

No. 886,878.

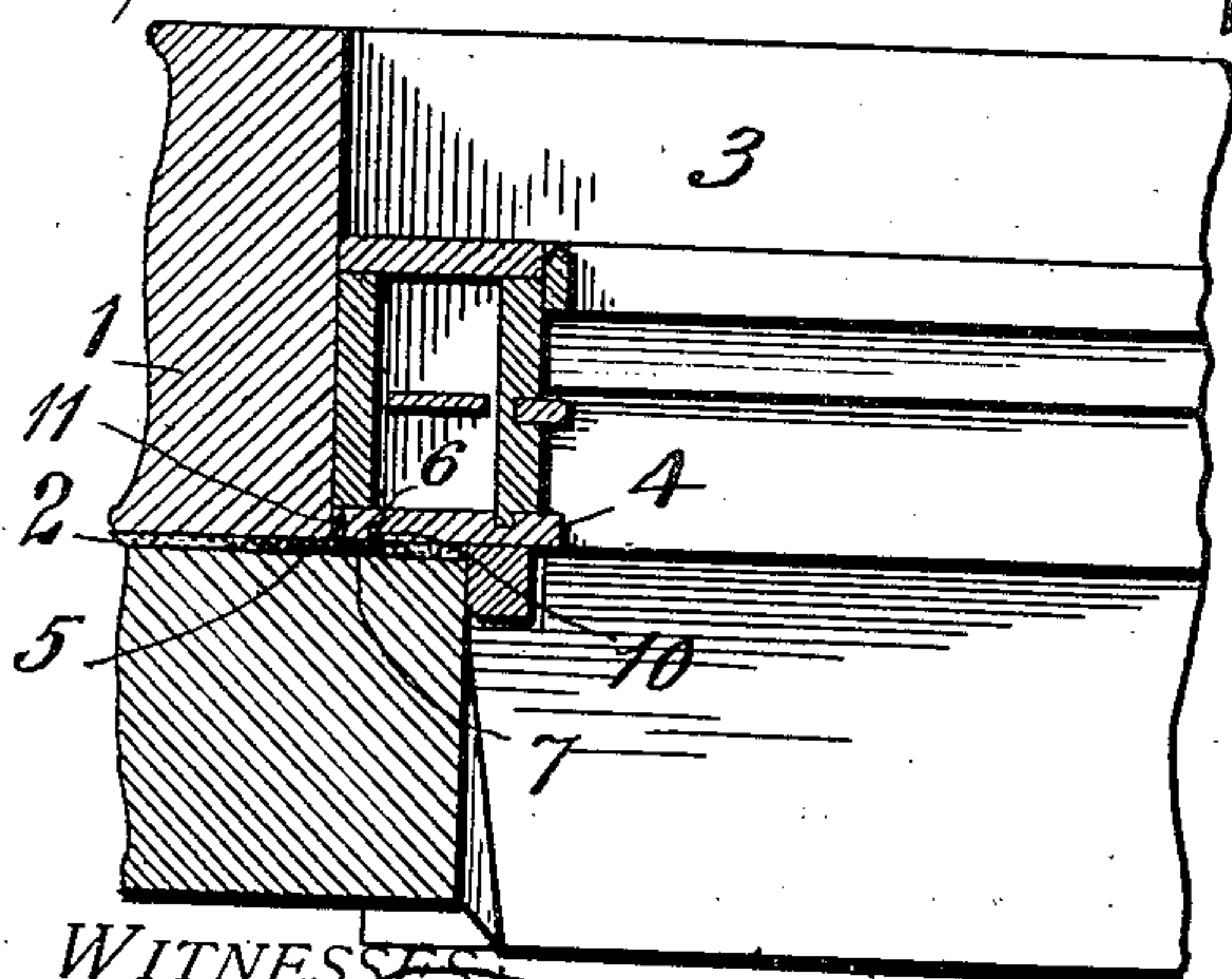
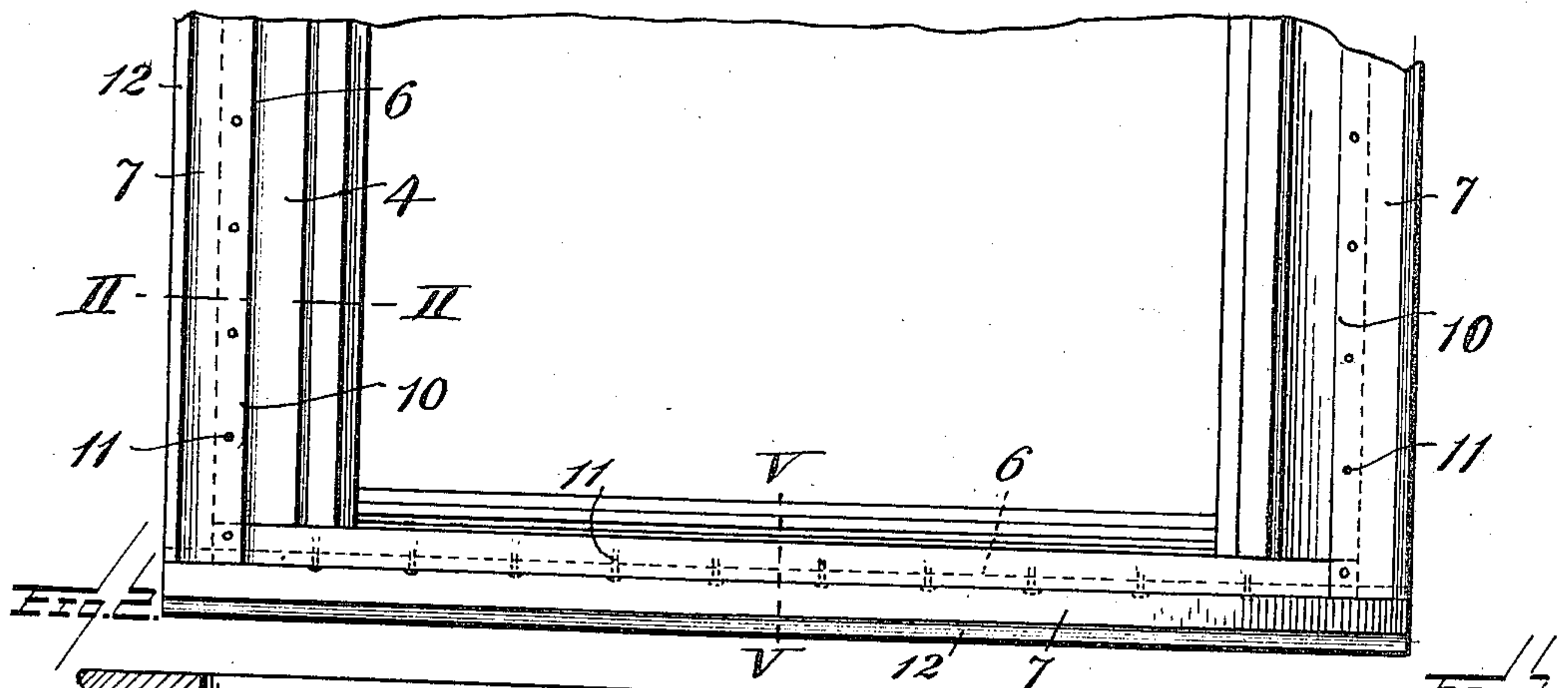
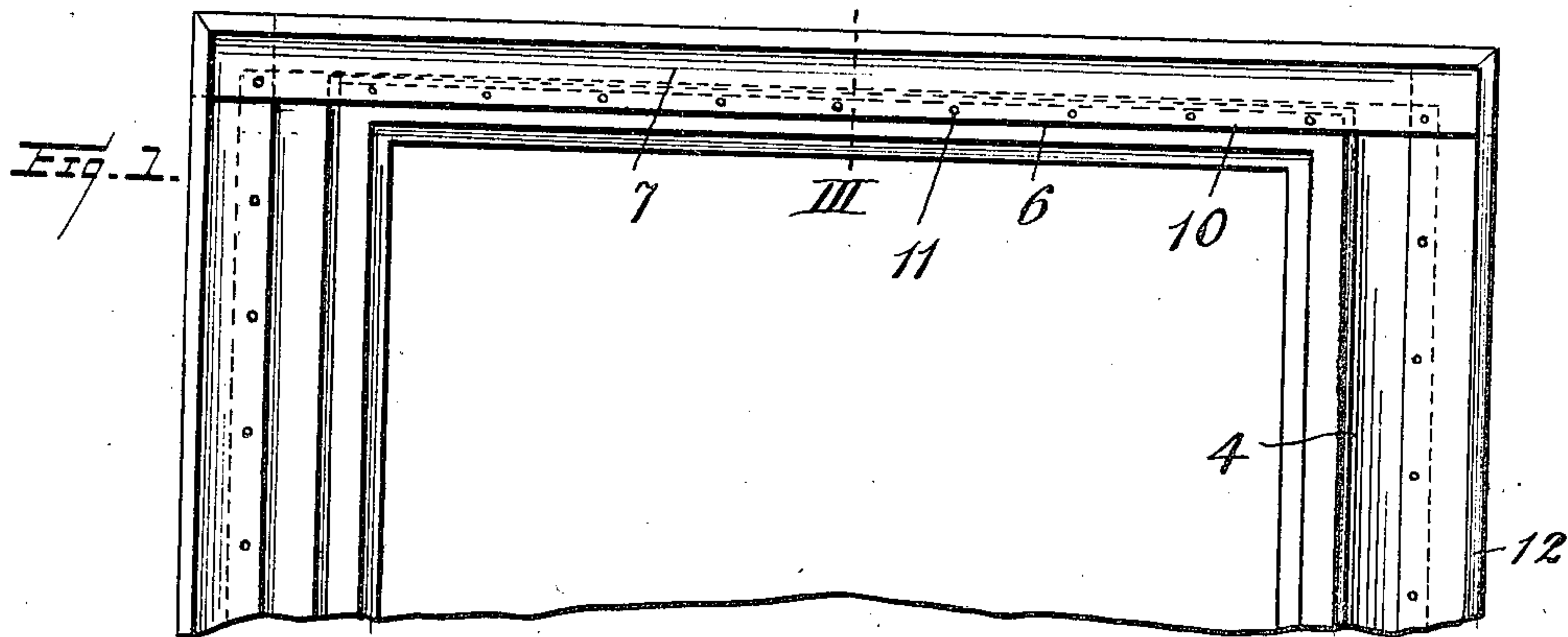
J. S. SEWELL.

PATENTED MAY 5, 1908.

WIND STRIP.

APPLICATION FILED MAY 31, 1907.

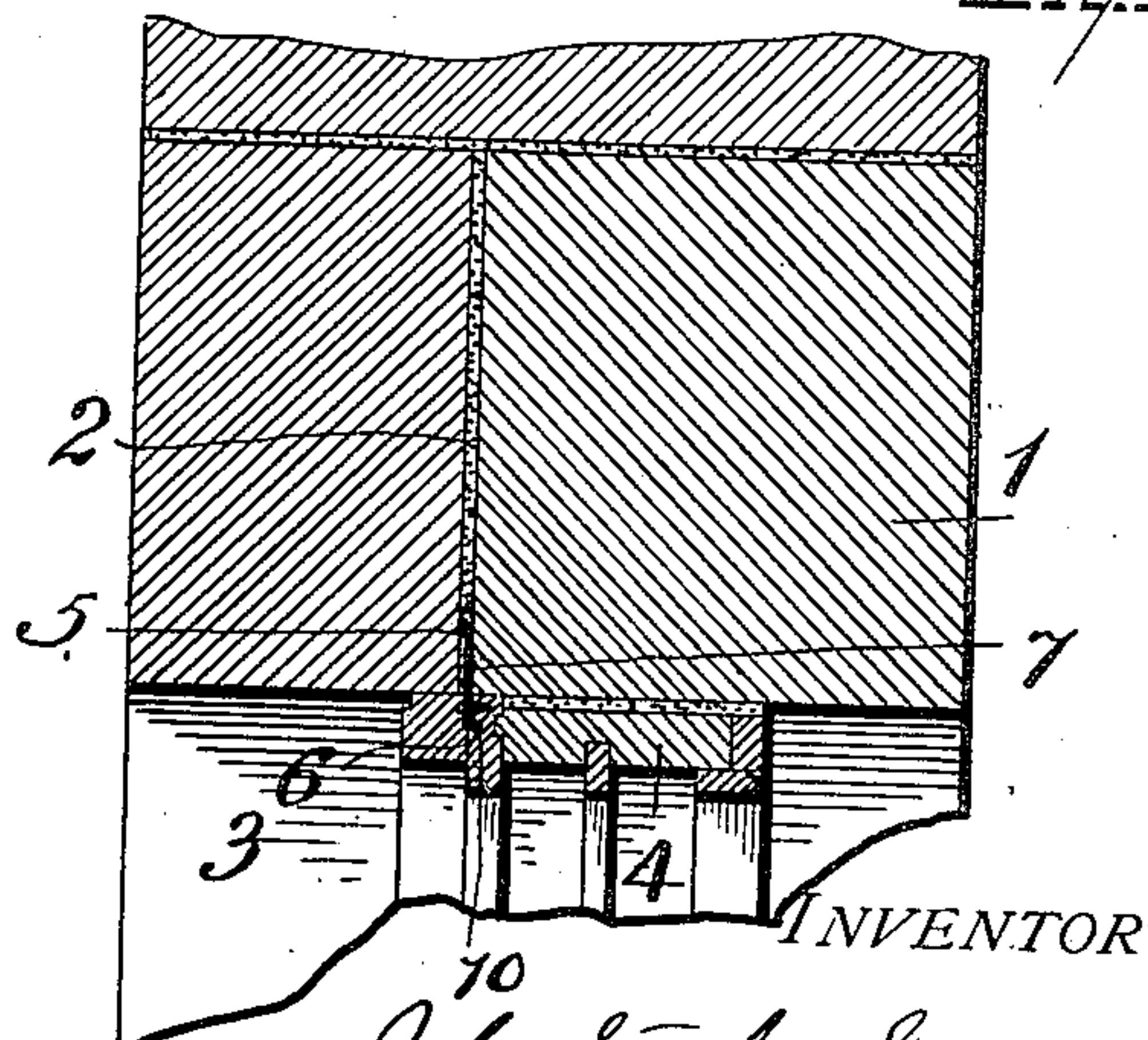
2 SHEETS—SHEET 1.



WITNESSES:

*H. F. Roy Co.*

*J. S. Barker*



BY

*John Stephen Sewell*

*H. N. Low*

Attorney





# UNITED STATES PATENT OFFICE.

JOHN STEPHEN SEWELL, OF THE UNITED STATES ARMY.

## WIND-STRIP.

No. 886,878.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed May 31, 1907. Serial No. 376,552.

*To all whom it may concern:*

Be it known that I, JOHN STEPHEN SEWELL, of the United States Army, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Wind-Strips, of which the following is a specification.

The invention relates to door and window frames when combined with masonry walls, for the purpose of preventing the leakage of wind, cold air, light or dust between such wall and frame.

The term masonry is used to include stone, brick, concrete or equivalent material, and it is to be understood that the invention is applicable to exterior or interior walls, wherever an objectionable space is liable to be left between the wall and such frame, either from want of close fitting or from the shrinkage of the frame, or from cracking or displacement of the wall.

The invention is useful with wood or metal frames, a leakage space being often formed or left around the latter due to indifferent workmanship or to the bending or warping of the metal.

It is well known that, especially in cold and windy weather, a great deal of cold air enters into buildings, not only between the doors and windows and their frames, but also between the frames themselves and the walls. In such instances dust is almost always carried inward by the wind and evidences the leakage, by soiled streaks on the walls extending from the inner edges of the architrave or trim, and from the lower edges of the aprons under the sills. Efficient forms of weather strips have been devised to prevent leakage between the doors and the window sashes and the frames thereof, but a great source of cold, annoyance and want of economy remains at the present day by reason of the entrance of cold air, above referred to, between the masonry walls and the frames that are supposed to be fitted in an air tight manner into the door and window openings in such walls. Such leakage is a source of very great expense, in the heating of buildings, and in many cases great cost has been incurred in the tearing out of plastering around window frames for the purpose of stopping such leakage by fibrous substances or packings.

The present invention is designed to overcome, at slight initial expense and in a per-

manent manner, the difficulties above referred to, and consists, essentially, in the combination of a thin sheet or strip of metal or other permanent and non-shrinking material, with the masonry wall and frame in such manner that it can be seated in a recess or joint of the wall and extend past a portion of the frame. The wind strip is independent of the frame but engages the same so as to form an air tight joint therewith, and is embedded in the mortar of the masonry joint, thus making a wind tight connection with the wall also.

The invention more particularly consists in the parts and combinations thereof herein-after set forth and claimed.

In order to make the invention more clearly understood I have shown in the accompanying drawings means for carrying the same into practical effect, without limiting my improvements, in their useful applications, to the particular constructions which are hereinafter illustrated and described by way of example.

In said drawings—Figure 1 is a front elevation of a window frame, partly broken away, having attached thereto a wind strip, showing the same ready for insertion into the window opening of a wall according to my invention. Figs. 2 and 3 are cross sectional views on lines II and III of Fig. 1, showing also a portion of the wall. Fig. 4 is an end view of one form of the strip, similar to that shown in Fig. 9, on a larger scale, indicating also one of its fastening nails. Fig. 5 is a vertical cross sectional view of the sill, on line V of Fig. 1, including also a portion of the wall. Fig. 6 is a horizontal section of a window frame showing another manner of applying the strip. Figs. 7 and 8 are horizontal sectional views of a door frame showing two ways of applying the strip. Fig. 9 is a similar view showing the frame and strip as applied to a concrete wall.

Referring to the drawings, 1 indicates the masonry wall, having joints therein indicated at 2.

3 is the opening in the wall, which is here shown as a window opening, but which is to be understood as typical of a door or other opening.

4 is a frame, which may be of wood, metal or other material, of any suitable shape and construction, fitted in the opening 3.

5 indicates a recess in the wall at or around the opening 3, and which is preferably situ-



ated where a joint occurs in the masonry of the wall. In the case of a concrete wall such a recess may be left in the construction of the wall, or provided; but ordinarily the concrete wall will be filled in around the frame and strip.

6 is a recess in the frame 4, which may be formed in a portion of the frame or which may be provided where a joint occurs between two members of the frame.

7 is the wind strip, preferably of metal, such as zinc or galvanized iron, which is independent of the frame in the sense that it is not formed therewith and being separate from the frame may be applied thereto at the required points. This strip 7 is fitted closely in the recesses 5 and 6 so as to extend from the joint between the frame and wall outward past a portion of the wall and inward past a portion of the frame. The wind strip 7 may be flat as shown in Figs. 2, 3 and 8, where the main portion of the strip is flat, though for certain purposes it is preferred to bend both edges as hereafter described. Or the wind strip may be bent into L or other shape as indicated in Figs. 4, 5, 6, 7 and 9.

To accommodate a strip having its middle portion bent in this manner the frame may be provided with a space or shallow recess 8 parallel with the face of the opening 3 (Figs. 5, 7 and 9) the recesses 5 and 6 being in such case not in line with each other but being arranged at the two ends of the space 8. The inner end or edge of the strip, being the edge which is seated in the frame, is or may be provided with a bent edge or flange 10 extending into the frame in a direction parallel with the face of the opening 3 (Figs. 2, 3 and 8). It will thus be seen that the recess 6 in the frame 4 may extend straight into the frame in a direction at right angles to the side face of the opening 3, or may extend into the frame parallel with the face of the opening 3, or may have a right angled form between two parts of such frame (Figs. 3 and 8).

11 indicates nails, which are the preferred means for securing the strip to the frame for greater convenience. But it will be understood that the improvement includes such a strip when fitted to the wall and frame as described with or without securing means. For more secure and close interlocking with the wall 1 the strip 7 is or may be provided with a hook-like edge flange 12. After the strip has been applied to the frame I prefer to white-lead the recess 6 of the frame at one or both sides of the strip to insure an air-tight joint. When the strip is combined with a hollow or other casing having joints through which air might pass, the strip is applied at the outer or windward side of such joints, as shown in Figs. 2 and 6.

The material used for the strip is or may

be flexible so that it may be given the bends indicated at 14 in Fig. 4, thereby enabling the outer edge of the strip which enters the recess 5 of the wall to conform to the location, in the opening 3, of such recess and the masonry joint 2. Zinc is a material well suited to this purpose, and is also durable and permanent in character.

In applying the improvement to a brick or stone wall, the ordinary procedure is to take the frame, having the strip 7 applied and attached thereto around all four sides of the frame, and set it on the wall where the opening 3 is to be made, the strip at the bottom of the frame being caused to enter a joint of the completed wall. This bottom strip will be bent, if necessary, to cause its outer edge to be in the same vertical plane as such joint. Similarly the side and top strips will be bent, if necessary, to cause them to conform to the planes where the masonry joints at the sides and top of the frame will occur, according to the proposed construction of the wall. The wall may then be completed around the frame in the usual manner.

The mortar of the masonry joint into which the strip 7 is inserted performs the two functions of connecting the parts of the masonry and of forming an air tight filling around the edge of the strip.

What I claim is:—

1. A door or window frame, having a wind strip comprising a flange embedded in the frame, a part which is parallel with a portion of the frame and an outstanding flange or extension, the wind strip being permanently secured to the frame, in combination with a wall having an opening for the said frame and a recess in the boundary surface of the opening into which recess the said flange or extension projects and closely fits, substantially as set forth.

2. The combination of a door or window frame, a masonry wall having an opening for the said frame, and the wind strip extending across the joint between the frame and the wall and tightly fitting into the frame and embedded in the wall, substantially as set forth.

3. The combination of a door or window frame, a masonry wall having an opening for the said frame, and the wind strip extending across the joint between the frame and the wall and tightly fitting into the frame and embedded in the plastic material of the wall, substantially as set forth.

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

JOHN STEPHEN SEWELL.

Witnesses:

N. CURTIS LAMMOND,  
H. N. LOW.