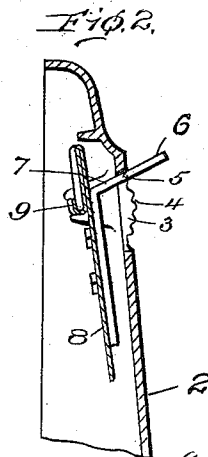
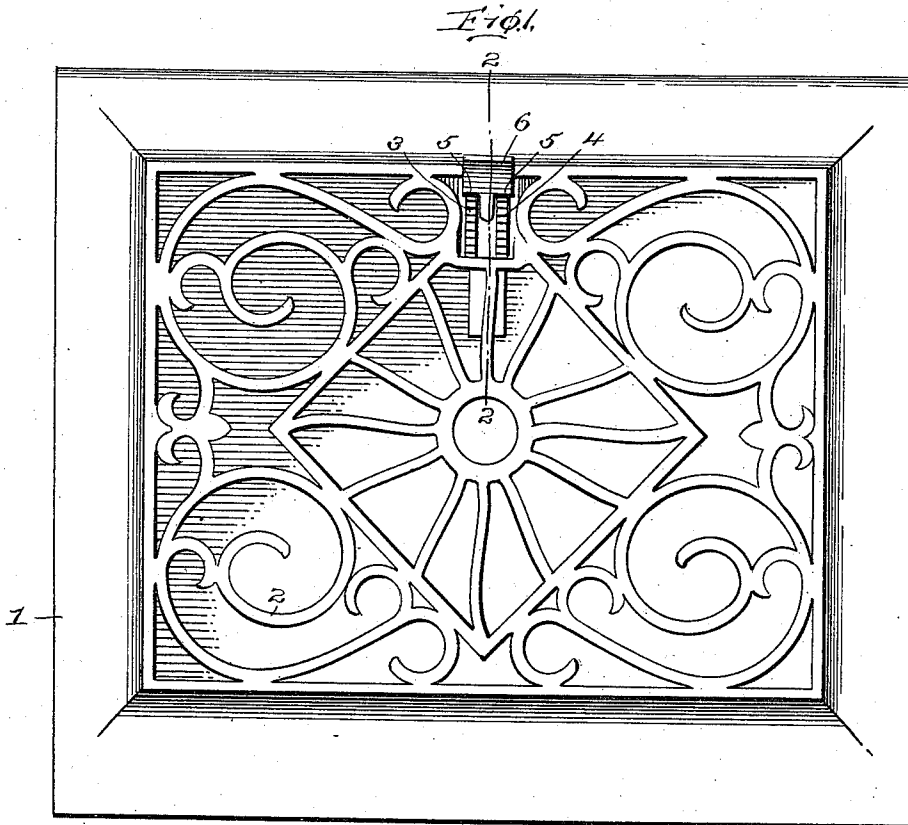


J. J. & S. P. BURGESS.
WARM AIR REGISTER.
APPLICATION FILED FEB. 15, 1910.

989,329.

Patented Apr. 11, 1911.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

FIG. 3.

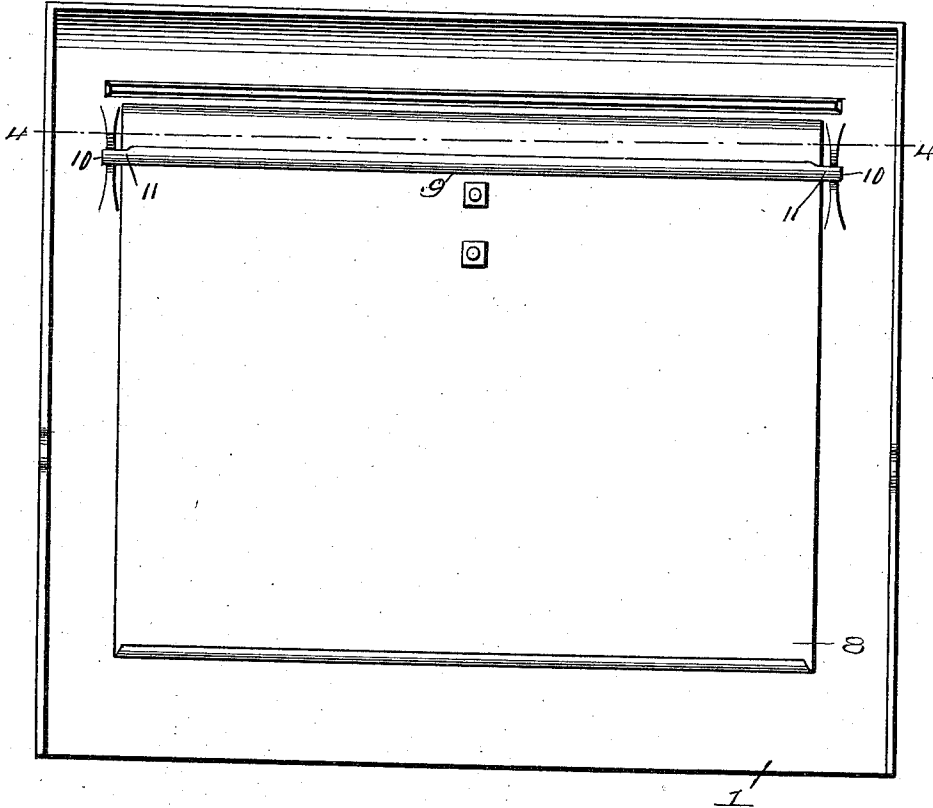
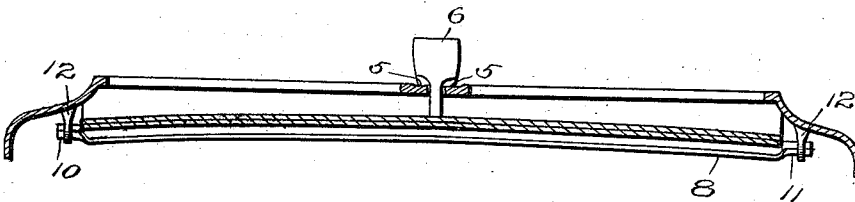


FIG. 4.



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UNITED STATES PATENT OFFICE.

JOHN J. BURGESS AND SAMUEL P. BURGESS, OF ROCK ISLAND, ILLINOIS.

WARM-AIR REGISTER.

989,329.

Specification of Letters Patent.

Patented Apr. 11, 1911.

Application filed February 15, 1910. Serial No. 543,980.

To all whom it may concern:

Be it known that we, JOHN J. BURGESS and SAMUEL P. BURGESS, citizens of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Warm-Air Registers; and we 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 improvements in warm air registers, and particularly to a damper arrangement for controlling the amount of warm air passing therethrough.

The object in view is the arrangement in a warm air register of a deflecting member and associated parts for regulating the warm air passing through the register.

A further object of the invention is the arrangement in a register of a pivotally mounted deflector arranged in the back of the register and adapted to be moved across the warm air tube or box to which the register is connected for varying the amount of warm air permitted to pass through the register, the deflecting member being controlled by means extending therefrom to the front of the register.

A further object of the invention is the arrangement in a register of a pivotally mounted deflector and a controlling lever arranged to engage an arc-shaped frictional member for holding the lever in the position to which the same has been moved for holding the deflector in any of its adjustable positions.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangement of parts which will be hereinafter more fully described and claimed.

In the accompanying drawings:—Figure 1 is a front view of a register embodying the invention. Fig. 2 is a section through Fig. 1 approximately on line 2—2. Fig. 3 is a rear view of the structure shown in Fig. 1. Fig. 4 is a section through Fig. 3 approximately on line 4—4.

Referring to the accompanying drawings by numerals, 1 indicates the frame of a register and 2 the grille or openwork thereof. Preferably the frame 1 and grille or openwork 2 are cast though the same may be

made in any desired manner. In forming the grille 2 an arc-shaped member 3 is formed thereon and provided with notches or teeth 4, for accommodating the engaging portions 5—5 of an operating lever 6. Operating lever 6 is provided with a reduced portion 7 which extends inward a short distance through the grille and is bent at an angle as clearly shown in Fig. 2 for being secured by suitable bolts or rivets to a deflector 8. Deflector 8 is made from any desired material and folded for its entire length at its upper end for forming a reinforcing member 9 which works in journal members 10 and 11. The reinforced part of the deflector 8 comprises the upper portion of the deflector bent back upon itself and then bent for forming a substantially trough-shaped structure, part of the portion bent back upon the deflector and the trough-shaped portion extending beyond the sides of the deflector so as to form bearing or journal members 10 and 11.

In securing reduced portion 7 of lever 6 to deflector 8 the deflector and also the member 9 are slightly bowed as shown in Fig. 4 for giving a continuous strain or tendency on lever 6 to engage arc-shaped member 3. This arrangement causes the lever to be locked in any of its adjusted positions and as a result deflector 8 is firmly held at any desired angle to the grille 2 so as to catch and deflect any desired proportion of the warm air passing up the warm air tube to which the register is secured.

The bending or bowing of the reinforcement 9 of the deflector is preferably only sufficient for causing the engaging portions 5—5 to continually engage the notches 4 of member 3. By this arrangement the lever 6 extends the same distance outward from the register at all times regardless of the position of the deflector 8.

In mounting the deflector journal members 10 and 11 are loosely mounted in slotted lugs 12—12 extending from the frame 1 so that the deflector depends upon the tension between the same and the portions 5—5 of lever 6 for holding the deflector properly in position.

What we claim is:—

1. In a register, a grille, an arc-shaped rack connected with said grille, a deflecting member formed with a reinforced portion extending for the full width of the deflect-

ing member, journal members projecting from said reinforced portion, journal sockets for said journal members secured to said grille, and a lever rigidly secured to said
5 deflecting member and arranged to engage said rack on said grille, said lever being slightly shorter than the distance between the rack and the deflecting member so as to retain slightly bowed said deflecting member for causing the automatic locking of
10 said lever in said rack.

2. In a register, a grille, a pivotally mounted resilient deflecting member, an adjusting lever extending through said grille
15 and rigidly connected to said deflecting member, and an arc-shaped member formed with a rack secured to said grille and engaging said lever for locking the lever in any of its adjusted positions, said arc-shaped
20 member being struck on an arc of a circle with its center substantially the same as the pivotal point of said deflecting member and said lever is permitted a pivotal movement upon the slight bowing of said deflector and

caused to automatically lock in any of its 25 adjusted positions.

3. In a register, a grille having a slot formed therein, and with a segmental rack adjacent such slot, ribs formed upon the back of the grille and provided with bearing 30 notches, a deflector member provided to cover the entire grille and provided with trunnions arranged to be seated in the bearing notches, a lever rigidly secured to the deflector and having a shank passed through 35 the slot, such shank being shorter than the normal distance between the deflector and the rack whereby the deflector is placed under tension, and means carried by the lever for engaging the notches of the rack. 40

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN J. BURGESS.
SAMUEL P. BURGESS.

Witnesses:

J. F. WITTER,
FRANK HAYMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
