Oct. 9, 1928. 1,686,617

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FUME GUARD FOR COOKING RANGES

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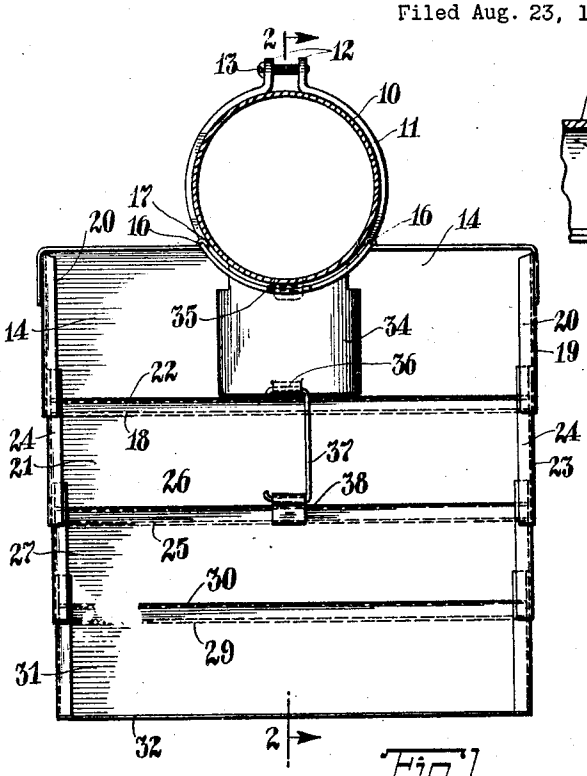


Fig. 1.

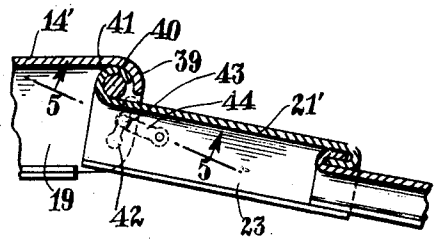


Fig. 4.

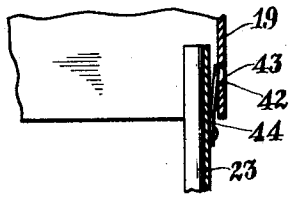


Fig. 5.

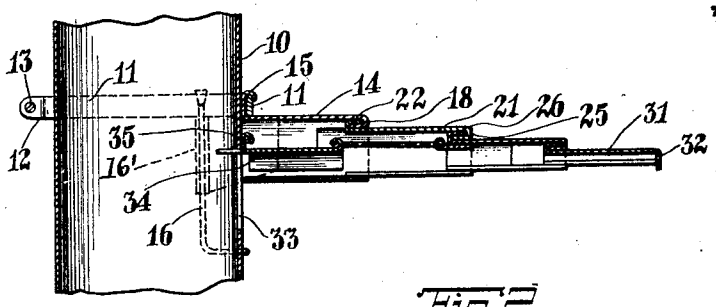


Fig. 2.

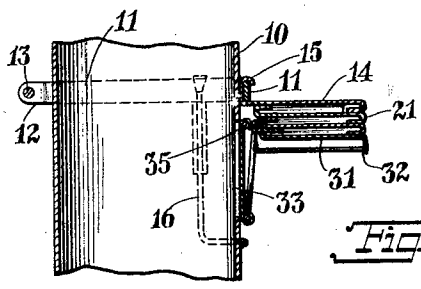


Fig. 3.

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UNITED STATES PATENT OFFICE.

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FUME GUARD FOR COOKING RANGES.

Application filed August 23, 1927. Serial No. 214,802.

This invention relates to an extensible fume guard for cooking ranges and has for its object the provision of an extensible canopy adapted to be extended over a cooking range to direct the fumes arising therefrom to an aperture in a flue.

Another object of my invention is the provision of an extensible canopy operatively connected with a flue door adapted to effect opening of the latter when extended over a range.

Another object of my invention is the provision of an extensible canopy adapted to be mounted on a flue pipe to be extended therefrom over a range when desired and to be rotated downwardly at an inclination to horizontal surface of the range.

Other objects will appear hereinafter the novel features and combinations being more clearly set forth in the appended claims.

In the drawing:

Fig. 1 is a bottom plan view of a fume guard embodying my invention.

Fig. 2 is a transverse sectional view taken on line 2—2 of Fig. 1 illustrating my improved fume guard in upright position.

Fig. 3 is a central transverse sectional view of my improved fume guard in closed position.

Fig. 4 is a fragmentary sectional view of a modified form of my invention.

Fig. 5 is a sectional view taken on line 5—5 of Fig. 4.

Referring particularly to the drawings the numeral 10 designates a tubular flue pipe similar to that ordinarily employed on gas, electric or other forms of cooking ranges for carrying away the products of combustion and the fumes of the materials being heated. A ring 11 comprising end ears 12 is disposed around the flue pipe 10 and is secured together at its ends by a screw 13 disposed through apertures in the ears 12. A rear shelf element 14 or canopy section comprising an upwardly disposed edge portion 15 is mounted on the flue pipe 10 by the ring 11 and by a substantially U-shaped wire 16 which is suspended from the ring 11 in close proximity to the sides of the flue pipe. It should be understood that the upwardly disposed edge portion 15 of the rear canopy section 14 is disposed between the side of the flue pipe 10 and the ring 11 and that the side wings 16′ of the section 14 are wound at their rear edge portion around the downwardly disposed portions of the U-shaped wire element 16 as shown at 17 in Fig. 1.

The rear canopy section 14 is thus rigidly mounted on the flue pipes 10 and comprises a substantially horizontal rectangular top plate having a downwardly and inwardly disposed front edge portion 18, substantially vertical sides 19, and a lower flange 20. The rear edge portion of the top plate of the canopy section 14 is provided with a substantially semi-circular aperture for accommodating a portion of the flue pipe 10 as shown in Fig. 1.

A canopy or guard section 21 of smaller dimensions than the section 14 is slidably mounted below the top plate of the canopy section 14 and comprises a rear edge portion 22 which is disposed upwardly and forwardly as shown in Fig. 2 and is adapted to interlock with the front edge portion 18 of the section 14 for limiting the extensibility of the section 21 relative to the section 14. It should also be understood that the interlocked edge portions of the section 14 and 21 also provide a substantially leak proof joint therebetween for preventing the escapement of fumes when the device is extended as illustrated in Fig. 2.

The canopy section 21 comprises side elements 23 having flanges 24 thereon which are slidably engaged on the upper surface of the flanges 20 of the side elements 19 of the rear stationary section 14. The forward edge portion of the canopy section 21 is provided with a downwardly and rearwardly disposed edge portion 25 which is adapted to coact with the upwardly and forwardly disposed edge portion 26 of a third canopy section 27 which is of smaller dimensions than the canopy section 21 and slidably mounted therein. The front edge portion 28 of the canopy section 27 is similarly provided with a downwardly and rearwardly disposed edge portion 29 which is adapted to cooperate with the upwardly and forwardly disposed edge portion 30 of a fourth and forwardmost canopy section 31 which is of smaller dimension than the section 27 and which is slidably mounted therein. It should be understood that the above described construction is such as may be extended to the positions shown in Figs. 1 and 2 for positioning the canopy section in substantially horizontal relation over the horizontal surface of a range not shown in the drawing and that the above described sections may be retracted to the compact arrangement illustrated in Fig. 3 when the device is not in use.

The rear canopy section may be employed as a shelf for storing receptacles at all times either when the guard is in extended or compact position. It should also be understood that the sides of the canopy serve to prevent the fumes from escaping from therebelow and in directing the same in to the flue pipe 10 as hereinafter more clearly set forth. A front flange 32 is provided on the front section 31 for preventing the escapement of fumes around the front edge of the guard.

An aperture or port 33 is provided in the pipe 10 below the guard and is adapted to be covered or closed by a door 34 pivotally attached at 35 to the side of the flue pipe 10. The door 34 is provided at its lower extremity with a loop member 36 in which the rear end of the link 37 is journaled. The forward end of the link 37 is journaled in a loop member 38 soldered to the rear portion of the canopy section 27 as illustrated in Fig. 2. It should be understood that as the guard sections are moved to extended position, the link 37 is pulled forwardly and raises the door 34 to open position and that as the guard sections are moved to retracted position, the link member is moved rearwardly and closes the door 34 positioning the same over the aperture 33 in the flue member 10 as shown in Fig. 3.

It should be understood that the fumes and products of combustion arising from the range are confined beneath the guard member and drawn into the flue pipe 10 before they are able to pass into the space above and around the guard.

In the modified form of my invention illustrated in Figs. 4 and 5, the rear canopy section 14′ is provided at its front edge portion with a down-curved substantially arcuate extension 39 and a rod 40 disposed longitudinally across the front portion of the section 14 secured at its extremities in the sides 19′ of the section 14′. The forward end of the canopy section 21′ is provided with an upwardly disposed curved extension 41 which is adapted to be journaled on the rod 40 when the guard is extended. An irregular slot 42 of arcuate shape, is provided in the side portion 19′ of the rear section 14′ and is adapted to receive a projection 43 mounted on the end of a spring 44 attached to the side of the section 23′ as shown in dotted lines in Fig. 4. The projection 43 is adapted to register with the slot 42 when the guard is in extended position and is adapted to be pressed inwardly against the action of the spring 44 and reengaged in another position of said slot when it is desired to alter the inclination of the forward portion of the guard relative to the rear section 14′ thereof. It should be understood that the guard member may be provided with as many sections as illustrated in Figs. 1, 2 and 3 and with more, if desired; the above described arrangement being such as will permit the inclination of the guard to be varied as desired.

Having thus fully described and shown an embodiment of my invention what is desired to be secured by Letters Patent of the United States is:

1. The combination with a flue pipe having an aperture in the side thereof, of a stationary rear canopy section rigidly mounted on said flue pipe above said aperture, extensible canopy sections mounted on said stationary canopy section, a door pivotally mounted on the side of said flue pipe adapted to close the aperture therein, and a link operatively connected at one end to said door and at the other end to one of said extensible canopy sections adapted to raise said door when said extensible sections are moved forwardly for uncovering the aperture in said flue pipe and to lower said door when said extensible canopy sections are moved rearwardly for closing said aperture.

2. The combination with a flue pipe having an aperture therein, of a door pivotally mounted on said flue pipe adapted to cover said aperture, a stationary canopy section mounted on said flue pipe, a rod disposed across the forward end thereof, telescoping canopy sections slidably mounted on said stationary section, a curved extension on the edge of one of said telescoping sections adapted to be journaled on said rod when said telescoping sections are in extended position for permitting the latter to be disposed at an inclination to said stationary section, and a link operatively attached at one extremity to said door and at its other extremity to one of said telescoping sections adapted to open said door for uncovering the aperture in said flue when said canopy is extended and to close said door for covering said aperture when said telescoping sections are retracted.

3. The combination with a flue pipe having an aperture in the side thereof, of a stationary rear canopy section rigidly mounted on the said flue pipe above said aperture, extensible canopy sections mounted on said stationary canopy section, a door pivotally mounted along its top edge to the side of said flue pipe above the said aperture, and capable of closing the aperture, a loop member formed on the lower edge of the door, and a link hingedly engaged in the loop member, and pivotally connected with one of the extensible canopy sections for raising the door and lowering the door as the extensible sections are extended or retracted.

In testimony whereof I have affixed my signature.

JOSEPH JURALEWICZ.