



The Ruby Slippers: Inventing an American Icon

by Dwight Blocker Bowers

Hollywood is much more than a southern California locale for experiment and innovation—it's the actual and symbolic center of the American film industry, a place where the everyday is transformed into the extraordinary, a nexus of reality and dreams where mundane monochrome is spun into the rainbow-hued stuff of legends. As Paul Nathanson says in his 1991 book *Over the Rainbow*, Hollywood has become legendary for its ability "to reflect . . . the collective daydreams of America." One example of the innovative way that the Hollywood movie industry of the 1930s reflected these "collective daydreams" is the creation of the iconic movie prop, the ruby slippers, for the 1939 film *The Wizard of Oz*.

[Read more . . .](#)

Image: The pair of [ruby slippers in the collections](#) of the Division of Music, Sports, and Entertainment, National Museum of American History, Smithsonian Institution.



Notes from the Director

James Cameron's *Avatar* was the box-office smash to beat over the past holiday season. The director of the *Terminator* franchise and *Titanic*, Cameron has made CGI—computer-generated imagery—and other cutting-edge special effects his cinematic bread and butter. But despite his reputation as today's special effects master par excellence, I was not surprised to see this headline in a recent issue of Newsweek: "[It's The Story, Stupid](#): Directors James Cameron and Peter Jackson are the kings of new film technology. But they insist they aren't slaves to it."

Well, of course. What director would want to identify as a mere technician, however high-end, rather than an artist? Despite the obligatory bow to filmic art, I confess that the overdose of F/X these days, especially the raucous variety, has me running to Netflix in search of the European art films of youthful memory, shoestring productions blessedly free of most special effects (except for that magical opening scene in *8 ½* where Marcello Mastroianni floats through the roof of his traffic-jammed car—it's a personal favorite). I sometimes find myself regretting altogether the arrival of the computer to the film scene.

At the same time, I tell myself to get real about the movies. Whatever our illusions about cinema, whether heavy on story line and character or suffused with CGI, it is important to recognize that all films are just that—an illusion, and a technological one at that. As my colleague Harry Rand reminded me, movies are frozen slices of reality, cinematically joined to trick our eye into the sensation of continuous movement. Make no mistake, movies are, and have always been, illusions born of technology. This came home to me recently when I saw a photo from a film shoot of a scene in *To Catch a Thief*. We witness Grace Kelly, in all her pristine beauty, sitting in a beach chair, presumably alone—except that she's not. In fact, as the camera draws back, we see that she's tightly encircled, virtually engaged, by a ring of cameras, klieg lights, reflectors, microphones, etc., not to mention the mob of technicians operating this jungle of apparatus.

Of course, there are levels of technology in filmmaking, today as in the past, with perhaps a quantum leap coming with computer graphics. But, in general, there is a technological continuum from the Lumière brothers, through Thomas Edison and George Lucas, that eventually leads to Cameron's *Avatar*. In fact, some of the cutting-edge effects of today are not all that revolutionary, at least in concept. For instance, much has been made of *Avatar*'s use of performance capture, a computer-generated animation technique to re-create the organic motions of humans and animals. Seventy years ago, Disney studios used "rotoscoping" based on the same principle, but employing, instead of computer technicians, an army of animators who manually traced the filmed motions of live actors.

Over the years, the Lemelson Center has hosted many inventors and inventions from Hollywood. The late [Stan Winston](#), Cameron's frequent collaborator, told us what got him excited about the computer effects business and what it was like to work with Schwarzenegger and Cameron on the *Terminator* series. Marty Kline, the CGI genius behind such productions as *Stuart Little*, *Star Trek: The Motion Picture*, and the late-1970s TV series *Battlestar Galactica*, brought with him some of the physical models that were the platforms for his digital magic. Movies,

though, were only one genre of artistic invention coming out of the Los Angeles area; innovations in musical instruments like electric guitars and drumheads are two of the area's other surprising and innovative products. So, what is it about "Hollywoodland," as the original iconic sign read, that has made it such fertile ground for innovation?

Best regards till next month,
Arthur Molella
Jerome and Dorothy Lemelson Director



Have You Seen?

The 1979 movie *Alien* is a landmark in the tradition of science fiction motion pictures. Telling a nightmarish tale about a demon beast that terrorizes the crew of a space cargo ship, the original has spawned a number of film sequels. This [Aliens egg prop](#), created by designers H. R. Giger and Michael Seymour, is now part of the Museum's collection of popular entertainment artifacts.

The collection encompasses many other artifacts of 19th- and 20th-century commercial theater, film, radio, and TV: some 50,000 sound recordings dating back to 1903; posters, publicity stills, and programs from films and performances; puppets; numerous items from world's fairs from 1851 to 1992; and audiovisual materials on Groucho Marx, to name only a few. See [a selection of these treasures](#) on the Museum's website.

Image: This egg is a central prop in the Alien narrative. From the collections of the Division of Music, Sports, and Entertainment, National Museum of American History, Smithsonian Institution.



Trivia Challenge

Thank you to everyone who entered the December challenge and congratulations to Nancy P. of Sacramento, California, who, among others, knew that Christian Kent Nelson invented the Eskimo Pie, America's first chocolate-covered ice cream bar, in his home laboratory in 1920.

[Nelson patented his invention](#) and the ice cream bar quickly rose in popularity in America. By 1922, Nelson was earning \$2,000 per day in royalties on his product. And on that "sweet" note,

we conclude our monthly trivia challenge. Our thanks to everyone who took the challenge over the past year!

Image: Christian Kent Nelson, 1922, from the [Eskimo Pie Corporation Records](#), Archives Center, National Museum of American History, Smithsonian Institution.



From the Collections

[A costume donated](#) to the Smithsonian's National Museum of American History by designer Bob Mackie and worn by comedian Carol Burnett in her television comedy-variety show is currently on display on the Museum's third floor. The donation, a curtain/dress, parodies the iconic green-velvet dress Scarlett O'Hara fashioned from drapes in the legendary 1939 film *Gone with the Wind*. It was designed by Mackie and worn by Burnett in the comedy sketch "Went with the

Wind," a satire that to this day showcases Burnett's adept humor.

On November 13, 1976, American audiences watched Burnett descend a staircase in a green-velvet dress, as Vivien Leigh did in the classic film more than thirty years before. This time, though, Burnett did so with the drapes still attached to a brass-plated curtain rod balanced across her shoulders, and a befringed valance refashioned as a hat atop her head. Leading-lady Burnett quipped during the sketch, "I saw it in a window, and I just couldn't resist it."

"Mackie's design represents an iconic reimagining of Scarlett O'Hara's curtain dress," said Brent D. Glass, director of the Museum. "It was his spirit of innovation that made 'Went with the Wind' a symbol of this country's rich comedic history."

Image: Bob Mackie's sketch for the "curtain dress." From the collections of the Division of Music, Sports, and Entertainment, National Museum of American History, Smithsonian Institution.



Inventive Ideas for Schools and Families

Isadora Duncan (1877–1927) began inventing spontaneous dance pieces in the 1890s and is often considered the inventor of modern dance. Her innovative style defied the rules of classical ballet, using familiar motions such as walking, running, skipping, jumping, kneeling, and rising. As Duncan’s dancing grew in popularity, she changed the character of traditional ballet while also making powerful political and social statements and building support for the arts and for women’s rights.

Dancing can be creative, fun, and a great way to exercise. You might follow well-known dance moves you see on television or create your own as you go along. Many artists and singers create their own type of dance moves and some work with choreographers who invent and design new dances. You can choreograph some new dance moves, too, and see how they work with different types of music. [Download the activity!](#)

Steve Madewell, Lemelson Center Spark!Lab Resident Eccentric

Image: [Isadora Duncan](#). Photo by Soichi Sunami, 1904. From the collections of the [Smithsonian Archives of American Art](#).



Our Podcast—Prototype Online: Inventive Voices

What do the Beatles, DuPont, and Mickey Rooney have in common? Remo Belli. After World War II, Belli moved to Los Angeles and entered into a thriving community of fellow musicians, entertainers, and entrepreneurs. In the search for improvements over the animal skins used for most drumheads, Belli and his collaborators perfected the first practical, synthetic drumhead, made with Mylar, and set new standards for the music products industry. In our latest podcast, drummer and entrepreneur Remo Belli talks about how he changed the face (and head) of an industry. [Tune in!](#)

Image: Remo Belli. Photo courtesy of Remo Belli.

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[National Museum of American History Frequently Asked Questions](#)