

W. P. WIDDIFIELD.

WEATHER-STRIP.

No. 180,180.

Patented July 25, 1876.

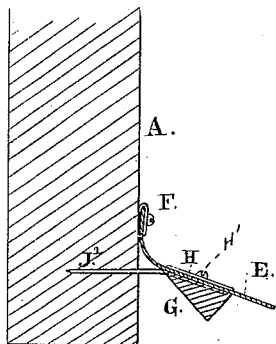


Fig. 1.

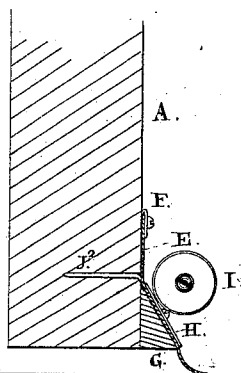


Fig. 2.

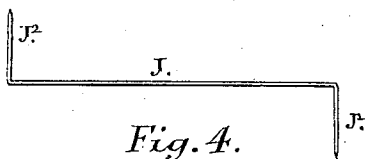


Fig. 4.

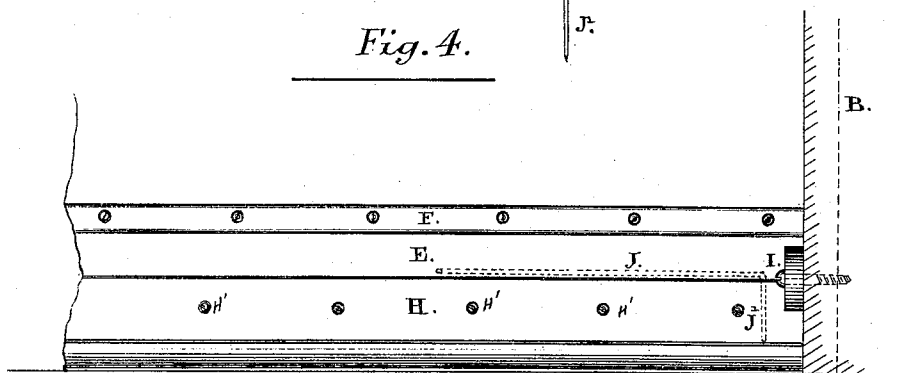


Fig. 3.

WITNESSES.

H. H. Warren.

W. Sanford.

INVENTOR.

W. P. Widdifield.

By Kidout, Bird & Co.
Attys

UNITED STATES PATENT OFFICE

WATSON P. WIDDIFIELD, OF SILOAM, ONTARIO, CANADA.

IMPROVEMENT IN WEATHER-STRIPS.

Specification forming part of Letters Patent No. 180,180, dated July 25, 1876; application filed May 22, 1876.

To all whom it may concern:

Be it known that I, WATSON PLAYTON WIDDIFIELD, of the village of Siloam, in the county of Ontario, in the province of Ontario, Canada, have invented certain new and useful Improvements in Weather-Strips for Doors; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, and to the letters of reference marked thereon, and forming a part of this specification.

My invention consists of an improved construction of apron for the bottom of the door, and in the manner in which it is attached thereto, and to the stiffening and supporting bar, and in the construction and manner of placing the spring for raising the apron automatically above the floor when the door is opened.

In the accompanying drawings, Figure 1 is a section of the lower part of an open door with my improved stop attached. Fig. 2 is a section of the same, the door shown as closed. Fig. 3 is a front view, and Fig. 4 is a detail of the lifting-spring.

E is the apron, the upper edge of which is contained within the recess in the folded metal strip F, which strip is fastened to the door by screws or tacks passing through both folds of the metal and apron. This construction is neat in appearance, and especially durable, as it protects the edge of the rubber and prevents fraying.

G is a wooden supporting-bar on the lower part of the apron, finished with a triangular cross-section. Immediately over the situation of this bar, on the outside of the apron, a strip of sheet-metal plate, H, of, say, equal width to the bar, and parallel therewith, is placed and secured by screws or tacks H' passing through the apron into the wood. This metal plate prevents the tacks or screws sinking through the rubber, and preserves the latter from tearing where the perforations occur.

The folded strip F and the plain strip H are preferably made of a metal non-corrosive under the action of water or the atmosphere.

I is a roller fastened to the face of the door jamb, which, acting in combination with the bar of the apron, causes the latter to be depressed equally across the width of the door when closed.

J is the lifting spring, formed from a single piece of wire bent at or near to a right angle at each end, in opposite directions, to form the parts J¹ and J². The part J² is firmly driven into the wood of the door up to the shoulder, while the part J¹ is slipped between the rubber and the wooden bar G.

The spring or lifting power developed is the resistance to torsional strain of the wire when the door is closed.

The advantages gained by my improvements are a neat finish, a durable construction, and the working of all the parts in an easy and positive manner.

I claim as my invention—

1. In combination with the elastic apron E, metallic plate H, and cross-bar G, the spring J, bent at opposite right angles J¹ J² at each end, one end secured in the door and one end between the apron E and bar G, as and for the purposes described.

2. In combination with the bar G and apron E, the sheet-metal plate H, as and for the purposes specified.

3. In combination with the elastic apron E, plate H, bar G, and spring J, the roller I secured to the jamb of the door on the inside thereof, for holding the weather-strip down close in position when the door is closed, as described.

4. The weather-strip for the lower part of doors, composed of elastic apron E, metallic clamp F, metal plate H, bar G, and spring J J¹ J², all constructed and arranged as and for the purposes shown and described.

W. P. WIDDIFIELD.

Witnesses:

H. M. HOWELL,
C. H. WIDDIFIELD.