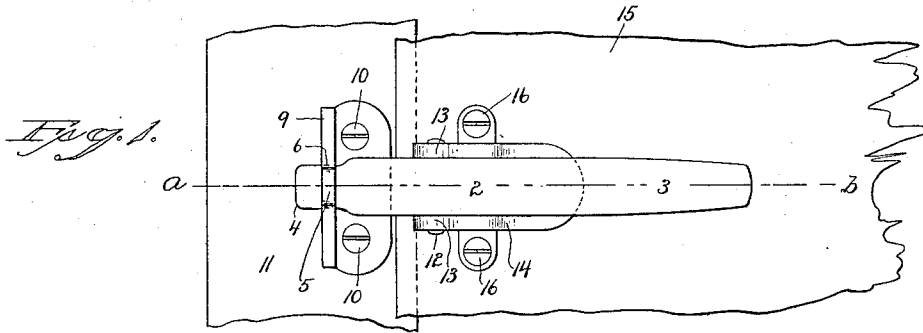
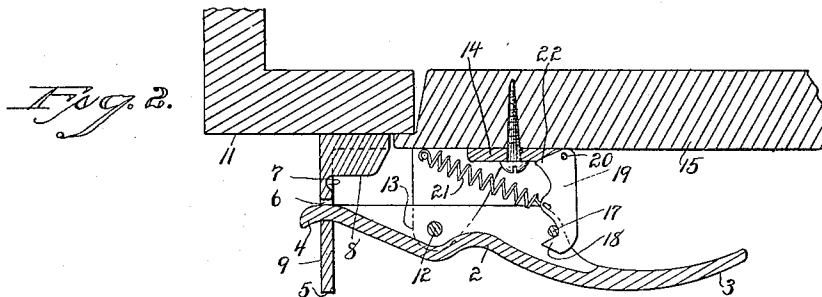
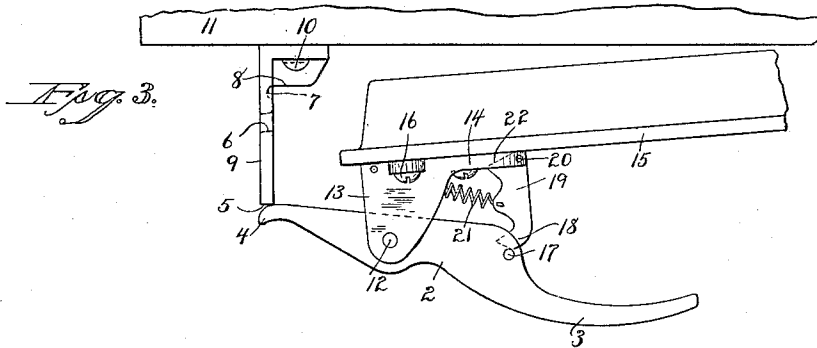
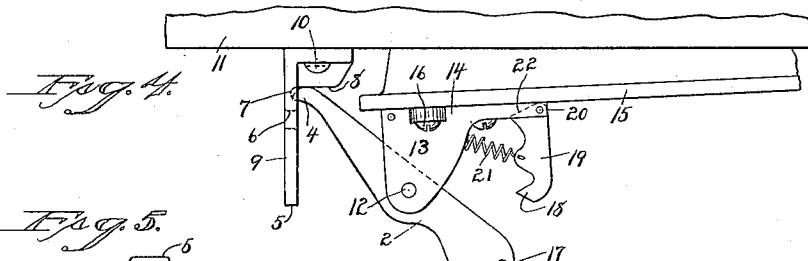
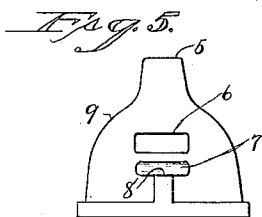


H. B. NORTH & J. W. GIBNEY.
 ANTISLAMMING LATCH FOR OVEN DOORS.
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1,153,514.

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ANTISLAMMING-LATCH FOR OVEN-DOORS.

1,153,514.

Specification of Letters Patent.

Patented Sept. 14, 1915.

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To all whom it may concern:

Be it known that we, HERBERT B. NORTH and JOSEPH W. GIBNEY, citizens of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Antislamming-Latch for Oven-Doors; and we do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a view in front elevation of our improved anti-slamming latch as applied to an oven and oven door, which are shown broken away. Fig. 2 a view thereof in central horizontal section on the line *a-b* of Fig. 1. Fig. 3 a plan view thereof with the latch in one of its safety positions. Fig. 4 a corresponding view with the latch in its other safety position. Fig. 5 a detached view in inside elevation of the keeper.

Our invention relates to an improved anti-slamming latch for use on the doors of ovens heated by a gas-flame or an oil-flame, the object being to provide a simple, durable, convenient and efficient latch which will prevent oven-doors from being slammed shut, whereby, the extinguishment of the flame consequent upon the compression of the air within the oven is prevented and the danger of explosion following the extinguishing of a gas-flame is avoided.

A further specific object is to produce a latch constructed so that in case of an explosion within the oven, the latch will give away and allow the door to swing open and so prevent the wrecking of the oven.

With these ends in view, our invention consists in an anti-slamming oven-door latch having certain details of construction as will be hereinafter described and pointed out in the claims.

In carrying out our invention as herein shown, we employ a latch 2 having a handle 3, and a long curved nose 4 adapted in form and length to co-act with the outer abutment 5, the locking-slot 6, the safety-notch 7, and the inner abutment 8 of a keeper 9 secured by screws 10 to the front wall of the oven 11, the said outer abutment 5, locking-slot 6,

safety-notch 7 and inner abutment 8 being arranged, in the order given, from the outer end of the keeper 9 inward. The said inner abutment 8 which is centrally located at the bottom of the keeper, is arranged at a right angle to the said safety-notch 7 and guides the nose 4 of the lever 2 thereinto. The latch 2 is hung upon a stud 12 supported in the arms 13 of a bracket 14 attached to the oven-door 15 by means of screws 16. To yieldingly hold the latch in its closed position, it is furnished with a locking-pin 17 co-acting with a doubly beveled nose 18 at the outer end of a dog 19 hung upon a pivot 20 in the bracket 14. A helical spring 21 secured to the dog 19 and to the bracket 14, exerts a constant effort to draw the dog inward into its locking position. At its inner end, the dog is formed with a heel 22 engaging with the bracket 14 to prevent it from being drawn too far inward by the spring 21.

The anti-slamming or safety operation of our improved latch is as follows:—Assuming that the oven door 15 is closed and locked as shown in Figs. 1 and 2, and that it is desired to open it, the handle 3 of the latch 2 is grasped and pulled outward, whereby the locking-pin 17 is caused to ride over the beveled inner face of the doubly beveled nose 18 of the dog 19, against the tension of the spring 21 which yields to permit the dog to swing outward and the pin 17 to ride over it. During the time that the latch 2 is being disengaged from the locking-dog 19 as described, its curved nose 4 has been withdrawn gradually from the locking-slot 6 in the keeper 9 by a corresponding opening movement of the door. Now, if the door, after being opened, is slammed, one or two things will take place depending upon the position of the latch 2 at the time, which, in turn, depends largely upon the user. If the door is slammed shut with the hand of the user upon the latch 2, the chances are that the nose 4 of the latch will strike the outer abutment 5 of the keeper, as indicated in Fig. 3, whereby the door will be abruptly and positively stopped before moving into its fully closed position and the compression of the air within the oven prevented. The door cannot now be closed except by taking hold of the latch and deliberately inserting

its nose 4 into the locking-slot 6 after which the latch will be pressed by its handle 3 into its closed position during which the pin 17 will ride over the outer bevel of the doubly beveled nose 18 of the dog 19, against the tension of the spring 21. The pin 17 is thus caught under the nose of the dog 19, remaining in contact with the beveled inner face thereof. However, in case of dangerous pressure within the oven, the tension of the spring 21 will be overcome and the dog 19 forced to let go its hold upon the pin 17 carried by the latch 2 which will then permit the door to open. In case the door should be slammed shut with the latch 2 in substantially the position shown in Fig. 4, the nose 4 of the latch will pass the outer abutment 5 of the keeper 9 and strike the inner abutment 8 thereof, and be deflected thereby into the safety-notch 7 as also shown in Fig. 4, though the operation would be substantially the same if the safety-notch 7 were omitted, the main thing being to provide a safety abutment 8 for the nose 4 of the latch at a point within the locking-slot 6. The door having been prevented from slamming, as described, the latch 2 must now be deliberately maneuvered for entering its nose 4 into the locking-slot 6 which must precede

its being swung into its closed and latched position as shown in Figs. 1 and 2.

We claim:—

1. In an anti-slamming latch for oven-doors, the combination with a latch, of a keeper provided with a locking-slot for the reception of the latch and with anti-slamming abutments located on opposite sides of the said slot.

2. In an anti-slamming latch for oven-doors, the combination with a latch, of a keeper having a locking-slot for the reception of the nose of the latch and provided with an outer abutment located outside of the said slot but in line therewith, and with an inner abutment located on the inside of the said keeper at a point within the said slot.

3. In an anti-slamming latch for oven-doors, the combination with a latch, of a keeper having a locking-slot for the reception of the nose of the latch, and provided with inner and outer safety abutments located in line with the said slot on opposite sides thereof, and a spring-actuated dog arranged to engage with the latch for yieldingly holding the same in its closed position.

HERBERT BRINKERHOFF NORTH.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."