

ASK THE INSPECTOR COLUMN FOR FEBRUARY 24, 2016
HEADLINE: TIMBER FRAME HISTORY

I got this question from a reader, recently, and then had two other readers follow almost simultaneously with a similar inquiry, so I've blended the questions into, "We are looking at buying an older, timber frame construction home. We do not understand the history of this type of house. How long have they been around and are they a good building?"

These readers' questions could take an entire newspaper to answer fully, but I will condense it for this column. First, let's cover one thing, timber frame, post and beam and, even some parts of a log home, have some framework of this style. The terms are somewhat run together. Today, most commonly, we use the term timber frame. A modern home is assembled with a system called platform frame, although we have also had balloon frame, plank and beam frame and braced frame in the evolution of wood structure homes. Permanent timber frame, which is different from the platform frame mentioned above, buildings were actually present at the time of birth of Christ. Some of the early renditions of timber framework were as simple as a sharpened wood post driven into the ground in a row. A taller gable end post was then lashed to a ridge beam, after which smaller logs were lashed to the sides of these posts or a notch was cut into them and the logs, used as a form of rafter, were then lashed to that.

The development of the joint called a mortise and tenon, which also happened around the time of Christ, allowed our ancestors to create buildings that could rest upon the ground with a wood section called a "mud sill." Alternately, they could be positioned on large stones. Rot was the main destroying factor of the "driven stake" type of wood building and, as such, they were only used as animal storage or homes for the poor. The densely forested parts of northern Europe and some of the Scandinavian countries had multiple renditions of a timber frame home. There are records of these homes having their walls filled-in after the frame was built with vertical or horizontal logs or planks. The Swiss were known for this type of assembly in their chalets. Many buildings during the Middle Ages were constructed of stone with a timber frame roof. Unfortunately, the forests were stripped of good timber with little thought for tree management and, by the 1400's, nearly 2/3's of England's forests were gone.

On this side of the Atlantic, the first homes were log cabins, generally with a chimney that rose up through the middle of the home for warmth. The timber frame method that was used to assemble the roof was brought from Europe. In North America, there was a lack of skilled woodworkers and proper tools in the early years and initial timber frame methods were crude compared to Europe. While oak was the wood of choice in the old country and some new world homes were made of that, virgin timber like pine, spruce and fir quickly took over, due to their abundance and easier workability. After log, timber frame was the main home construction method used in Upper Canada into the 1840 to 1850s.

Some areas that had an abundance of stone saw limestone homes built around the turn of the century, but they still had some form of timber framework in the roof assembly. Braced timber framework began to show up around the turn of the century and it was used into the 20th century.

Where are timber frame buildings most common? Take a look at the majority of wooden barns built before the Second World War. This will give you the chance to see the framework exposed and marvel at the skills of the woodworkers. Even today, a “barn raising” using this tried and true method is done in some areas. The Mennonites come to mind. They are famous for their woodworking skills in the assembly of timber frame barns and they still use this method today.

Most of these buildings assembled in Upper Canada were sawn by a method known as “pit sawing,” which was common up to the 1850’s. This is a method where a hole or pit is dug in the ground. One man stood above with another in the pit. The log was rolled over the pit and a long bladed saw with handles on both ends was used by the pair. It was back breaking work. Shortly thereafter, the circular saw was introduced and lumber production shot up dramatically. Dimensioned lumber, as we know it today, became available. This also led to the introduction of balloon framework and spelled the end of timber frame as the assembly method of choice for a home. For nearly 100 years, this method of home construction laid dormant. In the late 60’s, when I entered the home building world, I remember the resurgence of this method of home building and it really became popular in the ski country of the US. By the 70’s, it saw a major growth spurt and the methods used by our forefathers were “re-invented.” Today we have a number of excellent timber frame companies all over North America.

In Eastern Ontario, I am aware of a couple of private schools that teach this method of home building. As well, in the states of Vermont and New York there are a couple of excellent schools that offer multiple week courses. I had the pleasure some years ago to visit a school in New York. The teacher was self-taught, as there are no degree courses in timber framework!

I confess to a love of older homes, both inspecting them and living in them. Our own home, an 1894 church, is balloon frame. I expect this home, which we renovated two and a half years ago (www.alltechgreenchurch.ca) to last another hundred years plus in its new life. Prior to living here, I added a large addition to my platform frame home, which was timber frame. The older methods of wood assembly are a testament of the skill of the early wood workers and carpenters. As such it is certainly nothing to ever shy away from when buying an older home.

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