

The Titanic is built of what?

By Wayne Kusy

I have a strange hobby that is also considered Outsider Folk Art – I build models of ocean liners out of toothpicks. They range from four feet to 25 feet in length. The largest is the *Queen Mary* (1936), made from 814,000 toothpicks and 19 gallons of Titebond II wood glue. I am from Chicago, a city of historical skyscrapers brought to us by Louis L. Sullivan and Frank Lloyd Wright. Anyone here will tell you that the tall buildings built between the Chicago fire and 1925 were part of the heyday of Chicago architecture – a time when form followed function and style meant everything. Likewise, my focus is on early 20th century ocean liners up to 1940, the heyday of steamships. The early ships were like floating palaces and are a challenge to build. They were built with craftsmanship and an eye for beauty and art. However, I also have built the *Cutty Sark*, the famous English tea clipper. Why do I do it? The only thing I can tell you is that it is rewarding and fun.

It all started as a fifth-grade art class project. For several days, we were given the task of building art from household utensils. One day we worked with oat meal, the next day it was popsicle sticks. Then, the last day of the project, we would make art from toothpicks. Coming from a Legos, Tinker Toys and plastic model airplane background, building things from toothpicks seemed like the next logical step in the progression. Our class

assignment was to build three-dimensional objects with those little splinters of wood. Some kids built t-pees, others built squares. Mine was a three-dimensional shape that didn't look like anything recognizable. But, it inspired me to do more ... and bigger ... and even bigger yet.

That same year, I heard of this strange ship named the *Titanic* in a school book. Soon after, I saw a mention of it as my mother was reading the *Chicago Tribune*. If memory serves me well, the article was about locating the ship, and possibly raising it. Then, they wanted to bring it back into service as a freighter. This *Titanic* thing really intrigued me at that point. By sixth grade, I built my first toothpick ship, a square rigger inspired by the *Cutty Sark* and USS *Constitution*. It was two feet long and my first toothpick model ship. I also read my first real book cover to cover. The name of the book was "A Night To Remember" by Walter Lord. I may have skipped a chapter or two because of technical jargon that was over my head, but I read enough of it to get me addicted to the story behind the most famous shipwreck of all time.

By the end of elementary school, I had built three ships based on actual sailing vessels. But I had yet to build a real model of an actual ship. In high school, I lost interest in toothpicks, believing that it was kid's stuff – a phase I had grown out of. However, I soon found that some phases never fade away.



The author works on his 25-foot model of the *Queen Mary*. (Courtesy of Wayne Kusy)

When I was in college in 1982, I heard there was a man named Jack Grim who was going to search and take pictures of the *Titanic* in the Atlantic. He never found anything conclusive, but the event reinvigorated my interest in building ships from toothpicks again. Since I was a little older, I wanted to build the next ship bigger than anything I had built previous and I wanted it to be an existing vessel. I wanted to build the *Titanic!*

Titanic

75,000 toothpicks, 10 feet long

I went to the library and revisited "A Night To Remember." This time, photocopying all the deck plans. From those plans, which included size and ratio markings, I calculated the form and shape of the hull. To build this large aboat, I had to build an infrastructure or substructure skeleton to form the curvature of the *Titanic's* hull. It looked like a large roller coaster. Then I would clad this skeleton with a skin of toothpicks to replicate the hull plates. To make sure I did it correctly, I purchased a plastic Revell model of the *Titanic* to compare and contrast. Within a year and a half, give or take a month or two, I built a 10-foot model of the RMS *Titanic*, made from 75,000 toothpicks and one gallon of Elmers Glue. As you can imagine, it



This 10-foot-long model of *Titanic* is comprised of 75,000 toothpicks, (Courtesy of Wayne Kusy)



Wayne displays his handiwork with his 10-foot model of the English tea clipper Cutty Sark. (Courtesy of Wayne Kusy)

was a nightmare to move around. The rigging was a favorite for cats. When my roommates had parties, the *Titanic* would collect empty beer cans and cigarette butts. Nonetheless, I wanted to build an even bigger model yet! Consequently, the roommates and pets had to go!

Lusitania

194,000 toothpicks,

five gallons wood glue, 16 feet long

I originally wanted my next model to be the *Queen Mary* (1936). Unlike the *Titanic*, where deck plans could easily be found in library books, there really wasn't that much detailed information available on how the *Queen Mary* was built and, at that time, there were no *Queen Mary* plastic models available at any of the local hobby shops. But in my exhaustive search, I did manage to find a Japanese model of the *Lusitania*. So for the lack of structural information, I had to settle for the *Lusitania* to be my next toothpick ocean liner.

Measuring 16 feet in length, at 194,000 toothpicks and five gallons of glue, the *Lusitania* was built to disassemble into two eight-foot sections with removable masts. It made it possible to transport without tearing down walls, taking doors off hinges or removing windows. I also created a toothpick shaft and interlocking system to connect the two pieces for exhibits. The two sections are fastened so tightly, you cannot see the seam from where they separate.

Contrary to popular belief, I do not know

a thing about engineering or have a degree in the field. Instead, I developed a methodology of using triangular patterns within the toothpick skeletons to maintain their curvaceous shapes and to withstand the pressures of time itself. With every ship that I built, I got better at it. I also developed ways of building the smaller intricate features like cowling vents, cranes, lifeboats, ships wheels and other small odds and ends you normally would find on the decks of an ocean liner. In fact, this is for what my ships have become known, not just being built from toothpicks, but the meticulous attention to detail. My only tools are wire cutters, an Exacto knife and a boatload of patience.

About 80 percent of the time it takes to build a ship is spent building the superstructures and upper works. Those little things make those big toothpick ocean liners not just sometime to say "Wow" to, but something to go up to and see all the little stair cases, docking bridge, telegraphs, rudder, propellers and anchors. It is like a toy house, but bigger. It's a unique art form, even if I do say myself. But, before 1994,

I was the last person in the world to con-

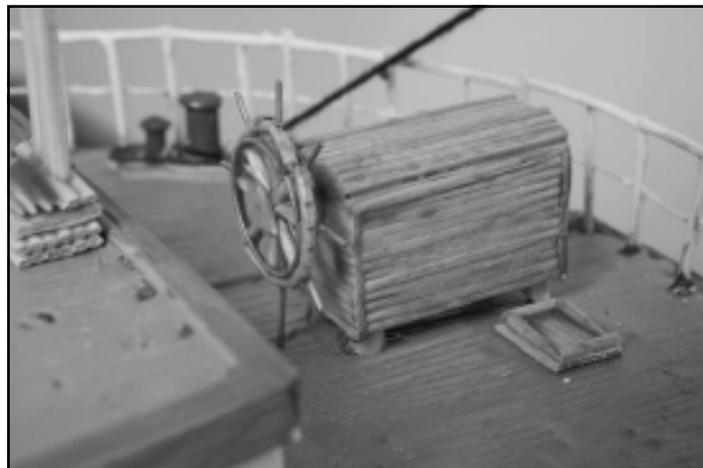
sider it art.

Until late 1993, my ships were only a hobby. From time to time, friends would say, "Man, those are museum pieces," but I never thought to try to exhibit them. One day, a store manager friend requested that the *Titanic* be exhibited in the front window of his new novelty shop in Wicker Park of Chicago. It won much attention from passers by. Before I knew it, the media came knocking on my door, including CNN Headline news. Within weeks of the exhibit in the storefront, I was on four local news broadcast and had a full page spread in the *Chicago Tribune*. All of the sudden, the art world came knocking on my door.

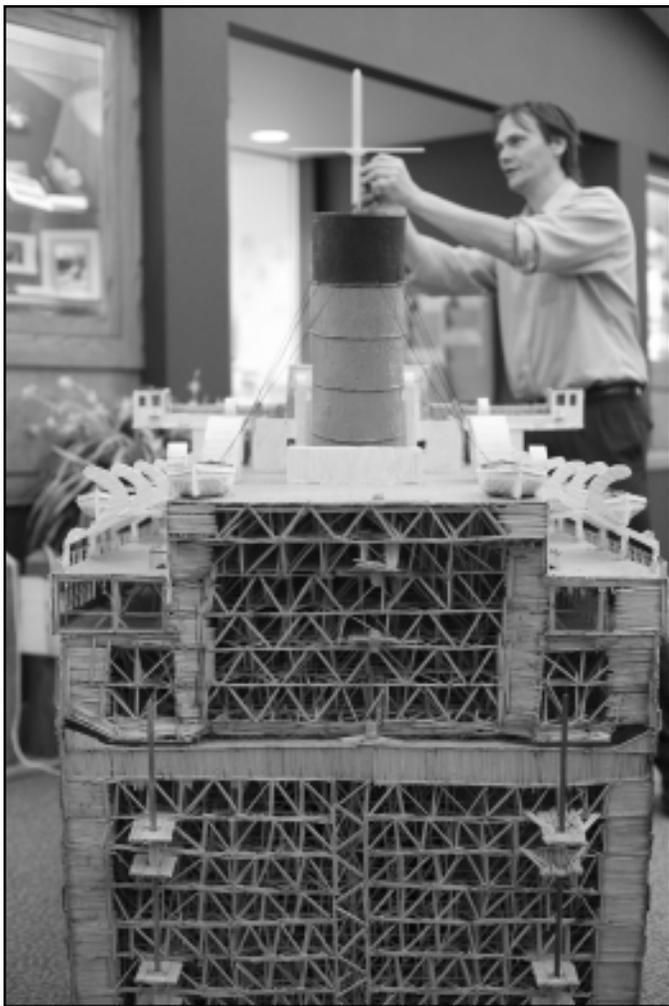
Before 1994, I never considered myself an artist. The last place you would find me at is an art museum. I couldn't tell you a Picasso from graffiti on a subway train. The closest I come is being a rock guitarist. But evidently I am, according to all these art people I have met through the years. I am a Folk Artist, that is someone who has no formal art training. What I do is art because it is a concoction of my own device, structural design, attention to detail and all. Before I knew it, I had my first national exhibition in Baltimore's American Visionary Art Museum, a national folk art gallery brought to fruition by an act of congress in 1994. Afterward, media coverage had poured in, and still keeps coming since. To put it all in a nutshell, I am a poet that didn't know it. Since this honorable recognition, I have learned to appreciate other art, for I can see other artists do their media for the same reason I do mine, its fun.

National Press

1995 was an unbelievable publicity year – *People Magazine* and *NBC Dateline* just



The attention Wayne pays to detail in his models is evident in this closeup of the Cutty Sark's ship's wheel. (Courtesy of Wayne Kusy)



To maintain the curvature of the hull and structural integrity, an intricate networking of toothpicks makes up the interior of each ship. (Courtesy of Wayne Kusy)

to name a few. There were hundreds of articles written on the *Lusitania's* stay at the Baltimore museum, from *The New York Times* to Baltimore travel brochures. I even did an interview for "All Things Considered" on NPR. I sold the *Titanic* to a Los Angeles museum of miniatures shortly after the blockbuster movie came out by James Cameron. People recognized me on the street, asking what my next ship was going to be. There was also a downside to my semi-celebrity status – my band broke up because of it. I was the guitar player in a bluegrass band and my climb to semi-fame was a little too much for the other band members. They thought I wasn't doing enough for the band, that the band should have had the *People Magazine* spotlight. On that sour note, I decided to build an even bigger ship yet. Consequently, unrealistic griping bandmates had to go!

The RMS *Queen Mary* and the Internet

On the heels of all this publicity, I wanted to keep the cameras rolling. So in 1996, I decided to embark on building the biggest ship yet, the RMS *Queen Mary* (1936). I was finally able to obtain deck plans by purchasing a book from the *Queen Mary's* gift shop. Currently, the actual ship is in permanent mooring in Long Beach, California, where it serves as a tourist attraction and hotel. I planned and scaled this ship to be 25 feet long, three feet wide and six feet tall from keel to masts. Like the *Lusitania*, the *Queen* would be built in sections to negotiate the small spaces and stairwells of my apartment building. The ship would disassemble into six major pieces; three hull structures and three superstructure pieces. The masts and smokestacks would also disassemble. This ship would take me eight years to complete.

Though I had finally obtained the deck plans for the *Queen Mary*, there were quite a few hurdles I had yet to jump. I didn't have a plastic model to know how to paint it and where to put the portholes and other details. There were whole areas of the ship for which I had no clue how it looked in order to build it. Again, I searched all the hobby shops and no model could be found. But this time, I wasn't settling for another ship. It was the *Queen Mary* or bust.

The Internet had become the perfect research tool and soon became my personal Global Positioning System for my quest of building the RMS *Queen Mary* out of toothpicks. When toothpick construction began, the web was still in its embryonic stage. Graphics weren't yet possible and there was no high speed cable widely available. Until that point, I had accumulated just enough photographs from library books to finish the

hull. By the time I started building the superstructure, the Internet had evolved and it became possible to search for photos of the *Queen Mary* online. Not only did I find historical photos of the real ship, I also found personal vacation photos taken by tourists which proved decisive in building the *Queen*. Those vacation photos showed parts of the ship the publicity and historical photos didn't. Using the deck plans, I was able to identify areas of the *Queen* photographed by the vacationers. I had gathered a mosaic of vacation photos of the *Queen Mary* from stem to stern. I had a printout of every portion of the davit, mast, lifeboat and vent. But, still, there were pieces of the puzzle missing – the after-sections of the ship, including the stern and docking bridge. Once again, the Internet would save me.

A little help From W6RQ and the Long Beach Police Department traffic helicopter

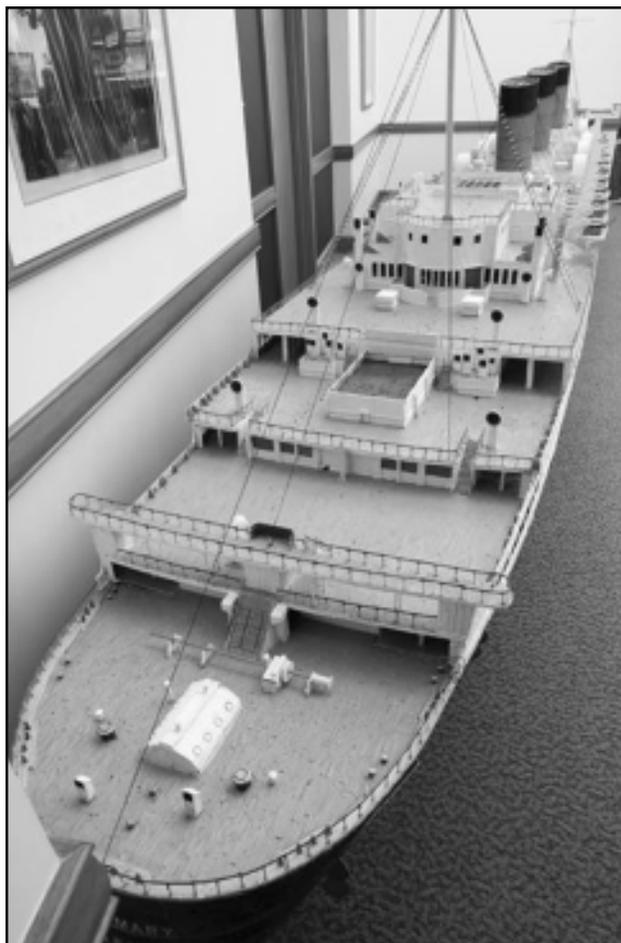
In my search for photos of the after sections, I had stumbled across a website for a Ham Radio operation located aboard the *Queen Mary* named W6RQ. Their website contained overhead photos of the ship – just what I needed! I emailed them and asked them if they had more and, if not, could they have someone take some for me. W6RQ went far beyond my request. They had a Long Beach Police Department traffic helicopter go up and hover 200 feet above the ship and take all the overhead photos I needed to com-



Queen Mary's toothpick propeller. (Courtesy of Wayne Kusy)

plete the toothpick *Queen Mary*! Completed in 2004, the toothpick *Queen Mary*'s inaugural exhibit was at a public arts program for the village of Algonquin in Illinois. Prior to this exhibit, all six sections had never been assembled as a whole ship. I only use a school ruler to make scale calculations. If my calculations were off, even by a fraction, the ship would look weird. Instead, it was perfect! Maybe I should have been an architect. Again, the media response poured in, from *Good Morning America* to the local papers.

Building those old ocean liners has always been a passion for me since childhood, but they also take a lot of time to build. I try to squeeze them with being in a rock band named Heavy Mental, and computer programming. Yes, I do have a life outside of toothpick ocean liner building! I also have a regular nine-to-five job. I have a total of six ships built or currently under construction. The three not mentioned here are two models of the *Cutty Sark* and my new endeavor, the SS *American Star*. Four of the ships are on exhibit around the country. The three ear-



An overhead view of the *Queen Mary*. (Courtesy of Wayne Kusy)



At 16 feet long, the *Lusitania* is on permanent exhibit at the American Visionary Art Museum in Baltimore, MD. (Courtesy of Wayne Kusy)

lier ships built during my childhood were destroyed by a moving accident in the mid-1980's. Since the toothpick *Queen Mary* was launched, the ships have made international

press and are even mentioned in hard-cover books. My favorite is a Houghton Mifflin mathbook for children, grades one through six. Here, fifth-graders can find a photo of one of the *Cutty Sark*s.

My latest liner, the SS *American Star* will be 13 feet long and around 100,000 toothpicks before completion. It will be also built in two sections. For obvious reasons, the *American Star* will not be bigger than the previous ships. I have outgrown that phase. But, you never know – old habits are hard to break.

The Toothpick Fleet

- ***Titanic***
Completed 1985; 10 feet long; 75,000 toothpicks. Sold to the Carol & Barry Kaye Museum of Miniatures 1997 in Los Angeles, CA.

- ***Lusitania***
Completed 1997; 16 feet long; 194,000 toothpicks. Currently on permanent exhibit at the American Visionary Art Museum in Baltimore, MD.

- ***Queen Mary***

- Completed 2005; 25 feet long; 814,000 toothpicks. Currently on exhibit at the Nation Museum of Model Ships in Sadorus IL

- ***Cutty Sark***

- Completed 2007; 10 feet long; 56,000 toothpicks. Currently on exhibit at the public arts program at the Village Hall in Algonquin, IL

- ***Cutty Sark* (mini)**

- Completed 1998; 4 feet long; 12,000 toothpicks. Available for exhibit.

- ***SS American Star***

- Work in progress; 29,000 toothpicks and counting.

Upcoming shows

- **Free Toothpick Classes for Kids**

- Four classes featuring the work in progress display of the SS *American Star* and the completed *Cutty Sark* (mini). Scheduled for June 2008 (No definite date)

- **January 2nd 2009, Intuit Gallery**

- 756 Milwaukee Ave
Chicago IL

- SS *American Star* (work in progress) and *Cutty Sark* (large)

[Editor's note: To see more photos of Wayne's toothpick models, go to www.WayneKusy.com; for videos go to www.youtube.com and enter "Wayne Kusy" in the search engine.]