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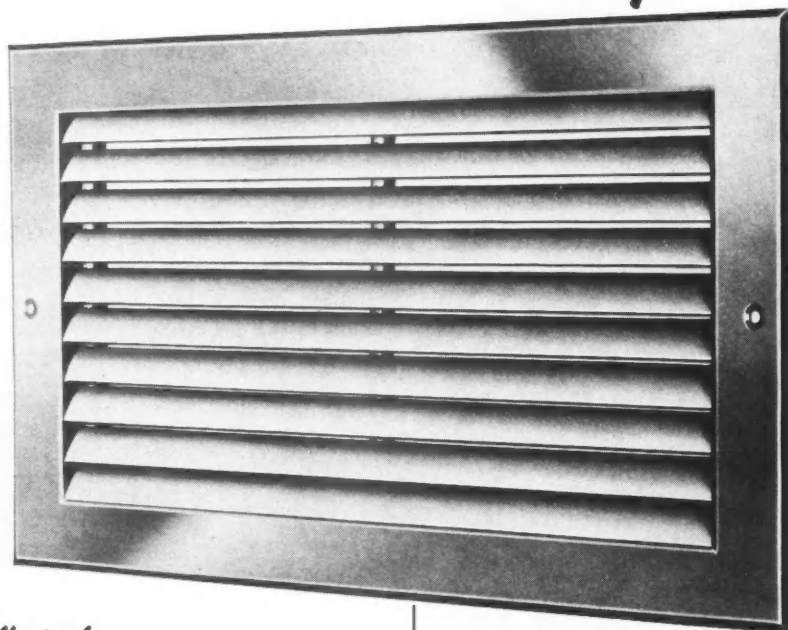


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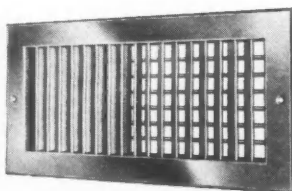
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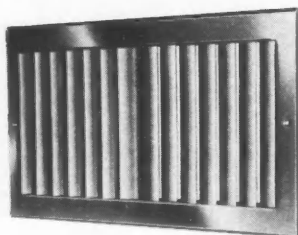
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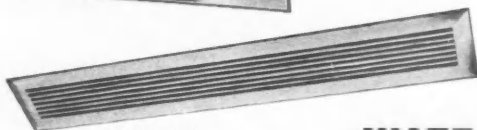
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March, 1960

Volume 3, No. 7

IN THIS ISSUE

COVER Model of proposed fine arts center for Arizona State University, designed by
Frank Lloyd Wright

PRESIDENTS' PAGE Summary of proposed new AIA structure.....	Page 5
PERSPECTIVE The editor eyes the coming convention	Page 7
NCARB HOLDS PHOENIX MEET	Page 8
EDWARD D. STONE FAVORS WRIGHT PLAN By Charles Montooth, AIA.....	Page 11
ADOBE IN ARCHITECTURE By Odd S. Halseth.....	Page 13
CONVENTION AWARDS ANNOUNCED	Page 18
LOOKING AT THE SPECS By Robert W. Myers.....	Page 19
POPULATION GROWTH AND LAND USE Maricopa County and Phoenix	Page 21
CRITIQUE Reaction on school planning editorial	Page 28
CHAPTER NEWS	Page 31
NEW ARIZONA REGISTRANTS	Page 31
BOOKS	Page 32

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ARIZONA STEEL FABRICATORS ASS'N.	6	O'MALLEY'S BUILDING MATERIALS	30
ARIZONA STRUCTURAL CLAY PRODUCTS ASS'N.	20	PALMER INDUSTRIES INC.	12
ARIZONA TESTING LABORATORIES	22	PBSW	16
BLACKMORE SALES COMPANY	23	PIONEER PAINT & VARNISH CO.	14
CARNS-HOAGLUND CO.	2	PIPE TRADES INDUSTRY PROGRAM	17
DEER-WILLIAMS CONSTRUCTION INDUSTRIES, INC.	30	PLAN SERVICE OF ARIZONA CONTRACTORS	18
ENGINEERS TESTING LABORATORIES	29	SA-DEL COMPANY	18
ENTZ-WHITE LUMBER & SUPPLY CO.	28	SOUTHWEST FOREST INDUSTRIES INC.	4
GLADDING McBEAN & CO.	9	SUPERIOR SAND AND GRAVEL	28
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THE PRESIDENTS' PAGE



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Gerald I. Cain



**CENTRAL
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Jimmie R. Nunn



GROWING PAINS are affecting everyone these days. The family outgrows the house they live in. The city is bursting at its boundaries. Our nation will increase 50 million in the next ten years to 225 million people. By the year 2000, a mere forty years away, the nation's population is expected to reach the figure of 350 million.

These same growing pains have been felt by the American Institute of Architects with its membership having more than tripled in the past twenty years.

The rapidly expanding membership in the Institute has caused the Board of Directors to propose "A New Structure for A.I.A." to be introduced at the national convention to be held in San Francisco, April 18 to 22. This proposal, which is aiming for greater efficiency in the Institute's efforts to unify and serve the architectural profession, has come out of fifteen years of study and deliberation.

The proposed organization structure would be as follows:

(1) The Chapter — to remain unchanged except that state chapters and large metropolitan chapters are urged to organize into Divisions.

(2) The State Association — no change except to create State Associations where none exist and to limit membership to A.I.A. members only.

(3) The District Council — this is new. District Councils are to be set up uniformly for all Districts with the membership in the council consisting of the presidents of every Chapter and every State Association within the District. The District Council President is a member of the National Board of Directors and has the title District Vice President. The Council must hold at least one meeting each year.

(4) The National Council — This is also new. A National Council is to be created and is to be the policy-making body of the organization representing all members of the A.I.A. through their elected State Representatives and acting as an advisory body to the Board of Directors. Membership in the National Council consists of an elected representative of each State Association and members of the national Board of Directors. The National Council will hold at least

Because of the importance and timeliness of the subject matter, Central Chapter gladly yields this space to Southern Chapter President Cain's summary of the new structure proposed for The Institute, which will be an issue at the forthcoming San Francisco convention.

one meeting each year about midway between national conventions.

(5) The Board of Directors — Basic changes are that the members be reduced from 18 to 10, number of meetings increased, Executive Committee to be eliminated, and terms of office modified. The Board will consist of the President, First Vice President, Secretary, Treasurer and one District Vice President elected from each District, with six districts being proposed instead of the existing thirteen.

(6) The National Convention — remains unchanged.

The stated reason for this proposed structure change is to prevent the present machinery from becoming bogged down and to gear up the organization for leadership. The criteria is composed of creating full membership participation in shaping A.I.A. policies, acquiring effective control of A.I.A. affairs by the members, establishing an efficient internal communication system, reshaping a more realistic structure, and providing an efficient operation.

I have tried to present here, as briefly as possible, the information contained in the twenty page booklet issued by the Institute, which I am sure many of you have not had time to read.

I am not trying to sell this proposal, but I am taking advantage of this means to relay this information to more of our membership. "No consideration is more important than to give every member the opportunity to fully understand and evaluate this proposal so that we may jointly act on it in the best interest of the Institute and thereby our profession and our society."

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The Editor's PERSPECTIVE

*Perspective is a pleasant thing!
It keeps the windows back of sills
And puts the sky behind the hills.
—Author unknown*

NEXT MONTH, from April 18 to 22, the historic hills of San Francisco will be trampled over by some two thousand architects from all parts of the country. They will be attending the annual convention of The American Institute of Architects, headquartered at the Mark Hopkins Hotel, with panel discussions and business meetings to be held at San Francisco's new Masonic Temple.

Delegates will hear J. Robert Oppenheimer, director of the Princeton Institute of Advanced Studies, and Cyril Northcote Parkinson, historian and author of "Parkinson's Law", among other well-known authorities in science and the humanities.

Under the general theme "Expanding Horizons", the architects will explore the trend of political, economic, technological and philosophical developments so as to help the architectural profession to keep ahead of changes in the human environment.

Oppenheimer's and Parkinson's speeches, and those of philosopher Morton Gabriel White of Harvard and sociologist Wendell Bell at the University of California, will be related to architecture by panels of outstanding architects.

The convention program also features the ceremonial investiture of newly elected Fellows of the AIA and a President's Reception, both at San Francisco's famous City Hall.

Other convention events include a tour through San Francisco's and the Bay area's outstanding houses, and an "open house" party on historic Jackson Square. Convention goers are invited to participate in the host city's annual Black and White Symphony Ball.

One of the most memorable events of the convention, I predict, will be the hospitality evening, when guests will be invited to the residences of San Francisco's architects to enjoy an evening in the intimate atmosphere of their homes. It is fine to visit distant and famous convention centers, but one gets an unbalanced view of these places unless he can sense the home environment that lies beyond the hotels, restaurants and normal tourist attractions.

I am impressed with the magnitude of the plan-

ning that will precede this unusual act of hospitality, and with the spirit that it suggests.

Not that it surprises me, because for five years San Francisco was "home town" for me. In fact, the very thought of returning there has set my mouth watering in prospect of again relishing some of my favorite dishes from "The City's" famed restaurants. And every day I'm going down to Podesta & Baldozzi's flower store and gaze at the artistry of their floral creations.

If the moon is right I'm going to see it from the Top of the Mark, reflected in the waters below the Bay bridge.

There's one sight, though, that I have little hope of ever seeing again except in my mind's eye. Perhaps many have been awed by the same sight, though I've never seen a picture of it, the view having been the result of a rare combination of being at the right place at the right time of a right kind of a day.

Entering San Francisco across the Golden Gate Bridge just as the sun was setting at an unremembered time of year, its brilliant rays were reflected to me from every west window in that fabulous city. Never has there been a golden glitter to equal that sight.

Oh yes, the Convention! The San Francisco Museum of Art will show an extensive exhibition of the work of LeCorbusier. The exhibit was designed and arranged in Switzerland, and from San Francisco it will travel to Tokyo, where it will be shown in LeCorbusier's newly completed Museum of Western Art.

There will be 91 different product exhibits on display at the Masonic Temple, and the convention will present a number of national and international awards.

It should be a great convention. See you there!

Phil Litt

Phoenix Meeting

N.C.A.R.B.

Members of the Board of Directors of the National Council of Architectural Registration Boards met in Phoenix February 11-13. Central Arizona Chapter, AIA, were hosts at a cook-out at South Mountain Park.

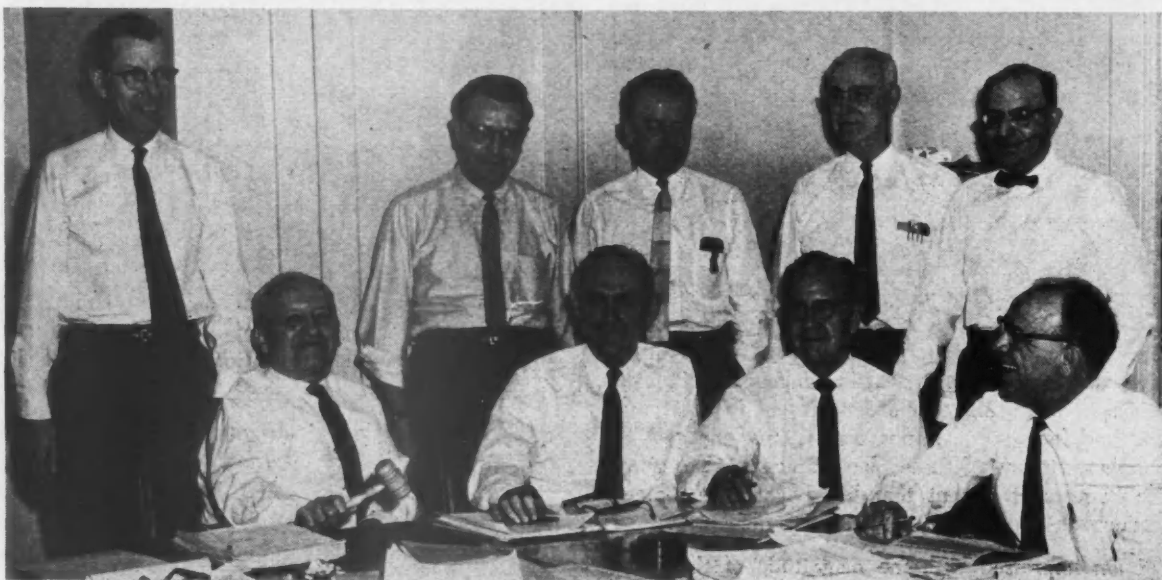


AFTER DINNER REACH — Uncooperative weather brought a chill wind later in evening. Glowing coals felt good.

SIZZLE — (Left) Bob Starkovich broils the rib-eyes as (from left) Mr. and Mrs. Paul Drake, Summit, N. J.; Richard Drover, Phoenix; and A. R. Melander, Duluth, Minn., look on.

BALANCING ACT — (Below from left) Joseph Hughes, Phoenix; C. J. Paderewski, San Diego; Mrs. Hughes and Mrs. Paderewski.

BUSINESS — (Bottom) NCARB officials (standing, l to r) Ralph Mott, Ft Smith, Ark.; James Sadler, Oklahoma City; Paderewski; Chandler Cohagen, Billings, Mont.; Drake. (Seated) Walter Martens, Charleston, W. Va.; Edgar Berners, Green Bay, Wis.; Melander; and John Brenner, Phoenix.



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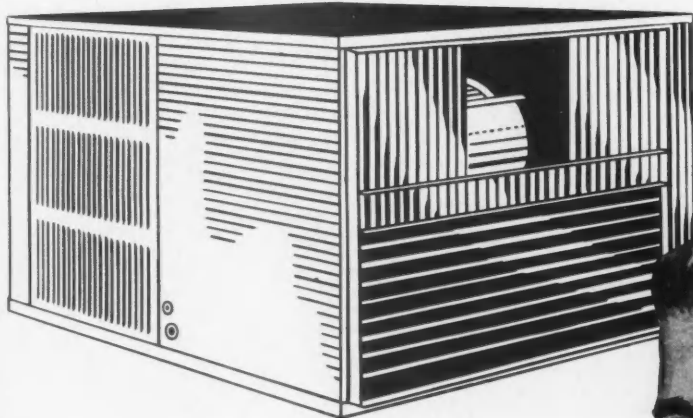
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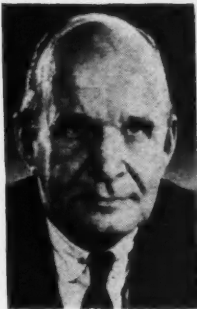
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Edward Stone Interviewed On Wright Art Center

By CHARLES MONOOTH

It was refreshing and inspiring to hear our country's most popular architect speak strongly for greatness in architecture and beauty in American life. Edward D. Stone, FAIA, was the architect. He spoke to the Phoenix Press Club on February 16 about the Fine Arts Center designed by Frank Lloyd Wright for Arizona State University. Complimenting the citizens of Arizona on their vision to desire to build such



Stone

an architectural masterpiece by "the greatest creative talent that our country has produced," he said that we would be setting a trend towards an emphasis upon cultural and artistic values which would be an example to the nation.

Mr. Stone told stories illustrating the success of the Guggenheim Museum which has brought art and great architecture to thousands who otherwise would not know of them. He told about his director friend of the Metropolitan Museum who was delighted over this venerable institution's increase in business resulting from overflow crowds from the Guggenheim.

Suggesting equally beneficial results to come from a Frank Lloyd Wright building here, Mr. Stone compared the future of the Fine Arts Center as a place of pilgrimage with the centers of art in Italy, where the works of Michelangelo and Leonardo have attracted millions over the years.

To Mr. Stone, Frank Lloyd Wright was a personal hero. "Thanks to Mr. Wright, we are developing an indigenous architecture based on his principles. No architect today touches pencil to paper without subconsciously paying tribute to him."

When asked about his own New Delhi Embassy, Mr. Stone told of the purpose behind the design. As he explained the nature of the Embassy's sun-shade roof, he said he was "following Mr. Wright's principles." He also explained the purpose of the pre-cast ornamental concrete grille which has now become his trademark. He attributed its origin to Mr. Wright who, he said, "used it here in Phoenix thirty years ago."

Many questions were asked of Mr. Stone. One, concerning the project under discussion, was the question of cost. Mr. Stone had just come from the groundbreaking ceremonies in Marin County, California, for a government center project, a recent work de-



signed by Mr. Wright which is to be completed under the direction of the Taliesin Associated Architects. Mr. Stone brought out two pertinent facts regarding that project's costs. Mr. Wright's estimate of a \$3,500,000 first stage program was \$160,000 over the contract price, and the square foot cost of Mr. Wright's building was less than the cost of a similar but plainer building just completed by the same county government.

Mr. O. D. Miller, a university regent, asked about the value of the proposed center to future generations. Mr. Stone replied that Mr. Wright had captured the imagination of the youth of today and that his work possessed the quality of timelessness, which would make the proposed center an object of appreciation for generations to come.

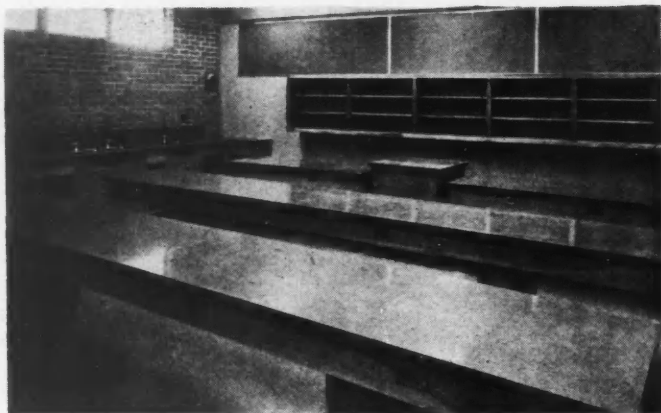
Architect Stone is a quiet-spoken man, with a warm, likeable personality. He charmed his audience with his good humor. When asked if Mr. Wright's auditorium and classroom additions to the university would not make the present campus shabby by comparison, he replied, "I don't object to seeing a beautiful woman among a group of plainer ones." He pursued this point further by explaining how many of the buildings Mr. Wright planned will inspire future architects of campus buildings and how the whole level of subsequent building at the University will be raised as a result of the good example set by the Fine Arts Center.

Mr. Stone was asked how the building could be completed now that the architect was no longer living. He replied that, under the direction of Mrs. Wright, Chief Architect William Wesley Peters and the architects of the Frank Lloyd Wright Foundation (5 registered in Arizona) who worked with Mr. Wright for 25 years, were well qualified to perform the necessary services to complete the work as the architect envisaged it.

Finally, the distinguished speaker talked of the need for beauty in our life. Mr. Stone reminded all of us that such a rich nation as ours could and should afford great art and architecture. In severe tones he lamented the destruction of the natural beauty of our land in the last 100 years. "Look about you," he said, "look about you when you are out driving along our highways or through our city streets. What you will see is ugliness."

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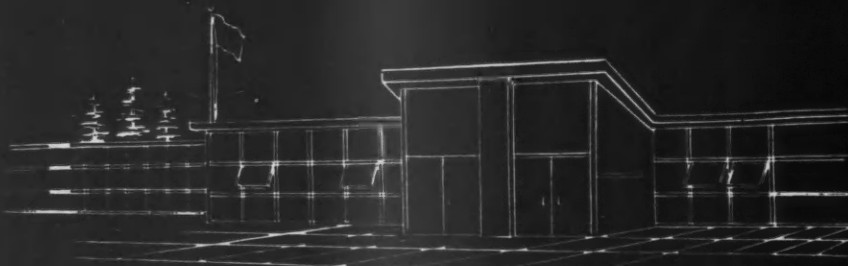
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By ODD S. HALSETH

ADOBE IN ARCHITECTURE

A noted anthropologist describes an indigenous material and the building style it influenced. Mr. Halseth has just retired as City Archeologist of Phoenix.

Adobe, which originally was an Egyptian word for brick and later came into the Spanish language via the Moors and finally into the New World, now is applied to soil, bricks made of mud and straw, plaster of the same materials, as well as to a house of this type of construction. The qualities which make adobe soil practical for building purposes are typical of nearly all arid countries the world over and since much of the early agricultural developments which led to sedentary life occurred in such areas, it is natural that adobe construction is one of the earliest forms of house-building known.

Yet, here in the American Southwest, where it was practiced by the Indians long before the Spanish explorers appeared, its history and proper application to modern living are not always appreciated sufficiently to produce what is considered good architectural treatment.

The Indians, of course, with their primitive technology and peculiar social organization, built only to satisfy the most essential needs. Available adobe soil was puddled into walls and chinked with stone and rocks of various size; vigas, or roof beams, were cut with stone axes and carried by man power from forests, and their social system of clans, fratrics and maternal descent, made the Indians group their dwelling units together in huge blocks of buildings, sometimes several stories high, which have been likened to our modern apartment houses. Doors, windows and other conveniences were almost non-existent, ladders took the place of stairways and fireplaces were open hearths with the smoke escaping through a roof opening. Yet, when the Spaniards arrived they found the Indians experienced builders and ready and willing to accept the new innovations made possible by an advanced technology. Steel axes and horses enhanced the supply of vigas and lumber for doors, windows, lintels, corbels, balconies and other architectural details which not only made living more comfortable, but added touches of beauty to the houses. The long, one-story dwelling became more acceptable and as the mixture of Indian and Spanish efforts produced buildings of various uses, certain

styles developed which we today refer to as Pueblo style, Mission style and, since the recent revival of adobe construction in and around Santa Fe, New Mexico, the Santa Fe style. As a result of this we find today that the millionaire and the poor Indian or Mexican may live in houses which look very much alike and which do not denote their difference in economic status, at least from the exterior.

The Santa Fe style, which is used in both private and public buildings throughout the Southwest, is a mixture of Indian and Spanish contributions to architecture and has developed certain basic features which marks its relative degree of purity. First, it is based on stability in the effect of a one-story building clinging to mother earth. Two-stories are exceptions, often frowned upon by the purists, and three-stories, except in a church or similar structure, is not considered acceptable at all. Facade lines should be horizontal and roofs always flat with just enough pitch to carry water to the canales. The ridge of a roof should never be seen above the pretile or firewall. Roman arches or any circular out-

ORAIBI PUEBLO, ARIZONA — Before the white man, 14,000 Hopi Indians dwelled here. Windows and doors were a Spanish introduction.

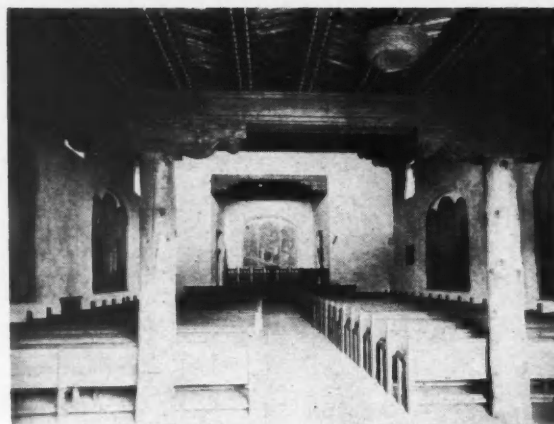


ADOBE IN ARCHITECTURE

lines common in the California Mission style, are taboo in the Santa Fe style. To relieve monotony devices like portales, or inset porches, balconies, firewalls, projecting vigas and flanking buttresses lend a variety of effects to the Santa Fe style which may be further enhanced with carved doors, lintels, corbels, architraves, balustrades and cornices. Color also is important and usually run to the light colors unless the soil itself is dark brown, but shades like blue and green must not be used except in minor decorations, preferably on the inside.

House shapes may be a single straight unit, always with a wall or fence enclosure — however, L-shaped, or U-shaped so that one or two sides are fenced to provide a placita or patio. Here is the well, usually, and around the well whatever plantings one wishes. Plants must be kept away from building walls for obvious reasons.

Inside such exteriors one may use his own imagination as to comfort, decor and appearance, but the outside is a matter of civic obligation to neighbors and community in using good taste within certain traditional principles. During the Spanish occupation of the Southwest this was no problem since this was the time of forming the traditions. For some reason or other, Europeans have mixed and adapted most architectural styles in a more consistent manner than we have here in America. They may have built a Gothic



SANTA FE STYLE—Auditorium in Santa Fe, N. M. Museum, copied from the Acoma Mission built about 1700 under guidance of Franciscans.

church over a Norman crypt and even added a Tudor wing, but never try to decorate a Gothic window with Tudor panelling. The distinction between consistency and integrity sometimes is very fine and it is good taste which finally determines architectural success or failure in any construction, whether adobe or steel, glass and concrete. Furthermore, from an historical viewpoint, it determines our judgment of nations and civilizations past and present.

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time. First of all, the material was nearly always available where it was practical to use. Before social legislation which fixed wages and other costs, cheap labor also was readily available in arid regions. In the Southwest 30 years ago one could contract to have a thousand adobe bricks made and laid in walls for as little as \$30.00. On a daily wage scale, good adobe workers, who knew every trick of the trade, could be had for \$1.50, so a 5-room adobe dwelling could be built for as little as \$1200.00. This is no longer the case and adobe now must compete in cost with more common building materials which sometimes are preferable both as to initial cost and maintenance. The natural advantages of cooling and heating adobe houses no longer exist. Other technological building methods, aside from the fact that good adobe craftsmen are getting hard to find, have made adobe construction almost obsolete, except where suburban taste and money demand the ranch type home or an individual digs his own cellar and makes bricks from the excavation dirt. Even here, building ordinances place restrictions on adobe construction which make it costly and sometimes impractical.

Adobe construction methods are based on long years of primitive life and strict observation of natural laws. Adobe has certain affinities which must be adhered to. Properly mixed with straw and water, shaped into form in a wooden box and sun-dried, an adobe brick attains a remarkable degree of tensile strength. Its insulation qualities are well established and it has another quality which is so obvious that we often fail to recognize its advantages. This is inertia. It is well known how old adobe houses will remain

standing among the debris of other types of construction after an earthquake. When our army tested its First World War tanks against various obstacles, brick walls were easy push-overs, but adobe walls resisted with stubborn inertia. If one sticks to the practical application of natural laws, adobe construction actually is as simple as common sense; otherwise the don'ts show up as costly experiences. Building ordinances which require that adobe walls must be stuccoed with cement or fabricated plaster are not based on common sense. Such covering will not bind with adobe to create a oneness, but will allow for a lot of condensation and little evaporation which eats the "life" out of the mud in a short time. The amount of adobe plaster washing off a building in a year can easily be put back again in a few hours, or a slow-setting lime plaster, slaked in the pit for a year, has been known to stay in excellent shape for 30 years or more.

Lintels extending less than the length and the width of a course of bricks in the wall are apt to result in needless wall cracks, and wood, rather than metals, are preferable with adobe. Laying up high corners, which often is done in a regular brick or concrete block wall, also may result in cracks. The secret of adobe is that, with a minimum of plaster between bricks, these eventually form one solid mass with more inertia and, hence, longer life.

Moisture in any form is adobe's chief and almost only enemy. Even a dirt roof will take a lot of rain if it runs off quickly, but a slow gentle rain will soak through and cause leaks if it lasts long enough. A waterproof roof is no guaranty, however, against erosion of walls if the flashing is not proper or if rain-

Chimayo, N. M., a blend of Indian and Spanish.



ADOBE IN ARCHITECTURE

splash is allowed to hit the walls. Planting, of course, should never be put against an adobe wall.

As to architectural innovations based on exceptional tastes, there are a few basic traditions which should not and need not be violated in order to achieve both beauty and comfort. Haddon, in his *Evolution In Art*, used the word *skeuomorph* to describe certain survivals of the marks or effect of tools or a process as

decorations, such as the lashings of a stone point to a spear carried over as a decoration on a bronze spear, where lashing is no longer needed. We find some of this in new adobe houses at times, for example where corbels are placed under vigas on the outside walls, or when viga butts show up on all four walls of a house. Whether two opposite walls should have viga butts showing is a matter of taste, but when they show on all four walls, *skeuomorphis* really becomes a

"Adobe soil was puddled into walls and chinked with stone and rocks of various sizes." Acoma pueblo, N. M.



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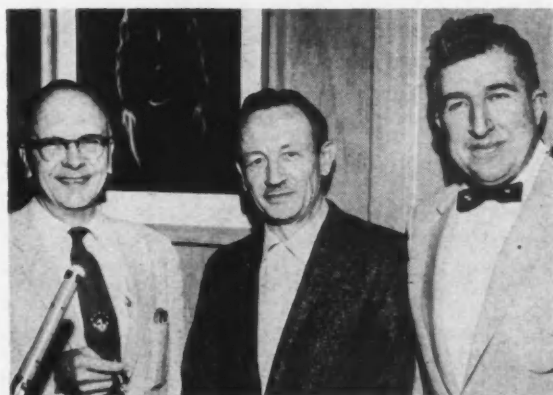
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dirty word. Screen porches or any other type of appendage breaking up the horizontal solidity of lines must be frowned upon. Porches, like portales, should be inset with masonry walls on three sides, or the continuity of the "Santa Fe" style is broken. Our popular "Bungalow" style and an adobe house have many features conducive to arid land buildings, but both need their own peculiar architectural treatment and in this respect the twain will never meet.

There are few books on adobe architecture. Most of the construction cost is in manual labor, so some architects have never bothered to specialize in this field. The records of Indian and Spanish architecture in America are full of information to the student, however, and the renaissance of native architecture, which began back in the 1880's, when president Ripley of the Santa Fe railroad started the series of station and hotel buildings along this line, is well documented in both plans and descriptions, as well as in many fine examples of both public and private structures throughout the Southwest. Such buildings as the Santa Fe Art Museum, which is a faithful copy of the old Acoma Mission; the Gross, Kelly Company's warehouse in Santa Fe; The Colorado Supply Company's store and warehouse in Morley, Colorado, are only a few examples of successful adaptation of adobe architecture to public use. The Palace of the Governors, in Santa Fe, is perhaps the finest example of what is called the "Santa Fe" style and its most successful

adaptation to modern use is often said to be the "El Ortiz", the Fred Harvey hotel in Lamy, New Mexico. Architects like I. H. Rapp, Charles Gastra, Carlos Vierra, T. A. Hayden, John G. Meem and others, have left behind them designs and buildings which are the pride of many Southwestern communities. These men had one thing in common; they were students of history as well as of design and construction, and they carried the simplicity of honesty and pure tradition into their efforts with the highest degree of integrity. ■



PANELISTS — The March program sponsored by Arizona Masonry Guild at Arizona Ranch House Inn, Phoenix, featured a discussion on "Inspection of Unit Masonry Construction." Architect participants were (from left) Kemper Goodwin, Lester Laraway, and Martin Young. Mutual problems of masonry contractors and architects were aired, and ideas given for improved construction. A large audience listened and participated.

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AIA Convention Awards Named

Ludwig Mies van der Rohe, FAIA, world famous architect and the retired director of the Department of Architecture and City Planning of the Illinois Institute of Technology, has won the 1960 Gold Medal of the American Institute of Architects.

Mies van der Rohe was elected for this honor by the AIA Board of Directors meeting at Institute headquarters at the Octagon in Washington, D. C.

Mies van der Rohe was born in 1886 in Aachen, Germany, and, like two other world famous architects, Walter Gropius and LeCorbusier, apprenticed in the office of Peter Behrens in Berlin. Mies' first building, the Kroeller house at The Hague, Holland, completed in 1912, caused a sensation in architectural circles for the classic simplicity which still denotes his most recent buildings such as the Seagram Building on New York's Park Avenue.

The Directors of The American Institute of Architects have created a new annual award for architectural photography and elected Roger Sturtevant of San Francisco its first recipient.

The AIA Architectural Photography Award winner is known well beyond the Bay Area for his sensitive photographs of both historic and modern buildings. Ken Hedrich, another well-known architectural photographer received the AIA Fine Arts Medal last year.

The winner of the AIA Fine Arts Medal for 1960, is Thomas Hart Benton of Kansas City, Mo., a well-known painter who is currently working on the mural for the Truman Memorial Library in Independence, Mo.

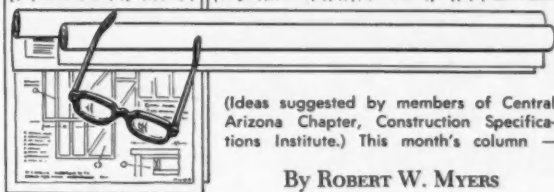
Born in 1889 in Neosho, Newton County, Mo., Benton achieved considerable fame with his heroically realistic presentation of American life on murals for the New School of Social Research in New York in 1931, the Missouri State Capitol in 1936, the Jefferson City, Mo., Lincoln University in 1953, the Power Authority Building in Massena, New York in 1957.

A silversmith practicing his ancient craft in Colonial Williamsburg, Va., William L. DeMatteo, has won the AIA Craftsmanship Medal this year. Born in Tenaflly, New Jersey, he worked as a silversmith with his father and opened the Williamsburg craft shop in 1953. Among his outstanding work are the Williamsburg Award Bell made for the former British Prime Minister Winston Churchill, a Communion Cup for Queen Elizabeth and a Printer's Composing Stick for the Lord Mayor of London.

Working in a bright green suit with a pigtail swinging down his back, Mr. deMatteo works in the tiny Williamsburg shop, which is a favorite tourist attraction.

The Awards will be presented at a ceremony in the course of the AIA's annual convention at San Francisco, April 18-23, 1960.

LOOKING AT THE SPECS



(Ideas suggested by members of Central Arizona Chapter, Construction Specifications Institute.) This month's column —

By ROBERT W. MYERS

In writing specifications of materials and equipment, the problem arises whether best to specify items by proprietary name or go to great lengths describing the items in terms of function, construction, quality and appearance. Both methods have their good and bad points. With certain public agencies, proprietary names are not permitted.

The use of proprietary names for more complicated and intricate equipment and products has definite advantages, particularly for the contractors, subcontractors, owner and architect.

The architect is more certain of getting dependable, trouble- and maintenance-free equipment in a product. The architect's inspector merely has to check for the manufacturer's name, model, capacity, size, etc., to see if the item is what has been specified. The same applies for the person who checks shop drawings and submittals.

Proprietary names help the contractors and estimator in preparing a lower, realistic and intelligent bid in less time. He can bid with confidence as to what is required and not have to worry about something being rejected later as not coming up to specifications. The contractor is also sure the equipment will fit areas without expensive alterations after the job is half completed.

However, the use of proprietary names in materials such as concrete, masonry products, steel and many other materials, should be discouraged. When materials can be described simply and with the assistance of ASTM numbers and national institute specifications such as those provided by the Steel Joist Institute, American Institute of Timber Construction, Association of Tile Manufacturers, and many others, it is an advantage to discard proprietary names, as it gives a more open type of specification, more competitive costs, and good control over the materials and workmanship going in the job.

Where to draw the line between proprietary names and descriptive specifications is a very difficult decision to make in some cases. Also, going to either extreme has definite disadvantages for everyone concerned.

When a proprietary name is used, it is desirable to use several names that are equal or acceptable for one item to avoid a closed specification. Provisions in the special conditions should be made, too, that an item not specified could be still considered if it is equal to what has been specified.

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12:45 to 1:35 p.m. — Program
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Population Growth and Land Use, Maricopa County and Phoenix Urban Area

The accompanying material is quoted from two major reports prepared by the City of Phoenix and Maricopa County Advance Planning Task Force.

Authorized by the City Council and Board of Supervisors, and their respective Planning commissions, these reports are part of a study basic to long range planning for the growth of the county.

Other important studies are under way, preparatory to competent planning of parks and recreation, airports, streets and highways.

An auspicious spirit of co-operation between the various communities within the county, is evident. It augurs well for the environment in which we — and the 900,000 new citizens expected within 20 years — will live.

Both reports, "Population Growth of the Phoenix Urban Area," and "Land Use of the Phoenix Urban Area," are available from city or county planning departments. Cost, \$1.50 each. Their study by architects is strongly recommended.

FUTURE POPULATION GROWTH FACTORS

In the immediate future, natural increase in the population will be an important element in the growth of the Phoenix Urban Area. Maricopa County, with a births-deaths ratio of about 3:1, has experienced a natural increase in its population of about 75,000 persons since 1950 (a rise of about 2 per cent per year), and the indications are that the population boom which began in 1946 will continue for at least the next 20 years.

In-migration, however, is likely to continue to account for the bulk of the Phoenix Urban Area's growth in the near future. The Census Bureau predicts that the greatest population growth in the United States within the next decade or so will occur in the West, with Arizona second only to Nevada in highest rate of growth among the states. It has been estimated that the population of Arizona will increase by 79 per cent from 1955 to 1970. In August, 1957, the U. S. *News and World Report* published future population estimates based on data from the Census Bureau and other sources which indicated that, among 33 of the nation's "Metropolitan" areas in which rapid growth is taking place, Phoenix would experience, by 1975,

the second highest growth rate (over 100 per cent), exceeded only by Miami and followed by Houston and San Francisco.

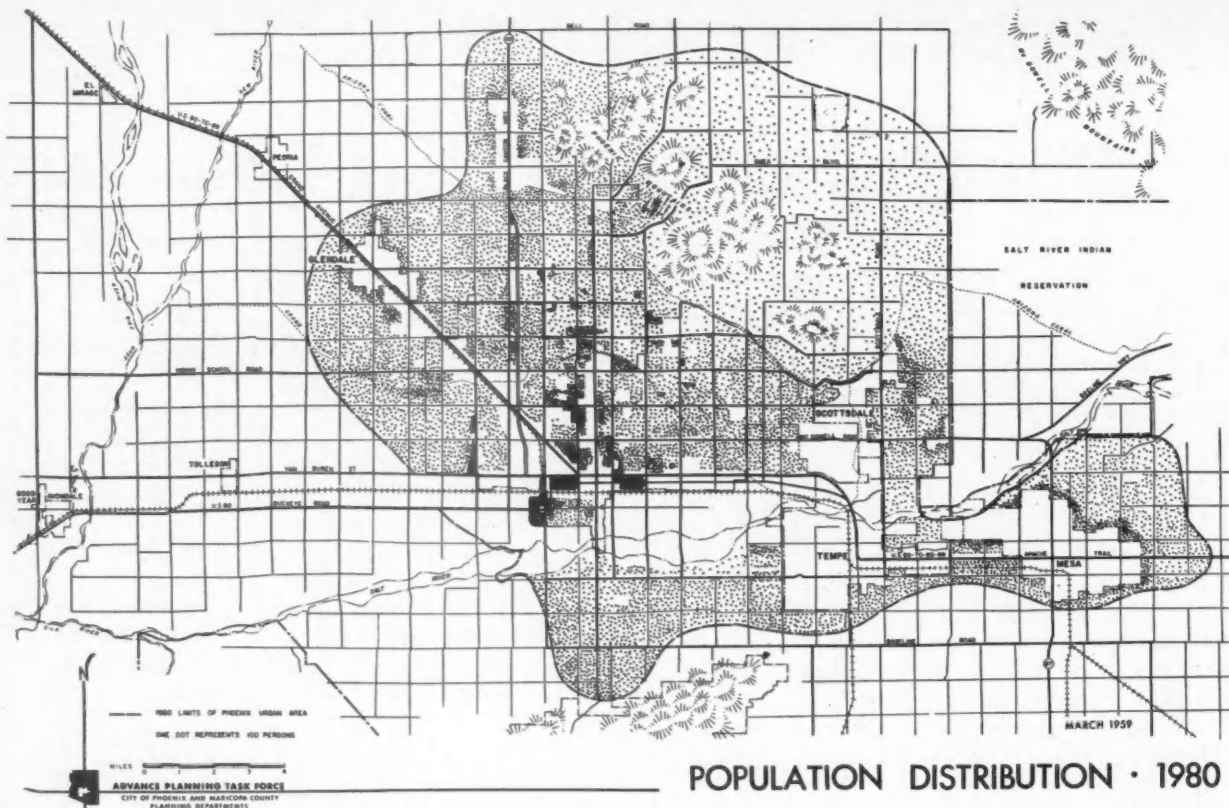
The Phoenix area appears to have two principal assets which will influence its future growth. The first of these is its winter climate. If migration of the American people continues to increase as a result of higher incomes and improved means of travel, the moderate winter climate should bring increasing numbers of people and businesses to the Phoenix Urban Area. Secondly, Phoenix should profit, growthwise, from its position as the hub of government and business in Arizona and from the fact that it is the largest urban area between southern California and central Texas.

FUTURE POPULATION GROWTH

In forecasting the probable future population of the Phoenix Urban Area, a projection of the Bureau of the Census of the population for the State of Arizona has been relied upon. The projected growth for the State of Arizona has been related to Maricopa County and the Phoenix Urban Area on the basis of trends since 1950, thus apportioning from the total population estimated for Arizona that portion which it is thought would be in Maricopa County and in the Phoenix Urban Area.

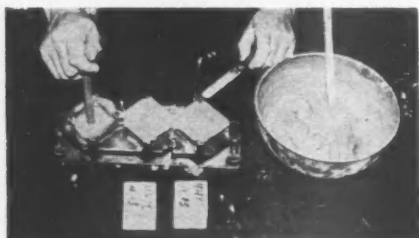
There is little evidence to suggest significant changes to appear in the pattern of population growth in the Phoenix area. The pattern to date has been closely related to national migration trends and it is apt to continue to be so. For this reason, reliance has been placed on national trends and their relationship to the Phoenix Urban Area in making the future population estimates rather than on independent estimates based upon the potential of the area.

In 1955 the Bureau of the Census published a range of population projections for the population of the United States as of 1970 and 1975. The range of "high" and "low" result from assumed high and low fertility rates. The high projection indicated a United States population of 209 million persons by 1970. In November of 1958 these projections were revised and the new projections published reflected increases in the population growth rate with the effect being that the projection to 1970 of 209 million persons becomes the medium low new projection, or a conservative one. It is on the basis of this earlier high projection



POPULATION DISTRIBUTION • 1980

Plate 8.



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that the future estimate of population for the Phoenix Urban Area is made. All future estimates are based on the assumptions usually implicit in such predictions, i.e., no major wars, depressions or other catastrophes will occur to drastically alter the pattern of growth.

PROBABLE FUTURE POPULATION MARICOPA COUNTY AND PHOENIX URBAN AREA - 1980

Census projections previously described indicate that the population of Arizona will increase to about 1,800,000 by 1970, and to about 2,400,000 by 1980. In 1950 Maricopa County's share of the state population was 44.3 per cent. Arizona State Employment Service estimates indicate that this share has increased by approximately one-half of 1 per cent each year since 1950. At this rate of increase the county should have nearly 60 per cent of the state's population by 1980, or 1,440,000.

In 1950 the Phoenix "urbanized area" (Census definition, which excluded most of Scottsdale and Glendale) minus the cities of Mesa and Tempe, contained nearly 60 per cent of the population of Maricopa County. The Phoenix Urban area of 1958 contained about 70 per cent of the county's population. Assuming a continuation of this relationship to 1980, the Urban Area should have at least 1,000,000 people on that date. (Not including population within the pres-

ent boundaries of Glendale, Scottsdale, Mesa and Tempe, which presently numbers some 70,000.) Whether this population is attained before or after 1980 depends upon certain imponderables. The important thing is that plans be prepared to serve the future population needs as they materialize.

ESTIMATED FUTURE POPULATION MARICOPA COUNTY, AND CITY OF PHOENIX, TO 1980

Year	Population (000)	Maricopa County Increase (over pre- vious date) (000)		% of Arizona
			%	
1958	560			49.1
1965	800	240	42.9	53.3
1970	1,020	220	27.5	56.7
1975	1,230	210	20.6	58.6
1980	1,440	210	17.1	60.0

Year	Population (000)	City of Phoenix ¹ Increase (over pre- vious date) (000)		% of County
			%	
1958	244			43.6
1965	550	306	125.4	68.8
1970	670	120	21.8	65.7
1975	820	150	22.4	66.7
1980	1,000	180	22.0	69.4

¹Reflects City annexations after July 1, 1958.

(Continued next page)

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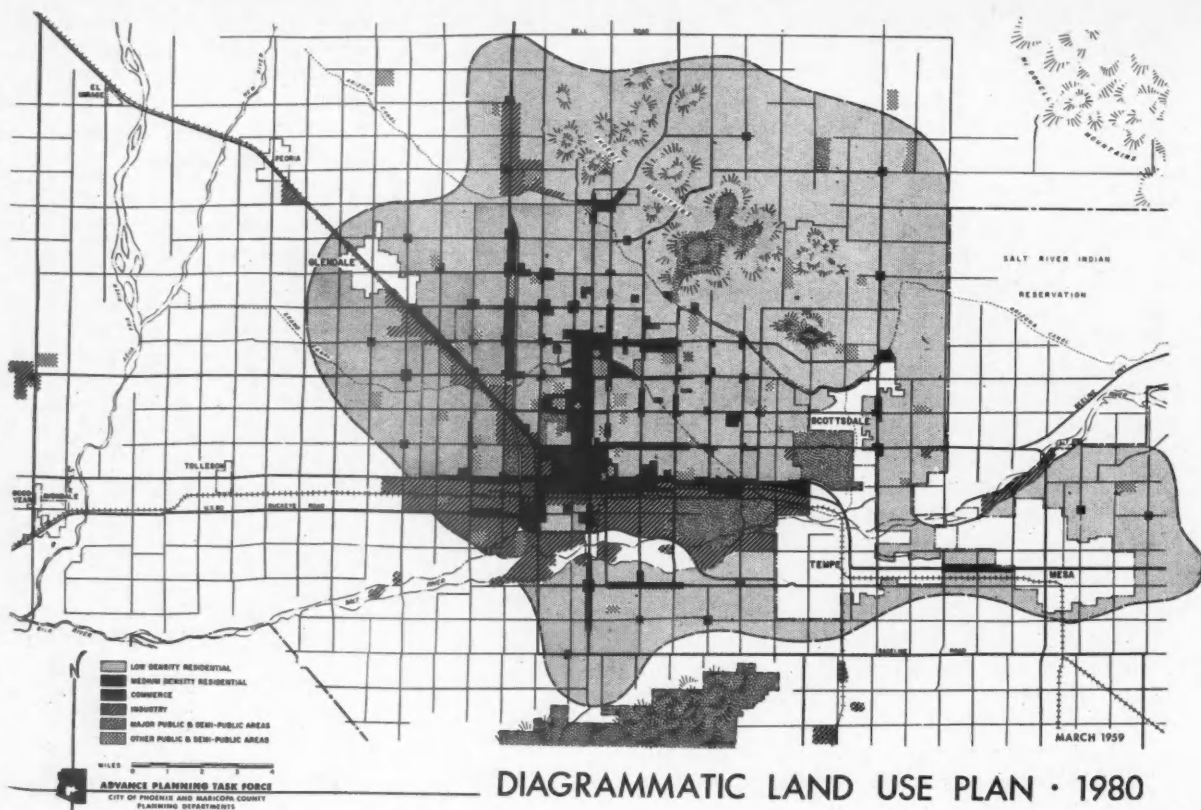
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FUTURE LAND USE PLAN - 1980

One of the many purposes of this report was a determination of how many people will live in the Phoenix Urban Area by 1980. It has been estimated that the population of the Phoenix Urban Area will probably be about 1,000,000 persons by 1980. Therefore, the future physical planning for the Urban Area should be geared to meet the needs of this future population.

Plate 7, the Preliminary Diagrammatic Land Use Plan for 1980, was derived from the land use - population relationships as revealed by the recent land use survey. These relationships have indicated the quantity of land area probably required to accommodate 1,000,000 persons.

The land use - population ratio for the City of Phoenix in 1958 was 9.88 acres per 100 persons, while in the fringe areas the ratio was 15.4 acres per 100 persons. Since the latter ratio is characteristic of the most recent development, it is probably more characteristic of development which will occur in the next 20 years than that which occurred in the older portions of the city. Since the development which is expected to occur in the next two decades will be double in amount that which has occurred to 1958, the future total urban ratio of land area to people would be somewhere near 14 acres per 100 persons. (An average of the ratios given above, but heavily weighted toward the fringe characteristic).

The plan shown on Plate 7 embraces an area of approximately 226 sq. miles excluding Glendale, Scottsdale, Tempe and Mesa. Based on the aforementioned population-land use ratios, about 143,300 acres or 203 sq. miles would be needed for all urban purposes by 1980. However, for various reasons certain areas will remain vacant as in all cities. Thus, the future urban area shown diagrammatically here should be more than ample for future urban needs as foreseen at this time. This is the area for which physical plans should be prepared now. Such plans should then be reviewed and revised periodically as warranted by changing conditions or unforeseen needs.

On the basis of past trends, the Diagrammatic Land Use Plan reflects the allocation of adequate space for all foreseeable urban uses. Most areas of the plan propose retention of the existing physical structures since it is recognized that they will probably continue into the future. Quite often overlooked in future plans is the fact that when a street is constructed or buildings, such as homes, plants, stores, etc., are erected they become, for all practical purposes, permanent features of the landscape influencing the city's land use pattern for generations. However, in some cases a community need in one particular area or another demands action which can make a drastic change in the land use pattern. For example, the area west of Sky Harbor Airport extending to Central Avenue is in an area of adverse residential influence as a result of the



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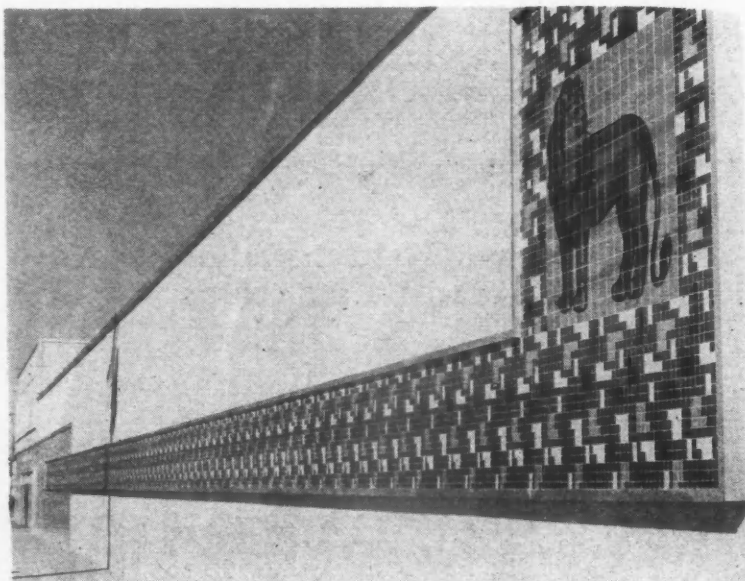
POPULATION AND LAND USE

runway locations on the Sky Harbor Airport, so the plan proposes a complete elimination of residential uses. In another area, immediately to the southwest of the Central Business District, about 323 acres of land has been designated as an urban redevelopment project. The Future Land Use Plan reflects the community's decision that this land will be renewed for residential purposes, with elimination, where possible, of those non-residential uses which would not be compatible nor conducive to a healthy residential area.

FUTURE DISTRIBUTION OF POPULATION--1980

The 1980 distribution of population in the Phoenix Urban Area is shown on Plate 8 with each dot representing 100 persons. The location of the future population is based upon the residential areas identified on the Diagrammatic Land Use Plan, Plate 7. As previously stated, the Land Use Plan proposes some change of the existing land use pattern by 1980. These changes are of course reflected by the map showing the distribution of the 1980 population.

The most significant population shift is in the area bounded by Central Avenue on the west, Sky Harbor Airport on the east and the Salt River on the south. The people residing in that area now are proposed to be relocated to other residential areas by 1980.



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SUMMARY

FINDINGS

1. Topographical features and irrigation facilities have exerted a marked influence upon the general shape of the Phoenix Urban Area.
2. The pronounced degree of mixed land use existent in the Urban Area is a major deviation from the norm. Mixed land use gives rise to conflicts which adversely affect the long-term stability of a neighborhood.
3. The Phoenix Urban Area contains an unusual amount of undeveloped land, about 43,385 acres. Intermittent vacant parcels exert adverse economic effects on developed property and have disrupted the continuity of streets and utilities making public service more expensive and less efficient.
4. All urban uses of land were found to occupy 11.74 acres per 100 persons in 1958, as compared with 14.84 acres average for 11 other similar urban areas.
5. In Phoenix the residential use of land averaged 4.74 acres per 100 persons. In the Urban Fringe Area the ratio was 8.09 acres per 100.
6. Phoenix has a relatively high percentage of commercial land use — a ratio of 0.54 acres per 100. The large amount of strip or ribbon business constitutes a major deficiency of existing commercial development.
7. Industry uses 2,600 acres of land in the Urban Area. Recent development demonstrates a trend toward decentralized, sprawling factories located on large land areas providing space for employee parking and plant expansion.
8. A grave deficiency exists in park and playground land. Exclusive of Papago Park and South Mountain Park, only 584.5 acres are in this use, less than one-fourth the ratio typical of 11 comparable urban areas.
9. Vast areas of federal and state land around the perimeter of the Valley offer excellent opportunity for development of a superior system of regional parks.
10. Public sewerage systems have not kept pace with growing needs and a relatively small proportion of existing urban development has public service. An immense and precarious reliance has been placed on private disposal systems.
11. Political boundaries affect physical growth to some extent in terms of location and sequence of development.

CONCLUSIONS

1. Topography and irrigation will continue to influence the use of land, particularly in relation to provision of public utilities and in areas subject to flood damage.
2. Mixed land use evidences a lack of firm land use policies and their enforcement through sound zoning and subdivision controls. In partially built-up areas, land use conflicts can be alleviated through positive planning action. In completely built-up areas, their correction requires vigorous urban renewal action.
3. Forty per cent of the new growth predicted by 1980 should be absorbed within the present limits of the Urban Area. Adoption and enforcement of positive land development policies are necessary to prevent continued scatteration of urban development throughout the Valley.
4. By 1980, the urban use of land is expected to total 14.33 acres per 100 persons. One million people will require 143,300 acres, or 224 square miles, of developed land.
5. By 1980, the residential use of land is expected to require about 7.4 acres per 100 persons, 95 per cent of which will be in single-family use.
6. Encouragement of the trend toward consolidation of commerce in organized centers, together with required provision of adequate off-street parking will increase the ratio of commercial land use to 0.70 acres per 100 persons by 1980.
7. Decentralization of industry must be controlled to prevent scatteration and lessen ill effects on adjacent property. By 1960, industrial land use will occupy about 8,800 acres in the urbanized area.
8. A total of 10,000 acres of park and playground space as well as 3,750 acres of elementary and high school sites will be required to serve the 1980 population. A long-range program of land acquisition and development is a vital community need.
9. Both enabling legislation and concerted public support are necessary to insure the retention of public-owned lands until they can be developed for recreation use.
10. As urban population grows sanitation becomes a matter of vital concern. Less and less new development must be permitted to use private disposal systems. Extension of public service to new development offers an important tool in achievement of desirable land use patterns.
11. Changes in political boundaries are not expected to exert any quantitative influence on future population growth.



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by Veron Junger, A.H.C.
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CRITIQUE

TUCSON SCHOOLS PLAN AHEAD

To the Editor:

I greatly enjoyed the January issue of the *Arizona Architect*, and I appreciate the fact that your organization has devoted the major portion of the issue to schools and their problems.

In your editorial you raise some questions that perhaps should be at least commented upon.

1. The first question raised was rather a broad one: "Would some school trustee please tell me why boards persist in locating new schools where they do instead of a block or two off the streets that will inevitably be main thoroughfares?" Probably many of the schools in the state have had the same problem we have had in Tucson. Master plans originally indicated that half-section lines would not be main thoroughfares. We have had the finest kind of co-operation from the Planning and Zoning staff, and in many instances they are still recommending that these half-section lines not be major thoroughfares. Of course, some of the older schools were on section lines. That was common practice 30, 40, or 50 years ago, and it would be far too expensive to relocate many of these schools.

2. "Why not buy land that is unlikely to be on future busy streets?" This is incorporated in Question 1 above. "Wouldn't such land be less expensive?" If other school districts were buying land far in advance, as School District No. 1 has done, there would be no difference in cost. Master plans have suggested that the logical place for an elementary school is in the center of a section of land, if in a densely populated area, in order that the children not walk too great a distance to and from school.

3. "Wouldn't it be safer for children to approach?" I would question this very much, since a large majority of the children would have to cross the busy thoroughfares in order to get to school, and of course there would be no school in the immediate neighborhood to slow down traffic.

4. "Wouldn't it prevent much of the traffic slow-down that most of our schools seem now to cause?" Our safety patrols, as far as students are concerned, control student traffic and not motor vehicles. The very few seconds that are lost by a driver do not present a serious problem. Any driver can leave home two to three minutes earlier and still arrive at work on time without breaking any laws, even though he travels a street where schools are located. Traffic slow-down does create some public irritation against the schools. However, when people realize how important it is to drive safely and, especially in Arizona, to cut down traffic fatalities, I would not consider this a very great handicap.

5. "Wouldn't schools, if located away from arterials,

be quieter and more conducive to learning?" Schools are planned at the present time so that vehicular traffic, except in rare instances, does not present a serious problem to us.

6. "Wouldn't they require fewer crossing guards?" My feeling is that it would require more rather than fewer crossing guards, and of course, if they were away from the school, they would all be paid guards, since this is a requirement by state law.

7. "Wouldn't they leave the more valuable land available for commercial, heavy taxpaying uses?" Practically all of our elementary and junior high schools, and wherever possible senior high schools, are not located in areas that would lend themselves either for commercial or industrial purposes. Consequently, the answer to your question in regard to taxpaying uses would be a very positive "No."

As far as many of your other questions are concerned, I am heartily in accord: — seeking out new sources of taxation, changing the source of support, broadening the base, equitable assessments (which would certainly involve equalizing of assessments between counties and between classes of property), depletion taxes, etc. — are only a few of many very pertinent questions which you raise.

Again, may I thank you for a most helpful edition of the *Arizona Architect*.

ROBERT D. MORROW
Superintendent,
Tucson Public Schools

PHOENIX EXAMPLE DOESN'T APPLY

To the Editor:

The Tucson-Pima County Planning Department noted with considerable interest your editorial comment on locating school sites (*Arizona Architect*, January, 1960).

Locating schools in Pima County is different from the situation you describe. This is particularly true in our large Tucson District No. 1 whose officials have relied on our recommendations to invest more than one million dollars in school sites.

Our department weighs certain basic principles before any site is even suggested. Probably the most important of these yardsticks is the relationship of elementary school locations and traffic. This we believe:

1. Elementary sites are ideally located in the heart of a residential unit not less than a square mile in area, away from the section-line streets — our major routes — and so no child is more than five-eighths of a mile from school.

2. No through neighborhood streets should be permitted at half-sectionlines. We believe inter-neighborhood traffic over a system of connecting half-section-line streets destroys the integrity of neighborhood units. Thus, without these, there is no through traffic past elementary schools.

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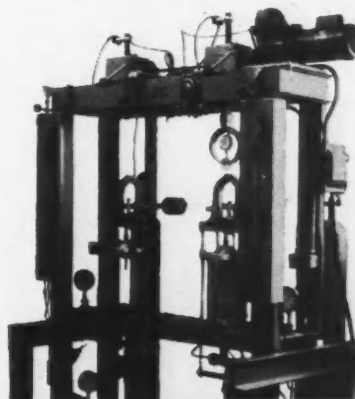


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Dwaine holds B.S. and M.S. degrees in civil engineering from New Mexico State University. His experience includes special studies in soil mechanics at M.I.T., 2 years soils research, U. S. Public Health Service, 2 years with California Division of Highways and City of Las Cruces. A registered civil engineer, he has been with this firm two years and is in charge of the Soil Mechanics and Foundation Analysis Section.



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Critique

fold principle of urging development of our section-line majors to their fullest possible extent and promoting limited access residential units for safety's sake makes it possible to divorce elementary schools from traffic.

We do not dispute your criticism of an unwise selection of school sites. But we are smarting from your holding up the Phoenix situation as an example to point an accusing finger at all Arizona school districts.

We hope the enclosed copies of our school plan as brought up to date, will be of interest to you and suggest how the problem can be corrected.

ANDRE M. FAURE,

Planning Director, City-County
Planning Dept., Tucson

Editor's note: Our editorial was indeed provoked by selection of school sites in Phoenix, which provided the one specific example we gave.

The school planning activities of Tucson and Pima County, covered in the 1955 "Plan For School Locations" and the "1960-62 School Building Plan Reappraisal" for Tucson School District No. 1, submitted by Mr. Faure, are excellent examples of progressive planning. The reports will be extensively quoted in a forthcoming issue of *Arizona Architect* in the hope they will inspire and benefit other school districts.

It is perhaps significant that the Tucson study was undertaken while both the city and county planning and zoning commissions were headed up by architects — M. H. Starkweather and Gordon Maas Luepke, respectively.

POLICY AND CONSCIENCE

To the Editor:

Thank you for *Arizona Architect*, which Mr. Neutra appreciates very much. He has found the magazine to be of real character and valuable content. "Policy sits above conscience" — you justifiably quote Shakespeare. (February *Perspective*).

Perhaps Mr. Neutra could sometime find occasion to write a little piece for you.

D. SERULNIC

Office of Richard J. Neutra, FAIA
Los Angeles.

Dear Mrs. Serulnic:

We have been aware of Mr. Neutra's interest in Arizona architecture and appreciate his comments about our magazine.

It would greatly please us and our readers to have him contribute to our pages.

THE EDITOR

CENTRAL ARIZONA CHAPTER NEWS

• Our membership is growing! The following new members are warmly welcomed to the Chapter: corporate Ross Jensen, transfer corporate (Oregon Chapter) Bill Williams, and junior associates Don Schwenn, Herbert Schneider, John Daly.

• The annual joint meeting with the Central Chapter, Arizona Society of Professional Engineers, held at the Scottsdale Safari Hotel, was highlighted by a lecture on "Intuitive Structure" by Paul Jacques Grillo, Professor of Architecture, Notre Dame University. Professor Grillo described a course he initiated at the school which is planned to acquaint the student with structural design, not in a technical manner, but as an experimental and intuitive aspect of knowledge that he already possesses within himself. This knowledge, Grillo states, is arrived at through one's own experience in the various aspects of motion, equilibrium, and stress; through the attaining of control of these factors in his own body. Articulation, skeleton, and other terms widely used in the science of structures are not new terms, but are directly borrowed from one's own physical "construction." The feeling of strain and stress is daily experienced in the various actions that constitute living.

Professor Grillo remarked that, in his own experience, he acquired the conviction that the command of the structural part of design cannot be obtained only by a purely mathematical approach, but has to be backed by the poetic and immediate certitude of intuition.

• The next regular meeting will be held at Knotty Pine Restaurant on April 7th. The importance of this session cannot be emphasized too strongly: a film describing the proposed reorganization of AIA will be shown. This new system, if approved at the San Francisco convention, would have a powerful effect on Chapters in the Southwest, and all members are urged to attend the meeting, and to analyze and comment upon the reorganization.

• By invitation, your executive secretary attended a meeting of all Chapter and State executives in Washington on March 21-22. As a representative of both the Chapter and the Society, Betty will have a full report to present at a later date.

• Jimmie Nunn represented the Chapter at a dinner sponsored by various guilds and associations of the construction industry, and local chapters of management societies. Guest speaker at the March 1st event was Arthur Hood, international figure in management and training in industry. Jimmie, who just returned from a month's work (!) at Squaw Valley, and his wife were guests of Ralph Yoder, executive director of the Arizona Masonry Guild.

• NCARB members have written their thanks and appreciation for the February cook-out. Special

SOUTHERN ARIZONA CHAPTER NEWS

• The March meeting featured an illustrated talk on the architecture of Brasilia, new capital of Brazil, by Nicholas Sakellar. He also showed pictures of Rio de Janeiro, which he visited on his recent trip to the largest nation of South America. The meeting also featured a 15-minute film on the proposed new structure of the AIA.

• The Chapter has voted to support the Tucson electrical and pipe trades industries in their efforts to obtain repeal of a city ordinance allowing FHA and VA regulations to supersede city building code requirements at the option of contractors. It is said that the ordinance is without precedence in the United States. A suit is being brought for repeal.

• Officers of the Chapter met March 12 with regional AIA director Frederic "Bunk" Porter to discuss chapter and region affairs, and to advance plans for the regional conference to be held in Tucson at the El Conquistador Hotel October 26-29.

PLAN NOW TO ATTEND

Ninth Western Mountain Regional Conference

Tucson — October 26-29, 1960

praise goes to Mary Ann Nunn, Bob Starkovich and their helpers for providing plenty of good food; Ralph Haver deserves a boost for protecting the crowd against the effects of Eastern-like chill winds.

• Bob Helgeson has recently opened an office at 2727 N. Central Ave.

— AIA —

NEW ARIZONA REGISTRANTS

The State Board of Technical Registration has announced that on February 1, 1960, the following architects became registered and certified in the State of Arizona:

James W. Alberts	4510 E. 28th St., Tucson
William T. Baker	862 E. 8th Place, Mesa
James W. Bird	642 Spreckels Bldg., San Diego
B. Gail Buckmaster	Rt. 8, Box 319, Tucson
Albert Criz	9832 W. Pico Blvd., Los Angeles
Irvin Finical	2741 Kiva Place, Tucson
Don Garland	2215 Cochiti Ave., Farmington, N.M.
James A. Gresham	2106 E. 34th St., Tucson
Charles S. Haines	101 Park Ave., New York, N.Y.
Douglas Honnold	9026 Melrose Ave., Los Angeles
Neil M. Johnson	2525 W. 7th St., Los Angeles
Richard H. Johnson	2925 White Circle, Salt Lake City
Robert C. Kaestney	210 N. Encina Ave., Visalia, Cal.
Alex A. Lipsey	108 W. Lake St., Chicago
William K. Lockard	2801 E. Kleindale, Tucson
Gordon A. Luma	321 S. 11th St., Tacoma
Emil W. Pellegrini	624 Park, Birmingham, Mich.
Clarence F. Reinhart	Adams Bldg., Bartlesville, Okla.
Curtis C. Schafer	825 N. Miller St., Mesa, Ariz.
Harold L. Swanson	4545 N. 32nd Pl., Phoenix

IN THE BOOK WORLD

MIDWAY, A Magazine of Discovery in the Arts and Sciences. University of Chicago Press quarterly. \$1; subscription one year, \$3.50. This little magazine is "for that particular kind of layman, the armchair scholar." It is based on the idea that most scholars publish the fruits of their research in journals for others of similar interest. This magazine is designed to interpret important works of scholars for laymen — who may well be scholars in other fields — and present them in non-technical language. First issue contains an article "On Loneliness," by Frieda Fromm-Reichmann, M.D., which gives an insight into the causes and effects of what is sometimes an acute malady. In "Seat of the Soul", an eminent neurosurgeon traces man's long search for answers to some basic questions about himself. An experiment on a primitive people, a tale of ancient India, and an analysis of the economic goals of the East and the West are among the first issue's contents.

SHOPPING TOWNS, U.S.A.: THE PLANNING OF SHOPPING CENTERS by Victor Gruen and Larry Smith. This book is the complete planning guide to the shopping center era. Included is every planning function that might arise in small, medium or large centers. Here is reliable formulation of planning principles as most typically exhibited in completed major shopping centers. And here are the methods and procedures crystallized by Gruen and his economist team-mate on many projects, Larry Smith.

Never in the history of planning has so much interdisciplinary knowledge been needed for a single building type. No architect, planner, economist, developer, real estate owner, shopping center operator, or department store manager can afford to overlook it. 288 pages. Illus. Reinhold. \$13.50.

AMERICAN BUILDING ART: THE NINETEENTH CENTURY by Carl W. Condit. Here is the dynamic story of American contributions to architecture and construction during the 19th century. This is a book that claims to encompass the whole record of American engineering achievement in this period. The great inventions in form and material that revolutionized structural techniques in building construction in the 19th century — wood framing, iron framing, the wooden bridge truss, the suspension bridge, the iron arch bridge, the railway trainshed, concrete construction; the buildings of Louis Sullivan, Roebling's Brooklyn Bridge, Eads' Bridge in St. Louis — all these are described in detail. His story is enlivened with a wealth of anecdote about the builders themselves. Illus. Oxford. \$12.50.

ENGINEERING DRAWING (Ninth Edition) by Thomas E. French and Charles Vierck. This new edition of a now almost classic book in the field has been completely revised and redesigned, bringing it up to date and in pace with present-day conceptions. There are new chapters, new material on graphic communication and modern commercial practices, a special new appendix, and more extensive captions for the illustrations. 640 pages. McGraw. \$10.75. (May).

CRETE AND MYCENAE — The Glorious Art Heritage of Early Grecian Cultures by S. Marinatos. The very names, Crete and Mycenae, evoke in our imaginations the mystery and glamour of early Grecian civilization. This volume is a stunning dramatization of sculpture, architecture, art objects, beautifully visualized and printed. \$25.00. Abrams.

THE ART OF HENRY MOORE by Will Grahmann. England's great contemporary sculptor is presented in a full-length treatment — nearly 200 plates of his sculpture plus a showing of his watercolors and drawings. The text is by Germany's celebrated historian of modern art. 284 pages. Illus. \$15.00. Abrams. (April).

THE VATICAN by Jerome Carcopino. This is a monumental volume. Some of the two-page colorplates measure 24¾ by 17". Great works of art and architecture are revealed as well as private chambers and sumptuous halls and gardens. The text was written by one of the distinguished members of the French Academy. 242 pages. 100 reproductions, 40 pages color. \$100.00. Abrams. (April).

HIGH SCHOOLS — TODAY AND TOMORROW by Charles Bursch and John Lyon Reid. Written by an outstanding educator and an experienced school architect, this book suggests a more flexible program designed to fit the ability and interest of the student by teaching the student to use his own initiative in research. 96 pages. Illus. \$7.95. Reinhold.

SPECIFICATION STANDARDS: MECHANICAL & ELECTRICAL by Louis Axelbank and Ben John Small. The first and only guide to organized specification writing for mechanical and electrical services of buildings. Standardized forms and well defined abbreviations make it possible to cut the length of specifications to a minimum. 512 pages. \$5.95.

ALVAR AALTO by Frederick Gutheim. Finland's foremost architect has enriched contemporary architecture through his creativity in all aspects of architecture from furniture design to town planning. His international renown has been achieved with the qualities of humanism, wit, and art. Braziller. \$3.95.

PLANNING HOMES FOR THE AGED edited by Geneva Mathiasen and Edward H. Noakes. This book is the first comprehensive planning guide on the problems of designing and building homes for the aged and infirm. The editors, an expert in problems of the aging, and a noted institutional architect, provide written and graphic assistance to those responsible for the physical planning of such homes. Included are chapters prepared by eleven specialists on such topics as community needs and resources, site planning, the residence unit, common services, health needs and the infirmary, staff facilities, service units, construction materials and costs, architectural design and furnishings, and the function of the architect.

Combined with the authoritative text is a collection of practical, contemporary designs for these institutions. In addition, useful appendices give pertinent population data, building costs information, and an exhaustive bibliography for research. Also offers much new thinking for convalescent hospitals, homes for the aged, nursing homes, and other related institutions. 119 pages. Illus. Dodge. \$12.75.

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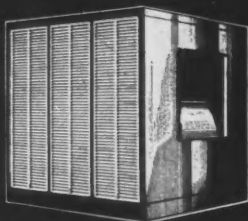
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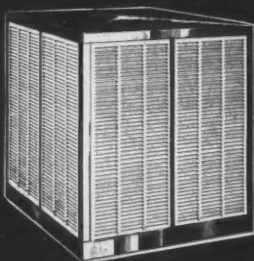
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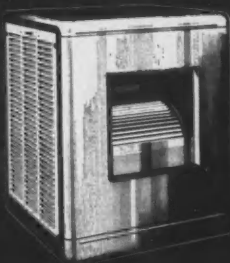
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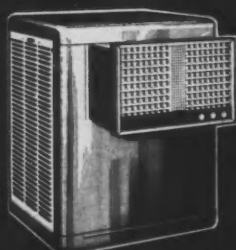
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