The Brazos County Courthouse and Jail in Bryan, Texas has been selected by members of the Brazos Chapter, A.I.A. as representative of recent work in the Chapter area. Architects: Caudill, Rowlett, Scott and Associates, TSA-AIA, of Bryan. This project was given a first honor award by the 1957 AIA Honor Awards Jury.
Kelley's acoustical fastening members offer a proved design backed up by one of the Southwest's largest stamping and roll forming companies. You get more than a design that is engineered to do the job. You get more than on-time delivery. Your clients benefit from low freight charges. Made in Houston, so you can be sure of good delivery, plus the advantage of lower delivery costs. Write for descriptive folder, or ask to have a Kelley engineer discuss acoustical fastening members with you.
Custom-style the heart of your homes...the kitchen...with automatic GAS built-ins

Gas built-ins offer you more brand names, more automatic features, more models and are more acceptable to women.

Here are actual quotations from builders about built-in ranges...

"We are swinging toward the use of built-in cooking equipment. Our experience has shown that many of our sales are closed quicker by the use of these units."

"We build to order and are now getting greater demand for built-in ovens and ranges."

"I like them because you can make a much better arranged kitchen with them."

"I'm planning another 208 V. A. homes and hope to use built-ins in them."

But be sure...
Install GAS built-ins!
CONCRETE FRAMES AND FLOORS

... economical construction for modern public buildings

The photo above shows the Tulsa County Courthouse, Tulsa, Okla., as it appeared when under construction. The completed building is 14 stories high. The floors are of ribbed concrete construction.

New public buildings, like the Tulsa County Courthouse, can be built faster and with greater economy when designed with concrete frames and floors. There are many reasons for the growing popularity of this type of construction.

Concrete frame and floor construction offers long life, great strength, life-long economy and maximum firesafety. Its moderate first cost, low maintenance cost and long service life add up to true low annual cost, which pleases public officials and taxpayers alike. Additional proof of the economy of concrete frame and floor construction is the fact that when competitive bids and cost analyses were made they showed that this method saved up to 40% on frame and floor costs.
TIGHT MONEY COULD CHANGE "BOOM"

The building magazine Architectural Forum has recently predicted a "Spectacular boom" in U. S. construction over the next 10 years. If construction economist Miles L. Colean, writing in the magazine recently, is correct, this would be the picture by 1966:

- Total new construction at $64 billion, up 45%, over 1956.
- Non-residential building up 43% to $18.4 billion.
- Residential construction up 26% to $17 billion.
- Highway building up about 7.5% as a very important factor.
- Public utilities and sewer and water facilities up 58-84%.

The estimates are based upon a 1966 U. S. population of 197 million, the nation having just crossed the 170 million mark.

The fact that creeping inflation may seriously undermine dollar values in the next decade is apparently not considered, at least not to the degree of correcting these figures to reflect the possibility that $64 in 1966 might represent $60 billion or less today.

A far more critical factor which economist Colean may or not have considered, however, is the possible effect of continued "tight money" policies.

Treasury head George Humphrey undoubtedly must keep a tight rein if runaway inflation is to be kept in check. There is now serious question, however, as to whether or not the time is overdue for moderate relaxation. Otherwise, Architectural Forum's estimates may have to be greatly revised because the funds for needed construction are simply not available.
Trinity white—the whitest white cement—is a true portland. The gleaming sparkling whiteness as mass or contrast increases the stature of good design. Use it for architectural concrete units; stucco; terrazzo; and wherever high light-reflection is indicated. Trinity white meets all Federal and ASTM specifications.
Statewide Observances Mark Centennial of Founding of AIA

TSA members across Texas marked the centennial of the founding of the American Institute of Architects and the first century of architecture as an organized profession with a statewide series of special programs opening February 20 in Houston and running through the first week in March.

At the Houston celebration, first in the state, some 300 civic leaders held a dinner at the new Houston Country Club. Governor Keen Johnson, vice president of Reynolds Metals Company, paid tribute to the architectural profession. He emphasized the increased opportunity for service now before members of the profession.

Large banquets were also held in Dallas, where the Dallas Chapter honored 100 civic and business leaders, and in Austin. All of the 13 TSA Chapters held special observances, with many recognizing skilled craftsmen, as at Austin, Wichita Falls, El Paso, Harlingen, Fort Worth, and San Antonio.

The San Antonio dinner paid tribute to that city's Chamber of Commerce, for its long record of community service.

Over the state, many special radio and television programs were tied in with newspaper publicity.

Many TSA Members Active In Newly-Organized Specifications Institute

Many members of the Dallas Chapter of TSA are active in the newly-organized affiliate there of the Construction Specifications Institute.

The purpose of the CSI is to promote improved specification practices in the construction and allied industries, including gathering and analyzing statistics, engaging in research on specification writing, and maintaining a clearing house for unbiased technical information on specifications.

Founded in 1949, CSI now has 1256 members in 10 Chapters. The Dallas Chapter, when it receives its charter, will become the eleventh affiliate.

H. T. J. Martin, specification writer for the Dallas architectural firm of George Dahl, was named president of the new North Texas affiliate. Grayson Gill, former president of TSA, is vice president. Directors include Thomas D. Broad and Terrell R. Harper, both prominent members of TSA-AIA.
A New Design In School Lighting

By C. A. Winkelhake, Ph.D.
School of Architecture and Planning
The University of Texas

In recent years many architects and educators have held the position that school lighting should help the student fix both the identity and the location of his varied school tasks with least effort. During these years lighting research has shown that conditions of reflected flux significantly relate to the visibility of typical school-type tasks. Among other things, this condition has been called "dimage."1

Varied designs today continue to include out-of-date lighting solutions, as for example Van de Rohe's Crown Hall at Illinois Institute of Technology. Nevertheless, contemporary standards for good seeing conditions in school environments have steadily improved during the past several decades, and present concern is with the foremost lighting design development which has taken place in the last few years.

I. Luminous-indirect luminaires made a big forward step possible in school lighting design about 10 years ago. Their development made the ceiling function through reflection as a quasi-source of illumination. The luminaires themselves acted only as radiators to furnish the light energy for the ceiling to reflect.2

Examples of designs using luminous-indirect luminaires are numerous today. The diffuse, even distribution of light from the luminous-indirect luminaries directed to the ceiling and reflected to the surrounding surfaces of the room corresponds favorably with the student's requirements of fixing both the identity and the location of his visual task with least effort.

The important thing to note here in relation to a new design era in school architecture is that luminous-indirect luminaires today in many schools throughout the nation provide the equivalent to a total ceiling area light source. This means a total ceiling area light source. This means a

Total Ceiling Area Light

Here, in a classroom at Olympia School in Daly City, Calif., is an example of total ceiling area light. The diffused, even distribution of light directed downward comes from the total ceiling area via a translucent medium. This is said to correspond very satisfactorily to the varied demands of orientation and visual performance in the contemporary school environment.

A limited number of total ceiling area light sources are already in use today in schools. One example, here illustrated, is a schoolroom in Daly City, California. The diffuse, even distribution of light directed downward comes from the total ceiling area via a translucent medium. It corresponds very satisfactorily to the varied demands of orientation and visual performances in the contemporary school environment.

III. Architecturally speaking, the elimination of odd sizes, shapes and numbers of small light fixtures obviously creates many new design possibilities. From the standpoint of the organization of volume and mass in architecture, a new space freedom is born. Here, in a classroom at Olympia School in Daly City, Calif., is an example of total ceiling area light. The diffused, even distribution of light directed downward comes from the total ceiling area via a translucent medium. This is said to correspond very satisfactorily to the varied demands of orientation and visual performance in the contemporary school environment.

To sum up: Spatial freedom as well as human freedom from environmental stress are both capable of realization through the development of the actual total area light source. This means a more complete functional quality which includes a more complete aesthetic quality, and this very neat dual accomplishment will characterize a new design era in school architecture as it makes visual and functional order a more complete reality.


BRONZE MONUMENT

Some 4,000 years B.C., on artificial mounds towering above the muddy Mesopotamian plains, the Sumerians began building their many-storied brick and stone ziggurats, the prototype of the Tower of Babel, in honor of their long forgotten gods.

It was not until 6,000 years later, and more than 6,000 miles away, that men devised the first practical embodiment of his age-old aspiration towards the sky, the modern skyscraper.

SKYSCRAPER BECOMES PRACTICAL

In the intervening gap of more than five millennia, "commonsense" builders throughout the world had dismissed the dream of skyscraping structures of practical use—as opposed to pyramids, monuments and cathedral towers—as an architectural fantasy.

But, in the second half of the 19th Century, the skyscraper became possible, practical and necessary. This was the direct result of the world-transforming Industrial Revolution and its accompanying outburst of inventive genius and vast growth of cities.

So was born the skyscraper—and it was both inevitable and fitting that its birth occurred in the United States, the newest of the great nations, the only one conceived and born in a new continent, free of the shackles of outworn tradition.

The industrial revolution, by making unlimited supplies of iron and steel available for the first time in history, made possible the employment of metal as the primary building material.

This led directly to the great architectural revolution of modern times, the use of the metal skeleton, instead of masonry or brick walls which had to grow thicker as the building grew taller, to support the entire weight of the structure. Metal's enormous strength and comparative lightness removed—from the practical viewpoint—virtually all previous height limitations.

FIRST SAFETY ELEVATOR

The skyscraper was made practical—for nobody wants to climb more than three stories—by a typically American "do-it-yourself" inventor, Elisha Graves Otis. In 1852, while master mechanic in a Yonkers, N. Y., factory, he invented the first safety elevator.

The skyscraper became an economic necessity when the vast growth of cities enormously increased land values.

Modern Skyscraper

This New York skyscraper symbolizes the modern evolution of the tall buildings made necessary by concentration into urban areas and resulting high costs of land.

in business districts. Since they could no longer, from a dollars-and-cents viewpoint, expand horizontally, buildings had no place to go but up.

The world's first true skyscraper, the Home Insurance Building, was completed in Chicago in 1885. It met all three qualifications. A metal frame structure, it was the first to use Bessemer steel beams. Its elevators were both fast and safe. And, erected on increasingly valuable land, it stretched skyward, first 10 stories and then, in 1890, 12.

The second true skyscraper, the 13-story Tacoma Building, was erected in Chicago in 1888.

As is the case with virtually all major advances and invention, controversy still rages as to whether the Home Insurance Building, or the Tacoma Building, erected three years later, deserved the title of "first skyscraper."

But in 1931 a committee of architects and construction experts awarded the Home structure the palm of priority.)

1892 COLUMBIAN EXPOSITION

Then, in its birthplace Chicago, the skyscraper concept reeled from what seemed a fatal blow. Ignoring completely this distinctively American architectural advance, the 1892 Columbian Exhibition, staged to celebrate the tercentenary of the discovery of America, chose for the exposition buildings the pompous—and to modern minds vulgar—Roman Renaissance style.

Louis Sullivan, great architect and acknowledged leader of the new "skyscraper" school, mourned that "thus architecture died in the land of the free and the home of the brave . . . the damage will last for half a century."

But, fortunately, Sullivan was wrong. The skyscraper, filling a need that no other form of structure could, would not be downed. In Chicago itself, Sullivan's own masterpiece, the Gage Building, which foreshadowed and paved the way for the climactic evolution of the Skyscraper concept in such edifices as the new Seagram Building, in New York, was completed in 1898.

SPREADS ACROSS GLOBE

The beauty and practicality of this great American contribution to architecture and modern civilization—one of the very few major revolutions in the art of building—soon spread it throughout the United States and the world. In virtually every great city across the globe the skyscraper was recognized as the one possible solution of the dilemma posed by ever mounting population.

(Continued on Page 9)
University Study Would Find How Schools Deteriorate

School administrators in Texas and over the nation may profit from a three-year study now underway at the University of Michigan. Principal objectives of the study are to determine just how and why an average school building deteriorates, and what should be done at what time to effect maximum economy.

Architects are playing a central role in the Michigan study.

“We want to help school board members and administrators obtain maximum educational benefits at the least cost," explains A. Benjamin Handler, associate professor of planning, who is in charge of the work. "There is little, if any, information available to them on the useful lives of school buildings, the changes to be expected through the years, and the ages at which a building should be repaired or abandoned. Our objective is to provide this information."

To find out how the average school building deteriorates, the researchers charted the defects in a large sample of "unsatisfactory" schools in Michigan, then correlated these defects with age.

The schools were considered unsatisfactory because of educational deficiencies, fire and structural hazards present, poor location, or a site too small to meet future needs.

The result of the survey, Professor Handler reports, is a fairly clear-cut picture showing the vital stages in a building's life.

During the first two decades or so, it is noted, only relatively minor defects and inadequacies show up. The third decade is one of two critical periods, however, for the number of defects becomes marked, much equipment needs to be replaced, and a general renovation is sometimes in order.

But the process of deterioration continues, Professor Handler's group found, and by about the age of 40 the simultaneous accumulation of several kinds of obsolescence—educational, environmental, structural, locational—reach a peak.

If the structure is modernized, he adds, 15 more years of satisfactory use may be expected.

During the sixth decade, an appreciable portion of the schools are abandoned, and those remaining embark on their final decades, receiving no major repairs. The group found that most schools are abandoned between 60 and 69, with the average age 63.

Other phases of the program include:

1. An estimate of the overall school plant needs in the State of Michigan between now and 1970. Preliminary estimates here indicate that, if the present rate of expenditures is maintained, the shortage of school rooms should be eliminated by 1963.

2. A study of school growth patterns for every county in the state and every incorporated area with a population of more than 10,000. Projected for 1960-70, the study includes estimates of total populations, school age populations, total enrollments.

3. Developments in education affecting buildings of the future, obtained partly by a poll of school superintendents.

4. Developments in the field of architecture and design affecting schools, obtained by a survey of architects and publications.
Brazos Chapter, The American Institute of Architects Representative Selection:

Brazos County Courthouse and Jail, Bryan, Texas

CLIENT: Brazos County
County Judge — A. S. Ware

ARCHITECT: Caudill, Rowlett, Scott & Associates, TSA-AIA, Bryan, Texas

INTERIOR PLANNING: Knoll Associates, Inc.

MECHANICAL ENGINEER: J. W. Hall, Jr.

CONSULTING ENGINEER: W. E. Simpson Company

LANDSCAPE ARCHITECTS: Caldwell and Caldwell

CONTRACTOR: A. P. Kasch and Sons

The Brazos County Courthouse and Jail was to express the county "capitol" idea; yet it was to be friendly and inviting in character. The business and service offices — Clerk, Tax Collector, Health, Education, Extension, and Welfare — were to be easily accessible to the public. These offices, having little or no relationship to each other, nor to the judicial functions of the county, could have direct and separate public entrances.

The result was the design of a zoned campus-type plan, a unique decentralized plan for a courthouse. The business offices, the service offices and the judicial functions are housed in six separate units separated by landscaped courtyards. In effect the plan locates most of the offices on the ground floor and public elevators are eliminated.

Ground level offices have an unconfined atmosphere; glass walls direct the view toward landscaped areas rather than toward the streets. Separation of the units permit a surge of people in or out of one unit without disturbing those in other buildings. The individual units are separately lighted, heated and cooled.

FOUR-STOREY BUILDING

The four-story building houses all the judicial functions. The first floor houses a separated jail entrance through the Sheriff's Department, the County Judge's Chamber, the Commissioners' Court and offices and the Drivers License Bureau. To handle large groups of people, a wide lobby-corridor was provided to serve the second floor District and County Courtrooms. Also found on the second floor are the District Judge's Chamber, Jury Rooms, the District Clerk, and offices for the Court Reporter and Court Attorney. The third floor houses the Grand Jury Room, Justice Courts, Probation Officer, Constable, Civil Defense, the Jury Deliberation Room, and the Jury Dormitory (private entrance from court-room). The basement has public toilets, maintenance and mechanical areas.

The jail is located on the top floor of the judicial unit. The lower floor exterior walls are extended upward, isolating the jail windows from public view. The jail is served from the sheriff's department on the ground floor by the only elevator in the building. Prisoner traffic remains separated from public traffic to the courtrooms through the use of private stairways and corridors and the elevator. The jail is mechanically cooled by forced air.

FIVE SMALLER UNITS

The five smaller one-story units contain the following departments: (1) County Clerk, Auditor and Treasurer; (2) Tax Assessor and Collector; (3) Public Welfare and Veterans' Service Officer; (4) County Health; and (5) County Superintendent of Schools and County Agents and Home Demonstration.

BRONZE MONUMENT

(Continued from Page 7)

ing ground costs and the ever growing demand for office and service space within the high-priced urban business area.

Strangely enough, however, New York City, now internationally recognized as the showcase, shrine and center of the skyscraper, at first lagged behind Chicago and St. Louis in skyscraper development.

This was ended only when New York's antique building code, which had stubbornly refused to recognize the superiority of steel over brick and stone, was drastically revised at the turn of the century.

Interior View of Winning Selection

A view of the District Courtroom in the Brazos County Courthouse and Jail in Bryan with walnut and travertine tones enlivened by persimmon counsel chairs. The witness chair is highlighted by a large fixture and is not enclosed; observation of the witness and his movements is considered important.
Number Of Swimming Pools Nears 100,000

The number of contractors who build only swimming pools and the distributors who sell them pool supplies has grown from 400 to 1300 just in 1956!

In 1954 there were 36,000 pools in the U.S. One year later there were 56,000, and today there are conservatively estimated to be 86,000 pools in operation.

Cost of construction and original equipment of the 50,000 built in 1956 will exceed $325,000,000.

GROWING MARKETS FOUND

Lushest market for pool builders is the institutional or commercial one. Throughout the country neighbors are forming clubs to build pools; municipalities are building community pools; builders are advertising community pools with tracts of homes or pools optional with individual homes; cabana clubs are springing up all over; almost all new hotels or motels are being built with pools; country clubs are finding pools pay for themselves in increased food and beverage receipts.

A great percentage of all new school buildings, even elementary schools, include either outdoor or indoor pools. Thousands of smaller villages and towns, some with population as low as 1300, are raising funds for pools either through subscription or bond issues. Before long every U.S. hamlet will have its own pool!

NATIONWIDE DEMAND NOW

Although the greatest demand for pools has come in the last few years from warm areas like southern California, Florida, and the Gulf Coast, the eastern seaboard and the mid-west are catching up. In many locations the outdoor swimming season has been extended two months with the use of recently developed water heaters and wind baffles.

New products, new building methods, new types of pools, and increased competition have been gradually reducing the cost of pools. Now a satisfactory pool can be built in a frost-free area for as little as $1500. In Texas and the deep south the same pool would cost about $3000, while in the north it would be from $3500 to $5000 and up.

Interestingly enough, 80% of the pools built in the last year were paid for in cash. Of the 20% that were financed, banks put up some 70% of the money while finance companies handled 20%.

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2900 E. 17th ST. P. O. BOX 6032 AUSTIN, TEXAS
New Reference Book
For Airport Planning
Available From IATA

What the world's airport planners should know about the construction of airport buildings and aprons adequate for the needs of a rapidly expanding air travel industry is contained in a new reference document just published by the International Air Transport Association.

The 133 pages of the new IATA volume contain a wealth of current information and airline technical experience on planning the important terminal-building areas of airports. It presents the coordinated opinions of the association's 74 member airlines, as major users of the world's international airports.

Included in the volume is a special section on heliports, their design and location in relation to conventional airport layout.

The IATA document results directly from a recent airlines study of current and future requirements for terminal buildings and apron facilities at airports throughout the world, the introduction states.

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Texas Bitulithic Company
NEW PRODUCTS

The first “Home Theater,” a cable distribution system to place first-run pictures, originating in the booths of local motion picture theaters, on television screens in the homes of subscribers throughout the city, is planned for installation in Bartlesville, Okla. The Bartlesville “Home Theatre” is planned to carry only current motion-picture product, which will also be shown in the local conventional theater.

The “Home Theatre” film will feed directly into the receiver in the subscriber’s home. This wired system is then tapped, and a thin cable or wire lead is taken directly to the regular television receiver in the subscriber’s home.

A new counterflow furnace is being introduced by the Plumbing and Heating Division of Rheem Manufacturing Company.

This new Rheem furnace conserves approximately 13 inches of vertical space in contrast to previous counterflow design. In arriving at this advantage, an easier installation is possible, plus increased space for the installation of Rheemaire air-conditioning in counterflow heating systems.

Increased flexibility in concealment of wall and ceiling-located plumbing control valves is provided by “INSPECTORS,” a new line of access doors now being marketed in Texas by Albert A. Sterling, Jr., and I. P. Newby, exclusive representatives for the building drainage products of J. A. Zurn Mfg. Div., Zurn Industries, Inc., of Erie, Pa.

According to Zurn officials, these new access doors substantially aid architectural planning and engineering construction. Easier plumbing maintenance and repair can be provided without any penalty appearancewise because “INSPECTORS” are designed to blend attractively with modern wall and ceiling materials. They are available in stainless steel, perma-coated steel for use with painted areas, or chrome-plated for use with marble, tile and similar materials.

Full 180° opening permits unobstructed access to controls; rounded safety corners prevent injury to service personnel. Flexible anchor straps permit rigid attachment to brick or masonry construction, while holes in the steel frame facilitate nailing to plaster or wood construction.

“INSPECTORS” are available in seven different sizes, from 8” x 8” to 24” x 24” of open area. Rectangular sizes and designs for particular specifications are also available, if desired.

A new Vina-Lux point-of-purchase display has just been made available to Azrock dealers by the Azrock Products Division, Uvalde Rock Asphalt Company.

Easily set up on counter or window, the unit stands only 18” high and occupies less than 1 square foot of space. The realism of this three dimension, full color display attracts attention to Azrock’s colorful line of vinyl-asbestos tile.

The first application of Fiberglas Perma-Ply, a product of Owens-Corning Fiberglas, has been completed atop the new manufacturing plant and office building of the Garrett Oil and Tool Company, a division of U. S. Industries, in Longview, Texas.

About 80,000 square feet of the glass material was installed on the roof. Fiberglas Perma-Ply is a porous fibrous glass mat which, in combination with asphalt in built-up roofs, provides strong reinforcement to prevent cracking, blistering and other types of deterioration which have plagued roofers for many years.

The fibers of glass in the Perma-Ply sheets are said to strengthen the asphalt in a built-up roof just as fibrous glass provides reinforcement for molded boat hulls and automobile bodies or as steel rods and mesh are used to reinforce poured cement.

The “glass roof” concept is described by roofing contractors as an important development.