

# Moving Illustrations: The Paper Engineering of Julian Wehr

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with an exhibit from the Julian Wehr Collection of the Small Library, University of Virginia.

Text: Paul Wehr

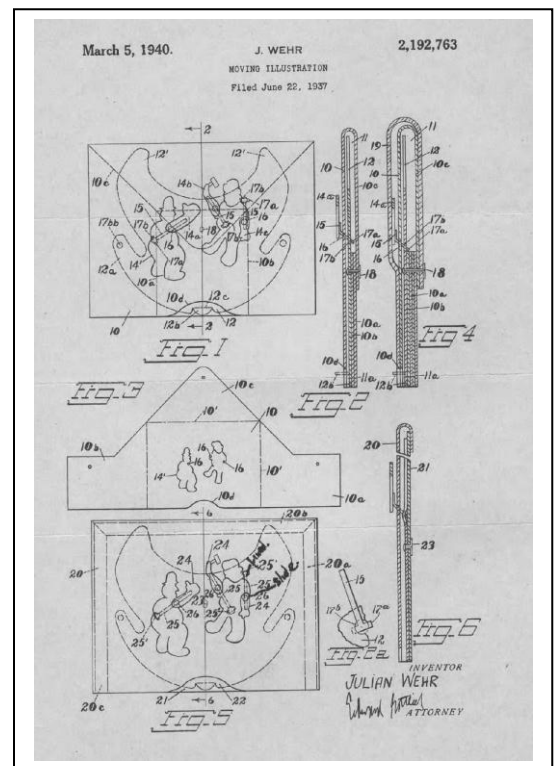
Images: Christiane Griffin-Wehr, Jeanine Wehr Jones, Lawrence K. Jones

Original drawings: Julian Wehr

Julian Wehr animated books were first published in 1942, sold in the millions of copies throughout that decade, with occasional titles appearing in the fifties and early sixties, and are now valued among movable book collectors. His books have been reproduced in several European countries and his invention of the movable illustration was used without license in Latin America long before his patents lapsed.

## The Idea

Wehr's idea for a moving illustration probably had its origin in his childhood in Brooklyn. As a boy in a German American family of comfortable if modest means, he might well have had a movable book such as those of Lothar Megendorfer whose illustrations the reader could bring to life with tabs and strings. That childhood experience of delight would have easily been retrieved later with Julian's decades of training and work as a draftsman, artist and sculptor. Deep in the Great Depression, with his new and devoted wife Julie and a growing family, Julian desperately needed a stable income. Though his work as an illustrator and engraver was by then receiving critical notice, steady work was hard to come by. With Julie's encouragement and her later promotion with publishers, the concept of a movable children's book took form as a patent application submitted in 1937, with patent # 2,192,763 awarded in 1940.



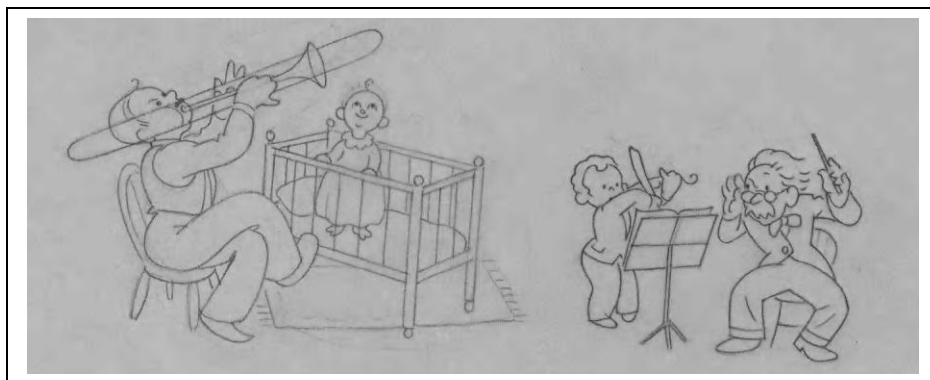
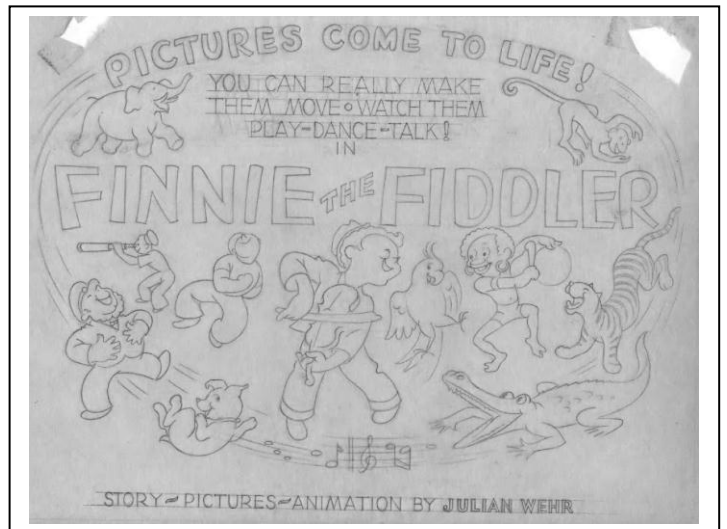
It was for a “moving illustration.” The “animation” moniker might have been suggested by the films emerging in those years from the Disney studio.

### Creating the Prototype

The animated book brought together three elements: a story, colored illustrations of the text, and two or more animated illustrations with their movement mechanisms working between a doubled page. The animations would begin as tracings with which the movement of the hidden template and movable illustration pieces were envisioned. The images would then be transferred to card-stock, becoming a mockup for testing, modification, and coloration. From prototype to mass market required, of course, a printer/publisher with some vision and the shop with the photoengraving, printing and diecutting equipment to produce the prototypes as well as the contacts for assembling and marketing. At the Duenewald Printing Corporation in New York, Ralph Duenewald and his daughter Doris would bring the story to Julian, mass produce the covers, pages and animation pieces, send them upstate for assembling, and then to market. The Duenewalds may not have been involved with the first book, *Finnie the Fiddler*, but they produced most of those to come after.

### The Story

Occasionally, Julian would produce all the elements of the book...story, illustrations and animations, as he did with *Finnie the Fiddler*. The story of *Finnie* was as original as were its illustrations. Finnie’s life and adventures mirrored that of the author who had lived them.



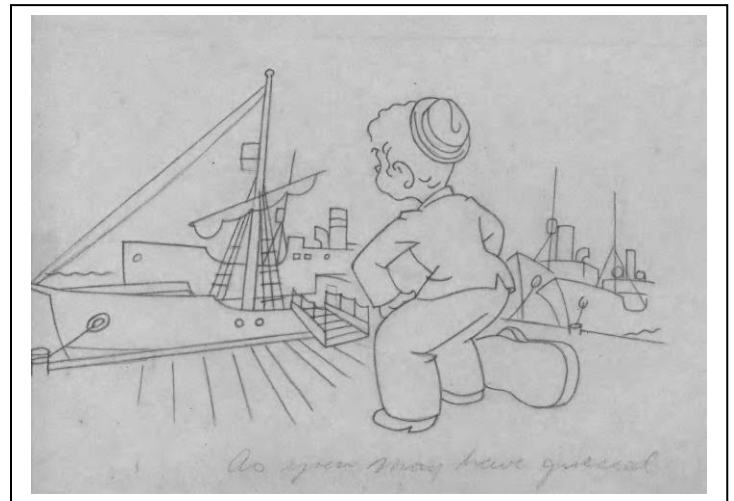
*Finnie* was raised in a family with music, as was Julian . . .

and with a violin and dog, gifts from a loving father.

Julian was a bored student and was not the teacher's favorite pupil.



He tolerated high school where his budding artistic talent was appreciated but left before graduating. He escaped his domineering mother and the monotony of the classroom for the Merchant Marine, the high seas, and adventure.



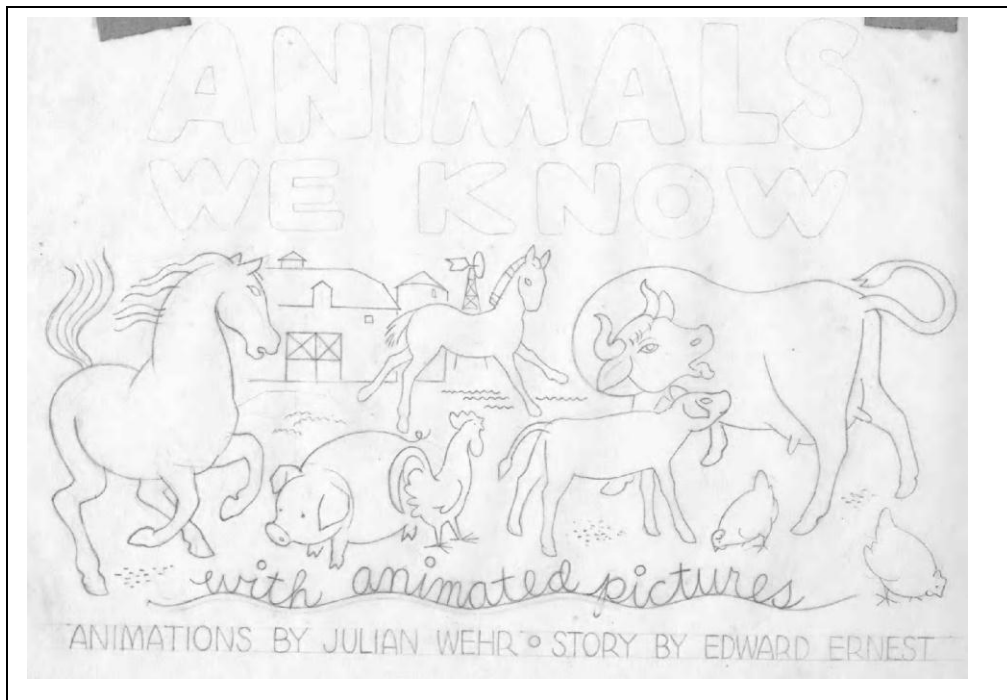
He later wrecked a sailboat along the Italian coast and Julian's "wet" encounter with the sea also found its way into *Finnie's* moving illustrations.



*Finnie the Fiddler* was created in 1941 as Julian's employer, Jenter Associates, shifted from commercial display work to glider production for the military. Julian's work was phased out. Artists were no longer needed. But that first book had found a publisher by the time Julian and Julie were fleeing a New York at war for a Vermont farm in late summer of 1942. Would the book work as Julian had promised and would it sell? The Wehrs' future hung in the balance.

Those first months in Vermont, waiting for *Finnie* to appear in bookstores and to sell, might have been hungry ones for the family. But Julian cut wood for a local farmer to tide the family over and Julie's garden, *Bossie* the cow, and some productive Rhode Island Reds made up the difference. Once *Finnie* caught on, however, the demand for animated books escalated rapidly and seemed limitless for several years.

Stories from other authors and the public domain were used and Julian's new acquaintance with farm life found its way into a book or two.



Fairy tales and nursery rhymes provided other stories.

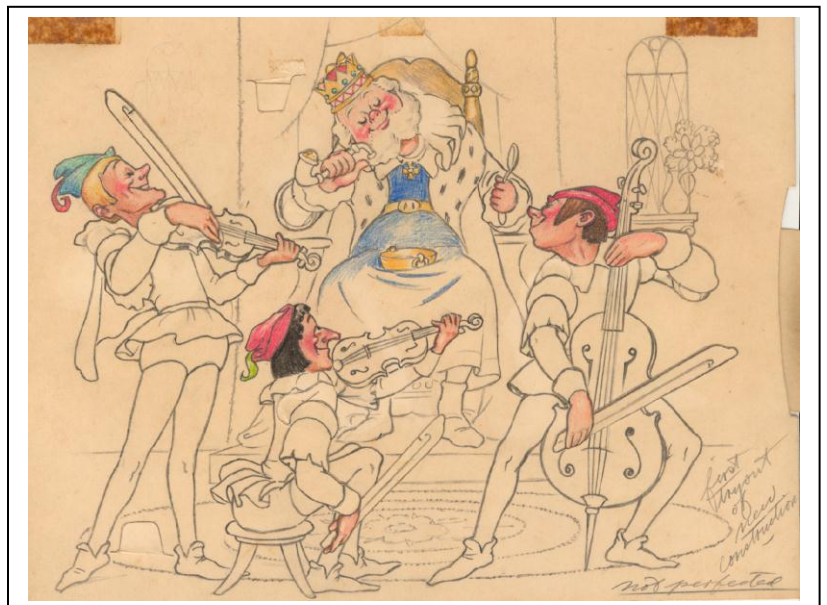
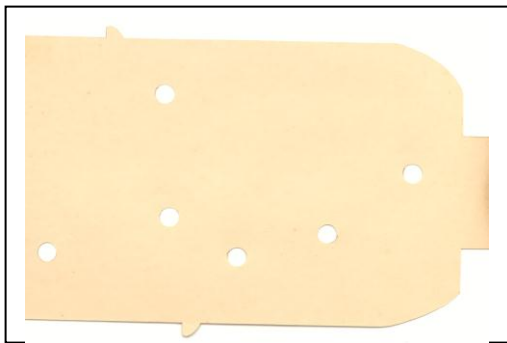
## The Illustrations

Done with pastel pencils, images were needed for 1) the covers, inside surfaces and out, 2) the story pictures from page to page, and 3) the animation pictures drafted, then modified as the openings for the movables were cut. The images were traced for proper sizing, paths of movables tracked on the illustration, and openings through the illustration accurately placed. The protractor, gum eraser, square, eyeshade, Exacto knife and other tools of the draftsman did the bidding of the engineer's imagination, calculation and measurement.



## Animation Construction

In building the movement mechanism from the illustration, artist became engineer and even sculptor. All components had to mesh...template, illustration, and movables... interconnecting, generating envisioned movement, and with minimal friction The placement of openings for the movables in both illustration and template would determine the range of their movement. Repeated trial/error/correction was the procedure.



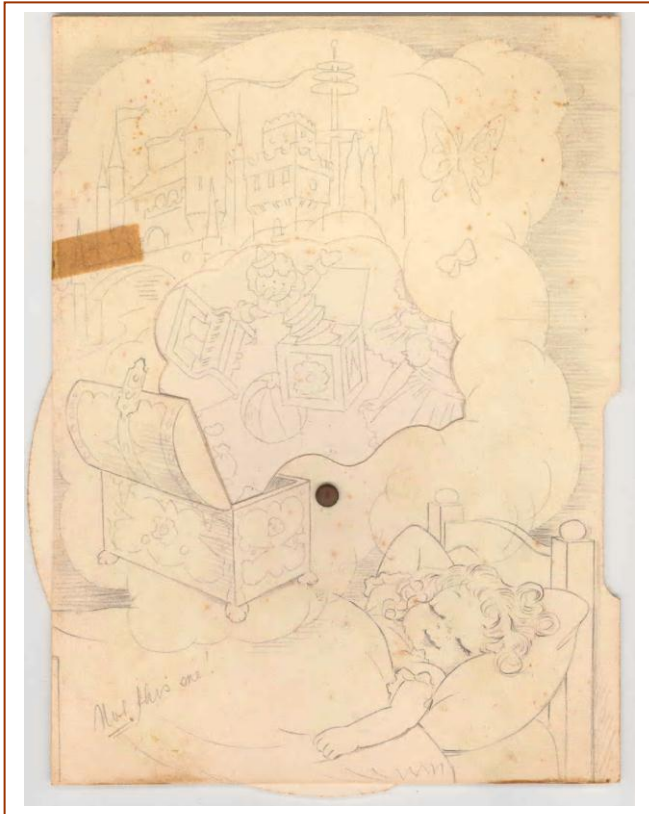
Julian designed several movement mechanisms.

1) The slide design had the template anchored through slits in the illustration and holes through which the extensions of the movables coming through the illustration page would pass. The template and consequently the movables would be activated with the tab at the side of the illustration.



2) The rocker/pivot design had the template anchored with a small movable coming through the illustration from behind, activated by a tab moved from side to side at the bottom also coming from behind. Other movables would pass through the illustration from above into the template



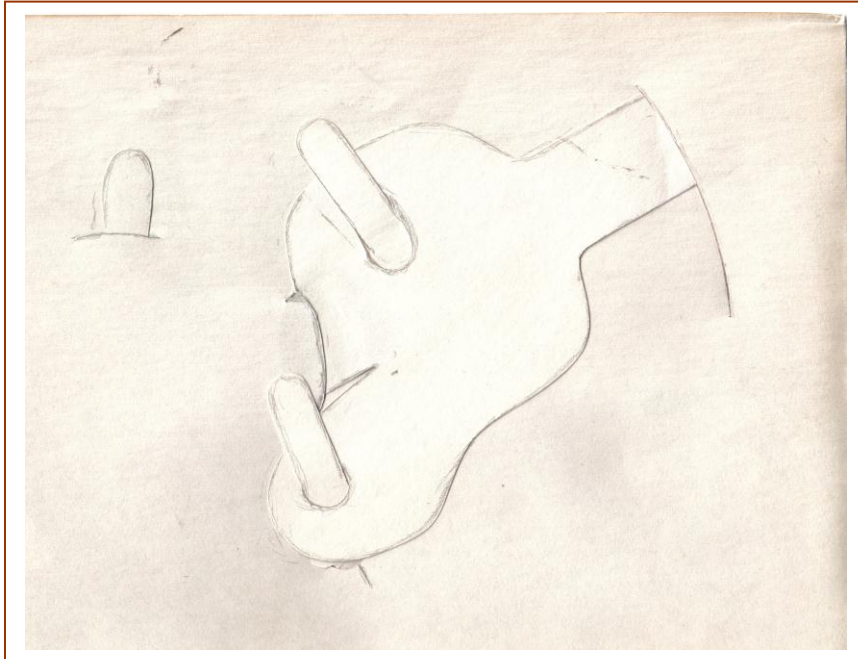


3) A third approach had a wheel appearing through a cutaway in the illustration, fastened with a rivet, and rotated from the side.



He would elsewhere combine rotary and in-out movements





4) The most complex animation design would have the template/tab moving in all four directions and the movables likewise



## Production and Marketing

Once the demand for the Wehr animated books was established, Julian was at it 24/7. He worked in a small studio room in our farmhouse on Sullivan Hill, with no electricity and no working telephone. He was the linchpin in the operation. The next title idea or text would arrive from the Duenewalds even while a prototype from the last had just been sent off to New York. He saw himself as the legendary sorcerer's apprentice. The demand was unceasing. He barely had time to create a holiday card for the production team in New York showing them all hard at work, depending on Julian .



The prototype would be sent or carried to New York. The photoengraver would make copper plates for the printer who would in turn produce multicolored pages for the die-cutter whose press would punch the slits, holes and movables. All components would be shipped for assembly somewhere upstate where female labor was cheaper and plentiful. Bookstores nationwide would then receive the finished product through various publishing outlets ranging from Grosset and Dunlap and E.P. Dutton to the less well known, like Saalfield.

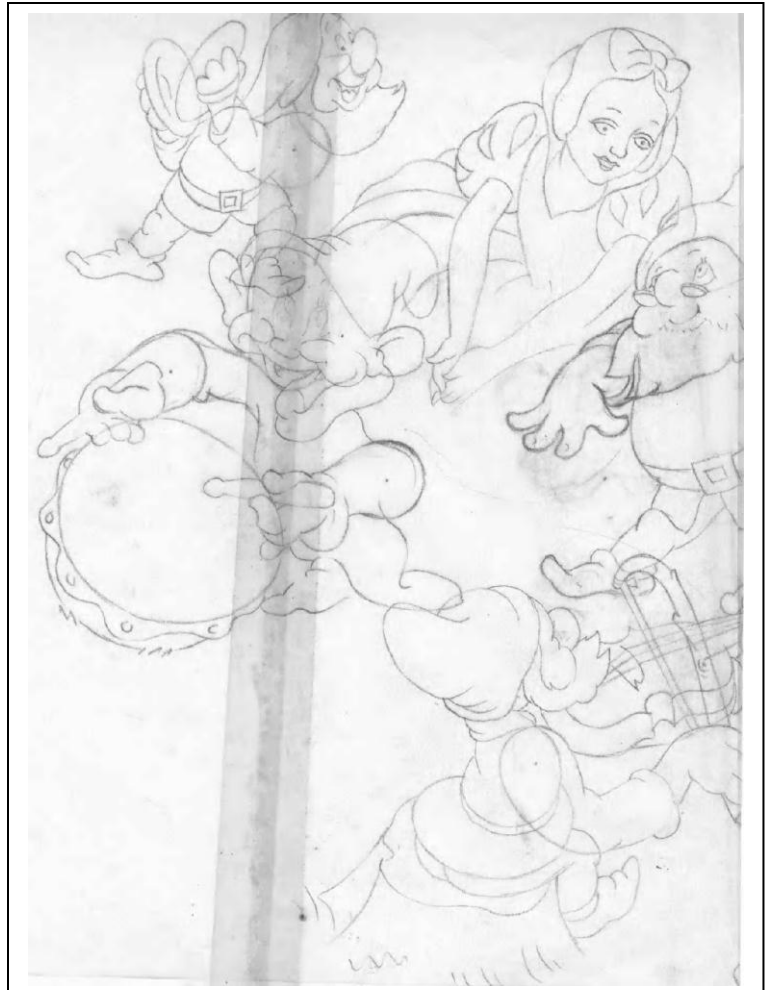
Production peaks of the books came in the periods 1943-45 (24 titles) and 1949-51 (16 titles). In the latter period, downsized versions of some of the originals appeared with fewer animations, including some editions with animations only in the covers. From 1942 through 1962, 51 editions of 41 separate Julian Wehr titles were published including at least one pop-up book and several with illustrations only.

As children's visual entertainment became increasingly dominated by Disney and Hollywood, Julian's books reflected the change.

For example, the later *Snow White* resembled much less the earlier one. And Julian's *Wizard of Oz* hardly resembled Hollywood's. His *Popeye* did but was done under license. As labor costs rose and the post-war market became more competitive, his book editions changed. Animations sometimes became illustrations only, full color illustrations went to two-color, hardcover editions became soft cover, animations were moved to the book covers.

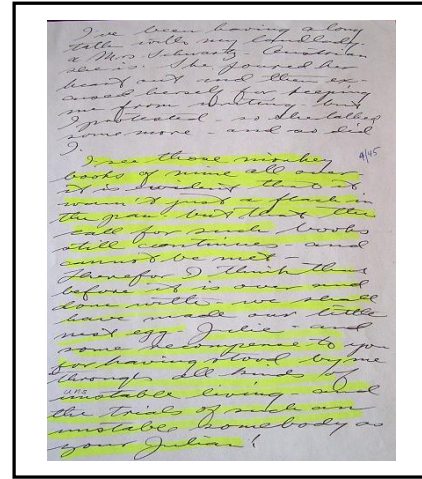
Technological, economic and social transitions greatly influenced the animated book market. Television was already invading American homes

by 1948. How to compete with Howdy Doody? Plastic quickly shaped the toy market and a recovering Japan became a source of unlimited children's diversion. Automobiles were changing family life forever. Parents reading to their children was fast becoming history. Animated books were still being published but were receding. Only seven titles appeared in the 1950s.



## The Engineer

The animated books brought together Julian's talent as an illustrator, genius at animation, and natural sense of humor. They were the by-product of a happy period in a life marked with more than its share of personal tragedy. The happiness came from a woman and children who loved him deeply and were in turn so loved. His letter to Julie while on a business trip to New York suggests that depth of feeling. And with the books, Julian could both provide for his family and build his mountain studio.



## The Sculptor

Once the books were selling, the engineer began to see the possibility of the sculptor's life he had dreamed of for years. There was now the money for tools, wood, hoists and the other paraphernalia of the sculptor's craft. There was a barn to be remodeled as a studio. There was a nearby abandoned marble quarry for stone. There was the magnificent setting of the farm on Sullivan Hill with the Northfield Range of the Green Mountains spreading to the north and south. Of course, as sculpting took more of his time, his paper engineering got less of it. A reduction in new titles published after 1946 resulted both from Julian's attention shift his to real passion as well as book market forces. Only 12 of the 22 books published thereafter were new titles. The rest were reissues or revised editions.



Julian's happiness vanished in 1947 as a fire in the dead of winter consumed his barn studio and two years of sculpting. His stone sculpture shattered from the heat. He saved only one piece in mahogany of a black man he had sketched on the New York subway on a business trip. The loss silenced the muses of both the sculptor and the engineer for quite a while. But his family was still there and a decision to move them south to Connecticut, where Julie while in college had bought land for an orphanage, redirected once again the creative mind.

## The Architect and Builder

Julian designed a house and set about building it, many miles to the south outside Danbury. Those long separations with brief trips home to Roxbury were difficult. There was to be a main section with wings for the ever-warring grandparents. Post-war inflation in 1947 had undermined his construction budget and as the book royalties decreased, the second wing became a porch and his mother, Mona, would live in the main section with us. Julian worked alongside his carpenter and mason and the house was sturdy and attractive, with an unobstructed view of Lake Kenosha. Julian landscaped it beautifully over the years.



children on cereal boxes or other promotional forms. But no project was fruitful enough to support his family. Mass market children's entertainment was going in other directions. Julian's moving illustrations delighted their final readership in a 1962 Mother Goose publication.

With the family resettled in their new life and his book income tailing off, Julian explored new commercial directions for his moving images. Would there be a market for animated greeting cards? Or three-dimensional toys? There were fruitless negotiations with a Massachusetts company to produce them in plastic. Television was coming to dominate children's entertainment and there was at least discussion with one of the net-works of building a program around storytelling and the books but nothing came of it. Occasional projects with advertising firms in New York produced movables for

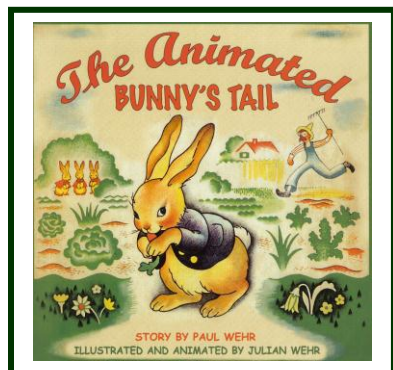


## Sculptor Reborn

In 1960, with their youngest child, Jeanine, graduating from high school, Julian and Julie moved to Florida. He was 62 by then, slowed by angina and nascent emphysema, with his spirit in the doldrums one might say. He designed a lovely little house for the three of them in New Smyrna Beach. Jeanie was off to college in nearby Deland. As the decade progressed, with Julie's encouragement and unfailing belief in his sculpting muse, Julian built a small studio attached to the house. He once again took up his chisels, the Swedish steel (if not the wooden handles) having survived the Vermont fire. For eight years he fought against time with a weakening body but creative spirit possessed, his muse working at peace with his beloved (ever growing and more geographically distant) family. He experimented with every kind of sculpting medium, producing lovely and interesting pieces, entering a Florida show here and there, and selling through a suburban Philadelphia gallery. Perhaps as contented as is possible for an artist, Julian died of a massive heart attack in 1970, age 72.



## Engineer Reborn



In 2003, Chris and I reintroduced the animated book to learn if Julian's genius could still work its magic with the child in all of us. It does, to judge by the delight in the eyes of the families now enjoying our first run of 4000 books. In spite of competition from television, the computer, films and videogames, the moving illustration hasn't lost its attraction for youngsters. And we mustn't forget the rekindled memories of the many boomers who come across the new editions, with a delighted "Hey, I had those when I was a kid

and how I loved them!” Or the gratification of movable book aficionados paying hundreds for an original that listed in the 1940s at \$1.25.

So, while Julian would have preferred to be known for his creations in wood, stone and steel, his moving paper sculpture bringing light through the years to millions of eyes, young and not so young, seems to me a legacy worthy enough. I believe my father, at his studio in the sky, would agree. There is not the slightest doubt that Julie would.

### Materials in the Exhibit

**From UVA collection:** tracings [ box-folders 1:26/ 2:1/ 2:2]; patents [b-f 1:19]; animated panels [b-f 1:2/ 1:5/ 1:7/ 1:8]; correspondence [b-f 1:13]; mockup [b-f 1:17]; photo [b-f 1:22]; tools [b-f 2:5].

**From Boulder:** Wehr originals; list of titles; Animated Antics disassembled; “An Artists Life” and “Julian Wehr Collection”; sculpture album with Jones attribution; spin-offs SW, ABT, ABT kit; Boehm et al.; Moving Illustrations file.

**From Hood River** (via Boulder and Stonington): King Cole toy.