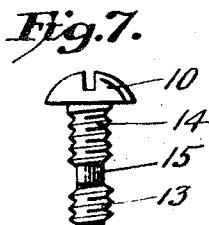
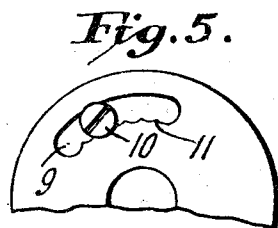
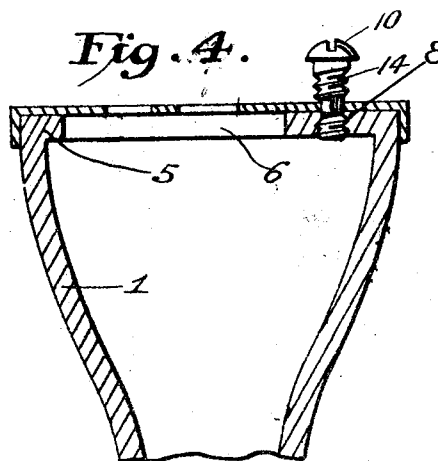
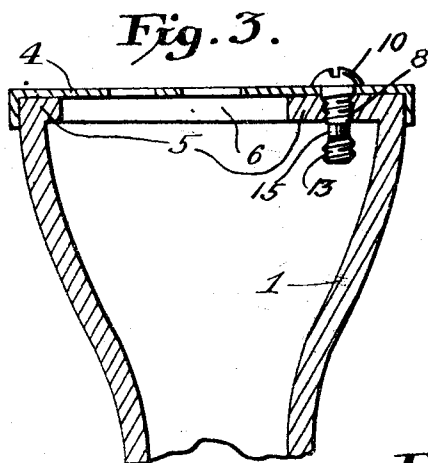
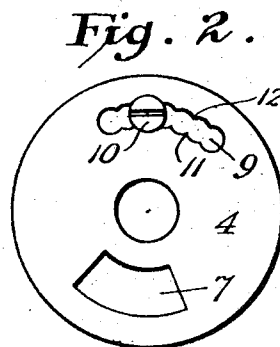
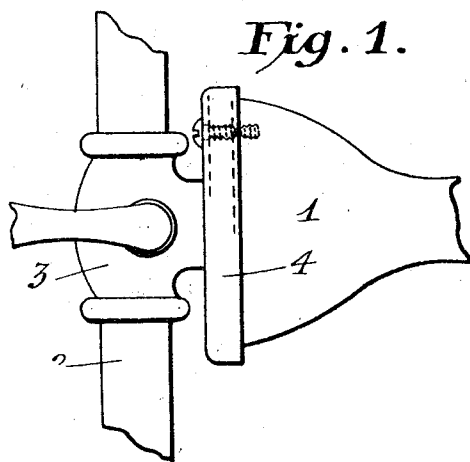


R. E. SARD.
ADJUSTING MEANS FOR MIXER CAPS.
APPLICATION FILED AUG. 7, 1912.

1,052,180.

Patented Feb. 4, 1913



Witnesses

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ADJUSTING MEANS FOR MIXER-CAPS.

1,052,180.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed August 7, 1912. Serial No. 713,929.

To all whom it may concern:

Be it known that I, RUSSELL E. SARD, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Adjusting Means for Mixer-Caps; 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.

This invention relates to adjusting means for mixer caps for gas ranges.

In the usual type of mixer caps wherein an ordinary screw is employed in combination with an adjusting slot to retain the air admission ports of a cap in a predetermined position, the screw is liable to work out of position or to be lost when adjusting the air admission ports of the mixer. It frequently happens, also, that the screw accidentally becomes loose and permits the shifting of the cap, thereby changing the size of the ports for admitting air to the mixer.

The objects of the invention are, first, to retain the adjusting screw at all times in its cooperative relation to the slot and the parts of the mixer cap; second, to permit the adjustment of the mixer cap without entirely removing the screw therefrom and, third, to prevent the shifting of the mixer cap after it has been adjusted. With these ends in view, I provide an adjusting screw having a shank of different diameters, said shank being threaded for a greater portion of its length, and provided with a non-threaded portion intermediate the ends of the shank. This screw is associated with the mixer cap of a burner, said cap having an adjusting slot, the edges of which slot may be either plain or corrugated, thereby permitting close adjustment of the air admission ports of the cap without removal of the screw.

The invention consists, further, in the features of construction and combination of parts hereinafter described and specified in the appended claims.

In the accompanying drawings, I have illustrated one embodiment of the invention, but the construction shown therein is to be understood as illustrative only, and not as defining the limits of the invention.

Figure 1 is a plan view of the cap, a portion of the adjusting screw being shown in

dotted lines. Fig. 2 is an end view of the mixer cap illustrating the screw cooperating with a slot, both edges of which are provided with corrugations. Figs. 3 and 4 are sectional views showing the adjusting screw in different positions. Figs. 5 and 6 are fragmentary views of the screw in cooperation with a slot having partly corrugated walls and plain walls, respectively. Fig. 7 is an enlarged detail perspective view of the adjusting screw.

The mixer 1 may be of any preferred form and is connected with a suitable supply pipe 2 by an ordinary valve 3, the mixer cap 4 being fitted over the end of the mixer as shown. The mixer is provided with an end face 5 having a suitable opening 6 for the gas supply pipe and the admission of air thereto. The mixer cap 4 fits over the end 5 of the mixer and is provided with an air inlet port 7 which registers with the portion 6 of the mixer for admitting air thereto. This end plate 5 is provided with a suitable threaded aperture 8 for the reception of an adjusting screw. The mixer cap 4 is provided with a slot 9. In Fig. 6, this slot is shown as curved and having parallel walls. However, it is preferred to provide the walls of this slot with suitable means for engaging an adjusting screw 10 to prevent the accidental loosening or shifting of the cap with reference to the mixer. One means for accomplishing this purpose is shown in Fig. 5, wherein a part of the walls of the slot are corrugated, as at 11, the corrugated portions of the slot cooperating with a threaded portion of the screw to prevent the shifting of the mixer cap. In Fig. 2, however, I have shown the slot provided with corrugations 11, 12 on opposite sides thereof.

An important feature of this invention resides in the screw 10, shown more particularly in Figs. 3, 4 and 7 of the drawing. In the preferred embodiment of the invention, as shown in Fig. 7, the screw is provided with a shank which is threaded near the free end thereof, as at 13, and also near the head, as at 14. This shank is reduced in diameter, however, at a point 15 intermediate its ends, and this reduced portion is preferably not threaded.

The construction of the screw is such that when the head 10 is in engagement with the cap 4, the threaded portion 14 of the shank of the screw will engage the end 5

of the mixer. When it is desired to adjust the mixer the screw is turned until the threads 13 engage the end wall 5 of the mixer and the reduced portion 15 is in alinement with the slot 9, whereupon the threaded portion 13 serves as means for retaining the screw in operative position on the mixer and within the slot during the adjustment of the mixer cap.

- 10 In operation, when it is desired to regulate the passage of air through the port 7, 6 of the mixer, the screw is turned until the threads 14 thereof are free from engagement with the aperture 8 and the slot 9 of the mixer and cap, respectively, thereby bringing the reduced plain portion 15 of the shank into alinement with the walls of the slot 9, and the threaded portion 13 of the screw into engagement with the plate 5 of the mixer. The cap may now be freely moved with relation to the mixer for adjustment of the air ports, as the non-threaded reduced portion 15 of the shank of the screw is of a diameter less than that of the slot 9, especially at its narrowest portion, *i. e.* between the opposite projecting walls 11, 12 of a corrugated slot, such as shown in Fig. 2. After the cap shall have been adjusted, the screw may be returned to its initial position with its threads 14 engaging plate 5 and the head of the screw operating to clamp the cap 4 to the plate 5. It will be observed, therefore, that it is unnecessary to remove the screw during the adjustment of the cap.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a mixer for gas ranges, a mixer cap provided with an adjusting slot and a screw carried by the mixer and projecting through the slot, said screw having a shank of different diameters, the reduced diameter of said shank cooperating with the walls of

the slot to permit the free adjustment of the mixer cap.

2. In a mixer for gas ranges, a mixer cap provided with an adjusting slot, a part of the walls of which are corrugated, and a screw carried by the mixer and projecting through said slot, said screw having a shank partly threaded and partly non-threaded, the non-threaded portion of said shank cooperating with the corrugated walls of said slot during the adjustment of the cap.

3. In a mixer for gas ranges, a mixer cap provided with an adjusting slot, a part of the walls of which are corrugated, and a screw carried by the mixer and projecting through said slot, said screw having a threaded shank with a non-threaded portion intermediate the ends of the shank, said non-threaded portion of the shank cooperating with the corrugated walls of the slot during the adjustment of the cap.

4. In a mixer for gas ranges, a mixer cap provided with an adjusting slot having corrugated walls, a screw carried by the mixer and projecting through the slot, and means for retaining the screw in operative position on the mixer and within said slot during the adjustment of the mixer cap.

5. In a mixer for gas ranges, a mixer cap provided with an adjusting slot, the walls of which are corrugated on opposite sides, a screw carried by the mixer and adapted to cooperate with the corrugated slot, said screw having a shank of different diameters, and means for retaining said screw in position on the mixer and within said slot during the adjustment of the mixer cap.

In testimony whereof, I affix my signature, in presence of two witnesses.

RUSSELL E. SARD.

Witnesses:

A. W. BLANCHARD,
WM. E. PALMER.