

FAMOUS ARCHITECTS (known and otherwise)

The earliest evidence of a constructed shelter consists in a circle of rocks found in Olduvai Gorge. This shelter might have been built by human ancestors about two million years ago. I don't imagine anyone would think of this as a house, but it indicates that dome-like shelters might have been the only alternative to living in trees or in caves at that time.

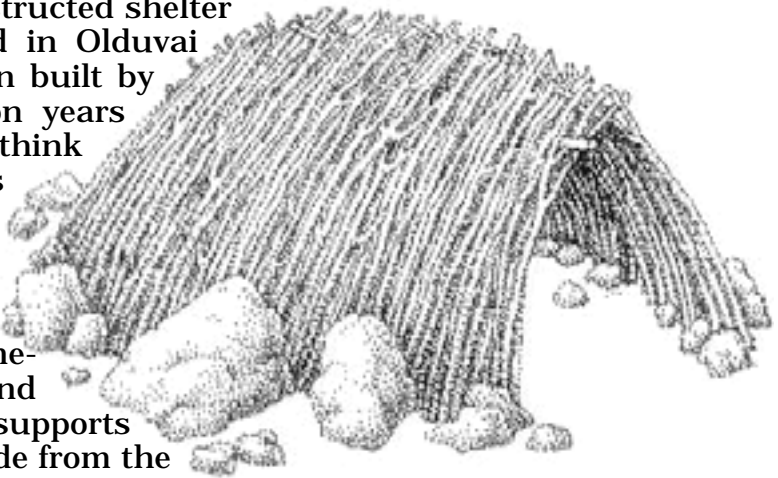
The next clipping is from a photograph of a reconstructed dome-like structure that used the bones and tusks of mammoths as walls and supports for a covering that was probably made from the hides of mammoths. The ruins of structures built around pits have been found in many areas. This was apparently a common method for constructing shelters and some sites have provided evidence of how the people that built them lived, what they wore, and what they were eating.

Similar semi-subterranean shelters were built of driftwood, moss and leaves along the shores of what are now Alaska and Canada by generations of people that crossed over from Siberia on a land bridge that appeared as a result of lowered ocean levels during the last of the great ice ages.

Dome shaped "igloos" are a more recent development that that would have required tools to shape blocks of ice and more knowledge of arches, domes and keystone blocks. By this time all of the large prehistoric animals were gone and modern types had probably become scarcer during winters when seals walruses and the bears that pursue them go from the land onto ice floes that have formed over sea water.

In order to survive, hunters would have been forced to move onto the sea ice and build shelters from the only available material, which would of course, have been ice.

In other parts of the world people would also have been forced to adapt to climactic changes by moving, or by learning how to build better shelters from materials ranging from sticks, to mud bricks, combinations of sticks and mud, sticks and animal skins and sticks and thick fabrics made from water resistant materials like the wool from goats, llamas and sheep.



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What might seem remarkable but probably is not, is that houses made from a variety of diverse materials in a variety of diverse locations had shapes that were so very much alike.

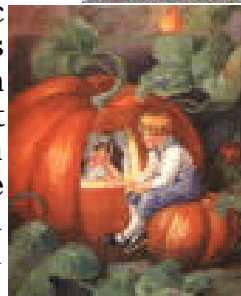
This clipping shows a replica of an ancient Chinese hut that probably used bamboo framing to support what might have been straw obtained as a by product of the rice harvest. Notice the similarity of this straw hut to an igloo, This didn't happen because one was copied from the other, but as a result of intelligent people solving similar problems of enclosing the most space with the least material and providing overhangs to keep snow or rain from blowing in to their shelters.

The next clipping shows what appears to be a contemporary mud hut with a thatched roof that is still used in many places. Mud can't be curved to provide a dome shape as well as ice and straw can, so the walls are vertical and are covered by a thatched roof with an overhang to keep rain water from dripping down onto the mud wall.

The next clipping shows a portable shelter called a "yurt" or "ger" that is still used by nomadic Mongolian herdsman that insure the survival of their animals by frequent moves to areas that have more for them to graze on. It can be assumed that some now use house trailers or motor homes, but the knowledge for constructing, assembling and moving these traditional shelters is kept alive and well. Similar portable shelters were used by the Mongol armies of Genghis Khan.

Much later, Buckminster Fuller either tried to revive the use of yurts made of aluminum, or used a picture of Peter Pumpkin Eater conversing with the wife that he was able to keep very well by confining her to a pumpkin shell. His Dymaxion house was more like Peter's pumpkin in appearance but more like a yurt in that it was designed for portability and easy assembly. One Dymaxion house was produced and years later was rescued and restored for display in the Henry Ford

Museum. Fuller's *Opus Magnus* was the geodesic dome that has had a much greater impact on the design of dome shape houses than his aluminum houses did.



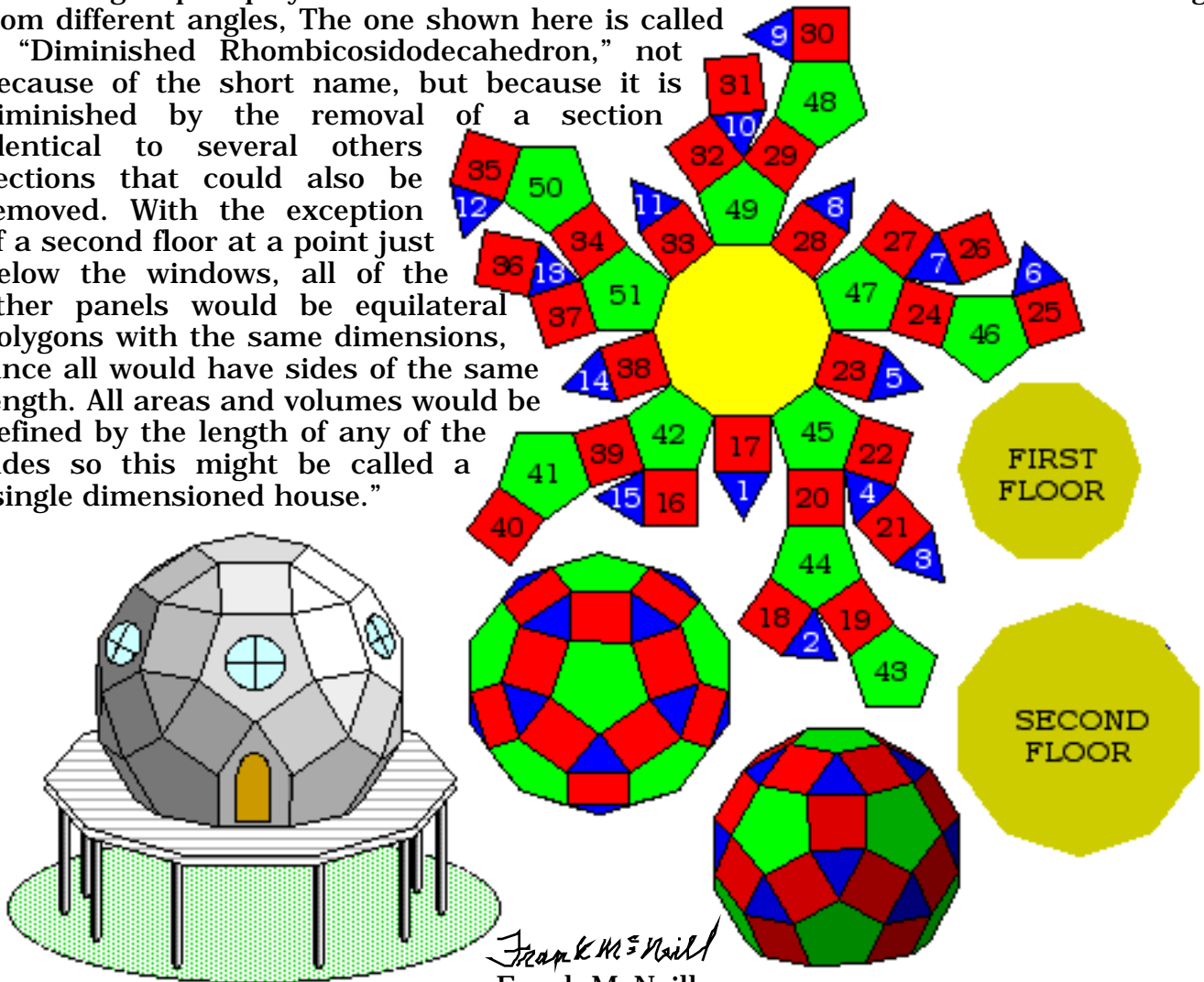
This clipping shows what has evolved from the circle of stones and assemblies of sticks and mud over the last two million years or so. As you can see it is somewhat larger and probably a lot warmer and more comfortable, than any its ancestral dome-shaped shelters were

For the twenty-six percent of the world's workers that earn about the equivalent of a US dollar a day or less, this version is also farther from the types of houses that they might be able to build or buy than from the stone circle and stacked sticks that might be seen by using the "way-back-machine" for a short trip back in time.



The pattern shown next can be developed by using any of several sources for polyhedral shapes. Go to: <http://mathworld.wolfram.com/topics/Polyhedra.html> to review a group of polyhedra called "Johnson Solids" that can be rotated for viewing

The one shown here is called a "Diminished Rhombicosidodecahedron," not because of the short name, but because it is diminished by the removal of a section identical to several others sections that could also be removed. With the exception of a second floor at a point just below the windows, all of the other panels would be equilateral polygons with the same dimensions, since all would have sides of the same length. All areas and volumes would be defined by the length of any of the sides so this might be called a "single dimensioned house."



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