(No Model.)

W. M. BARGER.

COMBINED THRESHOLD AND WEATHER STRIP.

No. 600,301. Patented Mar. 8, 1898.

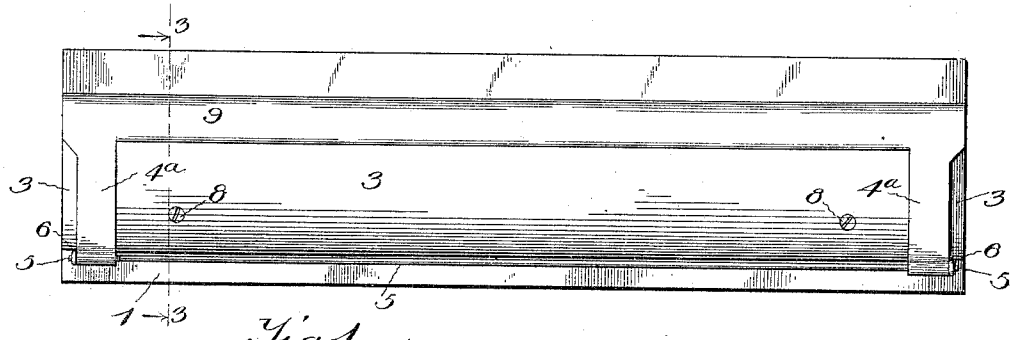


Fig. 1.

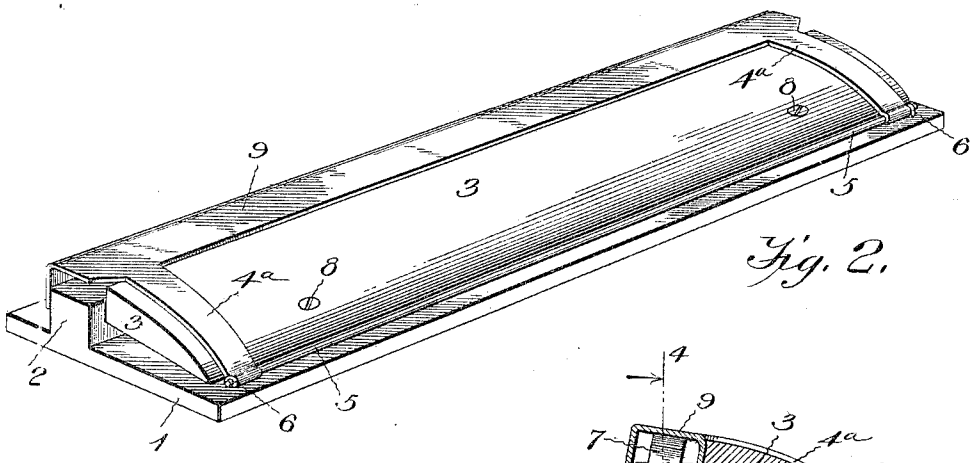


Fig. 2.

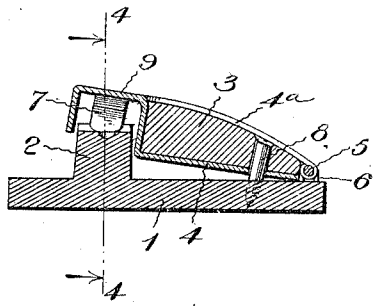


Fig. 3.

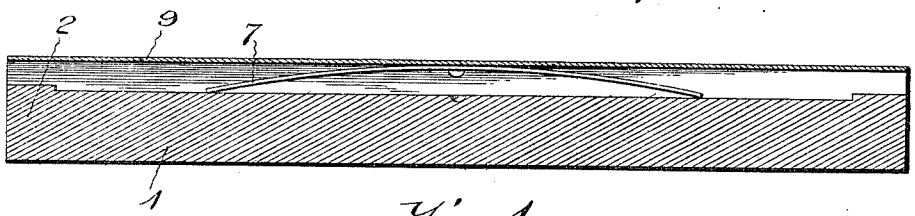


Fig. 4.

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COMBINED THRESHOLD AND WEATHER STRIP.

SPECIFICATION forming part of Letters Patent No. 600,301, dated March 8, 1898.

Application filed May 15, 1897. Serial No. 636,690. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. BARGER, of Hebron, in the county of Thayer and State of Nebraska, have invented certain new and useful Improvements in a Combined Threshold and Weather Strip; 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.

The object of the present invention is to provide a simple and inexpensive construction which may be readily applied to a door-frame in operative relation to a door and serve the purposes of a threshold and a weather strip to exclude wind, dust, and rain or snow from finding an entrance beneath the door.

With these ends in view the invention consists in the combination, with a bed-piece provided with a guide-rail, of a hinged metallic plate offset at its free end and adapted to embrace or fit over the guide-rail of the bed-piece, a threshold-strip carried by said hinged plate, and a lifting-spring acting against the hinged plate to normally elevate the same and the threshold-strip carried thereby.

The invention further consists in the construction and arrangement of parts, which will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the same in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a plan view of my combined threshold and weather strip. Fig. 2 is a perspective view thereof. Fig. 3 is a vertical transverse section on a plane at one side of the adjusting-screws. Fig. 4 is a vertical longitudinal sectional view through the bed-piece, its guide-rail, and the hinged metallic plate, showing the form of the lifting-spring which I prefer to employ.

Like numerals of reference denote like and corresponding parts in each of the figures of the drawings.

In the preferred embodiment of my invention illustrated by the accompanying drawings I employ a wooden bed-piece 1, which is provided near one edge with an integral guide-rail 2. This guide-rail 2 extends longitudinally of the bed-piece, and it rises therefrom a suitable distance to coact with the offset metallic carrying-plate 4 to serve as a guide therefor in the vertical swinging movements of said carrier-plate. This carrier-plate 4 is made or struck up from a single piece of metal, and it is of a size approximately equal to the dimensions of the bed-piece 1. I prefer to make this metallic carrier-plate with an offset 9 at or near its free end, and said carrier-plate is further provided with transverse cuts or incisions near the end edges thereof to produce the tongues or bands 4^a, which constitute the metallic wear-surfaces for the threshold and strip. The offset 9 in the free edge of the metallic carrier-plate is produced by bending the metal vertically, then horizontally, and then vertically in a downward direction, thus forming in the lower side of the offset edge of the plate a recess which is somewhat larger than the cross-sectional area of the guide-rail 2 of the bed-piece 1.

On the upper side or face of the metallic carrier-plate is fitted a threshold-strip 3, preferably of wood, and this threshold-strip has its lower face and its inner end face fitted snugly on the upper face of the carrier-plate and against the inner wall of the offset 9 therein. The upper exposed face of the wooden threshold-strip 3 is curved from its rear to its front edge, and over this curved face of the threshold-strip is fitted the bands or tongues 4^a of the metallic carrier-plate. Said bands or tongues constitute metallic wear-surfaces, against which the lower edge of the door is adapted to ride when it is opened or closed, and the free extremities of the metallic bands or tongues are formed into loops or eyes to receive the pintle or hinge rod 5. This pintle or hinge rod is supported in the eyes or keepers 6, which are attached to the bed-piece 1 at a suitable distance from the guide-rail 2 of said bed-piece, and the metallic carrier-plate and the threshold-strip supported thereby are thus hinged or pivotally attached to the bed-piece to swing in a vertical direction with relation to the guide-rail 2. The metallic carrier-plate is hinged on the bed-piece at a point to have its offset 9 fit over the guide-rail 2 of the bed-piece, which thus serves to prevent displacement of the hinged metallic plate with relation to the bed-piece and relieve the hinge or pintle rod from undue strain.

Between the guide-rail 2 and the offset 9 in the free end of the hinged metallic car-

rier-plate is interposed a lifting-spring 7, which, as shown by Fig. 4 of the drawings, is preferably of the curved or bowed form. This lifting-spring is arranged longitudinally of the metallic carrier-plate, and its ends are fitted or seated against the upper edge of the guide-rail 2, while its curved central part bears against the offset 9 in the carrier-plate 4. I have thus provided a simple construction of threshold and weather strip in which the parts are compactly arranged and the spring is positioned to be protected or housed by the metallic plate.

In order to adjust the hinged strip and the carrier-plate with respect to the bed-piece, I provide the set-screws 8, which extend through openings in the hinged strip and the carrier-plate, the set-screws 8 being screwed into the bed-piece 1. The heads of the screws serve as stops to limit the upward movement of the hinged plate and the threshold-strip thereon, and these screws also provide for regulating the height of the spring-actuated plate and strip to insure proper contact of the hinged element with the under edge of the door.

It will be noted that by constructing a threshold as herein shown and described the metallic bands or tongues of the hinged carrier-plate are arranged to extend over the curved surface of the threshold-strip to receive the wear due to the contact of the door therewith. When the door is closed upon the threshold, the spring lifts the hinged metallic carrier-plate and the threshold-strip into proper frictional contact with the door for the purpose of closing the space between the door and the threshold and to secure a tight joint against the entrance of wind, dust, or water.

A combined threshold and weather strip constructed as herein shown and described provides an exceedingly simple, cheap, and efficient device which is susceptible of movement to engage the door and hold it either partly open or entirely open.

The employment of my improved threshold obviates any tendency of the door to bind upon the threshold in the event of warping and swelling of the door, because the hinged spring-controlled plate and threshold will yield or give to the movement of the door, thus insuring at all times an easy movement of the door in opening or closing the same as well as securing a tight joint between the door and the threshold.

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

1. A combined threshold and weather strip comprising a bed-piece having an upwardly-projecting rail, a strip having curved upper surfaces and hinged to the bed-piece by means of a plate which is slit near each end so that the intermediate portion may be passed under the strips and over the pintle of the hinge, while the outer portions pass upward at each side of the curved surface, the said plate being extended to form a flange which is bent over a guide-rail of the bed-piece, a spring interposed between the flange and rail, and set-screws for limiting the upward movement of the hinged strip, substantially as shown and for the purposes set forth.

2. In a combined threshold and weather strip, the combination with a bed-piece, of a metallic carrier-plate provided with transverse tongues or bands, a hinge-rod attached to the bed-piece and to the free ends of said bands or tongues, a threshold-strip seated upon the metallic carrier-plate and confined between the same and its bands or tongues, and a spring which acts against the metallic carrier-plate to normally lift the same, substantially as and for the purposes described.

3. In a combined threshold and weather strip, the combination of a bed-piece having a guide-rail, 2, projecting upwardly therefrom, a carrier-plate, 4, hinged at one edge to the bed-piece and provided at its free edge with the offset which extends upwardly, horizontally and downwardly from the carrier-plate and is adapted to embrace the guide-rail, a threshold-strip attached to the carrier-plate to abut against, and lie flush, with the offset, and a spring to normally lift the carrier-plate, substantially as and for the purposes described.

4. In a combined threshold and weather strip, a metallic carrier-plate provided at one edge with a downwardly-opening offset and with the transverse bands or tongues in combination with a bed-piece having a guide-rail arranged to fit in the offset of said carrier-plate, a hinge-rod attached to the bands or tongues of the carrier-plate and mounted on the bed-piece to pivotally attach the carrier-plate thereto, a threshold-strip mounted on the carrier-plate and confined between the latter and its transverse bands or tongues, a lifting-spring acting against the carrier-plate at one side of the hinged connection thereof to the bed-piece, and means for limiting the upward movement of said carrier-plate, substantially as and for the purposes described.

5. In a combined threshold and weather strip, the combination with a bed-piece having a guide-rail, of a carrier-plate hinged to said bed-piece and provided at its free edge with the offset, 9, arranged to embrace the guide-rail, the threshold-strip fastened removably to the carrier-plate and having its upper face flush with the offset, 9, a spring which tends to normally lift the carrier-plate, and means to limit the upward movement of the carrier-plate, substantially as described.

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

WILLIAM M. BARGER.

Witnesses:
F. L. NAYLOR,
J. H. LYNCH.