While we wait for responses to the "Wheels" assignment to arrive, here are two more of the entries selected in the "Hyper" assignment.

**Current Assignment: "Wheels"**

This isn't limited to rustic wagon wheels being used as fences or the chrome hubcaps of overly customized hot rods. Anything that moves on, under or by wheels is fair game here, including cars, trains, unicycles, pretzel carts, skateboards, etc. Things like large pulleys or tiny watch parts would also be eligible, as would spherical rolling devices like ball bearings or the ball on the underside of a computer mouse. The wheels themselves would not have to be the center of interest in views of things (Continued on page 16)

"Hubble Telescope Gets Astonishing Stereo of Exploding Black Dwarf Star..." or "Western Pyrotechnics Fireworks Show, Holtville, CA, July 4, 1988." Quentin Burke of Holtville entered this imaginative image, taken with the help of Ellen Burke on the verbally synchronized left camera at a 16 foot separation. Film was Tri-X exposed at 1/11 with about a five second exposure. The original print pair was copied and then transferred to lithographic film to make this high-contrast, negative print.

"Jim Drennan in the Carrizo Badlands" by Rich Fairlamb of Torrance, CA was taken in Anza-Borrego Desert Park just east of San Diego in February, 1993. The 3D foot separation details the rugged texture of the landscape better than any contour map, with the rare added feature of a human figure to show scale.
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ON THE COVER
Centennial Photographic Co. No. 2044, “KANSAS & COLORADO STATE B. INTERIOR.” One of the more unusual exhibits at the 1876 Centennial Exhibition in Philadelphia was this huge model of the Kansas State House made of fruit and vegetables. (Note the many “Hands Off” signs.) Peter H. Fowler's feature article “A Guided Tour of the Centennial Exhibition” compares the sights of the exhibition to stereographed by the Centennial Photographic Company with written accounts of many of the same subjects found in the New York Times.
The Saga of Vol. 21, No. 1

S o, what happened? Color issues of *Stereo World* often involve some delay but our "March/April" 20th anniversary issue set new records in that department. To the many members who feared they had been forgotten and to all the readers and advertisers frustrated by its lateness, we offer our deepest apologies.

It's tempting to blame the delay on the size of the issue (60 pages counting covers) or better yet on the sudden abduction of the printing press by space aliens for use in some bizarre sexual rites on the far side of Titan. But neither of the above really had much effect on our schedule. The complications actually started with a very high volume of regular commercial jobs at Wy'east Color in Portland, OR (where NSA member Dwight Cummings generously donates color separation work) which required postponing the free work on *Stereo World* at several points during its preparation.

Surrendering completely to the temptations of digital imaging, we had decided to do all the SW image placement electronically (for the first time) for this special issue. The idea was to save a lot of the time and effort involved in manual stripping of the 4-color negatives into the full page negatives. Unfortunately, the department where this was to happen was even busier by the time all the images had been scanned and the issue was finally ready for electronic image-setting in early May. Arrangements were then made for this to be done on a computer available evenings in another department by none other than your semi-computer-literate and by now rather distracted editor.

Considering that the electronic placement of stereo pairs was to be a learning experience for all involved, things went slowly but surprisingly well – at least as they appeared on the screen. With the work load still too heavy at Wy'east in late May, it was decided that the final negatives would have to be generated at our regular printer in Ohio from computer disks containing the high-resolution 4-color images as well as the "low-res" instructions for their correct placement. (This ended up requiring the shipment of twenty-two 88 megabyte disks – more than some people in the digital imaging business have ever seen at one time.)

On June 17th, color page-proofs from the resulting negatives were shipped from the printer directly to the NSA convention hotel in Milwaukee where we hoped to use them as physical evidence that we hadn't spent everybody's money on Czechoslovakian stereo nude reels and that the issue was actually close to being printed. As it turned out, hotel guests and clerks were spared the sight of a crazed editor leaping from the atrium balcony screaming something about "computer-fraud-sabotage" thanks to the presence of NSA Board member David Hutchison at the opening of the long-awaited package.

After being lulled into a premonitory type euphoria by the beautifully done cover we discovered that roughly half of the stereo pairs in the proofs were pseudoscopic, and even those that weren't seemed to have been dropped into place by a one-eyed robot with no regard for stereo window or decent alignment of any sort. One "pair" simply repeated the left image twice, and even some flat photos were so cockeyed that sprocket holes could be seen peeking shamelessly out at the bottom. Adding textual insult to visual injury, large sections of type were out of place and several "continued" sections simply started the articles over again!

Drawing on his years of experience as an editor at *Starlog* Press, David calmly reassured me by observing that he had never in his life seen such a hopeless mess and that in theory, so many things could never go wrong at once in the real world. Fortunately, he was also blocking the door to the balcony at the time and insisting that we try to document the actual number and variety of problems involved in this Chernobyl of publishing misadventures.

As an alternative to using a phony name on his convention tag, SW Art Director Mark Willke had already prepared a special paper badge reading "Don't even ask about the March/April *Stereo World* unless you like horror stories!" and had run off a copy for me as well. I filled him in on how the horror story had just passed from the Kafka realm into something by Stephen King as I pinned on the little warning sticker. Like a stereo Scarlet Letter, it actually generated some outright pity for this hopelessly outnumbered production staff of two.

After maintaining a calm front (broken only by an occasional whimper) through the rest of the convention, I returned to Portland and Wy'east with my sad tale of computer generated woe. While going over the depressing proofs yet again, we learned that the computer on which I'd so precisely placed the image pairs in position (by free viewing them on the screen) lacked some bit of software that linked the position instructions automatically to the images on the disks for the benefit of the machine that generates the negatives. (Exactly why the digital imaging crew at the printer let their machine go ahead and)

(Continued on next page)
Stereo at its Best

Stereo World is an excellent magazine. I look forward to each issue. You manage to provide a good balance between the old and the new: stereo views, techniques, equipment, and publications.

Contrary to opinions expressed in recent letters, I find the historical stereo views to be of great value. Stereo World provides me with viewable copies of old stereo prints that I would otherwise never see, much less own. Stereo photography is at its best when it preserves a moment of history for later generations. I was not there when the pictures in question were taken, but by means of the historical views, and articles, I can share what the photographer saw (even if in black and white).

Current stereo views from our members, many of which are of professional quality, are worth printing in our magazine. Pictures of earthquake damage in California and presidential candidates in the last election come to mind as good examples. But, please, don't let Stereo World become another snapshot heaven as can happen all too easily in photographic organizations.

Keep up the good work!
Julius C. Martin
West Union, WV

SW Image Size

Why promote “free viewing” if pairs in SW are printed with 80mm infinity separation? Perhaps some people can accept this for old views because it is the original size but it becomes unacceptable for modern pictures, as there is no such reason.

Issue after issue, the pictures are getting wider and wider, and I can't keep on free-viewing them as I can't extend to more than 79mm infinity separation at ten inches distance. With my 64mm interocular distance, it's already very uncomfortable. The only benefit to having wide pictures is to see them completely FLAT.

It is unfortunate that these few extra millimeters should disqualify this journal from perfection in stereoscopic publication.
Philipp Gaillard
France.

Our standard procedure is to reproduce Realist format (SP) stereoas pairs of 2½-inch wide images, and horizontal format stereos (2x2 or 7P) as pairs of 3-inch wide images. A number of readers would like to see everything printed in the smaller width for easy free viewing, but at least as many seem in favor of printing everything in the wider size for better definition when using a viewer.

For the present, we'll probably continue partially satisfying (and partially frustrating) both camps until the path to "perfection" is revealed. Ultra fine-screen photo reproduction techniques now edging into the printing industry may in fact eventually allow use of free viewing size pairs that will also hold up under viewer magnification.
- Ed.

Hazeltine

The citation below is missing for July 26th through 28th, 1876, in my article “Martin Mason Hazeltine, 1827-1903: A Chronology” on pages 11-12 in Stereo World Vol. 20 No. 6.


The German translation is mine.
Paul Hickman
State University, AR

If you have comments or questions for the editor concerning any stereo-related matters appearing (or missing) in the pages of Stereo World, please write to John Dennis, Stereo World Editorial Office, 5610 SE 71st Ave., Portland, OR 97206.
The America of 1876 was a very different place from the America of 1994. The technology of ordinary life was vastly different. On land you moved on your own feet, behind an animal, or behind a steam engine. On water most things went by wind power. Steam was taking over at sea, though the final end of commercial sail did not come until the 1929 depression. Information came by word of mouth, by newspaper, or from books, none of them necessarily devoted to pure truth. The country was recovering from a devastating depression which in many ways permanently changed the society. (After 1874 the Anthonys stopped issuing stereo cards under their own name because of changed economics.) The Civil War was a recent memory and some of its orphans would not be teenagers for another two years. Against this unpromising background was held the Centennial Exhibition.

In 1976, for the Bicentennial, Stereo World published an article by T. J. McMahon (Vol. 3 No. 3) which describes the history of the Exhibition and the Centennial Photographic Company. My purpose here is to show what people felt...
about the exhibits as recorded by the *New York Times* Correspondent. To this end, I have, as far as space permits, kept the wording of the original articles unedited, and I have added only enough peripheral history to maintain the feel of 118 years ago.

The stereoscope and views were the technical and financial equivalent of big-screen TV today. Twenty years later, in better economic times, North Carolina Tobacco Co., in a coupon offer on the back of a stereo card (pirate), said of "The Stereoscope" that "It has heretofore been a matter of such great expense to get one . . . that only a few families have been able to afford it." The average family income in 1876 was around ten dollars per week, while quality stereo cards cost about 25 cents each, or the equivalent of about ten dollars in 1994 terms (note that at present auction prices the average inflation adjusted value of the Centennial Photo Co. cards has *not* appreciated in 118 years).

If the New York Times in its selection of coverage of the Centennial Exhibition in Philadelphia is a guide to popular interest, people were fascinated by leather goods, ornamental ceramics, steam engines, sail and rowing boats, and mining. An interesting discrepancy appears between the slant of the Times articles on the Centennial Exhibits and the Centennial Photo Co. Coverage. The majority of the Times coverage is of the Machinery Hall, card #653, while the Main Building, statuary, gardens, statuary, exteriors, statuary, panoramic views and statuary constitute the majority of the Photo coverage.

There were the usual elaborate opening ceremonies with oratory, choirs and a large throng of spectators. The times on July 17th had this to say:

> The most interesting thing by far in the "Exhibition" is, after all, the American people themselves, who have come in crowds from every section of the Union. Every variety of the *genus Americana* is here . . .

The crowds are shown on opening day in card #354. (I am not able to find a single direct reference to the opening in the Times, though there were eight articles on the closing, of which I am not aware of any stereos.)

There was a July 4th celebration, also of which no stereos seem to have been taken. As a matter of stereo-historic interest, however, the "Hymn of Welcome" for Orchestra and Chorus, was written for the occasion by Oliver Wendell Holmes.
There were also parades and celebrations for "State Days." Pennsylvania day, July 28th for example, according to the Times for July 27th, was to have:

The veteran corp of the First Infantry... escort Gov. Hartranft to the Pennsylvania State Building. On their arrival the ceremonies will open with the singing of an original Ode.

Card #1961 shows part of the parade. Unfortunately the people were walking faster than the shut-
ter, so the parade is hard to make out. As far as I know the "Original Ode" has not become a celebrated element of American literature.

The states, and some countries, also had hospitality buildings, mostly of very undistinguished architecture. The English Government Building for instance, card #229, is a striking example of the style known as "Stockbroker's Tudor". In the July 17th article the Times correspondent said:

And now as I passed the English
House a portly John Bullish kind of man came out and in thoroughly English tones called out . . . “tell Mr. Johnstone or young Wysox there’s no-one in the ‘ouse”. There was no mistaking his nationality!

The English, according to the Times of October 23, made this chilling announcement:

Her Majesty’s government intend to present [the house], at the Centennial grounds, to the people of Philadelphia.

I hope they were duly grateful.

The first description of an exhibit seems to be in the Times of July 3rd, 1876. Almost a whole column was devoted to the Krupp gun exhibit in the German section, card #966, including a biography of Krupp and description of the factory. There are actually four guns visible in this stereo, giving an eerie foretaste of the events of 38 years later. The Times description of the scene includes the following:

Not 20 yards from the main entrance of the Machinery Hall stand two monsters, more resembling a domesticated married couple of the hippopotamus species than anything else in creation . . . The signers of the Declaration of Independence . . . would, I am inclined to think, have been very ready to make the inquiry, ‘What’s them!’ which may be heard . . . almost every minute of the day. Stand on one side of them and you will hear the enthusiastic praise of them which bubbles from the lips of some young artillery officer . . . to the other side a grave-looking disciple of William Penn gazing at them in silence, a tear almost ready to start from his eyelid . . . are the only comments of the peace loving Quaker of the City of Brotherly Love.

There seems to have been a certain amount of exaggeration in connection with the guns, as the Times goes on to say of the largest:

In the first place, let me correct some widespread but very erroneous impressions . . . fabulous figures are quoted as to its dimensions and power, the most common being that it weighs 150 tons, carries fifteen miles, and throws a bolt weighing 1500 pounds.

The breach view in card #2694 might certainly support such estimates. According to the same article, the gun was sold to the Turkish government while on the ship to the Exhibition.

The impression given by the exhibit is that the gun is the most important German product. The impression given by the Times report is that it shouldn’t be taken too seriously. These attitudes influenced history for most of the following century. The quality of the German exhibits, however, seems to have been generally condemned. On August 7th the Times quoted as follows:

German industrial circles are painfully excited by a competent judge [Prof. Rolaux, a Commissioner and judge of the Exhibition] declaring the manufactures of the country inferior to those of other civilized lands . . . I do not remember seeing it denied in any paper that German goods are recommended by cheapness and not by quality.

The German exhibit is far from the only one criticized for poor quality. There are several stereos of the Italian section, card #1454 for instance. There was even an annex full of dubious artwork, some of the more gruesome Italian examples shown in card #1302. Opinion of these treasures at the time seems to have been similar to that of today, according to a letter to the Times by “Veritas” on July 30th:

Tradition is still extant in Italy of losses sustained in connection with the World Fair held in New York in 1845. Objects [of art] can-
not be sent on long ocean voyages without great expense and risk. The statues and pictures of the best Italian artists are too valuable to be sent... complains of the endless repetitions of the classical statues.

The porcelain exhibits, as seen on cards #173, #252, and #592, also came in for some abuse. On August 17th the Times reported:

The display of porcelain must be considered very unsatisfactory. Whether we compare it with what
has been shown at previous world's fairs, or whether we contrast it with what might have been shown, we must alike come to the same inevitable conclusion. The exhibition of English porcelain of the first rank is not equal to the single exhibits of individual firms at Vienna . . . This is due to several causes, the most important of which is most decidedly our heavy import duties, which combined with the premium on gold and the losses by breakage, compel importers to charge such enormous prices . . . that they are

Centennial No. 1303, “ART ANNEX, ITALIAN DEPT.”

Centennial No. 173, “STAFFORDSHIRE CERAMIC WARE.” Tracy Brown Collection.
excluded from the market. The second reason, which is only inferior to the first, is the fact that the manufacturers... are greatly discouraged. The demand for Sevres and Dresden... has almost entirely ceased.

The combination of high duties and the effects of the depression of 1873 seem to have killed the market for other things besides expensive stereo photos.

The Times Correspondent was not always negative, though the
pattern of his enthusiasm is not always clear. On July 30th, he wrote of the Chinese exhibits, part of which is shown in card #2021:

This week the wonderful display made by China in the Main Building has been supplemented by an annex. What else could be expected of a country containing 450,000,000 of inhabitants . . . All the cereals and innumerable articles of food can be inspected. The fish products are peculiar. Generally, I have boldly tasted but on this occasion smelling was quite sufficient. White shark's fins and black shark's fins are not appetizing, and I do not hanker for dried squid. Desiccated sea slugs or shrimp, if good to eat, were not satisfactory to my nose.

He also seems to approve of the Russian section, card #1429:

The double-headed eagle looks down on an indescribable multitude of things. The first thing that strikes one is the variety of wines, brandies, and liqueurs Russia must make and drink. Here is Vodki (sic) in every imaginable kind of bottle. When people travel for months in temperatures below zero such elegant bottles must be very comforting. But Russia shows here, too, agricultural machinery, admirably built and perfectly finished. There is an exhibit of harness and clothing, and tobacco and confectionery, and a charming show of low-priced china and earthenware . . . It is a grand exhibit.

There were a large number of exhibits of food and drink, domestic and imported. Among the strangest was in the Kansas and Colorado State Building, card #2044. The model state house seems to be made of vegetables and fruit. On July 23rd the Times printed:

Your correspondent has certainly tasted professionally, not voluntarily, many queer and strange things . . . It has been my good fortune to eat, however, some quite excellent . . . things. Now reindeer steaks, as put up in Finland, are excellent and I can recommend them freely, but I do not hanker after the potted tails of either the jumping kangaroo or of the tawny giraffe, though with a well baked and juicy young elephant's foot, it would be, with me, cut and come again.

To return to the Machinery Hall - one of the favorite views in the Machinery Hall was the Corliss Engine, of which there are several stereos. The engine was running at a claimed 1500HP, and powered many of the exhibits through shafts. Card #496 shows this gigantic piece of equipment close up and card #883 gives an impression of the scale compared with a row of railroad locomotives. The Times of July 10th had a surprisingly brief comment on this impressive monument to 19th century engineering:

I must say too one word about the Corliss engine exhibited by Van der Kerkhoeven of Ghent. It is, of course, constructed after drawings and under a royalty from the eminent American builder, but I think that Mr. Corliss himself will be the first to admit that the accuracy and finish of the work are remarkable and do great honor to his disciple in Ghent. The engine has Mr. Corliss' name so conspicuously displayed upon it that no one can possibly suspect Mr. Van der Kerkhoeven of desiring to sell under false colors.

One gets the impression that the Times correspondent felt that showing a foreign-built American design was somehow not quite fair. The bringing of this unwieldy object across the Atlantic and into Fairmont Park, even in pieces, must have been something of a feat in its own right.

The great interest in boats displayed at the Exhibition is reflected
in the Times of August 13th, "A FEW AQUATIC EXHIBITS", devoted to displays in the Government Building. The correspondent gives a long dissertation on the evolution of the fore-and-aft sail, illustrated by the "Dante" of 1600, shown in a card I cannot find (#2684), and card #930, showing models of modern examples:

... that I came upon an illustration (the Dante) that... the fore-and-aft sail, which seems now to be driving out the square sail...
witness the increasing number of three-masted schooners - was originally only a modification of the square sail . . . On the other hand, it is hardly fair to say that the exhibition is wanting in the Newport sailing craft, which shows a close descent from the Norwegian and English forerunners . . . It looks as if the ocean were to be divided henceforth between steamers and fore-and-aft schooners.

This was one of the more accurate Times predictions, as two and
three mast schooners were still being built well past the turn of the century. For example Western Stereoscopic Co. card #80 (not shown) shows the schooner Oakland loading lumber about 1905, and she was in regular coastal trade until she sank off Cape Mendocino in 1924. The great square riggers, however, were more efficient in long passages, and some continued in this trade until the end.

Talking of accurate predictions, note the vast number of steam
engines on display. For example card #819, “Machinery Hall South Avenue”, has at least a dozen stationary and mobile engines visible, and card #808 (not shown), for example, has more. Few there would have guessed that exhibited nearby was the forerunner of the new prime mover which would reduce steam engines to curios in just a few years. This important exhibit was in the Prussian section, described on July 3rd as follows:

... several small engines of a somewhat novel construction which appear to be rather a vexed question among the mechanical visitors. They are the small atmospheric gas engines exhibited by Langen and Otto. The method of working of these small engines is as follows: gas and air, mixed in such proportions as to form a mildly explosive mixture, are admitted into a [NOTE: something seems to be missing in this sentence] the engine under a piston which slides, air tight, in a cylinder..." [he goes on to get the operation totally mixed up, never having had the 4-cycle principle explained to him. Of course, at the time nobody else had either.] The inventors claim the following advantages - First, that it can be started at a moments notice... that the safety is proved... because there is no boiler... Second, that, compared with other gas engines the consumption of gas is considerably less... Third... that there is no ash to carry out and that none of the parts are exposed to the destroying action of fire... Without at all disputing the justice of these claims, I am disposed to think that the heavy jar upon the machine caused by the incessant falling of the piston must have a disadvantageous effect as far as the wear and tear of the engine go. However, the engine forms an interesting exhibit.

Two years before this exhibition a loony German by the name of Seigried Marcus had built three workable benzene powered automobiles, one of which still exists in a museum in Vienna. Only nine years after this article was written Carl Benz was running round Mannheim with an Otto-cycle engine in the first practical automobile. Still, I have owned a couple of cars in which the Times' "disadvantageous effect" was quite marked.

Fire was a menace to cities until quite recently, and towns from Boston to Bandon burned to the ground at one time or another. The Exhibition had a large display of fire-fighting equipment, housed in what the Times calls "the Hydraulic Annex", part of Machinery Hall. Some of this display is shown in card #1722, titled however "Pump Annex, Machinery Hall". The Times devoted a whole two column article, on July 8th, to the engines displayed, without, however, mentioning the water show from fire hoses shown in the card. Every type of steam pumper and chemical engine was described in detail, but the LaFrance seems to have been especially admired:

The rotary steam fire engine, exhibited by the LaFrance Manufacturing Co. of N.Y. is also a very fine specimen of fire-engine building. Like the Slishby engines, it is nickel plated and has some very fine work put into and on it. Neither in this engine or its pump is there a single valve, hence the great source of difficulty with piston engines is entirely obviated... Through a 1 and 1/4th inch nozzle with 200 feet of hose, water was thrown 264 feet...

Most of the steam engines were claimed to make steam in five to seven minutes, though not up to full pressure for somewhat longer. They were, of course, horse drawn, the weakness of which system was demonstrated in the Boston fire which spread out of control because all the horses were sick.

Thank you for allowing me and the New York Times correspondent to escort you through the Centennial Exhibition in Philadelphia 118 years ago.

Acknowledgements
The Southwestern Oregon Community College library, Coos Bay, Oregon, provided the microfilm files of the 1876 New York Times. Mr. Tracy Brown and Mr. Ken Speth kindly loaned some of the Centennial Photo Co. cards reproduced here.

Assignment 3-D

(Continued from Inside Front Cover)

like vehicles, but a close-up of just a windshield wiper on a 1938 Plymouth probably wouldn't be in the spirit of things. Deadline for entries in the "Wheels" assignment is October 7, 1994.

The Rules:

As space allows (and depending on the response) judges will select for publication in each issue at least two of the best views submitted by press time. Rather than tag images as first, second or third place winners, the idea will be to present as many good stereographs as possible from among those submitted.

Prizes are limited to the worldwide fame and glory resulting from the publication of your work. Anyone and any image in any print or slide format is eligible. (Keep in mind that images will be reproduced in black and white.) Include all relevant caption material and technical data as well as your name and address. Each entrant may submit up to 6 images per assignment.

Any stereographer, amateur or professional, is eligible. Stereos which have won Stereoscopic Society or PSA competitions are equally eligible, but please try to send views made within the past eight years. All views will be returned within 6 to 12 weeks, but Stereo World and the NSA assume no responsibility for the safety of photographs. Please include return postage with entries. Submission of an image constitutes permission for its one-use reproduction in Stereo World. All other rights are retained by the photographer.

Send all entries directly to: ASSIGNMENT 3-D, 5610 SE 71st, Portland, OR 97266.
Some people find the excitement of acquisition the best part of collecting stereo images while others will describe in detail a lucrative sale or their latest shrewd trade. But unlike most other types of collectible images, stereoviews have an interactive potential that can make just viewing and enjoying them the central motivation and delight. While this impulse has the effect of preserving many of the best views in personal collections unexposed to the market, it also means that any sharing of these unique images can happen only through visits to collector’s homes or by publication of the views – an all too rare event.

STEREOVIEWS ILLUSTRATED Volume I: Fifty Early American is the somewhat less than catchy title for a wide-ranging collection of gems assembled by Russell Norton and introduced at the June NSA convention in Milwaukee, WI. A title something like The Joy of Stereography would more accurately describe the visual delight provided by these 50 unique windows on 19th Century American Life. As the author explains in his preface: “This is a picture book. The whimsical selection presented here is from my personal collection and is a sharing and celebration of twenty years in pursuit of meaningful stereoviews.” Reproduced full size one to a page, the views are presented in general categories by subject, arranged alphabetically. Under each view is the original caption, the photographer and/or publisher, the date, any text from the back of the card, and an occasional explanation of the subject.

People, curiosities and historical scenes dominate this collector’s collection, with images that range from African-American farmers to a cat who survived the Chicago fire to Walt Whitman. In effect, the sequence of subjects is completely random since most of the categories are represented by only one or two views. A close-up of some large hail stones from an 1870 storm in Northampton, MA is followed by a view of a murderer’s body being dissected in a Dartmouth classroom. A George Barker view of people seated around a table in an open sided shack made of debris from the Johnstown flood is one of the most memorable images that calamity, while an Anthony view on the facing page invites one into a “Gipsy Camp” fortune telling tent (operated by “Prof. Nixon”?!?) in Saratoga Springs, NY. The delightful anarchy of images will prove to any doubter that stereoviews can go far beyond faded scenics or boring statuary.

There are individual views shown that some people would probably give about anything to have. The 1869 “Fairy Queen” steam driven horseless carriage view (probably by C.M. Clough) and the Crowell view of temperance protesters seated outside an Ohio saloon are no doubt among them, along with the railroad and Civil War views and the anonymous view of a lynching victim dangling above a Silverton, CO creek. For the morbidly curious, dollar value estimates are given at the back of the book with the notation “(no, they are not for sale)” and an indication of how condition, esthetics, impact, subject, and rarity affects the value of each view.

The quality of the 250 line duotone reproduction is enough to make it look as if original views had been left laying on some of the pages. While logos and titles are too dark to read on a few of the views, the images are all sharp and clear with no loss of highlight or shadow detail. The half-tone dots are somewhat hard to notice even with a magnifying viewer, and were created through a screen in a process camera rather than on a scanner. A wire binding allows pages to lie flat for proper fusion of the views, adding to the elements that place STEREOVIEWS ILLUSTRATED among the all-too-few books that demonstrate exactly how stereos should be published.

Aimed at stereo collectors and photographers, the book comes with no viewer but later volumes in the anticipated series will include viewers for a more widely targeted audience. Topics covered by the individual volumes will include: The Civil War, The Old West, Later American, Early International, African-Americans, Native Americans and Early English Groups.

STEREOVIEWS ILLUSTRATED is available for $20.00 postpaid from Russell Norton, PO Box 1070, New Haven, CT 06504-1070.
Single Image Stereogram Books

Reviews by John Dennis

Super Stereogram

The best (so far) of the rapidly growing assortment of single-image stereogram books has now been joined by a sequel just varied, informative and visually entertaining as the original. U. S. Publisher Cadence Books has followed Stereogram (reviewed in Vol. 21 No. 1) with the June release of Super Stereogram. Both are English translations of books published in Japan by Shogakukan, Inc.

Like the first book, Super Stereogram includes several types of single-image stereograms, computer generated pairs, manipulated drawing pairs, and photographic pairs. An interview with random dot stereogram inventor Bela Julesz (illustrated with stereo photos) fills in more of the historical back-ground of single-image stereograms when added to the material in Stereogram by Christopher Tyler, who is credited (with Maureen Clarke) with developing the single-image approach to random dot stereograms. Bela Julesz is a fascinating character, and even those who rate single-image stereograms as a faddish gimmick somewhere between pet rocks and Elvis paintings on velvet could find this chapter well worth the price of the book.

In his foreword, Stereoscopic Society President and NSA member David Burder notes the contribution of the Stereogram books to a world-wide rebirth of awareness of 3-D imaging’s potential and predicts, “...the fact that so many people have learned to fuse stereo pairs will surely lead to a resurgence of the production of 3-D images and imaging techniques for use in science and leisure.” Some of the most impressive of such pairs in Super Stereogram are the work of sculptor and computer artist Kenneth Snelson, who’s colorful atomic structures and other complex

A SIS Book With A Difference From

The single-image stereograms in Hidden Dimensions by Dan Dyckman (Harmony Books, New York 1994) require much more study than the usual clever pictures or pretty patterns seen in such books. It isn’t because they’re harder to fuse or understand, but because each one involves some sort of complex visual puzzle or maze. The pages of this book aren’t intended to be turned as soon as you fuse the image and say “oh that’s what it is” as is the case with all too many SIS books.

Some of the images require that you mentally unravel 3-D twisted, tangled masses of string and determine whether the string is knotted or simply looped. Other puzzles involve matching 3-D objects to images on facing pages that fit together with them, are associated with them, or are mirror images of them. Some of the best are the mazes. Several involve blocks of varying height and require you to “hop” from one to another in a particular pattern to reach the exit block. One pipeline maze is so complex that it extends over three pages of camouflaged 3-D background detail.

While his first book has only now been published, Dan Dyckman is certainly no newcomer to the SIS world. Illustrated with three single-image random dot stereograms, it was his article in the May/June 1990 Stereo World that inspired computer graphics enthusiasts around the world to create and share their creations, eventually resulting in millions of sales and millions of people discovering the joys of free viewing.

Not more than a fraction of a percent of them would recognize Stereo World if you hit them over the head with it, but Dan Dyckman has made a start at correcting that irony in his introductory text to Hidden Dimensions. Following an informative section on the theory and history of
A Familiar Name

3-D imaging and a brief explanation of how readers can do their own 3-D photography he includes the address of the NSA and a description of Stereo World—a first in any of the SIS books. In a chapter covering the history of single-image stereograms he mentions his 1990 SW article and informs his readers, “It was this magazine article, incidentally, that launched the craze that has mushroomed in popularity all over the world—artists who saw my early images, and read my description of how they were produced, began making their own autostereograms and collaborated with me to produce the earliest commercial items.”

The 8 x 10 inch hard cover book features 39 stereograms on its 64 pages and retails for $14.50 in the U.S. It should be available in most national chain bookstores or through Harmony Books, 201 East 50th St., New York, NY 10022.

objects float in dream-like landscapes. (See SW Vol. 15 No. 1, page 17.)

A few of the image pairs are contained within single drawings, as in “A Cup of Happiness” by Kan Dava. Among the single-image stereograms, perhaps the most amusing is “The Chicken and the Egg” by Michiru Minagawa. The answer to which came first is decided by whether the image is fused via convergence or parallel viewing, with surprisingly different images resulting. While many of the images are similar to those in the first book, a section on “Stere Naturalism” contains some delightful images that appear from leaves, flowers, trees and rocks. In one otherwise ordinary photo of people camping, huge owls appear in the trees above them while in others fish appear in streams and ducks fly out of bushes. Among some relatively predictable wallpaper effect stereograms is an impressive one by Miyuki Kato that shows mountains, a lake, waterfalls and birds in the glowing colors and lighting of a Maxfield Parrish illustration. In a section on “found” stereograms, a still from How to Marry A Millionaire shows Marilyn Monroe reflected in a row of full length mirrors. With each mirror aimed at a slightly different angle, three stereo images can easily be seen in them by parallel viewing.
As in the first book, nearly all images have fusion spots above them and symbols at the bottom of the page indicating whether the image is to be fused by parallel or convergence viewing or by both. Super Stereogram (95 pages) is available at most large chain bookstores. For a real treat (even if you don't buy it) sample the images on the inside front and back covers, not of the jacket, but of the book itself.

Enter NVision

Many of the single-image stereogram posters sold in malls over the past couple of years have been published by NVision Grafix, Inc. under the name Holusion™ Art. Soon to appear on bookstore shelves is the firm's first SIS book, The Authorized Collection of HOLUSION ART How and Why it Works. The relatively simple and large images on the 9 x 12 inch pages are fairly easy to fuse, matching the NVision posters, postcards and calendar aimed at a mass audience. The only difficulty comes with three horizontal images that extend across the gutter, causing a disturbing double seam in the fused image.

Holusion Art is the first SIS book to provide an actual viewing aid along with the usual free viewing tips. Taped to the inside of the book jacket is a heavy, page-size sheet of mylar in which readers can see their reflections when it's placed over the pages. Like the glass covering Holusion prints on display in malls, it enables people to focus and converge on a point beyond the print and then refocus while maintaining fusion of the image. The trick works surprisingly well with glass but requires a little more patience with the distorted reflections in the mylar. No fusion spots are provided.

In the design of many single-image stereograms, more imagination seems to be used in the choices of textural elements from which the images are created than in the images themselves. If a prize were to be awarded for the most imaginative of those choices, some of the stereograms in Holusion Art would clearly be contenders for medals. "Lasting Impression" looks like thick brush strokes of lavender, green and magenta paint on canvas that fuse into a woman with a parasol standing next to a bird bath in a garden. "Pinnacle Beings" is a wall of Egyptian hieroglyphics that fuse into a camel, dunes, Sphinx and pyramids. What appears to be a repeating mass of knotted, tangled ropes fuses into a cowboy on a horse being threatened by a rattlesnake in "Sidewinder Pass." Following an explanation of the technique, the only SIS in the book oriented for convergence viewing is a surprise concealed among downy, pink feathers.

In one of the sections of text scattered through the book, NVision's single-image stereograms are traced back to a 1970s patent for a hand-shifted wallpaper-effect stereogram process which NVision later "automated and refined" through computer graphics technology for the present Holusion images. No mention is made of David Brewster's description of the wallpaper stereo effect over 100 years ago, or of the work of Christopher Tyler in early computer generated single-image stereograms. Whether this is related to an effort to promote Holusion Art as a unique form or to some sort of patent question or other concern isn't clear, but it follows the approach of most U.S. publishers of single-image stereograms who seem to promote their images as the first, best and only thing of the sort around.

It will be a sign that single-image stereograms are maturing as a graphic art form in the U.S. when more books feature the work of the best independent artists or groups working in a variety of formats, as seen in some very successful books from Japanese publishers. Less emphasis on trademarks and names, and more attention to the wide-open, interactive potential of images people can manipulate with their own eyes (including stereo pairs) will preserve and expand a profitable market — one that could become a permanent part of human visual communication.

The 36-page Holusion Art features 20 stereograms on heavy, coated stock and is expected to be priced at $19.99. For retail sources, contact NVision Grafix, 222 West Las Colinas Blvd. Suite 1840, Irving, TX 75039.

Yet Another

Another Dimension from 21st Century Publications exists in two versions, one with 83 images (noted on the cover) and one with 87 images. In the larger version are some stereograms that incorporate small pictures in the background so they align with the hidden 3-D image. Martin Simon reports that in an image of tigers on the inside front cover, "Small pieces of the background patch include tigers' noses, mouths, ears etc., which 'fall' at the right spot in the hidden image. It adds some photorealism to the hidden image. Another image of sharks uses the same technique as does an image of a golfer." NSA member Simon was one of those involved with the creation of the book's single-image stereograms.

In presenting a collection of work by several individual SIS artists or groups, Another Dimension represents a step in the right direction for the publication of 3-D material in the U.S. Some of the most interesting and complex single-image stereograms to be seen anywhere were selected for the book. But the logical extension of free viewed art into the wider and deeper world of stereo pairs remains, apparently, a foreign concept.

Despite the fact that Japanese publishers have sold millions of books all over the world featuring both single and dual 3-D images,
professional U.S. publishers seem content investing in the hot, top-selling SIS format as if it were the only marketable 3-D known. It will result in a significant missed opportunity if they continue regarding the American public as unable or unwilling to make that one-inch visual and conceptual jump into the rich depths of stereo pair imaging.

Another Dimension, $16.95, is a soft cover book oriented for viewing many of the horizontal images with the spine at the top. For retail sources contact 21st Century Publications, Box 74715, Los Angeles, CA 90004.

Star Sign Stereo

A surprise entry into the competition for shelf space among SIS books is 3-D GALAXY See the Hidden Pictures in the Stars from William Morrow & Company, ©1994 Suny Shuppan. When fused, the stereograms reveal the traditional figures in the constellations like Virgo, Orion, Cygnus, etc. floating behind the stars in their actual positions.

One problem that immediately becomes apparent is that when the image is fused the stars (which are printed normally) double in number, making it hard to pinpoint exactly how they outline the figure shown. The figures are very simple with relatively few planes and no rounded contours. All but three of the backgrounds are totally flat, which helps emphasize the shapes of the figures but makes for rather dull viewing. The images in 3-D GALAXY are true random dot stereograms with color added, "Ophiuchus the Serpent Holder" being an amusing exception. Four double-page stereograms showing the constellations visible in the four seasons suffer terribly from crossing the gutter, which makes fusion nearly impossible to maintain.

While it's encouraging to see a SIS book devoted to a specific subject, the figures in the constellations are more easily shown with simple line drawings. (Those interested in actual 3-D star images should write to the David Chandler company, Box 309, La Verne, CA 91750, for a catalog of software that generates stereo of star fields based on actual relative distances.)

The 34-page, 8 x 12 inch 3-D Galaxy with 33 stereograms is $12.95. For retail sources contact William Morrow & Company, 1350 Avenue of the Americas, New York, NY 10019.

Coming:

Blue Mountain Arts, publisher of "5-D Stereograms", is publishing two books featuring images from the company's single-image stereo-gram posters and greeting cards. Love in 3-D follows the romantic, sentimental theme of Blue Mountain's greeting cards, while Reach for Your Dreams, USA has an environmental and geographic theme. Check your favorite bookstore or card shop, or contact Blue Mountain Arts, Box 4549, Boulder, CO 80306.

PhotoHistory IX and Movies Too

Serious students and collectors of photographica will find a fascinating array of lectures, exhibits, sales and tours at the Ninth Triennial Symposium on the History of Photography. The October 7-9 event is sponsored by the Photographic Historical Society in cooperation with the International Museum of Photography at George Eastman House in Rochester, NY.

Among the speakers will be Eastman House Director James Enyeart on Alfred Stieglitz: Passion and Personality, collector/writer Matthew Isenburg on Cameras, Equipment and Ephemera of the Daguerrean Period, and Image Permanence Institute Director James Reilly on The Future of the Past. A Photographica Trade Show featuring both equipment and images will be held October 9 from 10am to 4pm at the Holiday Inn South in Rochester. While none of the events are devoted specifically to stereography, it is well represented in the massive collection of the International Museum of Photography at George Eastman House.

Symposium registration is $65 ($25 for students) and includes the reception, lectures, a box lunch and the trade show. Admission to the trade show only is $5. The $25 Grand Buffet will include a pipe organ concert at George Eastman House. Checks in U.S. funds or requests for information should go to The Photographic Historical Society, Box 103, Honeoye Falls, NY 14472, or call Sharon Bloemendaal, (716) 288-6359.

Movie Machines V

In conjunction with PhotoHistory IX, The Movie Machine Society will hold its Fifth Annual Meeting on October 6 and 7 at Days Inn, 348 East Ave. in Rochester, a few blocks from George Eastman House. The Oct. 7 program includes a full day of lectures and tours at Eastman House with topics ranging from general movie history such as a report on establishing an International Cine-
Stereo and the Future of Film

In the early 1950s color transparencies became the predominant format for stereo enthusiasts. The society was no exception to the pressure, and Realist format slides slowly displaced the print format in the center ring. This held true for many years, and although prints have made a great comeback since 1980, color transparencies have held their favored status with untold miles of 35mm film ending up in the familiar mounts of the Realist format or as 2x2 matched pairs. They are especially well shown in a hand viewer and can be projected for large groups of people. Half of the Society's folio circuits are devoted to serving the needs of color-transparency stereographers.

But thoughtful observers of the contemporary scene in photography may find long term trends somewhat disquieting – especially so for stereographers. Not too many years ago 35mm color transparencies were very popular among amateur photographers in general. Single-lens-reflex cameras and carousel (and other) projectors sold briskly. Overnight service in developing and mounting was readily available.

Now, much of that has changed. Cameras still sell but the emphasis is on color prints. Fewer stores carry transparency film and I can't do better than 7-10 days to get Kodachrome developed even though I do my own mounting. The price of both film and processing has advanced sharply as service has declined. (No allowance is made in price to adjust for mounting not being wanted.) Video tape has completely replaced 8mm color movie film, and is an order-of-magnitude superior for the purpose intended. TV's have replaced movie screens in classrooms and lectures. It would seem not unlikely that the day is not far off when most snapshots will go directly from the camera to showing on the TV screen. Duplicates will be made electronically on your handy little copier.

What does this portend for stereography? I have no idea. But, it does not look good for the methods we are now using. Polaroid filters and hand viewers would seem to have no role to play. Anaglyphic techniques? Perhaps. But they have never been high on the quality-of-viewing list. Will the demand for transparency film drop so low that it is no longer economically feasible to produce or process it, or financially feasible for us to use?

This is not well thought out but represents recognition of a nagging feeling that has been calling for attention. It does give one food for pondering.

Contrast in Color Print Films

David Lee of Sacramento, CA, is the secretary of the O Print Circuit. He has circulated a statement regarding the relationship of contrast in color prints to the overall image quality obtained. It bears repeating and I quote from his memo:

While viewing the excellent images in the folios I have noticed that many of the color views could have profited by somewhat lower contrast. Being the owner of a custom color lab it is part of my business to evaluate color prints and to know what materials will produce which results. There are many new films and papers available these days, and unless one is in the industry it is hard to know what's what.

First of all, virtually all color films made by the major manufacturers are excellent films. However, they do have different characteristics which make some more suitable for some situations and others more suitable for other situations. Most of the prints which seemed overly contrasty were made with Kodak Gold film or something similar to it. These are excellent films, but of relatively high contrast. This high contrast gives the "amateur" (Kodak's designation) photographer the "snap" (Kodak's description) they are looking for. On the other hand Kodak's two main "professional" films, VPS (Vericolor Professional, short exposure, 160 ASA) and VPH (Vericolor Professional, high speed, 400 ASA) have somewhat lower contrast. They believe, and I agree with them, that the discerning photographer desires a longer tonal range with more detail (which means less contrast). Fuji also has a film...
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Now you are probably thinking, "But I really love intense color and with lower contrast my colors will be anemic." If anything the opposite is the case. Colors tend to have the most saturation when they are around middle gray or slightly darker, and with lower contrast film more of the tones are around middle gray, so the colors will tend to be more colorful. Lower contrast also does not mean that you will not have a good black in the image. Getting a good black depends more on getting a sufficient amount of exposure than on the contrast of the film.

The contrast of the color paper used by minilabs tends to exacerbate this problem. That is, these papers tend to be of quite high contrast, as opposed to "professional" papers which come in three contrast grades allowing the custom lab to choose the appropriate contrast for the particular negative.

The purpose of this article is not to say that everyone should be using a particular film and paper. On the contrary, it is to help you be aware of some of the options that are available so that you can get what you want.

I thank David Lee for this dis- cerning statement. We are all interested in obtaining the best picture quality in our images.

Voting results

Secretary Matt Rebholz reports the top vote-winners for the Alpha Transparency Circuit for 1993:

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<tr>
<th>Member</th>
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<tr>
<td>Paul Wing</td>
<td>153</td>
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<tr>
<td>Miles Markley</td>
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<td>21</td>
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<tr>
<td>Harry Richards</td>
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<td>Steve Trynoski</td>
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<td>John Dukes</td>
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<td>Paul Milligan</td>
<td>61</td>
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Favorite Views

1st: "Aspens" by Steve Trynoski
2nd/3rd (tie): "Cats in the Bag" by David Starkman
"Old Homestead" by Miles Markley

The Stereoscopic Society of America is a group of currently active stereo photographers who circulate their work by means of postal folios. Both print and transparency formats are used, and several groups are operating folio circuits to meet the needs in each format. When a folio arrives, a member views and makes comments on each of the entries of the other participants. His or her own view, which has traveled the circuit and has been examined and commented upon by the other members, is removed and replaced with a new entry. The folio then continues its endless travels around the circuit. Many long distance friendships have formed among the participants in this manner over the years.

Stereograph photographers who may be interested in Society membership should write to the Membership Secretary, E. Jack Swarthout, 12 Woodmere Dr., Paris, IL 61944.

ARCHIVAL SLEEVES: clear 2.5-mil Polypropylene

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<th>Description</th>
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<td>4&quot; x 5&quot;</td>
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<td>$80</td>
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Virtual Reality on Film: Spaceshot 360° 3-D

If you hung around near David Burder at June's NSA convention in Milwaukee there was a good chance that you got a peek through the Spaceshot 360° stereoscope he brought with him from England. Dozens of people who had read about the system in SW coverage of the Sept. '93 ISU Congress in Eastbourne (Vol. 20 No. 4 page 10) were eager to view the stereo panorama that passes before your eyes, gyroscopically activated by head movement to duplicate the effect of turning to view an actual 360° panorama.

The camera is a special stereo version of the Roundshot panorama camera made by the Seitz Company in Switzerland. A pair of 21mm lenses focus the images on dual strips of film synchronized to move past open 4mm slits as the camera spins. Exposure is controlled by the speed at which the motor spins the camera, with a range that equals shutter speeds of 1/125th to 8 seconds. Each exposure actually spins the camera around two and a quarter times providing a pair of 810° images. This overkill allows you to see two complete

The Spaceshot viewer, designed by electronics engineer Pat Falvey, is seen here next to two of the removable dual strip cartridges. Right and left film loops can be adjusted for correct stereo registration after they are installed in the cartridge.
panoramas in the viewer without having the splices interrupt the scene. The extra 90° allows for waste in the splicing procedure. Projected price for the camera is about $15,000.

The system's real breakthrough is the British designed viewer that for the first time allows direct 3-D viewing of transparencies from such a camera. The user can see any part of the scene with a simple turn of the head or body, slowly scan the entire image, or go back to something spotted earlier. The sections of film visible in front of the lenses are curved themselves in an effort to enhance the panoramic effect. The dual film loops are housed in a single removable cartridge that maintains the required synchronization. The visual effect of course beats the image quality of any virtual reality helmet, even though the interactive element here is limited to a static 360° view. Projected price for the viewer is about $3,200 and cartridges will be about $80 each.

An article in the May '94 issue of The British Journal of Photography concludes that the Spaceshot System is "essentially a solution looking for a problem" after mentioning possible applications like architectural records, museum displays, interior designs and detailed records of public spaces for police agencies. The writer points out that the viewer cartridges and film strips are cheaper than the costs involved in producing a virtual reality sequence.

While this is hardly a system ever likely to be priced for the amateur market, it could fill the imaging requirements in specialized applications impressively enough to send virtual reality competitors scurrying back to their megabyte cellars for many years to come.

More information is available from Artery Systems Ltd., 3 Frog Island, Leicester LE3 5AG, England.

Magic in Japan

A U.S. designed stereo camera will enter the domestic market in Japan following an agreement between Konica, Kodak Japan Ltd. and Image Technology International, maker of the 3D MAGIC™ camera (NewViews, Vol. 19, No. 6). A licensing deal between the three companies allows the manufacturing and marketing of the 3D MAGIC single-use camera for lenticular prints in Japan.

The three-lens camera will appear under the Konica and Kodak trademarks and model names. Noritsu Koki will produce the lenticular printing equipment to support the cameras.

While consumer photographic technology more commonly flows from Japan to the U.S., this exception is made even more ironic by the fact that Fujifilm's 3-D frame-splitter attachment for Fuji single-use cameras (Vol. 21 No. 1, page 41) is not marketed outside Japan.

First SIS Videos

While short sequences of animated single-image stereograms have been produced to run on computer screens since at least 1992, moving stereograms with color and sound are now in videotape format. The 30-minute Stereogram Video is available for $14.95 from Vis Video, a division of the company that owns Super Stereogram publisher Cadence Books. For sources, contact Cadence Books, PO Box 77010, San Francisco, CA 94107, (415) 546-7073.

N.E. THING has released Magic Eye, the Video Vol. I incorporating both still and moving SIS sequences. For a catalog of the company's SIS books, calendars, cards, etc. contact N.E. Thing, 19 C Crosby Drive, Bedford, MA 01730, (617) 275-3886.
Off-the-Shelf, Fuser-Friendly Software

If you've wanted to try creating your own single-image stereo-grams but earlier programs mentioned in SW and other sources sounded too difficult, "off-the-shelf" software (SISware?) is now available at retail outlets or by mail. Used in combination with Windows drawing programs like Paintbrush, Corel Draw, PC Paint and others, these packages convert drawings you've generated into a single-image stereogram for viewing on the screen or printing.

Many images people attempt at first just aren't suited for conversion, and definition and color will vary depending on your system. Don't expect to end up with the level of quality and complexity found in the best SIS posters and books, but with a little experimenting you can create some interesting images that are easily fused.

PC software: Stereolusions is $39.00 from I/O Software, 10970 Arrow Rte, #202, Rancho Cucamonga, CA 91730. STEREoGRAMS! is $39.95 postpaid from Lifestyle Software Group, 63 Orange St., St. Augustine, FL 32084.

Mac software: Pointilist is $39.95 from Pictorgrafx, available at many stores handling Mac software. Kai's Power Tools from HSC Software ($125.00 for version 2.0) is a "plug-in" package for use with Adobe Photoshop. One of the tools is for generation of single-image stereograms (random dot or other textures) through Photoshop. Besides retail dealers, this and other software is often available from computer mail-order firms at lower prices.

A wide variety of programs (17 at last count) for creating SIS on your (PC) computer are available through the Alt. 3-D and Photo-3D services on the Internet, with lists and descriptions available in their "FAQ" (Frequently Asked Questions) file. See "catching stereo in the Internet", SW Vol. 20 No. 5, page 32, but don't use the article's incorrect E-mail address with the typo to contact them. The correct one is: listserv@csg.lbl.gov.

New Lighted View-Master Viewer Improved

The new Chinese-made lighted View-Master introduced in 1992 (Vol. 19 No. 3, page 30) has appeared with a new flat finish in place of the high gloss red-orange of the original version. In addition, the image registration in viewers with the new finish has been improved. Batteries are no longer included with the dual-mode viewer, which can be used as a hold-up-to-the-light model or with internal illumination.
New Hardware for 2x2 Projection

Brackett Engineering, producer of the Realist format Brackett Dissolver projector, has introduced a new line of products to aid 2x2 projection.

Designed for both amateur and professional use, they include the Auto-Synch projection system, the Brackett Projection Mounter for stereo slide pairs, the Keystone Eliminator, and the Internal Polarizers.

The Auto-Synch System converts two standard Kodak 35mm slide projectors into one integrated unit providing automatic synchronized 2-D and 3-D projection with all the controls, electrical connections, and filtration built-in. The Auto-Synch I is a 3-D system operated manually through one projector’s remote control unit, priced at $395.00. The Auto-Synch II, priced at $695.00, is a 2-D/3-D system with built-in electronics for automatic fade or dissolve and can be operated from a standard stereo tape recorder.

The Brackett Projection Mounter, priced at $99.00, is designed to fit into the gate of a standard Kodak projector. It allows the film chip to be accurately aligned for the correct stereo placement within a Gepe mount while viewing the projected image in 3-D.

The Keystone Eliminator is included with the Auto-Synch Systems and attaches to the front of the top projector lamp module. It allows small room projection (as close as 10 feet from the screen) without the usual toe-in distortion of images from the two projectors. The device relocates the slide so that the projectors can remain parallel and sells separately for $20.00.

The Internal polarizers are designed to fit into the rear of the projection lens barrel, out of harm’s way. One size fits any lens regardless of front barrel diameter and is effective with all film bases. This set of two filters is included with the Auto-Synch Systems or is available separately for $20.00.

For details or shipping rates, contact Brackett Engineering, PO Box 493, East Sandwich, MA 02537, (508) 888-2180. (Prices in the March/April ad were incorrect.)
Automated Autostereo

An automated multiple exposure camera base for the production of lenticular display stereos by commercial studios or labs has been announced by Roberts Engineering of Belleville, WI. Called the Photolndexer<sup>TM</sup>, the device moves a 35mm or medium format camera along a track to preset positions for the correctly spaced exposures required to produce a lenticular print or transparency of a particular subject.

Like manual tracks and calculators for single-camera multiple exposures, this system is designed for studio use on static subjects. After the film is processed, a second device called the MaskIndexer<sup>TM</sup> is used with an enlarger where it guides the sequential recording of juxtaposed slices of each source image projected onto a master film. This film is then developed and laminated with a lenticular viewing sheet. It can also be color separated for offset printing.

Crayola's Jumping Colors

Anyone of any age can now create 3-D drawings even without trying thanks to a new product from Crayola called Jumping Colors<sup>TM</sup>. Six brightly colored marking pens and two black pens are included in the box along with a pair of ChromaDepth<sup>TM</sup> glasses which horizontally shift various colors by different amounts in opposite directions for each eye. (See page 34, SW Vol. 20 No. 1.)

A sample image appears on the back of the box to give buyers some idea of how various colors will pop into different 3-D planes when viewed through the glasses. Brief instructions suggest using the black pens to create dark backgrounds and outlines around the colors to emphasize the 3-D effect, similar to the way ChromaDepth glasses are used for some laser light-shows. The effect works best with strong colors like the yellow, green and blue included in box. For dramatic effects, you may want to add a regular red marking pen to the pink and magenta provided.

Just how interested kids will be in learning to control the depth effects of various combinations of colors and backgrounds (and how long this product will remain on the market) remains to be seen. Besides the fact that stereo oriented parents should probably buy at least one set for themselves in any case, Crayola missed a chance at doubling sales when they failed to mention on the box that using two pairs of glasses at once doubles the 3-D effect! Computer graphics enthusiasts may want to create programs that use color/background relationships to display interesting and perhaps animated images for viewing with the glasses.

HASSLE-FREE 3-D

WITH THE TECO-NIMSLO CAMERA AND 3-VIEWER

Use the lightweight auto-exposure camera to make:
- 36 Slide pairs
- Close-ups at 3 distances
- Lenticular Prints

Use the Universal viewer to display:
- Realist and View-Master rollfilm
- Nimslo/Nishika rolls
- Mounted slide pairs

PRICES:
- New camera ................... $145
- Your Nimslo modified.......... $63
- Close-up attachments
  6", 12", 30" dist's (ea) ........ $29
- Opti-Lite flash ................ $29
- Eveready case ................ $12
- Teco 3-Viewer ................ $67

Add $3 shipping per order. Calif. residents add 7½% sales tax.

MFD. BY:
TECHNICAL ENTERPRISES
1401 Bonnie Doone
Corona Del Mar, CA 92625
Tel. 714-644-9500

Crayola's Jumping Colors

HASSLE-FREE 3-D

WITH THE TECO-NIMSLO
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1401 Bonnie Doone
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Tel. 714-644-9500
More Nature Co. 3-D

Review by John Dennis

It would be hard to come up with a better comparison of color vs. black & white anaglyph reproduction if you tried. The two anaglyphic 3-D books for children currently on the shelves of The Nature Company stores offer classic examples of just how impressive black & white anaglyphs can be when properly printed, and of the pitfalls that lurk when publishing color stereos as anaglyphs. Under the Sea in 3-D! features 12 color stereos of undersea life by Rick and Susan Sammon, who also wrote the descriptive text appearing on the pages facing the pictures. Unfortunately, the strong colors found in many fish near coral reefs (and sometimes the high contrast of the flash lighting) interfere with fusion of most of the stereos in varying degrees. Only the shots of the octopus, the sea anemone and the moray eel work without any viewing problem. This is especially frustrating because the pictures would be interesting to see as projected or side-by-side stereo in unencumbered color. Even if presented as black & white anaglyphs, they would probably hold the attention of children when combined with the book's easily read and informative text. Creepy Crawlies in 3-D! is a collection of 12 black & white Scanning Electron Microscope pairs by David Burder. Printed in specific red/green anaglyphic colors similar to those used for his own posters and cards, these images fuse easily into startling 3-D that turns the pages into clear windows on another world. In fact I'm a little surprised that The Nature Company didn't stick a warning to parents of younger children on the cover. When well illuminated, most of the bugs on the 8-inch square pages look ready to bite off any fingers holding the book! Along with some of Burder's other familiar SEM stereos, the head-on shot of a springtail is included - providing this image now famous among 3-D enthusiasts some of the added recognition it deserves. Rick and Susan Sammon provided the text in this book as well.

The glasses included with the books have lenses more closely spaced than usual to accommodate children. In the samples reviewed, the same red/green filters needed for the anaglyphs in Creepy Crawlies were used in the glasses for Under the Sea. More of the brightness and color in the original underwater images can be seen if red/blue glasses are used (which are usually supplied with color anaglyph publications), but this won't correct any of the problems mentioned above.

Two more books, Wild Safari in 3-D and Slimy and Scaly Creatures in 3-D (which features some great closeups by Burder) are now available at The Nature Company. For information on ordering the $9.95 hardback books or for the location of the nearest store, contact The Nature Company, PO Box 188, Florence, KY 41022, (800) 227-1114.

3-D NUDES

The RAFFAELLI Color Slide Collection is the highest quality EROTICA produced anywhere in the world today. This master photographer has created Collectable Erotic Art Sets of Investment Quality. The most creative use of the 3-D effect in the directing of sets and models ever captured. Each item in our collection is guaranteed 100% money back. You must be an ADULT of at least 19 to request our catalog. Please send your Name, Address and Age, plus $2.00 P&H to...
Calendar

September 16 (IL) Super Chicago Show & Sale, Holiday Inn Skokie, IL 5300 W. Touhy Ave. Contact Mark Orenstein, 3919 N. Milwaukee Suite 210, Chicago, IL 60641, (312) 481-2801.

September 18 (FL) 14th Orlando Camera Show, Embassy Suites Hotel, 8978 International Dr., Orlando, FL. Contact Photorama USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236, (313) 884-2243.

September 17-18 (MI) 30th Detroit PhotoUSA USA, Dearborn Civic Center, 15801 Michigan Ave., Dearborn, MI. Contact PhotoUSA USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236, (313) 884-2243.

September 17-18 (OH) Ohio Camera Swap, Shadybrook Armory, Cincinnati, OH. Contact Bill Bond, 8910 Cherry St., Blue Ash, OH 45242, (513) 891-5266.

September 17-18 (TX) 15th Dallas Camera Show, Big Town Exhibit Hall, Big Town Mall, Mesquite, TX. Contact Donald Puckett, 1106 Graham Ave. #205, Dallas, TX 75223, (214) 824-1581.

September 18 (CA) Buena Park Camera Expo, Sequoia Club, 7530 Orangethorpe Ave., Buena Park, CA. Call (714) 786-6644 or 786-8183.

September 18 (FL) 18th Tampa Camera Show & Sale, Holiday Inn North Ashley Plaza Downtown, Tampa, FL. Contact PhotoUSA USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236, (313) 884-2243.

September 18 (GA) Atlanta Camera Show & Sale, Holiday Inn NorthWest, Contact Atlanta Camera Shows, Box 360033, Decatur, GA 30036, (404) 967-2773.


September 18 (NY) New York City Camera Show, Embassay Ballrooms The Inn on 57th St., 440 W 57th St., New York, NY. Contact N.Y.C. Camera Show, 25 Leary Ave., Bloomingdale, NJ 07403-1611, (201) 838-4301.

September 24 (OH) Akron Camera Show & Sale, Holiday Inn Fairlane, 4070 Medina Rd., Akron, OH. Contact PhotoUSA USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236, (313) 884-2243.

September 24-25 (TX) Photographic Collectors of Houston, Holiday Inn, Hobby Airport, Houston, TX. Contact Leonard M. Hart, Box 70226, Houston, TX 77270, (713) 887-9606.

September 25 (CA) Burbank Camera Show & Sale, Aeronautical District Lodge, 2600 W. Victory Blvd., Burbank, CA. Contact Anton at Bargain Camera Shows, Box 5352, Santa Monica, CA 90409, (310) 396-9463.

September 25 (CA) 5th Annual Fall Soviet Antique Photo Show, Westford Regency Hotel Ballroom, 1-495 exit 32 to route 110 W., Westford, MA. No cameras. Contact Russell Norton, PO Box 1070, New Haven, CT 06504, (203) 562-7800.

September 25 (OH) 44th Cleveland Photorama USA, Brook Park Armory, 6225 Engel Rd., Brook Park, OH. Contact PhotoUSA USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236, (313) 884-2243.

September 25 (Germany) Cologne Photo Fair, Stadthalle Köln-Mülheim (Townhall), Weiner Platz, Cologne, Germany. Contact B. Grahner, Schwinningstr. 77, D-52076 Aachen, Germany. Call Germany, 2408/6684.

September 25 (VA) Barone Camera Swap Meet, Holiday Inn Crystal City, 1439 Jeff Davis Hwy., Arlington, VA. Contact Camera Swap Meet, c/o Barone & Co., Box 18043, Oxon Hill, MD 20745, (703) 768-2231.

October 1 (CA) Riverside Camera Show & Sale, National Guard Armory, Riverside, CA. Contact Anton at Bargain Camera Shows, Box 5352, Santa Monica, CA 90409, (310) 396-9463.

October 1-2 (CA) San Francisco Bay Area Camera Show, Scottish Rite Auditorium, 1547 Lakeside Dr., Oakland, CA. Contact Carney & Co., 231 Market Place #379, San Ramon, CA 94583, (510) 828-1797.

October 2 (CA) Pasadena Camera Show & Sale, Elks Lodge, 400 W. Colorado Blvd., Pasadena, CA. Contact Anton at Bargain Camera Shows, Box 5352, Santa Monica, CA 90405, (310) 396-9463.

October 2 (VA) 11th Annual Fall D.C. Antique Photo Show, Rosslyn Westpark Hotel Ballroom, 1900 N. Ft. Myer Dr., Arlington, VA. No cameras. Contact Russell Norton, PO Box 1070, New Haven, CT 06504, (203) 562-7800.

October 6-7 (NY) The Movie Machine Society Fifth Annual Meeting (in conjunction with PhotoHistory IX), George Eastman House and Days Inn, Rochester, NY. See announcement in this issue or contact George Woodrow Jr., 95 Hills Ferry Rd., Nashua, NH 03060, (603) 889-1539.


October 9 (CA) Santa Monica Camera Show & Sale, Civic Auditorium, Santa Monica, CA. Contact Anton at Bargain Camera Shows, Box 5352, Santa Monica, CA 90405, (310) 396-9463.

October 9 (CO) Denver, Colorado CameraRama, Holiday Inn Denver International Airport. Contact Richard Feimann, F&S Cameras, Box 17307, Colorado Springs, CO 80935, (719) 491-4626.

October 9 (IL) Chicago Photographic Collectors Society Fall Show, Westin Hotel O'Hare, Rosemont, IL. Contact Jim Mayer, (708) 323-4427.


October 9 (NJ) Second Sunday Camera Show, Firemans Hall, Parish Dr., Wayne, NJ. Contact Second Sunday Camera Show, 25 Leary Ave., Bloomingdale, NJ 07403, (201) 838-4301.

October 15 (SC) South Carolina Photo Fair, Quality Hotel 7136 Ashevillle Hwy., Spartanburg, SC. Contact Steve Biggs, (704) 377-3492 M-F 9-6 EST, fax: 331-6984.

October 15-16 (LA) New Orleans PhotoUSA USA, Howard Johnson Hotel & Convention Center, 2281 Causeway Blvd., Metairie, LA. Contact PhotoUSA USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236, (313) 884-2243.

October 16 (CA) Buena Park Camera Expo (see Sept. 18).

October 16 (NC) Charlotte Area Photo Fair, Government House Hotel, 201 S. McDowell St., Charlotte, NC. Contact Steve Biggs, (704) 377-3492 M-F 9-6 EST, fax: 331-9984.
October 16 (NY)
New York City Camera Show (see Sept. 18).

October 22 (WI)
Super Madison Show & Sale, Howard Johnson Hotel, 4822 E. Washington Ave., Madison, WI. Contact Mark Orentzen, 3919 N. Milwaukee Suite 210, Chicago, IL 60641, (312) 481-2801.

October 22-23 (TX)
The Camera Show of Ft. Worth, Amon Carter Jr. Exhibit Hall, 3400 Crestline, Ft. Worth, TX. Contact Donald Puckett, 1106 Graham Ave. #206, Dallas, TX 75223, (214) 824-1581.

October 23 (Ontario)
Photographic Historical Society of Canada Annual Fall Photographica Fair, Queensway Boccioletti, 60644, (916) 527-7593. Contact Photorama USA, 20219 104th Ave., Hayward, CA 94547, (510) 828-1797.

October 23 (Ontario)
Photographic Historical Society of Canada Annual Fall Photographica Fair, Queensway Lions Center, 3 Queensway Lions Court, Toronto, Ontario. Contact Larry Bocciolletti, 1248 Jane St., Toronto, Ontario M6M 4X8, Canada, (416) 245-1439.

October 23 (CA)
Hayward Camera Show & Sale, Centennial Hall, 22292 Foothill Blvd., Hayward, CA. Contact Carney & Co., 231 Market Place # 379, San Ramon, CA 94583, (510) 828-1797.

October 23 (KS)
5th Annual Jayhawk Camera Show, Eagles Lodge, 1803 W. 6th, Lawrence, KS. Contact Jim Regan, 620 Alabama, Lawrence, KS 66044, (913) 841-2597.

October 23 (OH)
Photographic Historical Society of the Western Reserve, 22nd Annual Photographic Buy & Sell Show, Holiday Inn, Strongsville, OH. Call (216) 382-6727 or 232-1827.

October 29 (GA)
Atlanta Camera Show & Sale (see Sept. 18).

October 30 (CA)
Burbank Camera Show & Sale (see Sept. 25).

October 30 (AL)
Huntsville Alabama 10th Annual Photo Flea Market. Contact Malcolm Tarkington, Southern Photos, 2357 Whitesburg Dr., Huntsville, AL 35801, (205) 539-9627. Fax: 504-4105.

October 30 (IL)
Chicago Fantastic Camera Show, Radisson Hotel-Lincolnwood, 4500 W. Touhy Ave., Lincolnwood, IL. Contact Photorama USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236, (313) 884-2242.

October 30 (NY)

October 30 (NY)
Camera And Memorabilia Enthusiasts Regional Association Semi-annual Show/Swap/Sale, Hudson Valley Community College, North Greenbush, NY. Contact Bill Blackman, 14 Fairview Rd., Loudonville, NY 12211, (518) 482-1880, 5-9pm.

October 30 (TX)
Greater Austin Camera Show, Hilton Hotel North, Austin, TX. Contact Bob Talley, 7241-A Bianco Rd., San Antonio, TX 78218, (512) 295-8168.

November 6 (Quebec)
13th Photographic Flea Market, Holiday Inn Montreal Pointe-Claire, 6700 Trans-Canada Hwy., Pointe-Claire, Quebec. Contact Robert Tucci, 675 De Bern, St.-Jean-sur-Richelieu, Quebec JSA 1Y2, (514) 348-9184.

November 6 (The Netherlands)
35th International Fair of Photographic, "Euretco" Building, Miedoornkade 24, Industrial Estate "Doomkade", Houten (Motorway A-27), The Netherlands. Contact Harry van Kol, PO Box 4262, 2003 EG Haarlem, The Netherlands, +31 (0) 15 61 02 34.

November 12 (OR)
Portland Oregon 6th Annual Fall Camera Swap Meet, Washington County Fairplex, Hillsboro, OR. Contact Pro Photo Supply, 1112 NW 15th Ave., Portland, OR 97209, (800) 835-3314.

November 12-13 (AZ)
Tucson Arizona Camera Show, Convention Center, 260 S. Church, Tucson, AZ. Contact Arizona Photography Collectors, Box 14616, Tucson, AZ 85732-4616, (602) 529-5072.

November 13 (CA)
Hayward Camera Show & Sale (see Oct. 23).

November 13 (FL)
The Kendall Camera Club Photo Flea Market, North Miami Armory, 13250 NE 8th Ave., North Miami, FL. Call (305) 491-2328.

November 26 (Germany)
Second Solms Camera Show, Solms-Taunusch-Building in Solms near Wetzlar, Germany. Contact Lars Netopil, Steinstr. 24, 35606 Solms, Germany. Phone & fax 6442-25229.

Hyper-View

The Hyper-View Large Format Stereo Viewer was designed by David Lee and Michael Isenberg to provide the highest quality stereo image currently available.

It accomplishes this by using front-surface mirrors, instead of lenses, allowing the viewer to see a large unobstructed stereo image (up to 11 inches wide, or 22 inches for the pair). Because the Hyper-View Large Format Stereo Viewer allows one to perceive the entire image from the ortho-stereo position, it avoids the distortion and image degradation inherent in lenticular viewers. In addition, it improves on other mirrored stereoscopes by allowing one to get close up to view details as well as to see the entire image at once. (Pictured in Stereo World, July/August 1993, page 13.)

The Large Format Stereo Viewer is available from David Lee for $125 (plus tax for California residents). Call or write for further information.

Also available from Hyper-View:
* Stereo images by David Lee and Michael Isenberg (formats include Holmes stereo cards, Realist or 2 x 2 slides, or prints for the Large Format Viewer).

* Custom printing of your stereo images from negatives to Holmes stereo cards, slides, or large prints for the Large Format Viewer (black/white or color).

* Consultation on viewing and mounting techniques.

David Lee
1112 Santa Barbara Ct.
Sacramento, CA 95816
(916) 444-6101

Michael Isenberg
2600 Van Dyke Circle
Modesto, CA 95356
(209) 527-7593
**For Sale**


### ANAGLYPH images produced from your stereo pairs in digital format for viewing on your computer screen. $25 per image + $2.50 S&H. Write Computer Communications services, PO Box 13231, Alexandria, LA 71315. Ph/FAX (318) 442-3582.

### ARTHUR GIRLING'S "Stereo Drawing - A Theory of 3-D Vision and Its Application to Stereo Drawing". 100 pages hardbound 8½ x 12. Stereo photographers are finding that the book applies equally to stereo photography and is a mine of information on methods of making 3-D pictures and viewing them. Written in non-technical language and profusely illustrated with B&W drawings as well as 11 pages of superb anaglyphs, this book is a must for the serious stereocissist. Now available from NSA Book Service, 4201 Nagle Rd., Bryan, TX 77801. Price (including postage) $19.00 USA, Canada. Overseas add $2.00 surface, $4.00 air.

### BASEBALL TEAM HOLOGRAMS, 10 different $4. plus SASE. Michael Scharfman, 34 Florgate Rd., Farmingdale, NY 11735.

### CENTERFOLD STARS now in Realist 3-D slide sets. Publication quality, shot on the sets of a major magazine shoot featuring Angel, 8 slides only $20. (add $5 for viewer). Free newsletter. You must be over 21. IPA, 100-E Highway 34 - 2001 Ashworth, West Des Moines, IA 50265. Overseas add $2.00 surface, $4.00 air.


### HI-SPEED 3-D - Spectacular slides of water balloons in mid-through very late pop: plus a light bulb smash and a milk drop coronet. As shown in the July and November 1992 issues of Stereo World and at the San Diego convention. 6 2x2 slides (3 pairs) - $13.; or all 12 slides (6 pairs) - $22.50, including U.S. postage - Satisfaction Guaranteed. Franklin Flocks, 220 Sherian Ave., Suite 304, Palo Alto, CA 94306.

### I HAVE OVER 1,000,000 high quality stereo card reproductions that I must sell soon. I'm asking $0.10 each from anyone enterprising person who can see the profitability in such a stock. Call Harvey, (212) 431-9358 only if seriously interested.


### NEW CATALOG! We've got more 3-D publications now than ever before (including lots of random dot stereograms) in our 1993-94 catalog. For a copy, please send $1 for U.S., Canada and Mexico or $2 for all other nations (both are refundable with future order). Cygnus Graphix, Box 32461-X, Phoenix, AZ 85064-2461.

### NIMSL0, very good, no flash or box, $75 - plus postage. Michael Bucove, PO Box 8782, Ketchikan, AK 99901-3702, (907) 225-7023.

### ONE NORD STEREO PROJECTOR. Good condition. Write for photos or additional information. $115. postpaid. Y.C. Suess, 9020 Powell, Brentwood, MO 63144, (314) 962-4204 evenings.

### G-VU PRINT MOUNTS simplify mounting stereo views. Sample kit $5, includes mounted view. Black or gray $38/100 ppd. Also, King Inn 2½ x 2½ viewers & mounts. Q-VU, 817 East 8th, Holtville, CA 92250.

### STEREO REALIST slides of flowers, Death Valley, the Moon. Write for prices, etc. Also I have a lens-shutter for a Revere stereo camera for sale. Art Faner, 1075 13th St. NE, Salem, OR 97301.

### STEREO SLIDE STORAGE BOX! Eliminate those shoeboxes! 4x8x2 corrugated cardboard box holds approximately 130 cardboard or glass mounted slides. $2 each, plus $1 shipping per order. TKE, PO Box 6455, Delray, FL 33484-6455.

### STEREO VIEW CARDS - U.S. & Foreign - Dolores Hendrickson, 2650 West 223rd St., Bayou City, KS 66013, (913) 964-3360.

### STEREOSCOPIC VIDEO multiplier and viewer. Shoot 3-D video with two sync'd cameras, record and view with ordinary VCR and TV. With two paired liquid crystal glasses. $500. Call for more information. D.A. Hunter, (407) 439-6104.


### SUPERCARDH your Stereo Realist red button viewer! Send $7.95 for booklet loaded with viewer maintenance, repair, and improvement tips. Supplies, transformers, and repair services also available. SASE to G. Themelis, 10243 Echo Hill, Brecksville, OH 44141.

### THE 2-D BOOK, THE SECRET GARDEN - 100 FLORAL RADIOGRAPHS is available from ALMAR Company, PO Box 15174, Ann Arbor, MI 48104. Price: $40 + $5 S&H. Ideal gift for flower lovers. 3-D slides and cards of floral radiographs are also available. Send for catalog.

### VIEW-MASTER PERSONAL camera, black, Exc.++ in Exc. case, $115; Personal flash, Exc.++ $18; 300 Custom projector, (mono) fan-cooled 300w with 2½" anastigmat lens/metal barrel, Mint in original box w/papers, $40; Realist filter case w/3 pr. filters, Exc.++, $25; Kodak Stereo Viewer I, Exc.++ in ragged original box, $60; Kodak Stereo Viewer II, no AC cord or rheostat, Exc.++, $85. Kodak Stereo camera, Exc. in poor case, $115. Nimslo camera, Mint- but missing battery cover, $75. Nishika camera, like new in (torn & repaired) box with papers, $75. Mark Willke, 200 SW 89th Ave., Portland, OR 97225, (503) 237-6753. Send SASE for VM reel sale list.

### VIEW-MASTER WITH SOUND. Amazing difference, send stamped SASE for information. Walter Sigg, 3-D Entertainment, Box 208, Swartswood, NJ 07877.
**For Sale**

VIRTUAL REALITY CATALOG. Interested in 3-D for the computer? That's what we do! For a copy of our catalog, send $2 to Simsalabim Systems, Dept D, PO Box 4446, Berkeley, CA 94704.

WE NOW STOCK the SaturnScope (M15), elegantly made of Mahogany with glass lenses, folding handle, and pedestal base; Also the popular and handsome CedarEdge stereoscope with stand. StereoType, PO Box 1637, Florence, OR 97439.

WOULD LIKE TO SELL personal collection of View-Master singles. Have over 500 in lot that includes several harder to find reals and some nice foreign views. Also have several 3-reel packs of Old Time Cars, Trains, Ships, Civil War, Old Time San Francisco, World War I, Famous People, Mr. Lincoln. Have one Stamps and one Old Time Airplanes. If interested please call Wendell Foster, 522 E. Southern Ave., Spring-field, OH 45505, (513) 523-0973.

**Trade**

ARKANSAS and 1500 other selected stereo views in stock. Will trade only for Maine flat mount views - any subject or condition. Write of call for details: Blaine E. Bryant, 864 Bridgton Road, Westbrook, ME 04092, (207) 854-4470.

BELPLASCA (exc+) case + close-up attachment for Realist Macro or Killitt Stereo camera. Please write to: G. Niederhaus, Schneiderstr. 5, 33613 Bielefeld, Germany.

REALIST SLIDES for sale or trade - including Cecil B. DeMille movies, 300+ slides of Occupied Japan, 1955 Hawaiian Airlines advertising set, movie stars, stereoview reproductions and more. Send SASE for list. Chris Perry, 306 Logenta Drive, Palm Springs, CA 92264, (619) 325-4530.

THE REALIST NEWS - Vol. No. 1 (Jan.1951), couple stains at top, otherwise Exc.+; Vol. No. 2 (March 1951), Exc.; Vol. IV (March 1954), Exc+. I will trade these issues for ones that I need (Exc. + condition or better). Please let me know which you have available. Mark Wilke, 200 SW 89th Ave., Portland, OR 97225. (503) 297-7653.


USED ONE-STEP Polaroid cameras. Ex cond. for anything stereo. Robert V. Rossetti, 1612 - 16th St. NE, Canton, OH 44705.


WOLLENSAK 10 CAMERA and viewers wanted. Have over 5000 stereoviews to trade. Manfred Schmidt, 6544 N. Oak Park, Chicago, IL 60631, (312) 631-5949, Fax (312) 631-2173.

**Wanted**

ALASKA-KLONDIKE-YUKON-ESKIMO-ARCTIC stereoviews wanted, also will trade these. Additionally want Washington State, Idaho, Oregon stereoviews. Please write. Thanks, Robert King, 3800 Coorndr., Anchorage, AK 99507.

ARIZONA stereoviews wanted for major Arizona research facility. Please contact Photo Archivist Heather Hatch, Arizona Historical Society, 949 E. Second Street, Tucson, AZ 85719, phone (602) 623-5774.

BISHOP. Stereo Views or xeroxes and information for research. H. Bishop, Bishop and Son, Bishop Brothers, Bishop and Zimmerman, Bishop and Kauffman. PA, MD, Minnesota. Alice Sampson, 31 Pine Tree Drive, Audubon, MN 19403.

BOER WAR stereo cards and any related material (photographs, magic lantern slides, books, ephemera, etc.) wanted for trade or to buy. Top prices paid. Also any info on Boer War stereo photographers urgently sought. Please write to Nic van Oudtshoorn, PO Box 529, Klaamf 2533, Australia, Phone/fax: +61 42 331773.

CAPE MAY, NJ photos (esp. stereo), all formats considered (including real photo post cards). Also, any US outdoor CDVs (1860-70 + exc. cond. only), Richard Rydell, PO Box 132, Thomaston, ME 04881, (207) 372-8533.


CENTRAL PACIFIC RAILROAD stereograms (also Union Pacific): Alfred A. Hart, C.E. Watkins, A.J. Russell, Houseworth, Savage, Maybridge, Pond, Reilly & others. Dr. James Winter, 15145 Muhiolland Drive, Los Angeles, CA 90077, (818) 784-0619, fax (818) 784-1039.


COLORADO MINING TOWNS and railroads - all photographers + stereo, cabinets, CDVs, large paper, glass negatives, albums, books illustrated with real photographs. David S. Diggermess, 4953 Perry St., Denver, CO 80212-2630.

COLORADO TRAIN STEREV views, cabinet, and other large views. Specialties: Locomotives, trains, also stage coaches, freight wagons, street scenes, towns, occupational and expeditions, Top prices paid for glass negatives. David S. Diggermess, 4953 Perry St., Denver, CO 80212-2630.

COLORADO TRAIN STEREV views, cabinet, and other large views. Specialties: Locomotives, trains, also stage coaches, freight wagons, street scenes, towns, occupational and expeditions. Top prices paid for glass negatives. David S. Diggermess, 4953 Perry St., Denver, CO 80212-2630.

CRANFORD, J.G. or Crawford and Paxton, Cranford Bros., Crawford and Littler. Looking for photos of any kind and information for biography of this Oregon photographer. Eric P. Gustafson, 1795 W. 17th, Eugene, OR 97402.

FLM PRESSURE PLATES for Belspaca camera back. Paul Rusmey, 6809 Huntdale St., Long Beach, CA 90808.

FLORIDA STEREOS of historical value, especially Tallahassee, Tampa and Gainesville: Price and describe or send on approval; highest prices paid for pre-1890 views. No St. Augustine. Hendrickson, PO Box 21153, Kennedy Space Center, FL 32815.

GOLF stereo views, Corte-Scope views, Tru-Views, sets or individual cards, any old golf films or ephemera. George Lewis, PO Box 291, Mamaroneck, NY 10543, (914) 688-4579. all letters answered.

GOOD 3-D TRANSPARENCIES of all kinds of ani-mals. Send prices and samples. John D. Britton, 6868 NW 29th St., Fort Lauderdale, FL 33315-2077.

GRAND DUKE ALEXIS of Russia. Anything related to tour of U.S., 1871-72. Stereo views, por-traits, ephemera. Copies of your keepers would also be appreciated for research, Jim Crain, 131 Bennington, San Francisco, CA 94110.

HANOVER, PA stereoviews. Any views by P.S. and H.E. Weaver or C.J. Tyson of Gettysburg. John Richter, 34 South St., Hanover, PA 17331, (717) 637-7154.

HARDESTY & ARNSTRONG, Santa Ana, Cal. Scenes in Southern California. Stereoviews and/or information on this series. Irene Susse, PO Box 9541, So. Laguna, CA 92677, (714) 248-2680.

HARDHAT DIVERS WANTED! Stereoviews, CDVs, Albumen prints, Cabinet cards, photographs, daguerreotypes, ambrotypes, tintypes, RP post cards, etc. Also early underwater photographs. Gary Pilecki, 617 Guaymas Court, San Ramon, CA 94583, (510) 866-0848.


HOUSE AND BAR ROOM INTERIORS, amateur or professional flat mount stereoviews, cabinet, DCV, identified or unidentified, any country, especially USA or Canada, no comic views. Send photocopies, front & back & price to: Ken Heaman, 155 Wellesley St. E., Penthouse, Toronto, Ont., MAY 134 Canada.

I BUY ARIZONA PHOTOGRAPHS! Stereoviews, cabinet cards, mounted photographs, RP post cards, albums and photographs taken before 1920. Also interested in Xeroxes of Arizona stereographs and photos for research. Will pay postage and copy costs. Jeremy Rowe, 2931 E. Del Rio Dr., Tempe, AZ 85282.

I COLLECT VIEWS OF SAN DIEGO, California in Realist or View-Master format! Contact Dave Weiner, PO Box 12193, La Jolla, CA 92039.

IMAGES of Synagogues and Jewish Temples of Europe and USA. Sal Kluger, 11 Imbrook, Aberdeen, NJ 07747.

STEREOWORLD May/June 1994
WANTED

INDIANA. Stereoviews of Lake Maxinkuckee, Culver, IN by Frank M. Lacey, Photographer; Vance Block, Indianapolis. 9 views published of camps, club houses, etc., c. 1890s. Also 8 x 10 views. John Cleveland, 1054 East Shore Dr., Culver, IN 46511, (219) 842-3169.

JOHN H. FOUCII - Top prices paid for any photograph by John Fouch. James Brust, 1907 Rapallo Place, San Pedro, CA 90732, (310) 833-7477 or (310) 832-7943.

KING INN stereo camera, complete kit, like new. Jean Bellisle, 658 Rue Hubert, Longueuil, Quebec, J4J 2M2 Canada.

LANSING, MI stereoviews, photos, post cards, advertising, etc. Anything from Lansing. David R. Caterino, 9879 Bismark Hwy., Vermontville, MI 49096.

LIVE ACTION VIEW-MASTER REELS, also anything on WWII Nazi Germany. Also military key- wound ship clock marked U.S. Navy on face. Vance, 112 Sloop Arthur Dr., Concord, MI 48025.

MUYBRIDGE VIEWS - Top prices paid. Also Michigan and Mining - the 3 Ms. Many views available for trade. Leonard Wallace. 47530 Edin- burgh Lane, Novi, MI 48374.


NEW ORLEANS 1884-1885 Exposition stereoviews, by Centennial Photo Co., or any info. about them. Ken Speth, 2638 Boundy St., San Diego, CA 92104, (619) 283-5579.


NOVELVIEW VIEWERS, strips and advertising. Also looking for any Tru-Vue advertising materi- als. Contact Tom Martin, 2510 Douglas Dr. N., Golden Valley, MN 55422-3632, (612) 591-9453.


OLD VIEWS OF REVERE BEACH, Malden, MA & the waterfront of Boston, MA. Send Xerox to Freeman F. Hepburn, 557 Pleasant St., #203, Malden, MA 02146.

PERMANENT WANT: Stereo views of Boulder, CO and vicinity. Also misc. views by Boulder Stereo- ographers, Alan Ostlund, 479 Arapahoe Ave., Boulder, CO 80302, (303) 444-0645.


REALIST 1525 Accessory Lens Kit for Macro Stereo Camera; Realist 2066 Gold Button View- er; Realist 6-drawer stereo slide cabinet in Exc. or better condition (with Realist logo); Baja 8- Drawer stereo slide cabinet with plastic drawers marked "Vasserlie". Mark Wilke, 200 SW 89th Ave., Portland, OR 97225. (503) 287-7553.

REALIST SLIDES, complete kits, Red Button viewer, 60 slide & viewer storage case that was used by the auto industry in promotions, espe- cially by Oldsmobile in 1950 & 1951. Eddie Reza, 245 E. 6th St., Wahoo, NE 68066, (402) 443-3991 or 443-4470.

SINGLE VIEWS, or complete sets of "Longfel- low's Wayside Inn" done by D. C. Osborn, Artist, Assabet, Mass., Lawrence M. Rochette, 189 Woodland Drive, Marlborough, MA 01752.


STEREO CARDS (views) from Wisconsin, cities of Milwaukee, Waukesha, Templeton, Pewau- kee, Oconomowoc, Watertown, Hartland, Sus- sex. Send Xeroxes to Rick Tyler, 115 W. Newhall Ave., Waukesha, WI 53186 or phone (414) 549-0478.

STEREO DADS, ambrotypes & tintypes, all unusual photograph cases 1840-70 with or without images, thermoplastic and others. Charles Curb, 307 College, Clarksville, AR 72830.

STEREO DAGUERREOTYPES; all kinds, all nations & subjects. Any condition. Ken Appollo, PO Box 241, Rhinecliff, NY 12574, (914) 876-5232.

STEREO VIEWS from Bay City, West Bay City, Wrenoma, Salzburgh and Banks, Michigan and other Michigan. Leon Katzinger, 1406 N. DeWitt St., Bay City, MI 48706.

STEREO VIEWS of Dakota Territory, South Dakota & North Dakota or information about or names of photographers who recorded these areas of history with a camera. Kolbe, 1901 So. Duthl, S.F., SD 57015.

STEREO VIEWS of the Vickers Vimy aircraft and crews in the 1919 North America-England and England-Australia flights. (John Alcock and Arthur Brown, 14 June 1919 flew from St. John's Newfoundland to Clifden Ireland in 16 hours and 27 minutes. Brothers Ross and Keith Smith, first flight England-Australia, 12 no. to 10 Dec. 1919, 136 flying hours.) Would like to buy, borrow, copy any old views for use in stereo slide presentation in conjunction with current project building a replica of the VIMY for duplicating the London-Australia flight in September, 1994, 75 years after the original flight. There was also a Vimy from London to South Africa in 1920. Two South Africans, Pierre van Rynweld and Quinlin Brand, made the successful flight using two Vickers Vimens. Matt Rebholz, 3401 Gold Country Dr., Plac- erville, CA 95667, (916) 625-8410.


VIEW-MASTER REEL of Time Tunnel episode "Rendezvous with Destiny". Also looking for ocean liner stereo views. J. White, 2703 W. Lib- erty St., Girard, OH 44420.

VIEW-MASTER REELS and stereoviews of: carousels, amusement parks, Coney Island, car- nival midway, nickelenode pionos, fair organs, bioscope shows, museums, Panama, San Fran- cisco, Arkansas. Contact Sharon Marie, 814 17th St. #6, Bakersfield, CA 93301, (503) 921- 0820.

WAHLES, WHALING OR BOSTON HARBOR stereo views, including views of dolphins or the harbor islands. Send photocopies of front & back to: P. Barresi, PO Box 381771, Cambridge, MA 02238.

WILD WEST WANTED! Buffalo Bill, Annie Oakley, Indians, Cowboys, outlaws, lawmen. Wild West Show performers. Western town views. Stere- os, cabinets, CDVs, large photos. Please send xerox copy and price. Serious buyer. Art Sowin, 8436 Samra Dr., West Hills, CA 91304, (818) 346-2171.

YOUR BEST STEREO VIEWS. Views needed for a new computer-based viewing program promot- ing the NSA, ISU and general interest in stereo photography. Views must be in print format, no slides. For more information please call Doug Martin at (206) 885-9858 eves.

YOU COULD have told the world of your stereo needs in this ad space! Your membership enti- tles you to 100 words per year, divided into three ads with a maximum of 35 words per ad. Additional words and additional ads may be inserted at the rate of 20c per word. Send ads to the National Stereoscopic Association, P.O. Box 14801, Columbus, OH 43214. A rate sheet for display ads is available upon request. (Please send SASE for rate sheet.)

A s part of their membership, NSA members are offered free use of classified advertis- ing. Members may use 100 words per year, divided into three ads with a maximum of 35 words per ad. Additional words and addi- tional ads may be inserted at the rate of 20c per word. Please include payments with ads. We cannot provide billings. Deadline is the first day of the month preceding publication date. Send ads to the National Stereoscopic Association, P.O. Box 14801, Columbus, OH 43214, or call (419) 927, 2930. A rate sheet for display ads is available upon request. (Please send SASE.)

May/June 1994 STEREO WORLD
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High Intensity Light
Uses halogen bulbs
Includes low voltage transformer
Kydex housing
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- PVR Complete (includes Power Glove) $500
- StereoPro (disc, glasses, interface for stereo viewing of any file format—does not drive all SVGA cards-call for list) $300
- Model 3000 driver (VGA or video, polarity switch) $175
- PGSI (for gloves, glasses, PC or Mac serial port) $250
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- SiliconSpace-cable, glasses, stereoport interface for SUN, SGI, HP, Kubota, Intergraph, etc.

StereoSpace Model 1-cable, glasses, sync inserter interface $400

for high frequency LCD glasses use with PC's. Requires frequency variable SVGA card, multisync monitor.

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for SUN, SGI, HP, Kubota, Intergraph, etc. which lack a stereoport (TTL out) Requires multisync monitor.

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SpaceHelmet-Model 1-two LCD's, 100K pixels/eye, 4 ft.image $2500

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3D Theater for 1 (N Visor, Driver, 3D tape) $300

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Consumer Brochure lists 80 3D tapes.

HighTech 3D tapes

Virtual Worlds in 3D-6 Vols., Stereo Graphics-3 Vols.,
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LITERATURE

Steroscopic Video (55p-1000 refs) $20

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Stereo Graphics Info Pak (250 tech info) $50

See book list for 30 VR & 3D books

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STEREO WORLD May/June 1994
"Aspens" by Stephen Trynoski of St. Paul, MN was voted the First Place "Favorite View" for 1993 in the Stereoscopic Society of America's Alpha Transparency Circuit. The view appears in "The Society" on page 22.