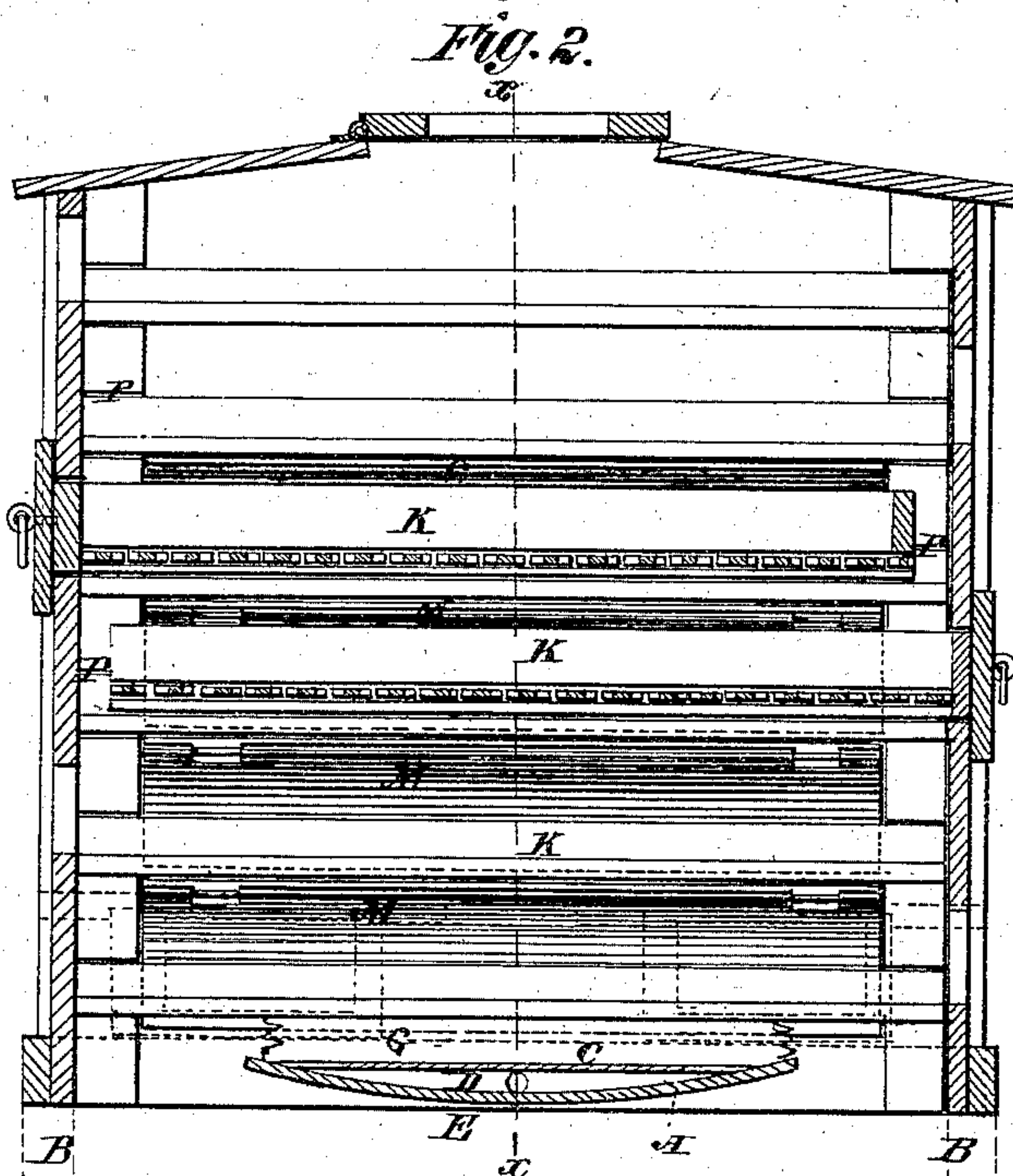
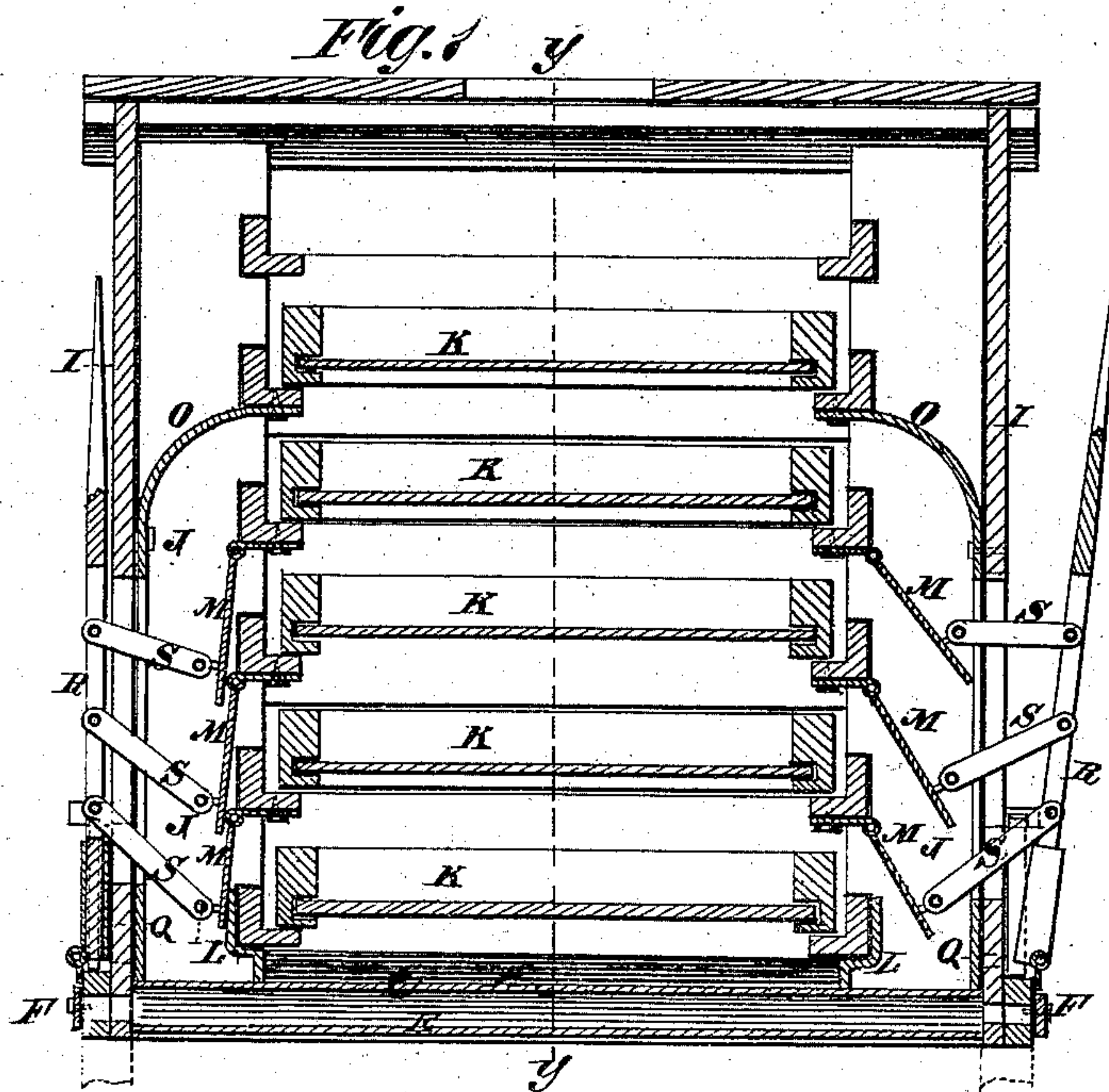


J. ALLEN.
Fruit-Dryers.

No. 152,788.

Patented July 7, 1874.



WITNESSES:

Francis McQuigg,
Chapman

INVENTOR:

BY

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UNITED STATES PATENT OFFICE.

JUDSON ALLEN, OF EVERETT, MISSOURI.

IMPROVEMENT IN FRUIT-DRIERS.

Specification forming part of Letters Patent No. **152,788**, dated July 7, 1874; application filed April 11, 1874.

To all whom it may concern:

Be it known that I, JUDSON ALLEN, of Everett, in the county of Cass and State of Missouri, have invented a new and useful Improvement in Fruit-Driers, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claim.

Figure 1 is a sectional elevation of my improved drier, taken on the line *x x* of Fig. 2. Fig. 2 is a sectional elevation of Fig. 1 on the line *y y*.

Similar letters of reference indicate corresponding parts.

The air-heating chamber is below the bottom concave plate A of the secondary air-heating and protecting chamber for the bottom of the drier, and within suitable foundation-walls B. C is a flat plate above the plate A, making a little heating-space, D, for the air, which is admitted at opposite ends through the passages E, controlled by valves F, to prevent the bottom of the drier from heating too much, and produce a current from the bottom of the drier. The plate C is perforated, and allows the air which enters between it and plate E to pass, together with the heat radiating through plate E, to enter the space G under the bottom drawer, while the hot air from the space below plate E enters into space J at opposite sides of the drawers K. These spaces are separated from the space under the lower drawer by plates L. They are also separated from the spaces between the drawers, except the upper ones, by valves M, and they are inclosed below the upper drawer by the curved deflecting-plates O. The

drawers are arranged with a passage, P, alternately on opposite ends, and they have slots or perforations in the bottom, to allow some heat to pass up between them. The heat is supplied under the lower drawer by radiation through the bottom plate, and currents from space D, while to the other drawers it is conducted mostly from the passages J by the valves M, which are graduated, as shown at the right hand of Fig. 1, so that each one will take its due measure, the upper one entirely cutting off the space when necessary. The heat escaping beyond the upper valve is all turned in under the upper drawer, or the next to the upper one, as the case may be. The heat between the drawers partly passes directly through them, and partly around at the passages D. The corner openings at the bottom, for admitting cold air to equalize the temperature when disturbed by atmospheric action, are represented at Q. The dampers are connected to levers R, outside of the case, by links S, which are so adjusted as to graduate the valves to the air-currents in spaces J, in the manner above described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with drawers K, having air-spaces at the sides of the series, of hinged valves M, the rods S, and the hand-levers R, as and for the purpose specified.

JUDSON ALLEN.

Witnesses:

J. T. PURCELL,
C. H. WOOLLEY.