L. KNOTT.

WEATHER STRIP.

APPLICATION FILED OCT. 26, 1910.

**1,016,419.**

Patented Feb. 6, 1912.

Fig. 1.

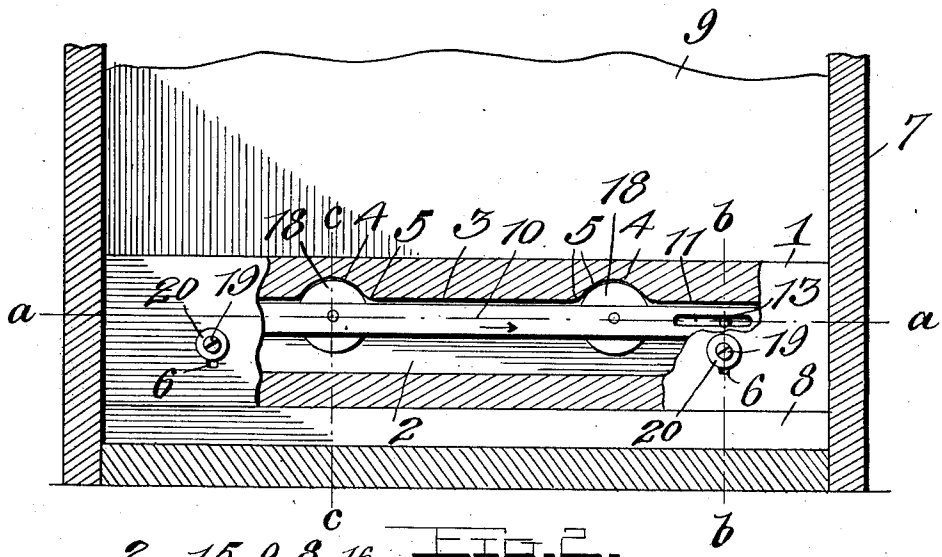



Fig. 2.

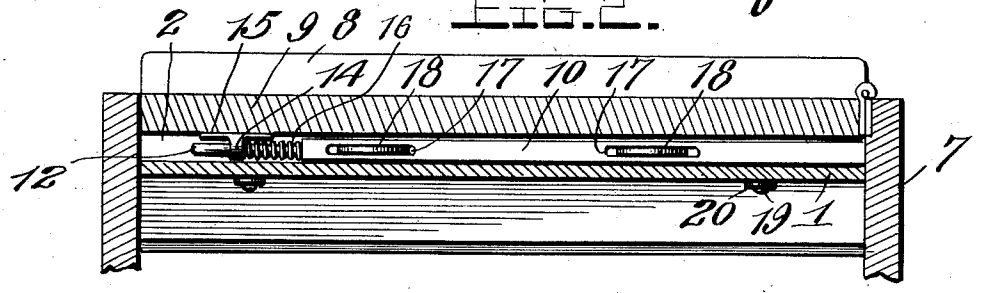



Fig. 3.

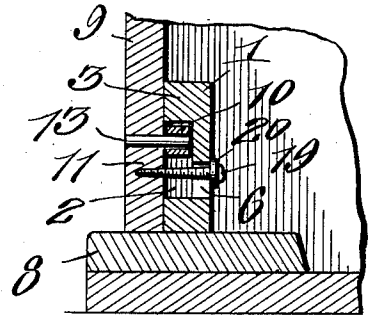
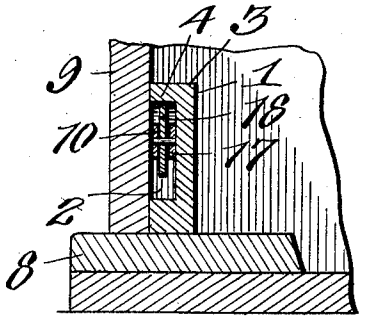



Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## WEATHER-STRIP.

1,016,419. Specification of Letters Patent. Patented Feb. 6, 1912.

Application filed October 26, 1910. Serial No. 589,171.

*To all whom it may concern:*

Be it known that I, LEVI KNOTT, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Weather-Strips, of which the following is a specification, reference being had to the accompanying drawings.

This invention is an improved weather strip for use on the lower portion of a door, at one side thereof, to close the crack at the lower side of the door, the invention consisting in the construction, combination and arrangement of devices hereinafter described and claimed.

The object of the invention is to provide an extremely cheap and simple device of this character which may be readily applied, even by an unskilled person, directly to one side of a door and which consists essentially of a longitudinally movable operating bar directly applied to the side of the door and also of a weather strip directly applied to the same side of the door for vertical movement, which weather strip is channeled on the side of the door to receive and cover the operating bar, so that the weather strip also constitutes the casing for the bar and other operating parts of the device.

In the accompanying drawings, Figure 1 is a front elevation of the lower portion of a door and its casing provided with a weather strip constructed in accordance with my invention, showing the door in closed position and the weather strip lowered against and upon the sill, the weather strip being shown partly in section; Fig. 2 is a horizontal sectional view of the same on the plane indicated by the line *a*—*a* of Fig. 1; Fig. 3 is a vertical sectional view of the same on the plane indicated by the line *b*—*b* of Fig. 1; and Fig. 4 is a similar view on a plane indicated by the line *c*—*c* of Fig. 1.

In accordance with my invention the weather strip 1, which may be made of wood or of any other suitable material is provided on its inner side with a longitudinal channel 2 which extends from end to end thereof and the upper side 3 of the channel is provided with recesses 4 in its lower side the said recesses being substantially semi-circular in form and each being curved as at 5 at one side. The weather strip is further provided at points a suitable distance from its ends with vertical slots 6.

A door frame is indicated at 7, the sill being shown at 8 and the door at 9. On one side of the door, here shown as the outer side, at a suitable distance from the lower edge thereof is a longitudinally movable operating bar 10 which is provided near one end with a longitudinal slot 12 and has a stem 12 projecting from its opposite end. A suitable securing pin 13 which projects from the outer side of the door operates in the slot 11 and serves to support one end of the bar 10 and enable the bar to move lengthwise, the stem 12 operating in an opening in a guide lug 14 which projects from a plate 15, which plate is secured to the door. The said plate with its guide lug supports that end of the bar 10 which is provided with the stem and also enables said bar to move lengthwise. A spring 16, which is here shown as a coil spring, placed on the stem, bears at one end against the shoulder formed by the bar, the opposite end of the said spring bearing against the said guide lug, the said spring acting to move the bar 10 in the direction indicated by the arrow in Fig. 1.

The bar 10 is provided at suitable points with vertical slots 17 in which are located rollers 18 mounted for rotation and carried by the bar 10. The bar is disposed in the channel 2 of the weather strip and the latter is attached to the outer side of the door by means of screws 19 which operate in the slots 6 and are provided at their heads with washers 20 which bear on the outer side of the weather strip and cover the slot 6. When the door opens the spring moves the bar 10 in the direction indicated by the arrow and causes the rollers 18 to move from the recesses 4 and engage the under side of the upper flange 3 of the weather strip and hence produce a camming action on the weather strip, the sides of the said recesses 4 forming cams, and raise the weather strip clear of the door sill so that the door can swing freely. When the door is closed, one end of the bar 10 engages one side of the door casing or frame and hence the said bar is moved endwise, against the tension of the spring and so as to cause the rollers 10 to enter the recesses 4 and thereby permit the weather strip to drop by its own weight and engage the upper side of the door sill and hence cover

the crack between the lower side of the door and the door sill.

It will be apparent from the foregoing description and by reference to the drawings that my improved device consists essentially of only two parts, the longitudinally movable operating bar connected directly to one side of the door and the weather strip also connected directly to the same side of the door for vertical movement and channeled on the side next the door to receive the operating bar so that the weather strip not only operates as such but also, in itself, constitutes the casing for the operating bar.

It will be understood that my improved weather strip may be readily manufactured at slight cost, that it may be easily applied to or detached from any ordinary door and that the same is automatic in its action, is not likely to get out of order and requires practically no attention.

I do not desire to limit myself to the precise construction and combination of devices herein shown and described as it is evident that modifications may be made therein within the scope of the appended claims.

Having thus described the invention what is claimed is:—

1. In combination with a door, an operating bar connected directly to one side of the door for longitudinal movement of the bar, a spring to move the bar to project one end thereof from one side of the door when the latter is open, rollers carried by the bar and projecting above the same; a weather strip applied directly to the same side of the door and having a longitudinal channel in the side next the door to receive and incase the bar and provided in the upper side of its channel with recesses to clear the rollers and cam surfaces at the sides of the recesses to coact with the rollers and cause the latter, when moved by the bar, to raise the weather strip, and means connecting the combined weather strip and casing directly to the door for vertical movement of the said combined weather strip and casing.

2. In combination with a door, an operating bar connected directly to one side of the door for longitudinal movement of the bar, a spring to project one end of the bar beyond one side of the door when the latter is open, and a weather strip also applied directly to the same side of the door independently of the operating bar and for vertical movement, said weather strip having a longitudinal channel in the side next the door in which the bar is located, so that the weather strip also, in itself, constitutes a casing for the bar, said weather strip and bar having co-acting means to cause the combined weather strip and casing to be raised when the bar is projected and to be lowered when the bar is retracted.

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

LEVI KNOTT.

Witnesses:
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