

COLUMN FOR FEBRUARY 19<sup>th</sup> 2005.

## HEADLINE; HERITAGE ROOFS

Early roof coverings in Upper Canada were a collection of slate, clay, metal and wood shingles for the most part. By the mid 1700's, slate was quarried in Cape Breton and many homes in Quebec from this era have slate roof coverings. The largest drawback to slate roofing was transportation, or should we say the lack of good roads and this meant there were pockets of slate roof homes, generally where there was a quarry to make them. The wood shingle or shakes, two terms that are often confused, were among the first roof coverings used and they dominated this part of home assembly until the turn of the 20<sup>th</sup> century. Both Pine and Cedar shingles were manufactured. Shakes are made by hand splitting them, shingles were machine made on a sawmill or shingle mill and this style of manufacturing is still in use today. I have wood gables on my own home covered in locally made wood shingles. On an average pitch roof, wood shingles from this era lasted up to 30-40 years. The quality of wood has decreased and wood shingles today last about the same as a good asphalt shingle. By the early 1800's the local tinsmith shops were in full operation and raised seam and cross hatched metal roofing was common by the 1850's. Metal shingles have proven their durability over the years. I see examples today where some re-nailing or proper screws and sealant application is all that is needed to maintain their durability. These metal shingles were sometimes very decorative. A few years ago I saw a home where the tinsmith had stamped a maple leaf and the word Canada in them. Knowing the home was built around 1860-1870 I had to wonder if this was not done to celebrate the 1867 Confederation. Asphalt roofing did not arrive from Europe until around 1860 and was very limited in use due to its failure to handle our freeze thaw cycles; it was a very high maintenance installation. By the early 1900's, the invention of asphalt shingles meant a quicker installation was possible. Now a roof that rivalled the life span of an average wood shingled roof was available.

The majority of homes built have a wood supported roof, steel as we know it today was rarely used before the turn of the century and then it was generally used in a commercial application. Timber frame homes had their own structure, often consisting of principal rafters, vertical supports called Perlin Beams joined across these rafters and this was all tied together at the peak to a ridge beam. Many of the stone homes I see have no ridge beam at all. It was common for these homes to have hand shaped wood rafters that were notched or slotted together at the peak and then a wood pin or dowel joining them. I have seen numerous stone homes where there are no metal fasteners or nails used in the roof rafter assembly, a testament to our forefathers abilities! Once sawmills dotted our landscape in the mid to late 1800's, dimensioned lumber became popular. Then ridge boards and standard rafters became the norm and this remained the method of assembly until the late 50's when roof trusses became readily available and are now the method of assembly in a modern home.

The main issue with older roofs is weather exposure and the lack of maintenance. On the exterior there are two areas that I concentrate on. They are the eave edges and the valleys if present. Take a good pair of binoculars and scan the soffit and fascia for decay and evidence of ice dam conditions. Once I am in the attic I turn my attention to where the rafters meet the wall. This could be a timber beam, the top of a balloon frame wall or even brick or stone where the rafters join. I try to probe these with an ice pick to detect any decay. They are difficult to inspect sometimes as patchwork, insulation and older repairs often hide the deterioration that is present. If the eaves from the outside appear to be decayed, it is a safe bet there's work needed here. This can be an expensive repair; the area must be exposed, sometimes new rafters joined or "sistered" to the original rafters and replacement of soffit and fascia materials. While still in the attic, special attention around any valley areas is also worth investigation. Ice dam conditions are more prevalent in these areas and any wood sheathing or rafters that have a white or dark stain should be investigated. A high percentage of older homes have limited, if any soffit ventilation. When many heritage homes were built this was not a consideration. When you open the hatch on a cold winter day, the attic should be very close to the outdoor temperature. I repeatedly see where an attic is a lot warmer than it should be and this causes a build-up of moisture and accompanying decay

problems. I personally like the turbines for an older home as they can be positioned for effective ventilation without covering the roof in square metal vents. Lastly, take a qualified heritage contractor or inspector thru your perspective purchase, this type of experience can often-spot areas that the average homebuyer would not persevere as a problem.

Now the answer to last week's question. What is a Panic-Bolt? The answer was D) a bar used on a door for quick release under pressure. Now this week's question. What is a Bay? Is it A) a type of window B) the distance between two adjacent trusses. C) A bearing portion of a timber frame roof D) an opening in framework for an addition to a home. The answer in next week's column.

Cam Allen L.I.W. RHI is a former builder/contractor and now operates a Private Building Inspection Company. He can be reached at [cam.allen@sympaitco.ca](mailto:cam.allen@sympaitco.ca)