

J. KAMMERER.
WEATHER STRIP.
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986,828.

Patented Mar. 14, 1911.

Fig. 1

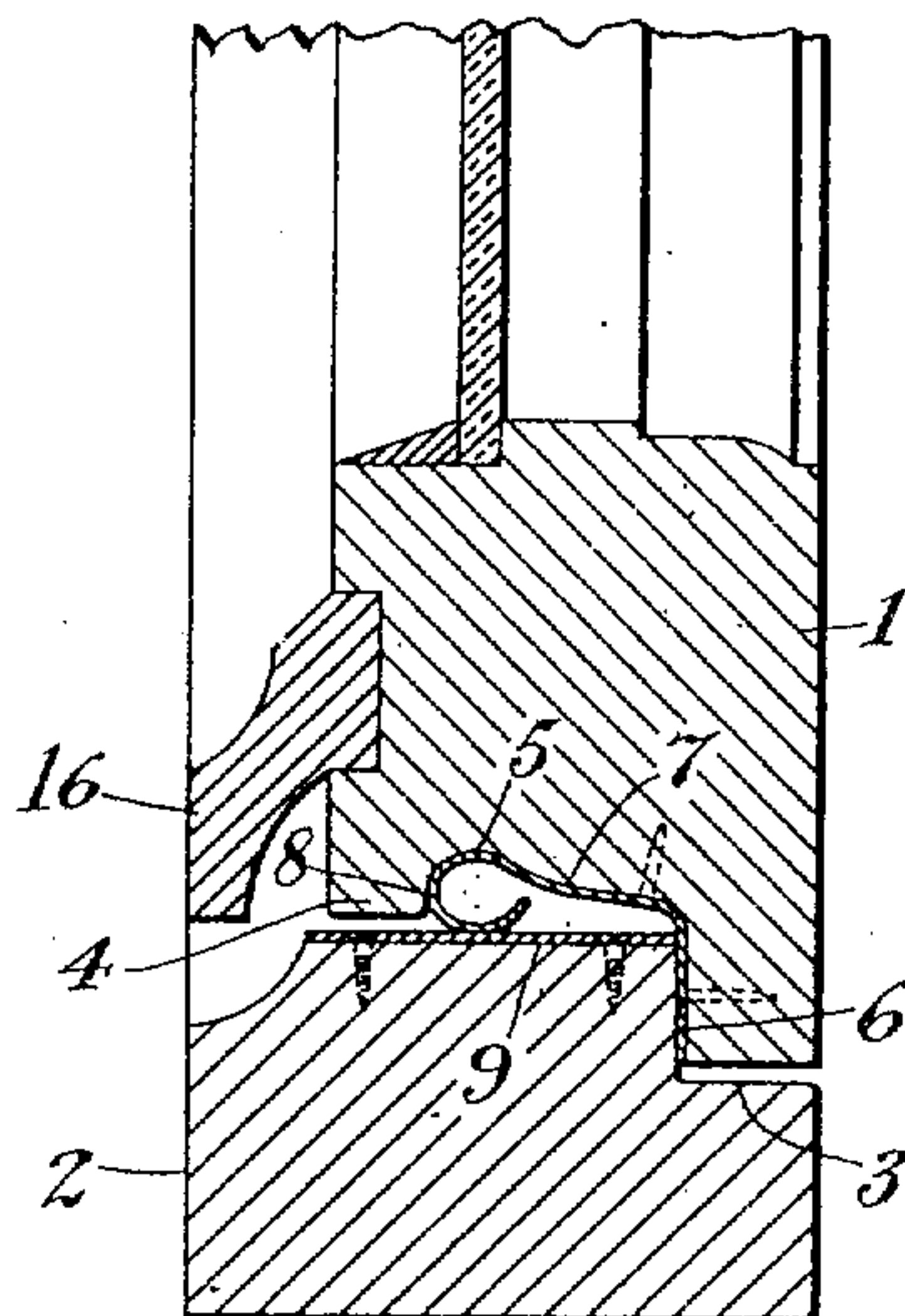


Fig. 2

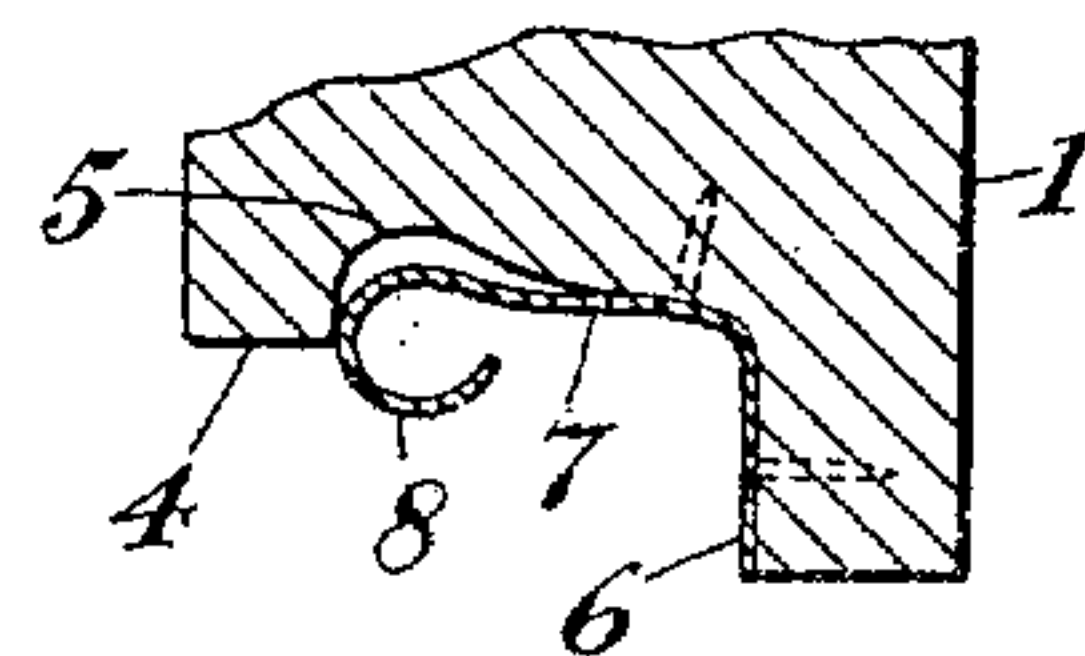
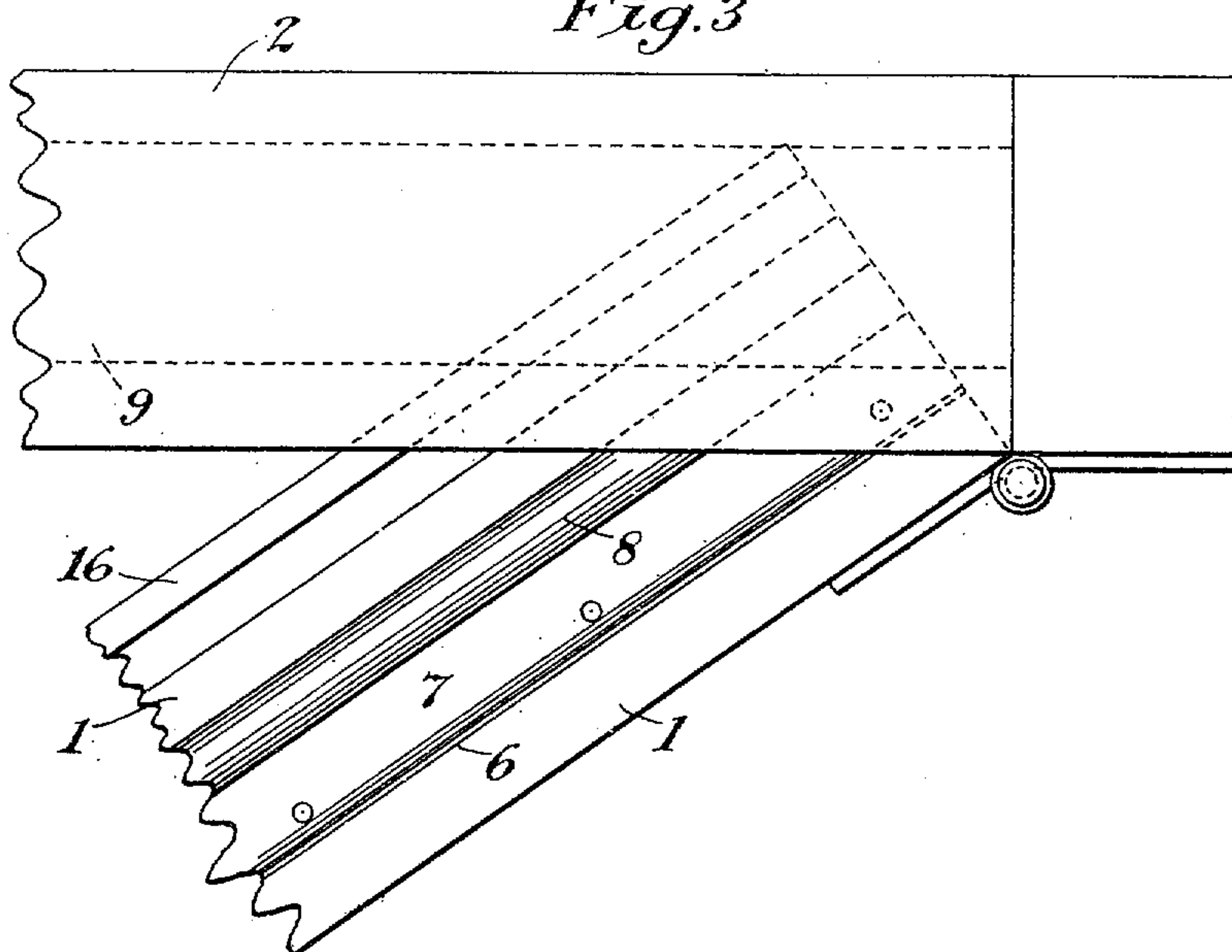


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

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WEATHER-STRIP.

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To all whom it may concern:

Be it known that I, JACOB KAMMERER, a citizen of the United States, residing in the borough of Manhattan, city of New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Weather-Strips, of which the following is a specification, reference being had therein to the accompanying drawings, forming part thereof.

My invention relates to weather strips and is particularly adapted for application at the bottoms of casement windows, the sills of which are low and which are so located that they may be used as doors.

The objects of my invention are simplicity and inexpensiveness of construction, durability, prevention of rattling, a high degree of efficiency in excluding wind, rain and dust, and freedom from liability to injury when the sill is trod upon.

Other objects and advantages will appear from the following description.

My invention includes a member comprising a base portion secured to one of two relatively movable parts and a resilient sealing portion adapted to seat in a groove in such part and adapted to form a sealing connection with the other relatively movable part, the sealing portion being pressed into sealing relation by the movement together of the two relatively movable parts.

My invention also includes other advantages and features and several details of construction as will hereinafter appear.

I shall now describe my invention with reference to the accompanying drawings and shall thereafter point out my invention in claims.

Figure 1 is a vertical section through the lower rail of the sash and the sill of the window and through the weather strip, with the sash in closed position. Fig. 2 is a partial vertical section through the lower rail and through the weather strip, with the sash partly open. Fig. 3 is an inverted plan view of a casement window equipped with my invention, with the sash partly open.

In the embodiment of my invention illustrated in the drawings, my improved weather strip is shown as applied at the bottom of the lower sash 1 of a casement window having a window sill 2. The sill 2 is provided with a rabbet 3 at the inner side of the win-

dow and the sash rail 1 is provided with a rabbet 4 at the outer side thereof, a concave groove 5 being formed in the rabbeted face 4. The sash rail 1 is provided at its outer side with a usual drip ledge 16. The rabbeted faces of the sash rail 1 and of the sill 2 coact to form a lap joint between these two members.

The weather strip is formed of resilient sheet metal bent to the required shape, sheet brass having been found suitable for the purpose. The weather strip has an L-shaped base fitting the rabbeted face of the sash rail 1, such base comprising a vertical flange 6 and a substantially horizontal resilient tongue 7 shown as curved outwardly and extending at a slightly obtuse angle to the flange 6, the flange 6 and the tongue 7 adjacent to the flange 6 being shown as nailed to the rabbeted faces of the sash rail 1. A portion of the tongue 7 is free and tends to swing away from the rabbeted face of the sash rail 1, as shown in Fig. 2. The free edge of the tongue 7 is turned or curved downwardly and inwardly, and finally it is turned upwardly toward, but not in contact with, the tongue 7 to form a resilient substantially cylindrical tubular sealing bead 8 having a slit or opening between the edge of the upturned portion of the bead 8 and the tongue 7. The bead 8 is adapted to seat in the groove 5 and to coact with a sealing strip or sill plate 9 shown as secured by screws to the top face or meeting face of the sill 2 to form a weather-tight seal between the sash rail 1 and the sill 2.

By reason of its slotted construction the bead 8 has a free springing action and has a tendency to expand in diameter, as shown in Fig. 2, which shows the position of the parts when the window is open. Also Fig. 2 illustrates the springing action of the tongue 7, which tends to hold the bead 8 partly out of the groove 5. When the window is in the act of closing, the rounded inclined faces of the bead 8 enable it to ride over the sill plate 9, and when the window is closed, as shown in Fig. 1, the bead 8 fits into and closely conforms to the walls of the groove 5 and is pressed firmly against the plate 9 by both the expansive tendency of the split or slotted bead 8 and by the downward springing tendency of the tongue 7, a weather-tight seal being formed at both points, that is, in the groove 5 and

with the plate 9. The upturned edge of the sealing bead 8 prevents excessive friction or catching of such bead on the plate 9.

In operation, any water which may be blown under the drip ledge 16 and penetrate between the sash rail 1 and the sill 2 will have its progress arrested by the bead 8, which, as above noted, makes a close fit with the plate 9 and in the groove 5 of the sash rail 1. The close seal also precludes the entrance of dust and wind and the resiliency of the bead 8 and tongue 7 prevents rattling of the sash. Any shrinkage of the sash rail 1 and the sill 2 will be compensated for by expansion of the expansive bead 8.

It is obvious that various modifications may be made in the construction shown and above particularly described within the principle and scope of my invention.

I claim:

1. A weather-tight joint comprising, in combination with the lower sash rail of a casement window and a window sill having a rabbet formed at the inside of its meeting face, the sash rail having a coacting rabbet formed at the outside of its meeting face and having a groove formed in the rabbeted portion, a sheet metal member bent to form a substantially vertical flange, and a substantially horizontal resilient tongue extending from the flange, the flange being secured to the side of the rabbeted face of the sash rail and the tongue being curved to form a sealing bead having a curved outer surface adapted to fit in the groove, such curved outer surface of the sealing bead being coactive with the sill when the window is closed to form a sealing connection between the sash rail and the sill.

2. A sheet metal weather strip having a substantially L-shaped base and a tongue

portion turned to form a substantially tubular sealing bead forming nearly a complete circle having an open slit along one side to provide for resiliency, in combination with a sash rail having a rabbet for receiving the L-shaped base and also having a groove in which the sealing bead is adapted to fit, and a part coactive with the sash rail and with which the curved outer surface of the sealing bead contacts to make a sealing connection.

3. A weather-tight joint comprising, in combination with the lower sash rail of a casement window and a window sill having a rabbet formed at the inside of its meeting face, the sash rail having a coacting rabbet formed at the outside of its meeting face and having a groove formed in the rabbeted portion, a sheet metal member bent to form a substantially vertical flange, and a substantially horizontal resilient tongue extending from the flange, the flange being secured to the side of the rabbeted face of the sash rail and the tongue being curved to form a substantially tubular sealing bead adapted to fit in the groove but when the window is open held out of contact with the bottom of the groove by the resilient tongue, and a sealing strip carried by the meeting face of the sill and coactive with the sealing bead to press such bead into the groove and to compress the same against the bottom of the groove, whereby a tight seal will be effected by the sealing bead between the bottom of the groove on the sash rail and the surface of the sealing strip on the sill.

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

JACOB KAMMERER.

Witnesses:

HENRY WEBER,
WM. ASHLEY KELLY.