H. B. ALVORD.
Weather Strip.

No. 202,088. Patented April 9, 1878.

Fig. 1.

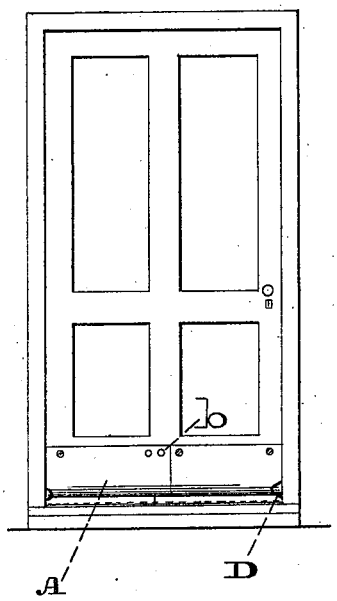


Fig. 2.

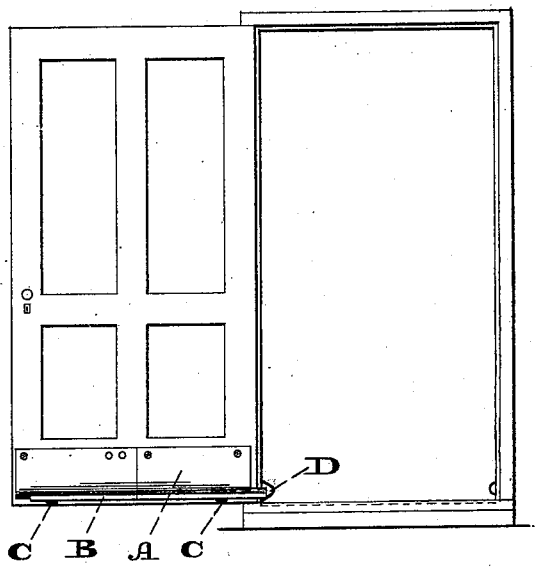


Fig. 3.

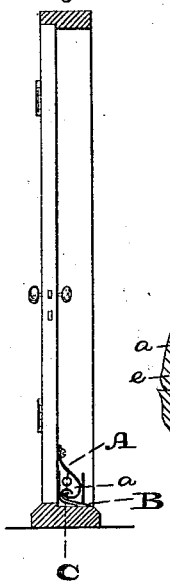


Fig. 5.

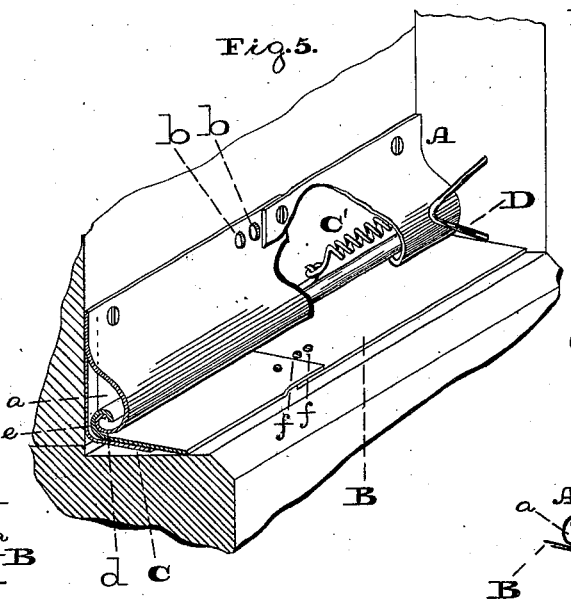
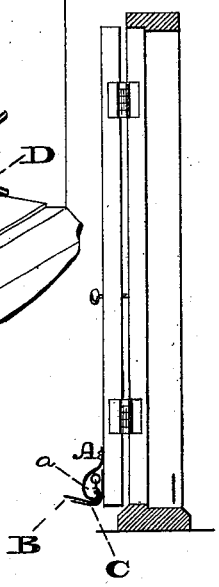


Fig. 4.



Witnesses:
W. F. Kircher
A. P. Grant

Inventor:
H. B. Alvord,
by John A. Wiedersheim
ATTORNEY.

UNITED STATES PATENT OFFICE.

HUBBEL B. ALVORD, OF VINELAND, NEW JERSEY.

IMPROVEMENT IN WEATHER-STRIPS.

Specification forming part of Letters Patent No. **202,088**, dated April 9, 1878; application filed February 23, 1878.

To all whom it may concern:

Be it known that I, HUBBEL B. ALVORD, of Vineland, in the county of Cumberland and State of New Jersey, have invented a new and useful Improvement in Weather-Thresholds, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figures 1 and 2 are front views of the threshold, embodying my invention. Figs. 3 and 4 are end views thereof. Fig. 5 is a perspective view thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a threshold made of extensible parts, so as to be applicable to doors and windows of different widths.

It also consists of a weather-strip formed of an adjustable connecting-plate and an adjustable sill-piece hinged thereto, a restoring-spring, and an elevating-spring, in combination with an incline or cam secured to the door-frame, for forcing down the sill-piece, as will be hereinafter set forth.

Referring to the drawings, A represents the connecting-plate, consisting of two or more horizontally-arranged plates, which are secured, continuous of each other, to the lower portion of a door, and they are recessed or somewhat tubular in the direction of their lengths, so as to form a space, *a*. Slots or perforations *b* are formed in the plate, so that the latter may be lengthened or shortened, or adjusted relatively to the width of the door or window to which the plate is secured.

Along the lower edge of the plate A there is a bead, *d*, which is overlapped by a tubular or bent portion, *e*, at the rear of a shifting sill-piece, B, of the threshold, said bead and portion *e* constituting a hinge-joint for the sill-piece. This sill-piece projects horizontally, or somewhat horizontally, forward from the base of the plate A, and it is formed of two or more pieces, continuous of each other, and having slots or perforations *f f*, whereby the piece may be lengthened or shortened, or adjusted relatively to the width of the door or window to which the piece is secured.

C C represent springs, which are secured to the plate A or the door, and so disposed that they press against the sill-piece, so as to elevate the same; and C′ represents a spring, which is arranged in the space *a* of the plate A. One end of this spring is secured to the plate A, and the other end to the sill-piece B, for restoring said piece to its normal position, which is toward the hinged side of the door, the sill-piece being somewhat longer than the connecting-plate A, and shifting or moving, so as to permit the closing of the door, and also to fit snugly within the door frame or jamb.

D represents a horizontal projection, which is inclined on its lower face, and it is secured to the lower end of the door-jamb at the hinged side of the door, and it is so arranged that in closing the door the sill-piece will come in contact with the projection and ride on the inclined face thereof. This operation forces down the sill-piece, and presses it tightly against the base or sill of the door-frame, thus closing the joint of said base and the door, whereby cold, water, and dust are prevented from entering at said joint, the advantages whereof are evident.

It will be noticed that, owing to the sweep of the door, the sill-piece, striking on its inner end on the door-frame, must necessarily shift in order to prevent said piece projecting and interfering with the closing of the door. This provision is also necessary in order to employ a sill-piece of the exact width of the frame, thus preventing the entrance of cold, &c., at the sides of the strip; but this shifting sill has been heretofore known.

In opening the door, the sill-piece gradually clears the projection or cam D and returns to its normal position, and the springs C C immediately elevate the sill-piece, thus permitting the easy opening of the door, and so holding said piece that the subsequent closing of the door is not interfered with by the sill-piece, and the parts are readily operative when the door is again closed.

I am aware that thresholds have been constructed in various ways, and that a shifting sill-piece and connecting-plate are not new. Such features I therefore disclaim; but,

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The weather-strip having an adjustable connecting-plate and adjustable sill-piece, substantially as and for the purpose set forth.

2. The adjustable connecting-plate A and adjustable sill-piece B, hinged thereto, in combination with the springs C C′, and with the incline D, the several parts being constructed and operating as described, and forming an improvement in weather strips or thresholds, for the purpose specified.

H. B. ALVORD.

Witnesses:
JOHN A. WIEDERSHEIM,
SAML. M. GRICE.