

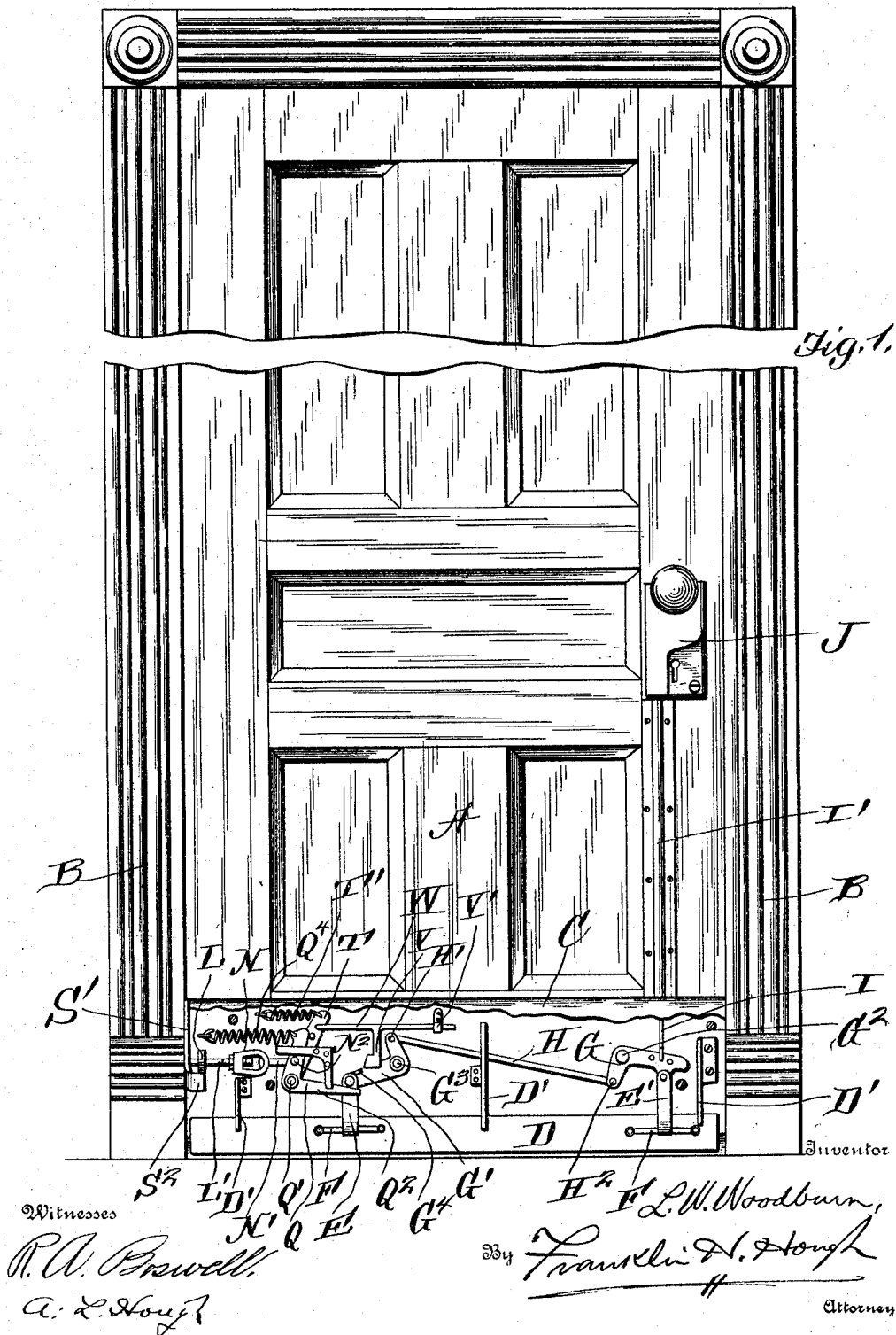
No. 813,268.

PATENTED FEB. 20, 1906.

L. W. WOODBURN.
WEATHER STRIP.

APPLICATION FILED JULY 31, 1905.

2 SHEETS—SHEET 1.



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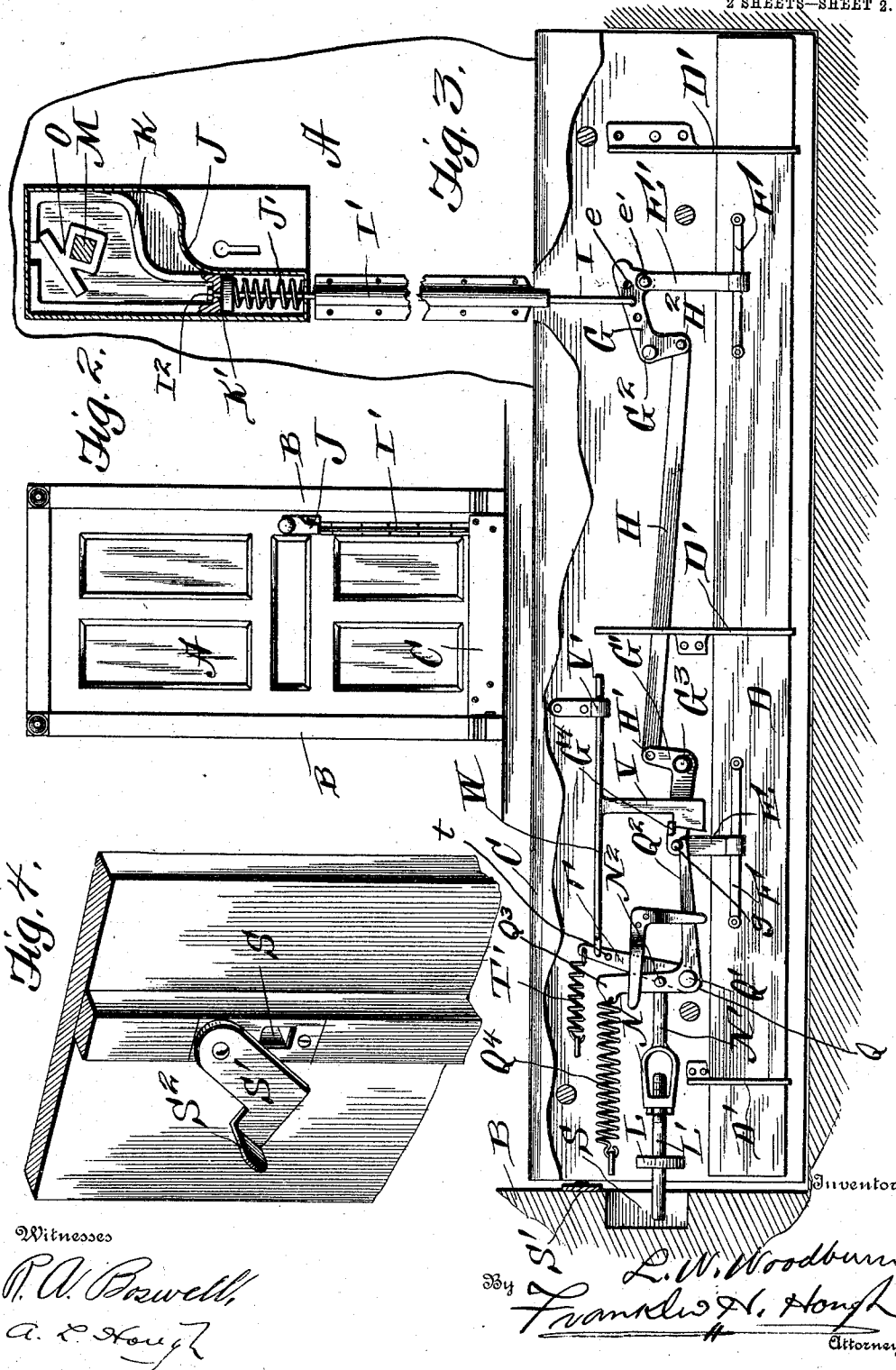
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UNITED STATES PATENT OFFICE.

LEWIS W. WOODBURN, OF CHARLESTON, ILLINOIS.

WEATHER-STRIP.

No. 813,268.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed July 31, 1905. Serial No. 272,056.

To all whom it may concern:

Be it known that I, LEWIS W. WOODBURN, a citizen of the United States, residing at Charleston, in the county of Coles and State of Illinois, have invented certain new and useful Improvements in Weather-Strips; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in door weather-strips, and the object in view is to produce a simple and efficient means, whereby a weather-strip may be adjustably fastened to a door in such a manner that as the knob-shaft carried by the door is rocked the weather-strip may be raised as the door is opened, and means is also provided for holding the weather-strip in a raised position while the door is opened.

The invention consists, further, in the provision of a door weather-strip so arranged that it may be actuated or not as the door is closed, and comprises various details of construction, combinations, and arrangements of parts which will be hereinafter fully described, and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a door, showing my improved weather-strip as applied thereto, parts of the casing being removed to better illustrate the details of the invention. Fig. 2 is a plan view of a door, showing my invention as applied thereto; and Fig. 3 is an enlarged detail view showing in elevation the various features of my invention, also illustrating the section of the door-jamb and portions of a door and casing to the weather-strip. Fig. 4 is a detail perspective view.

Reference now being had to the details of the drawings by letter, A designates a door, which is fastened to the frame B by hinges, and C designates a casing which is adapted to contain my improved weather-strip and the parts for actuating the same, and said casing is fastened, preferably, to the outer face of the door near the bottom thereof.

D designates a weather-strip which may be of any suitable material that may be found

well adapted for the purpose and is substantially of a length equal to the width of the door. Guide-arms D' project from the face of said casing and serve to guide the weather-strip in its vertical movement.

G and G' designate two angled levers, the former of which is pivotally mounted upon a pin G² and the latter upon a pin G³, projecting from the wall of said casing.

H designates a bar having a lug H' projecting from one end thereof, which engages an aperture in an arm of the lever G', and a similar lug H² projects from the opposite end of the bar H and engages an aperture in the angled lever G. The bar H is guided in its movements by means of a continuation of one of the guide members which serve to retain the weather-strip in its vertical position.

An arm of the angled lever G has a series of apertures *e* therein for the reception of the lower angled end of the rod I, which is adapted to engage one or another of said apertures for the purpose of raising the long arm of the lever G and in so doing assist in raising the weather-strip D through the medium of the link E', which is connected at its lower end to the loop F and at its upper end to said lever G. The rod I passes through an aperture in the bottom of the casing I', which is adapted to be fastened to the face of a door and also passes through an aperture in a boxing J and has a head I² at its upper end.

K designates a yoke, the free ends of which are bent toward each other, and the lower contracted end of said yoke is apertured, as at K', for the reception of said rod I. A spring J' is interposed between the lower end of the boxing and the contracted bottom of said yoke and serves to normally hold the yoke in its highest position. A knob-shaft M passes through an aperture in said boxing J and also through a rocking member O, the arms of which are positioned underneath the angled ends of said yoke and against which they are adapted to bear as said member is rocked. It will be noted that the head I² of the rod I engages the portion of the yoke about the aperture K' and has a tendency to draw down the yoke against the tension of the spring J', as the weather-strip is lowered.

Mounted in a suitable guide L, projecting from the casing in which the weather-strip is held, is a bolt L', the inner end of which is threaded and is mounted in the threaded end of a yoke N, which latter has a shank portion

N' with an angled end N². Q designates an angled lever pivotally mounted at Q' and having an arm Q³, to which the angled end N² of said shank portion N' is pivotally connected, and the other arm Q² of the lever Q projects underneath a lug g, carried by the angled lever G', which is pivotally connected to the casing at G³.

Said weather-strip D, which is provided with the loops FF, is supported by means of the bars E and E', each of said bars being turned into a roll for engagement with its loop and the upper end of the bar E is pivotally mounted upon the lug e, while the upper end of the bar E' is pivotally connected to the pivot-pin e'.

The lever G' is provided with a lug G⁴, projecting from one arm of said lever adjacent to the end thereof which is pivoted to the bar E, and W designates a longitudinally-movable rod which is mounted at one end in a guide D', and its other end is connected to the upper end of a lever T, which latter is pivotally mounted upon the pivot Q'. A spring T' is fastened at one end to the casing in which the weather-strip is housed, and its other end is connected to the lever T. Depending from the rod W is an angled arm V, the angled end of which is normally positioned to engage underneath the lug G⁴ for the purpose of holding the weather-strip in an elevated position. Projecting from the face of the lever T is a lug t, positioned in the path of the arm Q³ of the lever Q, whereby as the lever Q rocks upon its pivot in one direction said arm Q³ will contact with the lug t and cause the lever T to tilt and also cause the rod W to be moved longitudinally in one direction sufficient to throw the angled end of the arm V from under the lug G⁴, which will allow the weather-strip to fall by gravity. A spring Q⁴ is secured at one end to the casing in which the weather-strip is housed, and its other end is fastened to the arm Q³ of the lever Q, the purpose of said spring being to normally hold the lever Q in the position shown in Fig. 3 of the drawings, in which the weather-strip is held above the lower edge of the door.

The frame of the door is recessed away, as at S, and S' designates a plate (shown clearly in Fig. 4 of the drawings) which is pivotally mounted upon the door-frame and has a projection S², forming a handle, whereby the plate may be swung so as to expose the opening into the recess or close the same, accordingly as it may be desired to allow the weather strip to be held above the lower edge of the door or allowed to fall so as to engage the threshold.

In operation, when it is desired to hold the weather-strip above the lower edge of the door it will be noted that the spring J' will serve to hold the yoke K, so that the upper end thereof will not bear against the member

O, which is mounted upon the knob-shaft M, thus allowing the latter to turn freely. When the plate S² is thrown into the position shown in Fig. 4 and the door is closed, the outer end of the bolt L' will enter the recess S without actuating the weather-strip mechanism, and the door may be opened and closed freely without in any way affecting the weather-strip; but when it is desired to cause the weather-strip to be actuated as the door is opened and closed the plate S' is first closed over the recess S, and when the door is closed the outer end of the bolt L', coming in contact with the plate S', will cause a longitudinal movement to be imparted to the bolt L', which is connected to the lever Q, causing the latter to tilt under the tension of the spring Q⁴, the arm Q² of said lever Q will tilt down out of engagement with the lug g, and when the inner edge of the arm Q³ of said lever Q comes in contact with the lug t upon the lever T the latter will be tilted under the action of the spring T', and the rod W will be given a longitudinal movement by reason of its being connected with the lever T, and the depending arm V depending from the rod W will be moved from underneath the lug G⁴, thus allowing the weather-strip to fall by gravity, the falling of the weather-strip will draw down upon the long arm of the lever G and through its connections with the rod I the yoke K will be drawn down slightly, putting the spring J under tension and throwing part of the weight of the weather-strip upon the member O, thereby adjusting the mechanism, so that when the knob-shaft is turned in the act of releasing the latch the member O rocking with the shaft M will cause the yoke K to be raised, thus assisting in raising the weather-strip, the spring Q⁴ also exerting a force in raising the weather-strip as the bolt L' moves longitudinally, tilting the lever Q under the influence of said spring Q⁴. When the bolt L' returns to its normal position as the door swings open, the spring T' will cause the lever T to tilt upon its pivot, and the rod W being moved longitudinally will cause the angled arm V to be thrown underneath the lug G⁴ and hold the weather-strip in its elevated position.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a door and frame therefor, a casing upon the door, a weather-strip within said casing, angled levers pivotally mounted within the casing, pivotal link connections between said angled levers and weather-strip, a bar connecting said angled levers, a knob-shaft, means actuated thereby for tilting one of said angled levers, a spring-actuated angled lever cooperating with the mechanism actuated by the knob-shaft for partially counterbalancing the weather-strip, means for holding the weather-strip in a

raised position, said spring-actuated lever adapted to release the weather-strip-holding means as the door is closed, as set forth.

2. In combination with a door and frame therefor, a casing upon the door, a weather-strip within said casing, angled levers pivotally mounted within the casing, pivotal link connections between said angled levers and weather-strip, a bar connecting said angled levers, a yoke, a knob-shaft and means actuated thereby for raising said yoke, a rod connecting said yoke with one of said angled levers, a spring bearing yieldingly against said yoke, a spring-actuated angled lever cooperating with said rod to partially counterbalance said weather-strip, means for holding the weather-strip in a raised position, and mechanism for operating said spring-actuated lever, whereby the latter may cause said holding means to be released to allow the weather-strip to fall as the door is closed, as set forth.

3. In combination with a door and frame therefor, a casing upon the door, a weather-strip within said casing, angled levers pivotally mounted within the casing, pivotal link connections between said angled levers and weather-strip, a bar connecting said angled levers, a knob-shaft, a yoke, means carried by said shaft for raising said yoke, a casing in which said yoke is mounted, a spring bearing between said casing and the yoke, a rod passing through the yoke and connected to one of said angled levers, a pivotal spring-actuated angled lever adapted to cooperate with said rod to partially counterbalance the weather-strip, a lug upon one of said angled levers, spring-actuated means for engagement with said lug whereby the weather-strip may be held in a raised position, and a rod for operating said spring-actuated angle-lever, whereby the latter may cause said holding means to be released to allow the weather-strip to fall as the door is closed, as set forth.

4. In combination with a door and frame therefor, a casing upon the door, a weather-strip within said casing, angled levers pivotally mounted within the casing, pivotal link connections between said angled levers and weather-strip, a bar connecting said angled

levers, a knob-shaft, a yoke, means carried by said shaft for raising said yoke, a casing in which said yoke is mounted, a spring bearing between said casing and the yoke, a rod passing through the yoke and connected to one of said angled levers, a spring-actuated angled lever mounted in the casing, cooperating with said rod to partially counterbalance said weather-strip a lug *g* upon one of said angled levers adapted to be engaged by an arm of said spring-actuated lever, a lug *G*⁴ upon one of said angled levers, a longitudinally-movable rod *W*, a depending angled arm thereon adapted to engage said lug *G*⁴, a spring-actuated pivotal lever *T* connected to said rod *W*, and a lug *t* upon said lever *T*, and against which the spring-actuated angled lever is adapted to contact, whereby the rod *W* may be moved longitudinally and the depending angled arm thereof released from the lug upon the angled lever as the door is closed, as set forth.

5. In combination with a door and frame therefor, a casing upon the door, a weather-strip within said casing, angled levers pivotally mounted within the casing, pivotal link connections between said angled levers and weather-strip, a bar connecting said angled levers, a lug upon one of said angled levers, a longitudinally-movable rod, an angled arm thereon adapted to engage said lug, a spring-actuated lever connected to said rod, a lug upon said spring-actuated lever, a pivotal spring-actuated angled lever, knob-actuating mechanism cooperating with the latter to partially counterbalance said weather-strip, a bolt secured to said spring-actuated angled lever, and a plate against which the end of the bolt is adapted to contact as the door is closed, whereby the bolt may be moved longitudinally and said angled arm released from the lug upon the angled lever, to allow the weather-strip to fall, as set forth.

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

LEWIS W. WOODBURN.

Witnesses:

CHARLES C. DIGBY,
L. P. KELLEY.