

H. P. ROSTIN.
GAS IGNITING APPARATUS.
APPLICATION FILED JUNE 29, 1912.

1,042,971.

Patented Oct. 29, 1912.

Fig 1

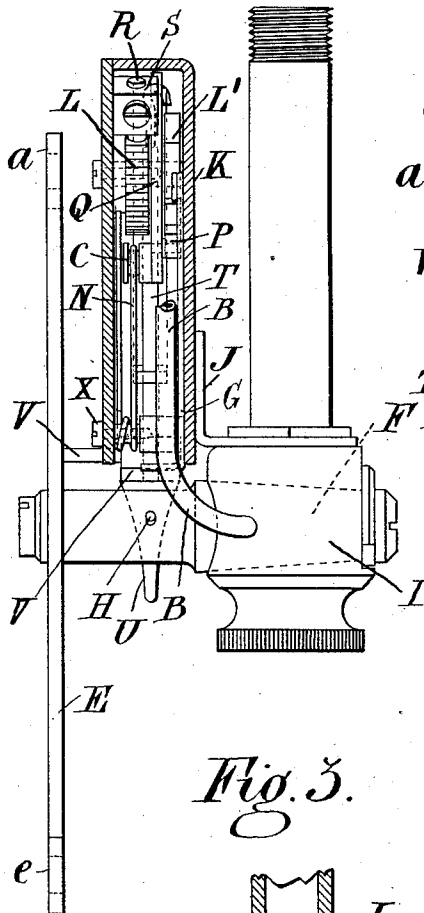


Fig. 2.

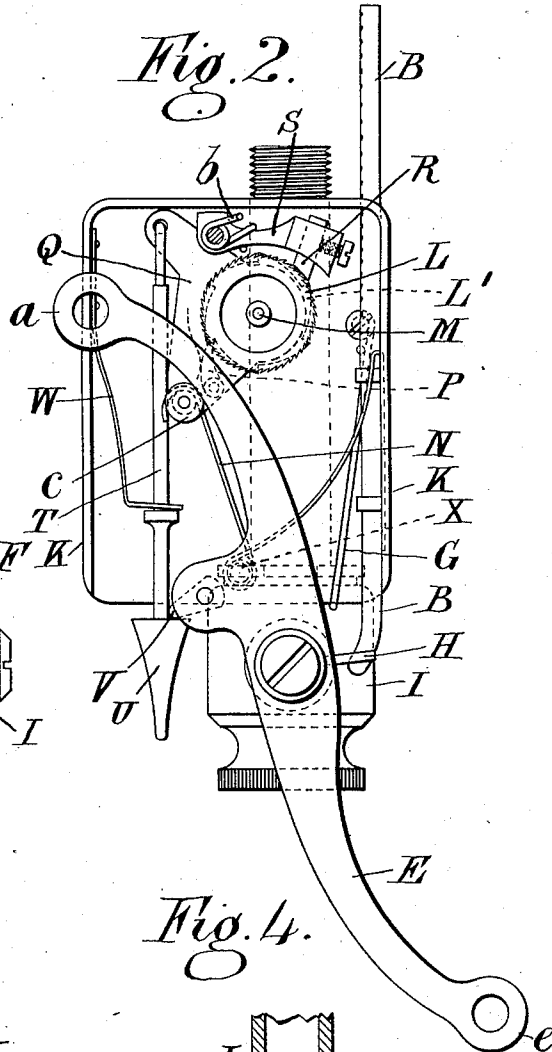


Fig. 3.

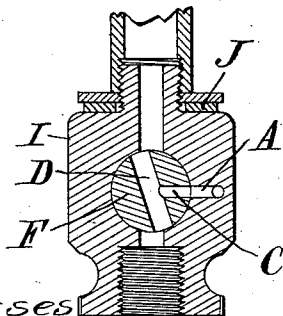
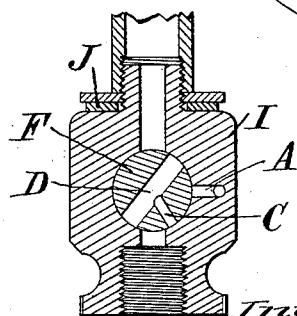


Fig. 4.



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UNITED STATES PATENT OFFICE.

HELIODOR PAUL ROSTIN, OF TOTTENHAM, ENGLAND.

GAS-IGNITING APPARATUS.

1,042,971.

Specification of Letters Patent.

Patented Oct. 29, 1912.

Application filed June 29, 1912. Serial No. 706,787.

To all whom it may concern:

Be it known that I, HELIODOR PAUL ROSTIN, a subject of the German Empire, residing at Tottenham, England, have invented certain new and useful Improvements in Gas-Igniting Apparatus, of which the following is a specification.

My invention relates to that class of apparatus employed for lighting gas at a burner and in which mechanism is operated by the movement of the gas cock to create sparks for lighting the gas at a by pass, and consists of an improved construction of such mechanism whereby the gas supply to the burner is first established, and then the pilot light is ignited by the sparks to light the gas at the burner, after which the pilot light is cut off.

My invention will be clearly understood from the following description aided by the annexed drawings in which:—

Figure 1 is an elevation partly in section showing the device affixed to a gas valve and pipe. Fig. 2 is a side elevation of the device with the cover removed. Fig. 3 is a sectional view of the gas plug and its casing, the plug being in position to provide for the passage of gas to the burner and by pass. Fig. 4 is a sectional view of the gas plug and its casing with the plug in position to cut off the flow of gas.

The construction comprehends a gas cock which may be of ordinary construction and involves the casing I and the gas plug F. The plug F is provided with a main passage D by which the burner is put in communication with the supply pipe and with a secondary passage C which extends laterally from the passage D and is adapted to momentarily communicate with the duct A in the casing I, the said duct being in communication with a by pass tube B. The communication of the passage C and the duct A is established by moving the gas plug beyond its normal open position and is interrupted when the gas plug is returned to its normal open position, as will be hereinafter described. The movements of the gas plug are effected by a lever E which is actuated to turn the gas plug F from the position shown in Fig. 3 to its normal open position by a spring G, the latter acting upon a lug H on the projecting end of the plug F.

I connect the casing K of the igniting arrangement to the gas cock casing I by a

clip J, and in this casing K a wheel L is mounted which has a toothed or rough edge on one side and revolves on a spindle M in close proximity to the by pass outlet or to holes in the by pass tube B. This wheel L is rotated by a spring N through the intermediary of a frame Q which carries a pawl P to act on teeth L' on another part of the wheel L. The frame Q is pivoted on the axle M of the wheel L or in a similar manner, and its movement is transmitted by the pawl P to the wheel L which rubs against a piece of mineral or alloy R, and thereby produces sparks by friction to ignite the gas flowing through the by pass tube. The piece of mineral R is carried by a spring-held arm S which is pivoted in the casing K.

Depending from the frame Q is a rod T having a cone shaped end U against which a nose V on the lever E acts, and the rod T is held pressed against the nose V by a spring W secured to the casing K. The spring N intermediate its length is coiled about a pin X and one end is secured to the frame Q as at *a* while the other bears against the casing K.

In Fig. 2 the position of the operating parts is such that the gas is shut off from both burner and by pass tube. To light the gas the end *a* of the lever E is pulled down until said lever is approximately horizontal, and in such movement the nose V presses upon the top of the cone shaped end U of the rod T and pushes said rod downwardly, thus moving the frame Q about its pivot M, in such direction that the pawl P rides over the teeth L' of the wheel L, the latter being held stationary by the grip of the mineral or alloy piece R which is pressed against the wheel by the spring *b* acting on the arm S. During this movement the frame A tensions the spring N, as is obvious. Just before the completion of the movement of the lever E the gas plug has been turned slightly beyond its normal open position in order to establish the communication of the passage C and duct A and thereby permit gas to flow through the by pass tube, as seen in Fig. 3. Immediately after the nose V has disengaged the cone shaped end U of the rod T, the spring N turns the frame Q back and lifts the rod T and, at the same time, the pawl P engages the wheel L and moves it around quickly, the teeth or rough edge of the wheel L striking or rubbing

against the mineral piece R, and producing sparks, which ignite the gas in the tube B. When the tip of the by pass tube is not located immediately adjacent the sparking device, such by pass tube passes through the casing K as shown in the drawings and is provided with a series of holes through which the gas emanates and as lighted travels up to the burner end in a manner well known. During the movement of the lever E the pin H will act against the spring G secured in the casing K and put the same in tension and when said lever after having been pulled its full distance, is released, this spring G will return the lever E a short distance only, leaving the plug F in position to cut off the communication with the gas supply pipe and the duct A, but at the same time to fully establish the communication of said supply pipe to the burner. To extinguish the burner the end e of the lever E is pulled to restore said lever to the position shown in Fig. 2 when the gas to the burner will be cut off and the spring W will have returned the piece U to a position beneath the nose V.

My invention is equally applicable for igniting gas burners of the domestic or household kind, or those employed for lighting large buildings, for street and other lighting, gas stoves or other gas consuming apparatus.

What I do claim as my invention and desire to secure by Letters Patent is:—

1. Gas igniting apparatus consisting of a casing, a toothed wheel, a frame pivoted on the axis of the toothed wheel and carrying a pawl engaging the toothed wheel, a rod jointed to the frame and carrying an enlarged piece on the end, a spring controlling the frame and a spring controlling the rod, a spring controlled arm carrying a piece of mineral or alloy which when acted upon by the toothed wheel produces

sparks, in combination with a plug or cock (positioned in the gas burner pipe) and having a by pass passage leading from the ordinary passage to a by passage in the plug casing, a spring controlled arm on said plug, a nose piece on the arm for engaging with the enlarged piece on the end of the rod, all being arranged and operated substantially as described with reference to the annexed drawings.

2. In a friction gas igniter, a by pass tube and a gas burner, a gas plug having passages for communication with said tube and said burner and movable first to a position wherein said passages are in communication with said tube and burner respectively and thereafter to a position wherein the by pass tube is cut off but the communication of the burner is maintained, a lever for turning said plug, a toothed and roughened wheel, a spark producing body for engagement thereby, a movable frame having a pawl to engage said wheel, a spring for moving said frame in a direction whereby the pawl engages the teeth of the wheel and rotates the latter, means for moving the frame in the opposite direction, comprising a rod depending from the frame and having an enlargement at its lower end and a nose provided on said lever for engagement against said enlargement, and a spring for producing a slight backward movement of said lever immediately upon its release after an operative movement thereof whereby the passage of gas through the by pass tube is interrupted.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HELIODOR PAUL ROSTIN.

Witnesses:

WM. O. BROWN,
FREDK. HUTCHINGS.