

L. H. ELLSWORTH, W. E. WILCOX & S. SEABURY.

Improvement in Weather-Strips.

No. 114,118.

Patented April 25, 1871.

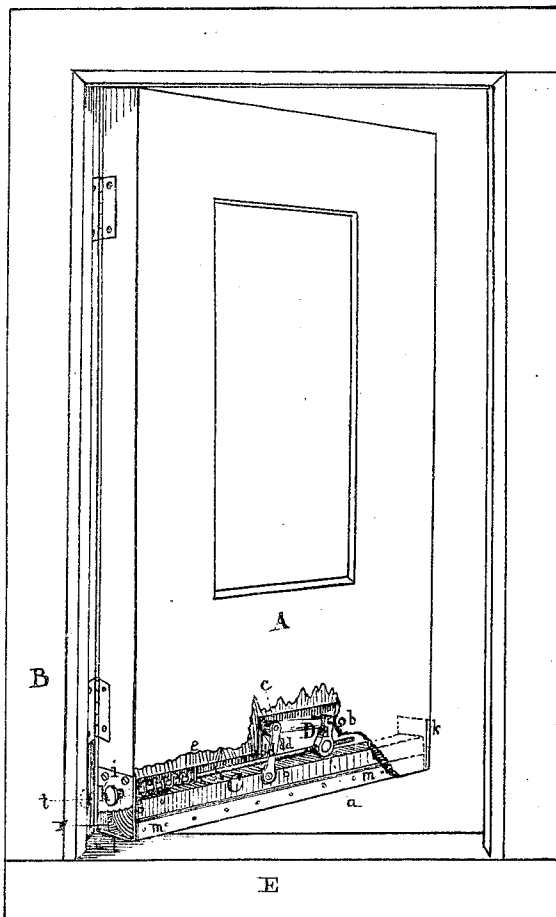


Fig. 1.

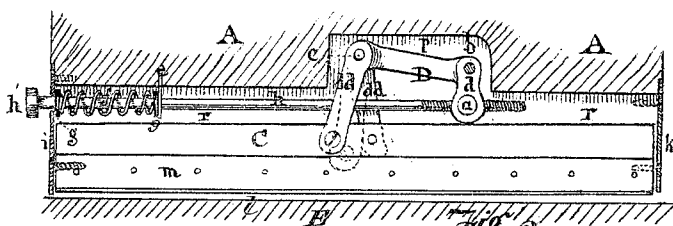


Fig. 2.

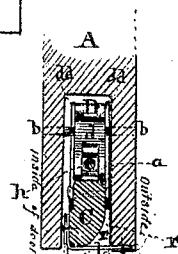


Fig. 3.

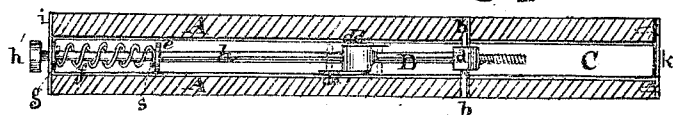


Fig. 4.

Witnesses
M. Burris
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United States Patent Office.

LUCIUS H. ELLSWORTH, WILLIAM E. WILCOX, AND SAMUEL SEABURY,
OF PEORIA, ILLINOIS.

Letters Patent No. 114,118, dated April 25, 1871.

IMPROVEMENT IN WEATHER-STRIPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, LUCIUS H. ELLSWORTH, WILLIAM E. WILCOX, and SAMUEL SEABURY, of the city of Peoria, in the county of Peoria and in the State of Illinois, have invented a new and improved Weather-Strip; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a perspective view;

Figure 2, a side elevation;

Figure 3, an end view; and

Figure 4, a plan view.

Like letters in the different figures of the drawing indicate like parts.

This device relates to the operation of a strip of rubber or cloth as a weather-excluder, which is pressed downward against the threshold by means of a rod operating on a lever, the rod projecting from the side of door next to the jamb, the rod being operated by being brought by the door against the jamb.

A is the door,

B, jamb; and

C, a strip of wood or other material, a cross-section of which appears in fig. 3, running the whole length of a groove, *r*, plowed in the under edge of the door for its whole length, (a deeper mortise, *P*, being made at the middle of the groove to contain the elbow-joint D and C.)

The strip C fits this groove closely; and to that side of strip facing the inside of the door the strip or cloth *l* is nailed and secured by a strip of strong material, *m*.

The opposite side of strip runs beneath the edge of the strip C, thus covering the entrance of the groove *r*, and is nailed along the outer under edge of the door at *n*.

D is an elbow-joint attached to a pin or pivot, *b*, running across the recess above the strip C, the shorter arm *d* of which carries a swivel-nut, *a*, through which the screw-thread of the inner end of rod *h* passes.

The longer arm of the elbow-joint carries a link or links, *d d d d*, passing downward by the side of rod *h*, and pivoted to the center part of the strip C.

The rod *h* has a head, *h'*, which projects beyond that part of the door which shuts against the rabbet of the jamb, and extends thence along the groove *r*, passing also through the stop *e* (fastened to the door) into and through the axis of the swivel-nut *a* in the elbow-joint *d*; this part of the rod having a screw-thread thereon.

A spiral spring, *f*, or its equivalent, is placed around the rod just within the groove *r*, which abuts against a washer, *s*, and the stop *e* in the door, and at the other end said spring presses against the collar *g* affixed to the neck of rod immediately within side of the plate *i*.

The plates *i* and *k* at either ends of the groove *r* are merely to close the ends of the groove, as the wood-work at those points would be liable to be broken.

The operation of this device is as follows:

The door, when nearly closed, carries the head *h'* of the rod *h* against the rabbet of the jamb B, causing the rod to press against its retained swivel-nut *a* in the arm *d* of the elbow-joint D. This depresses the other arm of the elbow, which is united to the link or links *d d*, and the latter also at their lower ends to the strip C. The latter is thus forced downward, carrying before it the rubber or cloth strip *l*, which thus closes the opening between the bottom of door and threshold.

The strip C is supported and kept within the groove *r*, when not in operation, by the pressure of the spiral spring *f* against the stop or collar *g* near its head, the other end of the spring having a bearing on the fixed stop *e*, so that, when the door is opened again, the head of the rod being released from the jamb, the spring *f* brings the weather-strip back into the groove *r* again.

When the weather-strip is not required for use it can be thrown out of gear by simply screwing the rod *h* further into the swivel-nut *a*, so that the head *h'* of rod does not strike the jamb, a recess, *t*, being left for this purpose in the rabbet of the jamb.

We do not claim a self-adjustable weather-strip, as we are aware of the same being shown in the patent of A. T. Pelton, December 16, 1845; but

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

The combination and arrangement of elbow D, links *d d d d*, rod *h* provided with head *h'*, strip C provided with rubber *l*, spiral spring *f*, plate *e*, and recess *t* made in the rabbet of jamb, but not extending out to the edge thereof, substantially in the manner and for the purpose as herein shown and set forth.

In testimony that we claim the foregoing weather-strip we have hereunto set our hands this 1st day of November, 1870.

LUCIUS H. ELLSWORTH.

WILLIAM E. WILCOX.

SAMUEL SEABURY.

Witnesses:

E. THURLOW,
H. W. WELLS.