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# In this museum, the elevators are works of art.

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**Oct. 1-2:** Course on Evaluating Occupied Designed Environments, Department of Continuing Education, Georgia Institute of Technology, Atlanta.

**Oct. 1-3:** Jailhouse Tech seminar, Toronto. Contact: Michael Cohn at AIA headquarters.

**Oct. 2:** Conference on Classical Tradition: The Wave of the Future, School of Architecture, University of Texas.

**Oct. 2-3:** AIA Energy in Design: Techniques Workshop, Buffalo, N.Y.; Chicago; Columbus, Ohio. (Repeat workshops Oct. 8-9, Albuquerque; Oct. 9-10, Atlanta and Memphis; Oct. 14-15, Kalamazoo, Mich.; Oct. 23-24, Spokane, Wash., and Providence, R.I.) Contact Brenda Henderson at AIA headquarters.

**Oct. 2-3:** AIA Energy in Design: Process Workshops, Chicago. (Repeat workshops Oct. 14-15, Klamazoo, Mich.; Oct. 16-17, Peoria, Ill.; Oct. 23-24, Phoenix; Oct. 29-30, Wichita, Kan.) Contact Brenda Henderson at AIA headquarters.

**Oct. 4-6:** Conference on Industrial Architecture, Detroit. Contact: Maurice Payne at AIA headquarters.

Oct. 5-6: Government A/E Contracting course, San Diego. (Repeat course Nov. 9-10, Washington, D.C.). Contact: University of San Francisco, School of Law Seminar Division Office, 5th Floor, 1120 20th St. N.W., Washington, D.C. 20036. Oct. 5-7: Three one-day seminars on New Techniques of Financial Management, Writing Professional Service Contracts and Project Management, Los Angeles. (Repeat seminars Nov. 4-6, Atlanta; Nov. 18-20, Denver; Dec. 1-4, Chicago.) Contact: Judy Clausen, PSMJ Seminars, 45 Van Brunt Ave., Dedham, Mass. 02026. Oct. 6-7 and Nov. 18-19: Business Management Seminar, Washington, D.C. (Repeat seminars Jan. 26-27 and Mar. 2-3, Houston; Mar. 17-18 and April 21-22, San Francisco). Contact: Director of Professional Development & Meetings, American Consulting Engineers Council, 1015 15th St. N.W., Washington, D.C. 20005. Oct. 6-9: Seminar on Marketing of Professional Services, Detroit. (Repeat seminars Oct. 13-16, Nashville; Oct. 27-30, Denver; Nov. 10-13, Portland; Nov. 17-20, Los Angeles.) Contact: Director of Professional Development & Meetings, American Consulting Engineers Council, 1015 15th St. N.W., Washington, D.C. 20005.

Oct. 7-10: Annual meeting of the Association for Preservation Technology, Washington, D.C. Contact: Mary Oehrlein, REHAB/TECH, APT, Suite 301, 1555 Connecticut Ave. N.W., Washington, D.C. 20036.

Oct 7-8: Architectural Management Con-

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ference, Drake Hotel, Chicago. Contact: William Hooper, AIA, at Institute headquarters.

Oct. 8-9: AIA Energy in Design: Practice Workshops, Albuquerque. Contact: Brenda Henderson at AIA headquarters. Oct. 11-13: Symposium on Forces that Influence the Future of Education, Columbus, Ind. Contact: Maurice Payne at AIA headquarters.

Oct. 12-13: Seminar on Innovative Low-Cost Applications for Microcomputers, Atlanta. (Repeat seminars Oct. 22-23, Los Angeles; Nov. 12-13, Washington, D.C.; Nov. 17-18, Honolulu.) Contact: EMA Management Associates, 1145 Gaskins Road, Richmond, Va. 23233. Oct. 12-14: Workshop on Development and Use of Computer Automation in Working Drawing Production, University of Wisconsin, Madison. Oct. 13: Workshop on Visual Marketing,

Boston. (Repeat workshop on Visual Marketing, Boston. (Repeat workshops Oct. 15, Washington, D.C.; Oct. 20, Atlanta; Oct. 23, Columbus, Ohio; Oct. 27, Minneapolis; Oct. 30, Salt Lake City; Nov. 4, New York City; Nov. 10, Chicago; Nov. 4, New York City; Nov. 10, Chicago; Nov. 13, Portland; Nov. 17, San Diego; Nov. 20, San Francisco; Dec. 1, Denver; Dec. 4, Kansas City, Mo.; Dec. 8, Dallas; Dec. 11, Miami). Contact: Karen Hughes, Ernest Burden Associates, 20 Waterside Plaza, New York, N.Y. 10010.

**Oct. 13-16:** Symposium on Indoor Air Pollution, Health and Energy Conservation, University of Massachusetts, Amherst.

**Oct. 14-16:** Workshop on Planning and Managing Architectural Working Drawing Production, University of Wisconsin, Madison.

**Oct. 15-17:** Solar Quest: Exploration of Energy Options conference, Denver. Contact: Linda Bouwkamp, Energy Programs, Jordan College, 360 W. Pine St., Cedar Springs, Mich. 49319.

**Oct. 15-17:** Solar Conference, Bar Harbor. Contact: Judy Berk, Conference Executive, College of the Atlantic, Bar Harbor, Me. 04609.

**Oct. 16-18:** Gulf States Regional and Louisiana Association of Architects Convention, Monroe, La.

Oct. 22-23: National Institute of Building Sciences annual meeting, Washington, D.C. Contact: Maryanne Kowaleski, NIBS, 1015 15th St. N.W., Washington, D.C. 20005.

Oct. 22-23: National Conference on Project Management Profitability, Minneapolis. Contact: Professional Services Management Association, 1700 E. Dyer Road, Suite 165, Santa Ana, Calif. 92705. Oct. 22-24: Association of Collegiate Schools of Architecture Southwest region meeting, Eureka Springs, Ark. Contact: Richard E. Kellogg, ACSA Councilor, University of Arkansas, School of Architecture, 209 Vol Walker Hall, Fayetteville, Ark. 72701.

Oct. 26-30: International Conference on Energy Use Management, West Berlin, Germany. Contact: EDEN, P.O. Box 64369, Los Angeles, Calif. 90064. Oct. 28-30: Construction Management Conference, Denver. Contact: Al Branson, Director of Conference Programs, Associated General Contractors of America, 1957 E St. N.W., Washington, D.C. 20006.

Oct. 28-31: Third International Conference on Urban Design, Galveston, Tex. Contact: Institute for Urban Design, Main P.O. Box 105, Purchase, N.Y. 10577. Oct. 31-Nov. 3: AIA's Designing for Energy Conference, Denver. Contact: Michael Barker at Institute headquarters. Oct. 31-Nov. 4: Industrial Designers Society of America annual conference, Los Angeles. Contact: IDSA, 1717 N St. N.W., Washington, D.C. 20036. Nov. 29-Dec. 5: 39th International Building and Construction Exhibition, Birmingham, England. Contact: Interbuild, Suite 735, 4733 Bethesda Ave., Washington, D.C. 20014.

June 6-10, 1982. AIA National Convention, Hawaii.

#### LETTERS

The Smithsonian: I question the accuracy of describing the pre-Ripley Smithsonian as "content to remain 'the nation's attic," stuffy, conservative, politically timid and inept" ("The Ripley Years: Expansion, Restoration," May, p. 55). Alexander Wetmore and Leonard Carmichael deserve better than that. Wetmore obtained unprecedented funding for the widely praised exhibits revitalization. Carmichael painted the museum galleries in bright colors and used the rapid succession of exhibition openings to win believers and to establish the credibility of new Smithsonian ventures. He obtained millions of dollars to keep the renovation running, to build large additions on the Natural History Building and to construct the Museum of History and Technology. He obtained the site and submitted the successful request for appropriations to plan and design the National Air and Space Museum. These pre-Ripley breakthrough surges of Smithsonian movement provided momentum for continuing growth and adventures. As Wetmore said, "We put the launch pad under Carmichael." As Carmichael said, "Nothing succeeds like one's successors."

The article about the Museum of History and Technology (p. 49) is a needlessly negative history of the design of a very successful building. A much better story is told by the building's 17 years of *continued on page 10* 

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#### Letters from page 6

outstanding performance as a museum in its complete flexibility to accommodate exhibits and programs not imagined 20 years ago. Designed for a cluster of discipline-oriented museums within a museum, it has adapted readily for huge interdisciplinary exhibits. For the large bicentennial "Nations" exhibit, an area of more than 25,000 square feet was put together and a new outside entrance provided, all without structural changes.

Walker Cain, the building's designer, deserves high praise for his accomplishment. He worked at a time when government was not into art, as it is now. Old channels that had to be traveled to create the building had been untested for a guarter century by anything like a large, modern museum building. For example, Cain and his associates spent weeks researching the background of the current stair and crowd codes to avoid what threatened to become a museum of stair wells. He designed not only a superbly functioning museum building but also the first modern building on the Mall. He also prevailed against opposition to erect the Mall's first permanent modern sculpture, "Infinity" by José de Rivera. Today, 20 years and three new Mall museums later, the road should be easier. It certainly must seem so to young writers. Frank A. Taylor Former Director,

U. S. National Museum

#### Marilyn Cohen, author of the article about the Museum of History and Technology, replies:

I thank Mr. Taylor for his careful reading of my article. Although I discussed the architectural merits of the museum, especially as viewed by the critics of the day, key museum staff working closely with the architects, as well as my own views, I thoroughly agree with Mr. Taylor's comments about the functionalism of the building. As Mr. Taylor is aware, my doctoral dissertation on the museum covers such issues as functionalism, the extremely difficult political climate and the fact that this museum was innovative in terms of exhibit design, size and function.

So far as the building itself is concerned, Mr. Taylor was also critical of the design. In July 1956 he attempted to convince one of the assistant secretaries of the Smithsonian that there were potential problems inherent in the design. In August 1956 he urged the secretary to require the architects to make major improvements in the design before it was approved.

The design does not detract from the fact that the museum was key to Washington's cultural development in the 1960s and '70s. Frank Taylor's role in helping change the Smithsonian and the District of Columbia are much to his credit and the nation's good fortune. And I hope that I was able to communicate the importance of Mr. Taylor's leadership in the museum profession and the Smithsonian Institution.

NCARB and Degrees: I must applaud the delegates to this year's AIA convention for passing a resolution rejecting the National Council of Architectural Registration Board's "absolute degree requirement" (June, page 9). Since it was announced last year that the NCARB would require all applicants for NCARB certification to hold a professional degree in architecture from an accredited school (effective July 1, 1984), I've been closely watching the pages of your publication to see the reaction of the profession. I was quite pleased to see numerous letters denouncing this decision, especially John F. Hartray's "Defending Our Self-Educated Minority" (Oct. '80, page 40).

While I appreciate the views of those who have attained their registration through the process of a nonformal education and of those who support the "selfeducated minority," I am disappointed that the most important voice has not been heard from—the voice of those who will be directly affected by the NCARB decision. Since I consider myself to be a member of this soon-to-be-extinct (?) minority, I would like to offer the following analogy to fill the aforementioned void: "A Note in a Bottle"

I hope whoever finds this note is a person who can understand my plight.

It's really strange; I've never had any complaints about being here; yet it's difficult for me to understand what happened a year ago. You see, like any rational human being stranded on a deserted island, I've made my own tools from sticks and stones and began building a boat. It wasn't long after I started building *my* boat that I began to realize how much a person can appreciate something when you design and build it using *your own* ingenuity, *your own* motivation, *your own* hands.

Five years ago when I saw that beautiful Fiberglas assemblyline cabin cruiser come within a mile of my island, I had a decision to make: Either build a fire to attract attention or ignore the chance to be "rescued" and continue building my boat. I guess it's quite apparent that I chose the latter. Matter of fact, quite a few boats have gone by here during the past five years. Some have even stopped and insisted that I must be "rescued" by them—that my craft would never be "accepted" as being seaworthy.

Well, I've stood my ground for all these years, and while most people can't accept it, I've accepted the fact that I'm here of *my own* volition: I'm quite proud of what I've accomplished, and I *was* looking forward to completing my craftbut it doesn't seem as though that will ever happen. Sometime during the month of May last year, a luxury liner called the NCARB arrived at my island. When its crew came ashore and totally ignored my presence, I knew trouble was ahead. But I never thought their reason for coming to my island was going to be as malicious as it turned out to be. As crazy as it may sound, they chopped down every last tree on my island and took them away!

Well, those boats are still stopping here every now and then. Some of them are even so *nice* as to remain me that I no longer have any trees to finish my boat, but I still refuse their rescue.

So here I sit on a barren island with the framework of my boat, my tools, my ingenuity, my motivation and my hands. Needless to say, I am a very frustrated man.

P.S. I'm sorry to say that the sand here isn't very good for building sand castles but *it is* something to do.

Stephen J. Shannon Philadelphia

Voting for AIA Officers: In your report on the Minneapolis convention (June, page 9) you mention the defeat of a proposal to study the pros and cons of voting for national AIA officers by mail instead of at the convention. It should be pointed out that it was the study and not the actual voting by mail that was rejected.

Regardless of this distinction, 4 percent of the membership (those who actually voted) apparently decided that, even without a study, this attempt to democratize the Institute was all con and no pro. As a result, the 4 percent decided that the other 96 percent would have no direct vote in electing their officers unless they were willing or able to attend the national convention.

One wonders how the 96 percent those who were not in Minneapolis last May—feel about all this. Maybe we should have a national poll (by mail, of course) to find out. Or does anybody care? Lester Wertheimer, AIA President, Los Angeles Chapter/AIA

**Correspondence from Italy:** Mark Maves, coauthor of the Journal's April article about Urbino and Giancarlo de Carlo, received the following letter. He shared it with us and we publish it with de Carlo's permission.—*Ed*.

#### Dear Mark,

I have just received the issue of AIA JOURNAL you sent me. I found the presentation of my work excellent and I wish to thank you for the perfect choice of the illustrations, the intelligence of the writing and the very good quality of the printing. . . . Giancarlo Milan

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# NEWS

#### Government

# HUD Community Grants Aide Wants to Involve Private Sector

The Reagan Administration's new manager of community development block grants and urban development action grants speaks in terms of "businesslike approach," "privatization of public services" and "cutting federal regulations." Stephen Bollinger, 33, former manager of public housing for Columbus, Ohio, is successor to Robert Embry as HUD assistant secretary for community planning and development.

In a recent interview, Bollinger was asked if his philosophy is to pull back federal participation. "In one area, you will see a broadening of participation," he said. "That is in providing professional technical assistance to local administrators and acting as a reliable information source and capable trainer."

Bollinger said a HUD priority is greater flexibility and less paperwork for local governments. Asked if that means fewer strings on federal dollars, he said, "All we are saying to state and local governments under our new legislation is 'give us a statement on your use of the money.' Then we will monitor and audit. If they don't spend the money properly, living up to their obligations under statutes, certification or statements of intent, then we will make sure the money is repaid to this department." He sees greater federal attention to waste, fraud and mismanagement "because we won't be dealing with

#### Government

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Stephen Bollinger

certain other issues that have previously occupied time and effort with minimal return to the department or taxpayers."

One such issue apparently will be the previous Administration's concern for "targeting" funds for low and moderate income people. "This Administration will go by the statutes, not by memos from assistant secretaries or by interpretations of the statements of individuals. Our programs principally benefit low and moderate income people. We believe that a theory of targeting takes away flexibility and decision making capabilities on the part of local and state governments. We think they are the best judges as to where to maximize funds."

And what of specific programs? "The community development block grant approach is one that we are committed to. We are now evaluating the program's capabilities, flexibilities and administration. As a result of that ongoing evaluation, recent legislation transfers administration of the small cities block grant program to the states....

"We are also evaluating the Urban Development Action Grant program. It has been around three or four years now and has proven to be popular. The results of a survey and evaluation should be ready in the next couple of months. Then the Administration, Secretary (Samuel) Pierce and I will decide its future." Asked about charges aired in Congress that the UDAG program has been manipulated for political ends, Bollinger said, "There is no evidence to substantiate any of that. The integrity of the HUD professional staff would be compromised if anybody even implied that it has been used in that way. I assure you that this Administration will not use any program in a political way.

"The Administration is devoting a great deal of time and effort to evaluating the enterprise zone concept (tax incentives for selected urban areas; see Aug., page 19). It is something we want to develop, but what form it will ultimately take and how closely it may parallel proposed legislation, I can't tell you."

A concept that Bollinger seems to embrace wholeheartedly is increased participation of the private sector in public activities: "While the government dollars available to our cities are limited, there is a great willingness by corporate citizens to be involved. They are a natural resource that the public sector needs to tap in a more intelligent way." He noted, for example, that many of the cities with problems getting their rehabilitation programs off the ground have private-sector builders, developers and rehabilitation specialists whose capabilities could be utilized. "We are encouraging our cities to look at their permit procedures and codes to see what can be done to streamline and encourage private, for-profit participation," he said.

#### Rehabilitation Tax Incentives Increase in Reagan's Package

Tax incentives for the rehabilitation of buildings more than 30 years old will increase next year under the Economic Recovery Tax Act of 1981, which is essentially the Reagan Administration's tax package that Congress approved last month.

Under the act, a three-tier investment credit for rehabilitiation will replace the current 10 percent investment tax credit (and additional energy credit) for expenditures connected with the rehabilitation of a building at least 20 years old. Also eliminated will be the option to amortize over a 60-month period the expenditures for rehabilitation of a certified historic structure. *continued on page 14* 

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#### **Government** from page 13

The new system allows a 15 percent credit for nonresidential structures at least 30 years old and a 20 percent credit for nonresidential structures at least 40 years old. A 25 percent credit would apply to certified historic structures. The credits are available only if the taxpayer elects a straight-line method of cost recovery with respect to rehabilitation expenditures. And, there must be substantial rehabilitation to qualify.

Another change involves noncertified buildings in historic districts. Under the old law, a building in an historic district was not a certified historic structure unless the secretary of the Interior designated it as such. Under the new law, the building is a certified historic structure unless the secretary of the Interior decrees it is not.

The act also repeals a penalty for tearing down historic structures. Under current practices, depreciation of the new buildings constructed or reconstructed at the site of demolished or substantially altered certified historic structures were limited to straight-line depreciation. That requirement has been repealed. The new act retains a provision that, in this case, demolition costs are not deductible.

The House ways and means committee tax bill had called for a \$2,000 builder's credit for passive solar to be phased out by 1990, but this provision was not included in the final legislation.

Some of the provisions that made it into the act are:

• Building depreciation: There is a 15year recovery period, but taxpayers may elect a 35- or 45-year extended recovery period. Taxpayers may use a straight-line method or (for property other than lowincome housing) the 175-percent declining balance method, changing to the straight-line method to maximize acceleration.

· Other depreciation provisions: For

other properties, used in a trade or business or for the production of income, depreciation costs can be recovered over three-, five-, 10- or 15-year periods. In the five-year group are office equipment and furnishings. The write-offs for these start with 15 percent the first year, rise to 22 percent the second and then level off at 21 percent for the next three years. · Corporation income tax: The tax on taxable income will be 17 percent for less than \$25,000; 20 percent for \$25,000 to \$50,000; 30 percent for \$50,000 to \$75,000; 40 percent for \$75,000 to \$100,000, and 46 percent for more than \$100,000. The rate on taxable income below \$50,000 will further decrease in 1982 and 1983.

• Foreign earned income: Present law allows a variety of deductions and exclusions for U.S. citizens and residents living abroad, including deductions for excess cost of living, housing, education expenses and home leave. The new act replaces the existing provisions for income earned abroad with an exclusion for the first \$95,000 of such income and an exclusion for excess housing costs (to be around \$6,100). The maximum foreign earned income exclusion will be \$75,000 in 1982 and will be phased up to \$95,000 by 1986 in \$5,000 yearly increments. Taxable years begin in 1982.

• Retirement accounts: The act increases the limit on deductions for contributions to individual retirement accounts from the lesser of 15 percent of compensation or \$1,500 to the lesser of 100 percent of compensation or \$2,000. The act also makes active participants in tax qualified plans eligible for IRA deductions. Also increased is the maximum annual deduction for a contribution to a self-employed retirement plan, from \$7,500 to \$15,000.

• Individual taxes: There will be across the board reductions in individual income tax rates to reach 23 percent by 1984 (5 percent in 1981, 10 percent in 1982, 10 percent in 1983). Withholding changes will take place on Oct. 1, 1981, July 1, 1982, and July 1, 1983. Top marginal tax rate will be reduced from 70 percent to 50 percent on Jan. 1, 1982, and the maximum tax rate on long-term capital gains is reduced to 20 percent for sales or exchanges after June 9, 1981. In 1985, income tax brackets will be tied to the consumer price index.

#### How Some Items of Concern to The Profession Fared in Budget

The Omnibus Budget Reconciliation Act, passed by Congress July 31 and signed by President Reagan Aug. 13, slashes nearly \$35.2 billion from the projected fiscal year 1982 federal spending level of \$740 billion. The cuts are less than the Administration recommended (it wanted \$41.1 billion cut) and the act provides more federal funding than the Administration requested for conservation, solar energy, the expansion of federal parks, the National Endowments for Arts and Humanities, grants to states for historic preservation, among other categories.

Following is a look at some of the budget measures affecting the fields of energy, housing and urban development, the arts and humanities, land conservation, historic preservation and transportation.

For the Department of Energy the authorization for nonmilitary energy programs for fiscal 1982 is \$5.646 billion, with nuclear fission receiving the largest share at \$1 billion. The figure is \$656 million less than Congress provided DOE for fiscal year 1981.

For solar energy, the act authorizes \$303 million for fiscal 1982 programs, \$110 million more than Reagan requested, *continued on page 16* 



**State Buys Wright House:** Frank Lloyd Wright's 1904 Susan Lawrence Dana house in Springfield, Ill., is to be purchased by the State of Illinois for \$1 million, restored and opened to the public. One of Wright's first Prairie School houses, it is unusual in that most of the original furnishings and accessories (also designed by Wright) are still intact. The house incorporates large

spaces for art exhibitions and for entertaining and is one of Wright's first designs that has several two-story rooms, in this case the gallery and dining room, and a three-story entrance hall. The plan is a rough letter T, the long arm being extended by a pergola to a detached gallery wing. The abstract patterned details are derived primarily from prairie sumac.

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# An architectural crisis. Versacor: Robertson's response.

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#### Government from page 14

although \$249 million less than the Carter Administration wanted. For conservation programs, the act authorizes \$182 million for fiscal 1982, \$96 million more than requested by Reagan but \$112 million less than Carter asked for. Funding for the building systems conservation program actually rose from \$22.4 million to \$23.5 million.

For other conservation programs, the act authorizes \$376 million for programs run by state and local governments in fiscal 1982, including \$175 million to weatherize houses of low-income families. The Administration had requested only \$195 million for state and local conservation programs and nothing for weatherizing. States can also get more money for weatherizing from a \$1.9 million block grant program for low-income assistance.

Congress rebuked President Reagan by providing a three-year authorization to the solar bank administered by HUD. The bank will receive \$50 million for each of fiscal years 1982-84 for financial assistance to individuals and businesses that install conservation or solar equipment.

The budget act also makes the building energy performance standards voluntary instead of mandatory as a 1976 law required. New federal buildings will be required to meet the standards, however.

For HUD programs, the act retains the urban development action grant program as a separate entity (the Administration had wanted it to be placed under the community development block grant program) and provides \$500 million for each of fiscal 1982 and '83. If no funds are set aside for UDAG after fiscal 1983, any amount that might later become available would be added to the CDBG account.

For other HUD programs, the reconciliation act does the following:

• extends section 312 rehabilitation loan program through fiscal 1982, but repeals the authorization of \$129 million for fiscal 1982.

• authorizes \$13.47 million annually for fiscal 1982 and 1983 for the urban home-steading program.

• authorizes the Neighborhood Reinvestment Corporation at \$13.43 million for fiscal 1981 and \$14.95 million for fiscal 1982.

• cuts, for subsidized housing, more from the fiscal 1982 budget than the President requested by authorizing \$18.09 billion *continued on page 20* 

Editor's note: It is hard to believe, but this month is the 20th anniversary of the death of Eero Saarinen. The JOURNAL will observe the anniversary with a major appraisal of his career and contributions in November, since the main part of this issue is given over to the winners of our photo contest.

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#### Government from page 16

for assisted housing, which would cover about 153,000 additional units.

• complies with the Reagan Administration request to ease federal controls over community development block grants and authorizes \$4.17 billion for fiscal 1982.

For the National Endowments for the Arts and Humanities, Congress voted to restore about \$60 million that President Reagan wanted cut from their budgets. Reagan had asked for \$88 million for NEA and \$85 million for NEH for fiscal 1982, a cut of 50 percent each. Instead, the reconciliation act reduced the funding by 25 percent, providing \$119.3 million in fiscal 1982 for NEA and \$113.7 million for NEH.

Congress also blocked President Reagan's plans to halt the expansion of federal park lands and to use acquisition funds for upgrading existing parks. The act calls for new land acquisitions to continue using money from the land and water conservation fund, which is authorized for at least \$275 million for fiscal years 1981-84. The act also calls for the continuation of federal grants to states for historic preservation (\$30 million) and acquisition of urban parks (\$10 million). The Administration wants both eliminated.

Also under Interior Department funding, the act limits authorization for the advisory council on historic preservation to no more than \$1.59 million in fiscal 1981, \$1.86 million in 1982, \$1.9 million in 1983 and \$2 million in 1984.

The act also prohibits after Oct. 1, 1983, the sale of federal flood insurance for new construction or substantial improvements in existing structures on "undeveloped coastal barriers" as designated by the secretary of the Interior. The act does, however, allow federally insured financial institutions the right to make loans for structures that would become ineligible for the flood insurance.

For transportation, the act authorizes up to \$3.792 billion in fiscal 1982 for mass transit programs and \$8.2 billion for the highway trust fund. In fiscal 1981, airport development, planning and noise compatability projects will receive \$450 million.

#### Interior Department's Authority To Name Historic Areas Upheld

In the first test of a new preservation law, a federal judge has reversed his 1980 ruling and affirmed the authority of the Interior Department to designate sites and buildings as landmarks.

The case involves the strategy of a group of central Virginia property own-



ers, Historic Green Springs, Inc., to hinder strip mining of land surrounding their 18th and 19th century houses. In 1977, the group donated easements on several thousand acres to the Interior Department, but last year federal district Judge Robert Merhige Jr. of Richmond struck down the historic designation granted by Interior.

Because the ruling was seen as a threat to thousands of similar properties, the Interior Department appealed. Meanwhile, preservationists successfully urged Congress to reform the administrative procedures that Judge Merhige ruled defective. In December, President Carter signed into law the measure restoring existing landmark designations, and the appeals court then ordered the judge to reconsider his decision.

Judge Mehrige's opinion was made public in late July. In it, he said that the new legislation "is plain" and that Congress legitimately "sought to shelter landmarks whose designations faced Constitutional challenge."

News continued on page 22

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#### Practice

# Supreme Court Agrees to Hear Antitrust Case Against ASME

The Supreme Court has agreed to hear this fall an antitrust case testing the liability of professional societies for unsanctioned or unapproved actions of volunteer members and challenging the traditional system of establishing building codes and standards by volunteer designers and engineers.

The case involves a lower court's decision that the American Society of Mechanical Engineers violated the Sherman Act because of an alleged conspiracy between two members of the ASME subcommittee with jurisdiction over standards for certain boiler control devices. The initial suit charged that the two members, one of them an official of a manufacturer of boiler control devices, conspired to issue a misleading opinion to a buyer of such devices, implying that a competing product was not up to ASME standards. The lower court assessed damages of \$7.5 million against ASME.

In arguing its case, the society held that the actions of the subcommittee were committed without the knowledge or ratification of the society. But the court based its decision on the doctrine of "apparent authority" implied by the fact that the members were acting under the aegis of ASME. In holding ASME liable, the court cited antitrust law that suggests that liability can be judged from the perception of the "third party," i.e. the buyer of the devices, who assumes that the actions of volunteers are sanctioned by the organization.

The appeal for a Supreme Court ruling has been joined by 14 other professional groups, including the American Association of Engineering Societies, the American Concrete Institute, the National Fire Protection Association, the National Institute of Building Sciences and the National Society of Professional Engineers.

In its amicus curiae brief, NSPE states that "if extended to its logical conclusion, the use of the 'apparent authority' test employed (by the lower court) raises a considerable concern that many activities of professional societies, over and above technical standards and codes activities, could subject the organization to antitrust liability for improper and unauthorized conduct of its members."

NIBS, in its amicus brief, says that "the work of voluntary organizations would be crippled..." AIA declined the opportunity to submit an amicus brief. Says Alan Stover, AIA, the Institute's general counsel, "AIA is not directly affected by the decision because the Institute historically has not been directly engaged in standards-making activities. But many AIA members serve on committees of standards organizations and testify before them, both individually and as representatives of the Institute."

#### Absolute Degree Requirement Is Reaffirmed by NCARB

While the delegates to the National Council of Architectural Registration Boards annual meeting this summer reaffirmed the continuance of the professional degree requirement for NCARB certification, they voted "to study alternative educational processes and the implications of requiring such a degree." The results are to be presented at the 1982 annual meeting.

The study resolution was submitted by the NCARB board of directors because of the recognition that "there may very well be educational alternatives that can be identified, verified and accepted within a carefully structured evaluation system," said NCARB's new president, Thomas H. Flesher, AIA.

At the meeting delegates rejected two related resolutions. One called for the repeal of last year's action to require the degree, to be followed by a study of possible educational alternatives. It was rejected by a vote of 29 to 18. The other proposed that the educational standard be modified to make the holder of a bachelor's degree "in any discipline" an eligible candidate for NCARB certification. The negative vote on it was 37 to 8.

At the meeting NCARB also received the results of a two-year study of the relationship between its examination, the practice of architecture and the public health, safety and welfare. The study committee found the examination "reasonably related" to practice but recommended study of new testing and grading methods.

Flesher, who will serve as NCARB president from 1981-82, is a partner of AIA's President Elect Robert Lawrence, FAIA, in the Oklahoma City, Okla., firm continued on page 24



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#### Practice from page 22

of Noftsger, Lawrence, Lawrence and Flesher. Other NCARB officers elected at the annual meeting are Sid Frier, FAIA, Little Rock, Ark., first vice president/ president-designate; Ballard H. T. Kirk, AIA, Columbus, Ohio, second vice president; Donald J. Prout, AIA, Cranston, R. I., secretary, and Robert E. Oringdulph, AIA, Portland, Ore., treasurer.

#### Red Cedar Awards for 1981 Honor 26 Completed Projects

Eight built projects received first awards and 18 received merit awards in the 1981 Red Cedar Shingle & Handsplit Shake Bureau/AIA architectural awards program honoring "architects and their projects that demonstrate design excellence and significant functional or esthetic uses of red cedar shingles or shakes."

In the residential/single family category, first awards went to Eric Hefty & Associates, Missoula, Mont., for the Hefty residence, and to Arne Bystrom, AIA, Seattle, for the Moore residence in Freeland, Wash.

In the residential/multifamily category, winners were Edmund Burger, AIA, San Francisco, for Albany Oaks in Albany, Calif.; Brun Moreland Christopher, Portland, Ore., for Abitare Condominiums in Portland, and Fisher-Friedman Associates, San Francisco, for Lighthouse Cove, Redwood City, Calif.

In the remodel/restoration category, the winner was Richard Bergmann, AIA, New Canaan, Conn., for the Connecticut Shore Complex, New Canaan. In the commercial/industrial category, first awards went to Fletcher/Finch/Farr, Portland, Ore., for the William Temple house, Portland, and Angello-Vitiello-Niiya Inc., Sacramento, Calif., for Saint Anthony Church, Sacramento.

Richard Bergmann and Fisher-Friedman also won awards of merit. Other merit award winners were Confer & Nance, Concord, Calif.; Crissman & Solomon. Watertown, Mass.; James Cutler, Winslow, Wash.; Huygens & DiMella, Boston; Larsen Lagerquist Morris, Seattle; Carl Luckenbach/Robert L. Ziegelman, Birmingham, Mich.; Moore Grover Harper, Essex, Conn.; Olson/Walker Partners, Seattle, Wash.; Roland/Miller/Associates, Santa Rosa, Calif.; Sandy & Babcock, San Francisco; Daniel Solomon & Associates, San Francisco; Goodwin B. Steinberg Associates, San Jose, Calif.; Stone, Marraccini & Patterson, San Francisco; Treffinger, Walz & McLeod, San Rafael, Calif., and George & Mieko Winnacker, Oakland, Calif.

Jurors were Henrik Bull, FAIA, Thomas Payette, FAIA, and Fred Repass.

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citizens, as indexes of cultural processes and social values, as purely utilitarian structures, and as aesthetic masterpieces. 1981 (1-27940-4)approx. 144 pp. \$45.00 (tent.)

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A practical problem-solver for architects and design apprentices, this timesaving guide gives you simple, step-by-step procedures for designing ordinary building foundations using

elementary math and engineering analysis. 1981 (1-06267-7) 338 pp.

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the pleasure, of the late Alfred Bendiner, an architect and artist whose lithographs and drawings go on display this month at the Octagon.

Bendiner received his architectural degree from the University of Pennsylvania and began practicing in 1929, designing mostly houses and industrial projects. A column, "Life Through a Martini Glass,"

until his death in 1964.

While at AIA conventions over the years, Bendiner sketched impressions of his fellow architects on scraps of paper, letterhead stationery, menus and convention programs. And his caricatures of musicians, actors and dancers were published in Philadelphia and Washington newspapers. News continued on page 88 Lewis Mumford

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# ANAJOURNAL



On the cover and the following pages are the 29 winners of the JOURNAL's photo contest, chosen from among some 1,000 entered by architects, students and interns. The jury was comprised of the JOURNAL's editors and art director plus photographer Cervin Robinson of New York City. Our thanks to him and to all of the entrants.

The cover picture, winner of an award of merit, is the interior of a former trolley house electrical substation, now a residence, in Potomac, Md. The photographer is George Sanders, AIA, of Albuquerque, N.M. He used a  $4 \times 5$  Speed Graphic and Ektapan film exposed at f/32. The jurors admired its "emotive quality, which suggests photos taken in the 1930s for the Farm Security Administration." D.C.





Award of Merit: Leaning barn, Bisbee, N.D., by Kent R. Anderson, AIA, Grand Forks, N.D. Plus-X, 2<sup>1</sup>/<sub>4</sub>x 2<sup>1</sup>/<sub>4</sub> Rolleiflex 80mm twin lens; f/8 at a 60th of a second. Said one juror: "A fascinating combination of stillness and activity."

**Honor Award:** Hotel and train, Dallas, by Peter Rand, AIA. An Ektachrome 35mm transparency using a Pentax with a 28mm lens and a polarizing filter. Jury comment: "A compellingly sensuous statement ... accessible on several levels ... three basic elements arranged masterfully."



Award of Merit: "Glass Block Heaven," Coleman A. Young Recreation Center, Detroit, by William Kessler, FAIA, Detroit. Plus-X, Nikon PC with a 35mm lens. Said the jury: "The kind of perspective you might draw, but surprising to see in a photograph . . . icy."



**Honor Award:** Base of the Gateway arch, St. Louis, by Don Wong, Minneapolis intern. A print made from a Kodachrome 25 transparency using a Nikon FM with a 24mm f/2.8 lens. Jury comment: "Surreal . . . unusual use of a much photographed subject . . . a part stands very successfully for the whole. Wind-blown figures show how large it is."



Award of Merit: Temple roof, Kyoto, Japan, by Vicki Mollenkopf Madara, an intern, Cambridge, Mass. An Ektachrome transparency taken with a Nikon equipped with a 75-150mm zoom lens. Jury comment: "Restrained use of color... has a dancing quality."



Award of Merit: Movie theater, Peru, Ill., by Mark D. Miller, New Orleans intern. A print made from a Kodachrome 64 slide using a 200mm lens. Jury comment: "Subtle color . . . artful composition."



Award of Merit: Building in Freeport, Ill., and the photographer's father's face, by Christopher Fye, a student at the University of Illinois. Plus-X, 35mm using a Pentax with 55mm and 35mm lenses. Said the jury: "Well executed trickery . . . shows an eye for building expression."




**Honor Award:** Oasis Diner, Boulder, Colo., by Richard A. Needler, Denver intern. A Kodachrome 64, 35mm slide using a Nikormat with a 50mm lens. Jurors said: "Sexy . . . photograph is much attuned to the subject . . . vernacular architecture photographed with whole-hearted pleasure rather than with ironic detachment . . . does not condescend, and I can respect both picture and subject."



Award of Merit: A partment building, Broadway and 63rd St., Manhattan, by Martin Rich, AIA, of New York City. A print made from a Kodachrome 64 original. Jury comment: "Captures construction process at the time when it is most interesting, both in the time of day and at the point in construction . . . makes something exceptional of something ordinary."



Award of Merit: Golden Gate Bridge by Russ Ver Ploeg, a student at Iowa State University. A 35mm slide using an Olympus OMI and a 50mm lens. Commented the jury: "Nice spooky quality, out of 'Star Wars'... Could be trite but isn't."

Award of Merit: River houses, Kashmir, India, by Jerry Rubin, intern, Shorewood, Wis. Tri-X, 35mm using a Pentax with a 50mm lens. Jury comment: "There is much going on in the composition, but no action in the frame ... a sense of apprehension."





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**Honor Award:** San Francisco el Alto, Guatemala, by R. Z. Fay, a student at the University of Oregon. Said the jury: "The foreground figure's cowboy hat is in intriguing contradiction to the building's moderne style and his placement and lighting give precision to the picture . . . tremendous moods and colors."



Award of Merit: Barn near Princeton, Ill., by Mark D. Miller, New Orleans intern. A print made from a Kodachrome 64 transparency using a 35mm lens. Said the jurors: "Painterly, looks like a Wyeth . . . wonderful light . . . evocative."

Award of Merit: Bas-relief on small garage, Champaign, Ill., by Lar Davis, Peoria, Ill. Plus-X, Canon PX with a 50mm lens. Said the jurors: "Makes you want to see the building . . . a carefully framed subject."





Award of Merit: Streetscape, lower Manhattan, by Martin Rich, AIA, New York City. A print made from a Kodachrome 64 original. Jury comment: "The flatness is appropriate and the black areas come together so you can't distinguish planes."



Award of Merit: Chapel, Couvent de la Sainte-Mariede-la-Tourette, Eveux, Lyon, France, by Jack D. Wilkins, AIA, Kearney, Neb. A print from a Kodachrome 64 slide made with a Nikon equipped with a 50mm lens. Jury comment: "Mysterious, like a Miró abstraction . . . captures Le Corbusier's approach to shape, light and color."



Award of Merit: Roof composition, Martha's Vineyard, Mass., by Ralph Mechur, Santa Monica, Calif. A Kodachrome 35mm transparency using a Minolta SRT102 and a telephoto lens. Jury comment: "One sees colors and shapes first, then discovers the subject. It could have been corny, but isn't."

**Award of Merit:** *Q* Street Bridge, Washington, D.C., by Marvin P. Mitchell, Washington intern. Panatomic-X, 35mm. Jury comment: "The grayness and sobriety are in keeping with the faces . . . dour, suggesting a somber ritual . . . archway provides movement."



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Award of Merit: Frederick W. Muller house, Arlington Heights, Ill., by Michael A. Dixon, AIA, St. Charles, Ill. A view camera using 4x5 Tri-X sheet film, f/45, 2,000 watts of artificial light. Jury comment: "Documentation, plus . . . a wonderful abstraction, as good upside down or sideways . . . almost every surface is textured."





**Honor Award:** Veranda, Block Island, Newport, R.I., by Richard Bergmann, AIA, New Canaan, Conn. A Kodachrome 64, 35mm slide using a Nikon equipped with a 35mm lens set at f/11. Said one juror: "I like the way this photograph uses a shadow to tell about the fretwork overhead and a glimpse of the sea to tell me (roughly) where the building is."



Award of Merit: Painted and unpainted strips over a tar-papered shed, Lake George, N.Y., by Kassel Slo-



Award of Merit: Federal Hall and George Washington statue, New York City, by G. E. Kidder Smith, FAIA, New York City. Tri-X, 4x5 Swiss Sinar, 180mm Symmar lens at f/11. Jury comment: "A nonsymmetrical photograph of a symmetrical subject.... The figures look almost choreographed.... shadows well used."

Award of Merit: Sidewalk outside an old cemetery in Savannah, Ga., by William Hooper, AIA, of Washington, D.C. A 35mm slide taken on Kodachrome 64 with a Minolta XDII, 55mm lens, f/8. Said the jury: "An appreciative, loving interest in the subject . . . shows delight in discovery "





Award of Merit: Roof with light, Miami, by Charles Richard Corda, AIA, Miami. A print made from a Kodachrome 64 35mm transparency using a Nikon with a 135mm lens at f/2.8. Jury comment: "Soothing composition, with a calmness heightened by the restrained use of color."



Award of Merit: Mill, St. Mary's County, Md., by Don W. Savage, Silver Spring, Md. A Kodachrome 64 transparency using a Nikon F2 with a 24mm lens, f/8, 120th of a second. Said the jurors: "Wonderful colors and textures...a picture discovered in its planes."



Award of Merit: Entrance, Piazza d'Espana, Rome, by Russell J. Angelo, Chicago. An Ektachrome 200 slide with a 35mm Ricoh and a 35mm lens. Jury comment: "An irresistible subject, well composed."



Award of Merit: Detail of the Golden Gate Bridge by John W. Moore Jr., San Francisco intern. A Kodachrome 64, 35mm transparency with a Minolta XDII using a 70-200mm zoom lens. Said the jury: "The bolts almost seem to be in motion . . . a small scale demonstration of engineering discipline."



**Award of Merit:** Sculpture detail, San Jose y San Miguel de Aguayo Mission, San Antonio, Tex., by G. E. Kidder Smith, FAIA, New York City. Tri-X, 4x5 Swiss Sinar, 180mm Symmar lens at f/11. Said one juror: "As good a picture of a detail as you could imagine."





Below, one of Marcel Breuer's earliest American commissions, the 1940 Chamberlain cottage in Weyland, Mass., as seen in one of Ezra Stoller's earliest professional photographs. Left, Miami through the eyes of Hollywood: photographer Tim Street-Porter's view of the Spear residence designed recently by the Miami firm Arquitectonica.



### The Pros' Turn

An issue concentrating on photographs by architects needs to avoid any implication that the editors consider architects to be competent substitutes for professional photographers. To remind us of our amateur status, therefore, here is a small portfolio of work by the pros. Planning ahead, we have saved for similar future issues a large number of photographers whose work we admire and frequently use, asking only seven geographically scattered ones to participate in this first photography issue. Not presuming to judge the experts, we have asked the seven to choose one favorite photo each. We expected a consistency of technical quality, of course, but the character of the seven particular photographs chosen for us—some valuable historical records of specific buildings, others highly subjective in content —gives to the portfolio, we think, an unexpected variety. *S.A.* 



Saarinen's St. Louis arch has been the subject of many photographs (including one by architectural intern Don Wong, one of our amateur honor award winners), but few photographers have had the nerve to cut off its top. The view above, with the 1851 Old Courthouse before it, is by San Francisco photographer Joshua Freiwald. Top right, Manhattan's past recalled by our juror Cervin Robinson in a 1965 photograph: in the background, the 1914 Municipal Building by McKim, Mead & White and, at center, one of the first commercial structures to have elevators, Richard Morris Hunt's 1873 Tribune tower, demolished in the late '60s; at right, R. H. Robertson's 1896 American Tract Society building. Lower right, Julius Shulman's recent photograph of the Rufino Tamayo museum, Mexico City, by architects Abraham Zabludovsky and Teodoro Gonzales de Leon.







The photograph by Bill Hedrich of Hedrich-Blessing, above, is of the main lobby of the Los Angeles Biltmore Hotel as restored in 1977 by Phyllis Lambert and Gene Summers. The original 1923 design is by Schultze & Weaver. Right, a church in northern Vermont photographed by Steve Rosenthal.



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## BOOKS

### A Key to Understanding Le Corbusier

The first volume of his sketchbooks, covering 1914-1948, reviewed by Josep Lluis Sert, FAIA

These sketchbooks are documents of primary importance to the understanding of Le Corbusier as a person, of his thinking and approach to his work. One also becomes aware of the development of his mind as years go by. His theories on life in general and ways of living in particular; his transcriptions of the visual world around him, his interest and alertness to form and texture, colors, scale and light are ever-present in his sketches.

He reacts to things he sees following a selective process related to his preferences and theories. He is as much a painter as he is an architect, although few architects are aware of the importance Le Corbusier attached to his painting, to which he dedicated every morning of his life. A great many of his admirers do not realize how closely his pictorial work relates to his buildings.

This becomes evident in the sketchbooks. When closely examined, one can follow the reactions of the man to the visual world around him: objects, furnishings, people in general, women in particular, plants and animal forms. He builds his own universe of preferences, his cosmos. "Everywhere objects like these are spread before us. If you have pencils in your hand, look at them and you will understand; you will then have a store of inspiration to draw upon, the lessons taught by natural phenomena. The chance occurrence too: the broken shell, the shoulder of beef sliced by the butcher's saw, have riches to offer which the mind cannot conceive. Drawing, observing, discovering, inventing, creating." (Creation is a Patient Search, page 209.)

Further examination makes one aware of the things that most moved him, what caught his attention; as well as positive or negative reactions to forms he happened to see and tried to understand in



his daily displacements or his travels to distant lands.

The sketchbooks take note of the ordinary, the particular or exotic he found worth recording, storing these materials as "aide memoirs" that would help in the development of his work—pictorial, architectural or literary. Some sketches are taken from planes, boats, trains or cars. They range in scale from vast areas of land emphasizing the great lines defining the structure of the natural or manmade landscapes to minor objects such as parts of plants or shells. Color accents are important and occur frequently. They

From Le Corbusier Sketchbooks, Volume I, 1914-1948 (MIT Press, \$125) are an untitled drawing from the 1914 book, above, and, right, another untitled drawing apparently made during the 1933 CIAM conference in Athens, Greece.





'Nimba, maternity idol, Lower Guinea,' above, is from the 1914 sketchbook. Below, 'Jacopo Figman' from a 1929 sketchbook compiled by Le Corbusier during a trip to South America. are often further documented in writing when he does not dispose of the proper crayons for those colors he would like to transcribe and remember more faithfully.

During our lifelong years of friendship, while working in his atelier at 35 rue de Sevres, during our long talks at the CIAM meetings, his weekends in my house on Long Island, and especially in our joint travels and work in South America—I saw how frequently he referred to his sketchbooks to refresh his memory on matters that were activated as new work developed, adding new pages.

When he was faced with starting a new project, he did not stand in front of a blank sheet on the drafting board with a blank mind—he immediately visualized on it the possibility of applying his notes or sketches and bringing the paper to life. He came to the office prepared for action: Preliminary sketches changed in quick succession, one replacing the previous one. He pursued the goals he wanted to accomplish in buildings or paintings with great tenacity, goals that had often been in the back of his mind for months or years. His preferences are related to his values. He was a man of simple needs, revolted by all things that were just pretentious and expensive. He liked to live with ordinary objects and furnishings around him. From his early training with L'Eplattenier he kept a lifelong liking for handmade objects and crafts; he often talked of the direct link between mind and hand.

He admired machines and what they could do to make life more livable, and found in them sources for new ideas. But machines as shapes in themselves had a limited role in his paintings.

In his purist period paintings of the 1920s, bottles, glasses, pipes, musical instruments had the more important roles, as they did in the best cubist still-lifes, but they were transformed by a new spirit.

Le Corbusier's first painting, "The Chimney Piece," 1918, shows books and shelves in contrast with a pure white, three-dimensional, geometric straightlined volume in a way that no cubist painter would have done. The architect was already there.

As time goes by it is also easy to de-







tect his pleasure in contrasting free forms with precise geometric elementary ones (following Cezanne's observations). His buildings contrast with his "jardins a l'Anglaise." Curved walls and curved volumes are combined with flat ones. In a minor scale, a freestanding curved wall would follow the shape of the bathtub or bidet it screens.

Many of the pages in these sketchbooks were merely reference material, intimate and private, never intended for publica-

The 1918-1919 sketchbook, top, 'reveals the dual roles of painter and architect.' The 'rabbit warren and chicken coop etc.' was inspired by Jeanneret's idea of exploiting the Domino patent, above. tion. It was only in the last years of his life, with the organization of his "fondation" in mind, that he must have realized their potential value for people, especially young people ("les jeunes," as he called them) who could better understand his goals, his philosophy of life and what he considered basic values through these documents.

In the many times he talked to me of his legacy to the foundation he planned, he repeatedly mentioned his hopes that new generations of architects and planners could undertake research there; and his wish was to open to them whatever he had learned in the course of his life. Not for them to repeat his experiences and emulate his work, but to help discover a

new way of seeing things, to open to them new windows to a better, more human and happier world.

This first volume of the *Le Corbusier Sketchbooks* (there will be a total of six) deserves careful examination. It displays the originals page by page. Reproduced are all drawings and texts, which have been carefully translated by scholars who happened to be very familiar with the man and his work.

If this first volume previews the remaining ones, then the complete series of sketchbooks will be a source of reference indispensable to those who want to fully understand the roots and sources of Le Corbusier's ideas. In them one will find the deep significance of his creative genius and evidence of his high standing and uniqueness in the modern art world, especially in the fields of architecture and urban design.

The book contains a brief preface by Andre Wogenscky, his close assistant during his later years and now director of the Fondation Le Corbusier, and a documented introduction on the sketchbooks by Maurice Besset, who has been supervising the classification and cataloging of all the work donated by Le Corbusier to his foundation.

> Books continued on page 71 AIA JOURNAL/SEPTEMBER 1981 69







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#### Books from page 69

Metric Architectural Drawing: A Manual for Designers and Draftsmen. Bernard Lyon Frishman, Lionel Loshak and Charles S. Strelka. (Wiley, \$30.) Metric Architectural Construction Drafting and Design Fundamentals. William J. Horning. (Prentice-Hall, \$16.95.)

These books are among the recent publications directed to metric conversion of the U.S. construction industry. Whether conversion occurs nationally on a single date or on a more gradual schedule, *Metric Architectural Drawing* will help the architect be prepared to produce SI metric drawings. Plan, elevation and detail drawings are easily mastered, but engineering data are more of a challenge.

The authors of this book have prepared an excellent series of chapters pointing out pitfalls, recommendations and conversion data derived from the Canadian experience. Probably panel products are the single most critical material for a smooth conversion. The differences between a 4x8-foot sheet of plywood and one 1,200x2,400 millimeters can make subtle but profound changes in housing and room sizes. The familiar 2x4-foot ceiling grid with lay-in fixtures requires metric fluorescent lamps if revised to a 600x1,200-millimeter grid. Such lamps are now available.

The bulk of Metric Architectural Drawing is sample drawings in SI metric. Taken from nine actual projects by Canadian architects, the buildings are a singlefamily house, a garage addition, a restaurant remodeling, town houses, a vocational school, a warehouse, a firehouse, a car dealership and a small research facility. This variety provides many details for study in a total of 89 pages of drawings. Variance from recommended dismensioning standards are attributed by the authors to Canada's early transition period, from which the examples are taken. The concepts of hard conversion and dimensional coordination are not clearly reflected in the Canadian work for reasons described by the authors in early chapters.

One small problem concerns the spelling of "metre" and "litre." U.S. practice has tended to support "meter" and "liter." Perhaps conversion will allow us to adopt the international spelling.

Certainly, the U.S. has the opportunity to plan a conversion process by taking advantage of the experiences of other countries. However, the conventions of SI metric have limitations of their own, such as the difficulty in dividing a meter by three.

Metric Architectural Drawing is an excellent and easy entry into the SI metric world. It is not too early for architects to become aware of the conversion issues through timely books such as this one. *continued on page 73* 



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Metric Architectural Construction Drafting and Design Fundamentals is a textbook to be used by a beginning draftsperson. The examples used are small scale residential and commercial buildings. Chapters are devoted to the consideration of site work, heating, plumbing, electrical work, sheet metal and recreation facilities. There are also the expected architectural drawings.

No references are made to sources for metric data other than those given in the book. Considerations of dimensional coordination are generally ignored. Implied is the availability of metric sized building products in the U.S. Panel materials, such as plywood or gypsum board, are shown at 1,200x2,400 millimeters, although some manufacturers of these products do not think that these sizes will be produced. The metric sizes can be cut down from the normal 4x8-foot sheets.

The use of metric dimensions for site drawings will require real estate and zoning acceptance. Most codes and standards and local ordinances do not accommodate metric dimensions. In anticipation of the day when the U.S. construction industry joins the metric world, this book is a useful introduction to metric drawing. Robert T. Packard, AIA, Administrator, Practice Department, AIA Headquarters

The Life and Work of John Nash, Architect. Sir John Summerson. (MIT Press, \$35.)

Architect John Nash (1752-1835) left Britain a splendid legacy-but also plenty of enemies. His story is expertly related by Sir John Summerson who has favored us with a new book to supersede his earlier one published in 1935.

Nash came from an obscure background, believed to be Welsh, and took an apprenticeship with the competent architect Robert Taylor in Spring Gardens, Westminster. Little is known about his first 40 years except that he went through bankruptcy after an unsuccessful London building venture and an attempt at divorce under scandalous circumstances. Nash seems to have deliberately covered his trail in that period, mystifying modern investigators, even including Sir John.

Nash's successful career began in Wales in the early 1790s as the architect of two jails. From there he advanced to country houses and for several years he worked closely with Humphrey Repton, "the leading professor of the landscape art," in the stylish picturesque mode. By this time, he had become unusually interested in the architectural possibilities of cast iron, designing a large footbridge at Stanford, Worcestershire (1795), which soon fell down, and a cove-lighted art continued on page 75





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**Books** from page 73 gallery framed in iron at Attingham Park (1806), which still exists.

To most of us, Nash's greatest contribution was working out the transformation of Marylebone Park (originally a preserve hunted over by Henry VIII) into Regent's Park, along with the great thoroughfare (Regent Street) connecting all the way down to Charing Cross. Summerson narrates the development of this great project, which Nash began to study in 1811 "as a masterpiece of insight and common sense." It is examined here thoroughly from a highly informed historical background: all aspects of financing, traffic circulation, politics, public health and esthetic character. In a way all this seems a prelude to the famous work of the Baron Haussmann who chopped his boulevards through Paris a generation later. Of Regent Street the author remarks that "it was business but also a sort of art."

While that great London project was underway, Nash became closely involved with the architectural enthusiasms of the Prince Regent, later George IV. Nash's best known works of that period were Carleton House (now gone) and the Royal Pavilion, the ultra exotic Oriental vision not far from the Brighton waterfront that fortunately survives and is currently being refurbished.

As an intimate of George IV, Nash was led into sudden and unpredictable changes and enlargements in Buckingham House (purchased in 1762), which was to develop from a pied-a-terre to the royal palace we see today. While no fraud was ever proved, the construction costs mounted along with the hostility of Parliament and—not the least—of the Duke of Wellington as prime minister. On the death of the king, Nash was sacked and spent the rest of his life in comparative obscurity. Historians ever since have fed on the calumny of the times, but Sir John *continued on page 77* 



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A prominent feature of the building is a center section that gets progressively larger on the higher floors. This section contains executive offices and board room and space for elevators and stairwells.

Besides its obvious contribution to energy conservation by moderating the effects of outside temperature variations, reinforced concrete also was chosen for its built-in fire resistance. Concrete also is monolithic and less susceptible to below-grade expansions and contraction. Finally, the economy possible with Grade 60 reinforcing steel contributed to the success of the project.

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THE ANSWER'S IN REINFORCED CONCRETE.

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now helps to return Nash to the high place he seems to deserve.

Right up through his palace campaign, Nash continued to innovate. The experiments in patent composition roofing failed but his "extensive and very peculiar use of iron" stood up under attack. The iron had been tested by weighing for tensile strength and by hammering for brittleness. The work survived an investigative committee of well known engineers convened for the purpose in 1831, when it was revealed that structural theory was still in a very primitive stage. In any case, Nash comes through as a pioneer in the evolution of techniques that have been in continuous evolution right up until now.

Let the buyer of this book be warned: It is more than a reference work by a noted authority to be shelved and forgotten. Such is Sir John's amiable style that the reader will probably read the book right through to the end, enjoying the well selected illustrations along the way. *Charles E. Peterson, FAIA* 

**Post-Modern Classicism: The New Synthesis.** Edited by Charles Jencks. (London: Architectural Design Profile; Academy Editions. Rizzoli, \$19.95.)

Charles Jencks, the architect and writer, is to collage architecture, better known as "postmodernism," what Siegfried Giedion, the art historian, was to modern architecture, also known as the "International Style." Jencks is prophet, interpreter, historian, propagandist and impresario all at once. Like P.T. Barnum, who assembled and parlayed such divergent attractions as the Fiji Mermaid and Jenny Lind into "the greatest show on earth," both Jencks and Giedion assemble and parlay the work of various architects into the one and only Valid Architectural Expression of Our Time. The important difference is that for all his excessive enthusiasm, Giedion was a true scholar and that modern architecture remains a great show that is far from over. Jencks' scholarship manifests itself mainly by the heap of names that covers the floor under his tenuous theoretic constructions. And postmodernism is as yet only a side show attracting mainly young architecture students and editors of chic magazines. Those of us who are busy in the world we really live in consider it mostly archimalarkey.

Jencks now asserts in this book that postmodernism as invented by Robert Stern on Venturian foundations and practiced by Charles Moore with gusto and Michael Graves with polychrome clumsiness is now in the throes of a classic revival. That, of course, is classic *chutz-pah*. In a previous book, Jencks told us that the collages, which were promptly adver*continued on page 79* 





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tised as postmodern, became the one and only Valid Architectural Expression around 1976. So if the style is being revised, classically or otherwise, at the age of five, it must have died awfully young, poor thing. What happened?

But wait. Jencks' writing style can at times be as grimly complex and contradictory as a James Stirling isometric. It is therefore possible that he means that postmodernism is reviving classicism. He says that "nearly every major Post-Modern architect has adopted parts of a classical vocabulary . . ." although he concedes that the vocabulary is used " 'Free Style' —not scholarly, correct or even, in some cases well-proportioned."

Some postmodernists, Jencks says, use classic orders, quoins and architraves with "calculated naivety" and "knowing ugliness." He approvingly notes some "pop art" distortions of classic elements and admits that some of the pop (notably Stern's design for a Best Products facade in the Museum of Modern Art show) are not even meant to be architecture. They are social satire.

Jencks' "re-semanticisation"—that's what he calls it, so help me—is presented with much the same murky and arrogant pretentiousness that characterizes the work of the "hardcore Post-Modernists" (Jencks' words and capitals). Like them, he uses the words "distortion" and "ambiguity" as something to be proud of.

Like other hard-core visuals, calculated, naive, knowingly ugly, distorted ambiguity may give pimply lads titillating shock. It may even help shake complacency, as dada helped abstract art and as the dictum "ornament is crime" helped architecture out of eclectic entanglement.

But whatever the import of making collages out of disparate architectural elements and ornament may prove to be, classic it is not. It has nothing to do with the emphasis on reason, clarity, proportion and restrained emotion that has characterized classicism since antiquity.

Much as many postmodern architectural designs are not really buildings, Post-Modern Classicism is not really a book. Printed in the format of a magazine, it presents a collection of more than 40 architectural designs by 25 architects, some built, some about to be built and some never meant to be built. The projects are shown in a confusion of pictures and drawings that are captioned only with small numerals keyed to explanations that are often carefully hidden on either preceding or succeeding pages. This is irritating, but does not much matter since virtually all of the designs have been published before, most of them by Jencks himself. The hard-core postmodern "classicists" include Charles Moore, Robert continued on page 81



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Stern, Hans Hollein, James Stirling, Arata Isozaki, Toyokazu Watanabe, Charles Jencks and Michael Graves.

The danger of such explicit material is that it may fall into the hands of the innocent young. A recent experience: I am helping a group of volunteer citizens build homes where handicapped people can live on their own. The city gave us a vacant Victorian school for the purpose. Our architect listened patiently to all the special requirements of severely disabled persons. Then, as busy architects are apt to do, he turned the problem over to a young man just out of architectural school.

The kid had paid attention in school. We wanted to know in a hurry how much this gift from the city was going to cost; was the idea feasible? The kid treated us to a lecture on the new vocabulary of shared metaphysics and cosmic symbolism and showed us his pastel colored drawings of the neo-neo Romanesque tower that he wanted to add on to the neo-neo Venetian Gothic school. It had odd fenestration. He said we also needed some false fronts to make a statement about historic continuity and relate our building to the town houses down the block.

He did not say—in fact he did not know—how we could get a wheelchair into this archimalarkey. *Wolf Von Eckardt, Hon. AIA, Washington, D.C.* 

Idea as Model. Introduction by Richard Pommer. (Institute for Architecture and Urban Studies and Rizzoli International Publications, Inc., \$17.50.)

Edited by Kenneth Frampton and Silvia Kolbowski, this book is the catalog of a 1976 exhibition mounted by the Institute for Architecture and Urban Studies, New York City, that contains as well new architectural models made by the same participants in the four-year period succeeding the initial exhibition. The exhibition's purpose, says Peter Eisenman in the preface, was, among other things, to demonstrate that "models, like architectural drawings, could well have an artistic existence of their own, one which was relatively independent of the project that they represented." He continues, saying that the exhibition was to show that many architects use models to document their design approaches and it was hoped that other architects would be encouraged "to adopt the idea of a model as a conceptual tool, as opposed to a narrative tool, as part of their design process."

Richard Pommer's introductory essay also points out that the purpose of the exhibition was to investigate architecture in a three-dimensional form, contending that models can provide "an illusion of *continued on page 83* 



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#### GRADUATE SCHOOL OF DESIGN, HARVARD UNIVERSITY FACULTY POSITIONS AVAILABLE

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APPOINTMENT CRITERIA: Preference will be given to candidates with advanced scholastic preparation as well as experience in teaching, research or practice in areas of teaching specialty. Performance is evaluated in teaching and creative work in research or design; creative work should demonstrate a coherent development of theoretical issues in the areas of teaching specialty. Academic administration and scholarship are also obligations in all academic ladder positions.

APPLICATION: Applications will only be accepted on the form available from the Graduate School of Design Appointments Committee, attn. Lynn Tronti, Gund Hall, Harvard University, Cambridge, MA 02138, USA. Applicants should not send dossiers. Applications should be received before December 1, 1981.

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reality, without being compromised by it. The value placed on reality and the conceptions of it, not the medium of representation, are the essential matter."

The models portrayed are intriguing. Among them are Eisenman's House II transformations, Michael Graves' Wageman house and Crooks house, John Hejduk's Bye house, Robert A.M. Stern's entry for the 1980 new *Chicago Tribune* tower competition and Charles Moore's Bunker Hill pavilion. All interesting, but the printed page loses the three-dimensional forms.

Man Ray: The Photographic Image.

Edited by Janus. (Barron's, \$19.95.) Almost as often emulated by architects as the look of Le Corbusier's buildings is the look of Le Corbusier himself. The bow tie and the circular eyeglass lenses are our official uniform, making it a cinch to spot each other at restaurants and airports. The look, as photographed by Man Ray, is in this book, with those very serious eyes behind the lenses (not so easy to imitate that!), and, as the editor tells us gratuitously, "It is an architectural face."

Here too are Georges Braque, Nancy Cunard, Erik Satie, Gertrude Stein (twice) and Kiki of Montparnasse (nude). Anonymously, there are "The Dancer," "Face Seen through Glass" and "Head Found under the Bed." Most intriguing of all, there are examples of the abstract photographs Man Ray pioneered, many of them titled "Rayograph."

In short, we are shown, in samples from the work of the American Dadaist (who died in Paris in 1976) a demonstration of the capacity of photography to function as art. As Man Ray himself said, "Photography is not limited to the role of copyist. It is a marvelous explorer of those aspects that our retina never records. . . ." It can simultaneously deal with aspects our retina does record, of course, thus—like architecture—serving two masters. The portrait of Le Corbusier is genuinely spiritual, even though a bit chilling; at the same time, it offers a good model to show to our optician.

Hospital Engineering Handbook. Third edition. American Society for Hospital Engineering. (American Hospital Association, \$31.25.)

The third edition of the *Hospital Engineering Handbook* is a total revision of the previous edition, published in 1974. There are new chapters on energy management and codes and standards. The 348-page book also addresses such topics as planned maintenance, purchasing, environmental controls and security and disaster preparedness. Although addressed to the hospital engineer, the book contains much information of concern to hospital designers. □



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As resources for design and objects of design. By Stanley Abercrombie, AIA



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One of a number of German-designed chairs now beginning to be produced and marketed in the U.S. by Vecta Contract is the Binar stacking chair (1) with an impressively comfortable soft brown polypropylene shell on a frame of chromed steel tubing. Legs are on black plastic guides, and a hand-hold is designed into the back of the shell for easy carrying; chairs stack seven high.

Futura (2) is a cotton velvet from Jack Lenor Larsen, suitable for upholstery, wall covering or curtains. It is available with any of three dominant colors: persimmon (shown), lemon peel or black plum.

The tables designed by Paul Haigh for Knoll (3) look impeccably crisp, but have soft plastic corners edged with strips of colored vinyl. Legs and side rails, available in black or clear anodized aluminum, can be combined to form two dozen different table sizes and shapes.

From Hartmut Räder of Bochum, Germany, are fireplace tools of iron (4)—log carriers with leather slings, cooking grills, ash shovels, fire screens and other items.











Angelika von Mutius

5

The Aptus II modular seating system by Jay Heumann for Metropolitan (1) is an updating of the earlier Aptus system. Seating lengths for one to four are suspended between arm units, cube tables, triangular tables and planters. Back and seat covers are removable; support elements come in 18 painted finishes. Part of Haworth's extensive IntraSystem seating program is the System 110 chair (2) for task-intensive office work. It has a polypropylene or upholstered shell in a nylon coated or polished cast aluminum five-star base; unlike larger chairs in the program, it comes only without arms.

Flotation (3) is a lamp of three identical cones of Japanese paper hung on thin wires. Its height is adjusted by moving the red metal ring; ceiling canopy is of white lacquered metal. Designed by Ingo Maurer for Design M of Munich, Flotation is available in diameters of 75, 100 and 120 centimeters. From R-Way is the Oakur wood desk (4) of red oak veneers and solids with hand rubbed oil finish. Also in the Oakur series are credenzas, bookcases and file cabinets. Robert DeFuccio's Stack Back chair for Thonet (5) is of solid and steam-bent elm, its back of butcher-block-like layers of elm. Seats are cane or upholstered. AIA JOURNAL/SEPTEMBER 1981 87

#### Survey Finds Median Salary of \$52,000 for Top A/E Executives

The median base salary for a chief executive in a design, engineering or planning firm is \$52,000, and the median bonus is \$12,000, according to the "Professional Services Management Journal." PMSJ surveyed its subscribers this spring, received 907 responses and published the results in July. Thirty percent of the respondents are in primarily architectural firms; 18 percent are primarily A/E firms, and 48 percent are primarily consulting engineers. Bonuses covered by the survey are for performance or incentives.

The report shows chief executives' salaries to depend on a single variable: total size of staff. The reported median salary ranges from \$35,000 with a bonus of \$6,000 for officers in small firms (one to ten persons) to \$167,000 for firms of more than 2,000 employees. Other findings: For firms of 19-30 employees, chief executives earn a \$50,000 median salary/ \$10,000 bonus; for firms of 55-89 employees, \$60,000 salary/\$19,000 bonus, and for firms of more than 350 employees, \$109,000 salary/\$36,000 bonus. Salary data are compared for various sections of the U.S. and Canada. Executives in the West are paid the highest median salaries/bonuses (\$58,000/\$14,000), according to the survey, while those in Canada are paid the lowest (\$41,500/ \$12,500). For other regions, the median salaries/bonuses are: Northeast, \$55,000/ \$14,000; Southwest, \$53,000/\$12,000; South, \$52,000/\$12,000, and Midwest, \$50,000/\$13,000.

The complete four-page survey is available for \$10 from PSMJ, P.O. Box 11316, Newington, Conn. 06111.

#### JOURNAL Article by James Fitch Cited by Architectural Critics

International Committee of Architectural Critics (CICA) prizes for articles on architecture have been awarded to James Marston Fitch for a contribution to the AIA JOURNAL and to Kenneth Frampton for an article in L'Architecture d'Aujourd'hui.

Fitch's work appeared in the JOURNAL's 1970s retrospective issue, published in January 1980. In that article, he compared postmodernist architects to "those merry, mad and murderous children who, in Richard Hughes' *High Wind in Ja*- maica, took control of a ship at sea and forced the adults to walk the plank."

Other writings honored by CICA were Manfredo Nicoletti's book, L'Architettura delle caverne, published by Editorial Laterza of Bari, Italy, and Authur Drexler's introduction to the "Transformations" exhibit held in 1979 by the Museum of Modern Art. A special international mention was given to Macmillan Reference Books, London, for Contemporary Architects.

The 1981 CICA awards were announced during the closing ceremonies of the 14th International Architectural Congress in Warsaw.

The awards jurors were Bruno Zevi of Italy, George Collins of the U.S.A., Dennis Sharp of Great Britain, Michele Champenois of France and Jorge Glusberg of Argentina.

#### Solar Education Directory

The third edition of the National Solar Energy Education Directory, published by the Solar Energy Research Institute, is available for \$7 from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (stock number 061-000-00534-7). Listed are courses, programs and curricula. □

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#### DEATHS

**Peter Collins:** In 1968, Mr. Collins took a sabbatical year of leave from McGill University, where he was professor of architecture, to begin the study of law. The year he received his law degree, 1971, his last book, *Architectural Judgement*, was published. It was a comparative study in decision making in architecture and law. His other books were *Concrete*, the Vision of a New Architecture (1959) and *Changing Ideals in Modern Architecture* (1965).

Mr. Collins, who died in Montreal June 7, was a native of Leeds, England, who became a Canadian citizen in 1962. During his 25 years at McGill, he also lectured at Smith College, Cambridge University and the University of California at Berkeley. He was editor of the *Journal of Architectural Historians* in 1967-68 and through the years contributed about a hundred essays and reviews to architectural periodicals in North America and England, including "Thoughts About Architectural Education" (AIA JOURNAL, Oct. '79). He received AIA's architecture critics' citation in 1972.

Perry B. Johanson, FAIA: In 1943, Mr. Johanson was a founding partner in Naramore, Bain, Brady & Johanson, a leading Seattle firm responsible for the Kingdome, office buildings and numerous medical facilities in the area. A former president of the Seattle Chapter/AIA, his community service included the chairmanships of the King County Planning Commission and of the design and advisory board for the 1962 Seattle World's Fair. Mr. Johanson died June 15 of a heart attack at the age of 71.

S. Harman Brown, Bethlehem, Pa. Louis C. Holloway Jr., Neptune Beach, Fla.

Roger Yuen Lee, FAIA, Honolulu John C. Merrill, Hamden, Conn. J. Earle Neff, Port Arthur, Tex. Oliver W. Phipps, San Diego Albert F. Roller, San Francisco Virgil L. Smith Jr., Birmingham, Ala. Robert C. Tripp, Essex, Conn. Gene C. Wilkes, Garden City, S.C.

#### BRIEFS

The 1981 National Directory of Landscape Architecture Firms is available free from the American Society of Landscape Architects, 1900 M St. N.W., Suite 320-PR, Washington, D.C. 20036.

The changing taste of Midwestern interior design will be traced through the career of Milwaukee interior designer George M. Niedecken, best known for his association with Frank Lloyd Wright, in an exhibit Nov. 20-Jan. 17 at the Milwaukee Art Museum. The retrospective will focus on Niedecken's career during 1897-1927.

H. H. Richardson's Allegheny County Courthouse and Jail in Pittsburgh is the subject of an exhibit of photographs, records and documents on display in the courthouse from Sept. 15-Nov. 1. On Oct. 17, the county will sponsor a public symposium in the courthouse on topics to include preservation, architectural photography and Richardson's architectural solution for the courthouse. Contact: Carol R. Brown, 1208 Allegheny Building, 428 Forbes Ave., Pittsburgh, Pa. 15219.

A & E Job Line is a monthly bulletin of senior level professional positions available with architectural and engineering firms. The bulletin is free to job hunters; employers who wish to list open positions pay a one-time annual fee. Contact Daniel N. Kanouse, President, A & E Job Line, P.O. Box 19, Lyndell, Pa. 19354.

#### Papers are sought for a daylighting con-

ference to be held in Philadelphia in May 1982. The conference will address the "often contradictory implications of the use of daylight to satisfy visual performance requirements while addressing energy concerns in a world with limited resources." Papers are to address a number of topics, among them daylight availability, design methods, fenestration controls, design process, architectural implications, annual energy performance. For information contact Mid-Atlantic Solar Energy Association, 2233 Gray's Ferry Ave., Philadelphia, Pa. 19146.

The new executive director of the National Architectural Accrediting Board is John Wilson-Jeronimo, who has resigned as AIA's administrator for member/component affairs.

**"Remember the Main"** is a new 16 millimeter sound film about construction arbitration written and produced by the American Arbitration Association. It describes the practice of arbitration for general audiences and provides instruction on how to conduct a hearing for specialists. Contact: Harriet Markowitz, American Arbitration Association, 140 W. 51st St., New York, N.Y. 10020.

Gerhard Kallmann, FAIA, professor of architecture at Harvard Graduate School of Design since 1967, has been awarded emeritus status and has retired. Kallmann continues his architectural practice with Kallmann, McKinnell & Wood and has accepted teaching appointments at the Massachusetts Institute of Technology and Yale University.

#### PRODUCTS

#### **Drafting Ink.**

Matte black ink, developed for use on polyester drafting film, is designed to reproduce without line variations or hot spots caused by light reflection. It can be used in all technical pens and computer drafting plotters. (Faber-Castell Corporation, Newark, N.J. Circle 191 on information card.)

#### Panels.

Curved glazed panels are designed for open-office systems that require visual access between work areas. Plexiglass panels feature 24-inch radius curves set in aluminum frames. (Panel Concepts, Inc., Santa Ana, Calif. Circle 190 on information card.)

#### Interactive Graphics System.

Sigmagraphics II is designed to assist space planners in producing interior designs. Drawings can be displayed in three dimensions and complete architectural drawings can be displayed for additions to original floor plans. (Sigma Design Inc., Englewood, Colo. Circle 188 on information card.)

#### **Ceiling System.**

Aluminum and steel screen ceiling system, for fixture clutter or irregular ceilings, features custom formed vertical vanes that snap into suspended metal carriers for installation. More than 100 colors, including metallic finishes, and a variety of patterns are available. (Levolor Larentzen, Inc., Lyndhurst, N.J. Circle 187 on information card.)

#### **Tubular Plywood.**

Molded Plytube can be used for concrete forms, in interiors as finished lally columns, as ducts, railings, etc. Although circular in shape, it can be formed in square, oval and rectangular configurations and is available in any thickness from three to 46 plies and up to 84 inches in diameter. (Plytube Corporation, Lawrence, Mass. Circle 186 on information card.)

#### Sun Screens.

Window shadescreens are constructed with aluminum louvers coated with a black finish. Panels can be removed and stored during winter months. (Kaiser Aluminum, Oakland, Calif. Circle 177 on information card.)

#### **Drafting Table.**

Thriftmaster four-post table features raising devices, anodized aluminum end cleats, a heavy-gauge steel base, tool drawer with a lock and a reference drawer. (Stacor Corporation, Newark, N.J. Circle 183 on information card.)

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