

A. WYNER, NÉE GUTTMANN.
GAS KINDLING DEVICE.
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1,052,197.

Patented Feb. 4, 1913.

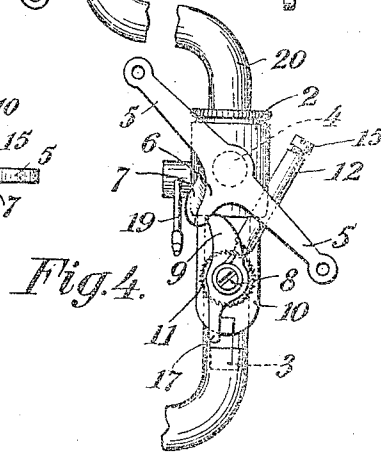
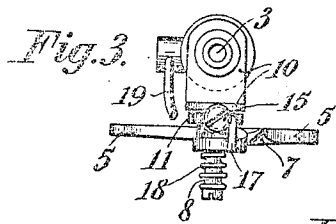
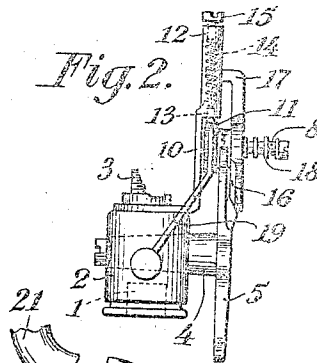
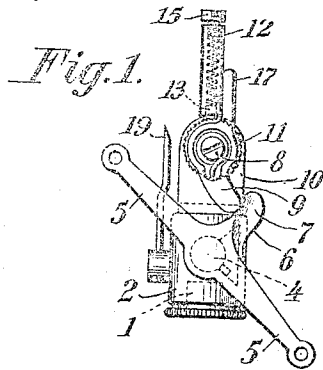


Fig. 5.

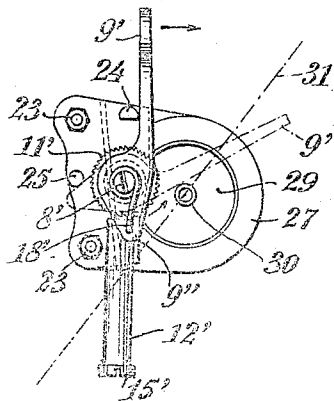
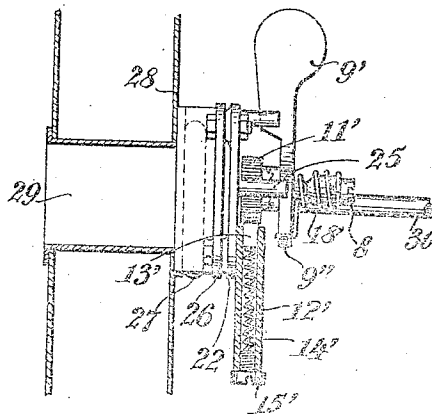


Fig. 6.



WITNESSES

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GAS-KINDLING DEVICE.

1,052,197

Specification of Letters Patent.

Patented Feb. 4, 1913.

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To all whom it may concern:

Be it known that I, AUGUSTE WYNER, *née* GUTTMANN, of 15 Nibelungengasse, Vienna, I, in the Empire of Austria-Hungary, have invented Improvements in Gas-Kindling Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Gas kindling devices are already known in which a spring controlled lever is rotated and when released rotates a friction wheel by means of a clutch acting in one direction, this wheel in passing quickly over a fixed pyrophorous piece of metal (for instance, an alloy of the metals cerium and iron, say 98 to 25% cerium and 2 to 75% iron) produces a spark for forming a kindling flame which then kindles the gas issuing from the burner. This type of gas kindling devices suffers from a very important defect owing to the fact that the lever operating the friction wheel is not given a definite position of repose so that it frequently binds and assumes an incorrect position.

The present invention has for its object to obviate this defect by providing a fixed stop for the lever operating the friction wheel, the said lever being normally pressed against this stop by a spring and forced back when the kindling has been effected so that it invariably assumes the correct operative position and that it is impossible for the mechanical device to fail.

A kindling device of this construction may be employed for lamp burners or for stove burners and is conformed to the respective mode of application.

The invention is illustrated in the accompanying drawings in which:

Figure 1 is a front elevation. Fig. 2 is a side elevation and Fig. 3 is a plan of a constructional form of the device adapted for upright incandescent burners. Fig. 4 shows a second form of construction and Figs. 5 and 6 represent a kindling device for gas stoves with the adjoining parts of the stove in two views, partly in section.

The gas kindling device is fitted in the known manner being mounted with the internal thread 1 of the cock casing 2 on the gas bracket, the burner being screwed onto the outer external thread 3 (Figs. 2 and 3.)

The plug 4 passing through the casing 2 is

provided on one side with a two-armed lever 5 mounted on a pivot; the ends of this lever can be provided (in the manner of the usual by-passes) with cords or chains which if desired can be carried to a distance so that the lever 5 can be rotated from below in both directions. In the middle of the lever 5 a somewhat shorter arm 6 is provided with a chamfered face 7 the length of which is such that when displaced it is able to operate an arm 9 mounted on a pivot 8 located above the cock plug. The pivot 8 may be arranged on an angular lug 10 secured to the upper external thread of the burner and it also carries the friction wheel 11 against which the pyrophorous metallic part 13 contained in a small tube 12 in the angle piece 10 is constantly pressed by means of a helical spring 14; the screw 15 closing the tube permits of adjusting the spring 14.

The arm 9 comprises a conical face 16 and an angular nose 17 which under the influence of the helical spring 18 which is also mounted on the pivot 8 is constantly pressed toward the tube 12, one end of this spring 18 being connected with the pivot 8 and the other end with the arm 9. On its hub the arm 9 carries one half of a claw clutch the other half of which is mounted on the friction wheel 11. The pressure of the spring 18 produces constant engagement between the clutch members. The spring 18 is therefore both a compression spring and a torsion spring and thus permits of rotation and also axial displacement of the arm 9, 17 operating the friction wheel.

The operation is as follows: If the left hand side of the plug cock lever 5 is drawn downward the arm 9 is displaced toward the left hand by the projection 6, the clutch teeth sliding over each other until the arm 6 releases the arm 9 at which moment the latter springs back under the influence of the spring 18, the friction wheel is rotated and a spark produced. This spark kindles the stream of gas issuing at the kindling flame tube 19 and thus produces a kindling flame which lights the main flame and which is shut off when the cock has been completely rotated.

It is obvious that such an arrangement can be utilized both for inverted and upright burners. For inverted incandescent burners (see the construction illustrated in Fig. 4) it is advantageous to direct the kindling flame downward so that it passes

through the by-pass hole in the globe and thus kindles the main flame. In both applications of the device the tube 12 can be set obliquely from the friction wheel 11 to the cock 2 thus rendering the construction shorter (see Fig. 4 for inverted lighting).

The device illustrated in Fig. 4 enables the gas kindling device to be inserted in a lateral cranking 20 of the gas supply pipe 21 of the inverted burner so that it is removed from the path of the hot current.

The kindling device for gas stoves represented in Figs. 5 and 6 consists of a base plate 22 in which fixing holes 23 are provided and upon which the pivot 8' for the friction wheel 11' is mounted. The friction wheel is provided with clutch teeth acting in one direction and with which the clutch teeth of the handle 9' engage under the influence of a helical spring 18' coiled around the shaft 8' upon which this handle is rotatable; this spring is secured to the shaft and to an extension 9'' of the handle. The base plate 22 comprises the stop 24 and also a second stop 25. A socket 12' preferably formed in one piece with the base plate forms a guide for the pyrophorous metallic part 13' and receives a spring 14' and a closing screw 15'. As shown in the drawing all the parts of the kindling device such as the handle 9', friction wheel 11' and guide sleeve 12' are arranged upon a plane base plate 22, by means of which the device can be secured in a simple manner by means of screws or the like to the angular lugs 26 of a ring 27. The ring 27 is fixed to the wall 28 of the gas oven at the inlet 29 for the kindling flame. The kindling device is mounted in such a manner that the spark produced strikes the gas issuing from the kindling conduit 29 and kindles the same. The operation of the device is as follows: If the handle 9' is rotated in the direction indicated by the arrow in Fig. 5, the spring 18' is put under additional tension and the teeth of the handle pass inoperatively over the teeth of the friction wheel 11'. In this movement of rotation the arm 9'' strikes against the stop 25 thereby preventing the handle from being rotated too far (see position shown in broken lines). In particular this arrangement prevents the spring 18' from being overstrained or fractured. If the handle 9' is suddenly released it springs under the action of the spring 18' onto the stop 24 thereby rotating the wheel 11'. The spark thus produced impinges against the gas and kindles it.

In practice the kindling device is mounted in an inclined position so that the line 31 (Fig. 5) becomes vertical.

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

1. In a gas-kindling device, the combination of a support, a pyrophorous part carried thereby, a friction-wheel engaging said part and journaled in the support, a lever fulcrumed in the support, a stop limiting the movement of the lever in one direction, and a spring normally holding the lever against the stop, said lever and friction wheel having a clutch active to transmit motion to the friction-wheel from the lever when the latter is turned toward the stop and inactive when said lever is turned away from the stop, substantially as described.

2. In a gas kindling device, the combination of a support, a pyrophorous part carried thereby, a friction wheel engaging said part and journaled in the support, a lever fulcrumed in the support and movable axially, a stop limiting the movement of the lever in one direction, said lever and friction wheel having a toothed clutch active to transmit motion to the friction wheel from the lever when the latter is turned toward the stop and inactive when said lever is turned away from the stop, and a helical torsion spring normally holding the lever against the stop and in clutching engagement with the friction wheel, substantially as described.

3. In a gas kindling device, the combination of a support, a pyrophorous part carried thereby, a friction wheel engaging said part and journaled in the support, a lever fulcrumed in the support and movable axially, a stop limiting the movement of the lever in one direction, said lever and friction wheel having a toothed clutch active to transmit motion to the friction wheel from the lever when the latter is turned toward the stop and inactive when said lever is turned away from the stop, a helical torsion spring normally holding the lever against the stop and in clutching engagement with the friction wheel and an actuating member pivotally movable in one direction into wiping contact with one side of said lever to turn the same against the tension of the spring, said member having a chamfered face adapted to wipe against the lever on movement of said member in the other direction, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUSTE WYNER, *née* GUTTMANN.

Witnesses:

MICHAEL A. WYNER,
ALBIN SCHILLER.