W. C. MATHEWS.
Weather-Strip.

No. 197,974. Patented Dec. 11, 1877.

Fig. 1.

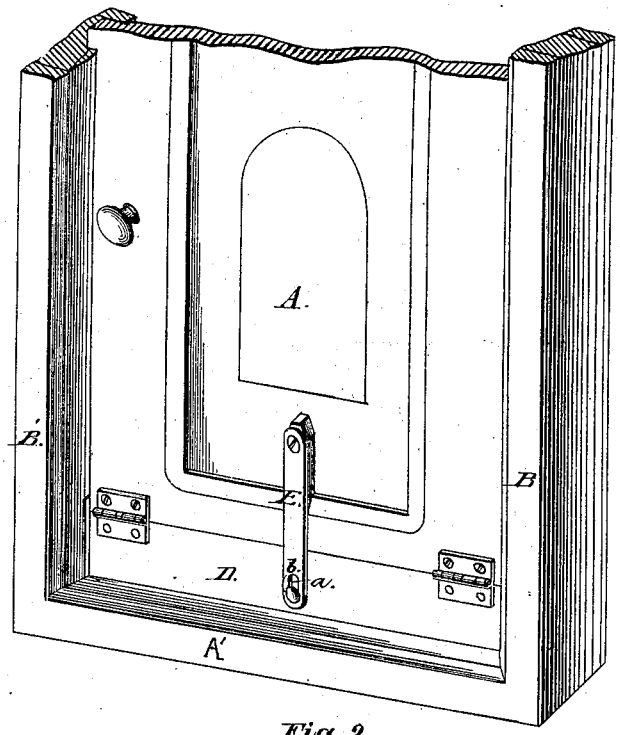


Fig. 3.

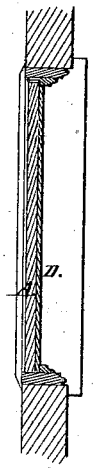


Fig. 2.

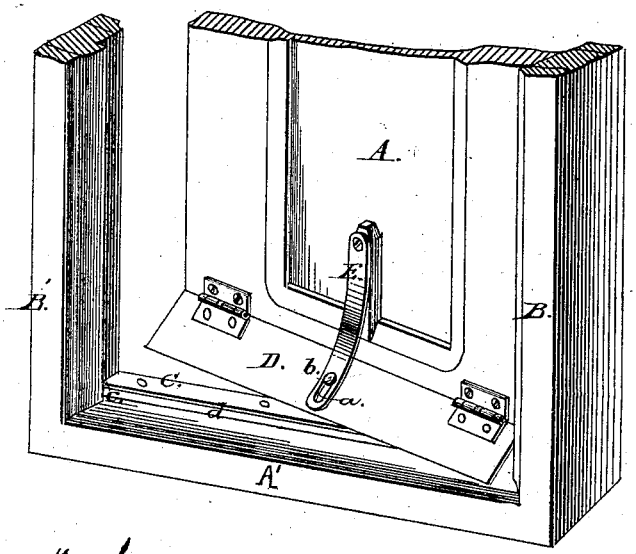
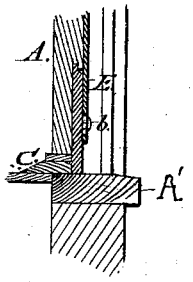


Fig. 4.



Attest:

John Thomas Kemp

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UNITED STATES PATENT OFFICE.

WILLIAM C. MATHEWS, OF SHENANDOAH, IOWA.

IMPROVEMENT IN WEATHER-STRIPS.

Specification forming part of Letters Patent No. **197,974**, dated December 11, 1877; application filed July 7, 1877.

To all whom it may concern:

Be it known that I, WILLIAM CLINTON MATHEWS, of Shenandoah, Page county, and State of Iowa, have invented a Weather-Strip, of which the following is a specification:

My invention is an improvement in weather-strips, to be applied more particularly to the bottoms of doors and windows opening on hinges. It consists of a plate or strip of metal tongued along its upper edge to fit into a corresponding groove in the door, said strip being hinged to the lower rail of a door or window, to be kept clear of the carpet-strip when open by a bent spring, provided with a slot at its lower end and secured to the door at its upper end.

The weather-strip, when the door or window is closed, fits snugly into a rabbet formed in the lower rail of the door or window, and, extending downward, rests on the door-sill and against the vertical bearing formed by the edge of a carpet-strip secured between the jambs of the opening.

Referring to the drawings, Figure 1 is a perspective view, showing the appearance of the device outside when the door is closed. Fig. 2 is a perspective view, showing the door partly opened. Fig. 3 is a horizontal section cut through door and door-jambs, and Fig. 4 is a vertical central section.

Similar reference-letters denote like parts in all of the figures.

A is the door, hung with hinges upon the jamb B, and closing against the shoulders formed by the rabbets in the jambs B B′. The sill of the door A′ has a carpet-strip, C, which, projecting above said sill, has its outer edge cut square, to form, with the door-sill, a rabbet, against which rests the weather-strip when the door is closed. The carpet-strip C is capped with metal or other hard material, and secured to the door-sill A′ in the usual manner.

The lower rail of the door is cut away or rabbeted to receive the plate D, which, when in its place, has its outer face in line with outer plane of door. The depth of the weather-plate D is equal to the rabbet in the lower rail of door and the depth or height of the carpet-strip C above the door-sill A′.

The door A is provided with a bent spring, E, which is screwed to said door, and, extending downward, is secured loosely to the weather-plate D. The spring E is provided at its lower end with a slot, *a*, and is held against the strip D by a pin, *b*.

The carpet-strip C is fastened to the sill of the door in such a way as that a groove, *c*, is formed between it and the jamb B′, of a width sufficient to admit the weather-plate D when the door is closed.

The rabbet in the jamb B′, against which the weather-plate D bears when the door is closed, may be clad with metal, to give a smooth bearing to the edge of the weather-plate which impinges against it. The upper edge of the weather-plate is provided with a tongue to fit into a groove in the return of the rabbet, to prevent rain, &c., from driving behind said plate.

The operation of the device is as follows: The door being closed, the weather-plate D bears evenly against the edge *d* of the carpet-strip C. As the door is opened inward, the spring E lifts and holds the weather-plate at about an angle of forty-five degrees, so that the carpet-strip C may be cleared as the door moves over it. When the door is nearly closed the lower edge of the weather-strip comes in contact with the return of the rabbet in the jamb B′, whereby the said strip is automatically pressed inward toward the door, and, extending below the bottom of said door, it enters the groove *c*, formed between the return of the rabbet and the carpet-sill C.

The strip D bearing snugly against the outer edge of the strip C, a close joint is formed to keep out rain, snow, wind, and dust.

I am aware that weather-strips are in use having springs moving in loops on the door, and secured to the strip, and this, broadly, I do not claim.

I am also aware that weather-strips held out of the way of the carpet-sill by springs

have been closed by coming in contact with the rabbet in the door-jamb, and this peculiarity, therefore, I do not claim, broadly; but

What I do claim, and desire to secure by Letters Patent, is—

The strip D, tongued along its upper edge to fit into a corresponding groove in the door, in combination with the carpet-sill C, rectangular at its outer edge, and forming, with the door-sill F, a rabbet, and jamb B′, forming, with outer edge of carpet-strip C, the groove *c*, as and for the purpose set forth.

WILLIAM CLINTON MATHEWS.

Attest:

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ELISHA CHARLES WHITING.