Dec. 2, 1930. F. F. FORSHEE 1,783,563

DOOR CATCH

Filed Jan. 23, 1929

Fig. 1.

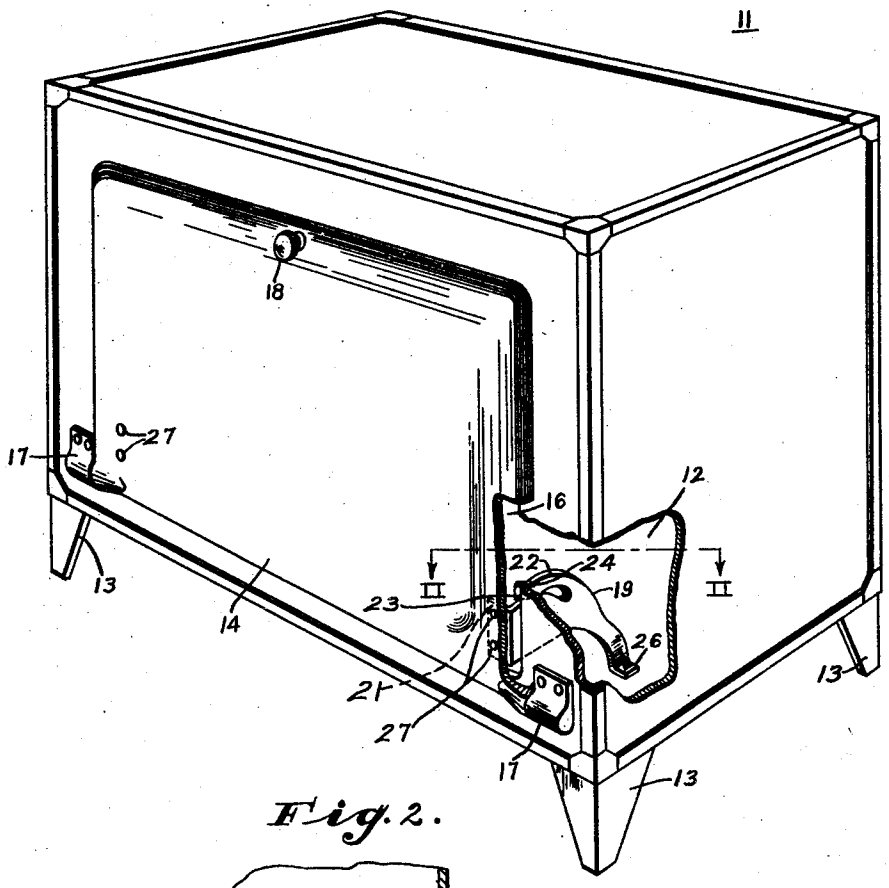
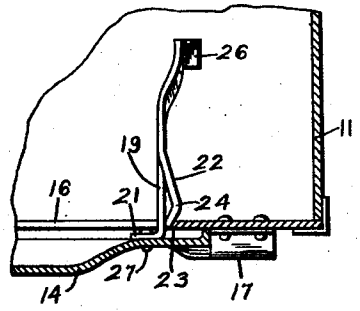


Fig. 2.



INVENTOR
Frank F. Forshee

BY
Charles G. Carr
ATTORNEY

Patented Dec. 2, 1930 1,783,563

UNITED STATES PATENT OFFICE

FRANK F. FORSHEE, OF MANSFIELD, OHIO, ASSIGNOR TO WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA

DOOR CATCH

Application filed January 23, 1929. Serial No. 334,412.

My invention relates to casing doors and more particularly to door catches.

An object of my invention is to provide a relatively simple and efficient catch for a casing door.

Another object of my invention is to provide a single means applied to a casing door for holding it in its open and in its closed position and for yieldingly opposing closing and opening movements of the door.

In practicing my invention, I provide in combination with a casing having an opening in one wall thereof and a door therefor hingedly mounted on the casing, a single metal member of substantially arcuate shape secured to the inside of the door adjacent the hinges thereof.

The arcuate member is provided at that end adjacent to the door with a resilient tongue portion bent out of the plane of the member for yieldingly opposing a closing movement of the door and for yieldingly holding the door in its closed position. The arcuate member is provided in its inner end with a lateral extending lug adapted to engage the casing adjacent an edge thereof to limit the opening movement of the door, and is so bent laterally as to yieldingly oppose the opening movement near the limit of its movement.

In the single sheet of drawings

Figure 1 is a view, in perspective, of a casing having a door catch embodying my invention associated therewith, parts of the casing and door being broken away to show the structure of the catch, and

Fig. 2 is a fragmentary view in section taken on the line II—II of Fig. 1.

A casing 11 is shown generally as comprising a plurality of walls enclosing a suitable chamber 12. The casing may be provided with supporting members 13, and with a door 14 to close an opening 16 in one wall of the casing.

I have shown a casing 11 generally only, as the device embodying my invention may be employed with and applied to any kind of a casing having an opening adapted to be closed by a door hingedly mounted on the casing, such as a range oven casing or a storage casing applied to and used with an electric range, or a small oven, which may be heated in any suitable or desired manner. In fact, the device embodying my invention is applicable to any kind of casing and door for closing the same.

The door 14 is provided with hinge pins at its lower corners, which fit into hinge plates 17 suitably secured to the front wall of the casing 11. A handle or knob 18 may also be provided at that portion or edge of the door opposite to the hinges 17 and the hinge pins fitting therein.

A door catch 19 is provided at each side of the door 14 having a front lug portion 21 bent laterally of the plane of the member 19, which as shown more particularly in Fig. 1 of the drawings is of substantially arcuate shape and which may be punched out of and formed from a sheet of metal.

The member 19 is provided with a resilient tongue portion 22 integral with the arcuate portion and located at that end of the member 19 adjacent to the door 14. The tongue portion 22 is bent laterally out of the plane of the member 19 and in a direction opposite to that of the lug 21 in order that it may yieldingly engage the edge 23 of the casing 11. As shown more particularly in Fig. 2 of the drawing, the tongue portion 22 comprises a substantially straight portion bent out of the plane of the member 19 and an end portion bent inwardly again to provide a shoulder 24.

At the inner end of the member 19 there is provided an integral lug portion 26, which is bent lateral out of the plane of the member 19 and in a direction opposite to that in which the lug 21 is bent. The inner end portion of the member 19 adjacent to and within the lug 26 is bent out of the general plane of the member 19 in the same general direction as is the tongue portion 22.

Any suitable means for securing the members 19 to the inner face of the door adjacent to hinges may be provided and is here shown as embodying rivets 27.

The operation of the device embodying my invention is as follows:

When the door is in its closed position, as

shown in the drawings, the tongue portion 22, and more particularly the forward edge thereof, will be in engagement with the edge 23 of the casing immediately surrounding the opening 16 covered by the door, and the door will, therefore, be yieldingly held in its closed position by the tongue portion 22 and more particularly by the forward end thereof. The pull of an operator on the knob 18 to open the door will bend the tongue portion 22 towards the general plane of the member 19 and permit of opening movement, which opening movement is yieldingly resisted when approaching the limit of its opening movement by the bent rear or inner portion of the member 19 and is definitely stopped by the lug 26 engaging the casing on the inside surface thereof immediately adjacent to the edge 23.

When reclosing the door, the straight and longer portion of the tongue 22 will yieldingly oppose a closing movement of the door by reason of engaging the edge 23 and both opening and closing movement of the door near the limits of travel thereof will therefore be yieldingly opposed by the member 19 so that an operator will have additional means for indicating that the limit of movement of the door is being reached. The yielding opposition of the member 29 is valuable also as slowing down the movement of the door at each end of its travel in order to reduce the shock which might otherwise occur if the door were given a sudden strong push or pull.

Various modifications may be made in the device embodying my invention without departing from the spirit and scope thereof and I desire that only such limitations shall be placed thereon as are imposed by the prior art or are set forth in the appended claim.

I claim as my invention:

In combination with a casing and a door therefor hinged thereto, a flat metal member, of substantially arcuate shape, having one end secured to the inside of the door adjacent to the hinge and having a resilient tongue portion adjacent to the secured end of the metal member bent out of the plane thereof to yieldingly engage the edge of the casing to oppose a closing movement of the door near its closed position and to hold it closed, the rear end portion of the flat metal member being bent out of the plane thereof to yieldingly oppose an opening movement of the door near its open position and having an integral lug extending away from the plane of the metal member to limit the opening movement of the door.

In testimony whereof, I have hereunto subscribed my name this 15th day of Jan., 1929.

FRANK F. FORSHEE.