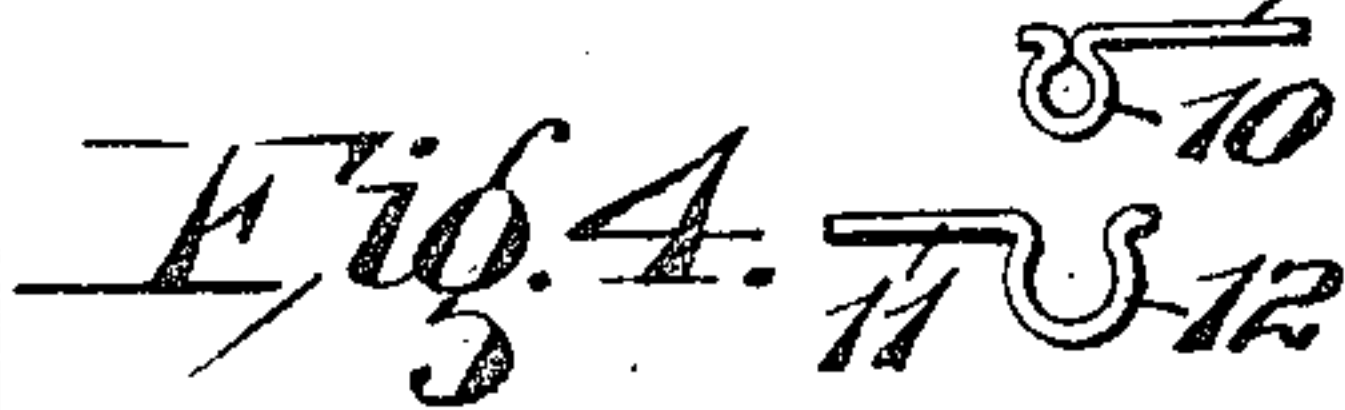
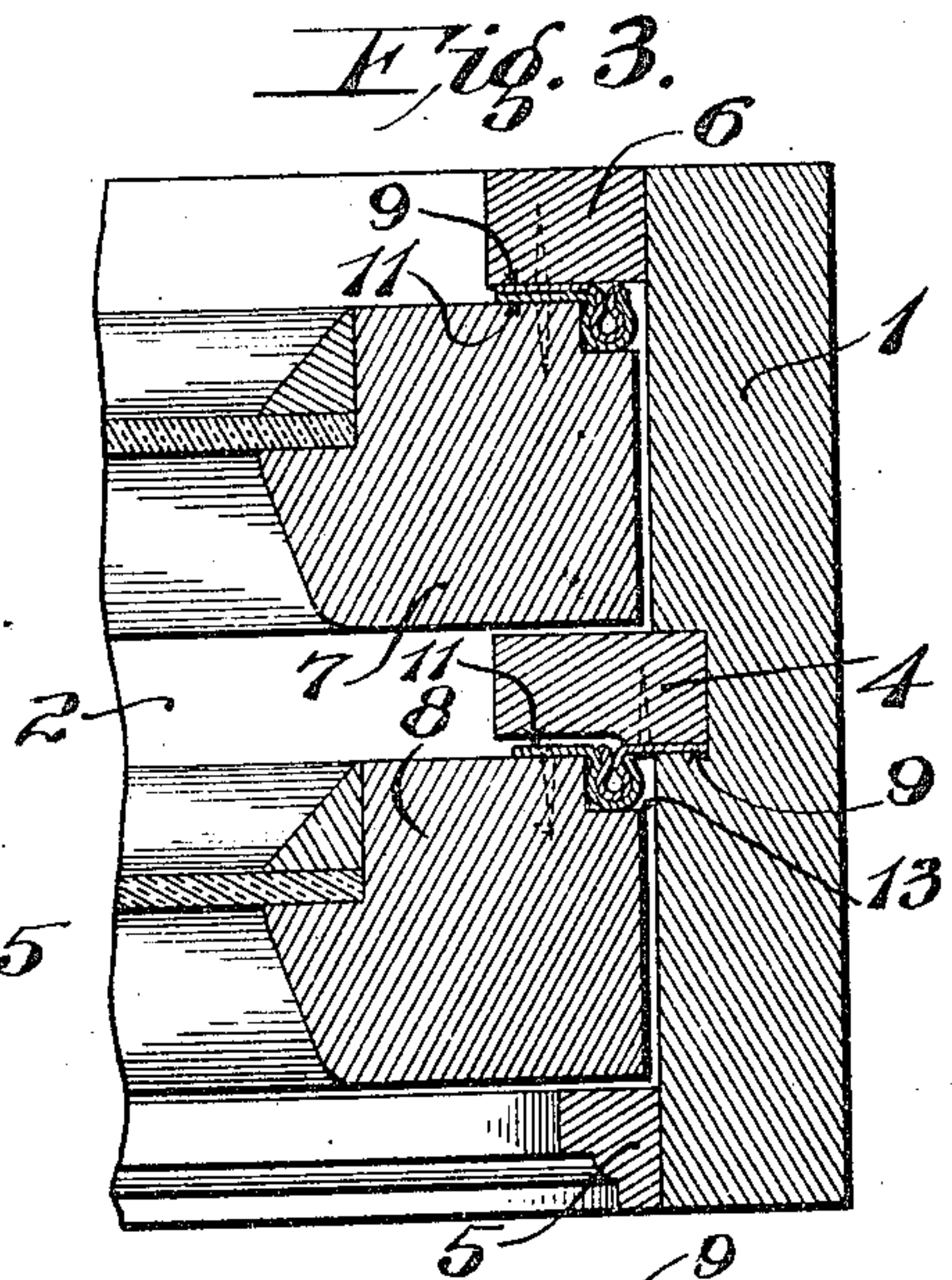
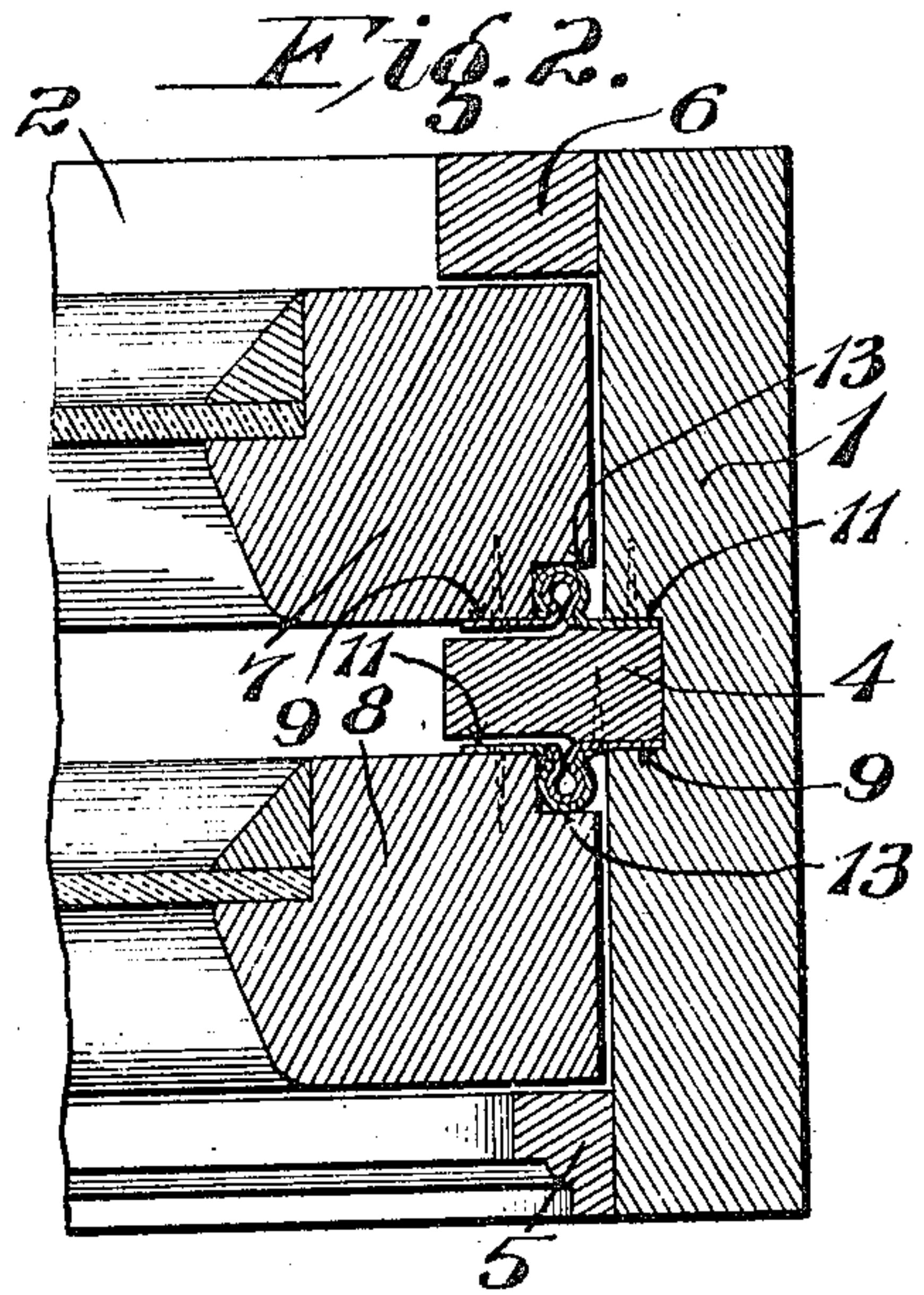
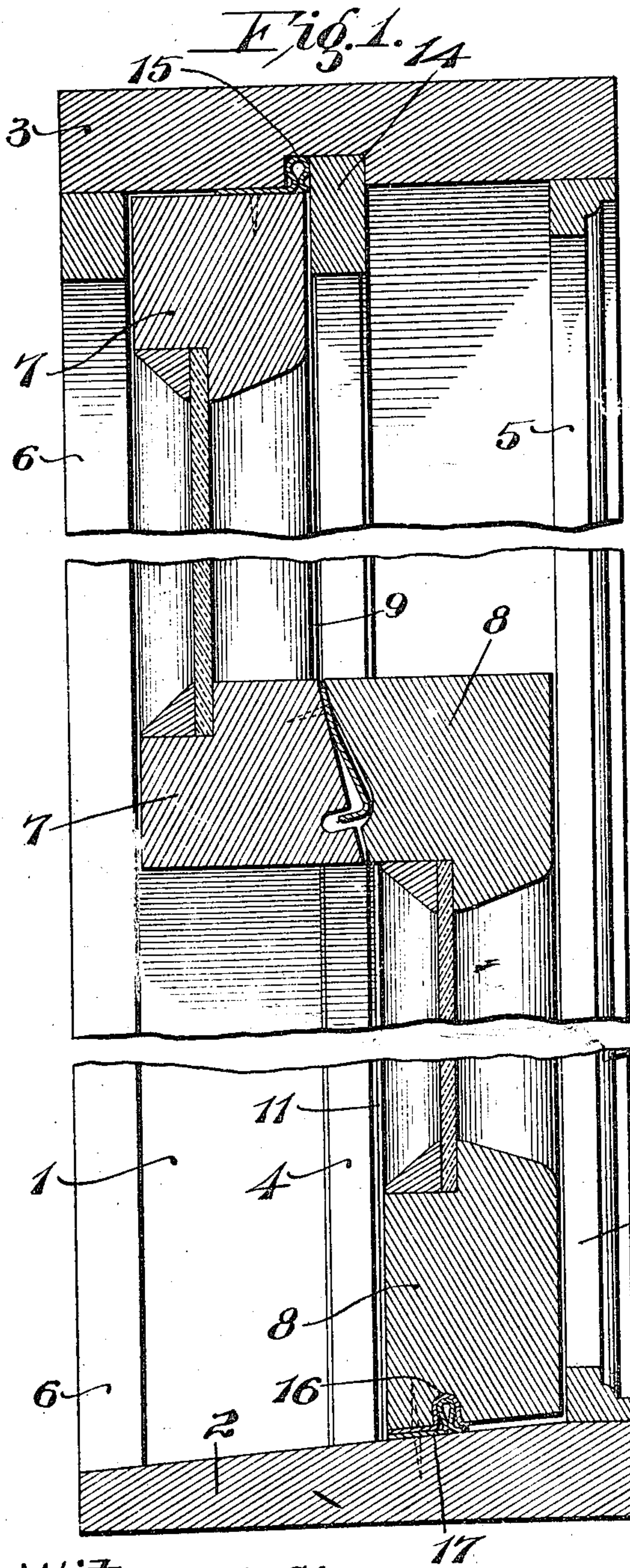


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 WEATHER STRIP.
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962,351.

Patented June 21, 1910.



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WEATHER-STRIP.

962,351

Specification of Letters Patent. Patented June 21, 1910.

Application filed December 31, 1908. Serial No. 470,156.

To all whom it may concern:

Be it known that I, OSCAR W. HOOPPAW, 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, of which the following is a specification.

My invention relates to weather strips, and is an improvement upon the construction illustrated in Patent No. 805,115, granted to Charles C. Bowers on November 21, 1905.

It has for its principal objects to exclude drafts from the room, to exclude dust from the space between the window sash and the window frame, to conceal the weather strip, to facilitate the installation thereof, to facilitate the removing of the window sash, to guard against the effects of the swelling and shrinking of the sash, to prevent the rattling of the sashes, and to provide for easy access to the sash weights without removing the weather strips.

The invention consists in the construction and arrangements of parts hereinafter described and claimed.

In the accompanying drawing, which forms part of this specification, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a vertical cross sectional view of a window embodying my invention, the intermediate portions thereof being broken away; Fig. 2 is a horizontal sectional view of a side of a window embodying my invention with one of the sashes partly open; Fig. 3 is a similar view illustrating a modified form of construction; and, Fig. 4 is a detail view of the cooperating elements of the weather strip.

The window frame is of any ordinary construction. As illustrated in the accompanying drawing, it comprises jambs 1, the sill 2, a head 3, parting strips 4, an inner stop 5, and an outer or blind stop 6. It also comprises an upper sash 7 and a lower sash 8. The jambs are provided with vertical grooves for the parting strips, as usual.

Mounted on the inner face of the lower portion of each parting strip is a strip 9 of sheet metal which is substantially continuous with the lower sash in its lower or closed position. On the marginal portion of this strip is formed a continuous bead 10, preferably of the form illustrated in Fig. 4.

In this form, the bead is a hollow or tubu-

lar rib which projects from the plane of the body of the strip and has its maximum width outside of said plane. The flat portion of this bead strip is tacked or otherwise mounted flatwise against the inner face of the portion of the parting strip that enters the groove in the jamb, so that the bead lies close to the inner face of the jamb. The outer portion of the inner face of the parting strip is slightly offset or dressed off; and, mounted on the outer face of the lower sash opposite this dressed portion of the parting strip is a second metal strip 11 whose marginal portion 12 is curled or bent to form a laterally projecting groove which is the counterpart of the bead of the metal bead strip, that is, the mouth or gap of the groove is narrower than the portion of intermediate depth. The mouth or gap of the groove opens outwardly, that is, toward the parting strip or toward the face of the sash. In order to accommodate the curled portion of the groove strip 11, the outer vertical edge of the lower sash is rabbeted or cut away to form a groove 13. The body portion of the metal groove strip 11 is flat and it alone is tacked or fastened, leaving the groove portion free. The groove portion is sufficiently resilient to allow the bead to be forced into it. In this construction, the groove strip 11 is permanently fastened to the lower sash 8; so that in the mounting and dismounting of the lower sash, it is merely necessary to remove the inner stop whereupon the members of the weather strip may be sprung together or apart without dismounting them.

The weather strip for the upper sash is similar to that for the lower sash. In the construction illustrated in Fig. 2, the inner vertical edge of the upper sash is rabbeted or grooved; and in this rabbet or groove rests the curled marginal portion of the groove strip, the flat portion thereof being secured flatwise against the outer face of the groove in the jamb. In this construction, the bead strip is mounted flatwise against the inner face of the upper sash with its bead fitting in the socket provided therefor in the groove strip.

In assembling the parts, the upper sash is positioned with respect to the outer or blind stop. Then the metal bead strips are positioned to slide in the grooves of the metal groove strips; and while in this position, the

bead strips are tacked or otherwise mounted on the inner face of the upper sash; after which the parting strips are mounted in place.

5 In the construction illustrated in Fig. 3, the rabbets or grooves in the upper sash are formed in the outer vertical edges thereof; and the metal groove strips are mounted on the outer face of the sash with their curled
10 margins resting in said rabbets or grooves. In this construction, the bead strips are mounted on the outer or blind stops. By reason of the location of the weather guard in this construction, dust and dirt are ex-
15 cluded not only from the room but from the space between the sash and the jamb, and the upper sash may be removed without dismounting the weather strips. For this purpose, the parting strips are first removed,
20 the upper sash is let down to its lowermost position, in which position all but the uppermost portions of the bead strips are disengaged from the groove strips, whereupon the sash is forced inwardly, permitting the
25 easy disengagement of the weather strips. Likewise to restore the outer sash to its place, this operation is simply reversed.

In the top of the window frame is a groove for the parting bead 14, the inner side portion of this groove extending outwardly be-
30 yond the margin of the upper sash. The top of the upper sash is provided with a metal bead strip 15 whose bead fits in the marginal portion of the top groove. The bottom of
35 the lower sash has a metal strip 16 fastened thereto which has a longitudinal groove midway of its width, the grooved or curled portion lying in a groove provided therefor in the bottom of the sash. The sill 2 is pro-
40 vided with a bead strip 17 whose bead is positioned to cooperate with said last mentioned metal groove strip 16. For this purpose, the opening of the groove strip is preferably wider than in the case of the groove
45 strips at the sides of the sashes, so as to make it easy to engage the bead therewith or disengage it therefrom. By this arrangement, the groove strip is better proportioned.

Mounted on the inner face of the meeting
50 rail of the upper sash is a resilient plate whose lower portion inclines away from said meeting rail and is provided with a flange that is rebent outwardly and has its marginal portion projecting part way into a
55 horizontal groove provided therefor in said meeting rail. The outer face of the meeting rail of the lower sash is provided with a depression or ogee curve adapted to receive the projecting portion of said plate, said de-
60 pression being rounded to accommodate said plate and to permit said plate to ride over the lower portion of the meeting rail of the lower sash when the sashes are moved up and down.

65 It is noted that the construction above de-

scribed has all the advantages incidental to the construction set forth in said Patent No. 805,115. Among the advantages peculiar to itself is the fact that the weather strips are protected from injury and concealed from
70 view by the parting strips of the sashes, as well as those hereinbefore mentioned.

What I claim is:

1. A weather strip comprising a frame, a sash slidably mounted therein and having
75 rabbets in its vertical edges, and counterpart metal bead and groove strips, said groove strips being mounted on the sash with their grooved portions in the rabbets and with the mouths of the grooves opening
80 toward the face of the sash.

2. A weather strip comprising a frame, a sash whose outer vertical edges are rabbeted, and counterpart metal bead and groove strips, said groove strips being
85 mounted on the outer faces of the sash with their grooved portions in the rabbets and with the mouths of the grooves opening toward the outer face of said sash and the bead strips being mounted on a stationary
90 part to cooperate with said groove strips.

3. A weather strip comprising a frame, parting strips detachably mounted therein, upper and lower sashes, and counterpart metal bead and groove strips, the lower sash
95 having rabbets in its outer edges and having the groove strips mounted on its outer face with their grooved portions in said rabbets and with the mouths of the grooves opening outwardly, and the cooperating bead strips
100 being mounted on the inner face of said parting strips.

4. A weather strip comprising a frame, a parting strip detachably mounted therein, upper and lower sashes whose outer edges
105 are rabbeted, and counterpart metal bead and groove strips, said groove strips being mounted on the outer faces of the sashes with their grooved portions in the rabbets and with the mouths of said grooves open-
110 ing outwardly, and the bead strips being mounted on stationary parts to cooperate therewith.

5. A weather strip comprising a frame, parting strips detachably mounted therein,
115 upper and lower sashes whose outer vertical edges are rabbeted, outer and inner stops for said sashes, and counterpart metal groove and bead strips, the groove strips being mounted on the outer faces of the
120 sashes with their grooved portions in the rabbets and with the mouths of the grooves opening outwardly, and the bead strips being mounted on the parting strip and the outer stops respectively.
125

6. A weather strip comprising a frame, a sash slidably mounted therein and having rabbets in its vertical edges, and counterpart metal bead and groove strips, said groove
130 strips being mounted on the sash with their

grooved portions in the rabbets and with the mouths of the grooves opening toward a face of the sash, the groove strips being resilient to permit the bead strips to be sprung into engagement therewith.

7. A weather strip comprising a frame, a sash whose outer vertical edges are rabbeted, and counterpart metal bead and groove strips, said groove strips being mounted on the outer face of the sash with their grooved portions in the rabbets and

with the mouths of the grooves opening toward said outer face and the bead strips being mounted on a stationary part to cooperate with said groove strips, the groove strips being resilient to permit the bead strips to be sprung into engagement therewith.

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