inwardly, releasing the same from the notch 40. The spring 31 then acts and quickly turns the plate 42 and the arm 14 swings with a sharp stroke to pass the abrasive block 16 across in contact with the steel 18, producing sparks which ignite the gas at the burner, the gas having been previously turned on as will be understood. On releasing the cord 27 the spring 44 returns the plate 43 and its arm 13 to original position, and the spring 31 carries back the plate 42, and the pawl 41 reengages the notch 40, and the device 25 is then ready for another operation.

It is to be understood that the structure may be varied in many respects from that shown and described, and no limitation is implied with respect to modifications.

30 What I claim as new is:—

1. An igniting device for gas burners comprising a pair of swinging arms pivoted concentrically beside the burner and having respectively spark-producing elements 35 operating by contact with each other, means connected to one of the arms to swing the same to bring the element carried thereby to igniting position adjacent the burner tip, means including a spring in tension between 40 said arms and automatically actuated by the movement of said arms to subsequently swing the other arm to such position and contact said elements, and means to return the arms to original position.

45 2. An igniting device for gas burners comprising a supporting casing, a pair of plates pivotally mounted therein, said plates having arms projecting outside the casing and provided at their outer ends with contact

spark-producing elements, a spring connecting the plates and tending to cause one to turn with the other, to bring said elements in contact, means connected to one of the plates to turn the same to swing its arm to igniting position beside the burner tip, a detent between the other plate and the casing, normally preventing the action of the spring, means carried by the first-mentioned plate to release said detent and allow the spring to act when said plate is swung to said position, and means to return the plates to original position. 50 55 60

3. An igniting device for gas burners comprising a supporting casing provided with converging slots, a pair of arms pivoted in the casing and extending through the slots and carrying contact spark-producing members at their outer ends, means to swing one arm to igniting position adjacent the burner tip, automatic means to subsequently swing the other arm to similar position, whereby the convergence of the slots will cause said member to contact, and means to return the arms to original position. 65 70

4. An igniting device for gas burners comprising a supporting casing, plates 42 and 43 pivoted side by side therein and having projecting arms provided at their outer ends with contact spark-producing members, a pull cord connected to the plate 43 to turn the same to swing its arm to igniting position adjacent the burner tip, a spring connecting said plates and tending to turn one with the other, a detent between the plate 42 and the casing and acting to prevent turn of the plate, a cam carried by the plate 43 and engaging the detent to release the same when the plate 43 is turned to said position, and a spring connected to the plate 43 to return said plates to original position. 75 80 85 90

In testimony whereof, I do affix my signature in the presence of two witnesses, at Fort Wayne in the county of Allen and State of Indiana this 28th day of March, 1910.

LOUIS A. VOELL.

Witnesses:

GEORGE JACOBS,
AUGUSTA VIBERG.