NORTH AMERICA'S HISTORIC BUILDINGS
by Neal Bullington

The William H. Seward House
This house at 33 South St. in Auburn, New York was Seward’s home from 1824 until he died in 1872. Serving as U.S. Secretary of State from 1861 to 1869, Seward is best known today for his role in the purchase of Alaska, which came to be known as “Seward’s Folly”. Built in 1816, the house still contains some original furnishings and much of his library in a favorite room known as the North Library. Ownership is in private hands. This view by S. Hall Morris has no number or additional information on the back.

COMMENT
(continued from page 3)

3-D.” Fozzy explains that 3-D doesn’t work that way, but to no avail. Next, Fozzy runs after a man who has forgotten his glasses. The man refuses them, saying he has seen the movie 97 times. He then pulls what he calls “boomerang fish” out of a bag. When the killer fish attack in the film, he throws them at the screen, only to have them go flying back into an applauding audience.

In the article (March/April ’85, page 31) you wrote that on SCTV the titles “3-D House of Pancakes” and “3-D House of Representatives” were mentioned but never shown. They certainly have been shown, and I have tapes to prove it! Also, I recently saw a rock video on MTV that featured a Stereo Realist being used in several shots but I don’t remember the name of the song or the group.

On TV’s “Alice” 3-D movies have been mentioned on more than one occasion. I remember one scene when Mr. exclaims, “Hey! The Pussycat Theater is showing 3-D movies.” Another character replies, “You won’t like it, Mel. Those cardboard glasses give you a headache!”

A recent McDonald’s commercial promoting their 30th anniversary shows a pair of anaglyph glasses lying next to a hamburger or something. And finally, a stereoscope and viewcards are seen throughout the 1980 version of “The Blue Lagoon.”

Steve Phillips
Moline, IL
This is the third in our series of four articles on the life and work of photographer J. J. Reilly, covering his later years in San Francisco and Marysville. Part Two covered his years at Yosemite and appeared in the Jan./Feb. 1985 issue. Part One covered his time at Niagara and his move to Yosemite and appeared in the Nov./Dec. 1984 issue.
STEREO WORLD has never specified any maximum length for feature articles, as the installments of the current series on photographer J. J. Reilly certainly prove. A work of scholarly research on the scale of this one by Paul Hickman and Peter Palmquist is hardly an everyday event in the field of photohistory in general or the study of stereography in particular.

Rare as such efforts are, getting them published and distributed to any but the most limited academic audience is difficult at best. STEREO WORLD is very nearly alone as a publication open to work like this—precise, detailed, and illustrated. If the magazine is to be faithful to its goals, we can't shut out any particular article for reasons of length alone—or demand that it be condensed to "convenient" size. An article with no hope of fitting into a single issue can almost always be published in parts, with careful planning. While the four-part article on J. J. Reilly is the most ambitious project of this sort we've undertaken, there are other major features possible that could benefit from our experience with this one. Some even longer articles could be run in shorter installments in more issues. In general, STEREO WORLD has the capacity (human and otherwise) to handle about one of these extended features per year.

—John Dennis

STEREO FEATURED AT PHOTOHISTORY VI

"The History of Stereo Photography" will be one of the presentations this year at PHOTOHISTORY VI—the photohistorical symposium set for October 11 to 13 at George Eastman House in Rochester, NY. The lecture by famous photohistorian and collector S. F. Spira will be illustrated through stereo projection as part of the weekend-long program sponsored by the Photographic Historical Society, Inc.

Experience the atmosphere of Eastman's stately home. View the museum's internationally famous collections, including special showings of items not normally displayed and a major exhibit by contemporary French photographer Lucien Clergue. And learn about the Eastman House supporters' program to retain this important cultural asset in Rochester.

The opening reception Friday evening includes a Godowsky/Gershwin musicale commemorating the 50th anniversary of Kodachrome film, with performers from the Eastman School of Music.

A full day of lectures Saturday includes three curators from the International Museum of Photography at George Eastman House. Seldom-seen items from the museum's unmatched archives will be presented by Robert A. Sobieszek, Director of Photographic Collections ("Treasures from the Eastman House Vaults I—Images") and Philip L. Condax, Director of Technology Collections ("Treasures from the Eastman House Vaults II—Apparatus"). Andrew H. Eskind, Director of Interdepartmental Services, will demonstrate how high technology provides improved access to historical materials with "Computer Output Microfiche on Photographers."

The preliminary list of speakers includes: Michel Auer, internationally known author, collector and researcher from Switzerland: "Photographers Encyclopedia International"—a resource for future research on photographers. Morris Moses, an engineer and noted researcher into the technical aspects of the history of photography: "Definitive History of Subminiature Photography." Naomi Rosenblum, professor at Parsons School of Design, New York, and author of a major history of photography: "From Mentor to Friend: Alfred Stieglitz and Paul Strand"—new research on the human dimension of photography and a chance to see Strand's important early work. S. F. Spira, prominent New York photohistorian and collector: "History of Stereo Photography"—as depicted by images and apparatus...projected in stereo!

Saturday evening, enjoy a candlelight dinner in Eastman's impressive mansion. Seating is limited, so reserve early. (The after-dinner presentation in the auditorium is available to all symposium attendees.)

Sunday is photographica day, featuring an exhibit and sale of antique equipment, images, and literature. Symposium and trade fair registration is $40, $20 for students. Banquet tickets are $25. Advance registration is advised, especially for the banquet.

To make reservations, or for more information, contact The Photographic Historical Society, Box 39563, Rochester, NY 14604.
Comment

FUSION CONFUSION

I recall reading some request for fusing experiences. (Editor’s View, Jan./Feb. ’85) Perhaps you can handle these episodes of fusion and confusion. Awaking from a nap, I found myself staring at the car ceiling on which had been stamped rows of spots regularly spaced like the holes in a peg board. I could feel that both eyes were not on the same spot. Continued staring revealed that about half of the spots were up to half an inch in front of or behind the plane in which they were supposed to lie. Closing and then reopening my eyes would fuse a different path of spots, with the result that a different group of spots would be displaced. Those spots were not as regularly spaced as had been intended.

I believe the above is called the “wall paper” effect. Almost any repetitive pattern can be tested thusly for possible stereo effects. Meticulously spaced patterns remain flat.

My weirdest stereo sight was offered one night by looking through two runs of vertical slat fencing at a lighted background in the neighbor’s yard. I thought I detected a dark object about 3 feet high (the fence is about that height) standing between me and the near fence. The near fence appeared a bit larger so that down the length of the superimposed views of the fences, groups of slats alternated between aligning (letting light through the spaces between) and blocking off openings (creating a dark band). Alternating the eyes shifted the positions of the dark bands several slats; so each eye was seeing a different set of bands. Where a line of sight from a band to the left to the right eye crossed a line from a band to the right to the left eye was the point at which the shadowy dark image seemed to be—this time on the near side of the near fence. It was like looking at the shadow of the little man that wasn’t there.

A stereo experience is sometimes offered by a photograph of a building which has repetitive elements spacedly spaced.

These might be pilasters, deep window recesses, or views back into the building through evenly spaced windows and showing repetitive patterns of lighting. If there is too much perspective in the picture, size disparity between adjacent elements may foil the effort. But a little perspective requires only that the titl of your horizon be adjusted depending on the angle of presumably horizontal lines at the level you attempt to view. Fuse two elements by crossing the eyes (the more elements between fused elements, the more pronounced the stereo). The element to the left is a right eye view of the fused element, and vice versa. I have had a field day with architectural magazines, getting a better impression of the building pictured than 99.5% of the other readers.

A stereo experience is sometimes offered by a photograph of a building which has repetitive elements spacedly spaced.

These might be pilasters, deep window recesses, or views back into the building through evenly spaced windows and showing repetitive patterns of lighting. If there is too much perspective in the picture, size disparity between adjacent elements may foil the effort. But a little perspective requires only that the tilt of your horizon be adjusted depending on the angle of presumably horizontal lines at the level you attempt to view. Fuse two elements by crossing the eyes (the more elements between fused elements, the more pronounced the stereo). The element to the left is a right eye view of the fused element, and vice versa. I have had a field day with architectural magazines, getting a better impression of the building pictured than 99.5% of the other readers.

HISTORICAL 3-D TRIVIA

In the 1951 British film "The Magic Box", the entire film deals with the life of William Friese-Greene who in 1897 invented the magic lantern. (Which by the way was a 3-D movie camera—it photographed a series of twin images, of which only one image was projected, by magic lantern.)

In the film, Friese-Greene (played by the late Robert Donat) strives to perfect his invention, but in so doing loses his money, his property and his self respect. He dies penniless. The film is 103 minutes long and has a large cast of British stars of the day, including Peter Ustinov.

MORE 3-D TRIVIA

The following is a listing of movies and TV shows using 3-D as a background element.

In "Bachelor Party", there is a scene which takes place in a theater showing a 3-D film. While a fight is taking place directly in front of the first row of seats, a couple (wearing anaglyph glasses) comment on the film, which is also in the middle of a fight sequence. The man says, “This is the best 3-D I’ve ever seen!” His date replies, “Nah, I’ve seen better!” Almost immediately, she is punched in the nose during the brawl occurring before her. “It is real!” she replies, or something to that effect.

In "The Muppets Take Manhattan" there is a funny 3-D sequence which shows Fozzy Bear working at a theater. The marquee and several posters all read “Attack of the Killer Fish in 3-D.” As Fozzy hands out polarized glasses to the theater’s patrons, we see the Popcorn Man (who often appeared on "The Muppet Show" as the mixed up chef) complete with 3-D glasses and all. He throws popcorn into the air, and when it falls into his face, says “The popcorn’s in (continued on inside front cover)
Pulpit Rock lay forty-one miles to the east of Ogden at the western entrance to Echo Canyon. Like A. J. Russell (the first railroad photographer to visit the region), Reilly also had the ability to arrange men and machines into harmonious relationships with the surrounding natural environment. Looking back in the opposite direction, from the mouth of the canyon toward the broad valley of the Weber River, Russell had conceived of the red conglomerate formation as being the “Sphinx of the Valley.”
whose only norm for mountain scenery was the Sierra Nevada. He had grown accustomed to the scale, topography, and climate of the Far West, and he was writing his letters for an audience in California. The *Alta*’s special correspondent decided to try his hand as an art critic on June 2, 1867. Twain was impressed by the physical size (sixteen square yards) and by the topographical accuracy of the *Domes of the Yosemite*, but he thought the atmospheric effects of the German-American painter were “imported...from some foreign country” and “smuggled into a portrait of the Yosemite.” To an indigenous writer like Twain, whose literary quest for a unique, American identity was marked by an almost obsessive concern with European civilization, it was not only unnecessary but improper to smuggle an alien German sky into a “portrait” of an unrivaled American place.

Six days later, the young writer embarked on “the first organized pleasure party ever assembled for a trans-atlantic voyage.” It was a memorable excursion. For the first time on record, “Everybody was going to Europe,” and Twain was aboard the steamship *Quaker City* as a spokesman for these “Innocents Abroad,” these “New Pilgrims.” He became an unofficial laureate for the kind of lowbrow, middle-class, American tourist that had just begun to replace the middlebrow, upper-class variety on the grand European circuit.

For five years—three in Nevada and two in California—Mark Twain lived in the Far West and worked as a journalist. Before he sailed from San Francisco on December 15, 1866, he secured a position as the “special travelling correspondent” of the *Daily Alta California*. In New York, the merciless abuse of local art critics almost dissuaded Twain from going to see the latest painting of Albert Bierstadt, *The Domes of the Yosemite*. Eastern art critics of the mid-nineteenth century tended to judge landscape paintings of the Western cordillera against an established norm: the Catskill Mountains as painted by the Hudson River School. According to one of Bierstadt’s critics, the Sierra Nevada was simply not a fit subject for a painting: “It may be faithful scenery, a jury of twelve men might so declare it, but we should nevertheless fall back upon abstract conceptions of nature.” Another New York columnist called the entire state of California “a land that hasn’t any nature in it—at least any nature such as we know...Such a climate and country may be possibly a very good place to live in, but it makes very uncomfortable pictures, and we wish Mr. Bierstadt would look up a field for his talent as an artist in which he might find some proper food.”

Twain, on the other hand, was a Western journalist whose only norm for mountain scenery was the Sierra Nevada. He had grown accustomed to the scale, topography, and climate of the Far West, and he was writing his letters for an audience in California. The *Alta*’s special correspondent decided to try his hand as an art critic on June 2, 1867. Twain was impressed by the physical size (sixteen square yards) and by the topographical accuracy of the *Domes of the Yosemite*, but he thought the atmospheric effects of the German-American painter were “imported...from some foreign country” and “smuggled into a portrait of the Yosemite.” To an indigenous writer like Twain, whose literary quest for a unique, American identity was marked by an almost obsessive concern with European civilization, it was not only unnecessary but improper to smuggle an alien German sky into a “portrait” of an unrivaled American place.

Six days later, the young writer embarked on “the first organized pleasure party ever assembled for a trans-atlantic voyage.” It was a memorable excursion. For the first time on record, “Everybody was going to Europe,” and Twain was aboard the steamship *Quaker City* as a spokesman for these “Innocents Abroad,” these “New Pilgrims.” He became an unofficial laureate for the kind of lowbrow, middle-class, American tourist that had just begun to replace the middlebrow, upper-class variety on the grand European circuit.

By Paul Hickman and Peter Palmquist

J. J. Reilly was a young Scottish emigrant in search of a new life when he arrived in California in 1856. After serving as a volunteer in the Union Army, he became a naturalized American citizen in 1866. The economic depression that still plagued the nation in the year of the centennial had not yet shaken his basic, positive attitude toward his adopted homeland. His views “from the Pacific Shore” were the first photographs to be received at the Philadelphia world’s fair. Ten years later, after another business slump and another broken marriage, Reilly’s optimistic views about the nature of art and life in America were abandoned altogether, but for the preceding fifteen years he was quite explicit about the national character of his work.

He devised a total of eight different logos for his stereo cards between December 1871 and August 1886. He updated his imprint whenever he formed or dissolved a partnership and whenever he made a seasonal or permanent change of address. (A few of his unnumbered cards fail to specify any place of publication.) The photographer was forever changing his logo, but in fifteen years there was one phrase that he never changed. Every known card of the period is inscribed with the obvious yet significant fact that Reilly’s stereographs were “Views of AMERICAN SCENERY.”
An English aristocrat was forcibly struck by an idea that soon became known as photography during his third visit to "classic Italy," during his honeymoon "on the lovely shores of the Lake of Como." A generation later, the famous alpine lake was reappraised by the *Alta*'s travelling correspondent in more colloquial, Western terms: "COMO? PSHAW! SEE LAKE TAHOE!" Several months later, the New Pilgrim made another comparison between the scenery of the Old and New worlds: "THE CELEBRATED Sea of Galilee is not so large a sea as Lake Tahoe by a good deal—it is just about two thirds as large."

Afterwards, he explained in a footnote, "I measure all lakes by Tahoe, partly because I am far more familiar with it than with any other, and partly because I have such a high admiration for it." To someone who had experienced the awesome scale of the American West, the scenery of the Old World was bound to seem pallid, domesticated, dwarfed.

From his travel letters and his unpublished journal, Twain compiled his "record of a pleasure-trip" in the spring and early summer of 1868. A year later, two months after the completion of the transcontinental railroad, it was published in the East.

The previous generation of upper-class Americans had made its annual summer migration at home as well as abroad. It had sailed not only across the Atlantic to Europe, but up the Hudson to Saratoga, the most exclusive American spa of the 1840s: "O Saratoga, Saratoga—if proof demonstrative be wanted of fashion's omnipotence, truly thou dost furnish some four thousand unanswerable arguments!" Saratoga was the chosen resort of the idle rich.

Six years after the completion of the Hudson River Railroad (1851), each of the big Saratoga hotels was accommodating twelve hundred guests. The affordable, five-dollar fare from Manhattan was bringing a new class of summer visitors to the Springs. Once carloads of these coarse Yankee businessmen began to fill the resort hotels, Saratoga was no longer exclusive, therefore no longer fashionable, and it was shunned by cultivated circles of high society. "The company is dreadfully mixed," lamented Henry James, in describing "the dense, democratic, vulgar Saratoga" of 1870. "Gentlemen at Saratoga are at a premium," observed the American expatriot, "far more...than at European watering-places."

Near Saratoga, James echoed one of Ruskin's positions—the American wilderness was an unfit subject for art, because its nameless solitude lacked meaningful, historical associations:

You feel around you, with irresistible force, the serene inexperience of undedicated nature—the absence of serious associations, the nearness, indeed, of the vulgar and trivial associations of the last picturesque of great watering-places."

Ruskin's basic assumption about the need for a relationship between nature and culture in art was rejected by many artists of the Hudson River School, but even those who share the English critic's anthropocentric bias toward art would have taken issue with his ambivalent disciple, Henry James, when the young anglophile dismissed scenery near Saratoga, the site of an important British defeat during the American Revolution, as devoid of "serious associations." The egalitarian and historical meanings of Saratoga were
anything but “vulgar and trivial” to patriotic American artists in the Era of Manifest Destiny. Before leaving upstate New York for his new home in California, Reilly visited the famous watering place. He also photographed it, presumably with the intention of selling his views to customers of his own social class.

By 1870 the most exclusive circles of high society had already begun a new migration pattern for the spring and summer months. Thousands of select Easterners were flocking to California, but it was not really “the West—the newer part of the New World—that many of the gentlemen tourists sought beyond the Missouri River,” writes Earl Pomeroy, in his social history of Western tourism, “but rather Italy, and the older part of the Old World. Californians hoped that the building of the Pacific railroad in 1869 would bring them traffic that had moved from the East Coast resorts to Europe.” The transcontinental railroad did indeed bring many Eastern and European tourists to the Pacific Coast, but many of them were nonetheless obsessed by “the transatlantic standard.” Metaphorical comparisons between the railroad journey and an overseas voyage became a literary convention in travel books of the late nineteenth century, and to those whose faith sustained them, California was “the Italy of America...or perhaps the

No. 135—PALACE HOTEL, SAN FRANCISCO, CAL. ["J. J. Reilly, Marysville, Cal./Views of American Scenery." (margins of recto, orange and lavender card). Also pirated by E. P. Best and by Miller & Best, and on anonymous imprints entitled "Stereo Views" and "Stereoscopic Views."]

The Palace was the largest and most sumptuous hotel in the world when it opened on October 14, 1875. Its monotonous, corrugated walls of bay windows sprawled to the southeast and southwest from the busy intersection at Market and New Montgomery streets.

Palestine.” Each New Pilgrim tended to describe his own intellectual background as much as the new land he visited, and through the changing pattern of his expectations and his observations, he not only helped to write the social history of the trans-Mississippi West, but to a surprising degree, he determined it.

The inaugural year of Yosemite’s tourist industry was 1855. The total number of visitors in the first ten years was 653; the total number of photographers was two (Charles L. Weed and Carleton E. Watkins).

During the year 1864, the number of visitors to the Yo Semite Valley was 64; in 1869, the list thus far foots up 1,113. The next season will undoubtedly show a much heavier influx of tourists.

By coincidence, 1864 was also the year that Pullman introduced the first modern sleeping car, “the Pioneer.” Five years later, after the conclusion of the 1869 tourist season,
it was by no means a coincidence that Pullman’s latest and most luxurious car was named “the Yo Semite.”

The Eastern tourist in the Far West was invariably “a gentleman,” quips Earl Pomeroy, “at least to his banker.” Only the rich could afford to ride in one of Pullman’s Yo Semite cars. The first-class, round-trip fare from New York to San Francisco was $570 in 1869, and the cost never dropped much below three hundred dollars till the rate wars of 1886-87. Most school teachers earned around two hundred dollars a year in the America of the 1870s and early 1880s. Six-week, round-trip excursions from New York to California had an average total cost of about eight hundred dollars; one-week, round-trip excursions from San Francisco to Yosemite were around $150. After the railroads, the average per-diem cost of travel in the Far West came to about two and a half times the cost of similar travel in Europe.

The alternative to travelling cross-country in a Pullman car was riding in the spare, cramped quarters of a second-class car attached to a freight train. Emigrant passage from New York to San Francisco was seventy-six dollars—a more affordable, one-way fare that lay within the means of many frugal, middle-class Americans. There were 13,114 passengers who travelled by rail from the East to San Francisco, as opposed to only 7,831 who travelled from San Francisco to the East, during the first five months of 1870. The prohibitive costs of first-class travel and the physical discomforts of second-class travel made it a foregone conclusion that each one of these Eastern travellers was either very rich or very hearty.

Four photographers travelled from New York to California in the springs of 1870 and 1871. J.J. Reilly and Charles Bierstadt journeyed from the most photographed place in America (Niagara) to the most photographed place in the West (Yosemite). Thomas C. Roche and Charles L. Pond came from Brooklyn and from Buffalo. Each of these photographers created a large body of work (at least a hundred stereographs) in the Yosemite region. The characteristic style of each visitor was determined in large part by his preconceptions about the West, by the nature of the cultural baggage he brought with him from the East. Unlike his fellow travellers, Reilly was an emigrant, not an excursionist. Bierstadt, Roche, and Pond toured the region for a season or two, making views of all its curious sights, then they returned home to photograph more familiar scenes in the East. Reilly lived and worked on the Pacific Coast for the rest of his life, a period of twenty-five years. The West became his home, his norm for American scenery.

Like the great twentieth-century photographer, Ansel Adams, Reilly received his first impressions of Yosemite's...
No. 443—MEXICAN CACTUS. [Orange and lavender card.]
Reilly had already visited "a great portion" of the Pacific Coast by July of 1874. He travelled as far south as Santa Barbara, where he photographed the old Spanish mission in addition to these dapper gents seated beneath a "Mexican" cactus. After the opening of its first resort hotel in 1874, Santa Barbara was visited on a regular basis by a small and unpretentious circle of Eastern tourists who sought an arid climate and a quiet, relaxed atmosphere.

waterfalls in the month of May. The spring thaw had just reached a crescendo in the fountainheads of the high Sierra. For Adams, the first experience was "so intense as to be almost painful"; he returned to the Valley every year for the rest of his life. From 1916 to 1984, Ansel's life was "colored and modulated by the great earth-gesture of the Sierra." The preceding autobiographical statement introduces an anthology of writings by John Muir, who coined expressions like "earth gesture" and "mountain sculpture" in the early 1870s. Muir's friend Reilly unquestionably preceded Adams in sharing intense feelings about Yosemite and its unique sense of place.

A pleasure trip to Yosemite was de rigueur for well-bred visitors from the "States." Afterwards, at least one such visitor had the audacity to admit why she—and many other Eastern tourists—had really made the trip. It was prescribed by fashion as the proper—if not compulsory—thing to do. "Wo betide the wandering Easterner," she warned in mock injunction, "if he seek the Pacific without bringing a trip to Yosemite back with him!" The trip had become fashionable, but many of those who made it had little real interest in seeing the place.

Thousands of excursionists travelled from the Atlantic to the Pacific in May of 1870. First by stagecoach, then on horseback, "the fashionable hordes" proceeded to descend upon the beloved Yosemite of John Muir:

They climb sprawlingly to their saddles like overgrown frogs pulling themselves up a stream-bank through the bent sedges, ride up the valley with about as much emotion as the horses they ride upon, and comfortable when they have "done it all," and long for the safety and flatness of their proper homes...

The tide of visitors will float slowly about the bottom of the valley as a harmless scum, collecting in hotel and saloon eddies, leaving the rocks and falls eloquent as ever and instinct with imperishable beauty and greatness. And recollect that the top of the valley is more than half way to real heaven, and the Lord has many mansions away in the Sierra equal in power and glory to Yosemite.

The following summer, Muir and Reilly were standing a mile above the floor of the Valley, reveling in the mountain gloom and mountain glory of Cathedral Pass and Cathedral Peak. Four years later, Muir wrote another letter from the Valley:

THE SUMMER FLOOD OF TOURISTS
As soon as the winter snow melts, an ungodervable avalanche of tourists comes pouring pell mell into Yosemite, flooding the hotels, and chafing and grinding against one another like rough-angled bowlders in a pothole.

Reilly lived and worked in Yosemite Valley for seven summers (1870–76). In these years, he had some satisfying, mountaintop experiences with Muir, but neither photographer nor guide was really free to leave the Valley for any length of time during the peak months of the tourist season. The financial success of Reilly's photographic business depended on the patronage of a heavy, seasonal influx of tourists. He sold these tourists his hard-earned views of alpine scenery, and he made countless portraits of them.
No. 442--DEVIL'S PUNCH BOWL, GEYSER SPRINGS, CAL. ["Paste-over" stereograph affixed to an orange and lavender card; probably marketed by E. Nesemann.]

From San Francisco, reaching "the Geysers" required a twelve-hour trip by boat, rail, and stage. From 1865 to 1874, the volcanic region beyond Sonoma attracted many visitors who were unwilling to make the longer, more arduous trip to Yosemite.

The hot springs and fumaroles of the region emitted strange vapors, which promoter and publicists delighted in calling infernal. From Thos. Houseworth & Co. or Bradley & Rulofson a tourist might purchase stereo views of the Devil's Canyon, Laboratory, Office, Pulpit, Tea Kettle, or Washhtub; Pluton Creek or River; Vulcan's Steam Works; the Witch of the Geysers or the Witches' Caldron.

One of these eerie scenes was described by Benjamin P. Avery, a journalist and art critic of the period. The Witches' Caldron was "filled with a thick inky liquid, boiling hot, that tumbles and roars under the pressure of escaping steam, emitting a smell like that of bilge-water, and seems to proceed from some Plutonic reservoir. One irresistibly thinks of the hell-broth in Macbeth, so 'thick and slab,' and repeats the words of the weird sisters: 'Double, double, toil, and trouble, Fire burn and caldron bubble.' A clever photographer, Mr. Muybridge, conceived the idea of grouping three lady visitors about this caldron, with hands linked, and alpenstocks held like magic wands, in which position he photographed them amid the vaporous scene with telling effect." (Avery was "irresistibly" led to think of Shakespeare's play by Muybridge's narrative subtitles for these two stereographs: "Macbeth, Act 4, Scenes 1-2.") Elsewhere, Muybridge etched Satan himself into a stereo negative of the Devil's Tea Kettle.

Reilly's view of the Devil's Punch Bowl is not so "clever" as some of Muybridge's more "telling" effects, nor has he populated his infernal scene with a large tourist group—a standard marketing practice in the smaller views of Watkins, Houseworth, and Bradley & Rulofson.

One of these artists has set his skylight kennel in front of the Yo Semite Fall, and blazons in big letters: "Photographs taken with the Yo Semite in the background!" Think of the impudence of the thing! Offering to throw in twenty-six hundred feet of cataract; pairing off your little dot of a face and figure with a half mile tumbling glory, and selling cascade and tourist for eight dollars a dozen. 24.

Ten years earlier, Twain was more enraged than even the preceding observer when a souvenir hunter from his ship had attempted to chip a "specimen" from the face of the Sphinx. The American writer was truly awed by the historical associations of the ancient monument: "Egyptian granite that has defied the storms and earthquakes of all time has nothing to fear from the tackhammers of ignorant excursionists." Likewise, the granite walls of the Yosemite were not only unscathed, but untouched, by most of Reilly's customers. Twain's travelling companions sought to
The Farallons were a small group of islands about thirty-five miles beyond the Golden Gate. South Farallon Island was a natural habitat for sea lions, jackrabbits, and murrels. A covey of these birds can be seen perched atop Murre Bridge in Reilly's view. From 1876 to 1886 all of Reilly's stereographs were trimmed in a new Bergner cutter. The resulting prints were larger and had an Adamesque arch of squatter proportions. Much of the picturesque beauty of Natural Bridge is attributable to the size and shape of the new dies and to the positioning of the uncropped prints in the cutter. The variety and irregularity of the serrated line at the top of the picture was much enhanced by the decision to place it in such close proximity to the low, squat arch of the picture frame.

deface the wonders of the ancient world for the sake of a souvenir. Excursionists who visited the natural wonders of the New World tended to be richer, better educated, more fashionable, and less destructive. Most of Yosemite's early tourists were content to survey its cliffs, falls and domes for the New World tended to be richer, better educated, more

new Bergner cutter. The resulting prints were larger and had an Adamesque arch of squatter proportions. Much of the picturesque beauty of Natural Bridge is attributable to the size and shape of the new dies and to the positioning of the uncropped prints in the cutter. The variety and irregularity of the serrated line at the top of the picture was much enhanced by the decision to place it in such close proximity to the low, squat arch of the picture frame.

FOOTNOTES


3Mark Twain, "The Domes of the Yosemite," San Francisco Daily Alta California, 4 August 1867, p. 1, col. 5.


5Mark Twain, "Lake of Como, July, 1867," San Francisco Daily Alta California, 22 September 1867.

6Mark Twain, "Capernaum, September, 1867." San Francisco Daily Alta California, 19 January 1868.

7Mark Twain (Samuel L. Clemens), The Innocents Abroad. or, the New Pilgrims' Progress (Hartford: American Publishing Company, 1869), p. 307.


For a brief discussion of these styles and preconceptions, see Paul Hickman, "Art, Information, and Evidence: Early Landscape Photographs of the Yosemite Region," Exposure 22 (Spring 1984): 26-27.


Mark Twain, The Innocents Abroad, p. 630.


Reilly's cards were being marketed by Amos Woods, of Marysville, California. [Logo, verso, unnumbered stereograph, collection of Peter Palquist.] Two years later, Reilly succeeded Woods as the proprietor of the Marysville gallery.

By July, Reilly had left San Francisco and moved to Marysville, where he proceeded to establish himself as a portrait and landscape photographer.

For the remainder of the year, he ran a seven-stanza advertisement in one of the local papers. He touted his many years of experience in posing sitters, his chiaroscuro lighting effects (the so-called "Rembrandt effect"), the latest style (bust portraits in three-quarter profile), correct exposures with shadow detail, great skill in retouching eyes and in hand-tinting lips and cheeks, and a picture that never fades . . . Fine work is done in Woods Photo Gallery, Odd Fellows Bldg, Marysville by J. J. Reilly, inventor of the new magic process for making the baby's pictures in from one to two seconds." ["At Woods Photo Gallery," Marysville Daily Appeal. Reilly had already succeeded Amos Woods as proprietor, but he retained the gallery name, which local residents had associated with the business since 1860.]

1879-86: Reilly operated the gallery for the next seven years. It was situated on the top floor of a three-story building that still stands on the northeast corner of Third and D streets in downtown Marysville. [History of Yuba County, California (1879), p. 142; Yuba County Census (1880), p. 414, information courtesy of James Abajian;
No. 215—EASTERN-BOUND TEA TRAIN, C.P.R.R., CAL.

'Paste-over' stereograph affixed to an orange and lavender card; probably marketed by E. Nespermann. Also pirated on a 'Diamond H' card.

Blue Canyon lay along the right-of-way of the Central Pacific Railroad, 216 miles to the east of San Francisco, on the western slope of the Sierra Nevada. In creating a sense of the rapid motion of rolling stock, Reilly's views were often more successful than those of the Central Pacific's own photographer, Alfred A. Hart, but in portraying the billowing smoke of steam engines, Reilly's unmanipulated wet-plate views of the 1870s were often surpassed by the retouched dry-plate views of a Colorado railroad photographer, William H. Jackson. Yet Jackson's pictures, like Hart's, still tend to lack a sense of movement, a sense that Reilly was sometimes able to engender by means of the arcs and diagonals of his open, baroque compositions.

McKenney's City and County Directory of Yuba, Sutter, Colusa, Butte and Tehama Counties (1881), p. 105; McKenney's Business Directory of the Principal Towns of California, Nevada, Utah, Wyoming, Colorado and Nebraska (1882), pp. 322, 589; Heald's Business College Directory (1882); McKenney's Pacific Coast Directory for 1883-84, p. 664; McKenney's County Directory of Yuba, Sutter, Colusa, Butte, and Tehama Counties (1884-85), p. 200; McKenney's Pacific Coast Directory for 1886-7, p. 566."

Reilly photographed one hundred and eleven surviving members of the Marysville Society of California Pioneers in his studio. He combined his vignetted bust portrait of each "forty-niner" into a single, mammoth-sized, photomontage. [Collections of the California State Library and Peter Palmquist.]

On a lower note, he was also paid at regular intervals, by the city of Marysville, for taking "mug shots" of local prisoners. [City council minutes, July 1879-August 1886, John Packard Library of Yuba County.]

After he had reestablished himself as a portrait photographer, Reilly resumed his former practice of numbering his stereo views. He devised new numbers for his better early work, and he assigned numbers for the first time to many of his later negatives.

1880-83: Employed a Chinese assistant named Sooy. [Information courtesy of Paul T. Shafer.]

1880-84: Sometime in the early 1880s, Reilly visited the Monterey peninsula. He photographed the Hotel del Monte and the Mission San Carlos. [The resort had opened on June 3, 1880; the church was restored in 1884.]
His views of the trestles and tunnels of the Santa Cruz narrow-gauge railway may date from the same excursion. [The narrow-gauge line from Santa Cruz to Watsonville was completed in 1876. Three years later a branch line was laid to the California Powder Works. The munitions plant is also the subject of a Reilly stereograph.]

1881: February: Boarding at the Western House, on the corner of Second and D streets, in Marysville. [City and County Directory of Yuba, Sutter, Colusa, Butte, and Tehama Counties, pp. 105, 118.]

March 1: At the age of forty-two, Reilly was married in Sacramento to his second wife, Jennie.

1883-84: "Awarded the First Premium at the last Fair for 1883, For the BEST PHOTOGRAPHS... Pictures copied and enlarged to life size, in Water Color, India Ink or Oil Painting." [Verso, carte-de-visite and cabinet-card portraits, collection of Peter Palmquist.]

1884: January: John and Jennie Reilly were residing at the corner of Eighth and D streets in Marysville. A block from John's place of business, Jennie was working as the proprietress of "Bon Ton Millinery Store/Dealer in French Flowers, Feathers./Ornaments, Laces, Etc. /Also an Excellent Stock of Hair Goods." [County Directory of Yuba, Sutter, Colusa, Butte, and Tehama Counties, pp. 200, 220.]

1884-86: Reilly's Yosemite views were displayed by the Southern Pacific Company at a succession of national and international exhibitions: 1) the World's Industrial and Cotton Centennial Exposition, New Orleans, December 16, 1884-June 1, 1885; 2) the Southern Exposition of Art, Industry and Agriculture, Louisville, August 1885; 3) the North, Central and South American Exposition, New Orleans, November 10, 1885-April 1, 1886. [Charles B. Turrill, Catalogue of the Products of California (New Orleans, 1886), pp. 3, 93.] Yosemite's most influential publicist acknowledged Reilly's contribution "in advancing its renown." [J. M. Hutchings, In the Heart of the Sierras (1886), p. 131.]

1885: December: "Every person having pictures taken at the Woods Gallery during the month of December will be presented with a ticket which will entitle the holder to a chance in a fine large picture of him or herself... J. J. Reilly, photographer." [Marysville Daily Appeal.]

1886: August 15: Reilly abandoned his second wife and his life's work in Marysville. His master set of stereo negatives—a body of work twenty years in the making—was acquired by Enno Nesemann, the proprietor at Woods Gallery for the next fourteen years. Like his predecessors in the small, country town, Nesemann earned a living by taking "dogtypes" and "mug shots", and by marketing views to a regional audience.
1887: June 15: As a veteran of the U. S. Army, Reilly filed a successful reapplication for a disability pension. He was residing in San Francisco, where he could be addressed care of Oscar Foss, a photographic stock dealer at 841 Mission Street.

1889: May 24: Divorce papers were filed in Marysville by Reilly's wife. [Jennie Reilly v. John James Reilly, suit no. 989, Superior Court of Yuba County, bk. 38, p. 380.]

June 17: Served summons to appear in divorce proceedings.

July 20: Failed to appear at the prescribed time in the Superior Court of Yuba County. The judge therefore awarded his wife all the property already in her name. [Judgement no. 337, bk. 7, p. 785.]

Two years later, his ex-wife was remarried to the local baker, Joseph Meyers. For another six years, however, she continued to run her millinery shop as "Mrs. J. Reilly." Seven years after retiring from business, she died in Redlands, California.

1890: May: Reilly was listed as an "artist" who resided at 313 Stockton Street. [Langley's San Francisco Directory, p. 1108.]

1891: On the 4th of March, he wrote a letter of inquiry to C. W. J. Johnson, a portrait photographer in Monterey: "Have you found a man yet to run your gallery for the summer? If not, I think I would try it, provided the place would pay anything above living expenses. I have been in the business for 25 years, but always for myself till lately. I am a steady, sober man, which you can find by enquiring of Foss or his bookkeeper Shilcock, as the two of them have known me about 20 years. Give me an idea of the amount of business done in the gallery and the prices you get for cabinet cards." Once again, Reilly gave the business address of Foss as his mailing address. [C. W. J. Johnson file, California State Library.]

1893: February 13: The New York Photograph Gallery was open for business on the top floor of the Vance Block in Eureka, California. The photographer in charge was J. J. Reilly, "a man of many years' experience." His partner was a man named Evans. The itinerant photographers remained in town for three months. [Humboldt Standard.]

1894: January: One of Reilly's views of Eureka was reproduced in a professional trade journal. It was described by the editor as "a fine architectural view," as an exemplary bit of work done by "an expert." [St. Louis and Canadian Photographer, vol. 18, pp. 44, 50.]

Sunday, June 24: Reilly was boarding at the Pioneer House, on the corner of Fourth and Mission streets, in San Francisco. He had already exhausted his disability pension. He was out of work and running out of money. Infirmed and despondent, he wrote the following suicide note, which he addressed to Coroner Hughes and to anyone else it might concern:

"This is to certify that I, J. J. Reilly, am tired of this life and so close up my accounts with all humanity on this earth.

No. 450—NATURAL MONUMENTS, IN MONUMENT PARK, COL. [Orange and lavender card.]

Midway between Ogden and Omaha, Reilly has boarded a southbound train of the Denver Pacific at Cheyenne, Wyoming. From Denver, he travelled as far west as the mining district of Georgetown, and as far south as the "natural monuments" of the Garden of the Gods. In 1871 the Denver & Rio Grande Railroad had transformed a provincial Colorado town into a fashionable watering place for its Eastern and English excursionists. According to the author of an 1873 guidebook to Colorado Springs, any significant historical monument to be found anywhere in the Old World invariably had its natural, New World counterpart somewhere within the Garden of the Gods. The visitor to "Monument Park" might "pass under the shadow of China's great wall, muse among Palmyra's shattered and fallen columns, stand face to face with the mysterious Sphinx of Egypt, gaze upon the Temples of Greece, or the Castles of England and Germany, or the old Abbeys which pious monks upreared."
Mr. An

J. J. Reilly was proprietor of the local Marysville photo gallery from 1879 to 1886; Jennie Reilly was proprietress of the local millinery shop from 1884 to 1897. She made the transition from housewife to businesswoman in the first year of an economic recession.

John and Jennie Reilly lived together in apparent happiness for five years, from 1881 to 1886. Reilly was divorced from his second, estranged wife three years later in 1889.

My reasons for doing so are: First, I am 55 years old; I have been disabled in the War of the Rebellion. Second, I am out of money and can find no work, so life to me is not worth living for. What are the few days, weeks, months or years which might be ahead of me? I am no good to any one, neither to myself, and why should I allow myself to suffer and go hungry? No, I will never do it. And as I see the country is in a very bad condition, and the Government is rotten, and it is only bloodshed that will purify it.

I request that my trunk and its contents be delivered to Oscar Foss, at 841 Mission street, who I know will forward it to my son, as I have directed him to do. I also request that my body be given to the Dr. Toland Medical College, as I am afflicted with liver and other troubles, which may be of use to the medical men. As I claim man should know and should be allowed to be his own judge as to what is best for himself, I claim this privilege. So good-by to all my acquaintances." ["Did Not Care to Live: The Reasons Given by J. J. Reilly for Attempting Suicide," San Francisco Examiner, June 29, p. 6, col. 6; "No Hope in Life: J. J. Reilly Prefers Death by the Gas Route," San Francisco Morning Call, June 29, p. 12, col. 6.]

Wednesday, June 27: Returning to the Pioneer House in the evening, Reilly stopped at the front desk to settle his account. After writing a letter to Oscar Foss, and setting aside five dollars that belonged to his old friend, he added a postscript to his suicide note: "My business is all settled, and I am in my right mind as much as I ever was. I am no drunkard, and know what I am doing." The old photographer then locked his door, and shut the window. Extinguishing his lamp, he turned the gas on full, "and went to bed to die."

Thursday, June 28: The next afternoon, a chambermaid detected a strong smell of gas coming from his room. "When the door was burst open he was found in bed unconscious." He was rushed to the hospital in a patrol wagon. His suicide note and a sealed envelope for Foss were found on his bedside table.

Friday, June 29: "Hovering between life and death at the Receiving Hospital."

Saturday, June 30: The following evening, Reilly died from the effects of carbon monoxide asphyxiation, and his body was removed to the Morgue. ["His End Accomplished: J. J. Reilly Dies from the Effects of Coal Gas," San Francisco Chronicle, July 1, p. 24, col. 6; "J. J. Reilly Succumbs," San Francisco Morning Call, July 1, p. 8, col. 7; San Francisco Examiner, July 1, p. 12, col. 2.]

Monday, July 2: At two in the afternoon, a funeral service was held for the late photographer in the parlors of Martin & Morrison, at 118 Geary Street. [San Francisco Examiner and Morning Call, each on p. 8, col. 7.]

Afterwards, his body was given to a local medical college, in accordance with his instruction. Reilly was survived by two ex-wives and by a son from his first marriage. A trunk filled with personal effects was shipped to the son. Some scattered remnants of his abandoned body of work are the photographic legacy that he left behind for the rest of us. He had succeeded in ending his life, but he was unable to erase his life's passage. In the final analysis, he was unquestionably a failure in business and in marriage, but his works were often an artistic success.

"The Fourth of July closes the Midwinter Fair—it will be Independence Day, San Francisco Day, and Closing Day all in one. Patriotism, sectionalism, and city pride will forr...
Upon his arrival in Marysville, Reilly began describing himself as the inventor and patent applicant for "the new magic process for making the baby's pictures in from one to two seconds."

On the backs of these cabinet-card and carte-de-visite portraits, Reilly announced that his gallery had once again captured the first premium for the best photographs at the 1883 fair (presumably the state or county fair).

North of Sacramento at the head of steamboat navigation on the Yuba River, Marysville was situated in proximity to the rich mining districts of the Feather and Yuba rivers. By the end of the first year of the California Gold Rush, the small river town was boasting a resident population of five hundred and a floating population of another thousand. Thirty years later, a small but proud fraction of these Marysville "forty-niners" were photographed by Reilly in his studio.
trinity of motives that will make the day one that will be long remembered in State annals." The San Francisco fair was "a detriment to the city during the hard times," and it was overshadowed by its obvious prototype, the Chicago world's fair, but in retrospect it was regarded as a partial success: "it has startled the world into a realization of the fact that the land of the sluice-box and the rocker has become the land of the plow and the pruning-hook." [Overland Monthly, 2d series, vol. 24, July 1894, p. 107.]

Almost a full year before Reilly's death, a brilliant and influential young professor from a large Midwestern university had already given birth to the "frontier school" of American historiography. The 1893 convention of the American Historical Association was held in Chicago in conjunction with the World's Columbian Exposition. Prof. Turner read his essay on "The Significance of the Frontier in American History" before the July 12th session: "The frontier has gone, and with its going has closed the first period of American history... In the crucible of the frontier the immigrants were Americanized, liberated, and fused into a mixed race, English in neither nationality nor characteristics. The process had gone on from the early days to our own... Moving westward, the frontier became more and more American. As successive terminal moraines result from successive glaciation, so each frontier leaves its traces behind it, and when it becomes a settled area the region still partakes of the frontier characteristics. Thus the advance of the frontier has meant a steady movement away from the influence of Europe, a steady growth of independence on American lines. And to study this advance, the men who grew up under these conditions, and the political, economic, and social results of it, is to study the really American part of our history." [Frederick Jackson Turner, The Frontier in American History (New York: Holt, Rinehart & Winston, 1962), pp. 4, 23, 38.] And to study the works of men like Reilly and Twain is to study the truly American part of our art and literature.

No. 403--MARYSVILLE LOOKING WEST, CAL. [Orange and lavender card; collection of John W. Weiler.] Marysville was the third largest town in California when Reilly first came to the land of El Dorado in 1856, but by the time he had become the town's portrait and landscape photographer in 1879, its population had dropped from 8,000 to 4,300.

A CHECKLIST OF STEREO VIEWS BY J.J. REILLY

Part II: New Series

The second checklist is a preliminary compilation of the "new series" views. These numbers and titles were devised by Reilly after he had established himself as a portrait photographer in Marysville, California. Negatives of different subjects were subsumed under a common number, but designated by separate titles, in at least three instances. Variant negatives are known to be designated by the same number and title in three additional instances. The "new series" views are crossreferenced, insofar as possible, to Reilly's "old series" numbers, to other photographers and firms that published his views from duplicate or copy negatives, and to various wholesale and pirated imprints. Whenever numbers were assigned to these views, the numerical designation is listed after the name of the maker or the name of the anonymous imprint.

Enno Nesemann acquired Reilly's master set of stereo negatives, and he probably also acquired an inventory of leftover Reilly cards. At first, Nesemann retained Reilly's "new series" number and title for each view, but he reset the information into a letterpress caption inserted beneath the left image of each negative. (Reilly's captions were electrotyped onto his Marysville cards beneath the right image.) Since "Reilly's paste-over stereographs" are invariably labeled in the typographical style of Nesemann, the vast majority of these hybrid views are presumably the product of Nesemann's early, transitional period as a stereo publisher in Marysville. (At least one example, however, seems to date from a much later period in his publishing career.)

At a later date, Nesemann renumbered a few of his Reilly negatives. He also updated and expanded his inventory of stereo views. For example, he published a stereograph of San Francisco's second Cliff House (1896-1907) under a number that Reilly had assigned to an outdated negative of the first Cliff House. From his provincial headquarters in Marysville, by 1890 Nesemann had become involved in producing comic scenes for the international audience of the Universal Stereoscopic View Company. The ambitious, small-town photographer also acquired several lines of European views, and several others of subjects nearer to home. A Nesemann stereograph of a San Francisco skyscraper was assigned the number 887; another of Mount Rainer was assigned his highest known designation, the number 915. The second example is a "paste-over stereograph" affixed to a curved Reilly card. To the best of our knowledge, Reilly never traveled up the Pacific Coast beyond Eureka, he never devised a "new series" number higher than 479, and he never marketed his work on curved stock. We can
By 1880 the tracks of two railroads had brought the northern end of Monterey Bay within three hours of San Francisco—and for a third of the old cost of travelling by stagecoach or steamer. The Santa Cruz Railroad Company was willing to make special, unscheduled stops to drop off campers and fishermen anywhere along its route—beneath coastal redwoods or beside mountain streams of the coastal range.

only surmise that Nesemann had modernized his remaining supply of old-fashioned Reilly cards by the turn of the century. If each of the preceding assumptions is correct, then Nesemann was responsible for marketing a huge, abandoned stockpile of Reilly's cards, and Reilly was responsible for taking a little more than half of Nesemann's final inventory of negatives.

Both the chronology and the checklists are works in progress, and each remains regretfully incomplete. We wish to acknowledge the assistance of Louis H. Smaus, who has made major contributions to both of the checklists. Can you, from your collection, provide us with any additional information? Any numbers and titles? Any cross-listings? Please direct information about views of the Yosemite, the Big Trees, the High Sierra, and Mono Lake to Paul Hickman at 945 Buena Vista Drive SE, Apt. H-204, Albuquerque, NM 87106. Information about views of all other subjects should be addressed to Peter Palmquist at 1183 Union Street, Arcata, CA 95521. We shall conclude our series of articles on Reilly in the next issue of Stereo World.

For a subsequent issue, we plan to compile a list of additions and corrections to the series, and we hope to be able to acknowledge your contributions.

**NEW SERIES** VIEWS

100—STATE CAPITOL, SACRAMENTO, CAL.
101—GRAND COURT, PALACE HOTEL, SAN FRANCISCO, CAL.
102—CHINESE STEAMER IN THE BAY OF SAN FRANCISCO, CAL.
103—SAN FRANCISCO LOOKING SOUTH, FROM NOB HILL.
104—RESIDENCE OF C. CROCKER, NOB HILL, SAN FRANCISCO, CAL.
105—SHIPING IN THE BAY OF SAN FRANCISCO, CAL. [E. Nesemann, No. 105.]
106—LOTTA'S FOUNTAIN, SAN FRANCISCO.
107—RESIDENCE OF MARK HOPKINS, NOB HILL, SAN FRAN.
108—CHINESE MERCHANT AND HIS WIFE, SAN FRANCISCO, CAL. [E. Nesemann, No. 108]
109—BALDWIN HOTEL, MARKET STREET, SAN FRANCISCO, CAL.
110—CLAY STREET, FROM SANSOME, SAN FRANCISCO, CAL.
111—BANK OF CALIFORNIA, SAN FRANCISCO.
SACRAMENTO, CAL. [American Views; E. Nesemann, No. 203.]

200—PULPIT ROCK, U.P.R.R. [E. Nesemann, No. 205.]

201—RAILROAD TRESTLE WORK CROSSING BEAR RIVER, CAL.

202—SUMMIT LAKE, C.P.R.R., CAL.

203—LAKE ANGELINE AT THE SUMMIT, C.P.R.R., CAL.

204—DEVIL'S SLIDE, U.P.R.R. [E. Nesemann, No. 184.]

205—MONUMENTAL SAWMILL, C.P.R.R.

206—SALT LAKE CITY AND THE WASATCH MOUNTAINS, UTAH.

[Also variant negative.]

210—HUMBOLDT HOUSE, C.P.R.R.

211—SUMMIT HOTEL, C.P.R.R.

212—SNOW SHEDS NEAR BLUE CANYON, C.P.R.R., CAL.

213—OGDEN DEPOT, C.P.R.R. [Also new view and title: "Bridal Veil Fall, height 900 feet, Yosemite Valley, Cal.""] Old series, No. 431; L. Dowse.]

214—MEXICAN CACTUS.

215—EASTERN BOUNDARY LINE, CAL.

216—LONG RAVINE BRIDGE, NEAR COLFAX, C.P.R.R., CAL.

217—BLOOMER CUT, C.P.R.R., CAL.

218—GOLD BEARING PYRAMID, GOLD RUN, C.P.R.R., CAL.

219—HYDRAULIC MINING, GOLD RUN, C.P.R.R. [E. Nesemann, No. 219.]

220—PULPIT ROCK, U.P.R.R. [E. Nesemann, No. 205.]

221—LEGENDS OF THE FEDERAL TRADE, CAL.

222—OVERLAND TRAIN COMING ROUND CAPE HORN, C.P.R.R., CAL.

223—GREAT WINDS, C.P.R.R., CAL.

224—1000 MILE TREE, U.P.R.R.

225—CAPE HORN, C.P.R.R., CAL.

226—GOING THROUGH THE PALISADES, C.P.R.R.

227—PASSENGER TRAIN GOING THROUGH THE PALISADES, C.P.R.R.

228—DONNER LAKE AND SNOW SHEDS, C.P.R.R., CAL.

229—C.P. RAILROAD BRIDGE, SACRAMENTO, CAL.

230—PICNIC GROUNDS IN BOWER CAVE, NEAR YOSEMITE VALLEY, CAL.

231—ENTRANCE INTO BOWER CAVE, NEAR YOSEMITE VALLEY, CAL. [American Series/American Views; American Views; E.P. Best.]

232—AMERICAN RIVER, FROM CAPE HORN, C.P.R.R.

233—C.P.R. PASSENGER DEPOT, SACRAMENTO, CAL.

234—YOSEMITE VALLEY FROM 3000 FT. ABOVE.

235—LAKE IN BOWDER CREEK, NEAR YOSEMITE VALLEY, CAL.

236—BIRDS ON THE FARALLON ISLANDS, PACIFIC OCEAN, CAL.

237—LYELL GROUP, FARALLON ISLANDS, PACIFIC OCEAN, CAL.

238—LIGHTHOUSE POINT, FARALLON ISLANDS, PACIFIC OCEAN, CAL.

239—LIGHT HOUSE, FARALLON ISLANDS, PACIFIC OCEAN, CAL. [E. Nesemann, No. 251.]

240—MOUNT TAMALPAIS, FROM SAUSELITO, SAN FRANCISCO.

241—C. P. R. PASS, LAFAYETTE, CAL.

242—BOWDER CREEK, NEAR YOSEMITE VALLEY, CAL.

243—Sierra Nevada, Cal. [American Scenery/American Scenery; Miller & Best; J. G. Parks.]

244—BOWDER CREEK, NEAR YOSEMITE VALLEY, CAL.

245—Saw ridge, sierras, CAL. [J. G. Parks.]

246—MIRROR VIEW OF YOSEMITE FALLS, YOSEMITE VALLEY, CAL.

247—SAW RIDGE, SIERRAS, CAL. [J. G. Parks.]

248—MIRROR VIEW OF YOSEMITE FALLS, YOSEMITE VALLEY, CAL.

249—YOSEMITE FALLS, HEIGHT 2634 FEET, YOSEMITE VALLEY, CAL.

250—YOSEMITE FALLS, HEIGHT 900 FEET, YOSEMITE VALLEY, CAL. [American Scenery/American Scenery; Miller & Best; J. G. Parks.

251—LIGHT HOUSE, CAL.

252—NATURAL BRIDGE, FARALLON ISLANDS, PACIFIC OCEAN, CAL.

253—FROM THE GATE OF GRANITE CASTLE, SIERRAS, CAL.

254—WATERFALL, YOSEMITE VALLEY, CAL. [American Scenery/American Scenery; Miller & Best; J. G. Parks.]

255—YOSEMITE FALLS, HEIGHT 2634 FEET, YOSEMITE VALLEY, CAL.

256—FROM THE GATE OF GRANITE CASTLE, SIERRAS, CAL.

257—MOSSIER FALLS, BLUE CANYON, C.P.R.R., CAL.

258—MOSHER FALLS, BLUE CANYON, C.P.R.R., CAL.

259—SILVER RIDGE, SIERRAS, CAL.

260—MOUNT TAMBUR, FROM SAUSELITO, SAN FRANCISCO.

Five miles south of the Monterey presidio, on the side of a knoll by the mouth of the Rio Carmelo, the Mission San Carlos was the seat of authority for the chain of twenty-one missions that extended from San Diego to Sonoma in Alta California, and it became the burial place of the first Padre-presidente of the missions, Junipero Serra. The third church to occupy the site was completed in 1797. The large stellar window piercing its massive stone facade and the attenuated morestle dome capping its staubea, square campanario make the church an unusual example of Spanish colonial architecture.

By a decree of the Mexican Congress, the Franciscan missions were secularized in 1835, and most of the old buildings soon fell into a sad state of disrepair. The barrel vault of the Carmel church came tumbling to the ground in 1852. The idea of preserving the "roofless and ruinous" church was conceived on San Carlos Day, 1879, by Robert Louis Stevenson. "As an antiquity" in the New World, "a quaint specimen of missionary architecture, and a memorial of good deeds," the young British writer thought "it had a triple claim to preservation." His letter to the Monterey Californian made a direct appeal to Yankee pragmatism by stressing a fourth reason for preserving the mission: its indirect value as a tourist attraction. Within weeks, both local newspapers had joined the campaign for preservation. The Californian thought a restored church might indeed "add much of interest to engage the attention of tourists. The expense will not be great and then, it is but casting our bread upon the water." A local Catholic priest was placed in charge of the actual restoration.

In 1884, the low-pitched tile roof of the old Carmel church was replaced by a steep shingle roof, and the sanctuary was rededicated to worship. The homeliness of the new roof was surpassed only by the incongruity of its superimposition behind the old facade.

Watkins, Taber, Fiske, and Reilly had already published views of the old church's ruins in the late 1880s, before over-zealous structural alterations transformed these photographs into valuable documents for the architectural historian. The entire church received a full and accurate restoration in the 1930s.
262—LEIDIG’S HOTEL AND SENTINEL ROCK, HEIGHT 3012 FT., YOSEMITE VALLEY, CAL. [Old series, No. 563; Richard Behrendt, No. 538; G. Fagersteen.]  
263—CLOUD’S REST AND MERCED RIVER, YOSEMITE VALLEY, CAL.  
264—MERCED RIVER AND GLACIER POINT, YOSEMITE VALLEY, CAL. [M. M. Hazeltine; S.C. Walker & G. Fagersteen.]  
265—HUTCHINGS’ COTTAGE, YOSEMITE VALLEY, CAL.  
266—CAP OF LIBERTY AND NEVADA FALL, YOSEMITE VALLEY, CAL.  
267—HUTCHINGS’ HOTEL, YOSEMITE, CAL. [also new view and title: “Nevada Fall, 700 feet high, Yosemite Valley, Cal.”; Old Series, No. 548; Stereoscopic Views.]  
269—SENTINEL DOME, HEIGHT 4500 FT. YOSEMITE VALLEY, CAL.  
270—YOSEMITE VALLEY FROM INSPIRATION POINT, CAL.  
271—MIRROR LAKE CANYON, YOSEMITE VALLEY, CAL. [Old series, No. 535; G.H Aldrich & Company, No. 862; C.P. Hibbard, No. 62; Littleton View Company, No. 862; Union View Company, No. 572; C.W. Woodward, No. 572.]  
272—FALLING CLOUDS, OVER YOSEMITE FALLS, CAL.  
274—CATHEDRAL ROCKS, HEIGHT 2660 FT. YOSEMITE VALLEY, CAL. [Old series, No. 452.]  
275—YOSEMITE FALLS, HEIGHT 2,634 FEET, YOSEMITE VALLEY, CAL.  
276—NEVADA FALL, HEIGHT 700 FEET, YOSEMITE VALLEY, CAL. [Old series, No. 437; New Educational Series, No. 273.]  
277—NORTH AND SOUTH DOMES, YOSEMITE VALLEY, CAL.  
278—YOSEMITE FALLS, HEIGHT 2634 FEET, YOSEMITE VALLEY, CAL. [M.M. Hazeltine; E. Nesemann, No. 278; S.C. Walker & G. Fagersteen.]  
279—THREE BROTHERS HEIGHT 3,830 FT. YOSEMITE VALLEY, CAL. [Richard Behrendt, No. 531; Diamond H: E. Nesemann, No. 279.]  
281—GLACIER POINT, HEIGHT 3,200 FEET, YOSEMITE VALLEY, CAL.  
284—MIRROR LAKE AND ITS REFLECTIONS, YOSEMITE VALLEY, CAL.  
285—MT. HOFFMANN RANGE FROM SENTINEL DOME, YOSEMITE VALLEY.  
286—DAY DAWN, YOSEMITE VALLEY, CAL.  
287—YOSEMITE FALLS, HEIGHT 2634 FEET, YOSEMITE VALLEY, CAL.  
288—SNOW’S HOTEL AND NEVADA FALLS, YOSEMITE VALLEY, CAL.  

No. 384—DEL MONTE HOTEL DINING ROOM, MONTEREY, CAL. [Orange and lavender card.]  
The Hotel del Monte was the first of the great Western tourist resorts. It was built and finished in three months by the Southern Pacific Railroad’s construction subsidiary, the Pacific Improvement Company. The management threw open its door “for genteel patronage” on June 3, 1880. The Improvement Company had disregarded both local and national traditions in building its “modern hotel of Swiss Gothic architecture” more like “a modern English country mansion than an American watering-place hotel,” and its 1880s guidebook to the Monterey peninsula delighted in boasting of its recent “improvements.”  
San Francisco society descended on the Monterey peninsula for the opening of the Del Monte Hotel. Speaking “as it strikes a stranger,” Robert Louis Stevenson had fostered preservation in the name of tourism in November 1879, but twelve months later, he had come to regret the exchange of the Monterey he had known for the new resort of “wealth and fashion”: “Monterey is adver-
The Story Behind Color Code
Marking of Stereo Slides
by Fritz G. Waack  
Berlin, W. Germany
(Edited by David Starkman)

Since no true two-lensed stereo projectors are currently being manufactured, the use of two mono projectors is increasing in popularity. It is not even necessary to have two projectors of the same brand or model, as long as the focal lengths of the projection lenses are equal.

For this reason (at least in Europe) the twin 35mm (2 x 2 x 2 in the USA or 2 x 50 x 50 mm in Europe) format has been replacing the single Stereo Realist type of mount. This is helped by the availability of mounts with opening sizes suitable for stereo, such as GEPE or Bonum.

Because it is important not to exchange the left and right singly mounted views when viewing or projecting, the question arises as to the best way to put distinguishing marks on the slides. In Germany a standard marking system was decided upon long ago, and given DIN No. 4531 (DIN is the German equivalent to ASA, used to give standards to all industrial products).

The standard for separated right and left view mounts is as follows: Green color code for the right slide and Red for the left. The code is in the form of a color dot placed in the lower left corner of the slide, when viewed with the correct side facing you, right side up. When projecting, this “thumb spot” appears on the upper right when viewed from the rear of the projector looking forward.

Of course, it is understandable that this standard is not generally known to amateur 3-D photographers. There is a similar problem with stereo sound equipment, where no color standard has been set for marking left and right channels. There is a related standard (DIN 45592) dealing with 3 and 5 pole plugs for microphones and headphones. This is an optional use standard which indicates yellow wire for the left and red for the right channels. As a memory device Red and Right both begin with the letter “R”. However, few factories follow this optional standard, and the “R memory device is only applicable to the German and English languages.

Thus, there is no reason for us stereographers not to adopt the oldest established standard of red for left and green for right.

In connection to this, it may be of interest to know that this standard is based on the earliest international navigation standards for indicating port and starboard.

In 1863 there was a convention established between the English and French governments for marking ships, which has become the international standard still in use today.

Until the beginning of the 19th century ships were marked with only white signal lights. This made it difficult to judge the direction of a ship, and increased accidents resulted, especially with the increased speed and traffic of the faster steamships.

In 1834 the British engineer Shaw proposed the use of a red light on the port side to a Liverpool shipping company. In 1836 a Southampton shipping company introduced a red light on port and a green light on starboard.

Now, with 3 different systems in use for signal lamps there was even more confusion. This caused the British Navy to settle on an obligatory standard in 1847: Red for port, green for starboard, and an additional white light on the stern.

As already mentioned, in 1863 the French government adopted the same standard, and over the years other nations have followed. Thus, this standard is one of the oldest international conventions.

This, therefore, is the basis for the left and right stereo slide color marking system. I urge all stereographers to adopt it for their own.
by David Starkman

As the story of the discovery of the Tomb of King Tut-Ankh-Amun goes, in November of 1922 the archaeologist Howard Carter and his wealthy backer Lord Carnarvon made their way to the debris covered entrance that the Egyptians had sealed some 3,500 years earlier. This led them down an approach corridor to the sealed entrance to the tomb chambers. A hole was broken through at eye level, and Carter shone a light through it into the space beyond. He was struck dumb by what he saw, and when Carnarvon asked impatiently, "Can you see anything" his reply was, "Yes, wondrous things!"

This is how Susan Pinsky and I felt on the afternoon of April 23, 1985 when we went to the California Museum of Photography at the University of California at Riverside to visit Seton and Isabelle Rochwite. For those readers who don't know Seton, he is the inventor of the Stereo Realist camera. His working design produced exactly the same format which was used in the production version of the Stereo Realist, and was to eventually become the "American Standard" for stereo photography. Kodak, Revere, Wollensak, TDC and numerous others all followed the same format.

This day was special because Seton had decided that it was finally time to donate all of his prototype cameras to the Museum, and we wanted to be on hand for the occasion (and take a few stereo pictures, too!)

"Wondrous things!" is just what came to my mind as Seton began taking one marvelous item after another out of plain cardboard boxes. Among the treasures:

Camera No. 1. Built in 1931 out of 2 Kodak 50th Anniversary box cameras that cost 40¢ each (an amount which required some debate before purchasing in these early Depression years!) This took large size rollfilm, and he made contact prints which were mounted on 3½ X 7 inch cards, for viewing in an antique style stereoscope.

Camera No. 2. Seton had a friend who was taking the much more expensive 45 X 107mm transparencies, which were far superior to the prints. This inspired him to make a much more sophisticated camera in 1933, from two German Dolly half vest pocket cameras ($11 each). This used 127 rollfilm in a way which left no film wastage. Positive slides were made from the negatives in a transposing print frame.

Camera No. 3. In 1935 Kodak introduced Kodachrome in 16mm, followed by 35mm size in 1937. Seton was excited by this, and thought that this new possibility would inspire a camera company to make a stereo camera to take advantage of this new color slide film. No such camera was introduced, so in 1940 Seton made his third and most significant design.

Using the lenses and other parts from two Univex Mercury's, he created a simple design with pictures 5 perforations wide, and a spacing between them of 15 perforations. This resulted in a uniform film advance of ten perforations, and left room for two frames between each pair. This meant that the entire film area was used, except for one frame at the beginning and end of each roll.

There were no masks for this format, so Seton made his own, stamping each film aperture with a die stamp made for him by his father. The only thin glass readily available in a suitable size was made for the 3¾ X 4" lantern slides. Simply cutting it in two along the long dimension resulted in the now familiar 15/8 X 4" size. This is the design that he took to the David White Company, and led to their making the Stereo Realist.

Stereoscope No. 1. Seton used a German 45 X 107 viewer to view his slides. After negotiating with David White Company he knew he had to have something better to go with the camera. For this he designed and built the prototype for the first stereoscope with built-in battery illumination. It was remarkably similar to the familiar "Red Button" Realist viewer that we now know so well.

All of the above mentioned items, and more, still exist, and are now in the possession of the California Museum of Photography, available for researchers to study, and to be exhibited. I don't know when they will first be put on display, but they will definitely be part of a large stereo exhibit that the Museum will have in conjunction with the National Stereoscopic Association Convention there in June 1986. Susan and I plan to work on a "History of the Stereo Realist Through Advertising" slide show, which may appropriately be shown at the same time.

Also the home of the huge Keystone-Mast stereo view collection, the California Museum of Photography is located in Watkins House on Canyon Crest Drive, University of California, Riverside. Telephone number for more information is (714) 787-4787.
Seton Rochwite unpacks the prototype of the Stereo Realist Camera. All photos by David Starkman.

Seton explains the prototype Realist and the story behind it to Museum Curator Charles Desmarais.
EXPO '85's HIGH-PROFILE, HIGH TECH STEREO

by Don Marren

Not everyone is lucky enough to attend Expo '85 in Tsukuba, Japan, this year—including the author of this article. Our 3-D eyes for this report belong to Brian Holmes who recently visited the world's fair along with colleagues from The Far East Society of Architecture and Engineering. Brian, who is currently working on three film presentations for Vancouver's Expo '86, was consultant and technical coordinator of the 70mm dual projector 3-D film, "Wilderness", at Sudbury's Science Centre (see STEREO WORLD, Jan./Feb. '85). His first-hand observations, together with the technological data supplied by the pavilions themselves (see acknowledgements), form the basis of this article. Brian considers 3-D to be well represented at Tsukuba (pronounced scuba with a short u) and he believes he got to see all the presentations. The bottom line of his observations: if you have any kind of interest in 3-D stereo photography, make tracks for Expo '85 immediately! The fair runs until Sept. 16. (Some very stylish photos of the fairgrounds and buildings can be seen in the June '85 issue of OMNI magazine.)

No one seems to know why there is such an interest in 3-D at Tsukuba's Expo '85. ls it a result of Hollywood's mini 3-D revival a few years ago? Not likely. Many of the projects at Tsukuba would have started production after that bubble burst. It may just be a coincidence that many of the business groups in Japan, the most technological of modern societies, chose advanced 3-D techniques to illustrate the fair's theme, "Dwellings and Surroundings: Science and Technology for Man at Home."

However, one of the likeliest reasons can be found in the contents of the films themselves. All of the 3-D presentations have futuristic or scientific themes which seem to be expressed best—and more effectively—with creative 3-D filmmaking. Under controlled 3-D projection conditions, which you'll find at Tsukuba, the impact can be astonishing.

Never underestimate the power of 3-D even in the sophisticated 80s. When used only as a gimmick, 3-D has always been an attention getter. The producers at Tsukuba, realizing 3-D's potential to help generate interest, have used the medium effectively to create films that are both popular and critical successes.

It's particularly interesting to note that three of the four major 3-D presentations use stereo techniques developed in the U.S. and Canada.
Camera film for the TENPERF (TM) system isn’t as wide as the full 70mm release prints. For each pair, the film moves ten sprocket holes (nearly 2") in the camera or projector, the lens systems separating and combining the images.

ly imagine the technological and financial resources that were drawn upon to create this spectacular pavilion and its exhibits.) The huge Exhibition Hall, which contains the 180° rotating Stereo-Vision theater, is suspended from parallel wire cables. The theater is one of the largest in the world, even though it only seats 380. A two-minute laser show spread over the entire audience area effectively prepares you for the first shot of the 70mm 3-D film, a cosmic space, on the big 65½' x 29½' screen. This exciting environment is reinforced with 124 stereo speakers. Yamaha designed the sound system specifically for the theater.

The 14-minute film, “Eternal Iron and Man”, describes a steel ball moving towards the blue Earth, with the star-studded sky as a background. The ball represents the “iron spirit”, a symbol of iron, which kaleidoscopically appears to connect space, nature and man. Overall, it is an extremely effective theme subject for such a large screen 3-D presentation.

The over and under 70mm 3-D system used was developed by Stereovision (TM) of the U.S. utilizing a compact Den-ei and Stereovision Super 70, 10-perforation camera. The system is similar in concept to that which is

Laser excitation

Lasers plus 124 speakers

The imaginative suspended structure (really a sea bridge) of the Steel Pavilion is itself an exhibit. (The Japan Iron and Steel Federation consists of 48 member firms, so one can on-
used in the usual 35mm theatrical presentations. The Steel Pavilion film is most impressive. The one-camera shooting technique demonstrates its compact size and the flexibility of the system in many scenes. Special effects, long, long shots, computer graphics and images with objects of various sizes often create headaches for the over and under format. The Steel Pavilion film manages to effectively show what is possible in spite of these restrictions.

Two visual treats from Sumitomo

A floating cube outside the Sumitomo Pavilion's 3-D Fantasium symbolizes the concept of the 70mm 3-D film chosen as the main exhibit inside. (The Sumitomo Group, a household name in Japan, consists of 55 member companies including breweries, banks, petroleum developers, construction, pharmaceutical, mining and forestry companies.) The cubic frame isn't really floating. A mirrored wall helps create the illusion of the entire frame jutting out from the building's facade. Because of its location on the Expo site, the cube is an eye-catcher, especially when viewed with the dramatic night-time lighting of the pavilion.

Sumitomo has another visual treat awaiting visitors in their main auditorium. The 17-minute film, "Earth Song—Erika’s Dream", incorporates 3-D Stereo-Space (TM) techniques developed in the U.S. by United Artists. It has all the eye-pleasing features one expects to see in a dual-projection system - amazing clarity and brightness from one end of the 59 x 27½ foot screen to the other. This film, along with Sudbury's Science North presentation, may set the industry standard which future dual-shooting/projection 70mm 3-D films will be compared to. Both are proof that effective 3-D films can be made without having objects thrust at your face every few minutes regardless of the story line.

The Sumitomo film is beautifully and tastefully photographed. It describes the relationship between man and nature as experienced by a young girl and her dog on a fantasy balloon trip through nature's kingdom. On-location drama is effectively combined with "colorful computer graphics to tell the story. Big thrills have their place in some films, but it's a pleasure to see directors and photographers using stereo to complement the story rather than as an annoying gimmick.

Surround-sound enthusiasts will be delighted with the multi-channel stereo effects. The music score, which enhances the film's 3-D format, was composed by Ryuichi Sakamoto, a world-famous Japanese composer.

Ultra-large screen anaglyph 3-D

The last place you’d expect to see anaglyph 3-D is at an 1985 exposition. Yet, here it is at the Fujitsu Pavilion, and it's one of Expo '85's most popular attractions. (Fujitsu is Japan's number one computer manufacturer and a world leader in communications technology.) Crowds run to the pavilion when the fair's gates open. Line-ups are anywhere from 2 to 5 hours to see "We are Born of Stars", a 10-minute scientific fantasy in the Cosmos Dome theater. (Other acclaimed exhibits here include the world's largest humanoid robot, a must-see for all visitors.)

Canada can take a bow here as credit for the super-large projection belongs to that country's IMAX System Corporation. This is the thrill-a-minute 3-D experience many people seem to enjoy. The audience, which is stepped-back at 23° beneath the screen, is literally surrounded with images. Viewers in the center face images of hurting atoms from all sides. Meteorites flying towards you disappear to one side or behind.

There is a logical reason for the use of the anaglyph 3-D system. With a polarized projection system, the angle of the filter, with respect to the usual screen image, must always be as close to zero as possible to produce a 3-D image. This
method cannot work for the Omnimax hemispherical screen in the Cosmos Dome. The 65½ foot screen is angled 29° to the seating, and the film must be projected across a range of 180° horizontally and 125° vertically. In other words, the variety of viewing angles is too varied for polarizers to work. Using anaglyph red/blue filter glasses, the audience can see the 3-D image regardless of the angle of view.

The use of computer graphics came about out of necessity. To fill the huge spherical screen, a film would have had to be shot using ultra-wide fisheye lens cameras. In actual fact, they’re too large to be placed close together to simulate the parallax of the human eye. Even if smaller fisheye lens cameras were developed, each would be reflected in the other’s image! This can also be the case with dual-camera rig systems using standard wide-angle lenses. Computer graphics overcame not only this problem but the headache of producing images with a large depth of field.

The distortion factor on the huge screen was the next consideration. To overcome this, the images put on film were distorted with a special computer program so that when they were projected there would be no distortion. It’s an enormous number-crunching task. (An ice crystal sequence simulation, for example, required 70 hours of computing time for the high-speed serial processing.) The high-resolution graphics were generated according to data processed by one of the world’s largest and fastest supercomputers, the Fujitsu FACOM M-380 mainframe (large scale) computer.

From the audience’s point of view, the results are surprisingly effective. It’s a thrilling 3-D presentation. Don’t expect perfection though. There is an overall hint of a pink tinge (common to any anaglyph presentation) and the film is not as bright or as sharp as we had hoped for. Still, even with these slight flaws, “We are Born of Stars” confirms the effectiveness a very large 3-D image can have on an audience.

The unique 70mm Omnimax film (15 perforations per frame, the largest size film format currently in use) is enhanced with 13 sound channels and 18 speakers for a maximum surround-sound effect.

3-D color computer graphics

The unique circular-shaped rotating theater in the Hitachi Pavilion lets you enjoy shows on three different stages without leaving your seat. (A fourth stage is the entrance and exit compartment.) Enjoy is not quite the accurate term to describe the quaint, old-fashioned animation of the second theater. The third theater makes the wait worth while. It’s here that you see a 35mm over and under 3-D film simulating a trip into outer space in what is being billed as the world’s first 3-D color computer graphics film. It’s probably one of the best 35mm 3-D film presentations you’re likely to see anywhere. Three screens are used. The 3-D image is projected on the center screen while two non-3-D images are projected on two side screens to “flesh out” the 35mm 3-D presentation.

Once again, stereo sound, accurately described as “seat-shaking”, completes the illusion of a voyage through space. Haruji Yoshinaga of Den-ei Inc. produced the film. John Whitney Jr., a world leader in the field of computer graphics, created the film along with creative supervisor Murray Lerner, one of today’s foremost authorities on 3-D images. Lerner directed the 3-D short “Sea Dreams” and the twin 70mm 3-D film at Epcot, “Magic Journeys”. (His 2-D documentary “From Mao to Mozart: Isaac Stern in China” won a 1981 Academy Award.) Digital Productions of Los Angeles deserves much credit for the real-looking computer graphics. Twenty minutes of the film “The Last Starfighter” used only their computer generated special effects rather than the usual model work.

ONE-AT-A-TIME 3-D TV

At the Matsushita Pavilion, 12-inch 3-D color TV is on-
ly one of many exhibits. And it’s probably the smallest and perhaps least important exhibit (dare we say it) when com-
pared to the large scale events happening around it. Three-
screen liquid crystal images, high-definition video and portrait-drawing robots all have their place of importance here.

Be prepared for a line-up of people waiting to see the 3-D TV curiosity. Only one person can view it properly at a

time. The images often tend to be murky, but listen, a break-
through is a breakthrough. Brian feels that although this system is an astonishing achievement its application will be

specialized.

How does it work? Matsushita’s press report says it best.

Five video cameras are fixed so that each is directed to an
object making certain angles with each other. Video recor-
ding is made by operating these five cameras synchronously.
The five video images, once recorded, are reproduced by
synchronizing the signals through a synchronous operation
control unit. The images are then projected by a color video
projection unit which uses five ultra-small, high brightness and
high-resolution projection tubes and a specially developed
screen involving a fresnel lens behind a two-sided lenticular

The size of novelty shop sunglasses, these “please return” glasses
make the audience as interesting as the slides at the Electric Power
Pavilion’s small 3-D show.

lens screen.

Matsushita forsees the system being feasible in a variety of
applications including education, medical and entertain-
ment purposes. The company expects the new system to be
a prototype from which more real and life-like 3-D effects
can be attained through future advancement of technology
and computer graphics technology. We wish them luck.

Besides 3-D

Tsukuba ’85 is a wonderland of scientific marvels in ac-
tion. For obvious reasons we’ve concentrated on the 3-D
presentations. 28 Japanese corporations, 47 foreign coun-
tries and 37 international organizations are represented.
Some of the gigantic innovations presented seem to have
been designed with one eye focused on the Guiness Book of
World Records. Sony, for example, has the world’s largest
television screen (about the size of the screen at a drive-in

In a cabinet that assures proper viewing angle and distance, 3-D
TV without glasses is displayed by Matsushita (known in North
America as Panasonic).

theater). The list of “the biggest”, “the largest” and “the first”
goes on and on. Robots pop up everywhere. Holography
becomes just another exhibition tool. There are lots of
hands-on displays and the pavilions’ architecture is nearly
always as interesting as the presentations inside. Cones,
spheres and pyramids galore dot the 250 acre site. The
Japanese Government Theme and History Pavilions mustn’t
be missed. They look like a zillion (probably cost that,
too—yen, of course) and feature exceptional state-of-the-

More World’s Fairs are coming!

A reminder to World’s Fair watchers. The next one is in
Vancouver, Canada, next year (two major 3-D presenta-
tion advertisements that we know of are already in production). There’s
another in Brisbane, Australia, in 1988, and then there’s the
biggie in Chicago in 1992 which will be the first Class A
Start making plans—and saving! Who knows what will be
happening in the world of 3-D a few years down the road?

Acknowledgements and credits

Everybody at Tsukuba was eager to please not only
visitors to the fair but the less fortunate who couldn’t attend
and wanted information about specific exhibits. Their
courtesy and eagerness to contribute to this article is ap-
preciated. We would like to thank the following:

Yoshio Kimura, Acting General Manager for Foreign Af-
fairs at the Steel Pavilion; T. Sugiu of Den-ki Inc.; T. Ishi-
ski, Assistant Manager and Yoshiro Ito, Deputy General
Manager of the Sumitomo Pavilion; the Fujitsu Pavilion
staff, especially Mr. Ikegaki; Akira Ishii at the Matsushita
Pavilion; Kouichi Enomoto, Manager, Public Affairs at the
Hitachi Pavilion; Haruji Yoshinaga, producer of the Hitachi
3-D film; and the staff of the Canada Pavilion for the use of
their “office” and translation facilities.

(SEE BOXED NOTE ON PAGE 33)
COMPUTING REAL

by Nick Brienza

With the introduction of the public domain ATARI software [1] to produce CAD-type 3-D graphics, owners of ATARI computers have a powerful new graphics tool at their disposal. It is now possible to create and edit ATARI 3-D graphic images at a fraction of the cost of other systems. You can manipulate these images: they can be edited, "zoomed" (reduced or enlarged), and rotated about the x, y, and z axes. But the real bonus is that you can see them in true stereoscopic 3-D perspective.

The 3-D program as originally presented (ANALOG #16) provided for a 2.25" x 3.75" simulated 3-D graphic image plotted on an ATARI 1020 Plotter/Printer. In this original program, after you draw one image, you are prompted to enter new coordinates and zoom ratio to draw a second image; the user inputs all requested information—in a form identical to the first image, with the exception of one (or possibly two) entries. This will create the "true" 3-D image pair required for stereoscopic viewing. The size of each image and the distance between successive images, as plotted with this "original" program, turn out to be very close to the standard stereo viewing format for prints. These images may be "free-viewed" as described periodically in STEREO WORLD.

Or, there are available several stereo viewing aids for those of you recovering from "free-viewing calisthenics" (as well as anyone who wants an alternate way to view stereo images).

For relatively "small" images—such as those generated on the Atari plotter with the original program—one can use a Holmes stereo viewer that can be purchased from sources that advertise in STEREO WORLD such as RedWing View Co., T.M. Visual Industries, Mr. Poster, Mast-Keystone and Reel 3-D Enterprises.

A relatively inexpensive, compact and ideally suited viewer for the 2¼" wide images of the original ATARI program is the "Stereopticon 707" made by Taylor-Merchant.

In a subsequent issue of ANALOG (#22, p. 84) a modification to the original program was presented that produces larger plotted images (6.25" x 3.75"). These images are too large to view with the standard viewers just described, and most individuals capable of free-viewing the smaller images will find free-viewing the larger images a real challenge.

But, once again, there are other tools you can use. You can construct your own viewer using front-surface mirrors, as described in CREATIVE COMPUTING (Jan. '83, page 168) or, as I prefer, you can purchase an excellent adjustable viewer for this purpose from NU 3-D VU Co. Since the mirrors in this viewer are adjustable it has the special advantage that images of any size and distance apart may be stereoscopically viewed, including large-screen projections and photographic prints.

BASICS

To get a correct stereo plotter image pair you must first generate one image and then generate the second image as though the viewer had moved a "small" distance in the direction the second image would be as it comes off the plotter. This direction relationship is important because a reversal

\[
(\phi, -4.5, 7)(\phi, \phi, \phi)(1) \quad (\phi, -4.5, 5)(\phi, \phi, \phi)(1)
\]

Fig. 1. "Futuristic Space Shuttle" done with ATARI plotter and original program—shown actual size. © 1985 Nick Brienza
of the first and second images would cause pseudoscopy: reverse stereoscopy where things in the background would appear in the foreground and vice versa. Enter zoom factor: 1

Since plotter images generated by the original program always have the Y-axis horizontal to the plotter paper as it leaves the plotter all rotation between successive images should be about the Y-axis. For successive images, specify new increments of X and/or Z. A specific example of generating a stereo pair would be to use the data entry for the "futuristic space shuttle" into the original 3-D program and then answer the computer prompts for the first image with the following:

**DMA off?** YES
**Output to plotter?** YES (Your response depends on whether you have already saved the "shuttle" data to a data file)
**Enter observer location X, Y, Z or E for edit:** 0, -45, 7
**Enter coordinates looked at X, Y, Z:** 0, 0, 0
**Enter zoom factor:** 1

When the drawing is complete, press START, SELECT, OPTION or the joystick #1 trigger to start the second image-plot sequence. This time the responses are:

**Enter observer location X, Y, Z or E for edit:** 0, -45, 5
**Enter coordinates looked at X, Y, Z:** 0, 0, 0
**Enter zoom factor:** 1

When you run the program with this enhancement you will be prompted with:
"Do you want to do an X-Y loop?"
If you answer "YES", you will be prompted to enter the degrees of total rotation and the number of degree increments. A good trial value with which to answer both questions is in the range of 2 to 4 degrees. Too large a value generates images with too great a disparity to view; too small a value reduces the 3-D effect.

This method eliminates the need to re-enter X, Y, Z coordinates and the zoom factor for successive 3-D image pairs.

Of special interest to note is that, in all of the examples given, the 3-D image can be made to appear behind, in front of, or emerging through the "stereo window"—this is determined by your response to the prompt: "Enter Coordinates Looked at X, Y, Z".

The portions of the image which are beyond these specified coordinates fall behind the "window", the image points which precede the specified coordinates are in front of the "window", and the image points which are at the same distance as the specified coordinates lie in the "window" plane.

Give it a try; let your imagination come to life in 3-D!

**REFERENCES**

ANALOG Computing (newsstand computer magazine), 565 Main St., Cherry Valley, MA 01611; Red Wing View Co., 1234 Phelps, Red Wing, MN 55066; T.M. Visual Industries Inc., 212 W. 35 St., N.Y., N.Y. 10001; Mr. Poster, Box 1883, So. Hackensack, N.J. 07606; Mast-Keystone, (continued on page 39)

(Figure 2) The images produced by this method are too large for freeviewing or standard stereoscopes or full reproduction here.

ANALOG #19 (June '84, p. 95) introduced an enhancement to the basic program providing the user with the option to "rotate" around the object/image. This works out ideally with the larger stereo images because of the correct image rotation involving the X, Y and Z coordinates vs. the direction which the images come off the plotter. (NOTE: If you use this rotation-enhanced version of the program to generate the smaller plotter images, you must cut between the stereo image pair and then place them side-by-side for viewing, being absolutely certain that you align them horizontally and vertically.)

When you run the program with this enhancement you will be prompted with:
"Do you want to do an X-Y loop?"

(Figure 1) Of special interest to note is that, in all of the examples shown a little less than 1/2 size.
BOOK REVIEW

Most Librarians recognize that many valuable resource volumes remain untouched in most Libraries. People do not know how to find the information they want or would enjoy. Not everything is cataloged for easy retrieval. If only we had the time to browse we would be amazed at how much we could learn from the experts.

Since very few people have the opportunity to visit the Oliver Wendell Holmes Stereoscopic Research Library, it may be of interest to our NSA members to know of some of the books we possess. Here's one:


Though the author was primarily concerned in 1948 with the use of aerial photographs in forest mapping, inventory and other phases of forest management, several chapters deal specifically with stereophotography. Chapter 10, "Stereoscopy," provides one of the most thorough introductions to stereo that I have ever read. There is an excellent description contrasting monocular and binocular vision with suggestions for the reader to experiment.

Recognizing the limitations of the prism stereoscope normally used in parlor viewing, such as with a Holmes Stereoscope, the author illustrates the usage of the mirror reflecting stereoscope equipped with magnifying binoculars. However, he finds the lens stereoscope more suitable for the study of forests. He provides a very technical description of photogrammetry, the science of obtaining reliable measurements by means of photographs. Collectors of stereo images may have little interest in the techniques of aerial photo-interpretation, but the broad application of stereophotography must impress us all.


Then there are the Fairchild stereocomparator, the Stereo-scanner by C. T. Brown, Jr., and the Abrams Contour Finder. Any similar devices would be welcome gifts for the Oliver Wendell Holmes Stereoscopic Research Library.

BUILD YOUR OWN LIBRARY

As a new feature of this Library Report for the next few issues, I would like to list specific books that should be a part of a personal (home) library on stereophotography and stereoscopy. To begin, I will mention books that are in the Holmes Library. Hopefully, some of our members will send lists of the five most significant books in their own collections.


Donations Received


Bibliography Available

A typed list of all books in the Library is now available upon request. Please send $1 for postage and handling.

MAX vs. MAX

IMAX and OMNIMAX films use the same large-format frame size and are produced by the same Canadian company, but that's where the similarity ends. The IMAX system projects images on a flat (slightly curved) rectangular screen, while the OMNIMAX system uses a dome, planetarium-style screen like the one in the Fujitsu Pavilion.

Unlike OMNIMAX, 3-D photography and polarized projection ARE possible with the IMAX system—and a 3-D IMAX film is in production for Expo '86 in Vancouver B.C. (More details in a future issue of STEREO WORLD).
Current information on stereo TODAY: new equipment, developments, magazine and newspaper articles, or 3-D events. This column depends on readers for information. (We don't know everything.) Send information or questions to David Starkman, PO Box 35, Duarte, CA 91010.

A NEW POLARIZED 3-D TV UNIT

Tektronix Inc. of Beaverton, Oregon has demonstrated a new 3-D TV system that combines the newest liquid crystal shuttering technology with standard polarized viewing methods. The result is a stereoscopic color video image that can be seen with regular polarized glasses.

The heart of the system is the liquid crystal "pi-cell" shutter with its improved light transmitting abilities over the "PLZT" ceramic electro-optical shutters used in some current 3-D TV systems. (These are built into goggles worn by the viewer, which are electronically connected to the synchronizing device controlling the left/right image selection on the screen.) To avoid the need to wear plugged-in goggles, it was realized some years ago that it would be best to alternate angles of polarization at the screen along with the alternating images. This would allow the use of simple polarizing glasses, and the concept was tried using PLZT ceramics as the optical switching device in what is known as a "passive" viewing system.

Tektronix' new liquid crystal shutter has the light transmitting ability to make this kind of passive system practical. As with other systems, the two images are displayed sequentially on alternate scan fields. A linear polarizer is placed directly in front of the screen. The "pi-cell" liquid crystal shutter operates in front of the polarizer, synchronized with the alternating images on the screen through a display controller. When a voltage is applied to the cell, light passing through it is polarized in one direction—when the voltage is removed, light is polarized in the other direction. The result is an image that can be viewed exactly like a projected polarized slide or film.

Press packets announcing the new Tektronix system are careful to point out the many advantages of passive polarized viewing over the "active" shuttering goggles required for other systems. The goggles require an "umbilical cord" connecting them to the display unit; fluorescent lights will appear to flicker through them; any other video screens in the room not synchronized to the goggles will flicker badly; only as many people can view the screen at once as there are goggles available and finally, the goggles are susceptible to accidental damage.

A demonstration of the system arranged for STEREO WORLD revealed just how bright and sharp a stereoscopic video display can be. Attached to the front of a regular Sony color monitor, the liquid crystal shutter seemed to make the surface of the screen vanish the instant polarized glasses were put on. Images fused easily, with objects appearing both behind and in front of the window—sometimes with a depth requiring a wide range of point separation in both directions.

It was hard to detect any ghosting in the sequentially polarized images, but there was an obvious flicker to the fused picture. The standard recorder and monitor being used to exhibit the system had the usual 60 per second "field rate" which allows a visible flicker when divided in half (30 fields per second for each eye) by the controller and liquid crystal shutter. (Human vision needs a video field rate of at least 50 per second to avoid flicker.)

The Stereographics Corporation of San Rafael, CA uses a patented technology to double the field rate of their special monitors, resulting in flicker-free 3-D viewing through their shuttering goggles. According to a Tektronix engineer, their
new polarized liquid crystal shutter will work equally well with such improved monitors, and Tektronix' own research is currently aimed at perfecting a high field rate, high image quality monitor for stereoscopic applications.

Unlike the Stereographics Corp., Tektronix isn't planning a complete system of stereo camera, adjustable mount bars and accessories. The new liquid crystal shutter technology is aimed at industrial and institutional users of sophisticated computer graphic imaging systems, many of whom would be expected to adapt the shutter to their own needs and hardware. The orientation toward computer graphics was made clear by the fact that the Tektronix demonstration tape consisted of 100% computer-generated stereo-pairs—no camera images at all.

Even if its initial use is limited to highly specialized applications seen by relatively few people, the Tektronix shutter/polarizing system is an important achievement that could become the standard method of 3-D TV display—and the basis on which future refinements are made. If high resolution cable or satellite TV systems ever appear, the liquid crystal shutter could be considered as a possible feature to include in the next generation of receivers.

The Tektronix shutter could easily be adapted to current TV projection systems and could also be altered to function as a circular polarizer compatible with the new Polaroid II viewing glasses, as used at the 1984 NSA Convention.

-J.D.

NEW BOOK ABOUT 3-D CAMERAS

"Stereokameras von 1940 bis 1984" (Stereo Cameras from 1940 to 1984) is a new book published in Germany (and in German) by Dr. Werner Weiser.

Even if you don't speak German, this is a fabulous book for stereo camera fans and collectors, as it beautifully documents 42 stereo cameras of this period. Every other page contains 3 large photos of one stereo camera showing front, top and open rear views. The facing page gives a complete list of technical specifications. Even in German the specifications are mostly pretty obvious, as numbers such as "24 x 23mm" are international.

The majority of the cameras are the standard Stereo Realist format, but some of the more obscure ones such as the Contura, Simda, Robin Hood, and Stereo Rocca are shown. The printing is well done, on heavy paper.

You can order your copy direct from: Dr. Werner Wieser, Siegelberg 57, 5600 Wuppertal 23, West Germany. Price, including shipping, is US$12.00.

P.S. There were a few truly obscure stereo cameras that Dr. Weiser admits he could not find for inclusion. These were the Japanese "Leader" and "Windsor", the French "Summum Stereochrome", the American "Winpro Stereo", the German "Rhein" and "Inventa", and the Russian "Astra". If any "Stereo World" reader can supply suitable photos of these I'm sure that Dr. Lorenz would very much appreciate it.

TEN USES FOR A NIMSLO

Mel Gerson of Brooklyn, New York has compiled a list of ten uses he's thought of for a Nimslo camera, using transparency as well as negative film. Got some others to add? Send'm in!

1. 3-D prints—no viewer type (normal Nimslo prints)
2. Standard 3-D (viewer type) when mounted (2 frames) in stereo frames (tape over the center 2 lenses, when shooting)
3. Standard 3-D prints (stereoscope style) when lens 1 & 4 negs. are printed & mounted side by side
4. 4 dupe half-frame slides at a time for novelty uses, key chains, etc., especially for family groups
5. 4 dupe color prints at a time—when sent for half-frame processing
6. Test special effects—put diff filter or gel over each lens (can leave one plain to get a standard print or slide)
7. After getting 3-D processing—negs can also be used for standard enlargements or slide dupes
8. Use 1 pair—in a 1/2-frame mount for 3-D projection with 2 slide projectors & filters
9. You can get 2 ranges of close-ups (using supplementary lenses) by using frame combinations of 2 & 4 and 2 & 3
10. By using Polaroid's instant 35mm slide films, Polapan (ASA 125), and high contrast Polagraph (ASA 400) you can get instant black and white 3-D shots for special effects

(Watch in a future issue of STEREO WORLD for a Nimslo application that VERY few people (including Mr. Gerson) have imagined!)
Remember the "Hanging of Mills" from page 28 in the JAN/FEB '85 issue? According to Rusty Norton the scene was in Vermont. A related and more dramatic view was published in Points of View: The Stereograph in America—A Cultural History, edited by Edward Earle. Rusty also has a slightly different view but from the same angle as the one we published.

From that same issue we had a view of the County Court-house in Freeport, Illinois, by Jacob Whitter. Ward Ryan furnished the information that Whitter was not only located in Freeport, but also spent some time in Colorado with shops in Denver and Georgetown, both by himself and in partnership with William McKirahan during the 1870's and early 1880's. His western views had titles like "Bear Skin Rug", "Beaver Brook", and "Ute Indian & Squaw".
“Entrance to the Cave” from the top of page 29 in the MAR/APR issue this year was identified as Central Park in Manhattan by Larry Gottheim and Jim Quinlan. It was a manmade cave photographed by many. This view was taken by George Stacy, probably in the late 1850’s, as part of a 60-view series published around 1860 as “Stacy’s Central Park”, with strip labels on the reverse. He later published several editions that generally did not give his name, but all have the unique format in which the sides go straight up until they are capped by the domed top, instead of gradually curving into the arch. The unknown view was reissued around 1864-66 and retitled “Central Park, The Ramble, No. 522”.

Keystone seems to have been rather careless about labeling some of their views. Francis Rizzari and David Olsen informed us that the mining camp of “Nevada” shown at the top of page 28 in the MAR/APR '85 issue is actually Black Hawk, Colorado, located about a mile from the famous Central City. Black Hawk was incorporated in 1864, and named after the Black Hawk Quartz Mill Co. of Rock Island, Ill. The white 2-story building with three windows across each floor is the schoolhouse that was completed in 1869. The white steeple visible above the school’s roof is the Presbyterian church that was completed in 1863. The famous mining entrepreneur H.A.W. Tabor once owned (continued on page 47)
by Peter E. Palmquist


When you think of Western railroads you cannot avoid remembering the Central Pacific, and the illustrious photographer who captured its early growth so eloquently. Through his work on the C. P. R. R., Alfred A. Hart (1816-1908), has become one of Western stereophotography's most respected imagemakers.

Although we know Hart's photographs very well, his life has been maddeningly obscure. What did he look like? What were his origins? How did he come to photography? When did he begin and end his C. P. R. R. work? What happened to him in later life? Various writers, for instance, have spoken sadly of his untimely death in 1869. This death date provided a plausible excuse for the fact that his negatives passed into the hands of C. E. Watkins who published them for many years.

Glenn Williamson has tackled these questions with vigor. His answers are at times as surprising as they are illuminating. Hart died in 1908, not 1869. Hart had a real childhood (son of a silversmith in Norwich, Connecticut), and a bonafide trade as a portrait and panorama painter. Can you imagine our A. A. Hart painting a panorama called New Testament and Scenes from the Holy Land? Hart did this in 1852.

His first photographic contact occurred during a partnership with daguerreotypist named H. H. Bartlett in Hartford, Connecticut. This association began about 1857 and lasted

Alfred A. Hart. Glenn Williamson collection.

until about 1860. Next, a move to Cleveland, Ohio, where he had an art store.

By January 1866 (and probably earlier) he was already involved with the C. P. R. R. in California. Williamson traced the development of photography for the firm through the business records of the railroad. Here he found information showing that the company purchased negatives directly from Hart, for example. He was involved with the C. P. R. R. until 1869.

Hart was also a publisher. In 1869 he published The Traveler’s Map of the Central Pacific Railroad of California and its connections from the Pacific Ocean to the Great Salt Lake... (see my article on the subject in Stereo World, January/February 1980), and in 1870 a guide book called A Traveler’s Own Book.

Williamson’s study reveals many significant insights in Hart’s role as a documentary photographer; “He was a gifted artist using the medium of photography.” Not surprisingly, he found that Hart had created a much larger body of work than had been previously credited to him, and that his work was published by Lawrence & Houseworth as well as Watkins. He also did views in Yosemite and San Francisco.

Included in Williamson’s thesis is a chronology of Hart’s life, a checklist of his paintings and photographs and a useful bibliography. The work is nearly 180 pages in length and is nicely illustrated. He also has several portraits of Hart, one of which is reproduced here.

While Williamson’s study is not the final word on A. A. Hart, he has taken a giant step towards bringing Hart into focus as an important Western photographer. This new research is an essential reference for anyone concerned with the greater aspects of Western railroad photography, and life in the nineteenth century arts.

Williamson is now a graduate student working towards a Ph.D. in photographic history at the University of California at Santa Barbara. His Hart thesis is available through interlibrary loan from the University of California, Davis, CA library. A copy is also located at the Sacramento Railroad Museum. For additional details contact: Glenn Williamson, 769-B Cypress Walk, Goleta, CA 93117.


ATARI 3-D (continued from page 32)

2212 E. 12 St., Davenport, IA 52803; Reel 3-D Enterprises, P.O. Box 35, Duarte, CA 91010; CREATIVE COMPUTING (newsstand computer magazine), Vol. 9, No. 1-Jan. ’83 (p. 168); NU 3-D VU Co., 71 East 28 St., Eugene, OR 97405.

NOTE:

At the time of this writing it is my understanding that ANALOG magazine will publish a much faster (machine language) version of the CAD-type program used as the example for this article. This updated version should be published in the July or August issue.

ANTIC magazine (another ATARI resource publication) has just published an elaborate 3-D image generation article—ANTIC, June 1985, pages 38-41 and 54-58.

Although I’ve used an ATARI system for my example, users of other computers should find the information valuable when generating 3-D views from other programs such as those appearing in magazines and on discs and tapes over the past few years. They exist for IBM, APPLE and TRS to name a few. Users of the TRS Color Computer, for example, were treated to an excellent treatise on this subject in the Jan. ’83 issue of CREATIVE COMPUTING (pages 162-188) by John D. Fowler, Jr.

A bonus here is that the images are generated in full color side-by-side on the screen; however, the only way to “capture” the image pair is by photographing the screen display since no plotter or printer dump routine is given. In general, if you want a “hard copy” of your stereo images you will have to send them to your plotter or printer. If you don’t have either of these or if your software doesn’t support them, you will have to photograph the consecutive images off your TV/monitor. (Be sure not to move the camera or change any settings between image pairs.)

© 1985 Nick Brienza
NEW STEREO EQUIPMENT
FROM EUROPE

by Dieter Lorenz, F.R.G.

In recent years in Germany, Austria and Switzerland a number of new stereo products were put on the market, including new viewers and other interesting 3-D items. Most of them did not come from large companies, but from small producers not known in the U. S.

A Brother of the NESH Viewer

The NESH viewer for over/under viewing (Stereo-Vertrieb nesh, Gerhard Neubauer, Suedstrasse 16, D-4400 Munster, FRG) well known to Stereo World readers (Stereo World, May/June 1984, p. 15) was invented a second time by the KMQ triumvirat of Christoph Koschnitzke, Reiner Mehnert, and Dr. Peter Quick (KMQ Stereographie GbR, Burgermeister-Weidemeier-Strasse 25, D-6906 Leimen/Heidelberg, FRG) who did not know about NESH before. The only differences between NESH and KMQ are that for the latter the right single frame has to be the upper one and that the non-stereoscopic images above and below the real stereo image become invisible by frosting parts of the prisms. This frosting, however, may lead to a vignetting effect especially for people wearing eye glasses.

The three gentlemen are a very active team. They are the authors of a 100 page book with over/under stereo color views of animals, plants and minerals seen through the stereo microscope (Christoph Koschnitzke, Reiner Mehnert, Peter Quick: Faszinierende Natur dreidimensional; DRW-Verlag Stuttgart 1983; ISBN 3-87181-240-4) and of a 1984 3-D calendar "Mit anderen Augen" (With Other Eyes) with twelve 56 X 85 cm 3-D over/under tables containing twelve different animal eyes.

A Monocle for 3-D

The Swiss F. Forster (Apparatebau F. Forster, Randenstrasse 220, CH-8200 Schaffhausen, Switzerland) constructed and produces a stereo viewing aid useful for side by side as well as for over/under stereo frames: the Stereo Monocle. Its principle is simple. It is like a cut mirror stereoscope. One eye is looking directly to one single frame,
the other through the Stereo Monocle with its two adjustable mirrors. The different length of the two beams is not so big that the eyes could not compensate. Depending on the direction the monocle is turned, either side by side or over/under stereo views may be viewed. The size and distance of the images is considered by adjusting the angle between the two mirrors with a screw.

The Rolls Royce of Stereo Viewers

Wetzlar has a good sound to photographers because the home of the Leica. This seems to be a good omen also for stereoscopy. Since 1982 in Wetzlar a very comfortable stereo viewer named "Stereofix-Macromax-Set" has been made not by Leitz, but by EMO Optik (EMO Optik, P.O. Box 1469, D-6330 Wetzlar, FRG; U.S. representative: Foto Care, Ltd. 170 Fifth Ave., New York, N.Y. 10010). The concept is from a well known Leica photographer, the late Theo Kisselbach. This stereoscope contains two four-lens five-fold magnifiers of highest quality on an adapter plate for stereo slides in two 2" by 2" frames. Not only the eye distance is adjustable, but also vertical parallaxes can be compensated and one frame can be turned relative to the other one! However, quality has its price. The set sells in Germany for 670.—Deutschmarks. (about $230.00!)

The Adjustable Mirror Stereoscope

Wetzlar for 2x2" stereo slide pairs.

The elegant, expensive Stereofix-Macromax-Set from EMO Optik in Wetzlar for 2x2" stereo slide pairs.

The adjustable mirror stereoscope from VCH Publishers, Inc.
PHOTOGRAPHING in 3-D

Thanks to David Burder I received a copy of 'Photographing in 3-D' which is published by the Stereoscopic Society in the United Kingdom. It is a thirty-two page booklet written by him and Pat Whitehouse. It covers the most basic things one should know in order to take and view 3-D pictures. It is very well done and is illustrated with 30 stereo pairs in full color on art paper. American sales are being handled by Reel 3-D Enterprises, P. O. Box 35, Duarte, CA 91010.

Connections and Reflection

During the past year or two, members of both print and transparency circuits have been treated to a series of views by Dr. Brandt Rowles of the stately Grand Hotel at Mackinac Island, Michigan. It is one of his favorite places and he has more than shown us why it appeals to him in a fine series of stereographs. This is the first treatment in stereo I have seen of this charming piece of America since Viewmaster's reel #248 which, I believe, was taken for Sawyers by Howard Taylor several decades ago.

Interest in the Grand Hotel was heightened when it was featured in the motion picture "Somewhere In Time". This film has been seen widely on TV during the past several years and after its initial theater run early in this decade. It is a haunting story of love spanning time and bears seeing over and over again in the manner of old time classics such as "Casablanca", "Lost Angel", or "The Wizard of Oz". Perhaps this shows that there are still people around who know how to make movies in addition to the demolition derby rejects who seem to get unlimited financing for their trash. One wonders how a 3-D movie would emerge if given the same care that Producer Stephen Deutsch and Director Jeannot Szwarc tendered to this story. Maybe we would finally have a good one. Pooh! on Academy Awards. "Somewhere In Time" is among the few real gems turned out in the past decade. The Grand Hotel was one of its stars along with Christopher Reeve and Jane Seymour. Yet the story, like the hotel itself, was woven together from threads spun long ago. All this helped draw Brandt Rowles and his Realist to Mackinac Island. It is hard to separate the film from the views as the association was fixed so firmly in the movie.

The story is about a young, successful playwright, Richard Collier (played by Christopher Reeve) who falls in love with the portrait of a once famous actress, Elise McKenna, displayed in the hall of memories at the Grand Hotel. Driven by forces beyond him, his obsession deepens until he manages to will himself back to the time when Elise McKenna (played by Jane Seymour) appeared professionally at the hotel theater. His presence there in the end answers the enigmas of her celebrated career and also seals his doom. An aura of mystery and romance sweeps us into accepting the supernatural premise while avoiding dealing with the paradoxes and contradictions inherent in all time travel stories. One can even accept the promise of hope beyond death for the star-crossed lovers in the ending...surprisingly taken, as I recall, from a 1932 tragedy called "Smilin' Through" in which Leslie Howard and Norma Shearer were faced with a similar case of unfulfilled but undying love. The
mood of the picture lingers long after the credits have wound their way off the screen...long enough even for a Stereoscopic Society member to take his Realist to Mackinac Island.

The Real Elise McKenna

What many may be unaware of is that the character of Elise McKenna is drawn almost in total from the real-life stage actress, Maude Adams, who, for a while, stood alone in public regard at the top of her profession. Well over three decades after her retirement the New York Times still felt her obituary belonged on page one. Still, the real Maude Adams remained a mystery as her private life apart from the theater seemed nonexistent. In fact her lifestyle moved her entirely apart from the behavior (often misbehavior) of her colleagues. She was aloof with a spiritual quality that set her above other actresses and it is interesting that this was respected and not resented by her audiences.

Maude Adams as Lady Babbie in J. M. Barrie's "The Little Minister". Her first starring role.

Born into a theatrical family, Maude Adams didn't get heavily involved on the stage until she was fifteen. Later she had the good fortune to spend five years with Jack Drew, a near legendary performer and member of the celebrated theatrical family (represented today by child movie star, Drew Barrymore...a niece several generations removed). Maude also acquired as manager a stern taskmaster, Charles Frohman. He was her guide and mentor from the start of her climb to the top and remained so until he went down with the torpedoed ocean liner Lusitania in 1915. Their philosophy was their life and their profession and it is probably safe to say no trace of it remains. Maude believed, "...not only in 'clean' plays but in the artist's obligation to live so as not to be in conflict with any pure character he had to project across the footlights. And, if a play and the acting call out unhealthy emotions and lead us to believe they are normal, the theater serves no good purpose." It is difficult to imagine anyone outside of a monastery who could or would live up to that today. But Maude found a manager, or he found her, and they found a playwright, J.M. Barrie, and they rose to the top while living within their constraints.

Still, there was that time when Maude suffered a breakdown. She had played Juliet and for once was badly mauled in print by Shakespearean traditionalists who were appalled by her interpretation. Others said, "Nonsense! For the first time Juliet was seen as a real, live girl." I have no idea if reading abuse contributed to it but Maude Adams sought 'haven and restoration' with the nuns at a convent at Tours, France, for a time. (Those who saw the movie will have another explanation to choose from). When she did return, her star was to shine brighter than ever. Perhaps it is no accident that her greatest success, the part most associated with her, was "Peter Pan", the definitive interpretation of the boy who wouldn't grow up. The veteran performer and manager, Nat Goodwin, in his memoirs said of her, "Little woman, I fear you are unconsciously missing the greatest thing in life...romance."

What made Maude Adams tick? We will never know. One time in later years she had a hole dug into which she put all her papers, writings, correspondence (many letters from the most famous people of her day), etc., and she burnt it all up. Her biographer was left with a dry recitation of...
Have you ever wondered how the giant 19th century stereo-publishers were able to produce "millions" of stereographs? Innovation, including automation and assemblyline techniques were the biggest boons to mass view production. One of these innovative procedures involved the use of negative "sandwiches" which greatly speeded up the printing process.

Recently, I obtained an original example of this technique. It came in the form of a glass stereograph negative once published by William M. Chase of Baltimore, Maryland. Although my sample is a view of San Francisco, c.1875-80, it is from the same large group of stereo negatives described in an article by Ross J. Kelbaugh, "William M. Chase," STEREO WORLD, 10 (2), May/June 1983, pp. 13-17.

Naturally, I was fascinated by the opportunity of examining this artifact on a first-hand basis. First, the original negative was trimmed to a size about 4 by 8 inches. Next it was cut into left and right halves and reassembled with the support of a sheet of cover glass. This method not only made the printing negative easier to handle, but it also made "rightreading" prints which required a minimum of trimming before affixing to the view mount.

A. Original negative. Most negatives from this period were on 5 X 8 inch glass.

B. The original negative was trimmed to 4 X 8 inches, then, cut apart and repositioned for best stereo effect. Usually the two negative halves are exchanged left and right (finishers often cut the prints and mounted them on opposing sides of the mount), but, in this case, we have a copy negative—this negative was made especially from prints already correctly positioned—and it was not necessary to exchange the left negative with its right side. Also with copy negatives the printer could make any number of working negatives. This would not only protect his original investment (in case an important negative was broken), but would also help him produce an increased volume of prints.
C. Cover glass. Also 4 by 8 inches, this glass provides the support for the sandwich. The original negative(s) are fastened to this glass by the use of cloth tape along the length of the package. The emulsion side of the original negative is away from the cover glass.

D. The original negative sandwich as seen by transmitted light. Note that in this example the cover glass is a little bit longer than the negatives (see secondary outline at each end).

E. and F. This is the emulsion side of the sandwich; also viewed by transmitted light. Note that the subject matter is reversed. The schematic shows two important facets: 1) the use of paper masks to block light during printing. These masks are glued directly on the emulsion side of the negative to enable the sky to print without tone; 2) A labeling strip. The emulsion area, directly under this strip, has been scraped away so that the label will print without interference. The cloth tape is shown by the hatched area of the diagram.

(continued on inside back cover)
FOR SALE

WAR BOOK: 8 X 11 hard paper board covered with red linen inscribed "Der Kampf Im Westen". Text in German with color action photos. Slots cut inside covers hold 100 stereographs 2 3/8 X 5 1/8" by Hoffman. Views are translated, and metal glasses are included. Book and views are in good condition. Photos if interested. Freeman Hepburn, 557 Pleasant St. #203, Malden, MA. 02148.

FOR VIEW-MASTER COLLECTORS ONLY. Original stereo drawings that View-Master International (Europe) used for its reels. Price $225.00. For information write to: Harry zur Kleinmiede, Sassenbergen 67, 9531 GW Borger, Holland.

CLAUDET STEREO DAGUERREOTYPES, New Hampshire, Lincoln Funeral, balloon tissue, Powell Survey, other western and more. Call or write, Mark Koenigstein, 700 Boulevard East #7D, Weehawken, N.J. 07087, (201) 863-0868.

KERNOW are a sales-gwel (Cornwall Through the Stereoscope), 7/8 perforation stereotypes, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall. Ten originals (not copies) in case with quality stereos, wild beauty, West Cornwall.

Stereoscopes, mint originals, 1901 Underwood & U. $53.00 postpaid. Also 37 glass slides, Norway, 3 1/4" square, c. 1880-90, $40.00 lot. Marvin S. Balick, 5000 Kenneth Pike, Wilmingtom, DE. 19807, (302) 655-3055.

ANTIQUE PHOTOGRAPHY Mail Auction. Hundreds of photos. Hard images, CDVs, Cabinets, Stereo views, misc. photos. Large variety—lots of quality unique images. $1.00 for illustrated catalog, should be out now. Don Ulrich, 1625 South 23, Lincoln, NE. 68502.


1985 VIEW-MASTER LIST (Sawyers)—3 reel packets, single reels, viewers, etc. Send large SASE. Warren R. Leese, 42H Franklin Greens So., Somerset, N.J. 08873 (201) 249-2896.

REALIST 3.5 with case. All in good working condition. Flash contact filed down for flash use. $135, delivered. Ken Farson, 3915 San Fernando Road, Glendale, CA. 91204. (213) 245-9424, (818) 246-2012.

SELL YOUR GOOD STEREOS at auctions, held frequently. Payment shortly after sale. Low commission. (First stereo auction in the U.S.), Earl Moore, 152 Walnut St., Wooddale, IL. 60191.

50 CARD SET, Trip Through Sears, Roebuck with box, $40. Keystone 100 card WWI set, missing #5, 18, 24, card #79 poor cond. $75. O'Donnell, 199 Weld St., Roslindale, MA. 02131.

WANTED


VIEW-MASTER REELS—Buy & Sell. Send for list of items for sale. Bill Wolf, 1428 Brook Ave., Allentown, PA. 18103 or call (215) 797-3760.

JACKIE COOGAN STEREO VIEWS, preferably 1920—1940 or "Addsams Family TV show. Any photos, ads, or products. I am preparing a book on his life and career. Originals not necessary. Anthony Coogan, 12185 Laurel Terrace Drive, Studio City, CA. 91604.

SHAKER people stereo views, cabinet cards, real photo post cards. Send Xerox & price to: Richard Brooker, 450 East 84 St. 1F, New York, N.Y. 10028.

KALEIDOSCOPES WANTED. Collector seeking high quality 19th century kaleidoscopes made of wood/brass/leather by makers such as Brewster, Bush, Jewell and others. Also unusual types and kaleidoscope mechanical slides. Martin Roenigk, 26 Barton Hill, East Hampton, CT. 06424, (203) 267-8662.


TOP PRICES PAID for Colorado negatives & positives of town views, occupational, locomotives, Indians and other western. Also want stereo views, cabinets and CDVs. Large photographs desired as well. David S. Digerness, 4953 Perry St., Denver, CO. 80212.

AUSTRALIAN VIEWS in stereo, CDV, also Australian dags wanted to buy or exchange for U.S. cards. Warren Smythe, 258 Cumberlnd Rd., Auburn NSW, 2144 Australia.


ANDREW JOSEPH RUSSELL views and information about his life and as a stereo photographer, by his great-great granddaughter. Kliner, Bird Bottom Fari, R.F.D. #1, Salisbury, CT. 06086.

CENTRAL PARK (NYC): All photographic images (stereo views, etc.) up to 1930. Herbert Mitchell, Avery Library, Columbia University, New York, N.Y. 10027, late evenings: (212) 864-8183.

BIOGRAPHICAL INFORMATION on French stereo equipment manufacturer Jules Richard. Particularly information on photographic studies by him. Also interested in purchasing 45 X 107 or 6 X 13 stereo nudes on glass. Bill Wegener, 4373 S. Wayside, Saginaw, MI. 48603.

HAVE COLORADO, CALIFORNIA gold mining, western ships, railroads, Indians, photographica and other goodies to trade for Catskill Mountains views I need. Also want Saratoga Race Course views. Gosse, Box 5351, Albany, N.Y. 12205.

WACKESHA, WISCONSIN — Stereo views, photographs, post cards, advertising, etc. Wanted from Wackesha, WI. Will pay postage. Mitt. & Marilyn Hagerstrand, 1140 Aldoro Dr., Wackesha, WI. 53186 or phone (414) 542-7049.

As part of their membership, members are offered Free use of classified advertising. Members may use 100 words per year, divided into three ads with a maximum of 35 words per ad. Additional ads or words may be inserted at the rate of 20¢ per word. Please include payments with ads. Deadline is the 10th of the month preceding publication date. Rate sheet for display ads available upon request. Send ads to the National Stereoscopic Association, Box 14801, Columbus, OH 43214 or call (614) 895-1774.
TUSCUMBIA, ALABAMA. Views of town or surrounding plantation homes. Views or information on existence of views of plantation called Belle Mont or Belmont near Tuscumbia. Anthony Winston, 344 Jackson Avenue, Morgantown, WV. 26505.

ROLLERCOASTERS: I’m new to NSA. Member of American Coaster Enthusiast would like to introduce old stereo views to ACE Magazine. What’s available? Photocopy to: Bob Martin 093801, P.O. Box 4000, Vacaville, CA. 95696.

Events

Sept. 8
South Bend, Indiana Photographica Swap Meet. Century Center, South Bend, IN. Contact Heirloom Images, Box 6486, South Bend, IN 46660. Call Roger Smith, 219-259-2968.

Sept. 14-15
Seventh Detroit Area Photorama USA. Dearborn Civic Center, Dearborn, MI. Write Sam Vinegar, 20219 Mack Ave., Grosse Pointe Woods, MI 48236. Call 313-884-2242.

Sept. 15

Sept. 15
Reading, PA Camera Show and Sale. Holiday Inn, North Reading. (Rte. 222 and N. 5th) Write Photographic Associates, Box 964, Carlisle, PA 17013. Call Bob Pare, 717-258-5261.

Sept. 28-29
Ohio Camera Swap Meet, 68 Shadybrook Armory, Cincinnati, OH. Write Bill Bond, 8910 Cherry, Blue Ash, OH 45242. Call 513-891-5266.

Sept. 28-29

Sept. 20

Oct. 5-6
2nd Cleveland Photorama USA, Cleveland Center, 3100 Chester Ave., Cleveland, OH. Write Sam Vinegar, 20219 Mack Ave., Grosse Pointe Woods, MI 48236. Call 313-884-2242.

Oct. 9-14

Oct. 11-13
PHOTOHISTORY VI, a photo-historical symposium at George Eastman House, Rochester, NY. (SEE ARTICLE IN THIS ISSUE).

Oct. 19-20

Oct. 27
Barone Camera Swap Meet, Holiday Inn, Crystal City, Arlington, VA. Write Camera Swap meet, c/o Barone & Co., Box 18043, Oxon Hill, MD 20745. Call 703-768-2231.

THE UNKNOWNs (continued from page 37)
the Black Hawk Hotel. The town had floods and other problems but still exists on Colorado state highway 119.

Our unknowns this issue include Gary Ewer’s view of a substantial stone house and residents which may possibly be from Middleburgh, N.Y. around 1879 because it came with a similar card that was so labelled.

Gary also sent the American Views card of a building that says “Armor 1882” on the front. It must have been of some interest to be worth issuing as a pirated card.

Vern Conover furnished the view of a drug store with fire & life insurance agency upstairs. It may be from New York State. The interesting dome next door might help locate the site.

The downtown view on a gold card also belongs to Vern and also might be from New York. The signs that are readable are all general in nature except for “A.J. Simpson’s CA…”

We’d like to thank Ed Poe for his invitation to come over some evening and view his collection of unknowns. Ed, we hadn’t previously heard of a photographer named Amon-tillado, but we’d like to see his work. Just one question, though...why do you keep the views in your cellar?

Send views or information to Neal Bullington, 137 Carman St., Patchogue, NY, 11772.
ARTICLES WANTED
ON CONTEMPORARY
STEREO TECHNIQUES
FOR PUBLICATION IN STEREO WORLD
JOHN DENNIS
5610 S.E. 71ST
PORTLAND, OR 97206

FROM the SOCIETY NOTEBOOK
(continued from page 43)

playbills and engagement dates and nothing of the person
behind the public image. “Is that all there is?” as singer Peggy
Lee used to wail. Well, it does add to the mystique of this
remarkable woman.

Maude didn’t carry on with her stage career long after
Charles Frohman died in 1915. A serious illness in 1918 saw
her retreat to a nunnery in Aurora, N.Y. After that she only
acted on rare occasions. She became fascinated with the
impact of electric lights on the theater and spent years
researching stage lighting, a subject in which she became an
expert. She was even aided by Charles Steinmetz, the wizard
of General Electric. A five year stint as head of the drama
department at Stephens College followed and her last ten
years were spent at her estate in the Catskills. She remained
in reasonable health and alertness until her heart stopped
one day in 1953 at the age of 80.

In the movie “Somewhere In Time” beautiful Jane
Seymour plays Elise McKenna and does it well. There are
many differences between Maude Adams and Jane
Seymour, or between Maude and Elise for that matter.
Maude was the only complete celibate. Jane has beautiful
children and is a film star, not a stage actress primarily. But
in a way they all become one, thanks to Jane and writer
Richard Matheson.

I’ve never found a stereo view of Maude Adams. She
came along much too late for the Gurney treatment but such
views may exist and if so I would love to see them. One
thing leads to another. Brandt Rowles’s views of the Grand
Hotel remind me of “Somewhere In Time” and that leads to
Maude Adams...all part of the same thought. That is the
fascination in going through a Stereoscopic Society folio.
Pictures never stand alone. They always have connotations
and associations and that is part of the enjoyment. One
never knows what emotions the next folio envelope may
evoke or what memories.

Society Membership
The Stereoscopic Society is made up of contemporary
stereo photographers at all levels of experience. Current
viewmakers, either transparency or print format, who may
wish information on joining the Society should contact the
Corresponding Secretary, Jack E. Cavender, 1677 Dorsey
Avenue, Suite C, East Point, GA 30344.
G. This is a full-scale print made by contact printing the sandwich. Notice the labeling which is typical of prints made from copy negatives. Also observe the grey sky areas which exist outside of the masked region.

H. A final print affixed to a typical W. M. Chase mount. Note that the finisher needed to handle only one piece of printing paper instead of the two halves commonly found when printing from an uncut negative.
THE camera behind the stereo photography boom of the 1950's. The original working prototype model of the Stereo Realist camera was recently donated to the California Museum of Photography by inventor Seton Rochwite, seen here in a view from the article in this issue by David Starkman.