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FLASHING

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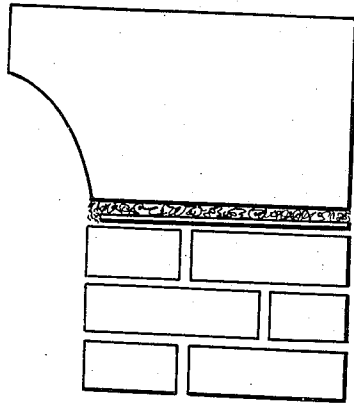


Fig. 1

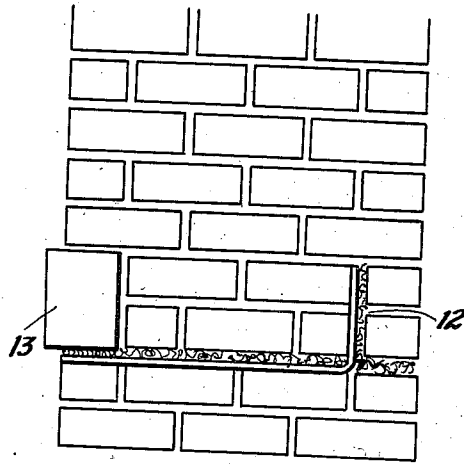


Fig. 2



Fig. 3

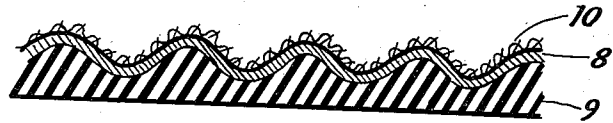


Fig. 4



Fig. 5

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# UNITED STATES PATENT OFFICE

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## FLASHING

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10 Claims. (Cl. 72-127)

The present invention relates to building construction and more particularly to flashings used in building construction and in particular to stone, masonry and brick construction where mortar is used as the binding or holding element between the brick, stone or masonry units. In all types of masonry buildings, flashing sheets are used in a great number of places as for instance over arches and window headers and under sills, over and under belt courses, under copings and between sections of the walls themselves. The primary purpose of such flashings is to prevent water seepage and to direct the drain of the water in the desired direction as well as to form a moisture proof seal for various parts of the wall and interior of the buildings. The flashing must serve this purpose without weakening the wall structure and without making any objectionable appearance in the uniformity of the masonry and at the same time be sufficiently cheap and easily handled. The flashing of the present invention accomplishes these purposes as will readily appear from the description below by providing a thin, durable flashing sheet which can readily be handled and which makes a strong thin joint and can be produced as cheaply as any of the other type flashings on the market.

At the present time the proper use of flashings call for mortar adhering surfaces on both faces of the flashing and, flashings to allow the use of mortar in both surfaces have coarse sanded surfaces or open mesh cloth surfaces to which the mortar is supposed to adhere. This type of flashing construction is much more expensive than that of the present invention and in addition is much more expensive to work and use and make a bulkier joint because of the fact that two layers of mortar must be used.

In the present invention, preferably a thin sheet of copper which is pliable and easily bent has applied to one of its faces a compound which thereby establishes this face as the bottom side of the flashing. Sheets of other material may be used providing they are sufficiently durable and yielding. The top face of the flashing may also have this same compound but I prefer to use a harder compound and form a dry hard surface on this side with an open mesh cloth which may be cut on the bias if desired to allow full yielding at corners or dry hard sand adhered to the compound to provide a completely dry surface which eventually will adhere to the mortar used in the masonry work at these places. By means of this construction the moisture is allowed to drain

out of the masonry at the top and is prevented from seeping through to the wall below. The mortar used on the top of the flashing together with the flashing surface forms a rigid bond while the compound preparation at the bottom without mortar forms an excellent water proof bond with the bricks or dry masonry. If desired the top of the flashing may be corrugated across its upper surface with the corrugations running transversely across the wall so that the drainage will be directed out of the wall.

The invention will be more fully described in connection with the drawing showing an embodiment of the same in which:

Figures 1 and 2 show sections of wall where the present type of flashing may be used, and,

Figures 3, 4 and 5 show cross sections through various flashing sheets forming modifications of the present invention.

Referring to Figure 3, 1 represents a copper sheet which may be .005 inch in thickness or approximately of that magnitude. The lower surface of this sheet is covered with a compound comprising a mastic asphalt which may be mixed with filler material of asbestos, slate, dust or other impervious materials. The compound is made by first melting the asphalt which may be a high melting point asphalt, at least of such a high melting point that the compound will not run or flow in the warmest weather, or crack in the coldest of weather while working it or otherwise to a liquid state or semi liquid state and then stirring into the melted mass the filler material. While the mixture is still hot there is added to it a dissolved rubber compound which may be made of ordinary rubber dissolved with some rubber solvent and at the same time there is added a small amount of wax. In forming this compound I have found that the proportions set forth below by weight make a satisfactory compound that will serve usefully in the present invention.

|                       | Per cent by weight |
|-----------------------|--------------------|
| Asphalt -----         | 30                 |
| Filler material ----- | 60                 |
| Rubber compound ----- | 8                  |
| Hard wax -----        | 2                  |

It will be understood of course that variations in the above composition in proportions and materials may be made without departing from the present invention. However, the compound must be such as to be sufficiently yielding and sticky so that it would become imbedded in the masonry work and adhere permanently to it. After the compound is applied to the copper and the

flashing then used in the masonry work, the compound forces itself into the interstices of the masonry work and fills up the surface pores to make a permanent bond with the set masonry below the flashing. While yielding to fill up the surface pores, this compound is at the same time very adhesive to the masonry and sticks to it firmly by the upper masonry weight applied to it.

I have found that this compound adheres tenaciously to the copper surface and that it forms a permanent bond with the copper.

The qualities are obtained without bringing about any difficulty in the handling of the flashing since the compound on the copper is not sticky except with the application of considerable pressure. Since the compound remains yielding and fills up the masonry surfaces, it will also fill up any holes caused by the piercing of nails or such other sharp surfaces either in the shipping, handling or application, and thereby provides a self healing flashing that will give always a water-tight structure.

On the upper surface of the copper, there is cemented as indicated in Figure 3, an open mesh cloth. This cloth may be of woven textile material or of any other suitable kind of material and it may be cemented to the copper by any cementitious material that is not pervious to moisture or solvent in water, such as may come from the rain or from drainage through the wall. In fact the compound used on the underside of the copper may be used to cement the cloth to it. Preferably the cloth should have a rough surface but it may be water-proof in which case the mesh becomes no longer open. In place of the type of flashing described in Figure 3, the type shown in Figure 5 may be used, in which the compound previously described is placed at the bottom as indicated by 5 and above the copper sheet 6, a surface 7 which is made from the compound previously described, but which has been substantially dried out by applying to the surface, pebbles, sand, or other such materials, which creates a surface that adheres strongly to the mortar. In fact such a compound 7 may also be added to the arrangement shown in Figure 3 in which case it is of course put over the fabric 3. It is also possible to use a second fabric cloth underneath the copper sheet and use the compound in the manner described in connection with Figure 3. In Figure 4 an arrangement similar to that in Figure 3 is shown. In this case the copper sheet 8 is corrugated in a direction so that when the sheet is placed on the wall, the corrugations will run across the wall. On the undersurface of the corrugations the compound 9 corresponding to the compound 2 is formed in a flat filled surface so that it will rest and adhere uniformly on the brick or dry masonry work. Over the copper sheet 8 is placed the cloth 10 which may be adhered to the copper in any of the ways that have been described. It is of course evident that the forms previously described in connection with Figures 3 and 5 and the other modifications mentioned, may also be used in connection with Figure 4. In Figure 1 the flashing 11 is shown beneath the top stone coping of a building construction, while in Figure 2 the flashing is indicated as embedded in the wall below a belt course of masonry 13 which may be a window header. In all of these cases, the flashing is laid on the bare masonry work or bare bricks. After this the mortar is placed

over the flashing and the next masonry element added.

It will be seen from this that the mortar is only used on top of the flashing. By supplying the top of the flashing surface with a hard cloth surface or a pebbled surface, adhesion with the mortar is quickly and permanently made so that the bricks or masonry above the flashing is held permanently and durably to the flashing. The weight of the masonry above the flashing forces the compound beneath it into the pores and openings in the brick surfaces and makes a permanent bond by its adhesion and by this penetration with the masonry below the flashing so that a strong bond is provided between the sections above and below the flashing.

Having now described my invention, I claim:

1. In masonry building construction, a flashing comprising a copper sheet having on top side thereof, a compound comprising a mixture of asphalt 30%, filler material 60%, rubber compound 8%, and hard wax 2%.

2. In combination with a masonry wall construction, a flashing positioned in the mortar joints comprising a metallic sheet having on its bottom face a yielding compound of asphalt and rubber into which the wall masonry is directly imbedded, and means positioned at the top surface of said flashing adhering to the mortar.

3. In combination with a masonry wall construction, a flashing positioned in the mortar joints directly in contact with the masonry wall element on its lower surface, said flashing comprising a sheet of thin durable pliable material having on its bottom face a compound of asphalt and rubber of yielding qualities, whereby intimate contact is provided in the interstices of the masonry wall element for the asphalt and rubber compound to permeate itself, and means on the top surface of the flashing for adhering to said mortar.

4. In combination with a masonry wall construction a flashing positioned within the mortar joint, said flashing lying directly in contact with the masonry element beneath it, said flashing comprising a copper sheet of pliable character having on its bottom face a compound of asphalt and rubber of yielding nature whereby the masonry element beneath the flashing has the compound completely penetrating its surface interstices, an open mesh cloth positioned in face to face relationship with the upper surface of the copper and adhesive means for holding the cloth tightly to the copper.

5. In combination with a masonry wall construction, a flashing positioned within the mortar joints having its lower surface in face to face relationship directly with the masonic element of the wall, said flashing comprising a copper sheet of pliable character, having on both faces thereof a compound of rubber and asphalt of yielding characteristic, whereby said compound will penetrate into the interstices of the surface of the masonry element and an open mesh cloth adhered to the compound only on one side of said flashing surface.

6. In combination with a masonry wall construction a flashing positioned within a mortar joint and having its lower surface in direct contact with the masonry element and the wall, said flashing comprising a copper sheet of pliable character, having on both faces thereof a compound of asphalt and rubber of yielding character whereby said compound will penetrate the surface interstices of the masonry element, and

coarse sand particles adhered to the compound only on one side of said flashing surface.

7. In combination with a masonry wall construction a flashing positioned within the mortar joint and having its lower surface in direct contact with the masonry wall element, said flashing comprising a copper sheet of pliable character having on one face thereof a compound of asphalt and rubber of yielding character whereby said compound becomes embedded in the surface interstices of the masonry element, said copper sheet being corrugated and said compound forming a flat exterior surface and means adhered to the top surface of the copper for forming a bond with the mortar.

8. In combination with a masonry wall construction a flashing positioned within the mortar joint and having its lower surface in direct contact with the masonry wall element, said flashing comprising a copper sheet of pliable character having on one face thereof a compound of asphalt and rubber of yielding character whereby said compound becomes imbedded in the surface interstices of the masonry element, said copper sheet being corrugated and said compound forming a flat exterior surface and an open mesh cloth adhered to the top surface of said copper for binding the same with said mortar.

9. In combination with a masonry wall construction a flashing positioned within the mortar joint and having its lower surface in direct contact with the masonry wall element, said flashing comprising a copper sheet of pliable character having on one face thereof, a compound of asphalt and rubber of yielding character whereby said compound becomes imbedded in the surface interstices of the masonry element, an open mesh cloth adhered to said copper surface by said compound and a second open mesh cloth adhered to the lower surface of said copper by said compound, and a second open mesh cloth adhered to the upper surface of said copper and itself forming the top surface of said flashing to which the mortar is adhered.

10. In combination with a masonry wall construction a flashing positioned within the mortar joint in the masonry wall, said flashing comprising a pliable sheet having on the lower side thereof a compound of asphalt and rubber directly imbedded in the interstices of the masonry wall element in contact with it and means adhering the top surface of said flashing to the mortar joint.

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