G. B. CHILD.

HINGE FOR STOVE DOORS.

APPLICATION FILED DEC. 27, 1915.

1,273,735.

Patented July 23, 1918.

Fig. 1.

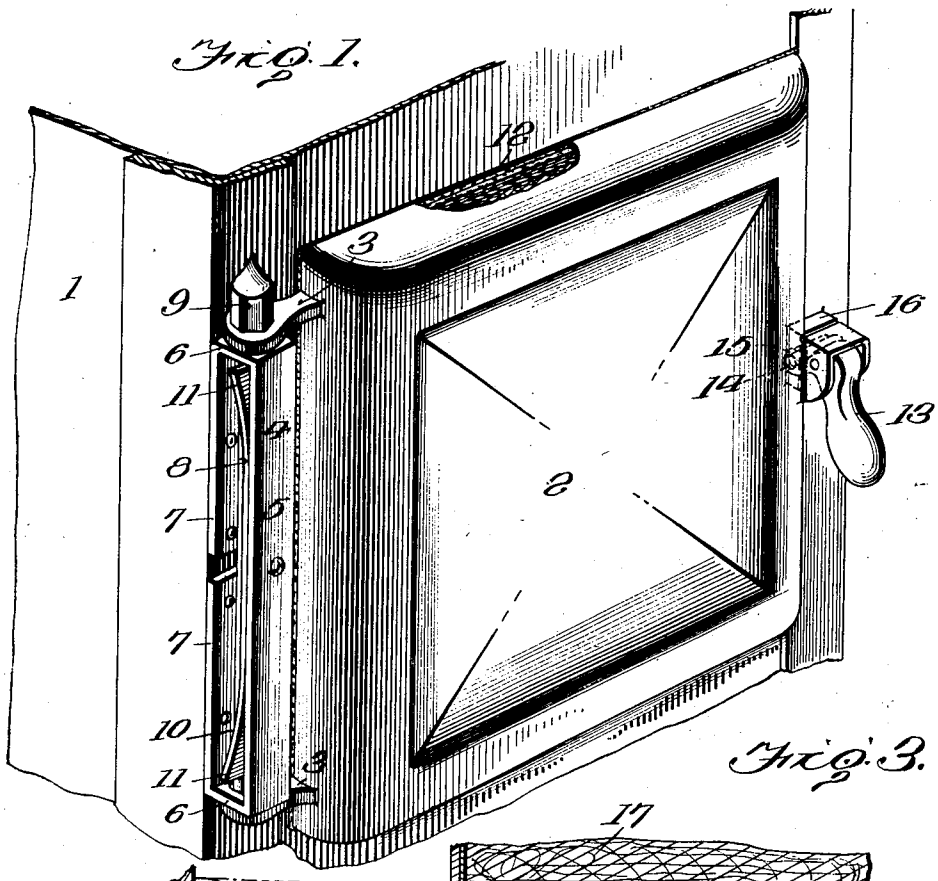


Fig. 3.

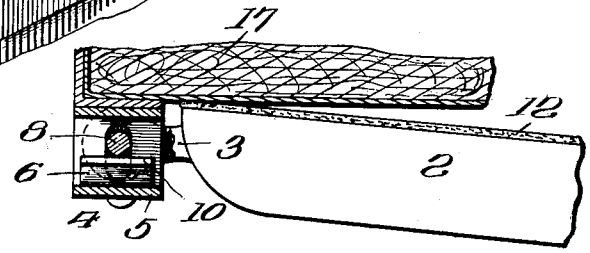
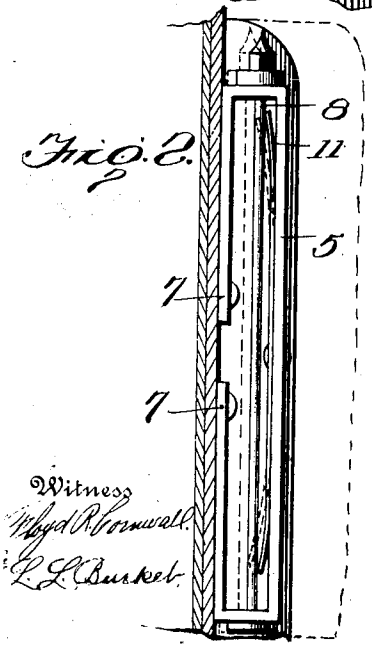


Fig. 2.



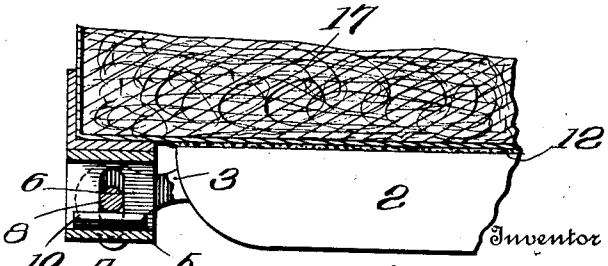


Fig. 4.

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UNITED STATES PATENT OFFICE.

GUY B. CHILD, OF CHICAGO, ILLINOIS, ASSIGNOR TO AMERICAN STOVE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

HINGE FOR STOVE-DOORS.

1,273,735. Specification of Letters Patent. Patented July 23, 1918.

Application filed December 27, 1915. Serial No. 68,702.

To all whom it may concern:

Be it known that I, GUY B. CHILD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Hinges for Stove-Doors, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in hinges for stove doors, and is adapted particularly for use in a gas oven which operates on the fireless cooker principle.

In gas ovens which operate upon the fireless cooker principle, it is necessary that the oven be tightly closed, and therefore necessary that the oven door be constructed to make a tight joint at its edges with the outer wall of the oven.

The object of the present invention is to provide a yielding pivot or hinge for the door, whereby a tight closure can always be made between the inner edge of the door and the outer wall of the oven, the door being pressure held.

A further object of my present invention is to combine with the yielding pivot or hinge a packing between the door and the outer wall of the oven, whereby the packing and its engaging metal wall will be yieldingly and pressure held, thereby making a tight joint between the door and oven wall, the packing preferably carried by the door.

Figure 1 is a perspective view of an oven door and hinge embodying my invention, shown in relation with a portion of the oven wall, and one edge of the door shown partly in section.

Fig. 2 is a side elevation of the spring or yielding hinge.

Fig. 3 is a top view of the door, with the hinge partly in horizontal section, the door being shown as it begins to engage the wall of the oven.

Fig. 4 is a view similar to Fig. 3, the parts shown in their positions when the door is closed.

Referring now to the drawings, 1 is a portion of the outer wall of a gas oven and 2 its door. The door is provided at one edge with the usual hinged lugs 3. Secured to the oven wall is a suitable combined spring and pivotal rod housing 4, which has an outer vertical wall 5, the end walls 6, and the inner ends or wall 7, which are riveted or screwed to the outer face of the oven. A pivotal rod 8 passes through the door ears 3 and through the end walls 6 of the housing 4, the upper end of the pivotal rod being preferably provided with a suitable head 9.

A leaf-spring 10 is vertically arranged within the housing 4, the spring having its center normally bowed outward and resting on the outer wall 5 of the housing 4, while the ends 11 of the spring engage the pivotal rod 8 near its ends. The openings in the end walls 6 of the housing 4 are elongated outwardly so that the pivotal rod is adapted to have an in and out movement in the housing 4. The spring 10 normally holds the pivotal rod 8 in its inward position, shown in Fig. 3, and when the door is closed, the pivotal rod is forced outward against the tension of the spring 10 into the position shown in Fig. 4.

The edge of the oven door 2 is provided with a suitable packing 12, and this packing is preferably made of the form of an asbestos strip or cord and will be held to the door in any suitable manner.

This spring hinge arrangement provides for a yielding action and holds the packing under a spring pressure and also insures an even engagement of the edge of the door all the way around, thus making an effective tight joint to prevent the escape of the air that is in the oven when it is closed and operating on the fireless cooker principle.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. In a door hinge, the combination with a door frame, of a door, a laterally movable hinged connection between one edge of the door and the frame, a yielding means holding the hinged connection normally inward, and means forming a closing connection between the free edge of the door and the door frame and pulling the free edge of the door closed, and forcing the yielding hinged connection outward and holding it under tension to make a tight joint between the door and the door frame irrespective of the wear of the parts.

2. The combination with a frame, of a door therefor, a hinged connection between the door and the outer wall, said hinge connection comprising a vertical housing secured to one of the said members, the other

member having hinged ears, a pintle between the ears and the housing having a lateral movement, a spring normally holding the pintle in its inward position.

3. The combination with a frame, of a door therefor, a hinge between one edge of the door and the outer wall of the frame, said hinge comprising a vertically arranged housing secured to one of said members, the other member having hinged ears, a pintle rod passing vertically through the ears and the said housing, the pintle openings of the housing being elongated outwardly, a spring for normally holding the pintle rod inward.

4. The combination with a frame, of a door hinged thereto, the hinge comprising a vertical housing secured to the wall of the frame, the housing having inner and outer and end walls, the door having hinged ears, the end walls of the housing having outwardly elongated openings, a pintle rod passing through the hinged ears and through the elongated openings of the housing, an outwardly bowed leaf-spring located between the pintle rod and the outer wall of the housing.

5. The combination with a door frame of a door, an elongated hinge connection between one edge of the door and the frame, the hinge connection comprising an elongated laterally movable pintle, and a yielding means engaging the elongated pintle at points adjacent its ends and normally holding it inward.

6. The combination with a frame, of a door hinged thereto at one edge, the said hinged connection laterally movable with respect to the door frame, yieldable means for normally holding the said connection in its inward position, the said yieldable means engaging the hinged connection at a plurality of points.

7. The combination with a frame, of a door hinged thereto at one edge, the said hinged connection laterally movable in respect to the door frame, yieldable means centrally supported and having its ends engaging the hinged connection for normally holding the said connection in its inward position.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

GUY B. CHILD.

Witnesses:

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A. F. MILLIKAN.