

A. M. LANE.
WEATHER STRIP FOR EXPANSION JOINTS.
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1,357,713.

Patented Nov. 2, 1920.

Fig. 1.

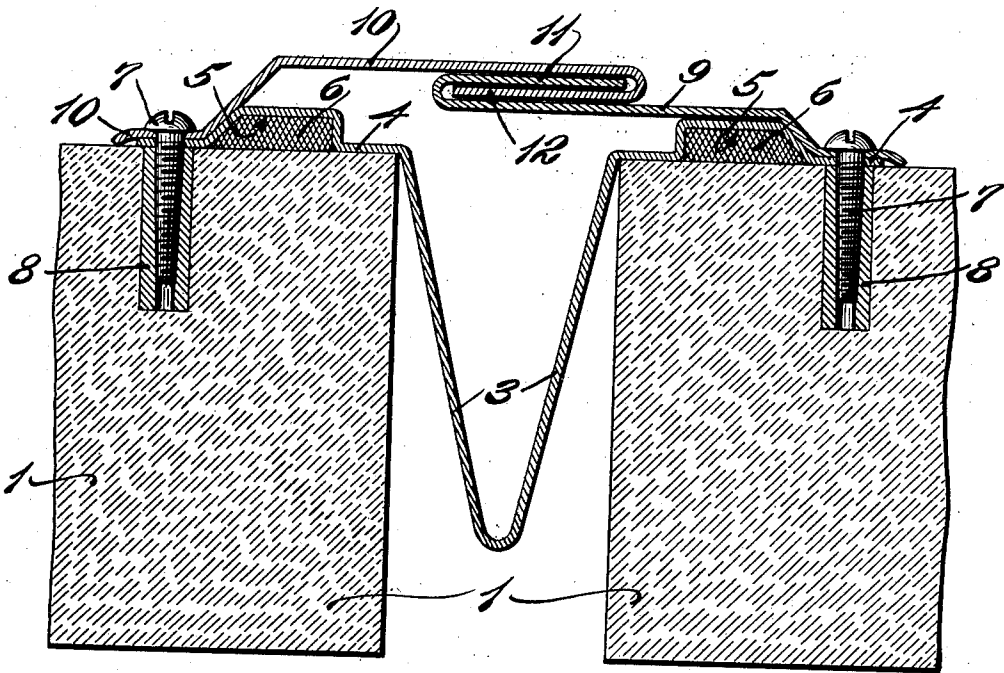
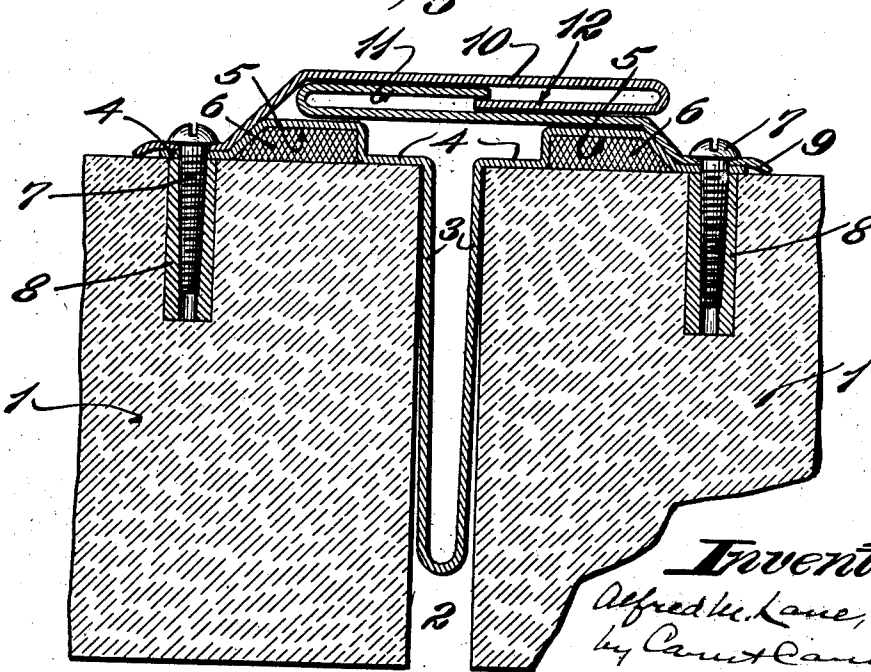


Fig. 2.



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UNITED STATES PATENT OFFICE.

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WEATHER-STRIP FOR EXPANSION-JOINTS.

1,357,713.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALFRED M. LANE, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Weather-Strips for Expansion-Joints, of which the following is a specification.

Expansion joints are frequently used in large structures built of reinforced concrete in order to accommodate expansion and contraction caused by variations of temperature. The simplest form of expansion joint is a mere gap between adjacent sections of the structure, the gap being narrowest when the sections are expanded by heat and being widest when cold weather causes the sections to contract and shrink away from each other. The object of the present invention is to provide weather stripping for this gap that will be operative for all variations of the width thereof. The invention consists mainly in metal strips whose margins are secured to the respective sections of the wall and whose body portion is formed into a loop or rebend that lies in the gap; it also consists in the arrangements and combinations of parts hereinafter described and claimed.

In the accompanying drawing wherein like symbols refer to like parts wherever they occur,

Figure 1 is a horizontal cross-section of my device applied to an expansion joint of a concrete wall as the same appears in cold weather; and

Fig. 2 is a similar view showing the construction as it appears in warm weather.

In said drawing, the reference numerals 1 indicate the adjacent end portions of sections of a masonry construction, such, for instance, as the wall of a building. These sections are so related that in hot weather, when they are most expanded, there is a small gap 2 between their adjacent ends. In this gap is disposed the body portion of a sheet or strip of metal, said body portion being bent or redoubled along the medial line to form a deep open loop 3 and the marginal portions 4 extending laterally and being secured to the respective sections of the wall or concrete structure. In the device illustrated, the marginal portions of the looped strip are each formed with a groove or channel 5 in the face next to the wall and the channels thus formed are filled with a

suitable packing or sealing material 6 adapted to prevent the admission of water between the sheet metal member and the wall. The edges or marginal portions of the looped sheet metal member are preferably secured by means of screws 7 that pass through said edges and work in threaded sockets 8 provided therefor in the wall.

By reason of the body of the sheet metal member being formed into a deep loop located in the gap of the masonry structure, said member is free to accommodate itself to variations in the width of the gap and thus keep the gap closed at all times. On account, however, of the mouth of the loop opening outwardly, it is exposed to the weather, and snow and ice are liable to accumulate therein; and in cold weather there is apt to be excessive radiation of heat from the interior of the structure. To overcome these disadvantages, interlocking flashing strips 9, 10 are mounted on the respective sections of the wall preferably by means of the same screws that secure the looped sheet metal member. The inner (9) of these interlocking strips is secured to one section of the wall and has its body portion disposed crosswise of the mouth of the gap and parallel with the face of the wall; and the free marginal portion of this inner flashing member is doubled back as at 11 parallel with the body portion but spaced therefrom far enough to accommodate the tongue or free marginal portion 12 of the outer flashing strip 10. This outer flashing strip is secured to the other section of the wall and has its body portion also disposed crosswise of the gap and parallel with the face of the wall and its marginal portion 12 is also doubled back parallel with the body portion but spaced therefrom far enough to accommodate the tongue 11 or marginal portion of the inner flashing strip. The two flashing strips are so related that when the gap in the wall is widest the free edge of each flashing strip is spaced slightly away from the bend or bottom of the pocket of the other flashing strip and so that when the gap is narrowest the free margins of the respective flashing strips will still overlap slightly.

By this arrangement, the gap in the wall and the throat of the looped or bellows member are protected from rain, snow and ice and a dead air space is provided between

the bellows member and the outer flashing that serves as insulation to prevent excessive radiation. It is to be understood that in practice the weather strip extends the full length of the joint and that its members may be composed of as many sections as may be required and may be of any material suitable for the purpose.

What I claim is:

1. A device for protecting expansion joints comprising a sheet metal member having a looped body portion and laterally disposed marginal portions in combination with flashing members secured respectively to said marginal portions and having their free ends rebent and movably interlocked with each other.
2. In a device for protecting expansion joints of masonry structures, flashing members secured respectively to the structure on opposite sides of the joint and having their free ends rebent substantially parallel with the exposed surface of the structure and slidably interlocked with each other.
3. The combination with a masonry construction having the ends of adjacent sections spaced apart, of a flexible sheet member whose body portion is doubled and disposed in the gap between said sections and whose marginal portions are secured to the

respective sections and flashing members secured to the respective sections beyond the margins of said flexible member and slidably interlocking with each other.

4. The combination with a masonry construction having adjacent sections spaced at their ends, of a flexible sheet member whose body portion is doubled and disposed in the gap between said sections and whose marginal portions extend laterally and are secured to the respective sections, and flashing members secured to the respective sections beyond the margins of said flexible member, said flashing members having their free ends rebent and slidably interlocking with each other.

5. The combination with a masonry construction having adjacent sections spaced at their ends, of a flexible sheet member whose body portion is formed into a loop disposed in the gap between said sections and whose marginal portions are secured to the respective sections and slidably interlocked flashing members secured to the respective sections outside of said flexible member, said marginal portions having channels in their inner surfaces and packing in said channels.

Signed at St. Louis, Missouri, this 13th day of November, 1918.

ALFRED M. LANE.