Lloyd Turner's Balloon Form Invention

As a young architect in the 1960's, Lloyd Turner dreamed of curves and concrete in architecture. He pursued an idea to step away from the widespread use of wood framing, and designed an inflated balloon form for thin shell concrete structures. He experimented with spraying a few inches of urethane foam on the inside of his balloon form to make a rigid form. He then sprayed gunite (air emplaced concrete), again from the inside, to stabilize the form.

It worked! The result was an insulated form with very low forming costs. Lloyd had invented a system for multiple dome structures. His original patents, and some with improvements, have been used for free form structures all over the world.

If you look closely through the trees and bushes of Lloyd Turner's northern California property, the domes of his home seem to emerge from the landscape.

The photo above and to the right show how the structure is earth burmed. This allows the building to melt into the surrounding landscape. This feature also keeps the interior climate more stable.
The photo to the right shows the comfortable interior of Lloyd's home. Plenty of light and space are a large part of the interior of Lloyd's home. There are many skylights throughout his house to take full advantage of natural lighting. With his design, the walls begin to curve at a higher point than many other dome designs.

**When is a Dome not a Dome?**

Lloyd refers to his style as soap bubble (the shape is also called a torisphere) architecture. The organic design of bubbles is both strong and efficient. This “soap bubble” shape transfers well to a house in that the walls are much more horizontal than that of a dome. This gives the home more usable floor space, and comfortable high curves for the ceiling.

Lloyd used his “soap bubble” architecture to design his house. The photo below compares a picture of bubbles to the floor plan he designed. The resemblance is amazing.
Build Your Own Lloyd Turner Balloon Form

If you would like to build your own bubble (torisphere) structure, the plans can be found at How to Build a Lloyd Turner Balloon Form.