March 11, 1930. J. V. PETRELLI 1,749,778

REGISTER LOCK

Filed Feb. 18, 1928

Fig. 1.

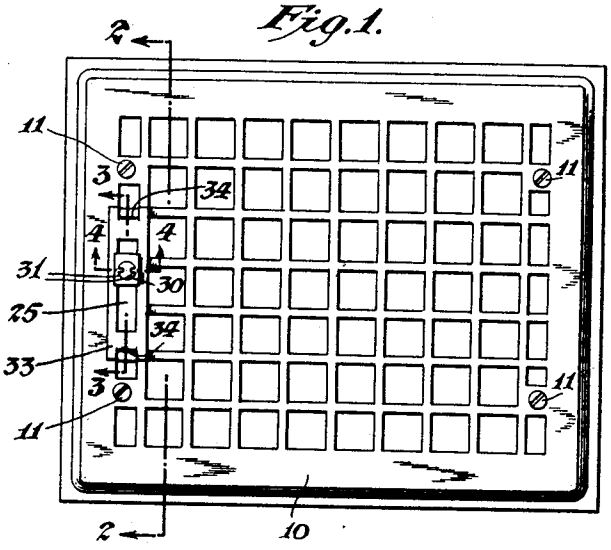


Fig. 2.

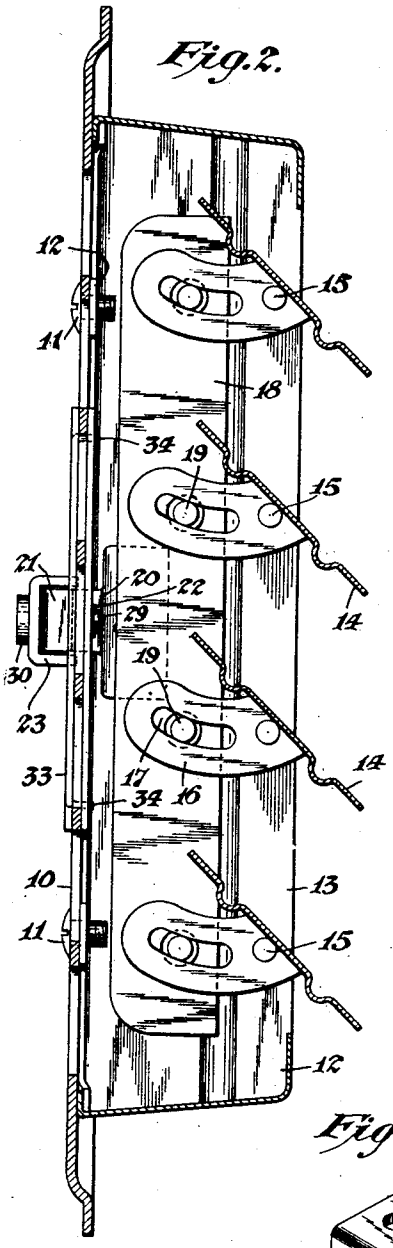


Fig. 3.

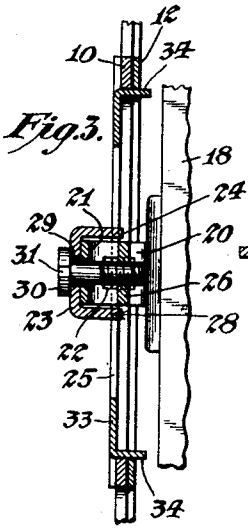


Fig. 4.

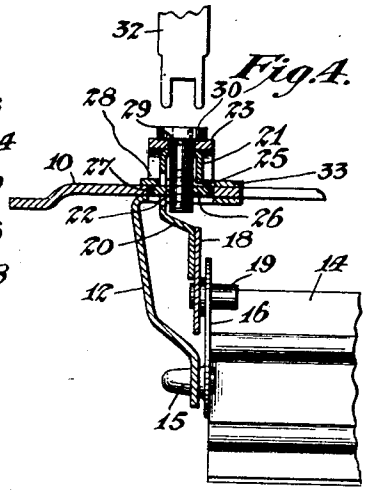


Fig. 5.

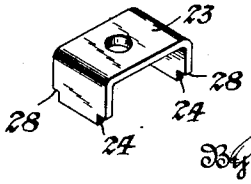
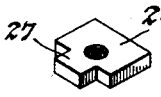


Fig. 6.



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UNITED STATES PATENT OFFICE

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REGISTER LOCK

Application filed February 18, 1928. Serial No. 255,217.

This invention relates to ventilators of the type having movable shutters controlling a heating conduit for example, and has for its object to provide means for maintaining said shutters in adjusted position so that they will not become accidentally moved by jar or otherwise to a different position from what is desired. Another object is to provide a simple, inexpensive, yet reliable and easily adjustable means for accomplishing this purpose quickly. In hot air ventilators designed for household use, for instance, it has been customary to have a grating with ventilator shutters mounted behind them and an actuating handle of some sort projecting through the grating for controlling the shutters. These have been purposely made easily movable in order to avoid sticking so far as possible with the result that they frequently slip from the position intended.

According to this invention there is provided a grating behind which is mounted one or more shutters controlling the passage of fluid through the grating, and means is provided for actuating the shutters from the front side of the grating, which means is also provided with a locking mechanism for said actuating means and shutters to hold them in adjusted position. Specifically this locking means includes a threaded member arranged to clamp the actuating means to the sides of an elongated slot in the grating.

Referring to the drawings:

Fig. 1 is a plan view of the ventilator of this invention showing a grating.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Fig. 4 is a section on the line 4—4 of Fig. 1.

Fig. 5 is a detail of the yoke member forming a part of the locking mechanism.

Fig. 6 is a detail of the nut also forming a part of the locking mechanism.

The grating 10 is preferably a stamping secured to the housing 12 by screws 11. Behind the grating the housing is provided with a large opening 13 of nearly the same dimensions as the grating opening and substantially coaxial therewith. A number of shutters 14 are pivoted at 15 to the housing side walls so as to be rotatable for opening or closing the opening 13 and the passage to which it is connected. As shown in Fig. 2 these shutters rotate in a clockwise direction to close and in a reverse direction to open.

Each shutter 14 has a projection 16 connected therewith at one end and of the shape illustrated, extending into the housing and provided with an arcuate slot 17 in each such projection. A slidable actuating member 18 is provided with pins 19 fitted within the slots 17 so that on translation of the member 18 in one direction the shutters are closed and on its movement in the opposite direction they are opened. As shown in Fig. 4 this slidable actuating member 18 is located along one side of the housing 12.

Projecting forwardly from the member 18 is an extension 20 of the shape shown in Figs. 2 to 4 inclusive and provided with a bent-over end portion 21 extending through the elongated opening 25 in the grating so that the shutters may be actuated from the opposite side of the grating. As shown in Figs. 3 and 4 the extension 20 is provided with a perforation 22 in one side through which a nut 26 may project. Extending over the top of the bent-over portion 21 is a yoke 23 shown in Fig. 5 as provided with reduced end portions 24 of the size to fit in the longitudinal opening 25, shoulders 28 shaped to engage the top of the sides of the opening as shown in Figs. 3 and 4. The nut 26 is provided with a reduced end 27 which is shaped to enter the opening 22. A screw threaded member 29 passes through the yoke 23, bent-over end portion 21, and engages the nut 26 as shown in Fig. 4. When this threaded member is tightened the nut is clamped against the under-sides of the strip forming the opening 25 while the head 30 of the threaded member clamps the yoke firmly in position and locks the extension 20 against shifting. The head 30 of this threaded member 29 is preferably provided with opposite slots 31 as shown in Fig. 1 so that a key 32 will fit into the slots and be adapted for turning the threaded member to loosen or tighten the clamp. Instead of having the nut engage the inside of the grating a wear-

ing strip 33 is provided as shown in Figs. 3 and 4 to fit in the opening and take the clamping action of the threaded member 29 of nut 26 and yoke 23. This strip 33 is provided with bent-down ends 34 which prevent its having any motion longitudinally of the slot relative to the grating but in case the pins 19 should stick and the actuating member 18 raised slightly there would be no excessive pressure on the extension 20 as the wearing strip 33 is capable of being raised slightly from the grating if necessary.

I claim:

1. The combination with a grating, of a housing on one side of and connected to said grating, and provided with an opening substantially coaxial with said grating, shutters pivotally mounted to said housing and controlling the passage of gas through said grating, slidable means for actuating said shutters from the side of said grating opposite the shutters, the grating having an elongated opening through which said actuating means projects, and threaded means carried by said actuating means for cooperation with the sides of said elongated opening for clamping said actuating mechanism in adjusted position, said threaded means comprising a nut non-rotatably mounted for cooperation with the sides of said elongated opening on one side, a headed bolt in threaded engagement with said nut, and also cooperating with said slidable means, and a washer member beneath the bolt head and shaped to enclose the projecting end of said actuating means and fit into said elongated opening and also engage its sides opposite the nut in such manner that tightening the bolt clamps said washer member and nut against the sides of said elongated opening.

2. The combination with a grating of a housing extending around the periphery of said grating on one side thereof, a series of shutters for closing the opening in said housing and each having journals at its ends pivoted in the sides of said housing, said shutters having arms carrying the journals at one end of the several shutters, said arms being extended beyond the journals and provided with slots extending longitudinally of the arms, a reciprocable bar having pins projecting into said slots to rock the shutters between shut and open positions as the bar is reciprocated, a bracket having one end fixed to said bar, a slotted guide on said grating through which the other end of said bracket extends, a flange on said housing beneath the grating and having a slot registering with the slot of said guide, a plate between said guide and flange and carrying said bracket, and means above the plate for moving the same whereby to move said bar.

3. The combination with a grating of a housing extending around the periphery of said grating on one side thereof, a series of shutters for closing the opening in said housing and each having journals at its ends pivoted in the sides of said housing, said shutters having arms carrying the journals at one end of the several shutters, said arms being extended beyond the journals and provided with slots extending longitudinally of the arms, a reciprocable bar having pins projecting into said slots to rock the shutters between shut and open positions as the bar is reciprocated, a bracket having one end fixed to said bar, a slotted guide on said grating through which the other end of said bracket extends, a flange on said housing beneath the grating and having a slot registering with the slot of said guide, a plate between said guide and flange and carrying said bracket, and means above the plate for moving the same whereby to move said bar, said means including a clamp for clamping said plate against the underside of said guide and thereby secure the plate in adjusted position.

In testimony whereof I affix my signature.

JOSEPH V. PETRELLI.