May 2, 1933. H. E. VOEGELI 1,906,674

THROUGH WALL FLASHING

Filed May 3, 1932

Fig. 1

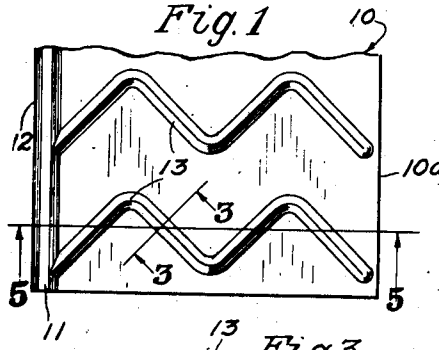


Fig. 2

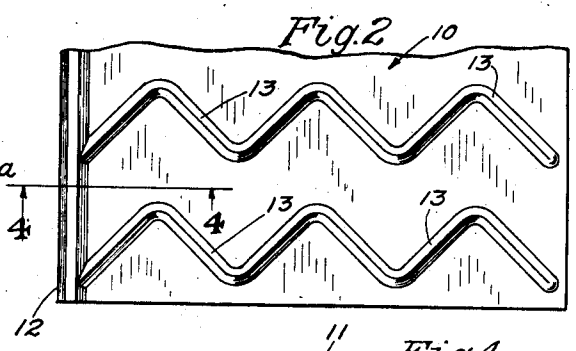


Fig. 3



Fig. 4

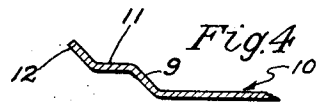


Fig. 5

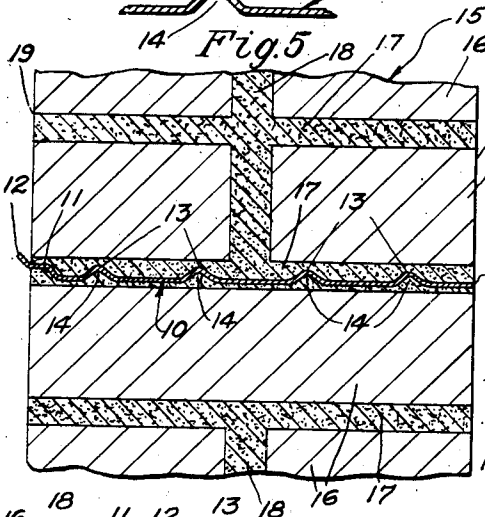


Fig. 6

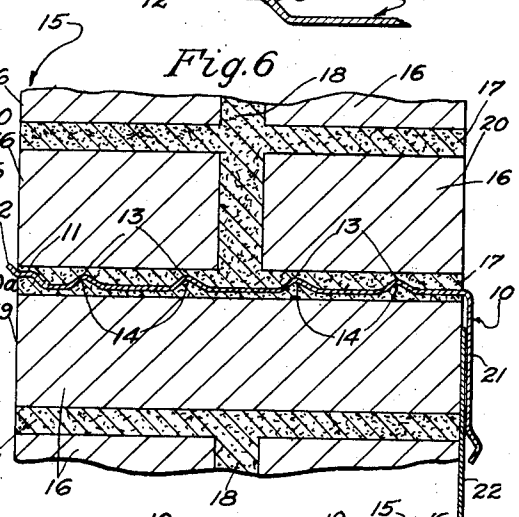


Fig. 7

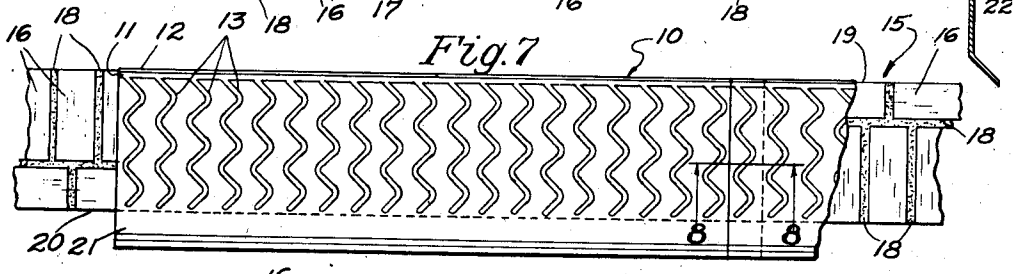
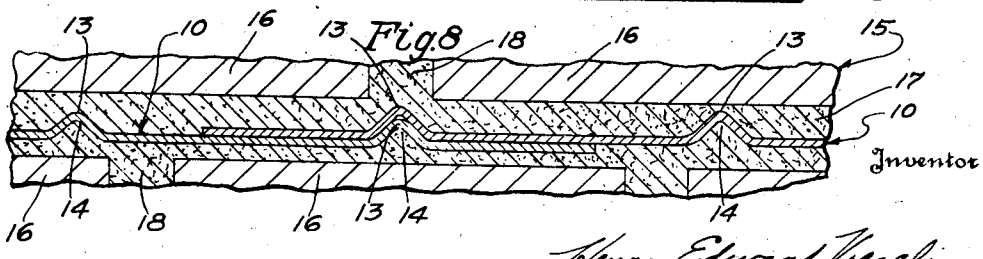


Fig. 8



Inventor

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UNITED STATES PATENT OFFICE

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THROUGH WALL FLASHING

Application filed May 3, 1932. Serial No. 608,892.

This invention relates to new and useful improvements in wall flashings and has particular relation to through wall flashings such as are used in brick or other masonry walls to prevent water soaking through and running down the inside of the wall.

An object of the invention is to provide a through wall flashing which may be manufactured at low cost and which when embedded in the mortar between adjacent layers of the bricks of a wall or under the coping or the like will hold the bricks, coping or the like against lateral movement in any direction.

A further object is to provide a flashing as stated and which is so constructed that succeeding strips or sections of the flashing along the length of a wall may be easily interlocked.

Other objects and advantages will become apparent from a consideration of the following detailed description taken in connection with the accompanying drawing wherein the invention is shown. It is to be understood that the invention is not limited to the details disclosed but includes all such variations and modifications as fall within the spirit of the invention and the scope of the appended claims.

In the drawing:

Fig. 1 is a plan view showing a portion of a strip or section of flashing in accordance with the invention;

Fig. 2 is a similar view and showing a flashing for a thicker wall;

Fig. 3 is an enlarged detail sectional view along the line 3—3 of Fig. 1;

Fig. 4 is an enlarged detail sectional view along the line 4—4 of Fig. 2;

Fig. 5 is a sectional view through a portion of a wall and showing the improved flashing in place therein, the flashing being sectioned as along the line 5—5 of Fig. 1;

Fig. 6 is a view similar to Fig. 5 but showing a slightly different flashing;

Fig. 7 is a plan view showing the flashing in relation to a wall and showing the interlocking joint between adjacent strips or sections of the flashing; and

Fig. 8 is a detail sectional view on an enlarged scale, the view being taken along the line 8—8 of Fig. 7.

The improved flashing of the present invention is made up in sections or lengths and of sheet metal, preferably copper. In the drawing the flashing of Fig. 1 is of a width for use in connection with 8 inch walls, while the flashing of Fig. 2 is of a somewhat greater width and is adapted for use in 12 inch walls. However, the invention is the same as applied to either flashing, the only difference in the flashings residing in their width.

The flashing comprises a body or strip 10 which may be of a convenient length and the desired width and adjacent one longitudinal edge the material of the body is offset upwardly from the plane of the body as indicated at 9 to form a ledge 11 and the extreme edge portion of said longitudinal edge of the body is then inclined upwardly providing a flange 12 forming a water stop. Extending in a direction generally transversely of the body and running from the ledge 11 substantially to the opposite edge of the body are a series of hollow zig-zag ribs. 13.

Ribs 13 are generally wedge or inverted V-shape in transverse cross section as clearly shown in Figs. 3, 5, 6, and 8 and these ribs may be pressed or rolled into the body 10 and are open at their undersides providing zig-zag grooves at 14. A comparison of Figs. 1 and 2 will show that the ribs 13 of the latter figure are of a length greater than the length of the corresponding ribs of Fig. 1, this increase in length of the ribs in Fig. 2 being equal to the increase in width of the body of that figure as compared with the body of the flashing of Fig. 1.

Reference character 15 generally indicates a portion of a brick wall made up of bricks 16 and horizontal and vertical layers 17 and 18 respectively of mortar. Obviously, the mortar binds the bricks together. In the drawing, 19 indicates the inner surface of the wall, while 20 indicates the outer surface thereof, and referring now particularly to Fig. 5 it will be noted that the im-

proved flashing 10 is embedded in a horizontal layer 17 of mortar with its outer edge 10a substantially flush with the outer surface 20 of the wall and with its flange 12 disposed inwardly of the inner surface of the wall. Also, it will be noted that the mortar fills the zig-zag grooves 14 and completely encloses the zig-zag ribs 13 whereby the body 10 or flashing 10 is substantially completely embedded in the mortar.

Attention is also directed to the fact that the ledge 11 is as high or slightly higher in the wall than the tops of the ribs 13, and that the flange 12 extends above the ledge. Should water seep down through the mortar connecting the bricks or should water attempt to run down the inner surface 19 of the wall it will be caught by the flashing 10 or by the flange 12 of said flashing and directed or diverted to the outer surface of the wall. There are no obstructions of any kind between the ribs 13, and the spaces between them form channels, and it will therefore be apparent that water caught by the flange 12 or intercepted by the body of the flashing will be carried outwardly between the ribs.

Moreover, the sections of the wall above and below the flashing will be held against lateral movement in all directions since in order that one portion of the wall move laterally with respect to the other it will be necessary to shear off the mortar or cement entering the grooves 14 as well as that between the ribs 13 of the flashing. Should one portion of the wall attempt to move laterally with respect to another portion thereof in the direction of the length of the wall obviously the ribs 13 and the mortar in the grooves 14 will prevent such movement. Should the tendency for relative movement between sections of the wall be in either direction transversely of the wall it is obvious that the mortar received in the bends in the ribs together with the connection between the main body of the mortar and the mortar in the grooves 14 will prevent such movement.

Referring now particularly to Figs. 6 and 7 the arrangement of the flashing in the wall is the same as that already described and the reference characters used above apply to each figure. However, the outer edge of the flashing 10 of Figs. 6 and 7 extends beyond the outer surface 20 of the wall and after the mortar has set, this extending edge portion 21 is bent downwardly as shown in Fig. 6 and may form a flashing over-lying the upper edge of an upstanding portion 22 of a roof flashing. In place of the relatively wide portion 21 the body or flashing 10 may extend but slightly beyond the outer surface of the wall so that when it is bent downwardly after the mortar sets it forms a relatively narrow drip edge.

In addition to forming a tie to prevent relatively lateral movement between the sections of the wall the ribs and grooves 13 and 14 also provide means whereby succeeding sections of the flashing used along the length of a wall may be interlocked. The manner of interlocking the adjacent ends of succeeding sections is illustrated in Figs. 7 and 8 and there it will be noted that the end of one section is disposed over the end portion of the next adjacent section and that the end groove in the lower side of the upper section receives the end rib of the lower section. This connection locks the sections together since it secures them against relative lateral movement in any direction owing to the fact that the grooves and ribs zig-zag. As the over-lapping end portions of the sections are embedded in the mortar or cement and as the weight of the upper portion of the wall will be on the flashing it will be apparent that the over-lapping end portions of succeeding sections of the flashing will be held against relative vertical movement.

From the foregoing description it will be apparent that I have provided a through wall flashing which may be manufactured at low cost since the grooves and ribs may be easily pressed or rolled into the sheet stock. Further, it will be apparent that in use my improved flashing will effectively tie together the upper and lower sections of a wall to prevent relative lateral movement between such sections. Also, succeeding sections of the flashing used along the length of a wall may be easily interlocked and without the use of solder or the like since it is but necessary to dispose the end portion of one section over or under the end portion of the next adjacent section to have the end groove of one section receive the end zig-zag rib of the other section.

Having thus set forth the nature of my invention, what I claim is:

1. A through wall flashing comprising a body formed of a length of sheet metal, said body having an upturned edge forming a water stop, and the material of said body being offset laterally from a face thereof to provide a series of zig-zag ribs extending transversely across said body from said upturned edge and similarly shaped grooves in the opposite face, said ribs being spaced from each other at their opposite ends from the water stop to permit the water to drain out.

2. A through wall flashing comprising a body formed of a length of sheet metal, said body having an upturned edge forming a water stop, the material of said body being offset from one face thereof to provide a series of hollow zig-zag ribs at the upper side of said body and extending transversely across the same from said upturned edge, said ribs being open at the under surface of

said body to form corresponding zig-zag grooves, and said ribs being spaced from each other at their opposite ends from the water stop to permit the water to drain out.

3. A section of through wall flashing comprising a body formed of a length of sheet metal having an upturned portion adjacent one edge to form a water stop, the material of said body being offset laterally to provide spaced hollow zig-zag ribs extending transversely from one side thereof, said ribs open at the other side of the body to provide corresponding zig-zag grooves, and said ribs wedge shaped in transverse section whereby the end groove of one section of flashing may receive the end rib of another section thereof to lock the sections together.

4. A through wall flashing comprising a strip of sheet metal having an upturned portion adjacent one edge to form a water stop and having a series of spaced ribs on one surface thereof extending transversely of the strip, and each comprising a portion of less length than the width of the strip and inclined to the side edges of the strip, the material of the strip being offset laterally from one face of the strip to provide said ribs and also provide corresponding grooves in the opposite face thereof.

5. A through wall flashing comprising a strip of sheet metal having an upturned portion adjacent one edge to form a water stop and having a series of spaced ribs including ribs comprising portions of less width than the strip and inclined to the side edges of the strip, and ribs comprising portions of less width than the strip and inclined to the edges of the strip in the opposite direction from the first mentioned portions, the material of the strip being offset laterally from one face thereof to provide said ribs and to also provide corresponding grooves in the opposite face thereof.

6. A through wall flashing comprising a strip of sheet metal having an upturned portion adjacent one edge forming a water stop and having a plurality of spaced parallel zig-zag ribs extending transversely of the strip on one face thereof, the material of the strip being offset laterally from one face to provide said ribs and to also provide corresponding grooves in the opposite face thereof.

7. A through wall flashing comprising a strip of sheet metal having an upturned portion adjacent one edge to form a water stop and also having a series of spaced ribs on one surface thereof extending transversely of the strip and each comprising a portion of less length than the width of the strip and inclined to the side edges of the strip, the material of the strip being offset laterally from one face of the strip to provide said ribs and also provide corresponding grooves in the opposite face, and the said ribs being tapered in cross section so that the grooves adjacent the ends of the strip may receive the ribs adjacent the ends of other sections to lock the sections together.

8. A through wall flashing comprising a strip of sheet metal having an upturned portion adjacent one edge to form a water stop and also having a series of spaced ribs including ribs comprising portions of less width than the strip extending transversely of the strip and inclined to the side edges of the strip, and ribs comprising portions of less width than the strip and inclined to the edges of the strip in the opposite direction from the first mentioned portions, the material of the strip being offset laterally from one face thereof to provide said ribs and to also provide corresponding grooves in the opposite face thereof, and the said ribs being tapered in cross section so that the grooves adjacent the ends of the strip may receive the corresponding ribs adjacent the ends of other sections to lock the sections together.

9. A through wall flashing comprising a body formed of a length of sheet metal having an upturned portion adjacent one edge to form a water stop, said body having spaced hollow zig-zag ribs on one side extending generally transversely thereof, and said ribs being open at the opposite side of the body and forming corresponding zig-zag grooves.

In testimony whereof I affix my signature.

HENRY E. VOEGELI.