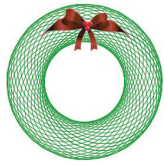


The Limited Monopoly™



“The Man Who Saved Christmas” – and Other Tales of Toys of Christmases Past

by John Hammond, PE and Robert Gunderman, PE



Saturday Mornings

Those of us that are “of a certain age” likely have fond memories of watching Saturday morning cartoons during the Christmas season. We would choose our favorite channel (selected from three network choices received via a roof top or rabbit ears antenna) and pay rapt attention as our TVs blitzed us with commercials of the latest and greatest toys. Even in that era, as broadcast television emerged as *the* communication medium for reaching the masses, some of the toys were already aged classics. Others were all new, made possible by modern manufacturing techniques, new materials, and of course, marketing geniuses. In any case, we would make our Christmas lists of our most coveted toys, and for at least that month before Christmas, we’d be more nice than naughty.

Toying with Patents

So this month as we waxed nostalgic about our youth and our favorite Christmas toys, being in the patent business, we couldn’t help but wonder - were those classic toys patented, and what did those classic toy patents look like? There are so many classic toys to choose from – where to start? A quick online search turned up the National Toy Hall of Fame¹ website of The Strong[®] museum right here in Rochester, which is perfect for stimulating the recall of aging memories. Browsing the list of the 53 inductees left us repeatedly saying, “Yeah – I had that one!”

Many of the toys in the Hall of Fame (e.g., Ball – inducted in 2009 and Stick – inducted 2008) either pre-date the entire historical concept² of a patent, or they simply lack the novelty and unobviousness required for patentability (e.g., Hula Hoop – inducted 1999). Nonetheless, of the toys that had some substantial structure, most were design or utility patented at the time of their introduction to young consumers via magazines, radio, and eventually, television. The limited monopoly provided by these patents helped their manufacturers establish them in the marketplace without competition from “knock offs.” Then, by the time the patents expired, these toys were established as iconic brands, and continued to be successful without patent protection.

A Few of Our Favorites

We could spend hours researching vintage toys and recalling youthful days spent playing with them. Our copy deadline approaches though, so here are a few of our favorite found in a first pass of searching³:

- The Spirograph[®]. A geometric drawing toy invented by British engineer Denys Fischer, first sold in 1965, and patented in many countries including the United States (US 3,230,624). When you play with a Spirograph[®], you can’t help but start thinking about the mathematical relationships between the gears, the holes in them, and the trajectory of the pen as you put down a tracing.

Jan. 25, 1966

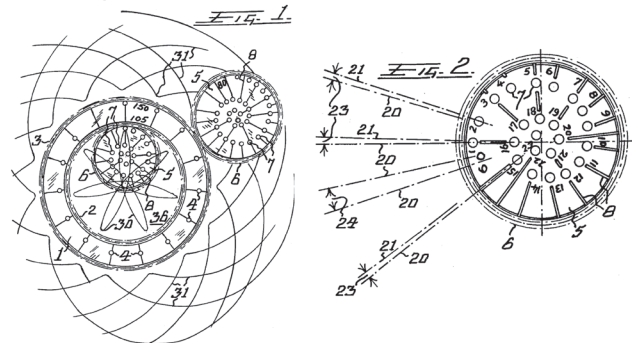
D. FISHER

3,230,624

DESIGNS INSTRUMENTS OR APPARATUS

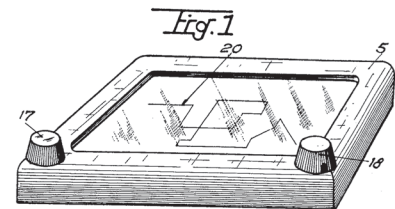
Filed July 24, 1964

2 Sheets-Sheet 1



(If you really want your head to hurt, have a look at the math equations for the “hypotrochoid” and “epitrochoid” Spirograph[®] curves that are provided in the Wikipedia entry⁴ on the toy.) Interestingly, it is said that Fischer invented the Spirograph[®] while doing research on a new design for bomb detonators for NATO. (Talk about serendipity...) The Spirograph[®], sold now by Hasbro, is still stimulating young minds today. And of course... there’s an app for that, Droid or iPhone... but we say buy the real thing.

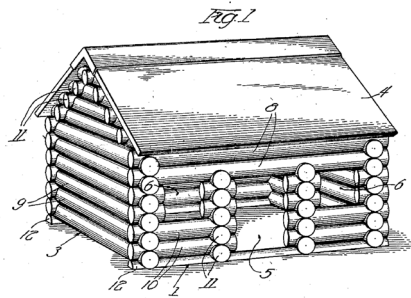
- The Etch-a-Sketch[®]. A 1998 Hall of Fame inductee, the Etch-a-Sketch[®] was invented by André Cassagnes of France. At its date of introduction in 1960 by the Ohio Art Company, it was protected by U.S.



Patent No. 3,055,113. The Etch-a-Sketch[®] was essentially a simplified x-y plotter, having a movable stylus that scraped a line of electrostatically adherent aluminum powder off a glass plate. As kids, we remember drawing crude images on our Etch-a-Sketch[®], while wondering how it worked. It wasn’t long before we discovered that with patient rastering back and forth, the entire screen could be erased, leaving the workings of the device clearly visible to our inquiring eyes and minds. The Etch-a-Sketch[®] is still sold today by the Ohio Art Company. Of course, there’s an app for that, too. (Does there really have to be an app for everything?)

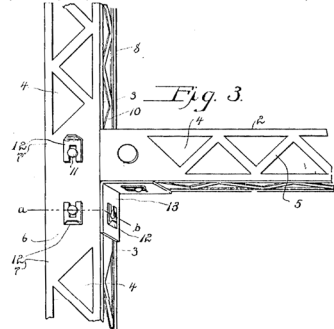
- Lincoln Logs[®]. What could be more fun than building a Lincoln Log cabin, and then demolishing it with a well-aimed speeding Tonka[®] truck? Inventor J.L. Wright invented Lincoln Logs[®], and received U.S. patent 1,351,086 for his “Toy Cabin Construction” in 1920. (Interestingly, J.L. Wright was the son of renowned architect Frank Lloyd Wright. We can’t help but wonder if perhaps

J. L. WRIGHT.
TOY CABIN CONSTRUCTION.
APPLICATION FILED JAN. 8, 1920.
1,351,086. Patented Aug. 31, 1920.
2 SHEETS—SHEET 1.



the son's invention of a toy log house was a manifestation of rebellion against his father, and the great talent for contemporary architecture that he possessed. Whatever the reason, the contrast is striking.) A 1999 Hall of Fame inductee, Lincoln Logs® are still sold today by K'Nex®. Honest Abe would be relieved to find that there doesn't appear to be an app for Lincoln Logs.

A. C. GILBERT.
TOY CONSTRUCTION BLOCKS.
APPLICATION FILED JAN. 20, 1913.
1,066,809. Patented July 8, 1913.



• The Erector Set. Lastly, our favorite. Inventor A.C. Gilbert received his first patent, US 1,066,809, for "Toy Construction Blocks" in 1913. Gilbert went on to obtain numerous additional patents for Erector Set construction toys that included wheels, pulleys, transmissions, and electric motors – everything needed to build just about anything. Originally sold as the "Mysto Erector," Gilbert subsequently formed The A.C. Gilbert Company, which provided young boys with these great construction toys from 1916 until the company's demise in 1967. Just look at the nearby Erector Set ad circa 1913 – there are a couple of future engineers there for sure.

Gilbert was the subject of the 2002 movie, "The Man Who Saved Christmas." As the story goes⁵, Gilbert had been asked by the U.S. government to retool his factory to support the war effort during World War I. He appeared before the Council of National Defense and persuaded the Council to permit him to continue to manufacture his toys. No doubt one of his key arguments was that he was developing young engineering minds that would be much needed in the future. As a result of his effort, Christmas was again a joyous occasion for many young boys of that era.

The Erector Set was inducted into the National Toy Hall of Fame in 1998. "Erector" toys are still sold, but they are not the same as those early toy sets. Authentic vintage Erector Sets can still be found on eBay though, for those who want to provide a child with the "real thing."

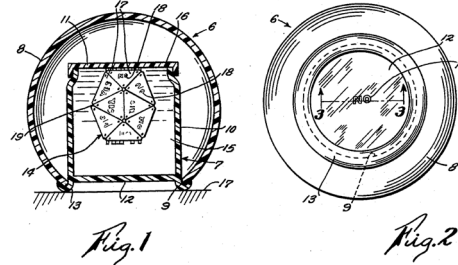
The Common Thread

So what do these great toys all have in common? Yes, they were all patented... but what's really relevant after all these years is that *they made kids think and create with their minds and their hands.* That's something worth thinking about the next time you are shopping for a toy for your child or grandchild, and the choice is between toys like these, and something that has electrons flying around in it. These toys put the fun in STEM.

As we close out 2013, we turn now to our Magic 8 Ball (U.S. Patent No. 3,119,621), and ask the question, "Do we wish all of our readers a Merry Christmas?" We give the Ball a few spins, then pause, and we see "Yes definitely." Then we ask, "Shall we all have a prosperous 2014?" We spin again and see "Without a doubt."



Jan. 28, 1964
A. C. BOOKMAN
LIQUID FILLED DIE AGITATOR CONTAINING A DIE HAVING RAISED INDICIA ON THE FACETS THEREOF
Filed Jan. 2, 1962
3,119,621



1. www.toyhalloffame.org/toys.
2. See *The Limited Monopoly*™ March 2011.
3. The authors acknowledge Wikipedia.org for its detailed information on each of these favorites.
4. <http://en.wikipedia.org/wiki/Spirograph>.
5. Michael White, librarian at Queen's University, Kingston ON. See <http://patentlibrarian.blogspot.com/2008/12/ac-gilbert-inventor-of-erector-set-and.html>

GRAPHIC CREDIT: Spirograph Christmas wreaths in banner made using Anu Garg's Java applet at <http://wordsmith.org/anul/java/spirograph.html>

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