

UNITED STATES PATENT OFFICE.

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WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 384,003, dated June 5, 1888.

Application filed September 27, 1887. Serial No. 250,847. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH THOMPSON and JOHN O. STEPHENS, citizens of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented a new and useful Improvement in Weather-Strips, of which the following is a specification.

Our invention relates to improvements in weather-strips; and it consists in a certain novel construction and arrangement of parts, fully set forth hereinafter, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is an inside view of a portion of a door. Fig. 2 is a section on the line *xx*, Fig. 1. Fig. 3 is a detail rear view of the weather-strip, showing in dotted lines the position of the adjustable strip when the door is closed. Fig. 4 is a rear view of a modified form of strip.

Referring by letter to the drawings, A designates a door to the lower edge of which is attached the improved weather-strip B.

C designates a molding provided in the lower edge on the rear side with a rabbet, D, and as the said molding is secured to the door the latter forms a side to the said rabbet. Thus the rabbet is in effect a groove in the lower edge of the door.

E E are triangular blocks or stops, arranged with the apex down at the upper side of the groove D.

G designates the adjustable strip, adapted to fit and operate in the said groove, and the upper edge thereof is provided with triangular notches H H to fit the blocks in the upper part of the groove. The end of the adjustable strip projects slightly beyond the end of the groove D on the hinge side of the door when the blocks E E are fairly in the notches in the said strip. The lower edge of the strip G is provided with two parallel slits, I I, and K designates a long strip of rubber or other similar packing material, the edges of which are secured in the said slits. It will be seen that an elastic loop is thus formed on the lower edge of the strip G, which may either be allowed to remain as seen in the drawings or may be filled with an elastic packing, as cotton or rubber.

L L are inclined springs, which are secured

at their upper ends in notches in the rear side of the molding and at the lower ends to the upper edge of the adjustable strip G. Vertical springs L' may also be used in the same way as the inclined springs, and in combination with the inclined springs to aid in holding the strip firmly in the groove in the molding.

Instead of the inclined and vertical springs L L', as shown in the drawings, Figs. 2 and 3, rubber bands M and M' (or elastic of any kind) may be used, as shown in the modification, Fig. 4.

The operation of this strip will be readily understood. The end of the adjustable strip projects slightly beyond the end of the molding C, and also beyond the inner or hinge edge of the door, and consequently when the door is closed the end of the said strip strikes against the frame of the door and is pushed toward the opposite edge of the door. The blocks E E being rigidly secured to the molding, the notches in the adjustable strip slide thereon, and as the blocks are further inclined downwardly the said strip in sliding longitudinally is also forced downwardly, and therefore when the door is shut the lower edge of the adjustable strip is pressed tightly against the sill of the door. When the latter is opened, the springs attached to the upper edge of the strip are allowed to act and they draw the strip back to its normal position, as seen in full lines in Fig. 2. When the adjustable strip is forced down, the elastic loop on the lower edge thereof is compressed and a very tight joint is formed.

The springs to draw the strip up as the door is opened are preferably arranged in pairs, as seen on the drawings, the upper ends of the same being close together, while the lower ends are spread apart. The object in this will be obviously to enable the strip to be drawn up after it has been moved either toward or from the hinge edge of the door. The springs are arranged on an incline to enable them to pull directly against the motion of the strip. It will be seen that the motion of the strip is parallel with the side of the triangular blocks, and consequently the springs are arranged approximately on the same incline.

This device is very simple, may be easily

attached to the lower edge of the door, and may further be very cheaply manufactured.

Having thus described our invention, we claim—

5 1. In a weather-strip, the combination of the molding C, adapted to be secured to the lower edge of the door and having the rabbet D in the lower edge thereof, the beveled blocks E E in the upper side of the said rabbet, the adjustable
10 strip G, adapted to operate in the said rabbet and having the notches in the upper edge to fit the said beveled blocks, the end of the said strip being adapted to project slightly beyond the end of the molding on the hinge side
15 of the door, for the purpose described, and the springs to hold the strip normally in the rabbet, substantially as specified.

20 2. In a weather-strip, the combination of the molding C, having the rabbet D in the lower edge, the triangular blocks E E in the upper side of the said rabbet, the adjustable strip G, operating in the rabbet and having notches in the upper edge to receive the said blocks E E, and the springs L L, arranged in pairs and se-

cured at the upper ends to the molding and at 25 the lower ends to the strip G, the said springs diverging toward the lower ends, as and for the purpose substantially as specified.

3. In a weather-strip, the combination, with the molding C, having the rabbet or groove 30 in the lower edge, provided with the stationary beveled blocks E E, of the movable strip G, operating in the said groove or rabbet and having notches in the upper edge to receive the said blocks and the parallel slits I I in the 35 lower edge, the strip K, of rubber or other similar material, secured at the edges in the said slits and forming a flexible loop, and the springs to hold the strip normally in the groove or rabbet, substantially as specified. 40

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOSEPH THOMPSON.
JOHN O. STEPHENS.

Witnesses:

R. R. CALKINS,
W. HUGGINS.