

Foster & Banta.

Weather Strip.

No. 16,874.

Patented Mar. 24, 1857.

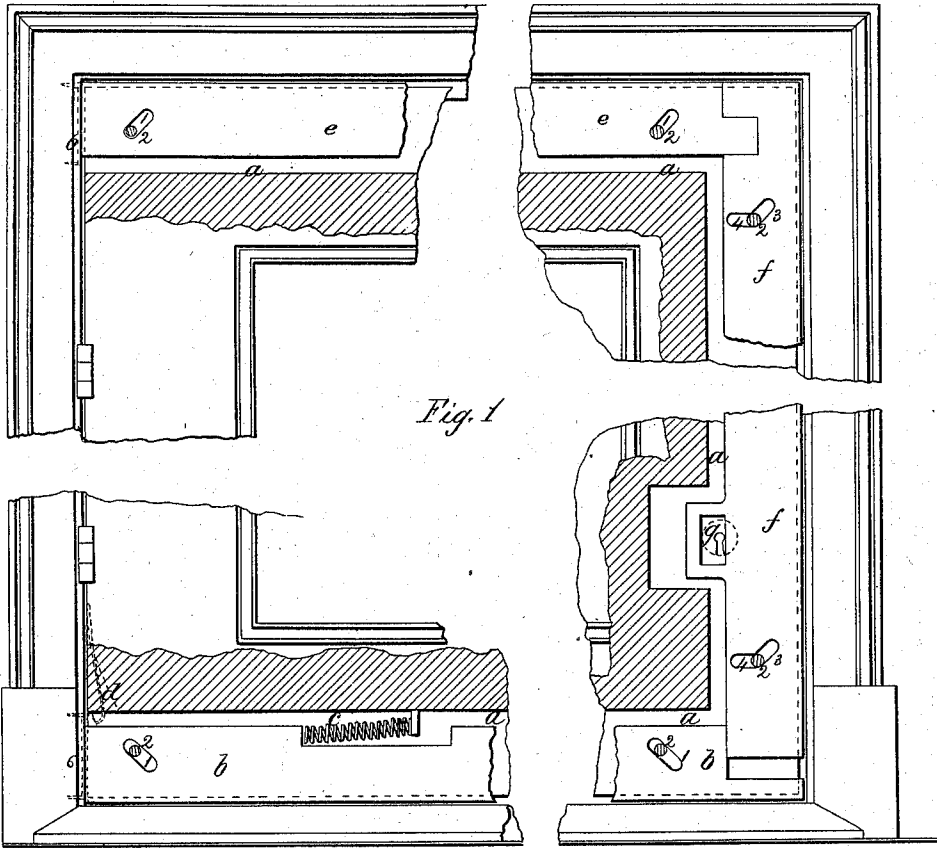
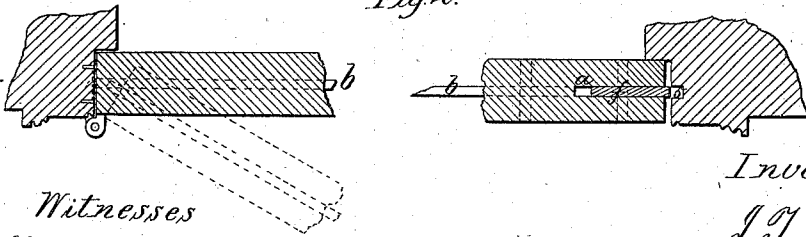


Fig. 1

Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN T. FOSTER AND JACOB J. BANTA, OF JERSEY CITY, NEW JERSEY, AND
JAMES H. BANTA, OF PIERMONT, NEW YORK.

IMPROVEMENT IN WEATHER-STRIPS FOR DOORS, WINDOWS, &c.

Specification forming part of Letters Patent No. 16,874, dated March 24, 1857.

To all whom it may concern:

Be it known that we, JOHN T. FOSTER and JACOB J. BANTA, of Jersey City, in the county of Hudson and State of New Jersey, and JAMES H. BANTA, of Piermont, in the county of Rockland and State of New York, have invented, made, and applied to use certain new and useful Improvements in Weather-Strips for Windows, Doors, &c.; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is an elevation of a door fitted with our improvements, the edges of the door being shown as removed for the purpose of exhibiting the other parts; and Fig. 2 is a sectional plan near the bottom of the door.

Similar marks of reference denote the same parts.

The nature of our said invention consists in the use of one or more strips of metal or similar substance inserted within deep narrow grooves or mortises on one or more sides of a door or window and sustained by pins in diagonal slots in such a manner that the shutting of the door or window forces out the metallic strip or bar, bringing its edge into contact with the sill or post of the door, excluding all wind, dust, &c.; and we also make use of said weather-strip on the side of the door as a locking-bar when desired.

In the drawings, *a* is a deep groove or saw-cut in the bottom edge of the door of sufficient depth to receive the metallic strip or bar *b*.

1 1 are diagonal slots or mortises in said bar, through which pins 2 2 pass, and *c* is a spring tending to force said bar to that side of the door on which the hinges are placed. Consequently said spring tends to draw said bar *b* within the groove *a* by sliding the same diagonally up onto the pins 2 2; but when the door is shut the end of the bar *b* (that was projected beyond the vertical edge of the door by the spring *c* at the same time that said bar was raised) takes a plate 6, attached to the door-jamb near the sill, and thereby, the door and pins 2 2 continuing to move while the bar is sustained at its end, causes the pins 2 2 to travel in the diagonal slots 1 1 and force

the bar down onto the sill. In order to fit this bar *b* into place, as well as the others hereinafter mentioned, the saw-cuts or deep grooves should be formed while the door is off its hinges. The same should then be hung in place and the bar *b* laid on the sill in its right place and holes bored through the door at the upper end of the diagonal mortises 1 1, so that when the said bar is inserted in its groove and sustained by the pins 2 2 it shall act correctly and set down closely onto the sill when closed, and a spring (shown by dotted lines at *d*) may be used in place of that at *c*, because the same can be more easily attached to the edge of the door in a mortise than the spring *c*.

When desired, the top edge of the door can be fitted with a similar weather-strip *e*, acting in precisely the same manner as that on the bottom, except that a spring is unnecessary, because the bar will descend diagonally by its own weight.

Should it be desired to insert a weather-strip in the vertical moving edge of the door, the same may be fitted as shown at *f*. In this case the upper end of the bar *f* is to be formed with a jaw receiving a tongue on the end of the bar *e*, and the diagonal slots 2 and 3 in said bars *e* and *f* being parallel, the said bars move together diagonally into the upper corner of the door-jamb, and the lower end of this bar *f* is pressed out by the bar *b*, at which point there is a sliding motion between the parts.

The bar *f* may be used as a lock to the door by forming a groove 5 in the jamb, (see Fig. 2,) and forming horizontal slots 4 at the base of the inclined slots 3, and providing a suitable lock at *g* to throw the bar *f* out into the groove 5, and, if desired, a pin may be inserted from the inner side of the door into a hole in said bar *f*, rendering the fastening perfectly secure.

It will be apparent that our invention may be applied with the greatest ease to casement or folding French windows as well as to doors, or may be used under any other circumstances in which it may be available.

We are well aware that metallic strips or bars have been inserted in a deep groove in the door and have been forced down onto the

sill by means of levers and links that give said downward motion as the door shuts, and the ends of said metallic strips (or a rod acting on the same) come in contact with the door-jamb. Our invention therefore does not relate to any such device; but we are not aware that any plate or bar forming a weather-strip has ever before been made with diagonal slots taking pins in the door, fitted and operating as specified, whereby the parts are simple, easily fitted to the door without injuring the same, cheap, and not liable to get out of repair, at the same time avoiding the cumbersome and costly fittings that have heretofore been used for this purpose. Therefore

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

1. Constructing weather-strips with diagonal slots taking pins in the door in such a manner that an endwise motion given to said strip in shutting the door shall cause the

weather-strip to press onto the sill or casing, substantially as and for the purposes specified, it being distinctly understood that we lay no claim to a bar having a similar movement, but actuated by levers, rods, or links.

2. The manner herein specified of hanging the vertical weather-strip *f* in connection with the upper and lower weather-strip *b* and *e*, so that the endwise motion of the latter strips shall force said strip *f* against the vertical door-post, as specified.

In witness whereof we have hereunto set our signatures this 19th day of December, 1856.

J. T. FOSTER.
J. J. BANTA.
J. H. BANTA.

Witnesses:

LEMUEL W. SERRELL,
THOMAS G. HAROLD.