W. RACE.

Stove Register.

No. 26,782.

Patented Jan'y 10, 1860.

FIG. 1.



FIG. 2.

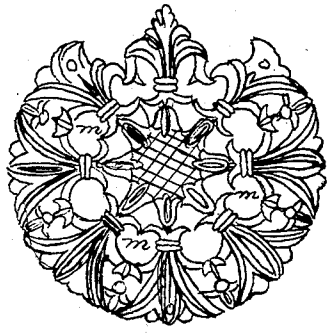
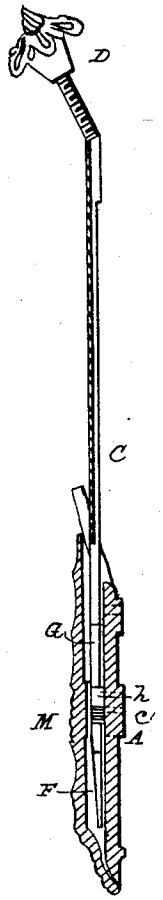


FIG. 3.



WITNESSES:

Thad. S. Scoville

S. J. Clles.

INVENTOR.

Washburn Race

by J. Fraser atty.

N. PETERS, Photo-Lithographer, Washington, D. C

UNITED STATES PATENT OFFICE.

WASHBURN RACE, OF SENECA FALLS, NEW YORK.

STOVE-REGISTER.

Specification of Letters Patent No. 26,782, dated January 10, 1860.

To all whom it may concern:

Be it known that I, WASHBURN RACE, of Seneca Falls, in the county of Seneca and State of New York, have invented a new and useful Improvement in Self-Acting Registers for Stoves; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a front elevation thereof, with the shield M, removed to show the dampers and actuating parts. Fig. 2, is a view, on a reduced scale, of the exterior of the ornamental shield, which covers the valves or damper-plates seen in Fig. 1. Fig. 3, is a section, on a vertical line taken at or near the center of Fig. 1.

Similar letters refer to corresponding parts in all the figures.

My improvements relate to that class of stove registers which are operated by the expansion and contraction of a metallic rod.

As represented in the drawings, A, is the plate, or disk, which is attached to the front of the stove; B, is an ornamental extension therefrom, containing, within a hollow in its reverse side, the expanding rod C, and affording a support for the screw nut D.

The lower portion of the disk plate A, is provided with two draft openings E, E, for admitting air within the chamber of combustion, these openings fitting over a corresponding space or aperture in the side of the stove. The damper plates, F, F, provided to close these openings, are of segmental form, each hanging by a pivot, *i*, *i*, at the top, and falling by their gravity, till their edges meet in a vertical line, and close the openings E, E. The pivoted portion of each is provided with a small segment of cogs *c c*, which gear together, and from one extends the curved lip *h*, which connects with the bent arm of the clutch-lever G, which is pivoted at its head, and connected with the expanding rod C, by the locking notch *k*, and hook *j*. The length of the rod being adjusted by means of the screw, D, while in its expanded state, to allow the damper plates to close the apertures E E, and check the draft, the contraction of the rod from subsequent cooling acts upon the lever G, moving its long arm toward the center of the disk A, which by its pressure on the lip *h*, causes that damper, and, by means of the cogs *c*, *c*, both dampers, to turn on their centers, and thereby open the draft-apertures, as shown. The entire weight of both damper plates F, F, by this arrangement, acts to close them, as the rod C, expands by heat; thereby requiring only a hook connection with the clutch lever G, for raising said damper plates simply, and thus allowing the utmost degree of expansion to which the rod C, may be exposed, without disarranging the device. This arrangement also allows very light damper plates, not weighted, to be employed, so that the whole is rendered very compact. The slight variation of the rod is so greatly increased by the leverage of G, and of the damper plates as to afford a great extent of graduation to the opening, thereby rendering it extremely sensitive to the variations of the temperature, while the manner of connecting the segment plates so that the action of the rod on one is directly communicated to the other, gives a double effect to the expansion and contraction of the rod, of that which has been heretofore attained.

The arrangement is such as to place the whole opening at the lower part of the damper, and consequently near the bottom of the stove, where it is most essential. It is also one of much greater convenience and admits of much greater elegance of construction than the forms exhibited in the patents of Elisha Foot for a self-acting register, and in the several patents granted to myself therefor, from the valves sliding radially against a flat disk, which admits of the working parts being hidden from view, as well as protected, by the ornamental shield M, Fig. 2; the whole apparatus being contained in little compass and requiring but a slight projection from the face of the stove. The shield M, is formed of ornamental work, having openings, *m m*, arranged around its center, and numerous smaller orifices, the whole forming an area sufficiently large to supply the amount of air that the draft openings E, E, will admit. The shield is cast separately and attached to the disk A, by screws.

I do not claim broadly, the use of an expanding and contracting rod for operating registers for stoves, nor the use of a single revolving damper operated by such a rod, but

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

The application of two damper plates F,

F, to the register plate A, when geared together so as to open upward simultaneously from the apertures E, E, situated at the bottom of the said register plate, through the connection of the single clutch lever G, with the expansion-rod C, in combination with said clutch lever and expansion rod, substantially in the manner and for the special purposes herein specified.

WASHBURN RACE.

Witnesses:
S. R. C. MATHEWS,
M. L. BELLOWS.