

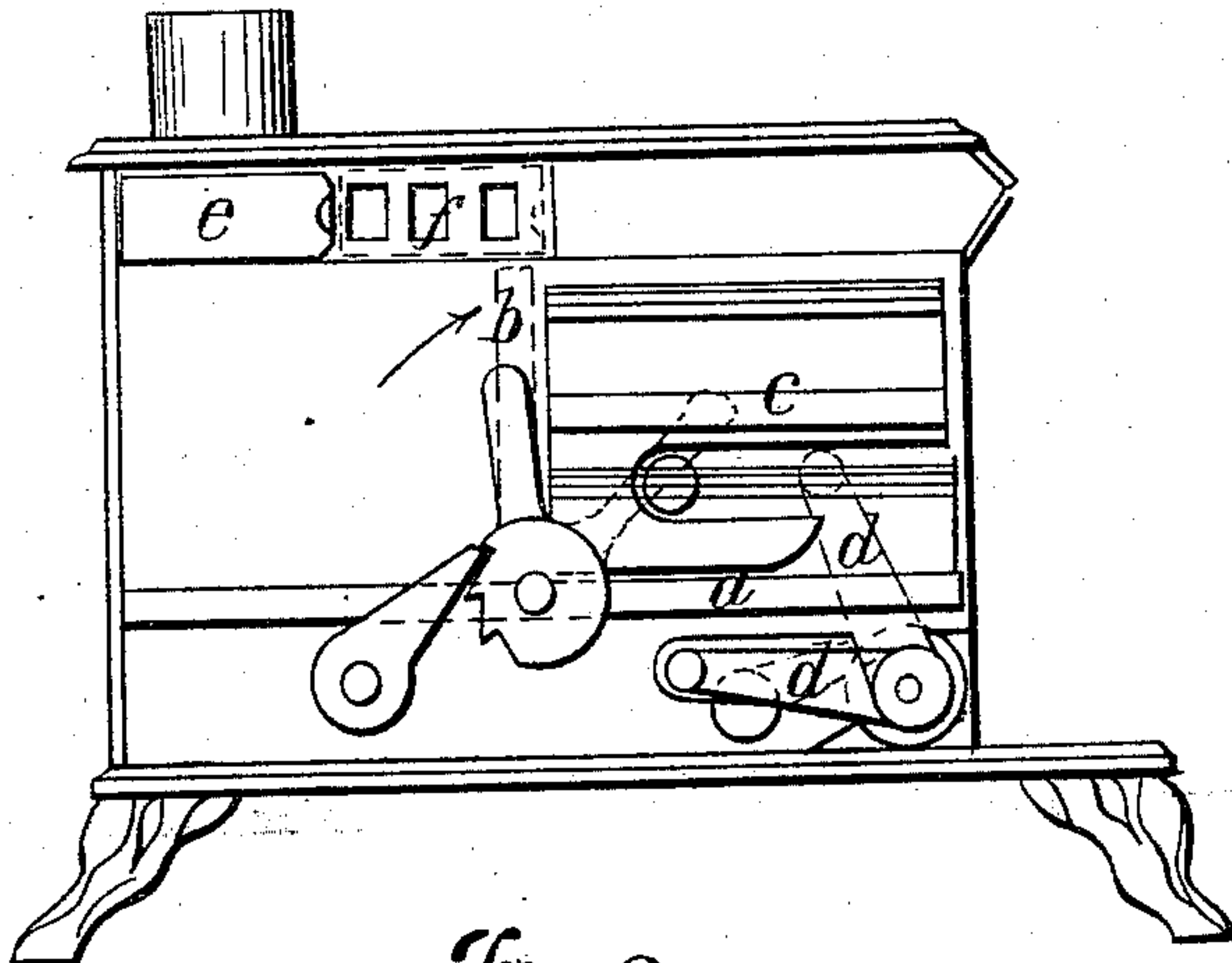
WHITING & HAMILTON.

Grate.

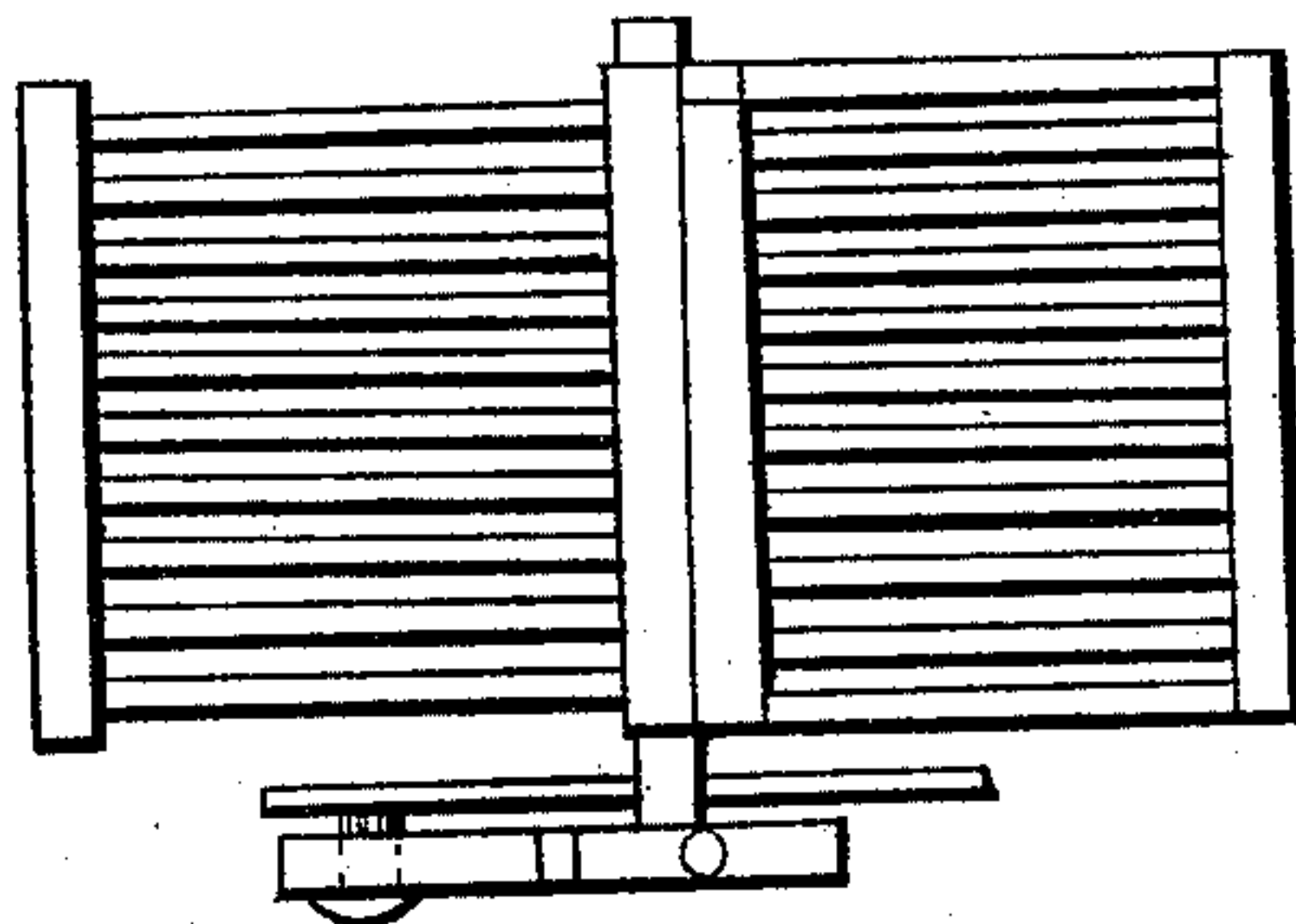
No. 80,689.

Patented Aug. 4, 1868.

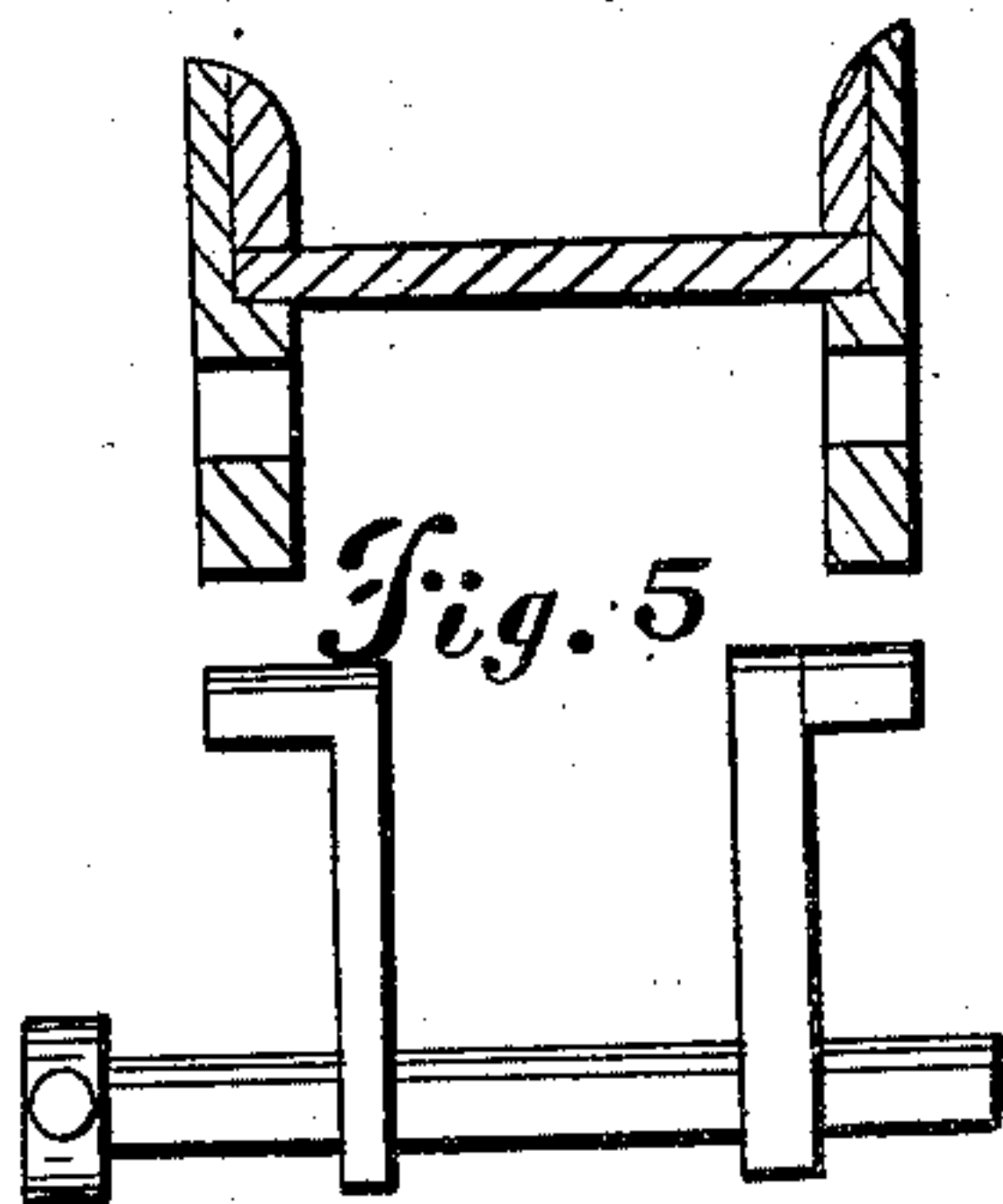
*Fig. 1*



*Fig. 2*

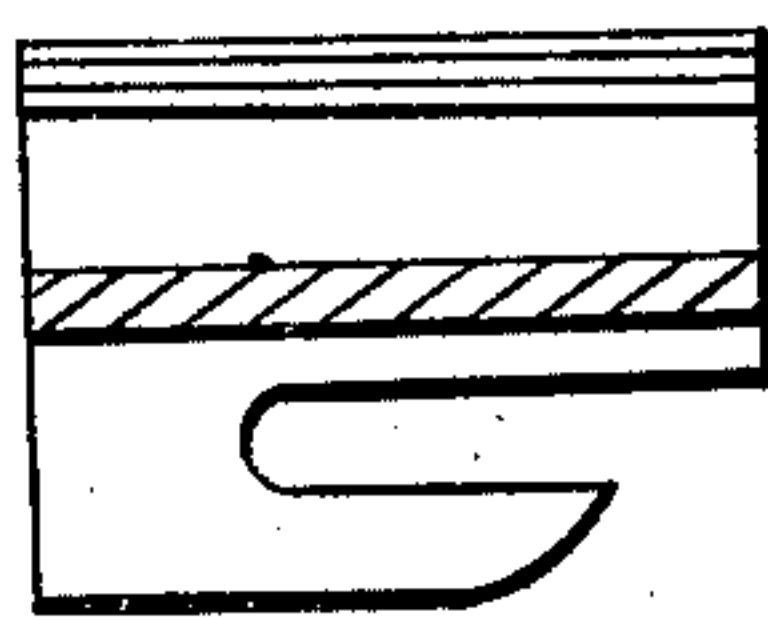


*Fig. 4*



*Fig. 5*

*Fig. 3*



*Fig. 6*



*Fig. 7*



*Witnesses:*

*C. Gregory, M.D.*

*Winant & Bennett*

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*R. Whiting*  
*Albert Hamilton*

# United States Patent Office.

RICHARD WHITING AND ALBERT HAMILTON, OF NEW YORK, N. Y.

*Letters Patent No. 80,689, dated August 4, 1868; antedated July 29, 1868.*

## IMPROVEMENT IN GRATES FOR STOVES, RANGES, AND HEATERS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, RICHARD WHITING, of the city, county, and State of New York, and ALBERT HAMILTON, of the same place, have invented a new and improved Grate for Stoves, Ranges, Furnaces, and Heaters; and we do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings, and letters of reference thereon.

The nature of our invention consists in so adapting the grate to any form or pattern of stove, range, &c., that it may be raised or lowered entire, perpendicularly, or a section or sections thereof may be inclined to any required angle by means of a cam, lever, or other suitable arrangement, thereby adjusting it to any size, varying the fire-space, and increasing or diminishing the fire at pleasure.

The accompanying drawing represents a summer-range or cooking-stove, and an arrangement for adjusting the grate. The back part of the grate can be raised or lowered to any desired angle, by means of the lever in the centre of the stove. The front half can be vertically raised or lowered, as required, by a similar device connected with a lever working in a slot in the side, under the grate-bars, as shown in the drawing.

Figure 1 is a side elevation, with the side removed, to show the form of grate.

Figure 2 is a plan of the grate.

Figure 3 is a side section of the front half of grate.

Figure 4 is a transverse section of same.

Figure 5 is a plan of lever and rock-shaft for lifting the front grate.

Figures 6 and 7 are the ratchet and pawl for working both sections of grate.

The following letters refer to the various parts.

*a a* is the grate in its usual position.

*b* is the back half of grate raised to an upright position, thus reducing the fire-space one-half.

*c* is the front portion of grate in its elevated position, as raised by the lever *d d*.

*e* is a damper for closing the openings *f* when the fire-space is reduced, so that the air may pass directly over the fire, in the direction of the arrows.

What we claim as our invention, and desire to secure by Letters Patent, is—

An “adjustable grate,” so constructed that the size of the fire-space may be readily increased or diminished, by raising or lowering one section of the grate perpendicularly, or by inclining the other section or sections thereof to any required angle, by means of a cam, lever, or other device, using either movement separately, or both combined in one stove, range, furnace, or heater.

RICH'D. WHITING,  
ALBERT HAMILTON.

Witnesses:

O. S. GREGORY, M. D.,  
WINANT H. BENNETT.