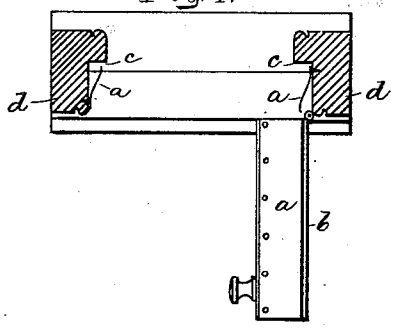
E. T. INGALLS.

WEATHER-STRIP.

No. 192,371. Patented June 26, 1877.

Fig. 1.



Witnesses.

L. W. Latimer

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Inventor

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UNITED STATES PATENT OFFICE.

ELIAS T. INGALLS, OF HAVERHILL, MASSACHUSETTS.

IMPROVEMENT IN WEATHER-STRIPS.

Specification forming part of Letters Patent No. **192,371**, dated June 26, 1877; application filed January 31, 1877.

To all whom it may concern:

Be it known that I, ELIAS T. INGALLS, of Haverhill, in the county of Essex and State of Massachusetts, have invented an Improved Weather-Strip for Doors, Sash, &c., of which the following is a specification:

This invention relates to weather-strips for doors and sash; and consists in a yielding or elastic metallic strip suitably attached to the door, or casing, or sash at one edge, its other edge being free to adapt itself to the surface over which it moves.

Weather-strips are commonly made of fibrous material or india-rubber, such strips being made to fill up or stop the openings between the doors and casings or sashes and frames.

The rubber, in practice, loses its elasticity, changes its condition with age, and according to varying temperature, as heat or cold.

In this my invention I employ an elastic metallic strip having but a slight movement. Consequently its elasticity remains unaffected and it is not subject to change by age or climate. This metallic strip used with a door yields gradually as the door is closed, and serves as a spring to arrest the shock or concussion of the door against the casing or jamb, and also acts as a packing. The free edge of the strip bearing against the casing, frame, or door, serves as a packing to prevent the passage of air or water, and being free to yield, yet having considerable rigidity, it readily adapts itself to the space it is designed to stop.

Figure 1 represents the invention applied to a door, the casing above the door being in section.

The drawing represents the elastic or spring metal strip *a* applied in different positions with relation to the door *b* and its surrounding casing. At the right and left of Fig. 1 the strips are shown as secured to the casing, and the free ends extend in opposite directions. The one at the right extends toward the front of the door, and the one at the left toward the jamb. The strip will preferably be attached to the door at top and bottom. It is shown attached at top in Fig. 1.

With a spring metallic strip, as shown, the door, as it is closed, will gradually straighten the strip, moving its free end from the position shown in the drawing to a position nearer the casing or door-frame, and the space, be it more or less, will be effectually closed, for the free longitudinal edge of the strip will press firmly against the door edge as the latter crowds it back.

Besides packing the door, the strip acts as a spring to receive and cushion the edge of the door as it comes in place against the portions *c c* of the casing.

The strips for the vertical portions of the door are most out of the way when attached to the casing.

A thin elastic metallic strip may be used for a great length of time without injurious wear. It is more durable and cheaper than india-rubber.

The weather-strip has one straight edge to be applied to the casing or other flat surface, and at or near its center it is curved longitudinally throughout its length, thereby causing the free edge of the strip to stand out away from the casing or other part to which the straight edge is secured.

I am aware that windows have been provided with guides covered on two sides with flat strips of metal, and adapted to fit into and fill grooves in the edges of the sashes, and I hereby disclaim such construction as not in anywise being of my invention; but

What I claim is—

The combination, with the door, of a sheet-metal spring-strip attached at one edge only, and adapted to operate between the door and its casing to relieve the door from shock when being closed, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ELIAS T. INGALLS.

Witnesses:

G. W. GREGORY,

E. C. PERKINS.