May 5, 1925. 1,536,842

M. P. HALBERT

WEATHER STRIP FOR DOORS AND WINDOWS

Filed April 18, 1922

Fig. 4

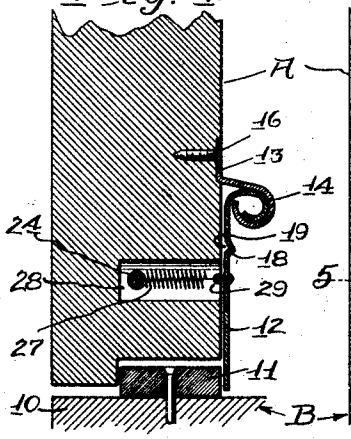


Fig. 1

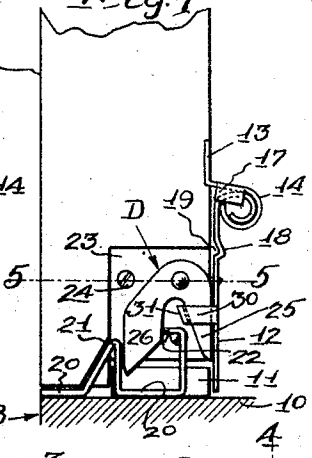


Fig. 2

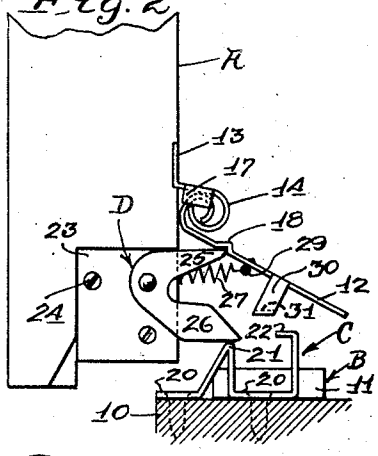


Fig. 3

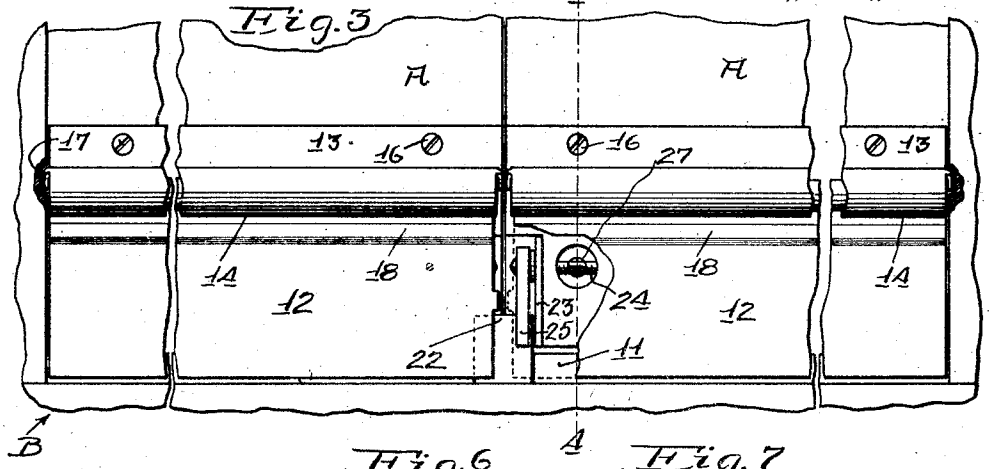


Fig. 5

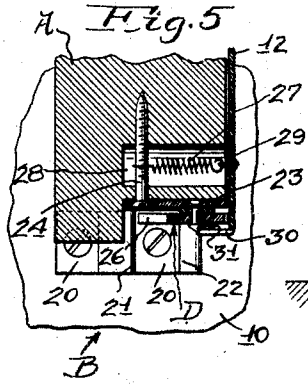


Fig. 6

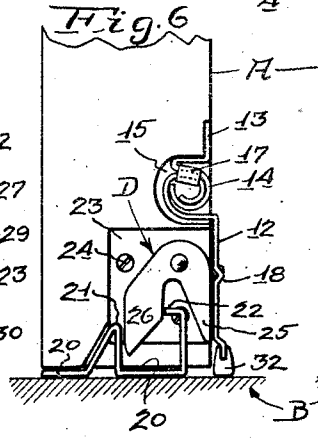
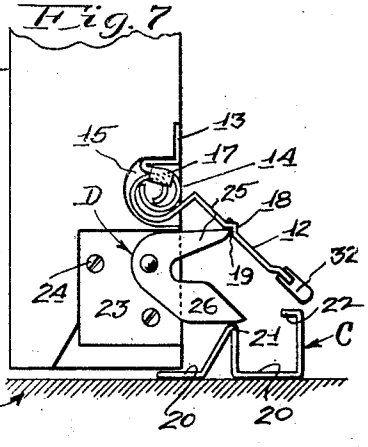


Fig. 7



Inventor
Mary P. Halbert
By Bradbury & Caswell
Attorneys

Patented May 5, 1925. 1,536,842

UNITED STATES PATENT OFFICE.

MARY P. HALBERT, OF ST. PAUL, MINNESOTA.

WEATHER STRIP FOR DOORS AND WINDOWS.

Application filed April 18, 1922. Serial No. 554,945.

To all whom it may concern:

Be it known that I, MARY P. HALBERT, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented a new and useful Weather Strip for Doors and Windows, of which the following is a specification.

My invention relates to improvements in weather strips for hinged windows and doors.

Its principal object is to provide a simple and durable device of this kind designed to be readily applied to a door or window and framework therefor, said device including a guard and automatic actuating means to cause said guard to seal the joint at the bottom of the window or door, when closed, also to cause said guard to clear the adjacent sill, jamb or floor, when the window or door is opened.

With the foregoing and other objects in view, which will appear in the following description, the invention resides in the novel combination and arrangement of parts and in the details of construction hereinafter described and claimed.

In the accompanying drawings, Fig. 1 is a view in elevation illustrating an embodiment of my invention as applied to a casement or "French" window, the window sash being closed against its stool on the sill and the guard held in position sealing the joint between said sash and sill; Fig. 2 is a similar view, the sash being swung back sufficiently to lift and latch the guard in elevated position; Fig. 3 is a front view illustrating companion casement sashes supplied with my improved device, portions thereof being broken away to illustrate parts otherwise concealed; Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3; Fig. 5 is a similar view taken on the line 5—5 of Fig. 1; Fig. 6 is a view similar to Fig. 1, showing my improvement as applied to a door and Fig. 7 is a view of the structure shown in Fig. 6, said view corresponding generally with that shown in Fig. 2.

In the drawings, A indicates a closure and B a frame therefor. In Figs. 1 to 5 inclusive, the closure A is a window sash of a casement or "French" window, while the frame B includes the window sill 10 and stool 11 thereon. In Figs. 6 and 7 the closure A is a door and the frame B the floor over which the door swings. A guard 12 suspended from a hanger 13 on the closure A seals the joint between closure and frame. The guard 12 and hanger 13 are sheet metal strips, the adjacent margins thereof being curled, one within the other, to form a weather proof hinge 14. This hinge may rest outside of the outer surface of the closure, as shown in Figs. 1, 2, 3 and 4, or may be housed within a groove 15 in the closure, as shown in Figs. 6 and 7. The hanger 13 is conveniently anchored to the closure A, as by means of screws 16. The hanger 13 is formed at its ends with downturned lips 17 embracing the ends of the curled margin of the guard 12, said lips being supplied to prevent endwise displacement of the guard 12 on its hanger 13. A longitudinal rib 18 rolled or pressed in the guard 12 supplies a groove or catch 19 at the rear thereof and, together with the curled margin of said guard, lends strength against warping or bending. An abutment C, mounted on the frame B, consists of a strip of metal bent into the form of a combined U and inverted V-shaped structure, said abutment comprising base members 20 for attachment to the frame B and spaced, upright tripping members 21 and 22. A dog D, pivoted on a plate 23, attached by means of screws 24 to the closure A, comprises a combined guard actuating and latch arm 25 and a trip arm 26. In opening the closure A, the trip-arm 26 of said dog D is swung forward by engagement with the tripping member 21 of the abutment C, said movement being imparted to the actuating arm 25, which swings the guard 12 into position (Fig. 2) clearing the frame B. The throw of the actuating arm 25, in thus lifting the guard 12, also carries the end of said arm 25 into engagement with the catch 19, thereby locking the guard 12 in elevated inoperative position. With the guard 12 raised upon the initial opening movement of the closure A, said closure is free to swing throughout its major sweep with said guard thus elevated. Upon the final closing movement of the closure A, the trip-arm 26 of the dog D engages the tripping member 22 of the abutment C and is swung downward to initial position between the said tripping members 21 and 22. This downward swing of the trip-arm 26 is accompanied by a similar movement of the actuating arm 25, which movement of said arm results, first, in disengaging the same from

the catch 19 in the guard and, finally, in withdrawing said arm from guard elevating position.

In some instances, instead of depending upon gravity to lower the guard 12 into sealing relation, I supply a spring 27 for that purpose. This spring is conveniently arranged in a hole 28 in the closure A near the plate 23, said spring being caught at its inner end over a plate anchoring screw 24 and at its outer end in an eye 29 attached to the guard 12. This spring 27, in addition to lowering the guard 12, bars the unrestricted upward throw of said guard, upon a quick opening swing of the closure A, and prevents the consequent failure of engagement between the actuating arm 25 and catch 19. The action of the spring 27, or of gravity, or both, in holding the guard 12 in sealing relation, is, in some instances, supplemented by means of a second catch arranged on the guard 12 and engaged by the actuating arm 25 of the dog D. Said catch includes a lug 30 bent rearward from the guard 12, said lug having an inturned lip 31 reaching behind the actuating arm 25. Upon the final closing swing of the closure A and after said actuating arm 25 has been released from the catch 19 in the guard 12, said arm 25, passes in front of the lip 31 and by the engagement of its rear edge with said lip causes the guard 12 to be drawn into and locked in sealing relation.

I prefer, especially in applying my improvement to doors (Figs. 6 and 7) to supply the lower edge of the guard 12 with a yielding abutment strip 32 of rubber or other suitable material. The use of such a strip results in a positive, final sealing movement of the guard 12 and provides a self-adjusting seal to accord with irregularities in the surface of the frame B.

Changes in the specific form of my invention, as herein disclosed, may be made within the scope of what is claimed without departing from the spirit of my invention.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. In combination with a hinged closure and frame therefor, a guard hinged on said closure, two catches on said guard, a spring operating to yieldingly draw the guard into operative position sealing the joint between said closure and frame, an abutment on the frame, a dog mounted on the closure and comprising a trip-arm, co-operating with the abutment, and a combined guard actuating and latch arm, said dog serving, during the initial stage of the opening swing of the closure, to lift the guard from sealing position, through the guard actuating arm, said arm co-operating with one of said catches to hold the guard elevated, said dog serving, further, during the final stage of the closing swing of the closure, to first release said arm from said catch and then engage said arm with the second catch and thereby lock the guard in sealing position.

2. In combination with a hinged closure and frame therefor, a guard hinged on said closure and arranged to normally hang in position with its lowermost edge sealing the joint between said closure and frame, an actuating abutment on the frame, and a dog pivoted on the closure to swing on an axis beneath the pivotal axis of the guard, said dog co-operating with said abutment and guard and serving, during the initial stage of the opening swing of said closure, to shift and hold the guard in elevated inoperative position and, during the final stage of the closing swing of said closure, to free said guard and permit of its return to depending operative position.

In testimony whereof, I have signed my name to this specification.

MARY P. HALBERT.