

No. 803,396.

PATENTED OCT. 31, 1905.

R. R. CALLAN.
SAFETY DEVICE FOR GAS STOVES.
APPLICATION FILED MAY 7, 1904.

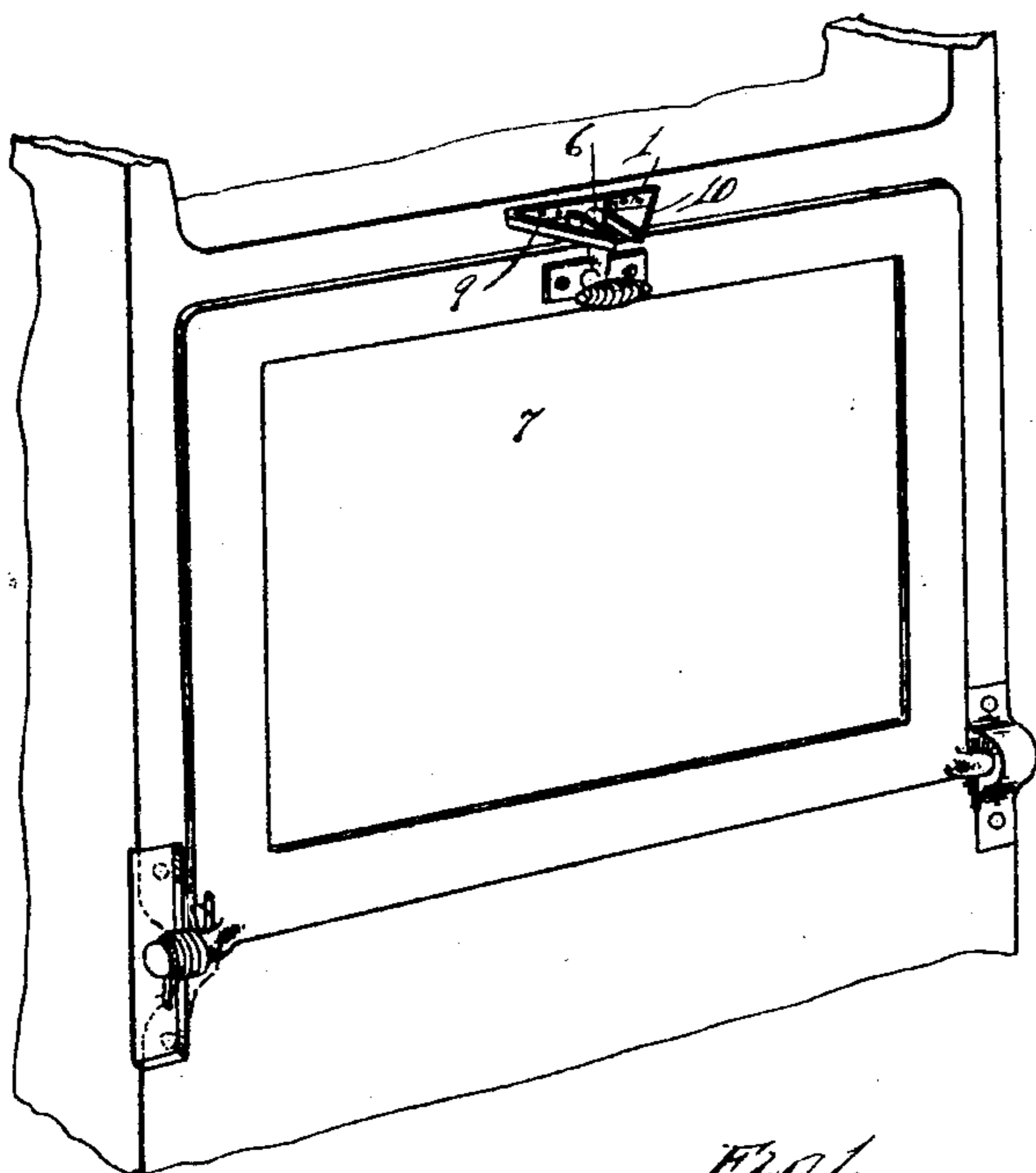


Fig. 1.

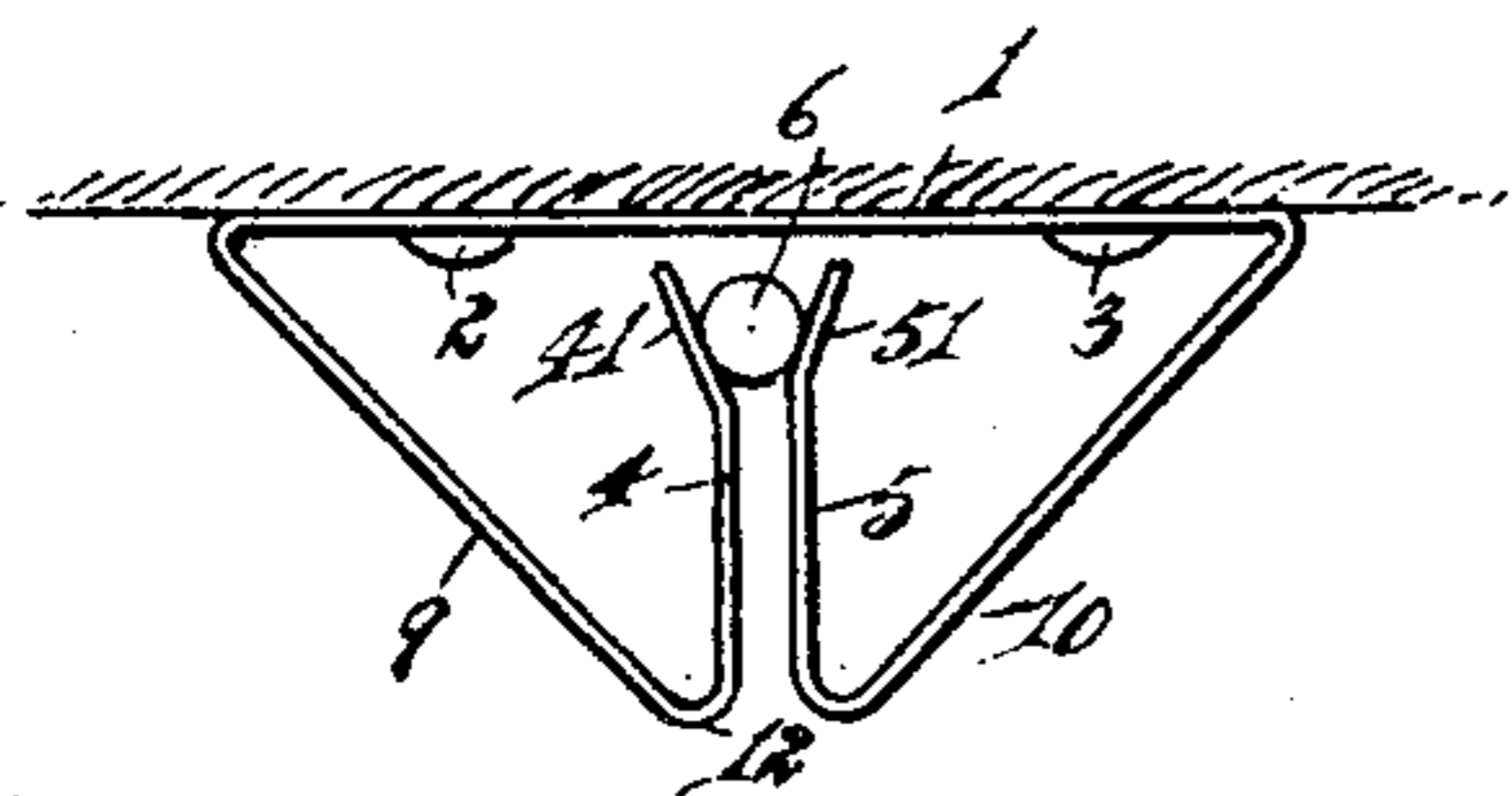


Fig. 2.

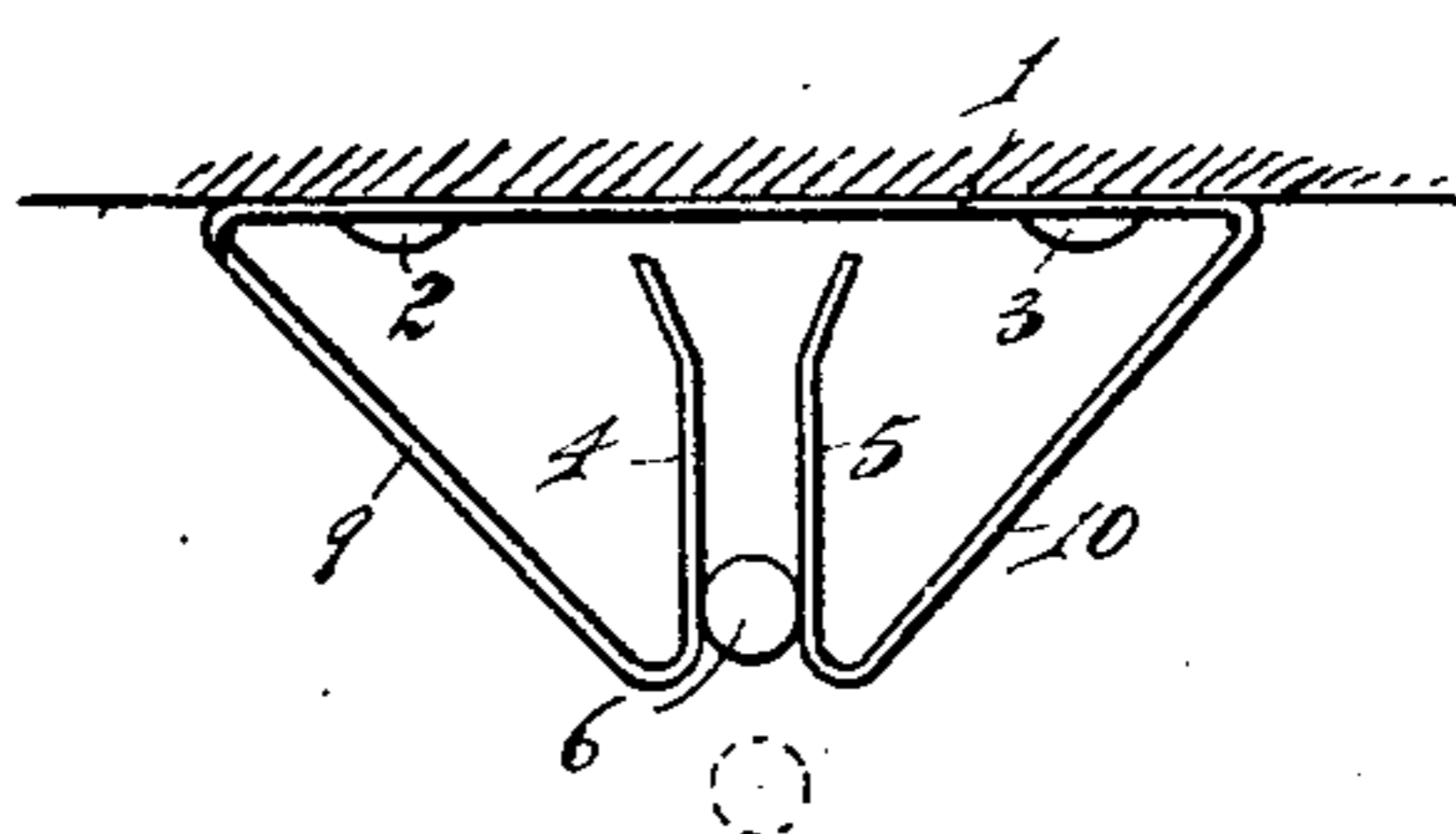


Fig. 3.

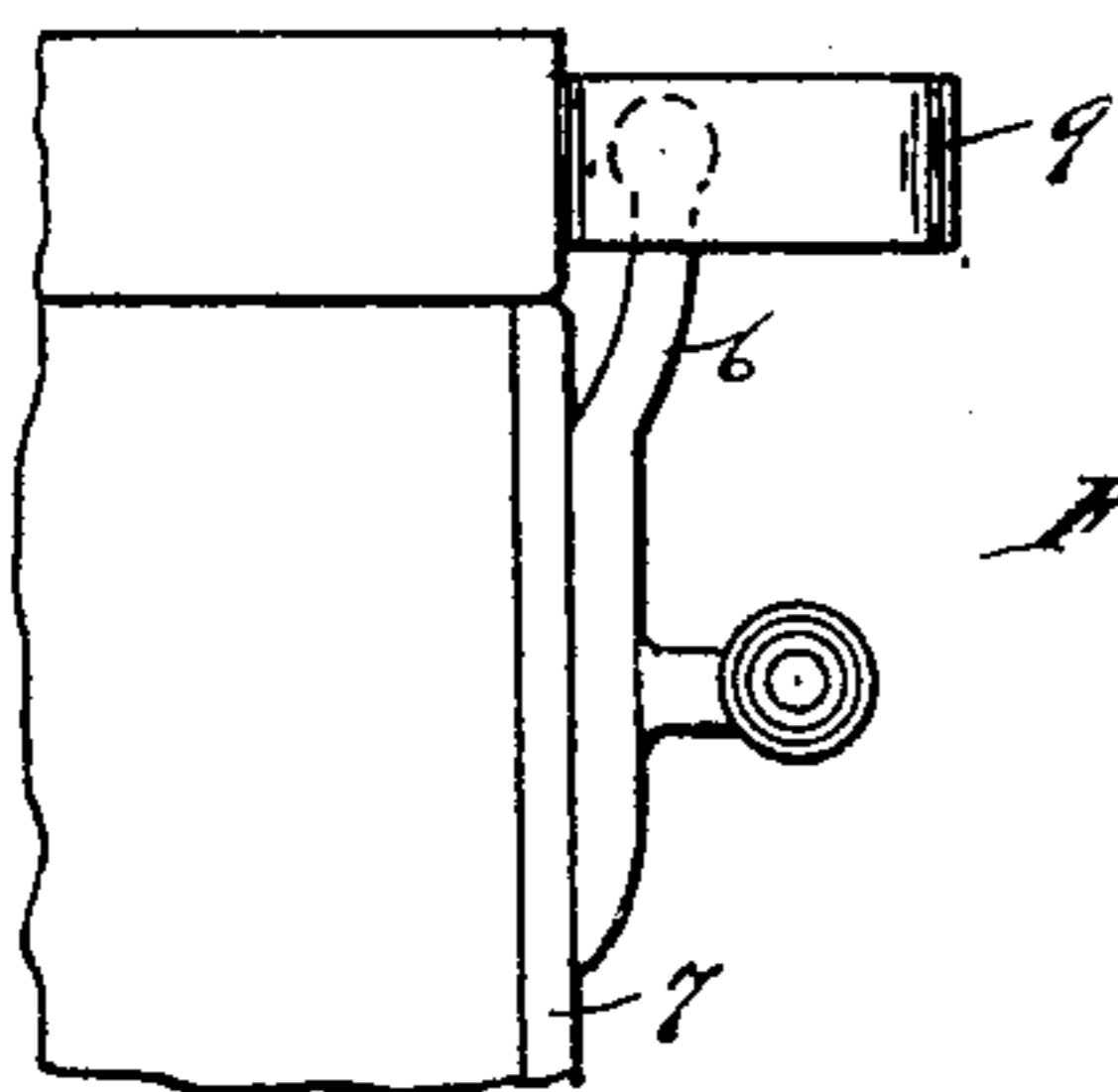


Fig. 4.

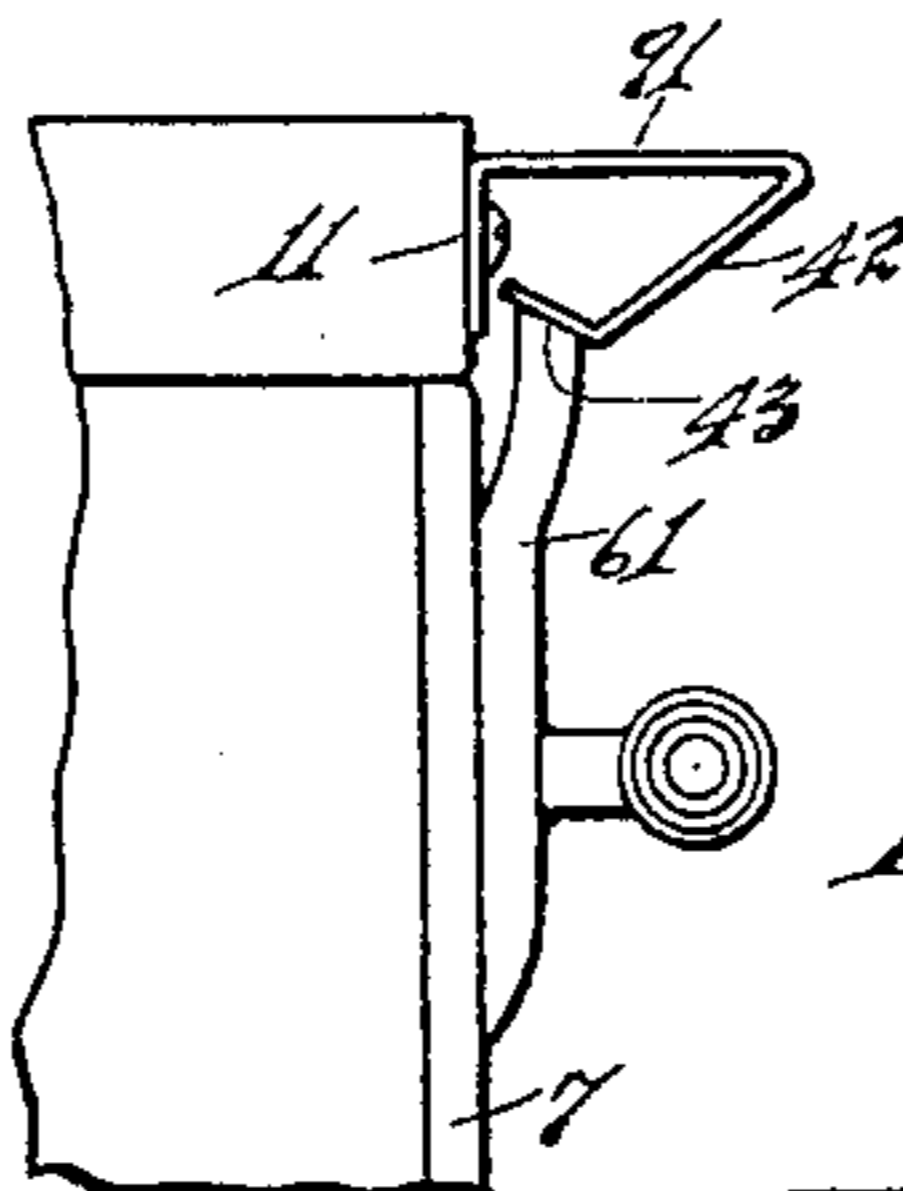


Fig. 5.

Richard R. Callan
Inventor

Witnesses:
J. G. Masser.
May E. Kott.

By *Lee* Attorney: Parker & Burton

UNITED STATES PATENT OFFICE.

RICHARD R. CALLAN, OF DETROIT, MICHIGAN, ASSIGNOR TO MICHIGAN STOVE COMPANY, OF DETROIT, MICHIGAN.

SAFETY DEVICE FOR GAS-STOVES.

No. 803,396.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed May 7, 1904. Serial No. 206,826.

To all whom it may concern:

Be it known that I, RICHARD R. CALLAN, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Safety Devices for Gas-Stoves; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to stove-door catches, and has for its object an improved catch intended to be used with the doors of gas-stoves.

It sometimes happens in the use of gas-stoves that the oven fills with gas and explodes, and if the oven-door has been caught under a secure catch an explosion of this kind injures and frequently destroys the stove; and the object of this invention is to produce a catch which will hold the door to place with sufficient strength for ordinary uses, but which will yield and allow the door to open in case of an accumulation of and explosion of gas in the oven, so that the stove will not be injured, but the door will merely be thrown open.

In the drawings, Figure 1 is a perspective showing a portion of the side of a stove with the door hinged thereto and in its closed position. Fig. 2 is a plan view of the catch and the latch on the door. Fig. 3 is a plan view of the catch and the latch on the door in a position in which the latch is shown as partly withdrawn from its securing position. Fig. 4 is a side elevation of the catch and latch. Fig. 5 is a side elevation of a somewhat modified form.

The catch is preferably made double of a sheet of spring material, bent to form a triangular frame with reëntering flanges at the end of the angles of the frame.

The side 1 of the strip of metal of which the catch is formed engages against the side of the stove, to which it is secured by bolts or screws 2 and 3. Both ends of the strip are bent forward and toward each other and each end is again bent backward or inward toward the straight part 1 of the strap of metal. The inbent ends 4 and 5 are spaced by a distance somewhat less than the latch which is to engage between them and their extreme inner

ends diverge, making a seat between the extreme terminals 41 and 51 in which the end of the latch is received. The latch 6 projects beyond the door 7 and engages between the inbent flanges 4 and 5 of the catch. The extreme diverging ends force the door to its seat.

At the turns or angles where the branch 4 bends inward from the part 9 and where the branch 5 bends inward from the part 10 the angle or corner is rounded and the rounded terminal 6 of the latch engages between the branches 4 and 5 at this rounded part and spreads the branches 4 and 5 when the latch travels through from the entrance 12 to its seat between the terminals 41 and 51. The catch is made of material that is sufficiently resilient to permit the two arms to spread in the way described.

In the form shown in Fig. 5 a catch with a single member is used, and in this the body part 11 is arranged vertically on the stove-frame. The part 91, corresponding to the part 9 of Fig. 2, extends directly forward on a substantially horizontal line. The branch 42 angles toward the catch 61, which engages under the terminals 43.

The door itself is preferably of the character known as a "drop-door" held on hinges having horizontal pintles and is provided with spring lifting or cushioning devices which are of common and ordinary construction, but which coact with the catch and latch to prevent the force of any possible explosion from throwing the door forcibly down and breaking the hinges or bearings.

Should gas accumulate in a stove furnished with this appliance and explode, the first force of the explosion is expended in opening the spring-catch, and during the time of movement of the door, while the catch is passing through between the parallel branches 4 and 5, the confined gas escapes around the edges of the door, and usually the door itself will not be blown entirely open. If, however, the explosion is sufficient to throw the door entirely out, it drops open as easily as though opened by hand and neither injures the stove itself or any person who may be standing near at hand. Burning gas is not driven directly out into the room, but to the front and back of the stove, and is not liable to come in contact with the persons working around the stove.

What I claim is—

1. In combination with an oven-door provided with hinges located at the bottom thereof, said hinges having horizontal pintles, 5 springs tending to close the door, a spring-catch and a latch engaging said catch with a prolonged frictional holding engagement whereby the door is permitted to yield in an opening direction, substantially as described.
- 10 2. In combination with an oven, a drop-door hinged along its lower edge, cushioning-springs therefor adjacent to said edge, a latch on the upper edge, and a resilient catch attached to the oven-wall at a point to engage 15 the latch when the door is closed and adapted to yieldingly oppose its passage therethrough when said door is intermediate the positions

of full closure and complete opening, substantially as described.

3. In a gas-stove, in combination with a 20 drop-door, a cushioning-spring therefor, a latch, a spring-catch provided with a long bearing adapted to continue in frictional engagement with said latch and afford during such engagement a continuous frictional re- 25 sistance to such opening, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

RICHARD R. CALLAN.

Witnesses:

W. J. KEEP,
GEO. L. RENO.