

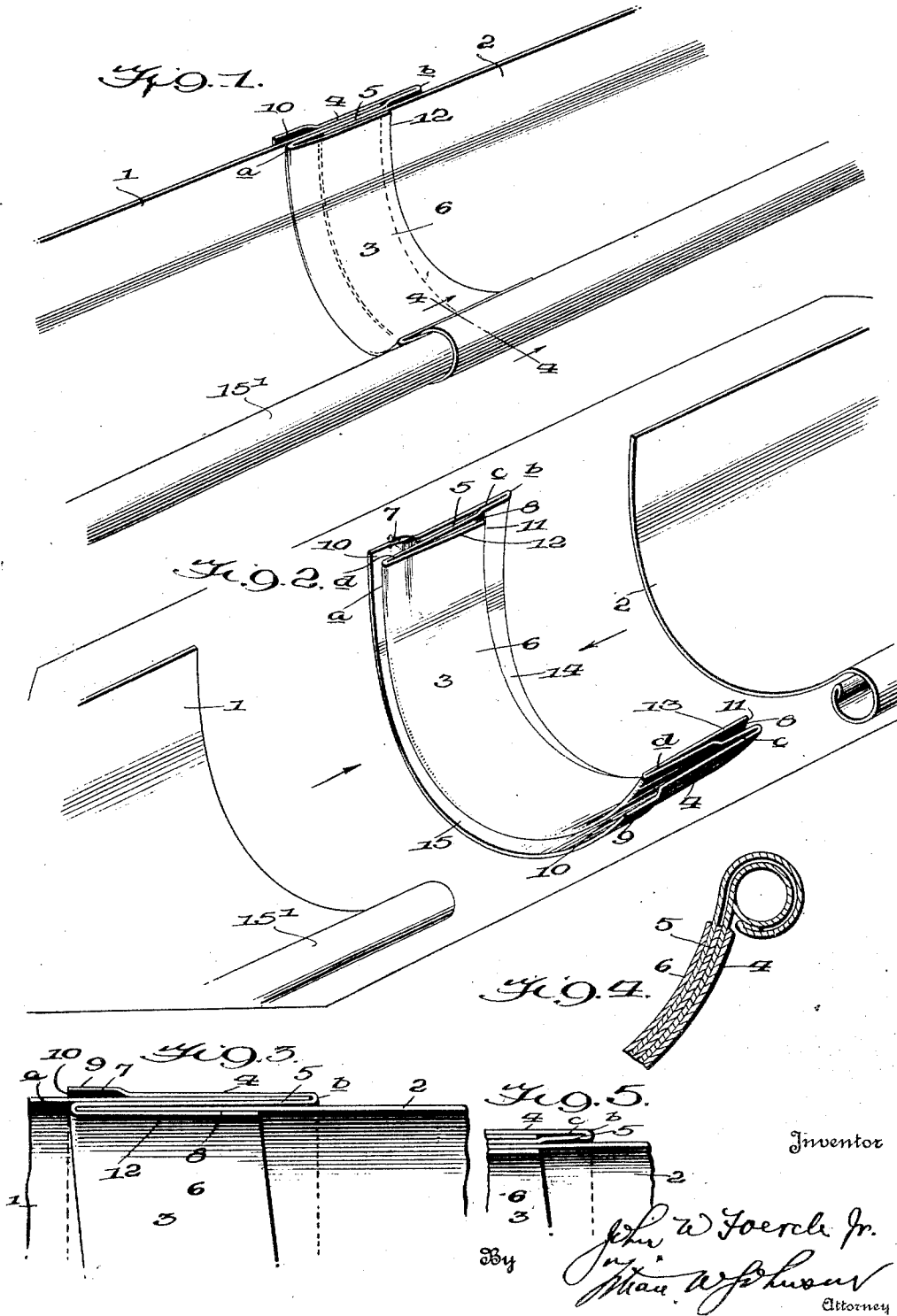
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GUTTER JOINT

Filed April 12, 1927



## UNITED STATES PATENT OFFICE.

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## GUTTER JOINT.

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This invention relates to improvements in gutter joints for joining gutter sections, commonly used on houses, and in building construction to direct the water from the roof to desired points.

Generally speaking, the objects of the invention are the same as those mentioned in my application, Serial Number 162,031, filed January 19, 1927, that is to say, it is the primary purpose of the invention to provide a gutter joint that may be made in various stock sizes and adapted to receive the ends of gutter sections, and to embrace them in such a way that they will be secure against both longitudinal and lateral displacement and at the same time provide a joint, in cooperation with the gutter sections, that will be leak-proof, and entirely eliminate the use of solder.

The joint is so designed as to necessitate, in no way, a change in the construction of gutter sections now commonly used and one which will require no extraordinary skill in assembling the sections and joints, and without the necessity of special tools for the purpose.

A characteristic and outstanding difference between the construction of the joint herein-after disclosed and the one disclosed in my application above referred to, is in the formation of the receiving pockets of the joint, particularly in that these pockets, and the entrances to them, are made for more ready entrance of the gutter sections, especially in starting the opposed ends of the gutter section into the joint, in assembling the parts.

In the drawings, Figure 1 is a perspective view of my improved joint, applied to the ends of two gutter sections.

Figure 2 is a group perspective view of the joint and the ends of two gutter sections.

Figure 3 is a top plan view of a portion of a joint with gutter sections in the pockets thereof, showing the oblique arrangement of the overlying portion of the joint, relative to other parts of the joint.

Figure 4 is a detailed sectional view through the joint and gutter sections, showing particularly the manner in which the beads telescope.

Figure 5 is a detailed plan of a fragment of the joint and gutter sections showing the one gutter section positioned short of the bottom of one of the pockets in the joint.

Referring to the drawings,

The numeral 1 designates a portion of a

gutter section, and 2, the adjoining section. The numeral 3 designates the joint as a whole. This is made of a single piece of metal stamped or shaped in convolutions or folds, upon itself, to form pockets in which the ends of the gutter sections are received and retained.

The metal is folded upon itself and "pinched" in such a way, at certain points, that when the gutter sections are in place it will be impossible for water passing along the gutter, to pass or leak through the joints.

Preferably the joint is made of tin of varying gauge of which the usual gutter spout is made. In the shown embodiment of the invention the joint is curved in cross-section and formed with an underlying portion a little wider at one end than the corresponding end of the overlying portion, and much wider than the overlying portion at the opposite end, for a purpose that will presently become apparent.

The numeral 4, designates the underlying portion of the joint; 5, the intermediate portion, and 6, the overlying portion, or that which conforms to the inner surface of the gutter when the joint is applied. By thus folding the metal upon itself, a retaining pocket 7, is formed for the reception of the end of one gutter section, and a second pocket 8, is formed between the portion 5 and overlying portion 6, for the reception of the end of the other gutter section. For some distance from the bending point *a* of the portions 5 and 6, the portion 5, is pinched down on the portion 6, until the inner surfaces of each are virtually in contact, and at the point of bending *b* of the sections 4 and 5, the section 5 is similarly pinched against the section 4, so that the ends of the reversed pockets 7, and 8, will receive snugly, the two gutter ends which are inserted from opposite directions. These narrowed portions of the pockets are designated by *c* and *d*.

The underlying portion 4 of the joint is rolled slightly out of alinement with the main portion, as indicated at 9 to form a comparatively wide entrance opening 10, for a gutter section at one end of the joint, and the pinching together of the portions 4 and 5, at the other end of the coupling produces a comparatively large entrance opening 11, for receiving the end of the other gutter section.

The portion 6 is so shaped that it lies obliquely within the underlying portion 4,

and is narrower at its end 12, than at its end 13, thus providing ledges 14 and 15, at opposite ends of the joint, which are beyond the edges of the said portion 6. It will appear  
5 that these ledges, when gauged by the underlying portion, are substantially triangular, with the base of the triangles reversely disposed. The ledges serve the purpose of supporting and accurately guiding the ends of  
10 the gutter sections when they are being forced into the respective pockets, in that when introducing one gutter section its end is properly positioned on the underlying section when it is only necessary to shove the section  
15 home into its pocket. Of course the adjoining section may be similarly properly positioned, relative to the oppositely opening pocket for the same purpose. Now, in assembling the parts, the end of a gutter section  
20 is properly positioned upon its appropriate ledge, and forced, preferably all the way to the bottom of its pocket, separating the pinched portion of the pocket sufficiently to enter. When one gutter section is thus positioned, the other is introduced from the other  
25 end of the joint and similarly manipulated, until its end is at the bottom of its pocket, when the joint will be complete.

In the drawings the gutter is shown with  
30 the usual head 15'. However, the end of one gutter section, at the point where the joint is made, is expanded slightly, or enough to slide smoothly over the bead of the adjoining section, as shown, because obviously, since the  
35 ends of the gutter sections, when home in the pockets, overlap for a considerable extent, and it is desirable to have the beads of the gutter section similarly overlap.

The joint is of such arcuate dimensions that  
40 one of its upper edges when the parts are assembled, will be considerably below the bead of the gutter sections, so as to in no way interfere with the telescopic entrance and move-

ment of one portion of the bead along the other, in joining the sections. 45

#### Claims:

1. A gutter joint comprising a member so bent upon itself as to form an outer underlying portion, an inner overlying portion, and an intermediate portion, said portions  
50 forming oppositely opening pockets for the reception and retention of the adjoining ends of gutter sections, the overlying portion being shorter than the intermediate portion and extending obliquely across said portion  
55 whereby ledges of substantially triangular shape are presented to provide entry rests for the ends of the gutter sections, said ledges being offset outwardly from the outer and intermediate portions respectively whereby the  
60 entry of the gutter ends into the pockets is facilitated.

2. A gutter joint comprising a member so bent upon itself as to form an outer underlying portion, an inner overlying portion, and an intermediate portion forming between  
65 the portions oppositely opening pockets for the reception and retention of adjoining ends of gutter sections, the outer overlying portion being shorter than the intermediate portion and extending obliquely across said portion, whereby on opposite sides of the overlying portion substantially triangular  
70 shaped ledges are formed to facilitate the entry of the gutter ends into the pockets, said ledges being offset outwardly from the outer and intermediate portions respectively, the joint thus formed being of shorter arcuate  
75 dimensions than the gutter sections it is adapted to receive so as not to interfere with the  
80 telescopic entrance of the gutter sections into the joint.

In testimony whereof he affixes his signature.

JOHN W. FOERCH, JR.