W. T. HOWARD.

Stove-Door Hinge.

No. 162,925. Patented May 4, 1875.

FIG. IV.

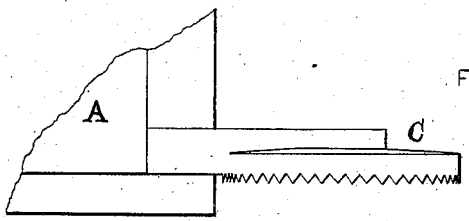


FIG. V.

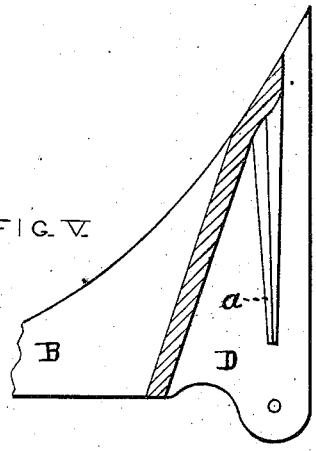


FIG. III.

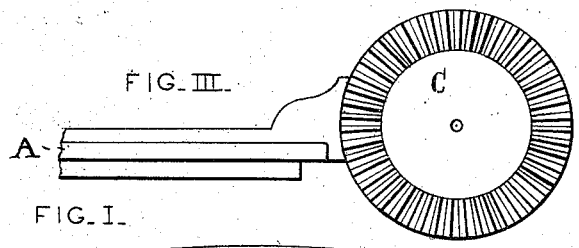


FIG. I.

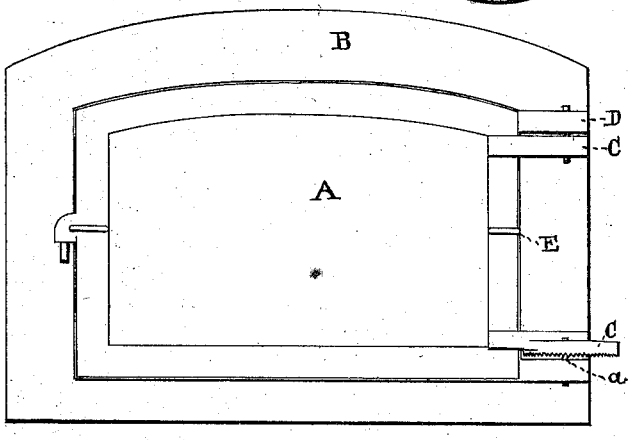
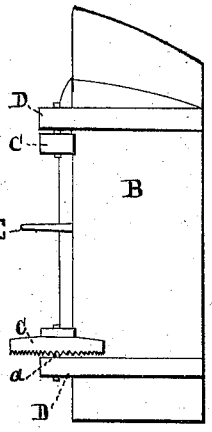


FIG. II.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM T. HOWARD, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN STOVE-DOOR HINGES.

Specification forming part of Letters Patent No. **162,925**, dated May 4, 1875; application filed February 11, 1875.

To all whom it may concern:

Be it known that I, WILLIAM T. HOWARD, of the city of Baltimore and State of Maryland have invented certain new and useful Improvements in Stove and Furnace Door Hinges, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to a peculiar formation of the opposing surfaces in hinges of stove and furnace doors; and has for its object the construction of a hinge that will slightly resist the ordinary movement of the door, and tend to retain the said door in certain positions, regardless of the draft tending to close it, or any inclination in the door-pivots from the vertical line which operates to throw the door backward or forward from the desired position. The door is by means of this invention adapted to be used as a damper, the opening of which can be graduated to control the heat and consumption of fuel in the stove, and also as a heat-regulating oven-door, as well as for other purposes. With this view I provide the two parts or members of the hinge with toothed, roughened, or corrugated opposing surfaces, which, when brought in contact, produce the effect alluded to.

In the further description of my invention which follows, reference is directed to the accompanying drawing, forming a part hereof, in which Figure 1 is a front view of a stove-door and frame, connected by hinges, the lower one of which is constructed in accordance with my invention. Fig. 2 is an end view of the same. Fig. 3 is a view on an enlarged scale of the portion of the lower hinge connected to the door. Fig. 4 is a side view of the same part. Fig. 5, also enlarged, is a top view of the other member of the same hinge, with a portion of the frame attached.

Similar letters of reference indicate similar parts in all the figures.

A represents the door, and B the door-frame. C C are the parts or members of the hinges attached to the door, and D D the parts of the hinges attached to the door-frame. The part C of the lower hinge is flanged or increased in diameter, in order to give a greater toothed surface, and thereby allow the teeth to be larger or of a greater pitch than could be obtained with the same number of teeth upon the corresponding part of a hinge of the ordinary size. The object in having a large number of teeth on this part of the hinge is to limit, as far as possible, the circumferential movement of the door at the hinge, caused by relative change in the positions of the opposing surfaces, and also to permit of the opening and securing of the door at small distances. The part D of the lower hinge is furnished with a single tooth, *a*, shaped to engage with the teeth at the under side of the part C, aforesaid. The single tooth, when used with the toothed flange, insures a satisfactory hold, which cannot be obtained with two opposing toothed disks for want of precision, which is not procurable in ordinary castings. The two parts of the hinge are connected by pins in the usual way, or by means of pintles cast to one member. E is an additional finger-piece, which may be used to advantage in opening and closing doors of excessive weight, where the toothed surfaces of the hinge cannot easily be disengaged in the ordinary way.

Having described my invention, what I claim as new, and wish to secure by Letters Patent of the United States, is—

The hinge portion D of the door-frame, having the ridge or Λ-shaped tooth *a*, in combination with the diskal portion C of the door-hinge, having its under surface provided with V-shaped teeth, the whole forming a device for adaptation to doors of stoves, furnaces, &c., whereby the door may be conveniently held to any desired position within its circumferential movement, substantially as herein set forth.

In testimony whereof I have hereunto subscribed my name this 10th day February, 1875.

WILLIAM T. HOWARD.

Witnesses:

W. H. DEETZ,

JNO. T. MADDOX.