A rain water diverter (transition flashing) to prevent water intrusions at eave of sloped roof and vertical wall abutments. The diverter comprises of a vertical wall flange that lies along the wall and a roof flange that lies against the sloped roof, spanning the lower portion of the roof flange as the up-turned U-shaped diverter, at an angle of preferably 95° or more from vertical flange. The unit has J-trim to accommodate sidings and a starter shingle slot that also serves as a stop to aid in installation.
ROOF EAVE RAIN DIREKTOR

BACKGROUND FIELD OF INVENTION

[0001] The present invention is directed to a rainwater diverter, for use at the eave of junctures of a sloped roof and a vertical wall, if wall extends beyond the eave of sloped roof.

[0002] (The terms diverter and direktor may be seen as a transition flashing, however since it was designed as a component that could be considered a vinyl siding accessory, the terms used in the following descriptions should not to be confused as different, the diverter is a component that deems it a transition flashing

BACKGROUND OF THE INVENTION

[0003] Many residential and commercial buildings consist of a plurality of upstanding walls, clad with vinyl sidings. In gaining optimal appearances, vinyl accessories are used at corners, under eaves, around windows, and along sloped roofs. At junctures of sloped roofs abutting a vertical wall, these trim pieces (J-channel) become conduits for rain descending to the water intrusion susceptible area at the eave, if the wall extends beyond the eave of said roof. Hidden from view under shingles and wall siding, is a series of flashing arranged in a manner that each member overlaps the previous one, in similar manner as roof shingles are positioned. In the vernacular of the trade, these are referred to as step flashing, consisting of a wall flange that lies along the vertical wall, and a roof flange that lies against the sloped roof. This arrangement along with the siding overlapping the wall flanges, create an effective water barrier along the roof slope, but leave the eave susceptible to water intrusions.

[0004] On wall claddings such as brick and stone, that employs flashing on the exterior, wall sheathing and structural members are protected, since the water exiting the lowest piece of flashing will be on the outside of the cladding. However, on vinyl and aluminum clad buildings, water has two avenues of seeping onto the vertical wall, under the J-channel on the step flashing descending to the eave, where the lowest piece likely has a portion snipped away to accommodate J-channel attached vertically against the fascia. The other via the J-channel cascading down the slope into said fascia J-channel, where it can drip into the cavity that exists behind all vinyl and aluminum sidings. The problem referred to above, is addressed by several U.S. Patents. U.S. Pat. No. 5,109,641 to Halan (1992) discloses a terminal flashing part to use at the low end of a juncture of sloped roof and a vertical wall. The offset (said to be L-shaped) has a feature subject to collecting debris, and it doesn’t provide a sufficient distance from vertical wall to ensure proper function. U.S. Pat. No. 5,333,419 to Hickner (1994) discloses an anti-debris feature, but discloses no means of diverting J-channel borne water. U.S. Pat. No. 5,675,939 to Hickner (1997) discloses bilaterally symmetrical flanges and an upturned corner, spanning a small portion of both roof and wall flanges, which can be installed on either left-hand or right-hand eaves, but present a non-procedure in J-channel installation, making it susceptible to leakage, and discloses no means of preventing intrusions behind the angled diverter.

OBJECTS OF THE INVENTION

[0005] The objects of this invention are,

[0006] (a) to provide a diverter which will prevent water intrusions at roof eaves abutting a vertical wall, if wall extends beyond the eave of sloped roof.

[0007] (b) to provide a diverter which will divert J-channel and flashing borne water from said abutments.

[0008] (c) to provide a diverter which is small enough that trivializing siding color matching is a likelihood.

[0009] (d) to provide a diverter that is clog resistant, which renders all diverters ineffective.

[0010] (e) to provide a diverter which can be visually inspected, annually-periodically to ensure debris-free operation.

[0011] (f) to provide a diverter which eliminates the consequences of shoddy, improper housewrap installation at said vulnerable eave to wall abutments.

[0012] (g) to provide a diverter which prevents these susceptible areas from trapping moisture, suspect in occurrences of black mold in many geographical areas of America.

[0013] (h) to provide a diverter which eliminates the need of notching the lower flashing of said eaves and other non-procedural J-channel installation practices that gutter water directly into the cavity behind vinyl and aluminum sidings.

BRIEF DESCRIPTION OF DRAWINGS

[0014] FIGS. 1-3, none of which are drawn to any particular scale, provide visual aid in relating to the present invention.

[0015] FIGS. 1 and 2, depict an embodiment to show vertical flange and roof flange with the semi-cylindrical diverter spanning the roof flange. this embodiment represent a right-side flashing for use on the right end of a sloping roof where it abuts a vertical wall. The expression right-side refers to the side of the roof as viewed from the ground.

[0016] FIG. 2 shows a cut-away section to offer a view through the wall flange, to show semi-cylindrical diverter and J-trim in their relation to flanges.

[0017] FIG. 3 show a cross-sectional view of the diverter installed at the eave of a roof, its proper position in relation to components that consist of said abutments.

REFERENCE NUMERALS IN DRAWINGS

[0018] 10 Wall flange (Direktor back)
[0019] 12 roof flange (Direktor leg)
[0020] 14 Semi-cylindrical diverter
[0021] 16 J-trim
[0022] 18 Fastener slots
[0023] 20 Starter shingle space
[0024] 28 Taller structure (beyond)
[0025] 30 Step flashing
[0026] 32 Drip edge (T-edge)
[0027] 34 Roof shingle
[0028] 36 Starter shingle
[0029] 38 Roof sheathing
[0030] 44 Eave fascia.

SUMMARY

[0031] Comprising the present invention, there is provided a water diverting component for installation at eaves of junctures of a sloped roof and a vertical wall, if the wall extends beyond the eave of sloped roof. The diverter part comprises of a U-shaped portion that essentially spans the bottom of the roof flange in its entirety. Water exiting diverter is sufficient distance from vertical wall to prevent seepage behind siding, and onto wall sheathing and structural members.

DESCRIPTION—FIGS. 1-3

[0032] Shown in FIGS. 1 and 2, are representations of embodiments showing a wall flange 10 and a roof flange 12 which meet at an angle of essentially 90°. 14 is the U-shaped diverter comprising a half cylinder which lies along the roof flange 12 and at an angle from the wall flange 10. The space 20 between the J-trim 16 and flange 12 is to accommodate starter shingle and drip edge. J-trim 16 is provided to accept siding panels.

[0033] FIG. 3 illustrates the installed diverter, prior to siding and accessory installation. Roof flange 12 and wall flange 10 are under flashing member 30 Starter shingle 36 and drip edge 32 are in the space 20 as provided.

Operation

[0034] The manner of installing the roof eave rain diverter could depend on the procedure in which the shingles were installed. The following is based on the most widely known proper procedure. After the drip edge 32, is fastened with drip leg snugly against fascia 44, the tarpaper, ice barrier (both not shown) and the starter shingle 36, are nailed to roof sheathing 38, the sequence of flashing 30 then roof shingle 34 is repeated to the peak of the roof.

[0035] To install the diverter, one must remove the 1 or 2 nails from the lower piece of flashing, then by lifting both flashing 30 and roof shingle 34 slightly, the roof and wall flanges of diverter can be slid into position, under the step flashing 30. By clipping J-trim 16 as needed until space 20 seats snugly against the lower end of starter shingle 36 director can then be fastened with two nails in fastener slots 18. this will divert all flashing borne water.

[0036] Under the diverter fit and fasten conventional J-channel as usual. To install J-channel up the slope, installer must notch one and a half inch from bottom (the side that lies against the roof) of determined (proper) end of the J-channel, and cut a quarter round ½”x½” notch into the back (the part that lies against the wall) of J-channel to fit snugly against roof shingles, then fasten to complete preparations for siding.

Ramiifications

[0037] Although the description above contains many specifications, these should not be construed as limiting the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this invention. For example the diverter can have other shapes, such as oval, triangular, square, etc. the J-trim under the diverter can have other designs rounded, square, etc.

1 claim,

1. a transition flashing design for use at a low end of the juncture of a sloping roof in abutment with a vertical wall, said flashing comprising a vertical wall flange for placement on a vertical wall, a sloping roof flange for placement on a sloping roof, and an up-turned semi-circular diverter essentially spanning the low end of roof flange.

said semi-circular diverter which is joined to wall flange in a leak-proof manner.

said wall flange extending below and around said diverter.

said transition flashing which has J-trim attached to diverter and extend up under roof flange.

said transition flashing which provides a space between J-trim and roof flange to accept starter shingle.

2. the flashing in claim 1, wherein the flashing is constructed as a unitary structure.

3. the flashing of claim 1, wherein the flashing is constructed of polymers.

4. the flashing in claim 1, wherein the flashing is constructed of compression-molded polymers.

* * * * *