Feb. 3, 1942. H. P. ORTH 2,271,710

BUILDING REGLET

Filed March 29, 1940 2 Sheets-Sheet 1

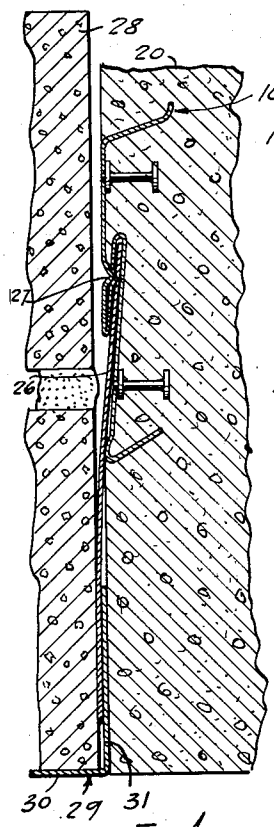


FIG. 4

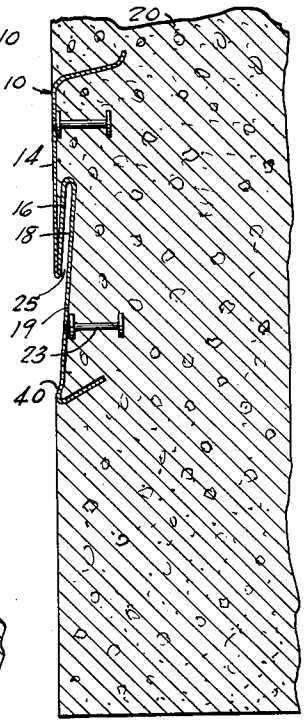


FIG. 3

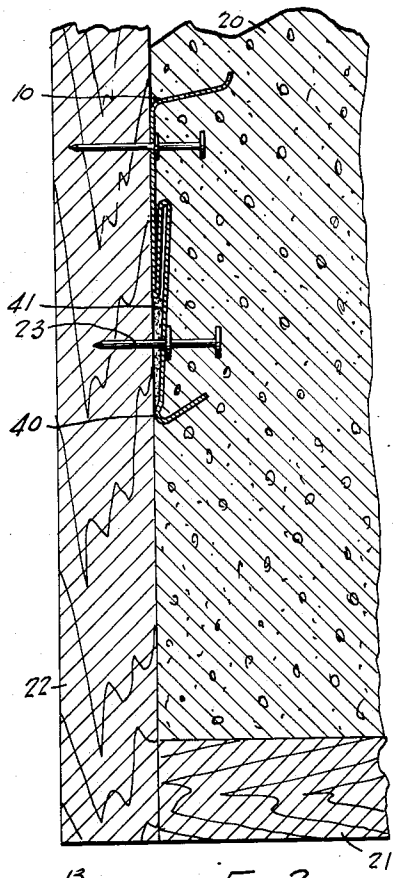


FIG. 2

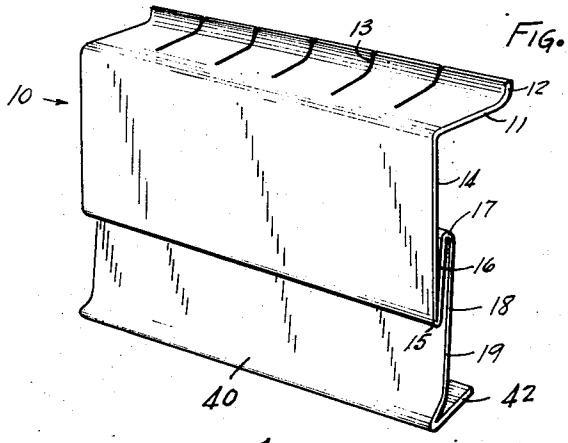


FIG. 1

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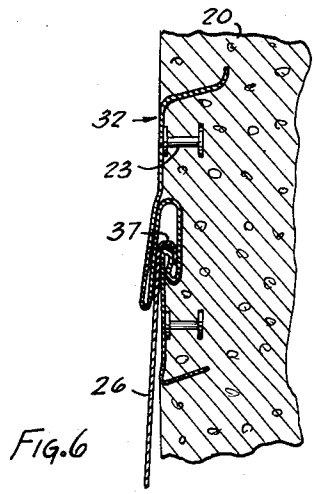


FIG. 6

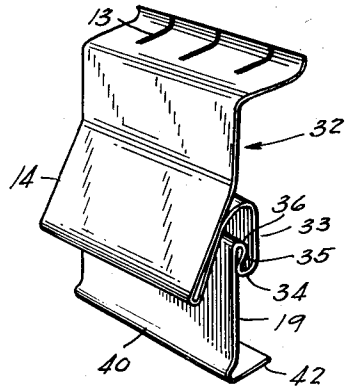


FIG. 5

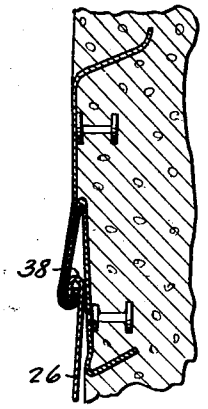


FIG. 8

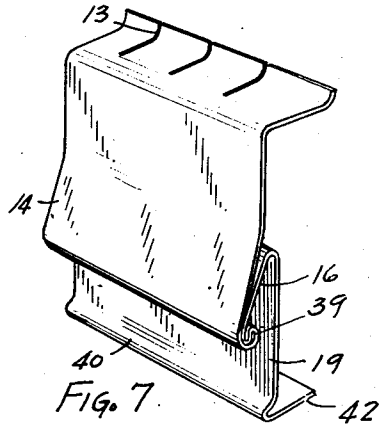


FIG. 7

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BUILDING REGLET

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6 Claims. (Cl. 108—26)

This invention relates to flashing reglets which are employed in such building constructions as spandrels, parapets, beams, columns, etc., for water exclusion purposes.

Structural elements of the character above noted with which flashing reglets are employed ordinarily include a steel girder about which is molded concrete. The complete spandrel or other element made up of the steel girder and the concrete is in turn faced by the finishing brick or something comparable thereto. Flashing reglets shed water between the finishing brick and the concrete in such constructions, and ordinarily find anchorage in the latter.

At the present time it is the conventional practice in this art to employ, in combination with the flashing reglet itself, either one or two additional parts in the nature of a counterflashing, and which cooperate with the flashing reglet to complete the sheet metal assembly that prevents water from entering between the concrete beam, or parapet wall, and remaining structure, as the case may be. In order to obtain the required water exclusion effects it is necessary that there be an interfit or interlock between the flashing reglet and the counterflashing, and the reglets have been designed to provide this effect.

In accordance with this need certain of the known reglets have included a protruding channel construction defined by the sheet metal of the reglet, and which channel construction extends laterally into the concrete so that when the molding of the latter is finished, and the forms removed, there is, supposedly present, a laterally extending channel or groove into which is interfitted the counterflashing.

In assemblying a flashing reglet with a spandrel or similar constructional element it has been the practice to affix the reglet to the inner face of the wooden form which defines the outer face of the element. The concrete is then poured into the form about the girder, and in order to insure of homogeneity in the concrete, agitating and tamping operations are carried out by workers with tools such as long poles which are inserted into the concrete with considerable force and pressure. This tamping of the concrete is looked upon in the constructional field as just about an absolute essential to insure of even distribution of the aggregates throughout the concrete, and a homogeneous body structure in the concrete.

However, with the channel construction of the reglets projecting into the concrete it is evident that the tamping presents a serious liability to cause crushing or collapsing of the channel structure. If the latter damage takes place it is, of course, impossible to interfit the counterflashing into the channel, and the building contractor is put to serious difficulties in obtaining the required sheet metal assembly of the reglet and counterflashing.

With the foregoing conditions in mind this invention has in view, as its foremost objective, the provision of a novel type of flashing reglet which is characterized as including a groove or channel formation which is not subject to being collapsed or crushed by concrete, tamping and agitating operations.

More in detail this invention has in view the provision of a reglet which includes a downwardly opening groove or channel that is almost parallel to the front face of the reglet, and which is defined by folds of metal of the reglet which assume a substantially compact position with respect to the face of the reglet. This channel, which is intended to receive the upper edge of the counterflashing, deviates from the vertical only slightly. This there is no appreciable projection into the concrete, and the folded metal structure which defines the channels is not subject to being collapsed by concrete tamping and agitating operations.

Yet another detailed object of the invention is the provision of novel means for providing an interlock between the upper edge of the counterflashing and the reglet in the channel of the latter.

With the novel channel construction of this invention the required interlock may be obtained in such a simple manner as by merely applying a punch to the outer face of the reglet over the channel when the counterflashing is positioned therein. The resulting deformation of the metal will establish the desired interlock. However, this interlock may also be obtained in another manner which requires a slightly more complicated reglet construction. The counterflashing itself carries, on its upper edge, a hooking flange, and the channel construction of the reglet is formed with a complemental flange over which the top edge flange of the counterflashing is adapted to fit. Thus when the counterflashing is inserted into the channel a required distance the flange at the top thereof fits over the flange construction in the channel of the reglet to establish the interlock.

The interlocking flanges of the counterflashing and reglet may be disposed either inwardly or outwardly, that is they may either extend to-

wards the concrete or away therefrom as occasion demands.

Flashing reglets of the type with which this invention is concerned ordinarily carry at the upper edge an anchoring or bonding flange which projects into and is embedded in the concrete to establish the bond therewith. Obviously this flange is exposed to the damaging effects of the agitating and tamping operations above described, and as a result there have been many cases in which the deformation of the flange has been so great as to materially interfere with proper positioning of the reglet.

With this condition in mind, the invention has in view, as a further object, the provision of a flash reglet of the character above noted which includes an anchoring or bonding flange that is at least partially sectional in character. This sectional characteristic may be obtained by slitting the flange inwardly from its free edge and at desired intervals, and presents the advantage of permitting any one section of the flange to be deformed, as by the tamping tools, without affecting adjacent or other sections of the flange.

Another important object of the invention is the provision of a flashing reglet which carries at the top an anchoring or binding flange which overlies the channel construction. With this arrangement the anchoring flange serves to protect the channel construction from tools which might be employed to agitate and tamp the concrete.

Still another object of the invention is the provision of a flashing reglet which is characterized as including upper and lower reglet faces, with the lower edge of the lower reglet face deformed to provide an outwardly extending sealing flange. When the reglet is attached to the form prior to pouring of the concrete, the edge of this flange engages the form to act as a seal for preventing concrete from getting in between the reglet and the form, and thence into the channel. When the form is removed this flange engages the inner face of the counterflashing which is assembled with the reglet.

Still another object of the present invention is to provide a flashing reglet of the character above noted, which is provided with a lower anchoring flange.

More in detail this invention has in view an arrangement in which the lower edge of the lower reglet facing is turned inwardly to provide a flange that is bonded in the concrete much in the manner of the upper anchoring flange. In a preferred embodiment of the invention the anchoring flange will be carried at the lower edge of the outturned sealing flange.

Various other more detailed objects and advantages of the invention will in part become apparent, and in part be hereinafter stated, as the description of the invention proceeds.

The invention, therefore, comprises a novel flashing reglet including a channel that is inclined only slightly with respect to the face of the reglet, and which opens thereinto. The channel projects only a slight and hardly appreciable distance inwardly from the rear of the reglet face. Appropriate means are provided for establishing an interlock with the counterflashing that may be inserted in the channel. The reglet also carries an anchoring or bonding flange that is adapted to project into and become embedded in the concrete of the structural part to which the reglet is applied. This flange is rendered sectional in character by slits extending inwardly from the free edge thereof and at appropriate intervals. This sectional anchoring flange is preferably carried at the top of the reglet, that is on the upper edge of the upper reglet facing. The reglet also includes a lower reglet facing the lower edge of which is deformed to provide, in the first instance, an outwardly extending sealing flange adapted to engage the form to prevent the entrance of concrete between said flange and form, and the lower edge of this sealing flange terminates in an inwardly extending anchoring or bonding flange that is embedded in the concrete.

For a full and more complete understanding of the invention reference may be had to the following description and accompanying drawings, wherein—

Figure 1 is a perspective view of a flashing reglet made in accordance with the precepts of this invention,

Figure 2 is a sectional view through a portion of a form showing the manner in which the reglet is carried thereby and embedded in the concrete and structural element such as a spandrel,

Figure 3 is a sectional view similar to Figure 2, showing the reglet as carried by the concrete and with the form removed, while

Figure 4 is another similar sectional view of the counterflashing assembled with the reglet and the relation of the facing brick with respect to the reglet, counterflashing and spandrel,

Figure 5 is a perspective view of one modification of the reglet,

Figure 6 is a detailed sectional view showing the manner in which a counterflashing is assembled with the reglet of Figure 5,

Figure 7 is a perspective view of still another modification, and

Figure 8 is a sectional view similar to Figure 6, showing the manner in which the counterflashing is assembled with the reglet of Figure 7.

In describing the construction and mode of usage of the reglets which are illustrated in the drawings, a structural element such as a spandrel will be referred to. It is to be understood, however, that the reglets are susceptible of application to other structural parts such as columns, beams, parapets and the like, all of which are characterized as including a surface from which water is to be excluded by the assembly of the reglet and counterflashing.

Referring for the moment to Figure 1, an improved flashing reglet of this invention is referred to in its entirety by the reference character **10**, and comprises an inwardly extending anchoring flange **11** terminating in an up-curved lip **12**. A plurality of cuts **13** may be formed in the latter and extend into the flange **11** to provide a sectional construction for a purpose to be hereinafter pointed out.

Depending downwardly from the flange **11** is a top reglet face **14** which terminates in a sealing fold or bend **15**. It might be well to note at this point that the reglet may be made from any appropriate sheet metal, although the invention has in mind particularly the use of copper because of the known properties of this material to resist corrosion or other destructive tendencies of water and other factors. Moreover, each of the reglets **10** will be made from a single piece of sheet metal that is folded into the construction illustrated.

A channel wall **16** extends upwardly from the bend **15** and terminates in a channel top defined by a bend **17**. A second or inner channel wall **18** extends downwardly from the bend **17**, and is

continued past the bend 15 to provide a lower reglet facing 19. The resulting channel construction is beneath and within the protection of the anchoring flange 11. The wall 16, bend 17, and wall 18 constitute a re-entrant fold that is integrally joined to the reglet facing 14 by the bend 15.

The manner in which the reglet of Figure 1 is incorporated into the concrete of the spandrel may be described by referring to Figures 2, 3 and 4. As shown in Figure 2, the spandrel includes concrete which is designated 20. This concrete 20 is poured into a form which includes a bottom 21 and a front form member 22. These forms 21 and 22 ordinarily are of wood, as they must be readily disassembled from about the finished concrete.

The reglet 10 may be secured to the inner face of the front form member 22 in any preferred manner, although the invention has in mind the use of such fastening elements as the double headed nail shown at 23. These double headed nails 23 will be placed above and below the channel construction defined by the walls 16 and 18. It is obvious that the reglet is secured to the inner face of the form member 22 prior to pouring of the concrete. The latter is poured and tamped in the usual manner, and it is evident that the tamping operations cannot have any serious damaging effects on the channel construction 16 and 17 because the layers of metal defining the same are in close proximity to the face 14, and are protected by flange 11, which would deflect blows away from the channel.

It is because of these concrete tamping operations that the cuts 13 are provided in the flange 11 and lip 12. If there is any tendency to deform certain sections of the flange the same will have little effect on the adjacent portions due to the presence of the cuts.

After the concrete has set the form members are knocked away, and the front form will readily come off the double headed nails as the double headed structure of the latter insures of a firm anchorage thereof in the concrete, and there will be no tendency to deform the reglet as an incident to removal of the form members 22. After the latter have been removed the protruding ends of the nails are nipped off, and the reglet is left embedded in the concrete, as shown in Figure 3. In this position the walls 16 and 18 define a channel referred to as 25, which opens downwardly and between the reglet faces 14 and 19.

The upper edge of a counterflashing 26 is now inserted into the channel 25. This counterflashing 26 overlies the lower reglet face 19, and after the required insertion has taken place, with sealing fold 15 pressed into contact with the flashing, an appropriate metal deforming tool such as a punch may be applied to the reglet face 14 over the channel wall 16 to deform the metal of the latter and the counterflashing 26, so as to establish an interlock represented at 27.

The usual brick facing is represented at 28 and a sheet metal member 29 in the form of an L completes the assembly of the reglet and counterflashing. One face of the elbow 29 extends through the brick facing, as shown at 30, while the other face extends up back of the counterflashing 26 between this member and the concrete 20 of the spandrel, as shown at 31. This method of employing a substantially straight counterflashing 26 and a separate L shaped member 29 is advantageous in that it permits of relative movements of these parts without any impairment of the water exclusion effects. Thus there is nothing to interfere with the fit of the upper edge of the counterflashing 26 in the channel 25.

In some instances a more positive type of interlock between the counterflashing and the reglet is desired. To obtain this result the reglet may assume the form shown in Figures 5 and 6. In this modification the construction of the reglet is substantially the same as that of the reglet 10 shown in Figure 1, with the exception of certain changes in the inner channel wall.

In the form shown in Figure 1 the inner channel wall 18 is continued out in an uninterrupted manner into the lower reglet facing 19. However, in the form of the invention shown in Figure 5 the reglet which is therein depicted, and which is referred to in its entirety by the reference character 32, includes an inner channel wall 33 that terminates at the bottom in a bend 34 from which upstands a wall 35 that terminates in a bend 36 that defines the upper edge of the lower reglet facing 19.

It is evident that the wall structure comprising the upper part of the reglet facing 19, bend 36 and wall 35 define a flange which is spaced both from the front channel wall 16 and the rear channel wall 33. When this form of reglet is employed the counterflashing 26 is formed on its upper edge with a U-shaped flange 37 that fits over the bend 36, as brought out in Figure 6. Prior to insertion of the counterflashing 26 the front channel wall 16 and reglet face 14 may be spread outwardly from the rear channel wall 33, this to facilitate the insertion.

However, after the flange 37 has been snapped over the bend 36, as shown in Figure 6, an appropriate tool such as a hammer may be availed of to substantially close the channel by returning the reglet facing 14 and outer channel wall 16 to their normal position in contact with the counterflashing face.

In the form of the invention shown in Figures 5 and 6 the flange 37 on the counterflashing extends inwardly towards the spandrel. However, a reverse arrangement may be employed in which this flange extends outwardly, such a construction being brought out in Figures 7 and 8. In this form of the invention the counterflashing 26 carries an outwardly U-shaped flange 38, and this is snapped over an upwardly and inwardly turned flange 39 carried at the lower edge of the reglet face 14 and outer channel wall 16. In this form of the invention the uninterrupted, continuous structure of the inner channel wall 18 and lower reglet facing 19 of Figure 1 is followed.

In each of the three forms of the invention illustrated in the drawings the flashing reglet includes a lower reglet facing 19. The lower edge of this lower reglet facing preferably takes the form of an outwardly extending sealing flange designated 40. This flange 40 is intended to engage the wooden form 22 so as to prevent concrete entering between said wooden form 22 and the reglet. If this sealing flange 40 functions properly the concrete will be properly excluded from between these parts, and there will be little danger of the concrete entering the channel 25. However, if desired further assurance against concrete entering into the channel 25 may be had by caulking the entrance to this channel as represented at 41 in Figure 2. This caulking 41 serves to close the mouth of the channel 25. Obviously means other than caulking might be employed to seal the mouth of the channel, as for in-

stance a paper strip which may be secured therealong by an adhesive.

The lower edge of the lower reglet facing 19 may terminate at the lower edge of this sealing flange 40. However, the invention has further in mind the provision of a lower anchoring or binding flange that is somewhat comparable to the top anchoring or binding flange 11. Such a lower anchoring flange is shown at 42, and this flange 42 is embedded in the concrete 20 to provide a firm anchorage at the bottom of the reglet.

While preferred specific embodiments of the invention are hereinbefore set forth it is to be clearly understood that the invention is not to be limited to the exact constructions illustrated and described, because various modifications of these details may be provided in putting the invention into practice within the purview of the appended claims.

I claim:

1. A flashing reglet of the character described comprising a form sustaining sheet material structure including an upper reglet facing, a re-entrant fold integrally joined to the lower edge of said upper reglet facing and having a portion extending below said upper reglet facing and providing a lower reglet facing, said re-entrant fold being substantially in engagement with the rear face of said upper reglet facing and providing a channel opening at the lower edge of said upper reglet facing, and spaced anchoring flanges extending rearwardly from said reglet facings and adapted to be embedded in a concrete wall.

2. A flashing reglet of the character described comprising a form sustaining sheet metal structure including an upper reglet facing, a re-entrant fold integrally joined to the lower edge of said upper reglet facing and having a portion extending below said upper reglet facing providing a lower reglet facing, said re-entrant fold providing a channel opening at the lower edge of said upper reglet facing, a rearwardly extending anchoring flange integrally joined to the upper edge of said upper reglet facing, and a second rearwardly extending anchoring flange integrally joined to the lower edge of said lower reglet facing.

3. A flashing reglet of the character described comprising a sheet metal structure including an upper reglet facing, a re-entrant fold integrally joined to the lower edge of said upper reglet facing and having a portion extending below said upper reglet facing providing a lower reglet facing, said re-entrant fold providing a channel opening beneath said upper reglet facing, a sealing bead projecting forwardly from the lower reglet facing, and means for anchoring said reglet in a concrete wall.

4. A flashing reglet of the character described comprising a sheet metal structure including a reglet facing, a re-entrant fold integrally joined to the lower edge of said reglet facing and substantially in engagement with the rear face of said reglet facing, said re-entrant fold providing a channel opening beneath said reglet facing, and a rearwardly extending anchoring flange integrally joined to the upper edge of said reglet facing and divided into individual sections.

5. A flashing reglet of the character described comprising a sheet metal structure including an upper reglet facing, means for anchoring said upper reglet facing in a concrete wall, a re-entrant fold integrally joined to the lower edge of said upper reglet facing and having a portion extending below said upper reglet facing providing a lower reglet facing, said re-entrant fold being substantially in engagement with the rear face of said upper reglet facing and providing a channel opening between said reglet facings, a rearwardly extending anchoring flange carried at the lower edge of said lower reglet facing, and a forwardingly projecting sealing bead at the joinder of said anchoring flange and lower reglet facing.

6. A flashing reglet of the character described comprising a sheet metal structure including an upper reglet facing, a re-entrant fold integrally joined to the lower edge of said upper reglet facing and having a portion extending below said upper reglet facing providing a lower reglet facing, said re-entrant fold providing a channel opening beneath said upper reglet facing, and an anchoring flange integrally joined to the upper edge of said upper reglet facing above said re-entrant fold and terminating to provide nailing space between said re-entrant fold and said anchoring flange in said upper reglet facing.

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