

(No Model.)

A. P. CHILSON.
WEATHER STRIP.

No. 577,719.

Patented Feb. 23, 1897.

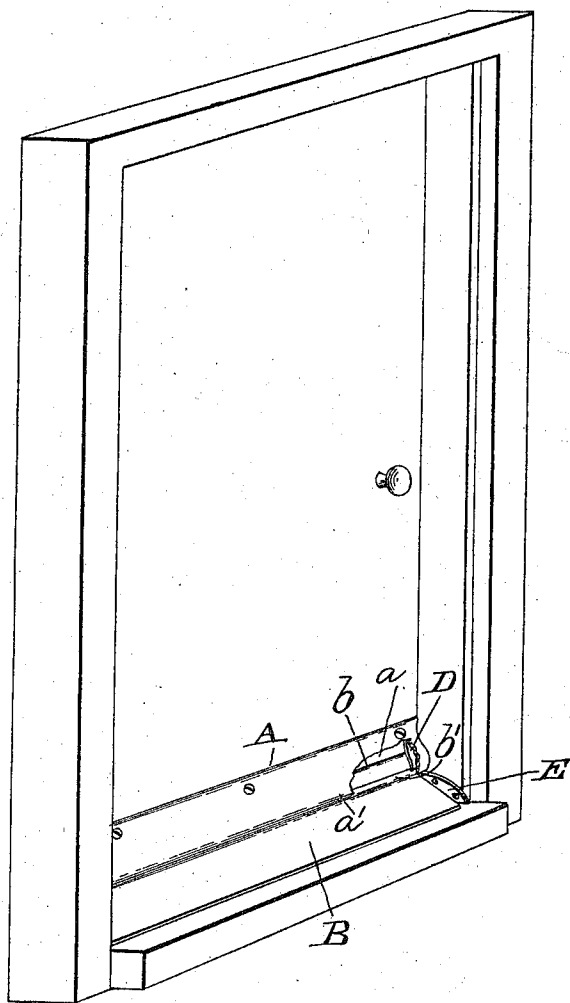


FIG. 1.

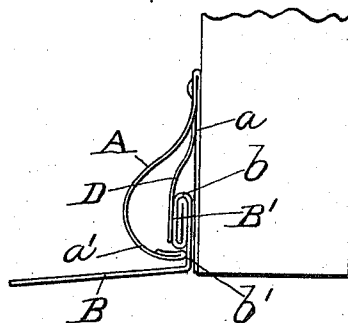


FIG. 2.

Witnesses

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WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 577,719, dated February 23, 1897.

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To all whom it may concern:

Be it known that I, ADELBERT P. CHILSON, a citizen of the United States, residing at Butler, in the county of De Kalb and State of Indiana, have invented certain new and useful Improvements in Weather-Strips, of which the following is a specification.

My invention relates to weather-strips, and has for its objects to provide a weather-strip simple in construction, of economical manufacture, and which may be readily attached to a door or removed therefrom. These objects I accomplish in the manner and by the means hereinafter more fully described in detail, reference being made to the accompanying drawings, in which similar letters of reference indicate corresponding parts in both figures of the drawings.

Figure 1 is a perspective view of my improved weather-strip attached to a door with a portion of the housing A cut away. Fig. 2 is an end view of my improved weather-strip.

In carrying out my invention I construct the weather-strip of sheet metal and in two parts, one part, A, of which is attached to the outside of the door, near the bottom thereof, and forms a support for a plate B, which rests longitudinally of the door-sill and close enough over the latter to prevent rain or snow from entering between the sill and said plate. The supporting part A, which forms a housing for a part of the plate B, which rests above the sill, is formed of a single piece of metal. It consists of a flat part *a*, formed by turning a strip of sheet metal over on itself and bringing the parts in close contact to a depth sufficient to receive the means for attaching it to the door. The part of the housing *a* which rests against the door is made flat, while the outer part thereof, *a'*, is curved, and its margin is folded in contact with its inner side and rests normally in contact with the flat part *a* when the plate B is not in position in said housing. This plate B may be made of a single piece of sheet metal having a flange formed thereon along its entire length, said flange being provided with a hollow cylindrical bead or rib along the edge thereof, formed by turning the margin of the metal of which the flange is made. In practice, however, I prefer to construct the plate B, with the flange B' thereon, of a single piece

of metal and form a rib *b* along the inner surface of the flange B'. This rib *b* consists of four thicknesses of the sheet metal, and is formed by folding the margin of the metal over twice toward the flat part of the plate B and in contact to a depth less than the width of the flange B' and again turning the part thus folded down against the flange proper, leaving a space between the edges of the rib *b* thus folded and the plate B, thereby forming a groove or channel *b'* at the inner angle of the flange B' and plate B, in which groove or channel the edge of the curved part of the housing *a'* rests and securely holds said plate B in position. The flange B' is held normally in contact with the flat part of the housing by a leaf-spring D, attached at its upper end to the door by any suitable means and within the housing at the end thereof. The plate B is placed in position by inserting one of its ends between the edge of the curved and the flat part of the housing, where they rest in contact, and pushing it along therein until its ends are flush with the ends of the housing. The edge of the curved part of the housing rests in the channel *b'*, at the point where the flange B' begins, the pressure of the edge of the curved part of the housing *a'* being sufficient to hold the plate movably therein. The flange B' engages with the spring D when the parts are in place. An inclined catch E is attached to the door-casing opposite the side to which the door is hinged and just above the sloping or feather edge of the sill.

When all the parts of the strips are in position and the door is being closed, the projecting part of the plate B passes under the end of the catch E and is depressed its entire length over the surface of the door-sill. When the door is opened, the spring D, which rests over the flange B', forces the latter back against the flat part of the housing *a* and keeps the edge of the plate B from coming in contact with the floor or obstructions thereon over which the door passes.

My improved weather-strip requires no hinge or pivot. The parts are simple in construction and cheaply manufactured and can be easily kept in order and readily attached to a door without the services of a mechanic.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a weather-strip, the combination with a housing provided with a flat part for attachment to a door and having a curved outer part with the edge thereof turned inwardly and resting normally in contact with the flat part of said housing, of a plate provided with a flange formed at a right angle thereto supported between the inwardly-turned edge of said housing and the flat part thereof by said edge resting in a channel formed at the inner angle of said plate and the flange thereon, a spring within said housing and said flange held normally in contact with the flat part of said housing thereby, substantially as shown and described.

2. A weather-strip consisting of a housing formed with a flat surface to rest against a door and an outwardly-curved portion with the edge thereof turned back and resting normally in contact with the flat portion, a plate supported between the edge of the turned-back part of said housing and the flat portion thereof, said plate having a flange formed at a right angle thereto, said flange formed by folding the metal of which it is made back on itself to form a channel at the inner angle of said plate and flange to receive the in-

wardly-turned edge of said housing and a flat spring secured within said housing to hold said flange in contact with the flat part thereof, substantially as shown and described.

3. A weather-strip consisting of a housing formed with a flat surface to rest in contact with a door, and having an outwardly-inclined part formed with its lower edge curved inwardly and resting normally in contact with the flat surface of said housing, a plate to cover the exterior part of the door-sill, said plate provided with a flange formed thereon at a right angle and having a groove or channel formed at its inner angle, said plate held in position in said housing by the edge of the curved portion of the housing resting in the groove or channel therein, a spring attached to the door and within the housing resting over said flange for elevating the outer edge of said plate, and a catch for attachment to the casing of the door for depressing said plate, substantially as shown and described.

In testimony whereof I hereto affix my signature in the presence of two witnesses.

ADELBERT P. CHILSON.

Witnesses:

J. A. BARBER,
O. V. BAXTER.