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GENERAL VIEW FROM THE SOUTHWEST OF THE MISSION SAN JOSE DE AGUAYO

The OLD SPANISH MISSIONS *in and* ABOUT SAN ANTONIO

BY F. S. LAURENCE*

OF the impressions carried home from an extensive Southwestern tour of the United States last Spring there stands out the memory of two places visited which throw over the visitor the spell of a tradition as nearly approximating the atmosphere of an ancient past as any locality in the United States can give. One is New Orleans, Louisiana, and the other is San Antonio, Texas.

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In San Antonio one begins to get this impression of an historic past from the first casual stroll about the streets in which chance will bring one, now and then, unexpectedly face to face with some interesting example of old Spanish settlement architecture, but the impression is not to be felt in its full force until, leaving behind the bustling streets of this highly progressive and enormously widespread modern city, the old buildings of the early Spanish Missions with their surroundings of

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peaceful landscape come into view well outside the city limits. Here one steps at once into the softly dreamy atmosphere of an ancient and romantic past.

To some extent the spell is foreshadowed when entering the one mission building which is to be found in the very heart of the city, the Alamo. But here one's reverie has to be conducted within the sound of strident voiced motor cars and the

and atmosphere throughout a great part of our country.

It was my privilege to be piloted over these wonderful old mission buildings by one of the leading architects of San Antonio in an afternoon set apart for the purpose and to be able to yield myself to the absorbing contemplation which his vast fund of intimate knowledge of their construction and history can induce. It was with the



INTERIOR OF MISSION SAN JOSE DE AGUAYO

View looking through the nave toward the main portal. Tradition avers that the arched ceiling over entrance was laid upon a solid earth center extending from the floor to apex of the arch. Evidences of the use of wood still existing in the construction of the belfry towers cast doubt upon the probability of this expedient suggesting that frame centers were probably used. The doorway at the left leads into the chapel which is still in use.

chattering comment of tourists in an interior which has been preserved as a sort of museum and arranged for exhibition purposes.

Not until one draws up before the exterior of one of the outlying missions sleeping peacefully in the golden sunshine of a perfect Spring day does the feeling come home that here, all too unfamiliar to our people at large and perhaps to the members of our architectural profession, stand architectural monuments which may well be the pride of any country and the source of superb inspiration for an architectural style to a great extent indigenous and wholly appropriate to conditions of climate

profoundest gratification also that I learned that this enthusiastic student had in preparation a book upon these old missions to be illustrated with colored restoration drawings which would convey the fact of their ancient polychrome splendors.

For it is not generally known that these old buildings in and about San Antonio were originally a blaze of brilliant polychrome coloring from the lowermost stones in the exterior walls to the topmost pinnacles of their belfry towers. Yet such was clearly the fact beyond all reasonable dispute upon close examination of the outer wall surfaces. Constructed massively of local stone afterward



WINDOW IN SOUTH WALL OF THE CHURCH OF THE MISSION SAN JOSE DE AGUAYO,
SAN ANTONIO, TEXAS

surfaced over with stucco, most of which has eroded and fallen off, distinct traces yet remain to the closely examining eye of the inscribing floral surface designs with which the stucco surface was covered and which here and there still bear distinct traces of the applied coloring. In general the passion flower was the prevailing motive. Higher up on the towers more distinct remains of the coloring yet exist notably in the voussoirs of the arched openings in the belfry towers—brilliant

wards garbed in all the brilliant coloring of their many hued blankets and vivid headdress; while in the near background, pacing slowly before the gorgeously carved portal of the mission chapel, a Spanish sentry in mediæval breastplate and helmet with his glittering halberd adds the finishing touch to the pictorial composition. The color in the foreground, vivid and vibrant, merging in the equally brilliant polychrome of the facade and mellowed into an encompassing golden glow by



MAIN FRONT OF THE HISTORIC ALAMO, SAN ANTONIO, TEXAS

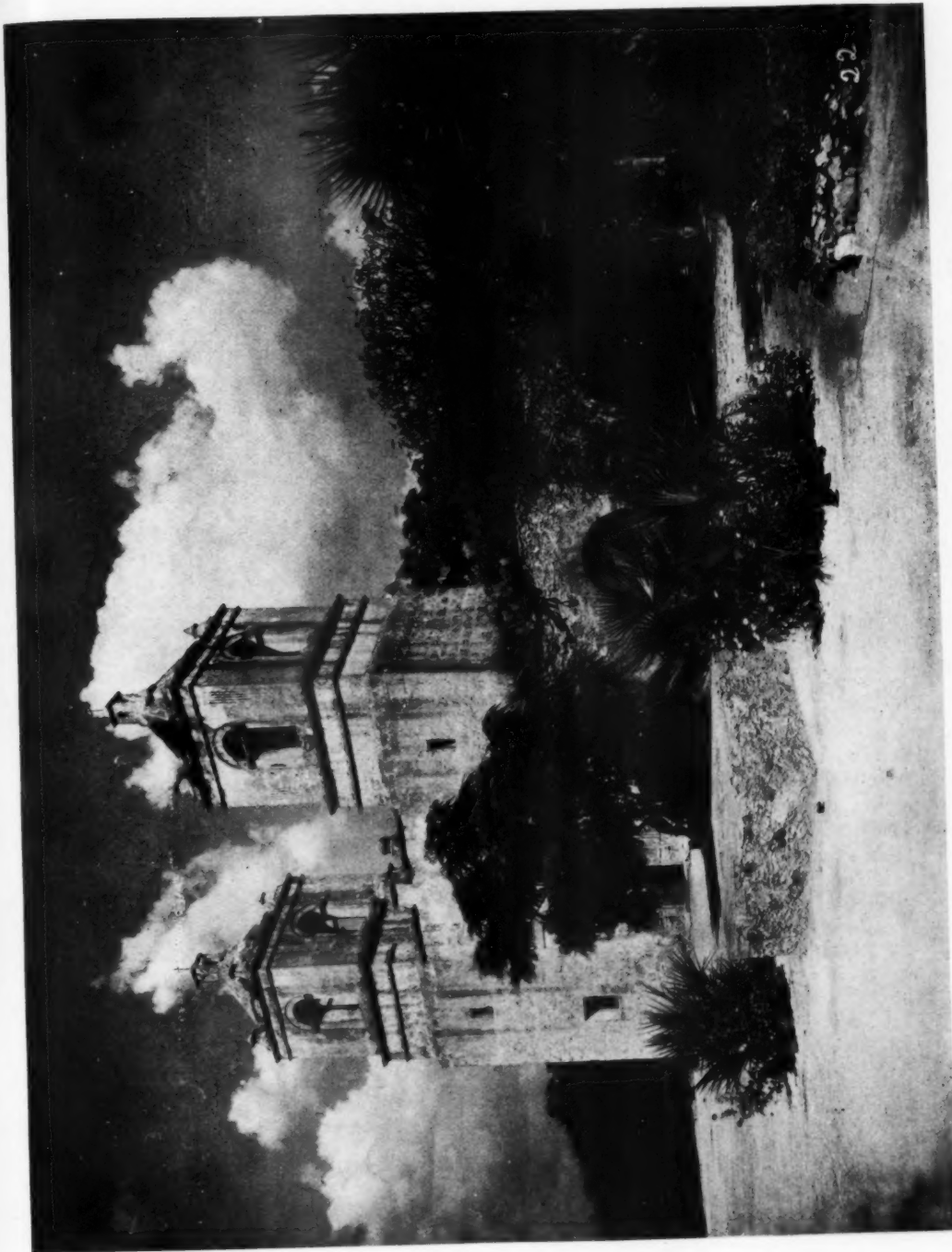
Now used as a museum. The heroic story of this building is familiar to all. It was formerly the chapel of the Mission San Antonio de Valero and was founded in 1718

blues, reds and yellows of an original quality that may still be identified upon close hand scrutiny.

The defensive walls which, with the outbuildings, usually encompassed the mission chapels shown in the illustrations, have in many cases crumbled away, but one can readily picture the original ensemble and not a great stretch of imagination is required to people the enclosed compound with the animated life which at one time must have contributed to a strikingly picturesque whole. One can still see the white robed monks of the old orders who ventured into this one time savage wilderness passing back and forth among or standing to address an assemblage of their aboriginal

the rays of the afternoon sun! Truly a subject for the palette of a Titian!

Of the outlying missions the Mission de la Purissima Concepcion is the best preserved, standing very nearly intact and still being used by the Catholic Church for regular services. Inside the chapel, whitewash has done its best to eliminate the artistic charm of the old stone walls and ceiling. Architecturally it is perhaps the best example although well informed opinion differs between that and the Mission of San Jose with its single tower and elaborately carved main portal. This latter feature by the way, the decorative carving, is one of the marvels of these early structures.



CHAPEL OF THE MISSION DE LA PURISSIMA CONCEPCION DE ACUNA, SAN ANTONIO, TEXAS
Traces of the original polychrome coloring are still to be discerned upon the outer walls

Carved from a soft native stone of mellow whitish color, the degree of artistic excellence shown in the sculptural treatment is astounding. Considering that this Mission was founded in 1720 in the middle of what was then a vast unsettled prairie peopled only by nomadic savages and that the building must have been erected largely by the labor of the monks themselves, one can only account for the scholarly completeness of architectural grasp in the details of its design and the masterly qualities of its sculptural carving upon the supposition that some of the leading designers and craftsmen from Spain must have been specially sent to execute this work, which was indubitably carved upon the spot. Indeed a tradition not absolutely verified exists that the King of Spain delegated one of the leading architectural sculptors of the period to come to America to carry out this work. Something of its scale can be visualized by reflecting that the head of a six foot man standing in the doorway would scarcely reach the feet of one of the figures in the flanking niches. (These and the similar sculptured figures above represent the virgin and several saints.)

The elaborately sculptured window in the South front, pictured in the detail illustration, proved a feature of particular interest to the writer because, although executed in the same native stone, its construction, the spirit of its ornamental relief and its interesting variations of color strikingly resemble work in terra cotta, and it furnishes a suggestion for the latter material which contains exceptional possibilities of interest. To realize in permanent form the feeling of this early ornament and its original polychromatic treatment would be something well worth while. Of the original coloring not a trace remains in this detail, the impermanent pigments with which it was colored having long since disappeared under the exposure to weather.

Of the remaining missions, San Francisco de la Espada, San Juan de Capistrano and the Alamo, but little need be said in detail. Excessively interesting from the standpoint of romantic history

and with notable elements of architectural charm in simpler form, the general description given here of the two more important ones fits the remaining examples. In one of these the writer noticed instances of the clay tile timber arch construction found in the early contemporary architecture of Spain and introduced to modern use in America by Mr. Guastavino. These clay tiles, about an inch thick, were in the light pink red of modern hollow tile fireproofing and were quite probably of native manufacture, although perhaps brought from Mexico.

Contemplating these old buildings with their wealth of suggestion for the modern architect, one is inclined to wonder why this precedent so admirably adapted to the physical conditions of the surrounding Southwest has not been more freely drawn upon for inspiration in the design of modern buildings throughout that section. California apparently has exploited the suggestions of an early mission architecture by no means more appealing than that of Texas—some authorities hold not so much so. Texas, American, alive, vital and natural to the core, and which has produced about the only native folkcraft in the United States which is entitled to take a high æsthetic rank as creative art, the gorgeously carved leather saddles of the cowboy, seems to have passed these sources of inspiration by for the inappropriate glories of the Wall Street style of architecture in its modern building work. San Antonio, it is true, with a fine appreciation of the historic sentiment embodied in these old mission buildings, would promptly hie to the lynching post anyone who might propose to destroy them and in one instance at least they have been so far valued that an important railway station is a virtual replica of an early mission chapel. So much so that the writer entirely forgot the purpose which took him there post haste in a taxi with sundry bags and suitcases and requested the red capped usher to lead him to the best pew, "not too far forward, if you please." When this can happen in Texas there is some hope for the rest of the country.

LOCKS and KEYS—PART II

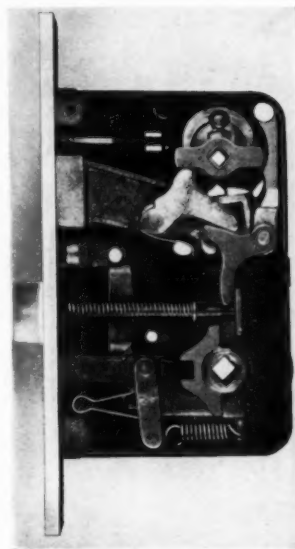
BY HARRY L. HARRIS

THE history of early American locks is vague. Unquestionably the first locks were hand wrought at blacksmiths' forges, the efforts of individuals. Many quaint museum pieces are in existence but they are valuable only as showing the skill and patience of the genius who constructed them. It is, perhaps, safe to say that the first American locks made in quantities, and in common use, were the wooden case rim locks. These locks had wrought iron plates mounted on an oak block. They were applied to the door by driving wood screws through the block into the door, after a keyhole had been cut through the stile of the door. An excellent example of this type of lock was illustrated in the first part of this article. It was taken from the door of a school in New Britain, Connecticut, kept by Elijah Burritt, brother of Elihu Burritt—The "Learned Blacksmith." Elijah Burritt conducted the school about 1820, indicating that the wood rim lock was in use at that period, although the specimen illustrated is clearly the work of an individual. The lock was the "best seller" in the early eighteen hundred and thirties.

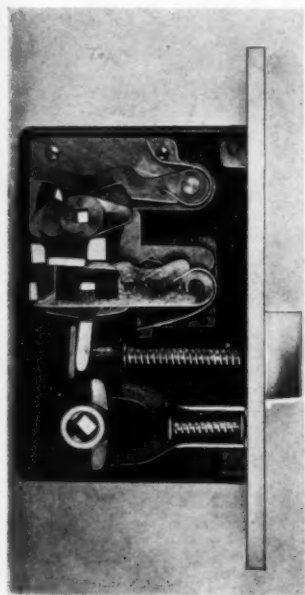
In the late fifties, cast locks depicting birds, beasts, and rural scenes became very popular. One of the most celebrated of these was the "Emigrant Lock" illustrated in this article. The hardy

Pioneer is shown with his trusty gun. These locks, heavily bronzed, were of the simple warded type, and had a tremendous vogue in the days when men's minds turned to the winning of the West. It belongs to the period of horsehair furniture, Berlin worsted "mottoes," and floral wall paper.

Lock history from 1851 is comparatively easy to read. The International Exposition held that year in London, developed the greatest "lock-picking" contest in history. Public interest was keen, and well known bankers on both sides of the ocean were drawn into the controversy. Pamphlets were published and much bad feeling was generated by the claims made by those who manufactured locks and those who were able to pick them. The American expert was A. C. Hobbs. He won many prizes in the contest, and finally successfully picked the best English bank lock then manufactured, to the



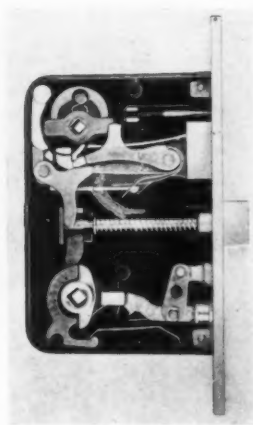
FINE EXAMPLE OF A CYLINDER FRONT DOOR LOCK WITH EASY COMPRESSION SPRINGS



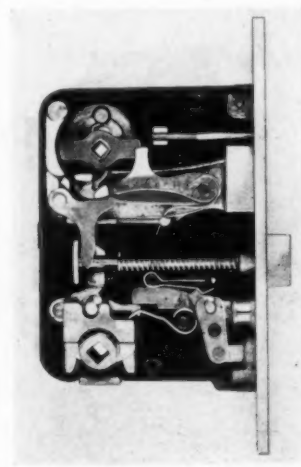
CYLINDER LOCK USUALLY USED IN HOTELS FOR CORRIDOR DOORS. DOUBLE COMPRESSION SPRING



CYLINDER LOCK FOR FRENCH DOOR OR NARROW STYLE FRONT DOOR. FRENCH SPRING



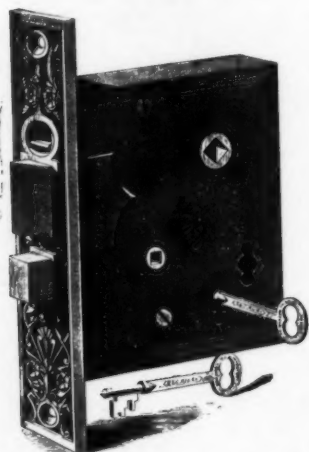
TYPE OF MODERN CYLINDER FRONT DOOR LOCK WITH COMPRESSION AND LEVER SPRINGS



ENTRANCE DOOR CYLINDER LOCK. USED WITH HANDLE OUTSIDE AND KNOB INSIDE. COMPRESSION AND SLIDE LEVER SPRINGS

great chagrin of our English cousins. Some of the locks picked by Mr. Hobbs were of the most ingenious mechanism, beautifully made, and ponderous in construction; but they were all key locks. Now it may be accepted as a truism that any lock having a keyhole can be picked. It is a question of time, delicate tools and a natural aptitude for the work.

Mr. Hobbs, spurred on by his success abroad, spent a great deal of time and money in inventing what he fondly hoped would be an unpickable lock but, entrance once obtained through the keyhole, it was almost as readily opened as the earlier locks.

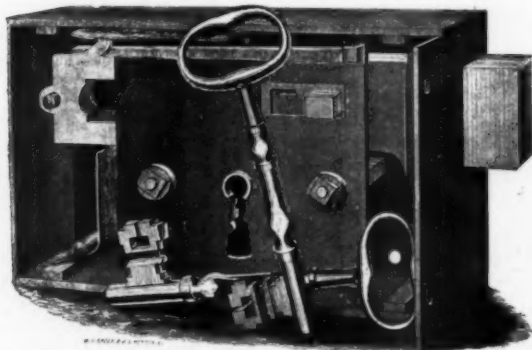


A FINE SPECIMEN OF ELABORATE FRONT DOOR WARED LOCK MADE IN 1868

Linus Yale, Jr., then discarded all forms of locks in use at that time and invented the first dial lock, which he called the "Double Treasury." This type was, of course, a tremendous stride in the right direction, but Mr. James Sargent, manufacturer of a competing brand of locks,

soon demonstrated that the "Double Treasury" was pickable. Corrections and modifications were made, however, and the dial lock as made today has successfully resisted all efforts to gain entrance through the body of the lock itself.

As better tools became available, more and more intricate locks were made, until the knowledge became widespread that there was little use in putting an expensive, complicated lock on a door that could be forced from the hinges, or by bat-



STURDY EXAMPLE OF A WARED LOCK MADE AND SOLD IN 1864. NOTE INTRICATE PATTERN OF KEYS AND SIZE OF BOLT

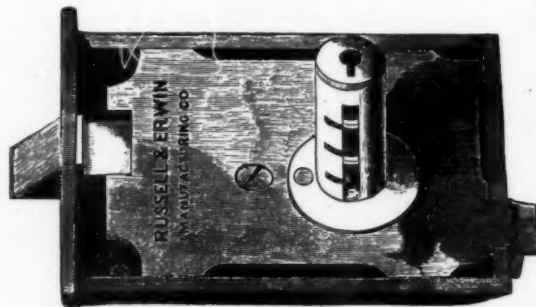
tering in the door itself. Webber & Fields, in one of their famous skits, illustrated this point of view. Determined to gain entrance to a safe, they struggled for some time with complicated tools and explosives, but, without effect. Then Mr. Fields turned the safe around and kicked in the back.

Security in locks today is well understood to be a relative term, and the complicated types of former years have given way to three general kinds of locks, which appear to fill all requirements. The three locks generally used are the "warded," the "lever tumbler," and the "pin tumbler."

In place of the elaborate keys of bygone days, three types of keys suffice today. The round key



FRONT DOOR LOCK IN GREAT VOGUE IN 1869-70



EXAMPLE OF ONE OF THE FIRST TUBULAR CYLINDER LOCKS MANUFACTURED. REPRODUCED FROM A WOOD-CUT IN A CATALOG OF BUILDERS' HARDWARE IN 1876



with solid cylindrical shank and stem, with a wing bit; the barrel key with a tubular stem, the hole of which slides over a guide pin in the lock; and the flat key which has three variations, marking the development of this handiest, most effective key. The first flat keys were of simple slips of flat metal. Later they were corrugated; and today, the best type is the "paracentric" key which, with its millions of possible variations, makes possible



A MID-VICTORIAN TYPE
OF DOORKNOB



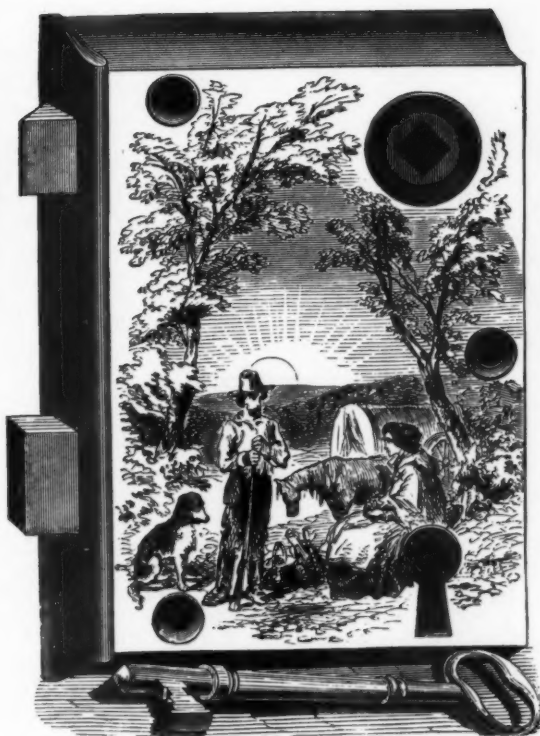
WROUGHT IRON HANDLE
USED ON SCHOOLHOUSE
DOOR, WHICH WAS FAST-
ENED BY A "WOOD RIM"
LOCK



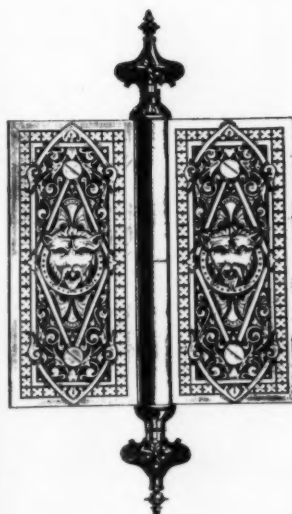
ONE OF THE FIRST "COM-
PRESSION BRONZE" DOOR-
KNOBS MADE IN THE U. S.
THE FACE OF THE KNOB IS
PICKED OUT IN BLACK AND
WHITE ENAMEL. TYPICAL
OF THE LAST WORD IN
HARDWARE TASTE IN THE
EARLY SEVENTIES



A REAL BRONZE
DOOR HANDLE MADE
IN 1870



THE HOUSEHOLDER WHO PLACED ONE OF THE CELE-
BRATED "EMMIGRANT LOCKS" ON HIS DOOR IN THE
EARLY SEVENTIES WAS SURE HE HAD INDULGED
IN THE ULTIMATE IN ARTISTIC TASTE AS WELL
AS SECURITY



FRONT DOOR BUTT, CHARACTER-
ISTIC OF THE ARTISTIC TASTE OF
1870. THE ELABORATELY CHASED
PLATES WERE SCREWED INTO
POSITION AFTER THE BUTT HAD
BEEN PLACED ON THE DOOR

EARLY EXAMPLES OF HARDWARE DESIGN

the production of an equal number of locks without duplication of keys.

The vast improvement which has been made within the last thirty years in the mechanics of lock construction is paralleled by the perfecting of artistic design. Individual locks, escutcheons, and knobs of great beauty were made in the Middle Ages, but they were the work of artisans, retained by titled men of wealth.

The early efforts toward beauty of design in this country were necessarily crude. Tools were imperfect, workmen uneducated. The slow progress in which were combined mechanical excellence and artistic treatment was an evolution in which much

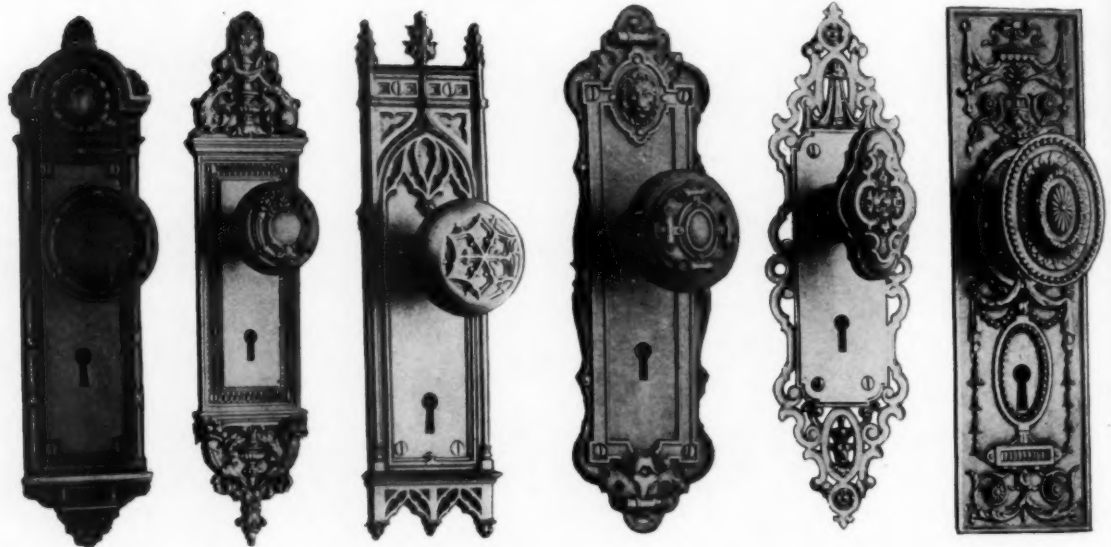
time, trouble and money were spent. Today when the reproduction of artistic craftsmanship is the ambition of every enlightened manufacturer, and when modern methods of merchandising have made it possible admirably to illustrate designs in hardware, and place those designs in the hands of hardware merchants all over the country for sale, it is difficult to realize that the "Emigrant Lock" of the early sixties was considered excellent art and of sturdy mechanical merit.

Builders' hardware was probably the last element, entering into the building of a home, to receive respectful attention. The architect of the early seventies could in masonry and woodwork, secure correct interpretation of his design. For hardware, he had to be content with what could be found on the hardware merchant's shelves. The cost of making special designs was prohibitive, and in disgust, the architect, perforce, accepted the plainest, least offensive hardware offered, rather than clutter up his efforts with the hideous designs then manufactured.

Today, industrial art is served by designer and workman combining their efforts in the same factory. Artistic effects are produced within cost limitations by the intimate knowledge gained by the designer in his daily contact with the workman and his knowledge of manufacturing methods to be used, by which his design is to be reproduced. It is the boast of American manufacturers that no architectural style can be presented that cannot from their stock be reproduced in worthy, artistic period designs to meet the demand. The American architect habitually employs a greater, more elastic variety of style than do the architects of any



TYPES OF KEYS IN COMMON USE TODAY. A. ROUND KEY WITH SOLID CYLINDRICAL SHANK AND STEM, WITH WING BIT. B. BARREL KEY, WITH A TUBULAR STEM. C. ORIGINAL TYPE OF FLAT KEY FOR CYLINDER LOCKS. D. PARACENTRIC KEY, THE LATEST AND BEST KIND OF FLAT KEY, ALMOST UNIVERSALLY USED FOR EVERY VARIETY OF CYLINDER LOCK



VIGNOLA
DESIGN
LOUIS XVI

BRAMANTE DESIGN,
ITALIAN
RENAISSANCE

TOULON
DESIGN,
GOTHIC

LEYDEN
DESIGN,
FLEMISH

HARDWICK
DESIGN,
ELIZABETHAN

CAENWOOD
DESIGN,
ADAM

other country. Greek, Roman, Gothic, Romanesque, Renaissance, in any one of the national types, Moorish, early English, Colonial are only a few of the current modes employed for which the hardware manufacturer may be asked to supply appropriate designs, and that it is possible to meet any and all requirements, is evidenced by the variety of period designs illustrated in this article.

The one problem left for the architect to face is the education of the man or woman about to build a home. For it is a fact, that the production of beautiful and appropriate designs in builders' hardware has outstripped the appreciation of, what Ruskin alluded to as the "masses." Choice is no longer, as formerly, between hardware that was merely plain, and hardware that was revolting. It is a choice between artistic efforts that are wonderfully beautiful; the production of which con-

stitutes one of the greatest American achievements in industrial art. Bronze, by process, is given the lovely patina of age. The oxidization of iron is retarded by the Bower-Barff process. Hand chasing produces magnificent light and shadow effects, and by new mechanical processes, wrought metal designs are produced in matted effects, surrounded by polished raised mouldings, that have heretofore been confined to cast metal designs.

Acknowledgment is made to the Russell & Erwin Manufacturing Company; Mr. Henry R. Towne, author of "Locks and Builders' Hardware;" Mr. Austin C. Lescaboura, Editor of "Scientific American;" "Knight's Mechanical Dictionary;" "Appleton's Encyclopedia of Applied Mechanics;" "The French Treatise of the Académie des Sciences;" M. Dehamel du Monceau "Art du Serrurier;" and the "Encyclopedia Methodique" for data and illustrations in this article.

THE LINCOLN HIGHWAY

THE following editorial from a recent issue of *The Lincoln Highway Forum* will interest architects. The American Institute of Architects may take credit to itself for being largely responsible for the great undertaking. In fact, it is one of the outstanding achievements of the Institute, whose Board of Directors, at a time when this project was beset by political foes, labored to good purpose to insure the successful undertaking of the national highway.

The editorial reads:—

The Lincoln Highway is now ten years old. During that ten years over \$50,000,000 have been expended on the improvement of the trancontinental road between New York and San Francisco. This season, traffic on the Lincoln Highway broke all records—exceeded all expectations—made all forecasts look ridiculous, awakened state and county authorities and the communities along the route to a new appreciation of the vital importance of that great artery, to a new understanding of the value of the road and the crying need for increased betterment.

The Lincoln Highway is proving itself not only the most important artery of through traffic in the Nation, but an asset of incalculable value to the states and counties and communities through which it passes.

What will the future bring? When sources in which confidence can be placed estimate that \$200,000,000 is being expended in California alone this year by motor tourists, when careful figures compiled at checking stations on the main routes of ingress into California show that 20,000 motor cars a month are entering that state now, and when it is understood that the Lincoln Highway is far from a satisfactory state of improvement at many points in several states, it is difficult indeed to make a forecast of what the next ten years will develop in the way of traffic on this road.

Certainly no program of improvement, no matter how far-reaching and ambitious, can keep up with the development of traffic!

The states west of the Mississippi cannot rush improvement on the Lincoln Highway too rapidly. Ten years from now they will still be behind the demands of the traffic. This year the Lincoln Highway has proven itself worth all that it cost and more. Every dollar expended on the betterment of that route will come back with dozens of others during the years to come to those far-sighted communities which are able now to see the signs of the times. Right now the Lincoln Highway should be paved with concrete from New York City to Cheyenne, Wyo., to carry traffic economically—ten years from now it will be.

ECONOMICS *as* RELATING to ARCHITECTURE

Economic Factors Which Underlie Construction Activity—Prepared for
THE AMERICAN ARCHITECT by the American Chamber of
Economics, Incorporated*

THE severity of the weather permitting, the construction industry will face a busy Winter. An open season, tolerating a heavier than normal movement within the industry, might contribute much toward the reduction of the existing building deficit. An inclement Winter, on the other hand, would only temporarily postpone this activity. There is still a heavy volume of construction under way, and the normal Autumn spurt in new building has resulted in the starting of some jobs deferred from last Spring. This Fall advance has not been notable for the reason that conservative builders are very cautious about their commitments. The receding volume of new jobs started and slightly weaker materials prices have brought about only a nominal reduction in building costs. It is to be hoped that the present gradual yielding of this expense feature matures into a definite trend. Demand is holding up very well, and, although it is declining in response to seasonal influences, it is running ahead of normal for this time of year.

Contracts awarded in the 27 states covered by the F. W. Dodge Corporation for the month of September showed only an insignificant change, less than 1 per cent, in comparison with the August return from the same districts. In a ten-year average September contracts awarded for these same 27 states have usually run about 14 per cent below the August figures, and the relatively high tide, at which the volume of new busi-

ness opened the first month of Autumn, lends strength to the feeling that late Fall and early Winter business will move in a plane comfortably above normal.

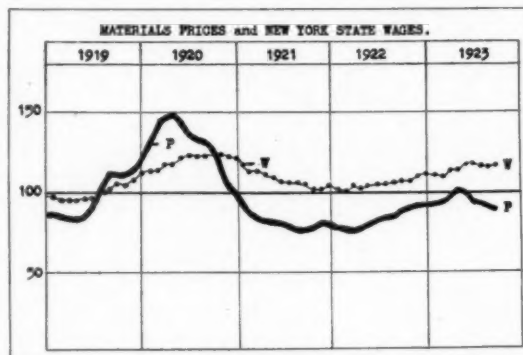
The value of jobs started in October, according to the ten-year average, should be about 8 per cent ahead of September, and October normally marks the peak of the Autumn advance. November returns fall usually 18 per cent below those of the preceding month, and December new business is normally 10 per cent below the November averages. These percentages measure only the average seasonal decline in the

volume of new jobs begun. As a result of the tremendous amount of building now under way, the total value of projects started in October should rise in excess of the usual October peak, and in November, December, January and February they should show notable resistance to the recessions common to these late Fall and Winter months.

The chief single impetus behind this surge of construction, which is carrying the volume of building above the

usual seasonal levels, is the vast need for new construction, a need that seems to defy reduction. Two years of record output appear to have brought the supply of building no nearer the demand than merely to have alleviated the urgency and distressing need that was such an obvious part of that demand a year ago. This deficit lends itself to only the most general approximation. In conservative circles it is still believed to be substantial. That it continues to be a power behind the industry, driving it onward, pushing it upward, admits of little doubt.

Two years of record building, nevertheless, together with the inability of accurately measuring this well of demand suggest rather strongly that architects, who have taken the enormous propor-



Materials prices are declining, but wages, as indicated by the trend of average weekly earnings in representative New York State factories, are reluctant to yield their high places. The price curve (P) pictures the trend of building materials reported by the Bureau of Labor, and the wage curve (W) is the trend of the average weekly earnings of the New York State factory workers. In both curves 1919 equals 100. The immediate prospective trend of curve P is sidewise and slightly lower, while that of curve W is sidewise and firm.

*The American Chamber of Economics conducts a consultation and educational service for executives, in economic principles. Its Supervising Director is George E. Roberts, Vice President of the National City Bank of New York. Co-operating with the Chamber are James B. Forgan, Chairman of the Board of First National Bank, Chicago; Frank A. Vanderlip, Financier and Economist, New York; Samuel Insull, President, Commonwealth Edison Company, Chicago; Joseph H. DeForest, Ex-President, United States Chamber of Commerce; Henry S. Prichett, President, Carnegie Foundation; Edward J. Nally, Managing Director, International Relations, Radio Corporation of America.

tions of this deficit for granted, should begin soon to give its size and its power increasing consideration and study. American economic history is filled with episodes of how just such vast pools of potential business, so wide as to defy measurement, so deep as to make concern for its exhaustion ridiculous, have in an unbelievably short time run dry. Now in haste it must be said that today there are no inklings of an approaching building depression. Quite the contrary, there are striking signs of a volume of new business that will remain above normal during the Winter and, as it appears now, well into the first and second quarters of 1924. Nevertheless, two consecutive years of business that work an industry to capacity, and the early prospects of an equally busy new year, these together with an immeasurable deficit of the industry's product should not stimulate as much caution and timidity as sincere interest and careful, thoroughgoing study.

A building depression is strikingly out of place in a picture of the immediate future of business. The present high tide of construction is faithfully supported by a stable, strong, and fundamentally sound movement in general industry and finance. Confidence and sentiment, to be sure, have not been sanguine. Speculative moods have been very irregular and depressed, and forward steps have been taken with a great deal of caution and timidity. Buying, for the most part, is a very deliberative process, partly because of the skittish and timorous industrial feeling as to the future and partly because of the weakness in general prices.

Production, in the 22 basic industries composing the Federal Reserve Board's index, is declining in a movement that has been corrected for seasonal variation. This index shows industrial output about 32 per cent above the low point of last year, and only about 11 per cent under the record high point of 1923. The immediate underlying trend, however, is unmistakably downward. Sales, generally speaking, are in good volume, particularly in wholesale trades, but the turnover of merchandise in retail establishments has been disappointing. New business is confined chiefly to immediate orders, small units, but rather heavy in the aggregate. Costs have yielded only fractionally. Wages are at a peak in the present movement, although employment has eased perceptibly. Prices are receding from the Fall high point in the wholesale markets, and while their recession is not likely to mature in a sharp, pronounced decline, a slightly lower price level will very possibly characterize the passing of the old year and the coming of the new.

High costs, and the timid purchasing of goods at prices which are relatively low have pinched profit margins so narrow as to dim the luster of dividend prospects and to detract from the speculative value of stocks. The curtailing of produc-

tion in some industries, the reappraisal of values in others, and the strife for economy which is common to all, suggest the inception of a trend designed ultimately to readjust costs. Basically, however, the general situation is strong and healthy. Manufacturers and producers are not piling up inventory, and the exceptional traffic reports testify to the unprecedented movement of merchandise into consumptive channels. High wages, the advancing purchasing power of the farmer's product and the increasing earning ability of corporations, all support well sustained consumption. Credit is ample in supply, and easier interest rates have shown the money market to be increasingly favorable to a constructive movement in business.

The attractive return offered by an investment in new construction is the third major economic force joining the building deficit, and expanding industry, in the sustenance of a heavy volume of building contracts awarded. Construction and realty markets have lost little of their activity, and prices have a strong, firm undertone. Demand is well maintained. Rents are still rising. Their advance is slowing down, however, and the culmination of forces underlying demand suggests that rentals are nearing their peak in this movement. They will be slow to decline, particularly in this reconstructive period of the business cycle, but they are sure to decrease at a rate proportionate to the inroads made in the construction deficit by the building industry.

Costs have apparently passed their 1923 peak, but their departure from high territory has been noticeably reluctant. The high point was reached in July, when the *Engineering News-Record's* index stood at 222, representing a rise from the 1922 low (March: 162) of 37 per cent. The October 1 index was 220, scarcely a recession of 1 per cent from the year's high.

The decline in materials prices has been the chief cause of the droop in costs. These prices touched their peak in April, 1923, according to the Bureau of Labor, when their index stood at 204. The decline since then has been more than 10 per cent, bringing the index down to 182, the September figure. The materials situation is much easier than it was in the Spring, due primarily to the receding number of new construction jobs started and under way. Stocks, generally speaking, have not been large and the declining volume of new building, plus the decided improvement in shipping and transportation facilities have enabled materials men to get through the most active season of the year without serious shortages.

The immediate outlook in the materials markets is not one of outstanding strength, and lower quotations are expected to be general throughout the Winter. Seasonal influences favor such a movement of costs. Coupled with the declining vol-

ume of new construction begun, another enervating influence is the decline in the commodity markets generally. The more remote prospect of the materials market, however, is quite encouraging. Many manufacturers will have another busy Winter, first, because the season's building will probably be of unusually heavy proportions, and second, because another active year is in prospect, and manufacturers will probably be accumulating stocks to provide against Spring shortages. Buying at the moment, however, is for immediate requirements only, and largely for the reason that markets are exhibiting a downward trend.

Prices of cement, brick, steel and lumber have undergone no striking change during October, and the undertone of these markets has become noticeably firmer under the stimulus of domestic Fall purchases and buying for Japanese reconstruction account. For the year, lumber shipments, according to the National Lumber Manufacturers' Association, have been running about even with production, but orders have been lagging slightly behind. Production is still in excess of normal, with shipments about 95 and orders about 80 per cent of normal. Rather brisk Fall demand has supported the market, which, without that support, would have slumped under the pressure of a slight over-production. On September 1 common brick manufacturers reported about 250,000,000 burned brick on hand, compared with 180,000,000 a month previous. Demand has fallen off slightly, but prices are firm, for manufacturers are increasing stocks in anticipation of a heavy demand in 1924. Large reserves of brick are said to be accumulating in the Hudson district and importations of brick are likewise reported in excess of normal. Cement, similarly, is easier to obtain, and many dealers are putting in Winter stocks. Production and shipments are still breaking all previous records, and stocks are working lower. The statistical position of the commodity is quite strong, and its price is likely to exhibit the least response of any of the principal builders' materials to depressing and seasonal influences. The demand for structural steel is receding, but manufacturers report a good movement of merchandise. New and forward business is extremely quiet, for buyers are expecting lower prices. Small, immediate orders, however, are plentiful, and this business has given a firm tone to what otherwise might be a soft price trend. There are some lines of supplies which are running independently of the general

market. Steam brass goods, sanitary earthenware, certain lines of plumbing fixtures and pipes are all in active demand. Orders in these lines are pressing, and sufficient business is said to be booked to project the present volume of output well into 1924. The undertone of prices in these particular lines is strong.

Labor costs are still tending upward, although wage changes have been fewer. *The American Contractor* reported twenty upward revisions and three cuts in September. During August seventy-two changes were made, sixty-six of which were increases. Employment is running slightly lower and the completion of building for the October renting season is lessening the shortage of skilled mechanics in many localities. Labor, like materials, is working into a seasonally easier position. The recession in the volume of new construction started is checking the phenomenal rise in labor costs, and bonus payments are disappearing. The supply of workmen, however, has not grown sufficiently to threaten a reduction in wages, and it is likely that a lowering of labor costs will come about as a result of a recession in the volume of building needed rather than as a result of the swelling of the ranks of the working men.

The lack of any basic change in the building situation has resulted in an unaltered mortgage money market. The decline in the volume of new building projects has simply eased the pressure of the demand for financial accommodation. Bankers are concerned with the trend of values, primarily, when they lend on the security of a mortgage, and values have not been fully readjusted in the building industry. Inasmuch as there have been reappraisals in other lines, bankers are wondering when the rearrangement is going to take place in construction values. Their preparations for such an eventuality have been the careful scrutiny of all new loans, forcing the owner to provide a greater part of the purchase price of new building by construing the "fair valuation" at a pre-war level, by loaning only on investment projects which are designed to meet a definite need, and by charging a full rate of interest during the life of the loan. Money is in good supply, but high valuations shatter confidence, and investors are reluctant to put their savings in risks, the equity and security of which are subject to some uncertain and future depreciation. The mortgage money market will work easier after costs and valuations have been reduced.



REFECTORY BUILDING AND BOAT LANDING, COLUMBUS PARK, CHICAGO

CHATTEN & HAMMOND, ARCHITECTS

This building has a concrete foundation, the superstructure being built of Gothic brick with stone trimmings, and red tile roof. It is located at the West end of the Columbus Park lagoon and is 270 feet long measured in an East and West direction, with a pavilion extending South 80 feet from the main building. The main floors are of tile and terrazzo. The concrete boat landing lies East and adjacent to the building and is 100 feet long and 20 feet wide, resting on concrete piers. A concrete terrace 118 feet long, 15 feet wide, extends along the North side of the building. A similar terrace 18 feet wide, 35 feet long extends along the South side, overlooking the lagoon and water garden. The lower floor will accommodate boaters in Summer and skaters in Winter, with provision for checking one thousand pairs of skates. This floor has a refreshment booth, toilets, boiler room, coal room, work room, and storage space.

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THE DETROIT HERALD
NOV 27 1923



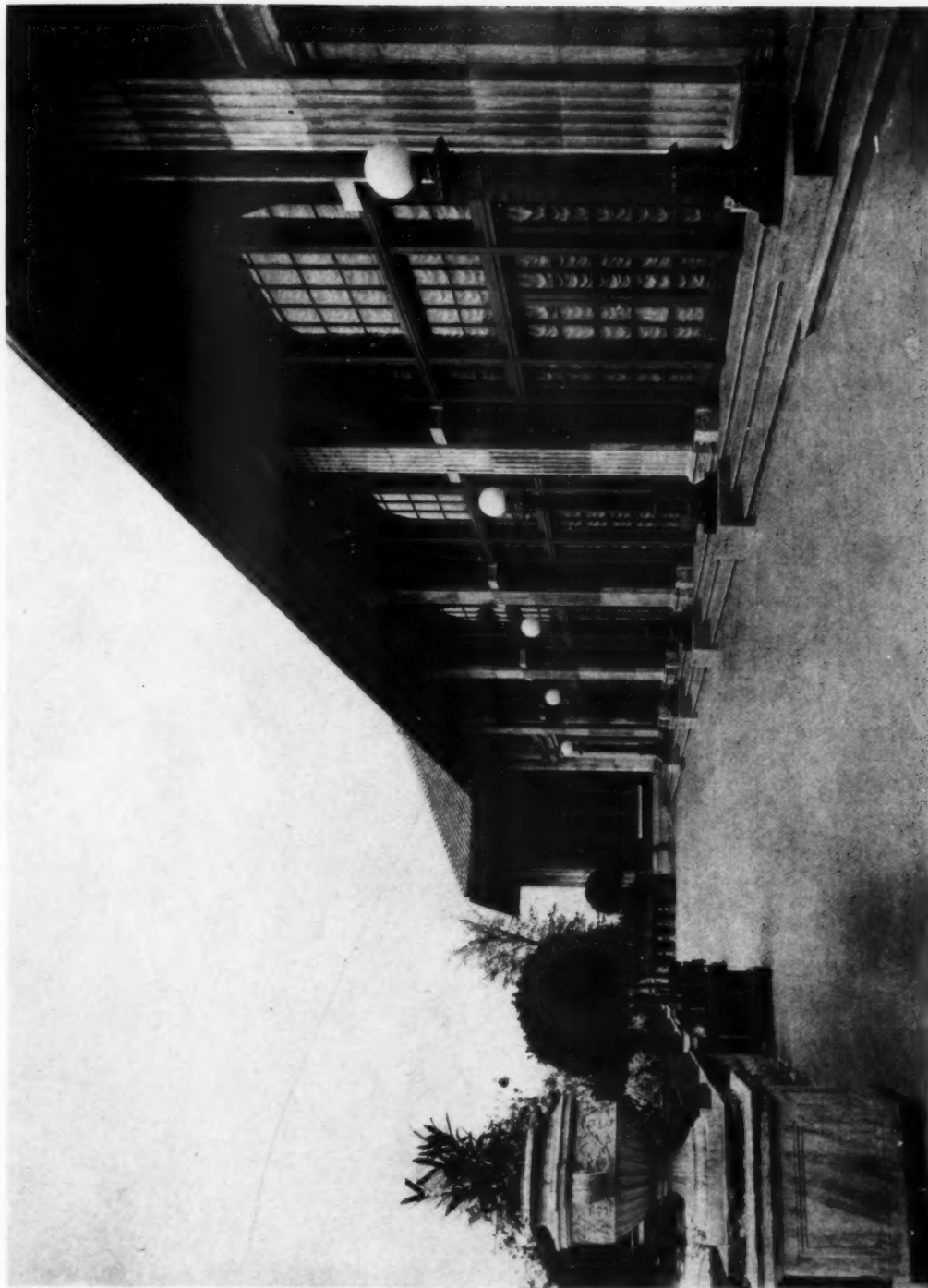
REFECTORY BUILDING AND BOAT LANDING, COLUMBUS PARK, CHICAGO

CHATTEN & HAMMOND, ARCHITECTS



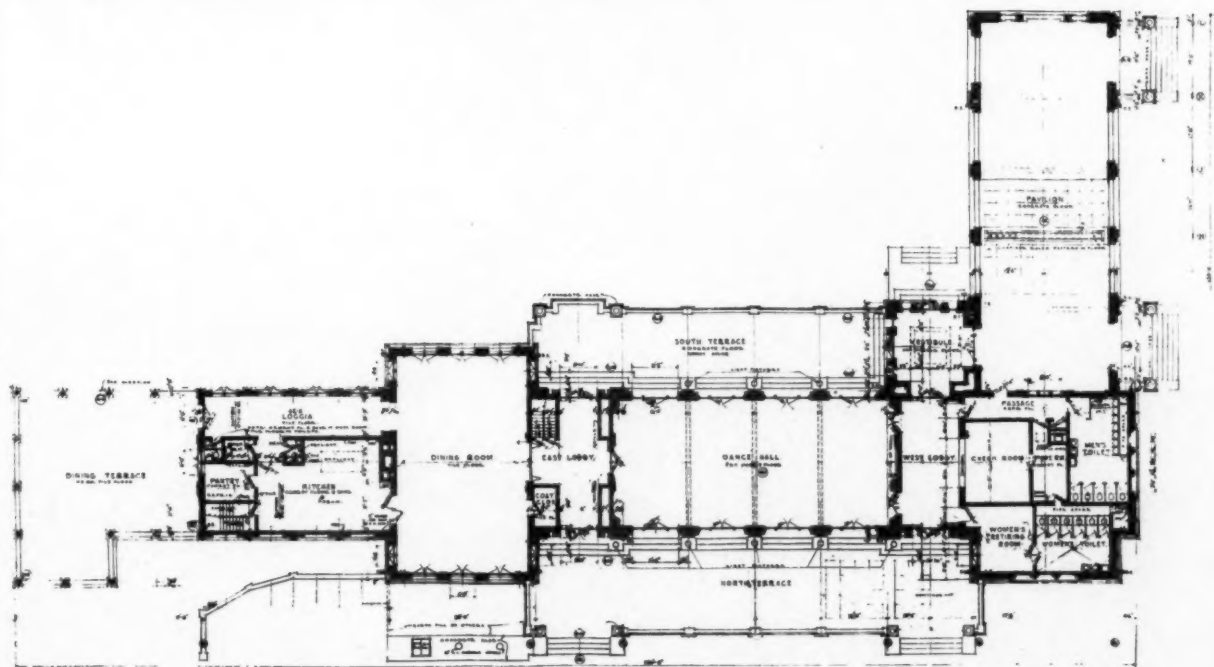
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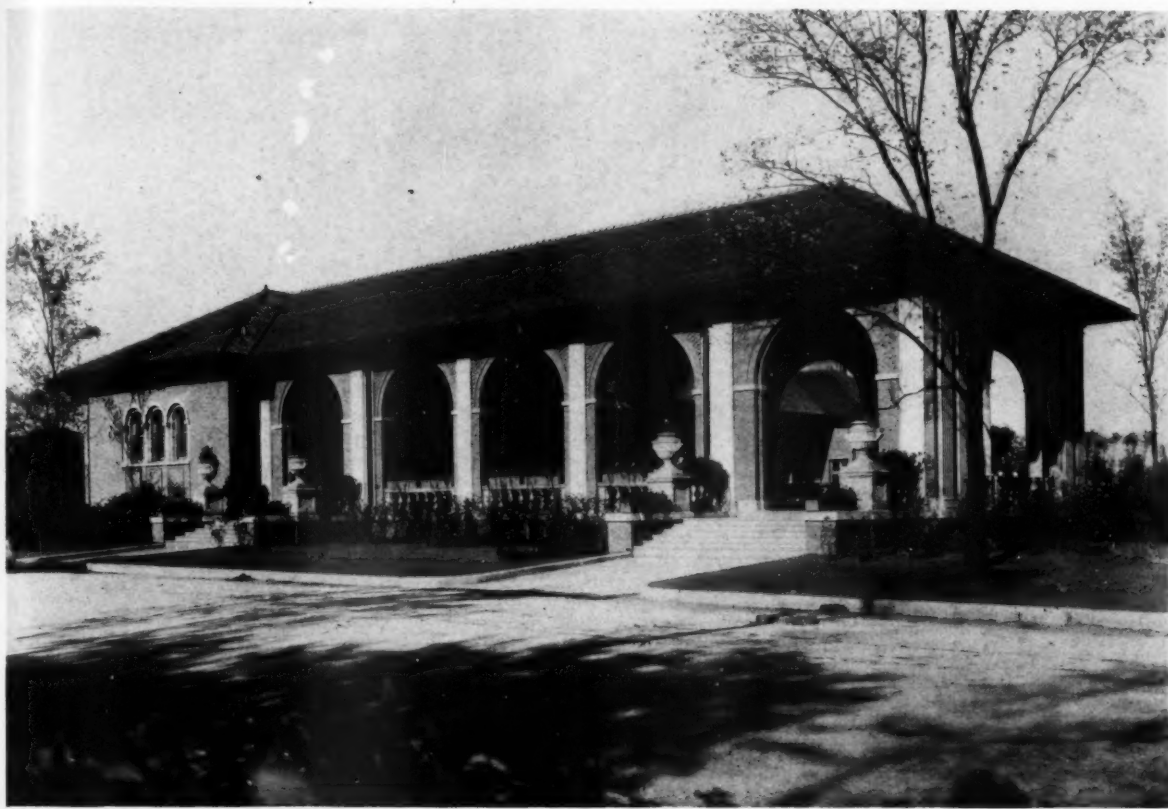
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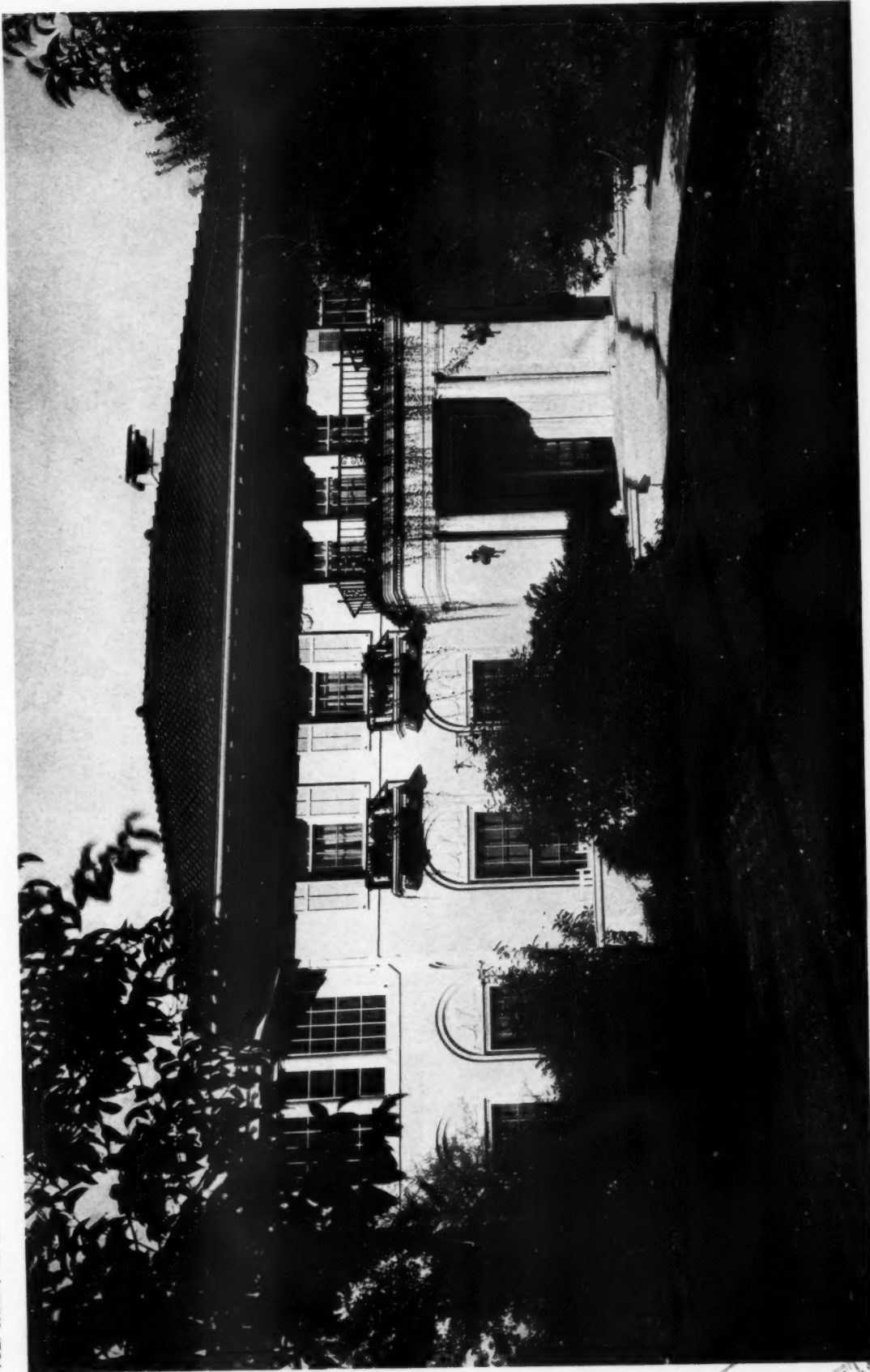


REFECTORY BUILDING AND BOAT LANDING, COLUMBUS PARK, CHICAGO
CHATTEN & HAMMOND, ARCHITECTS

THE DELAWARE BOAT LANDING CO
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GARDEN OF OFFICES OF HOWARD MAJOR, ARCHITECT, AND WALTER D. BLAIR, ARCHITECT, 164 EAST 61ST STREET, NEW YORK



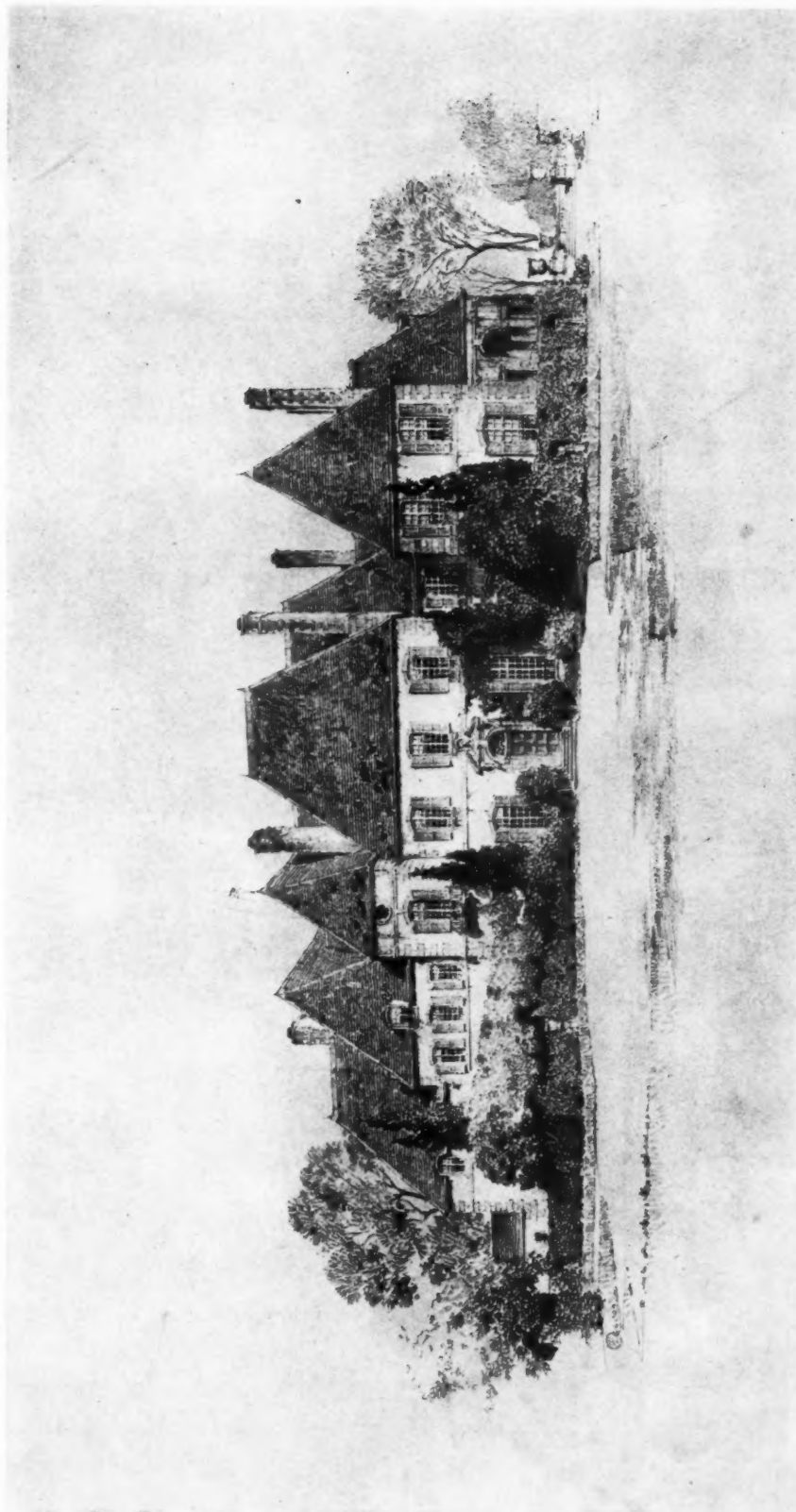
HOUSE OF HIRAM PARTEE, SAN ANTONIO, TEXAS
ATLEE B. AYRES AND ROBERT M. AYRES, ARCHITECTS

LIBRARY
THE DETLOTT EDISON CO.
NOV 27 1923



HOUSE OF HIRAM PARTEE, SAN ANTONIO, TEXAS

ATLEE B. AYRES AND ROBERT M. AYRES, ARCHITECTS



A HOUSE AT NEWPORT, R. I.

OFFICE SKETCH FROM OFFICE OF JOHN RUSSELL POPE, ARCHITECTS

This house was completed exactly as shown above, the planting being carried out as suggested in the drawing

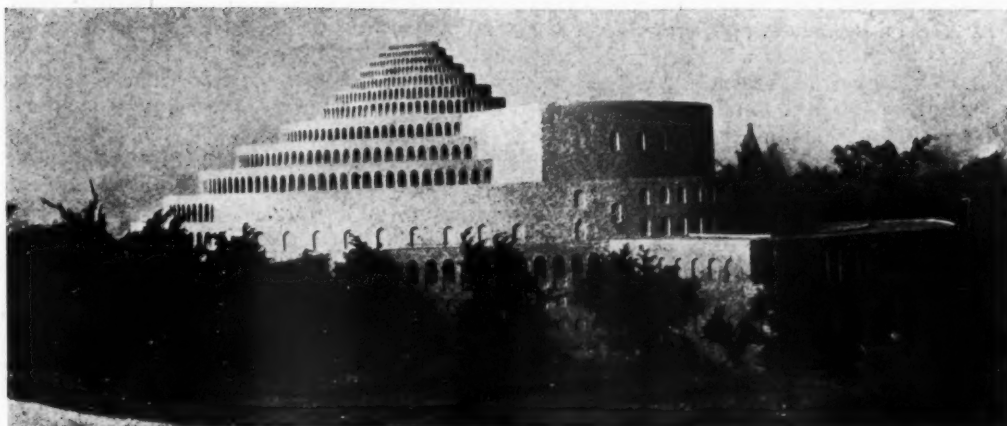
(Reproduced from original sketch by Otto R. Eggers)



A HOUSE AT NEWPORT, R. I.

OFFICE SKETCH FROM OFFICE OF JOHN RUSSELL POPE, ARCHITECTS

(Reproduced from original sketch by Otto R. Eggers)



REVISED DESIGN FOR THE FESTSPIELHAUS, SALZBURG

REVIEW of RECENT ARCHITECTURAL MAGAZINES

BY EGERTON SWARTWOUT, F.A.I.A.

IN this country and in Europe there are published at more or less frequent intervals a good many magazines which have more or less to do with architecture; some are the official organs of the great architectural associations; some are rather technical than popular, and some are more popular than technical; and there are some that only dip into the subject occasionally, with a very gentle and ladylike action usually, having now and then an article on the Use of the Sampler in Interior Decoration and How I Built My Cozy Little \$15,000 Home for a \$1,000 Liberty Bond and a Few Debts. Most of these magazines run more to pictures than to text, possibly because they are easier to get, but probably because there is more of an appeal in the pictures than in the printed word. Nearly everyone who picks up a magazine looks at the pictures but few read the articles, and, generally speaking, few of the articles are worth the reading. This was more the case years ago than it is now, and rather generally the English magazines did better in their text than did ours, but there has been in the last few years a decided improvement on both sides of the water; the new publication *Architecture*, London, has published some extremely good articles, many of them by well known men, and in some instances by men who were not architects themselves; the monthly causeries by Karshish (H. Bulkeley Creswell) in *The Architects' Journal*, London, are very clever; Mr. Pond's reviews in the *Journal of the Institute* and Mr. Percy

Nobbs' articles are good; there have been valuable technical essays and many good editorials.

But in going over all these magazines month by month I have been struck by the extremely contradictory character of their contents. In the same paper are to be found the beautiful Boissonnas photographs of the Greece of Pericles cheek by jowl with deplorably poor reproductions of futuristic paintings and views of those monstrous and ungainly structures that masquerade on the Continent as Modern Architecture, and more often than not there is no word at all of appreciation of the beauty of the one, but only an impassioned eulogy on the inner mystical significance of the other. There can be seen extremely good examples of modern work, things of real architectural merit, and sandwiched in between them dreary rows of factories, all well lighted and practical enough no doubt, but of no architectural significance whatever; and there will be no comment on the real architecture, but there will be many pages on the labor saving devices in the Chewing Gum Factory and the necessity of North light in the manufacture of Eskimo Pie. I presume it might be inferred that in the opinion of the editor the readers of architectural magazines are more interested in chewing gum than in churches, and that Eskimo pie is far more vital to the success of the Commonwealth than the tiresome details of the plan of a court house, or that the general public is fed up with the Greek and enjoys the grotesque. But such an inference, however well grounded, would

be an injustice to the hard working editor. He knows the Greek photographs are things of beauty and that the modernistic work is atrocious, but there is no one at hand to write of the glory of the one, while he has had sent him a fifteen hundred word article on the hidden symbolism of the other. In his secret soul he much prefers churches and court houses to chiclets and Eskimo pies but the able designers of the churches and court houses are as writers, able designers; whereas the industrialist thinks it good business to employ professionals to write about his factory and his altruistic ideals for the benefit of his employees. The editor has to publish what he can get; to a great extent he is dependent on the interest taken by the profession in the development of their profession; he would always prefer to publish a good thing than a bad thing, but he can hardly be expected to know where the good things are to be had unless he is informed by those who are in the position to know.

But it seems to me there is a little more in it than all that; there is after all a certain responsibility—a responsibility that the editor cannot avoid even though in many cases he is probably ignorant that he has any responsibility at all; and that responsibility is his because of the influence of his publication on the mind of the public. It might be said, of course, and in fact it is often said, the main purpose of the architectural press is to furnish a record of current architecture, good and bad alike, just as a newspaper has to publish the harrowing details of an Armenian massacre on the same front page

that carries the cheering announcement of the effect of the extension of the 12 mile limit on the sealed stores of the European marine. It might be said that even if the innermost secrets of a chiclet factory are not of prime importance to

the architectural world, still they can do no harm, and indeed may be even stimulating to some poor architect who has to do a new chiclet factory. It might be said, and in fact often is said, that even though the majority of sane and healthy men condemn the modernistic work as the product of a diseased brain, still these people that produce it, misguided as they are, are in earnest and are striving and who knows but what there may not be something in it after all? Who are we that we should judge? And all that—a pleasant little course and the easiest course, and one that hurts the feelings of nobody; a course pursued with notable success in Russia by those who were unwilling to hurt the feelings of the Bolsheviks and thereby came to their end in the dungeons of the Cheka or in wilds of Siberia; and this feeling of easy tolerance could be extended to the other professions. The medical journals could devote pages

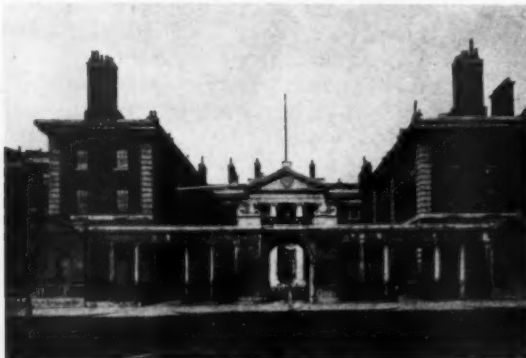
to the exposition of the views of a modernistic doctor who had discarded the outgrown and antiquated idea that quinine would cure malaria, and declared with vehemence that the heads of safety matches dissolved in Prussic acid was the only cure. The Bar Association might listen with interest to the plea of a radical that under any circumstances arson was justifiable. They might say, well, he is much in earnest about it and while we

From "The Architectural Review," London

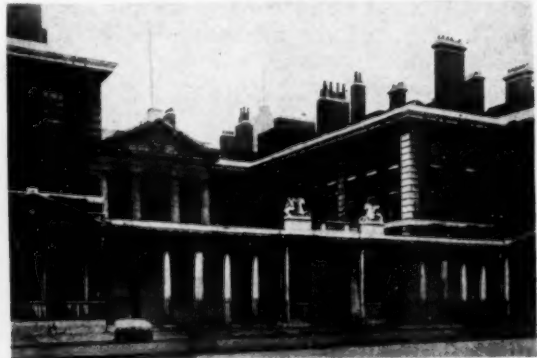


STANDING WOMAN
BY EDWIN SCHARFF
(From "Edwin Scharff")

From "The Architects' Journal," London



From "The Architects' Journal," London



THE ADMIRALTY SCREEN, WHITEHALL
ROBERT ADAM, ARCHITECT
BEFORE AND AFTER RESTORATION

do not agree with his ideas, after all, there may be something in what he says. All of which seems fantastical and untrue, but was not the same course pursued by the so-called art journals? They and certain feeble-minded critics, they alone, are responsible for the wave of nonsensical and disgusting stuff that has filled the papers, the exhibitions, and has even found purchasers among the newly rich. These so-called art journals have in

From "The Architectural Review," London



HISTORICAL CULTURAL EXHIBITION, BRESLAU

every issue illustrations of pictures and statues that would be nonsensical if there were not underlying all the nonsense and the distorted figures and the poor drawing a perverted moral sense that must be pounced on with delight by the Freudian exponents of psychoanalysis; and, accompanying and explaining these illustrations are pages of dreary jargon well nigh incomprehensible, and yet conveying to those silly enough to read them the idea that this is all modern and wonderful, and that the pink fish in the impossible bowl which is apparently sliding off a broken table is symbolic of the hidden glory of the great, pallid soul of the artist. And there are those who call themselves critics who solemnly wag their heads and approve all this rot, and talk vaguely of the wonderful new genius from Jugo-Slavia who combines the cold austerity of Iceland sagas with the wild freedom of the Congo. Can it be wondered at that some

of the public fall for it? They see it illustrated along with the best of antiquity and the Renaissance; they hear it fulsomely praised and they see no work of reproof or condemnation. They know nothing of art themselves; they see it is new; they think it a fad, they believe against their better judgment that these distorted shapes are the real way they should see life, and their artistic perception is ruined, often permanently.

Now, the architectural press should take warning of this before it is too late. They should realize that they have a very definite responsibility in the moulding of the public taste in things architectural. They should realize that their magazines should be more than a mere record of current activity; that if they cannot always publish the very best they should at least never publish things

From "The Architectural Review," London

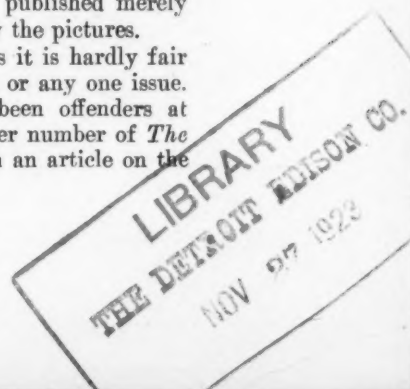


THE GROSSE SCHAUSPIELHAUS, BERLIN

The circular lobby showing the central illuminating pillar

that are absolutely bad; or if they do publish the bad, it should be noted as a horrible example and not eulogized by a silly article published merely because it happens to accompany the pictures.

To give an illustration of this it is hardly fair to single out any one magazine, or any one issue. To a certain extent all have been offenders at times, but there is in the October number of *The Architectural Review* of London an article on the



work of one Hans Poelzig by Herman George Sheffauer from which I quote the following:

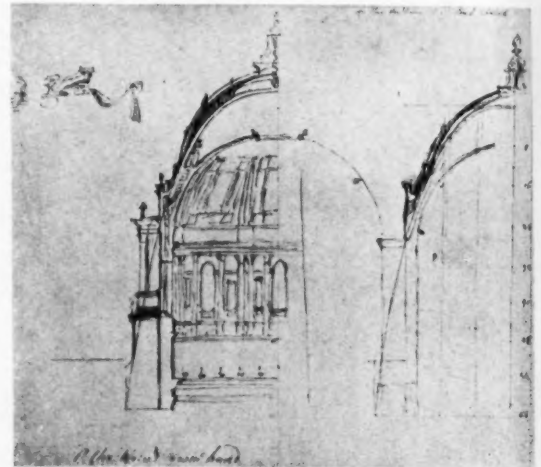
"Hans Poelzig is the most puissant and monumental creator and transmuter of architectural forms in modern Germany. In his gesture as a master-builder there is something magnificently broad, high, and deep, something mystical that reaches forward and backward beyond the epoch in which he works. From every building that emerges under his hand there breathes a kind of architectonic sermon. His buildings, those born in matter, and those still gestating upon paper, seem to preach a new reconciliation between architecture and religion. It is a divine, Dionysian element of æsthetic intoxication which Poelzig has struggled to bring back into architecture, a 'Formenrausch' under the influence of which architecture becomes plastic, strange, fecund, full of spontaneous impulse and expression—vocal—Daedalian.

"During the period in which he fulfilled the function of consulting architect for the City of Dresden, Poelzig designed a number of important and monumental buildings for this old city of baroque towers, churches, and colonnades. All

of them were new in inspiration and conception, aggressive, or at least assertive in their presentation of new form and feature—the rhythmically undulant—symphonic City Hall, a building which even in the plaster model seems to move and swell like music, the bold, masculine audacious Coliseum-like circle of the municipal fire brigade, the 'double public school,' chaste and stately as a naked princess.

"Poelzig shuns and abhors all the bondage of tradition. We find echoes of many architectures in his work, but his first wrestling with his problem, always an agonizing one—the struggle for

From "The Architectural Review," London



DRAWING BY SIR CHRISTOPHER WREN

Preliminary sketch for the dome of St. Paul's Cathedral. Brown ink



MAISONS LAFFITTE: THE CHATEAU
From a Water color by Cyril Farey

sheer purity and independence of inspiration—architectonic virginity."

A good deal of space has also been given lately to the modernistic work in Holland, to cubistic cinema productions and modern stage settings. Now, it seems to me particularly unfortunate that these wretched things should be published in such a prominent paper. The subject matter in it is generally of a very high order, and the illustrations are beautifully done and it undoubtedly has a large non-professional circulation, and it is very probable that many, seeing the pictures and reading the eulogistic articles, will come to believe that such things are really considered good by the architectural world in general; many may even be influenced to demand that the work they are interested in be done in this manner, and a great amount of harm may ensue.

Now, in all this I do not mean in the slightest degree that an architectural magazine should limit its pages to reproductions of the temples of an-

tiquity or to the works of the Renaissance. On the contrary, the work that is actually being done by the architects of today is naturally of the most vital interest to the profession and to the public too; commercial work is as interesting to some as monumental work is to others; domestic work has a distinct appeal to the general public; there have been extremely valuable numbers lately devoted exclusively to one technical subject, hospitals, schools, banks and the like. All these are excellent and instructive, but the things that seem to me

deplorable are the fillers, the occasional articles on unimportant subjects usually written by irresponsible persons; the hackneyed descriptions that often accompany the illustrations; the special articles descriptive of the work of certain firms in which more often than not there is an attempt to conceal by fulsome praise the lack of knowledge on the part of the writer; and most of all, the articles that advocate vociferously every new movement, not because it is beautiful or practical or appropriate, but because it is new.

From "The Architectural Review," London



A DETAIL AT AMSTERDAM
M. DE KLERK, ARCHITECT

EDITORIAL COMMENT

IN THIS ISSUE OF THE AMERICAN ARCHITECT is inaugurated a department of Interior Architecture. It has been established after a thorough investigation of the practice in a large number of architectural offices has indicated a growing reluctance to relinquish the interior architecture, including decorating, furnishing and equipment, to a second organization not always in sympathy with the work of the architect of the structure. The fact that too often the final aspect of a well designed building is marred or even ruined by ill-conceived decoration and furnishings is too well recognized to need comment, and doubtless accounts for the rule established by some of the better offices to accept no commission that does not include the interior architecture.

From figures compiled, it appears that the value of the interior decoration, furnishings and fittings now designed, controlled or influenced by architects, runs well into the millions annually, and it is for the purpose of increasing its volume and scope by furnishing practical help and useful information and suggestions that this new department has been started.

Mr. R. W. Sexton has joined the editorial staff of THE AMERICAN ARCHITECT and will assume direct charge of the department of Interior Architecture. He has had years of training and experience in this work and has been connected with some of the most important work of interior architecture in this country. It will be his pleasure to answer personally inquiries on the subject from subscribers whether they relate to matters of design or where materials and furnishings of various types can be obtained.

* * *

THE SKYSCRAPER is coming into its logical form, the tower type building. This is the result largely of the requirements of the zoning ordinances which have been adopted by many cities in this country. That this would be the ultimate form of the skyscraper type of building was forecast in an editorial printed in THE AMERICAN ARCHITECT January 18, 1908. This editorial stated in part:

The problems of the skyscraper have confronted architects in the larger cities of this country for the past fifteen or twenty years, and while those relating to the mechanical and structural features of these buildings have been solved in a manner generally satisfactory, the solution of the purely architectural problem has seemed in many instances to leave something still to be desired. The great difficulty occasioned by the almost invariable disproportion of breadth to height can hardly be said to have been entirely overcome by the "columnar" treatment, which has probably been more frequently employed as a general scheme of design than any other.

What may perhaps prove to be the ultimate solution of the problem, and what at least seems to remove the great difficulty mentioned above, is the new "trust" or "community" plan put in operation to a marked extent in New York during the past year. Under this plan a number of holdings are combined into one large plot and improved by one operation. Dignity of proportion can thus be obtained in the structure without sacrificing any of the possibilities of the site.

The operation of this plan seems to indicate in a measure one or the other of two forms as the ultimate skyscraper. The first, that of grouping two buildings so as to balance each other, and thus diminish the disproportion of breadth to height, has been chosen in two or three instances, and has attracted much attention. The second form is that of a huge structure extending over a block or more, the main mass rising some dozen or fifteen stories and surmounted by an immense tower or campanile, of a height proportionate with its base line. This type surely offers great opportunities for dignity of proportion, after which little difficulty in design or decorative treatment need be anticipated.

In the early days of the steel frame building someone proposed the "columnar" treatment consisting of a base, shaft and capital. Evidently without serious analysis of the problem, it was blindly accepted by architects and even by architectural schools and the idea prevails to this day. The function of the column is to support a load applied at its top. The top of a building supports nothing but blue sky—then why the analogy? The assumption was false in every respect. After many years, a few architects of individuality and courage designed tall buildings *per se* rather than as an imitation of a building appurtenance.

Anything developed in a natural manner is the finest product of human effort. Our failures are those based on the limitations of false prejudices, unrelated precedents and obsolete restrictions. Unfortunately architecture suffers from all these evils. Fortunately, the new zoning laws now being adopted are such as to compel the designing of buildings and the tower type is a logical development, as foretold in the editorial quoted.

INTERIOR ARCHITECTURE

The Principles of Interior Design

WHY is not the designing of interiors of structures, together with complete furnishings, always assigned to the architect of the building, instead of being placed, as sometimes happens, in strange and less competent hands? One architect recently remarked that he never could understand the grounds for the divorce. "So far as I am concerned," he added, "I never accept the commission for any building unless the interior architecture is included." Undoubtedly many architects carry out this same principle, for every architect, worthy of practice, is qualified by education and temperament, to handle the interior architecture of his building as well as the exterior. Sometimes, however, lack of appreciation of this fact on the part of the client has resulted in the separation of these two elements of the complete building. Whether the architect actually handles the interior architecture through his own organization or through associated specialists, he should retain complete control, at least, to secure the best results. The complete separation of the interior designing from that of the structure breaks into the natural development of the complete building and often leaves a scar which is difficult to heal, even at great added expense. Many an awkward situation has been created by turning over partially finished rooms for another to complete. For example, entire sets of window draperies have been made to hang to the floor, and, not until they were ready to be hung, was the condition of a projecting radiator cover found to interfere. Again, an interior specialist may think it much more pleasing to cover a radiator with a wooden enclosure after the room has been put in his hands. He seldom stops to consider that the architect had specialists in his organization who spent much time and study in working out the heating system to function properly, and that by enclosing the radiator, the efficiency of that system has been materially impaired. Such circumstances as these can and should be avoided.

Architecture, whether interior or exterior, is in every sense of the word one of the Fine Arts and every one knows that, as such, cut and dried rules

do not make its designs and color schemes. The fundamental principles of art and design, in which the architect is so well versed and by which he so carefully designs all his work, hold good in interior design as in exterior. It is purely a difference in scale. The interpretation of the adaptation of these principles, or, simplified, individual taste and opinion, take this subject beyond the sphere of rules and regulations. In other words, it is your interpretation of good design and proportion as you see it which influences all decisions. The

single fact that personal taste does have such a decided influence on the creation and execution of design, permissibly so, proves most conclusively that one mind, capable of so doing, should make all decisions affecting the same scheme to produce harmony and unity. Imagine, if you can, a picture which Millet began with a tree, Rousseau added a cow and Corot put in a poppy field! Different ideas of composition, different technique and different use of color. Yet is not that just what happens in taking the interior architecture out of the controlling influence of the architect?

There are three distinct steps in the evolution of any creation of art:—line, or composition; dark and light, or massing of lights and shadows; and color, or completing the composition in color. The elevation of each wall of the rooms of any

structure or building is the canvas on which you compose your picture. As an architectural subject, the principles of design as applied to the art of architecture must be applied here. These are proportion, repetition and subordination. Each must be applied directly during the three stages of creation and the results of this application are your ideas of good taste and good design.

Proportion in relation to line covers so much that it is unconsciously applied at every turn. It really overlaps all the others. The determining of the relation of the length of the room to the width,—the first step in the laying out of the floor plan,—the height of the ceiling in relation to the size of the room, the depth of the cornice in relation to the height of the ceiling, and so on even to the planning and selecting of the furniture, each

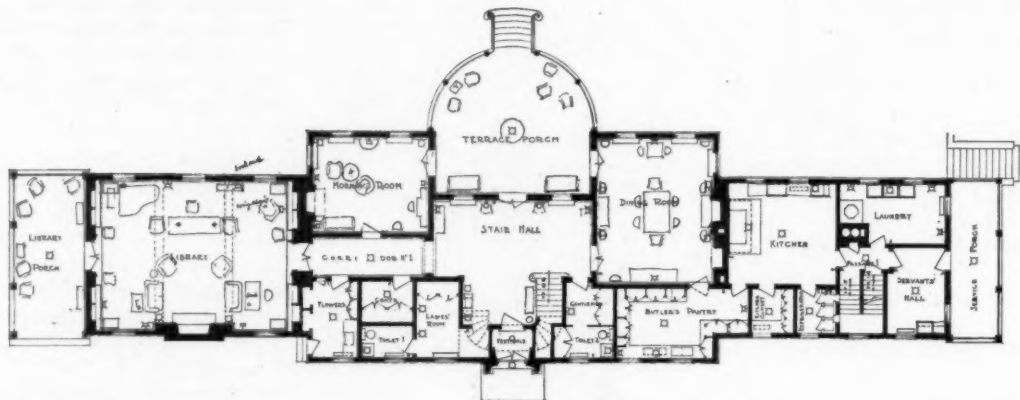


Louis XVI wall bracket, the long slender lines of the design in perfect keeping with the narrow stiles of French panelling. The rosette covering the standard American outlet box is well woven into the design

and all a matter of proportion. Repetition is more commonly known and more easily recognized as "balance." Who does not realize the importance of that principle, under whatever name? Door openings, wall panels, furniture, all must be properly balanced. Then, the making of certain features more prominent and the diminishing of others, is solely a matter of subordination.

In applying these principles to the dark and light stage, see how they enter in. The deep shadows from the mantel breast, the heavy shadow under the mantel shelf, and even the sharp shadow in the deep reveal of the fireplace all emphasize the importance of the mantel as the feature of the wall decoration. The shadows from the projecting

furniture in mind all the time. The position of wall outlets and even the general design of the bracket should be carefully considered when designing wall panels and decorations. The selection of furniture should be noticeably influenced by its size and design in relation to the room for which it is chosen. Wall outlets will not then be the deciding factor in laying out wall panels; proper scale of furniture to its surroundings, so often disregarded, will be evident, and correct combining of periods and styles of both furniture and decorations will be realized. Consider, for instance, the various methods of wall decoration—paper, painted plaster, rough plaster effects, wood panelling, wall fabrics,—all good in their proper



FURNITURE PLAN OF A HOUSE

FROM THE OFFICE OF CHARLES A. PLATT, ARCHITECT

After the general floor plan reaches a certain point, the furniture is placed on it to scale. Then the elevations are made, keeping the furniture in mind all the time. In this way that element so necessary for good results, unity of scale in walls and furniture, is thus obtained

mouldings of the cornice naturally pull the eyes upward to reveal the true proportion of the wall surfaces. The shadows of the trim mouldings on each other and on the surrounding wall, repeated exactly on all the windows, are purely the application of repetition in light and shade.

In the arrangement of color, the principles are ever in sight. The proportion of the various colors in the scheme, both in quantity and in relation of tone to each other, is the basis of establishing a color scheme. The repeating of certain colors at different places in the design, as on different pieces of furniture, is the key to unity of color, while subordination of color creates that element so necessary in good color schemes, contrast and emphasis. Even in the selection of various fabrics used in a scheme these principles play a most conspicuous part. Light and heavy weight materials must be properly distributed, and figured and plain goods must be carefully interwoven onto the same scheme.

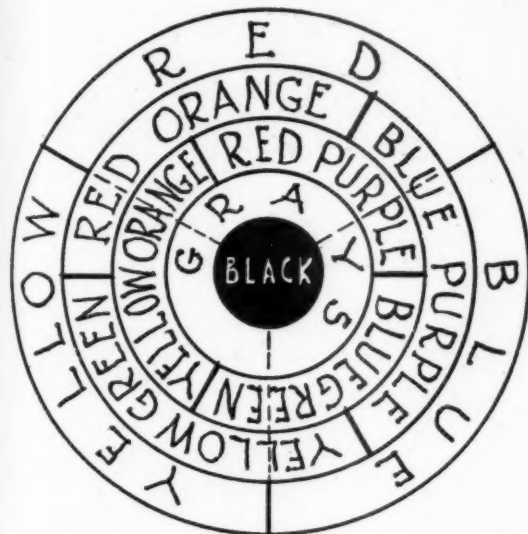
There can be no question that the floor plan of a room should be studied with the placing of the

place. What determines their use? So with the furniture, hangings, colors and all the accessories. In substance, then, it seems that the complete room should be visualized from the very start of the floor plan, and that all details during the stages of progression should be worked out to attain this result by those thoroughly familiar with the application of the principles of line, dark and light and color, with an appreciation of mass and proportion, and a passing knowledge, at least, of period details. In short, the architect of the building should be in complete control throughout.

Probably more interiors suffer from badly conceived color schemes and methods of application than from any other one cause. Many an otherwise really good interior has been ruined in this way. Beyond a certain point, a color scheme can be criticized only as not pleasing to your sense of color. Many may agree with you and find it displeasing too, but still that scheme may not be necessarily bad. Our allowed freedom of interpretation, fortunately or unfortunately, permits of this. Up to that certain point, however, there are

definite rules which govern selection. Color theorists have often gone so far as to say that color schemes can be made by rule, but in their application, these theories do not work out conclusively.

All colors in a scheme must be in harmony. What determines harmony? One color to be in harmony with another must have in its make-up one primary color which is also in the make-up of the other. Red-orange is in harmony with red-



The chromatic color spectrum, based on the three primary colors, red, blue and yellow. Two of the three primary colors combined together in varying proportions produce the complementary colors, an almost unlimited number of shades. All primary colors together produce grays and black

purple or mulberry, for there is red, a primary color, in both. Blue is in harmony with green for there is blue, a primary color, in green. Second, in a good color scheme there must be a certain touch of contrast. What is contrast in color? A color to be in contrast with another must have in its make-up no primary color which is in the make-up of the other. Thus, green, composed of blue and yellow, is in contrast to red, for there is no red, a primary color, in green. Contrast can also be brought about, and sometimes preferably, through depth of color. Thus, dark mulberry would be in contrast to light red-orange. Black, by its absence of value, is in contrast to all light tones and colors. Complementary colors, or those colors made up by combining two of the primary colors into one, harmonize more easily than pure primary colors, while pure primary colors make sharper contrasts. All this is, of course, elementary and yet warrants repeating, but has no value whatever unless accompanied by well trained artistic taste and correct appreciation.

All color schemes have what may be termed a "dominating color." This dominating or tonal

color is the one to be used in largest proportion throughout the combined decoration and furnishing of the interior, and is the backbone of the scheme. Then there is the "secondary color," a color chosen for its qualities of harmony with the dominating color. As a rule, this color is best when in slight contrast in tone or value to the dominating color, as its rather great proportion in the scheme would otherwise tend toward monotony. Other colors can now be brought into the scheme as desired to add contrast to break any chance of monotony, or to emphasize certain features of ornament and design. Contrasting colors need only be in direct opposition to one of the principal colors. For example, if red-purple is the dominating color and yellow-orange the secondary color, blue would create contrast directly with yellow-orange. There is no blue, a primary color, in yellow-orange. On the other hand, there is blue in red-purple, so there would be only harmony there. The distribution of the various colors depends on the size of the room, number of pieces of furniture, treatment of walls, and other considerations.

Consider the matter of contrast in relation to materials alone used in a scheme. First, of course, is its color and its relation to the scheme. This has been rather carefully touched upon. Second, is its design. The use of contemporary designs is just as important here as in the selection of furniture. Where period rooms are to be accurately produced, period fabrics must be chosen, but generally a carefully selected fabric of contemporary design will here, as in furniture, break any mo-

COLOR CHART

Dominating Color	Secondary Color	Contrasting Color
Red	Yellow Orange	Blue
"	Blue Purple	Yellow
Blue	Red Purple	Yellow
"	Yellow Green	Red
Yellow	Blue Green	Red
"	Red Orange	Blue
Blue Purple	Yellow Green	Red
" "	Red Orange	Yellow
Yellow Green	Red Orange	Blue
" "	Blue Purple	Red
Red Orange	Blue Purple	Yellow
" "	Yellow Green	Blue
Red Purple	Blue Green	Yellow
" "	Yellow Orange	Blue
Blue Green	Yellow Orange	Red
" "	Red Purple	Yellow
Yellow Orange	Red Purple	Blue
" "	Blue Green	Red

notony and add a certain punch, by contrast. Then, in the use of textures, this element of contrast must be considered. Relieve the heavy tapestry by a light damask, and the light silk by a velour. In the design of the materials, avoid all small patterns or all large patterns. Just so, avoid all geo-

again is the dominating note in the selection of contrast, and bad proportion will result in unrest and undecidedness.

Throughout the entire progress of interior architecture and furnishing, from the first line of the floor plan even to the last touch of color of the fur-



THIS ENGLISH DESK AND SPANISH CHAIR SEEM PERFECTLY AT HOME IN EACH OTHER'S COMPANY. ILLUSTRATING THE IDEA OF COMBINING FURNITURE OF CORRECT CONTEMPORARY PERIODS TO OBTAIN PLEASING EFFECTS

metric designs or all freehand designs. But combine them all together. The plain wall of plaster, as in illustration, is nicely relieved by the geometric design of the floor treatment. The dark and light of this design, so strikingly noticeable, further emphasizes this note of contrast. Proportion

niture, there is continually needed the influence of that one person who, at the very start, visualized the complete room. That influence is necessary to insure unity and harmony of design and color. Who, then, is better fitted by his training and experience to solve the problems of interior archi-

ture of the buildings and rooms which he has planned and visualized—problems depending on the correct adaptation of the principles of art and design—than the architect?

Architects are invited to correspond with the editor of this department regarding any problems of interior design or the availability of materials.

Acknowledgment is made to the following firms for their courtesy in supplying illustrative material: Bonded Floors Co., Kensington Mfg. Co., Lefevre & Saulnier, F. Schumacher & Co., Simmons Gardner Co.

entitled to one year's study in the Paris Ateliers of the New York School of Fine and Applied Art, which alone should induce many to compete in the hopes of success.

THE BUDDHIST EMBLEMS

THE motifs known in China and Japan as the Buddhist emblems have had widespread use as ornament for many centuries states *Good Furniture*. Unlike our religious emblems, their use is



DINING ROOM IN HOUSE OF G. H. KINNICUTT, FAR HILLS, N. J., CROSS AND CROSS ARCHITECTS

The wall decorations of this room are carried out in accurate Georgian design. The center table and chairs are of Queen Anne period, which influenced very strongly the Georgian, and are therefore very appropriate. The use of a Sheraton sideboard with its characteristic straight lines in direct contrast to the other furniture, breaks away from the stereotyped suite, and avoids any chance of monotony.

COMPETITION IN INTERIOR ARCHITECTURE

A COMPETITION of peculiar interest is that recently announced by the president of the Queensboro Corporation of New York for the best scheme of decoration and furnishing of a five room apartment, open to all students of Interior Architecture and Decoration. The plan of the apartment is one which this corporation has recently erected at Elmhurst, L. I. On the judges committee, it is interesting to find an architect, a furniture designer, a decorator, an editor and representatives of society. The winner of the competition will be

not only ecclesiastical but they appear on every sort of object. A fan from New York's Chinatown may have on its handle a bat, a swastika and a knot. This knot is a Buddhist emblem, the symbol of eternity. The clearest fact in Chinese design is that it always means something. A design without an idea is gibberish to the Chinese mind and unacceptable. Decoration uses the language of ornament as intentionally and as intelligently as a writer uses word language. These motifs have not been perpetuated for hundreds of years by Chinese designers for nothing. Rather they

have gained in meaning as they have come to us in solemn procession down the centuries. Still their original meaning has always been preserved.

Buddha was a Hindu prince born in the 6th century B. C. Sir Edwin Arnold's poem "The Light of Asia" is the story of Buddhism. After a youth of luxury and pleasure Buddha gave himself over wholly to studying the spiritual possibilities of man. He never claimed divinity but his followers deified him. Buddhism was not introduced offi-

cially into China until 67 A. D., but it gradually filtered across the mountains and it had been accepted long before its official recognition.

These emblems are very generally believed to have been shown in natural markings on the soles of Buddha's feet. The Hindus claim that he had 65 "marks of the Buddha," as they are called. These were supposed to indicate his divine origin so that he might thus be recognized. The Chinese appropriate only eight.



Scheme of decoration for a room inspired by the Italian. The walls are of antique plaster effect, the floor relieves this rather large mass of plainness by a tile treatment in shades of dark and light, set in a geometric pattern. The hangings are selected carefully to harmonize with the Italian feeling, a brocatelle of Italian design, and the chairs are covered in an antique velour. This scheme illustrates the relative values of texture, design, tones, as well as color



BREAKFAST ROOM IN THE HOUSE OF WILLIAM HOGARTH,
LONDON, ENGLAND

ARCHITECTURAL ENGINEERING

The LIGHTING of PICTURE GALLERIES and MUSEUMS

PART II

BY S. HURST SEAGER, F. R. I. B. A.

THE endeavor in both cases, as in the Gallery of Honor in the Ryks Museum at Amsterdam (Fig. 11) is to prevent reflections of spectators and objects, by keeping them in the shade, while the pictures are in a well lighted space. The endeavor is a rightful one, but the great mistake in all these cases is that the skylights are high above the ceiling lights, causing the picture space to be only moderately well lighted, and quite incapable of overcoming the general gloom caused by the solid central part of the ceiling. This was so painfully felt at the Mappin Art Gallery (Fig. 12) that the central dome at first made solid, was afterward glazed, and this glazing, together with that of the lunettes at the North and South ends of the nave, has converted it from an ill lighted and therefore comparatively useless space into one so well lighted that when the sun is shining through the South lunette this central space is by far the best lighted part of the gallery. The whole gallery is now an extremely pleasing one; but, as the illustrations show, the problem of lighting glazed pictures without causing reflections is no nearer solution here than in other top-lighted galleries.

That the solution cannot come by the attempt to give better light to the picture by placing the ceiling light close to the walls was pointed out as long ago as 1853 by the Messrs. Papworth in their book. They state, "Pictures have, as is well known, a tendency (especially if dark, highly varnished or covered with glass) to reflect the light objects near them.

"This mirror-like tendency will be found to be greater, wherever the windows may be placed, in proportion as the light on the picture is weak. It may be further remarked that the inconvenience in question is not to be counteracted by placing the skylights next to the walls (an arrangement objectionable on other accounts), for under such circumstances the light on any object near the pictures is necessarily fuller and brighter, whereas when the lights are near the center of the roof such objects present their shadowed sides to the paintings, which have thus less to reflect." The truth of this

statement is proved by the illustrations of the Mappin Art Gallery, the Ryks Museum, and in all those galleries having an open or partially open roof with the skylights on each side in the lower part of them.

It is necessary that it should be realized that in advocating the Top-Side-Lighting method I am not "proposing anew" any of those systems above illustrated. The very fundamental, and absolutely essential difference between the Top-Side-Lighted method and other arrangements of skylights in open, or partially open roofs is that in the Top-Side-Lighted method the central solid ceiling either springs from—or, is level with—the lower edge of the skylights (See Fig. 9*), while in the top-lighting systems the central ceiling, if there is one, either is level with or springs from the top edge. (See Fig. 13.) In order to carry out the Top-Side-Lighted method there must be a double pitched roof, and the skylights must be, not in the slopes of the roofs next to the walls, but in the inner slopes of the roof next to the ceiling.

This very essential difference was not recognized by Sir Martin Conway in referring to the new roof of the Wallace Collection. For at the annual meeting of the Museums Association he said in the course of his remarks, "Mr. Seager not only merely described to us his points, but has illustrated and proved them. I am thankful to think that the Wallace Gallery which is going to have its roof put in order, is to have one or two of the principal galleries provided with side lights at the top."

The illustrations show that the new roof of the Wallace Collection is the old top-light skylight with the ceiling light omitted, illuminating the spectators and objects and causing, as usual, overpowering reflections in all glazed pictures. (See Figs. 14 and 15.)

It is very easy to confuse the two methods, for the skylight is placed exactly as I suggested in the Top-Side-Lighted method—if the section be regarded as that of a bay (Fig. 16), but by placing skylights on both sides of the room the advantage of the position is completely nullified. It is

*November 7, 1923, issue of THE AMERICAN ARCHITECT.

fortunate indeed that pictures on the walls of rooms double lighted in this way can be nearly perfectly seen if one side at a time is lighted by the Top-Side-Lighted method. All that is necessary is to shut off by means of opaque blinds the skylight over either wall so that the pictures on that wall receive their light from the opposite skylight at the back of the spectator. In those cases where the room is very wide and the greatest amount of light from the skylights is thrown, not on the walls, but

as I wished, does show the great value of the system for all picture gallery and museum purposes.

The gallery was erected under a handsome bequest by the late Mr. John Sargeant, for long a resident of Wanganui, after whom the gallery is named. The plans and illustrations (Fig. 17) explain the scheme; and generally it may be stated that, though departures from the accepted design were made during the execution, the main principle of lighting was carried out.

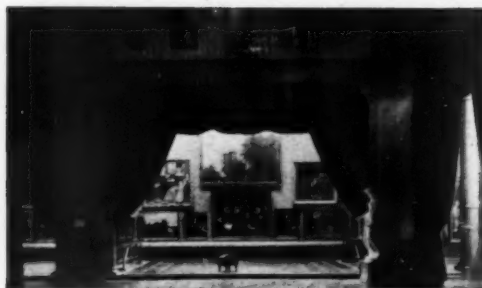


FIG. 11. RYKS MUSEUM, AMSTERDAM

Above: Gallery of Honor, showing bays top-lighted, floor most brilliantly illuminated in bays

At left: One of the bays in which it is impossible to exhibit any but unglazed pictures

At right: "The Night Watch," in specially built annex, side-lighted and screened

on the floor, other methods would have to be adopted.

Although I cannot refer to any gallery in Europe or America built with the Top-Side-Lighted method constructed as I have suggested it should be, I can fortunately bring before my readers illustrations of the Sargeant Art Gallery, commenced in 1914 and completed in 1917, at Wanganui, New Zealand, in which this system has been adopted, and which, while not carried out entirely

It is unfortunate that some of the illustrations show the gallery when filled with an overwhelming number of pictures obtained from all parts of the Dominion and Australia for the opening exhibition. It was never intended that the bays should be filled with pictures; this would necessitate visitors entering the bays and standing in the brightest light to view them, and overpowering reflections would, of course, result. The pictures should be placed on the end wall and be of such a size that

they can be efficiently seen from a seat placed just within the bay. Pictures can also be placed on the side walls to within six or seven feet of the inner end so that the spectator can see them when seated or in passing along the corridor, as illustrated in 5, Fig. 17. By using the side walls of the bays in this restricted way the hanging space in the gallery will be more than doubled. In a pair of bays 16 feet deep and 12 feet wide, and their portion of corridor, we have 528 square feet of floor

walls of the room—whatever its shape—must be much better lighted than the space in which the spectator stands. The bay treatment as shown in Fig. 16 is only suitable for those pictures which can be best seen when standing some distance from them. This distance will naturally depend on the size of the pictures, and therefore the bays should be of varying depths so that they may be suitable for pictures of varying sizes. In this case eight of the bays are 16 feet deep, suitable for 8-foot pic-

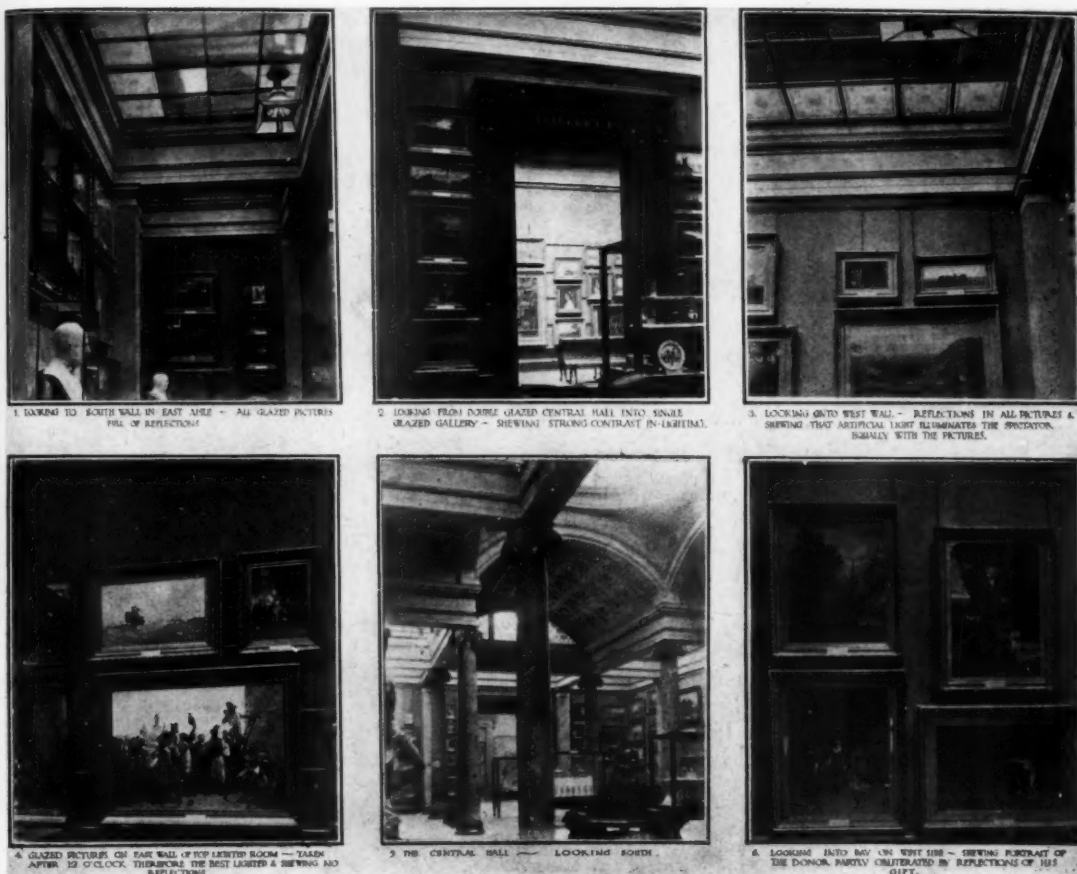


FIG. 12. MAPPIN ART GALLERY, SHEFFIELD

space to 52 linear feet of picture space, or about ten feet to one foot. I have shown the plan and elevation of the gallery as it is of interest to see the form of the building in which the Top-Side-Lighted method was first applied; but the plan of the building or the form of architecture is quite immaterial to the success of the system.

It is not even necessary that the bay treatment should be adopted (See Fig. 9*); the only fundamental principle to be kept in view is that the

tures, and four of them 10 feet deep, suitable for 5-foot pictures.

In Fig. 17 it can be seen from 5 and 7 how effective the bay treatment may be. In 8 we see the disfigurement resulting from the white dado and white ceiling. The cove of the ceiling also reflects the rays of light which should have been absorbed by a dark tinted surface. In spite of these disadvantages the pictures are excellently lighted, and there need be no reflections either in the pictures on the end walls of the bays, nor in

*November 7, 1923, issue of THE AMERICAN ARCHITECT.



FIG. 13. VIEW LOOKING NORTH IN NEWLY ROOFED ROOM IN THE WALLACE COLLECTION. TOP-LIGHTED

those on the sides of the bays next to the corridor.

Although the rooms provided for small pictures (6) are very well lighted, they are not as successful as they should be. Rooms, or bays, required for the exhibition of water colors, or small oil colors requiring close examination, should have the ceiling close to the limit of height at which pictures can be seen—not more than 10 or 11 feet, and for miniatures not more than eight or nine feet. This connotes that small pictures should be exhibited in small rooms, or bays with the ceiling brought down to the required height; and the light directed on to all the walls by the Top-Side-Lighted method. The small miniature room at Wanganui (Fig. 18)

was lighted in this way with success. The room seen in 6, Fig. 17, could be much improved if the ceiling were made much wider—as it could be without diminishing the light on the pictures—and the entrance were curtained as seen in the Ryks Museum (Fig. 11) and in Fig. 19.

The ante-room in the Soane Museum affords an illustration of the Top-Side-Lighted method (Fig. 20). It is of the greatest interest in that it enables me to refer my readers to a London example of a perfectly lighted glazed picture which, by accident, is quite free from reflections. This small room, 11 feet by 8 feet, was formed in an area off a passageway leading from the dining room, after Soane's death. This passage was lighted by Soane with tinted glass giving a subdued light, and the ante-room was lighted—as shown by section—with the usual form of double-pitched skylight glazed with clear glass. The half skylight (C) through which the rays of light pass to the picture is open to the sky, while that on the opposite side (D) happens to receive (in contrast with those at C) only feeble reflected rays from a dark brick wall, thus practically producing the conditions stated to be necessary for success in the Top-Side-Lighted method. The spectator stands in the subdued light of the passageway and looks on to the brilliantly lighted picture in the bay.

The picture at P¹ is in a similar position to those shown on the side walls of the bay in the Wanganui Art Gallery; it can be seen to be well lighted and free from all reflections except those of the small pictures in the angle which should not be there.

The conditions are reversed in the case of the glazed cabinet at B, with the resulting hopeless confusion of exhibits and reflections seen in 2.

In my original paper I showed the result of an experiment to prove that the reflections in glazed pictures and the pictures themselves were not in the same focal plane. It is the only instance in the whole range of nature where objects in one

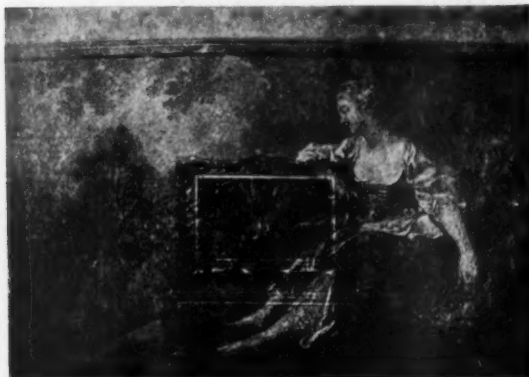


FIG. 14. AS SEEN, REFLECTIONS OF PICTURES



FIG. 15. AS IT SHOULD BE SEEN

"SHEPHERD PIPING," WALLACE COLLECTION

focal plane are superimposed on objects in another. It creates in the eye a greater strain than it can bear, and yet in the seventy years of art gallery construction no attempt has been made to get rid of it. This apathy is extraordinary when we consider the vast number of priceless paintings which are now so overpowered by reflections that it is quite impossible to see them. I can now show the result of this superimposition by illustrations of pictures in a few of our galleries; but in every gallery in the world the same thing can be seen wherever glazed pictures are exhibited.

It is not surprising that no progress has been made when a director of a most important gallery told me "Glazed pictures must reflect something," and on suggesting to an eminent architect after he had pointed out to me the brilliant lighting of a gallery he had designed that it could hardly be regarded as successful when the picture we were standing by merely mirrored our

reflections, he replied, "Oh, that is inevitable in all glazed pictures." It has been said that "Far too much has been made of this question of reflections." I am sure, on examining the illustrations, that those who think so will come to the conclusion that all responsible for art galleries must be strongly urged at once to take steps to improve

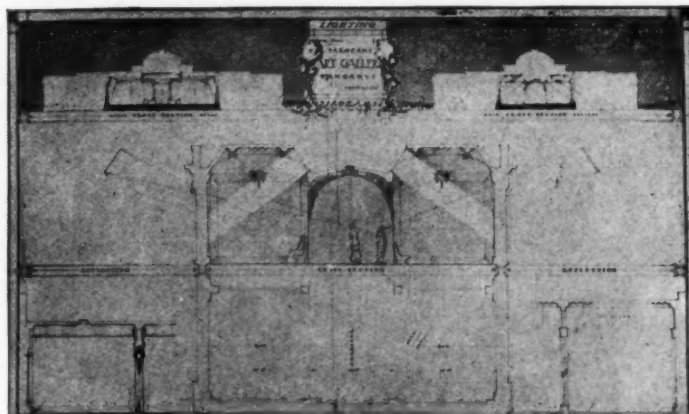
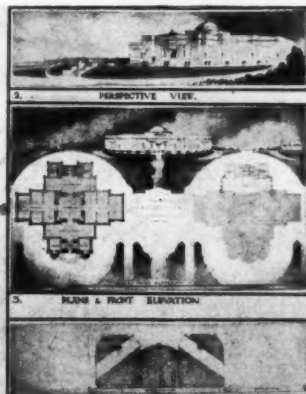


FIG. 16. THE TOP-SIDE-LIGHTED METHOD AS CARRIED OUT IN THE SARCEANT ART GALLERY, WANGANUI, NEW ZEALAND



1. FROM GALLERY FOR SMALL PICTURES LOOKING ACROSS SCULPTURE HALL TO DAY.



4. SECTION THROUGH BAYS.



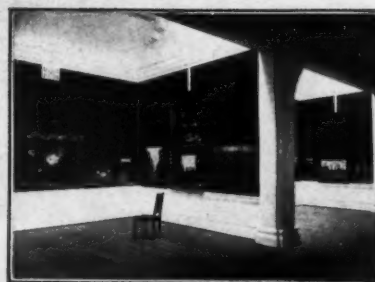
5. THE CORRIDOR & OPENINGS TO BAYS.



6. EAST BAY - GALLERY FOR SMALL PICTURES - BE ACHAINED & PAID. 7. THE SCULPTURE HALL - LOOKING INTO TERRAZZO.



7. THE SCULPTURE HALL - LOOKING INTO TERRAZZO.



8. DIVIDED BY - THE BAYS - WHITE DADO & COVE.

FIG. 17. SARCEANT ART GALLERY, WANGANUI, NEW ZEALAND



FIG. 19. FINE EFFECT BY SHIELDING SKYLIGHT



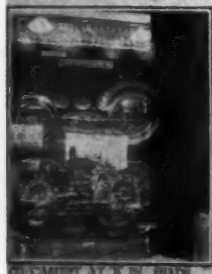
FIG. 18. THE MINIATURE ROOM, SARGEANT ART GALLERY

the existing conditions. We need to realize the truth of Ruskin's words, expressed over sixty years ago, "that a picture which is worth buying is also worth seeing," and to this end that our buildings shall be made "*scientifically correct, structurally perfect, and as architecturally magnificent*" as the occasion demands and the funds allow.

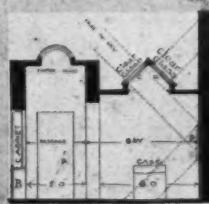
(To be concluded)



(1). THE ANTE-ROOM. SHOWING GLAZED PICTURE QUITE FREE FROM REFLECTIONS.



(3). PICTURE AT B IN BRILL.



(3). SECTION A-A



(4). PLAN



(5). PICTURE AT P IN GOOD LIGHT

FIG. 20. SOANE MUSEUM

BEHAVIOR of HEAT

THE behavior of heat is being investigated by several different agencies. The results so far obtained have a distinct economic value. A comparison of the tests confirms their validity. For some years the Committee on Research of the American Heating and Ventilating Engineers has carried on tests at the Pittsburgh laboratories of the U. S. Bureau of Mines. This laboratory work was instituted by the late John R. Allen, Professor of Mechanical Engineering, University of Minnesota, and is now in charge of Professor F. P. Anderson.

Professor Allen had for several years carried on a wide range of investigations at the universities of Michigan and Minnesota. Among other things, he studied the effects of different finishes applied to radiators and the results were printed in *THE AMERICAN ARCHITECT*, February 13, 1918, abstracted from his paper presented to the American Society of Heating and Ventilating Engineers. In these tests a comparison was made between an unpainted and a painted radiator; the results of the painting were recorded relative to the unpainted radiator. The application of two coats of copper bronze reduced the heat transmission 24 per cent with no change for two added coats. Application of aluminum bronze reduced the heat transmission 27 per cent. The best results were obtained by the application of snow white enamel paint which slightly increased the effectiveness of an unpainted radiator. Several colors were applied with a range of 5.4 per cent, "no-lustre" green being the least efficient. White lead and zinc paints gave the same results as the unpainted radiators. The number of coats of paint or bronze had no effect on the results; it was the character of the final coat that fixed the result.

THE AMERICAN ARCHITECT of July 18, 1923, published the results of some tests made by Henry A. Gardner and Harold C. Parks which confirmed the results given by Professor Allen. These tests were conducted on an entirely different basis, yet comparative in general results.

Tests, recently concluded, made by Dr. W. W. Coblentz of the Bureau of Standards, were mentioned briefly in *THE AMERICAN ARCHITECT* of August 29, 1923, which verified the findings above mentioned. The form and number of loops of the radiator have a considerable influence on its action. The effect of the application of paint is not to be measured in the percentages given when the final heating results are computed. Heating by steam or hot water radiators is accomplished largely by convection, the heating of air which passes over the surface of the radiator. This heat is distributed throughout the room by air currents.

This value ranges from 50 to 73 per cent of the total heat emitted, depending on the shape of the radiator. The balance of the heat is merely radiant heat. It will thus be seen that a properly painted radiator will be from 15 to 20 per cent more efficient than one finished with copper or aluminum bronze. Paint can be applied to a bronze finished radiator to secure the increased efficiency.

Dr. Coblentz's investigations were directed to other fields. In fact, the major investigation was directed toward the suppression of radiation from flat surfaces exposed to the sun. The making of these tests is quite simple. Duplicate samples of the same material are selected and the under or upper side coated with aluminum. The two samples are mounted on a suitable frame and exposed to the sun. After the samples are thoroughly heated by the sun's rays, the intensity of the heat radiated from the under side of each one is measured by means of a sensitive thermopile, mounted immediately beneath the sample. The comparative temperatures are quickly obtained with accuracy.

In coverings of white cotton cloth, such as used for tents and awnings, there is some sunlight transmitted directly through the fabric. By coating the under side of the cloth with aluminum paint, the heat radiated from the under side was reduced by 86 per cent. Painted on the top side, the reduction was 80 per cent.

Coverings of automobiles and ice wagons are usually made of cloth or "artificial leather." Being black they absorb about 90 per cent of the sun's rays. About one-half of this is re-radiated from the under side of the cloth. Samples of "artificial leather" with the outside coated with aluminum paint showed a reduction of 70 to 75 per cent of heat radiated. When the aluminum paint was applied to the rough-woven under side, the heat emitted was 40 to 45 per cent of that of the unpainted sample.

A $\frac{1}{2}$ " cypress shingle painted with aluminum paint on the under side emitted only 43 per cent as much heat from the under side as the unpainted sample. Similar tests on 1" cypress boards showed practically no difference in emissivity. Wood being such a fine non-conductor of heat, requires no treatment provided currents of hot air do not penetrate through openings.

Painting the under side of a Johns-Manville asbestos roofing with aluminum paint reduced the temperature on the under side 50 per cent.

Dr. Coblentz cites a case where the outside of a Portland cement kiln was coated with aluminum paint. The resulting fuel saving was measured in tons of coal. This whole investigation opens

up a tremendous field of application for the suppression of radiation for attaining increased comfort and for maintaining air coolness in enclosed places or for facilitating the radiation of heat.

ARCHITECTS' RESPONSIBILITY FOR SAFE BUILDING

RESPONSIBILITY is an attribute of life. Its limitations are not always clearly defined or understood. Legal limitations are readily learned and acting within the law is of no especial credit. Legal restrictions are necessarily limited to the most simple things because they apply to all kinds and conditions of men. This is especially true of legal building regulations. They cannot be specific to the individual job and are consequently very general in character. This, with the possibility of inadequate inspection, leads to a vast number of building owners resorting to subterfuges for evading building regulations. These things are accomplished every day and in all places. They are always against the common welfare as expressed in the terms of stability, sanitation and fire-resistance.

Architects have a direct responsibility in these matters. Admitting their function of rendering a service to the owner, it also follows that they owe a service to others. Concerning the architect's obligations, W. O. Ludlow, A. I. A., discussed them with special reference to fire protection before the meeting of the National Fire Protection Congress, recently held in New York City. Aside from stating the owner's and the builder's relation to the matter, he said:

I am credibly informed that of buildings costing over \$50,000, 80 per cent are now designed by architects. In all such structures the architect can do more to bring about fire-resisting conditions than all others combined. I do not mean that his will predominates over that of the owner, but I do mean that he understands the necessity for fire protection and knows how to provide it. His responsibility is, therefore, paramount. This responsibility is not only to his client but to the community.

We recognize a compelling moral, if not a legal obligation, for a man to conduct all his affairs, including his business, in such a manner that first of all the comforts and rights of every man affected or concerned shall be preserved, after that his personal interests may predominate.

Now the architect as a servant of the public and as a professional man entrusted with the wise expenditure of funds often amounting to hundreds of thousands of dollars, is practicing his profession under a code of ethics which makes impossible any neglect in safeguarding property, or in precautions for the preservation of human life.

I find the average architect guilty of a woeful lack of interest in the methods of fire prevention. He will acknowledge his share of the responsibility for the safety of the buildings he designs, and if he is real downright honest, he must admit that in drawing his plans and specifications he has not always given fire prevention the attention and study it deserves. He must admit also that it is his duty to plan just as carefully to prevent fire in every last detail as it is to calculate carefully the bearing strength of his

foundations and the safe carrying capacity of his steel work.

At this time, I would call upon every architect carefully to consider how he, individually, in the plans that he draws, in the specifications that he writes, in the superintendence he provides, and in the advice he gives his clients and the public, can in the fullest measure do his part in preventing this waste.

And let the architect not forget that he is largely responsible for an immense amount of flimsy construction which has come from his boards on the plea that the owner "demanded it." I believe that every architect is morally responsible for the education of his client in the practice and ethics of building. The failure of the architect to recognize this duty, or a lack of courage to speak his convictions to the man who holds the pocketbook has brought about more than one disaster to buildings and human life.

STANDARD SPECIFICATIONS FOR LIME PLASTER

A BULLETIN, bearing the above title, is the result of several years' study of field conditions and has been prepared in conjunction with representatives of the engineering and architectural professions as well as expert plasterers and producers of lime.

The specifications are in such form that they may be quoted directly and included in an architect's complete building specifications, or, if desired, the short form may be used and the contractor referred to the standard specifications.

This new bulletin, 305A, is 8½ x 11" in size and marked for standard A. I. A. filing. Each specification is on a separate page and the arrangement is logical and simple. The bulletin contains only specifications.

Copies may be secured from the National Lime Association, 918 G Street, N. W., Washington, D. C., the Central Division office of the National Lime Association, Chicago Temple Building, Chicago, Ill., or the Eastern Division office, Insurance Building, Washington, D. C.

JURISDICTIONAL AWARD

THE National Board of Jurisdictional Awards at its Atlantic City meeting, rendered a decision in the controversy between the electrical workers and sheet metal workers concerning installation of Conduo Base and also in the controversy between the engineers and the steam fitters on the question of low pressure heat during completion of the heating system while the building is under construction.

In the first instance, the Board decided that the installation is the work of the sheet metal workers. The second case was decided in favor of the steam fitters, holding that jurisdiction rests with them until the general test has been made and the work accepted by the owner or his agent.

A RURAL LIBRARY BUILDING

Report of the Jury of Award of the Eighth Annual White Pine Architectural Competition

PROBLEM: The design of a Rural Library Building, for a progressive and growing community with a present population of 2,000, located "somewhere in the United States." The lot is on a corner with a frontage of 100 feet on the main street and 200 feet on the secondary street. The land is level. Main Street runs North and South.

The architectural style is optional, and the plan arrangement left to the ingenuity of the designer.

All the outside finish for the building, including siding and corner boards, window sash, frames and casings, outside blinds, cornice boards, brackets, ornaments, mouldings, etc., not including shingles, is to be of White Pine.

The Library Building shall contain: Delivery Room (not less than 225 square feet), Adult Reading Room (not less than 375 square feet, seating capacity 20), Reference Room (not less than 275 square feet, seating capacity 6), Children's Reading Room (about 475 square feet, seating capacity 20), Librarian's Office and Work Room (175 to 200 square feet, capacity 500 volumes), space for Auditorium uses with small platform (seating capacity 125). By "Room" is meant space devoted to the purpose designated rather than an area enclosed within partitions. Shelving shall be provided for 8,000 volumes, either in a Book Room or on wall and floor bookcases in the Reading Room, or by a combination of both methods.

If consistent with the design, attic space may be devoted to a Local Historical Museum (not less than 400 square feet).

The building will be heated and ventilated by a hot air furnace or, steam boiler. Therefore, a furnace room and a fuel room are necessary, also a small general storage room and janitor's work room. There should be a storage room for books not in constant use, and a toilet room and lavatory for the use of the Librarian and her staff. No public toilets and no drinking fountains will be required.

The Librarian's Office shall contain ample space for a desk and table, a wash basin, coat closet, supply cupboard, wall shelving, and a lift from the unpacking room in the basement. Privacy must be secured by shutting this room off from the rest of the building.

There must be good natural light at all points and especially at the Loan Desk in the Delivery Room. Avoid skylights.

Not more than two persons, and usually only one, will be responsible for the supervision of the entire library when it is open to borrowers and readers. In many recent successful buildings partitions have been omitted and low bookcases have served to mark divisions.

A part of the building must be devoted entirely to the children. For a limited number of hours much of the activity of the library focuses in the Children's Room. The books, the card catalog, and reference or school collection will be assembled here. Shelving must be adapted to their convenience. A bulletin board, a few shelves behind glass doors for the exhibit of 50 to 100 illustrated books are desirable features for a Children's Room. A fireplace may be planned in this room if it is in keeping with the general scheme of the room.

Space must be provided for a general bulletin board, the card catalog, a magazine rack, conveniently accessible to the public.

Two or more entrances should be provided.

The competitor shall design an appropriate sign for the building, which, drawn to scale of $\frac{1}{8}$ inch to the foot, shall be his *nom de plume*.

FIRST PRIZE DESIGN: A very simple and admirable plan. Of all the plans submitted this seemed to the Jury best to meet the requirements of the program. It is practical, convenient and easily supervised. The auditorium annex could easily be omitted, if for reasons of economy it be considered not essential, without impairing the design or the general effect of the building. The basement space could then become valuable and the building would probably be better served if it were wholly utilized. The exterior possesses a high degree of both beauty and form in its ensemble and in all its naive details and the scale is highly consistent. A study of these details discloses a rare choice of simple forms suitable for execution in wood. The wood pickets beside the steps, the lattice, the profile of mouldings, the detail of the lantern and the direct way in which these forms are used make a pleasing variety and a harmonious design.

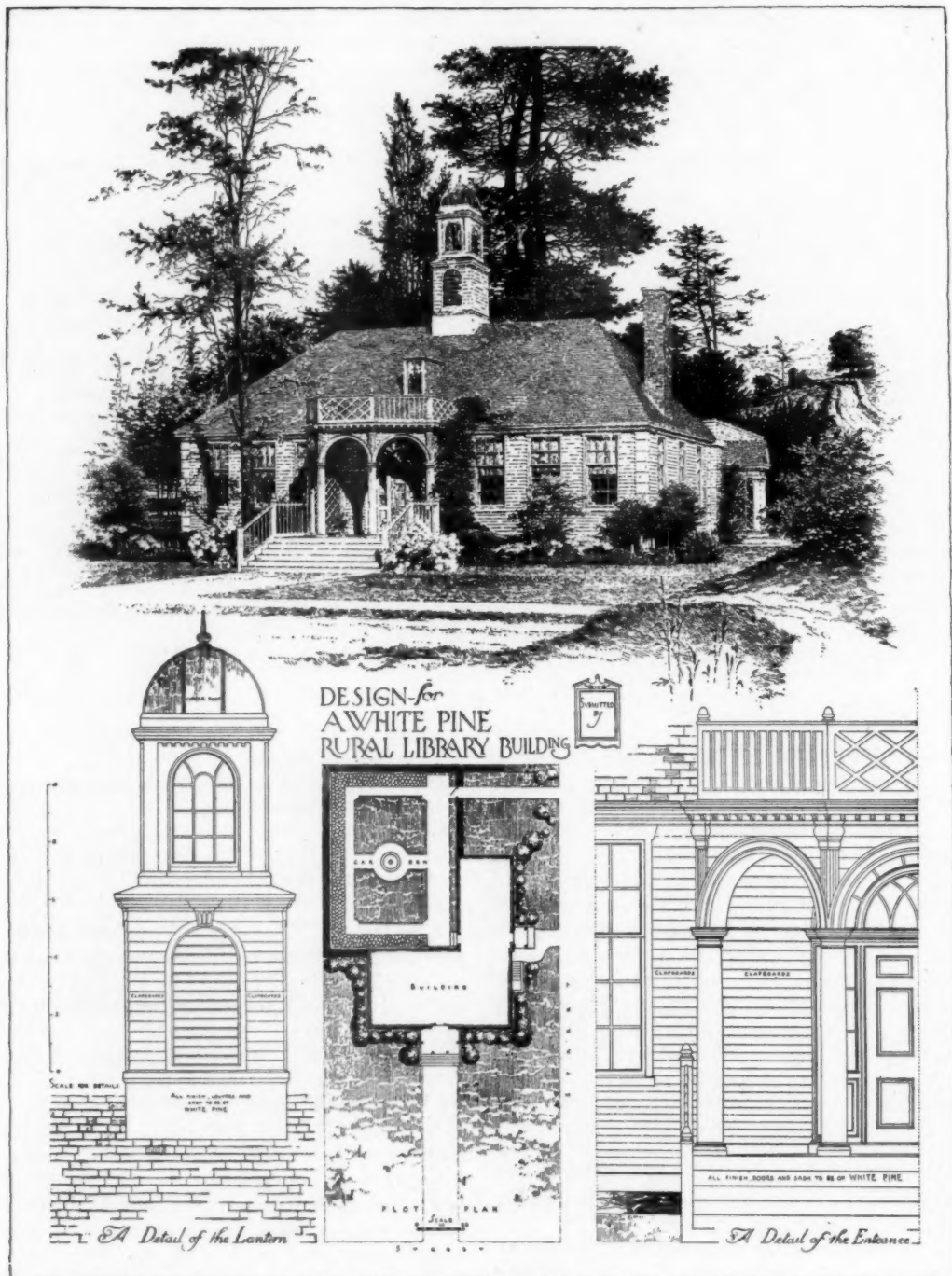
The rendering of the perspective, while not affecting the award, is commended by the Jury as a most delightful example of draftsmanship; marvelous understanding and beautiful work.

SECOND PRIZE DESIGN: An excellent plan, very similar to that of the First Prize, with just a shade less suavity. The basement is utilized to good advantage and the attic space is adapted for a small historical museum. The de-

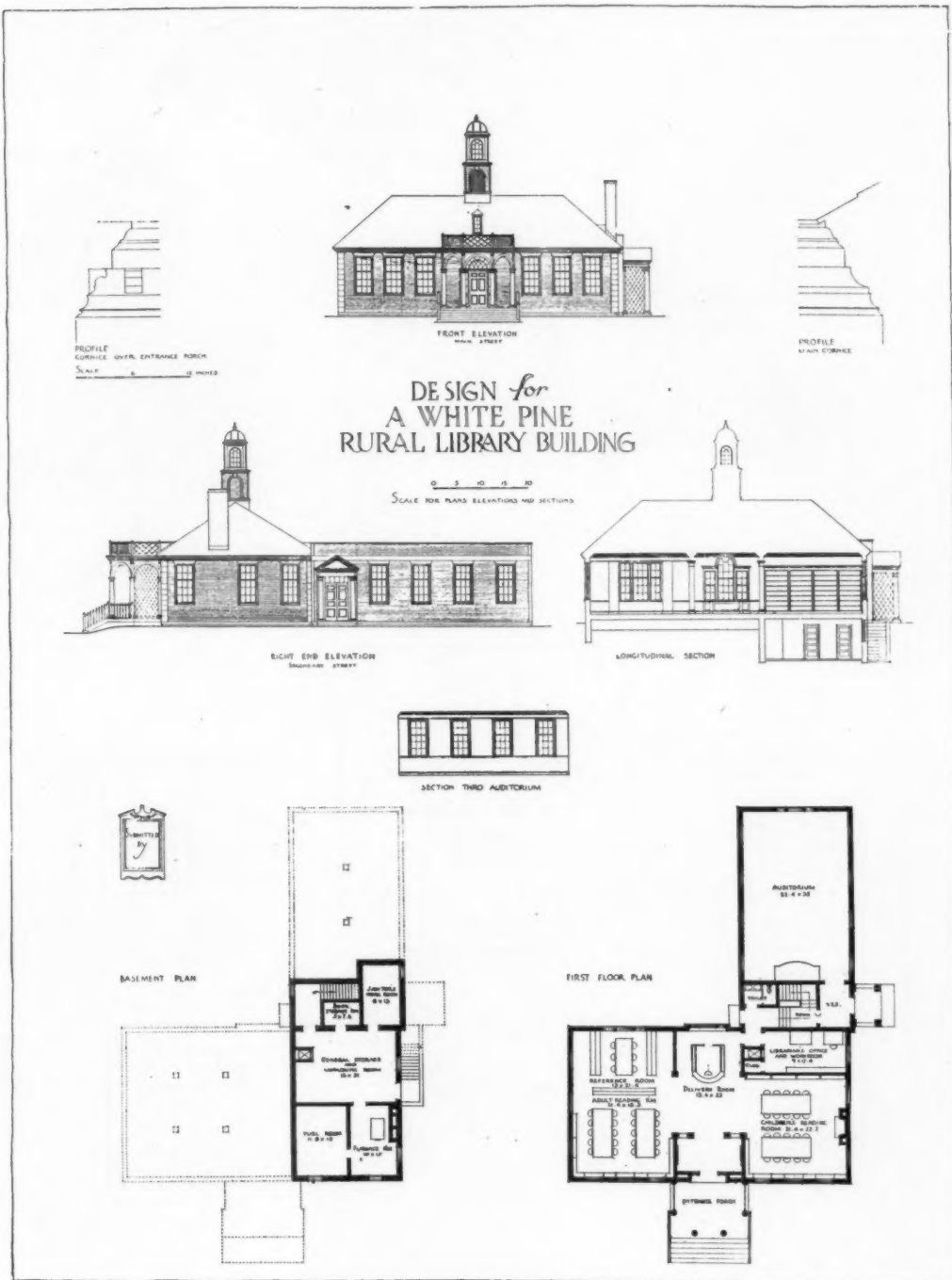
sign meets the requirements of the program to a marked degree. The exterior, highly appropriate for a rural community, is original in treatment, of good proportions and simple in detail. The very frank use of one-inch boards gives an "early American" feeling to the whole composition.

THIRD PRIZE DESIGN: A very lovely design which combines with its distinctly rural quality an admirable dignity. The plan, while simple and well arranged, suggests a larger building than called for by the program. Its outline redeems this fault in part, the simplification of certain details with which the plan appears crowded would tend to bring the design into scale.

FOURTH PRIZE DESIGN: The plan of this building appealed very strongly to the Jury. In some ways perhaps an ideal solution of the problem. Excellent judgment is displayed in its location on the lot and in its unsymmetrical arrangement, constituting its chief charm. The large well designed windows are varied to fit the needs of the rooms; the bay window and long window to the floor making the children's room very cheerful and attractive. The separate entrance to the basement auditorium, the placing of the book room, storage and heating apparatus are carefully worked out and the first floor plan is ideal in every respect.



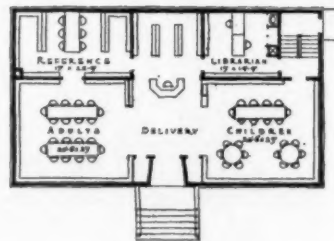
A RURAL LIBRARY
WHITE PINE ARCHITECTURAL COMPETITION
FIRST PRIZE DESIGN—RICHARD M. POWERS AND ALBERT C. MACLELLAN



A RURAL LIBRARY
 WHITE PINE ARCHITECTURAL COMPETITION
 FIRST PRIZE DESIGN, DETAIL SHEET—RICHARD M. POWERS AND ALBERT C. MacLELLAN

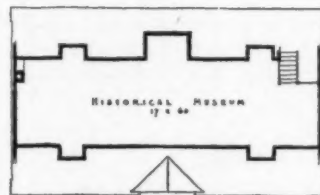


DESIGN FOR
WHITE-PINE
RURAL LIB-
RARY BUILD-
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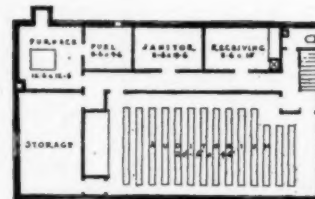


FIRST FLOOR PLAN

SCALE FOR PLANS
0 1 2 3 4 5 6 7 8 9 10



ATTIC PLAN

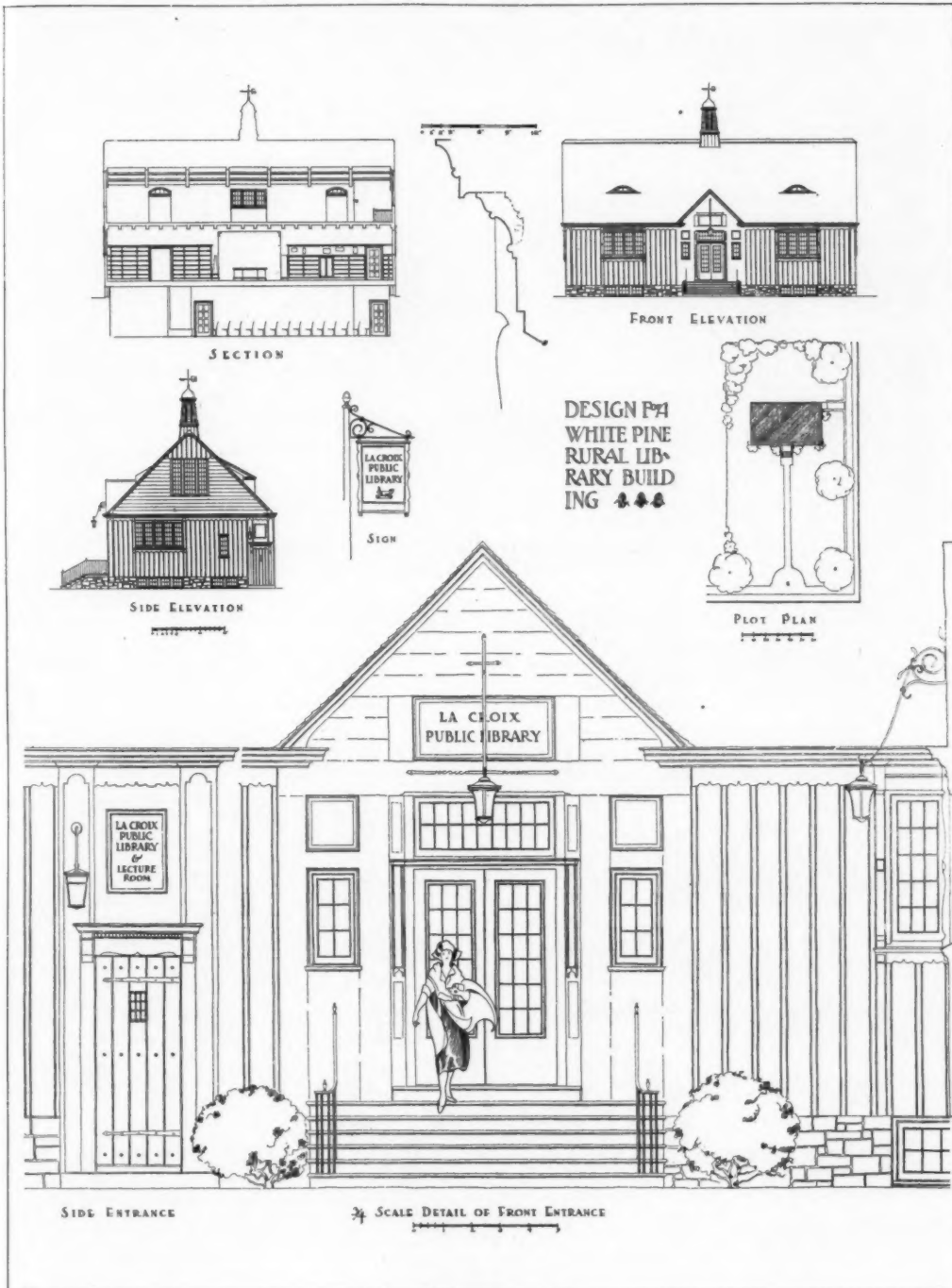


BASEMENT PLAN

A RURAL LIBRARY

WHITE PINE ARCHITECTURAL COMPETITION

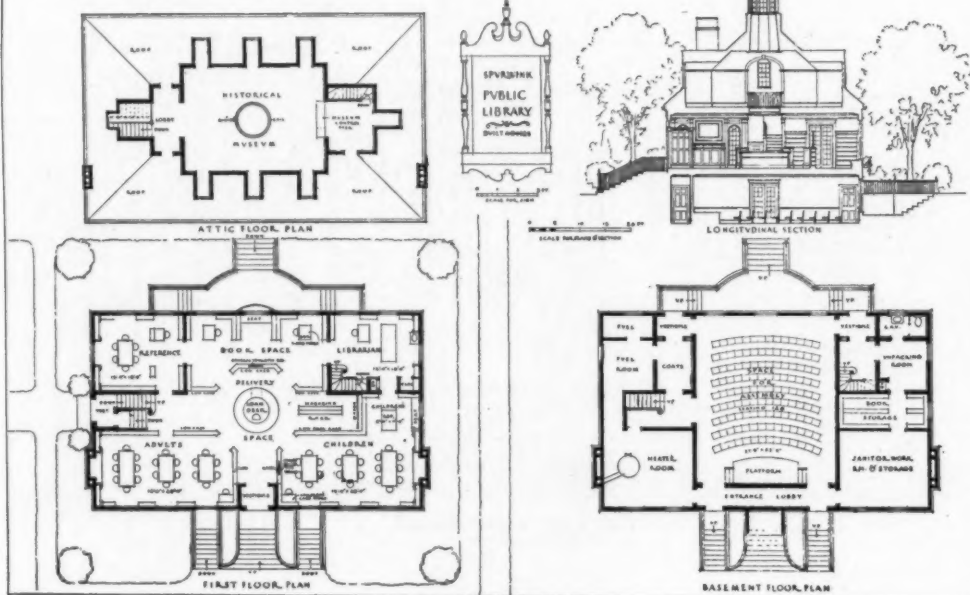
SECOND PRIZE DESIGN—H. A. SALISBURY AND FREDERICK S. STOTT



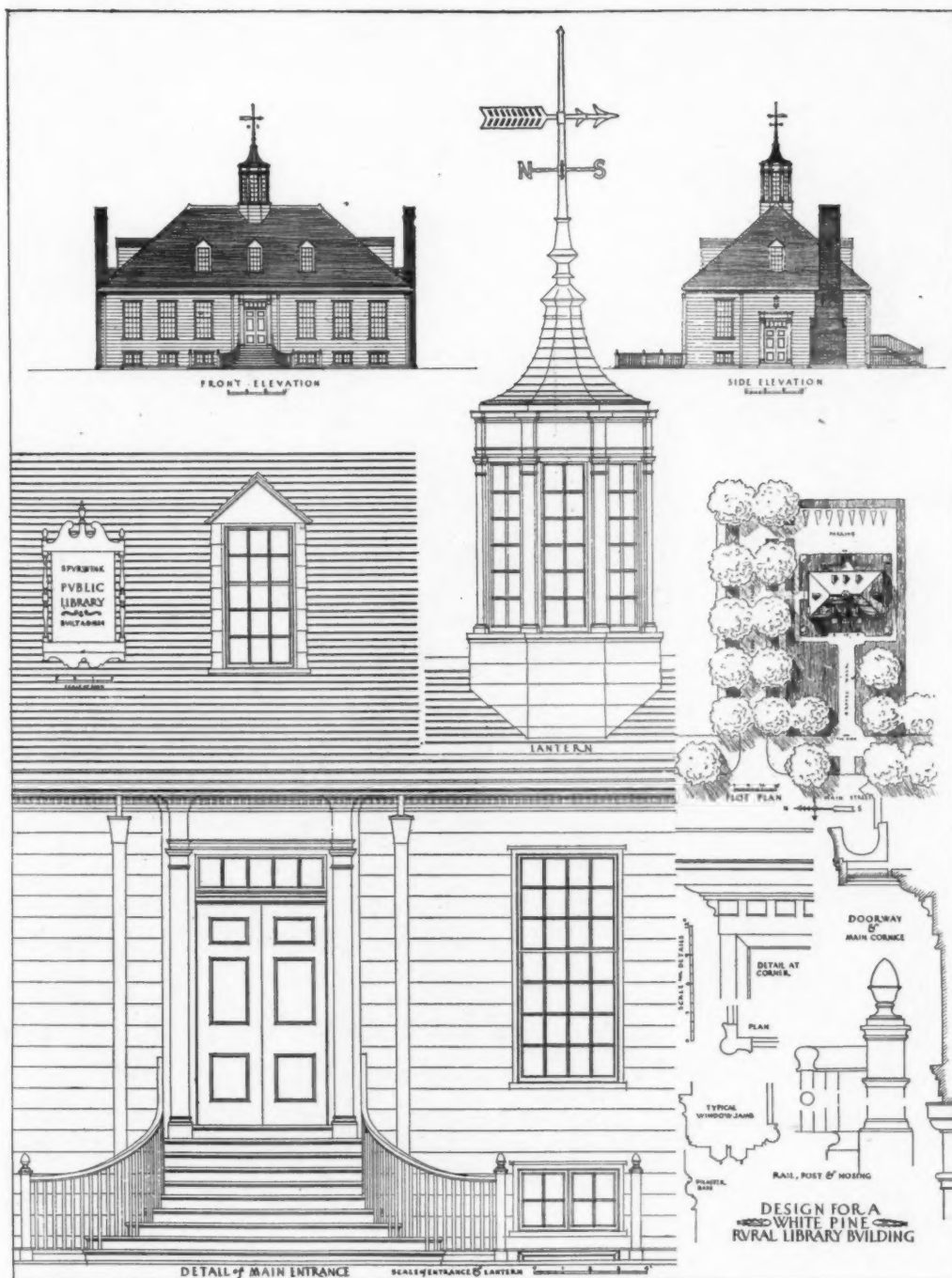
A RURAL LIBRARY

WHITE PINE ARCHITECTURAL COMPETITION

SECOND PRIZE DESIGN, DETAIL SHEET—H. A. SALISBURY AND FREDERICK S. STOTT



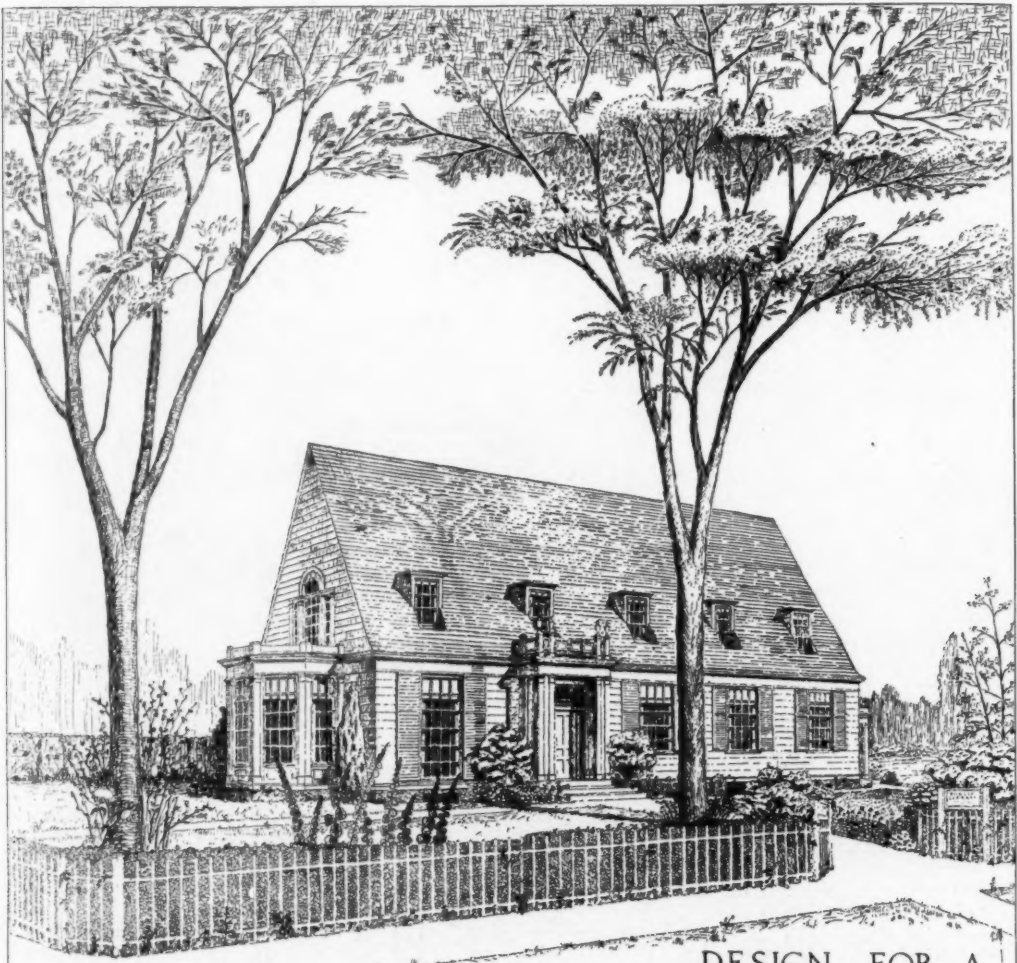
A RURAL LIBRARY
WHITE PINE ARCHITECTURAL COMPETITION
THIRD PRIZE—RALPH H. HANNAFORD



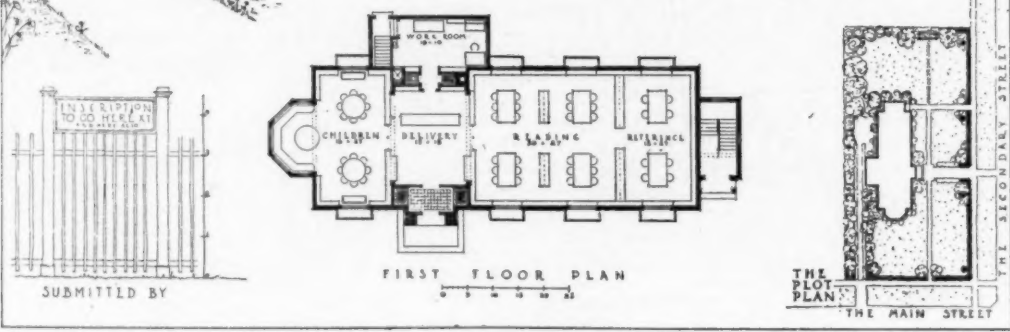
A RURAL LIBRARY

WHITE PINE ARCHITECTURAL COMPETITION

THIRD PRIZE DESIGN, DETAIL SHEET—RALPH H. HANNAFORD



DESIGN FOR A
WHITE PINE RURAL LIBRARY BUILDING



A RURAL LIBRARY
WHITE PINE ARCHITECTURAL COMPETITION
FOURTH PRIZE DESIGN—MERTON G. KINGSLEY

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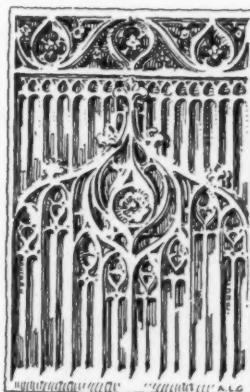
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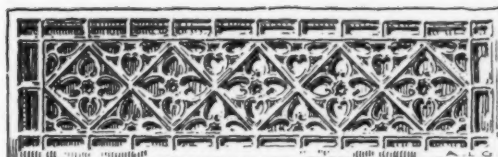


Main lobby in the Bush Terminal Building, which is equipped throughout with Ferrocraft Grilles.

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The purpose, simply stated, is to afford an organization which, it is believed, will become a most important element in architectural practice and building operations, a medium through which it may, without expense to itself, reach a class of readers that are most intimately identified with the field of the activities of The American Specification Institute.

Publishers, THE AMERICAN ARCHITECT AND THE ARCHITECTURAL REVIEW.

OUTLINE OF TENTATIVE SPECIFICATIONS FOR TRUCK SCALE

(The form of this bulletin conforms to the arrangement of Elements of a Specification as given in Bulletin No. 5, ANALYSIS OF A SPECIFICATION, Revised January 20, 1923.)

I. CONTRACT AND LEGAL

1. Parties:
2. Drawings:
3. Agreement:
4. Terms of Payment:
5. General Conditions:
6. Regulations and Codes:
7. Standards:
8. Patents:

II. ECONOMIC

SCOPE OF CONTRACT:

9. Work Included:
10. Schedule of Work Included:
11. Work not Included:

METHODS OF ANALYSIS AND COMPARISON OF BIDS:

12. Methods:
13. Basis:
14. Detailed Information:
15. Conditional Payments:

III. GENERAL DESCRIPTIVE

CHARACTERISTICS AND SERVICE CONDITIONS:

16. Location:
17. Railroad Siding:
18. Visiting Site:
19. Working Facilities:

IV. PRELIMINARY PREPARATIONS

20. Field Measurements:
21. Shop Drawings:
22. Samples:
23. Models:

V. MATERIALS

24. Properties, Chemical and Physical:
25. Sizes, Weights, Gauges:
26. Quantities:

VI. DESIGN AND CONSTRUCTION

27. Scale Design:
28. Beam:
29. Levers:
30. Bearings, Pivots, Stands, etc.:
31. Beam Box:
32. Platform:
33. Trap Door and Ladder Rungs:

FIELD WORK:

34. Foundations:
35. Erection:
36. Finish:
37. Protection of Work:

VII. SCHEDULES

38. Shop Production:
39. Field Operation:
40. Shipment and Delivery:

VIII. RESULTS

41. Inspection and Performance:
42. Instructions:
43. Guarantees:
44. Test:
45. Rejection:

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PERSONALS

Delos H. Smith, architect, has removed his office to 1707 I Street, Northwest, Washington, D. C.

Harvey R. Hoffmaster, architect, 3320 Lothrop Street, Detroit, Mich., would be pleased to receive manufacturers' catalogs and samples.

Arthur W. Angel, architect, has moved his office from 2136 East First Street to Room 3, 3404½ Whittier Boulevard, Los Angeles, Cal.

Mott M. Marston, architect, is now located in Suite 507 Douglas Building, Los Angeles, Cal. Mr. Marston was formerly at 1400 Stock Exchange Building, that city.

It is announced that James J. Donnellan, architect, has moved his office from 214 Lissner Building to Suite 231 Bryson Building, Los Angeles, Cal.

William H. Kraemer, architect, formerly located at 325 N. Western Avenue, has removed his office to Suite 105 Wright Building, Los Angeles, Cal.

Lehman & Schmitt, architects, have moved their offices from 210 Electric Building to the Hunkin-Conkey Building at Walnut and East Twelfth Streets, Cleveland, Ohio.

Philip Markowitz, architect, has opened an office at 4250 Broadway, New York City, for the practice of architecture. Manufacturers' catalogs and samples are requested.

It is announced that W. S. Hebbard, architect, has moved his office from Room 664 I. W. Hellman Building, Los Angeles, Cal., to Room 534, that building.

W. E. Gore, architect and engineer, registered architect of the State of Illinois, and specialist in school design, is now located at 411 Realty Building, Louisville, Ky.

It is announced that Martin A. Sheldon, architect, has removed his offices to 950 Monadnock Building, Market Street near Third Street, San Francisco, Cal.

Announcement is made that Scott Quintin has formed a partnership with Thomas L. Kerr, under the firm name of Quintin & Kerr, architects and engineers, with offices at 310-11 Weber Building, Alhambra, Cal. Manufacturers' catalogs and samples are desired.

George G. Smith, architect, has opened an office for the practice of architecture at 809 American Trust Building, Birmingham, Ala. Manufacturers are requested to send catalogs and samples.

J. L. Popkin, architect, formerly of Chicago, has opened offices for the general practice of architecture at 924-25 Peter Smith Building, Detroit, Mich. Manufacturers' catalogs and samples are requested.

Jos. R. Fallon, architect, announces the removal of his office from the Smith Building to the new Thornburg Annex, Suite No. 8, Connersville, Ind. Manufacturers are requested to send catalogs and samples.

Eldon L. Boots, architect, announces the opening of an office for the practice of architecture at North and South Road at Gabanne Avenue, Clayton, Mo. Manufacturers are requested to send catalogs and samples.

E. M. Tisdale, Fred C. Stone and W. W. Pinson, Jr., have associated for the general practice of architecture, having opened an office at 512½ Church Street, Nashville, Tenn. Manufacturers' catalogs and samples are desired.

Chas. M. Lobejager, architect, has removed his office from 104 Corona Avenue to Sackett Street, N. E. Corner Forty-sixth Street, Corona, Long Island. Manufacturers are requested to send catalogs and samples.

Lawrence A. Kerr and Harold Walsh have purchased the interest of J. C. Berry in the firm of J. C. Berry & Co., architects, Amarillo, Tex. The firm will hereafter be known as Kerr & Walsh, architects. Mr. Berry has opened an office in Suite 2, Horne Building, Long Beach, Cal.

Charles E. Keyser, architect, announces the removal of his offices to 317 Portsmouth Building, Kansas City, Kan., where he will be pleased to receive catalogs and manufacturers' literature. Mr. Keyser was formerly located in the First National Bank Building, Leavenworth, Kan.

George Bain Cummings, architect, announces that he has admitted to partnership Fred Leonard Starbuck, architect, formerly of New York City. Under the firm name of Cummings & Starbuck, architects, they will continue the practice of architecture with offices at 520 Security Mutual Building, Binghamton, N. Y.

November
Bankers: T.
Arch.: Ch.
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Lewis
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Boston.

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Arch.:
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Federal Reserve Bank, Richmond, Va. Arch. Sills, Buckler & Feaghagen, Baltimore, and Carneal & Johnston, Richmond. Con't: J. T. Wilson Co., Richmond. Rfr.: Warren Ekret Co., Philadelphia, and N. W. Martin & Bro., Richmond.



Corn Exchange Bank, New York. Arch.: S. E. Gage. Con't: J. H. Taylor Const. Co. Rfr.: Ford Roof Const. Co. All of New York City.



Birmingham Trust & Savings Bank, Birmingham, Ala. Arch.: Miller & Martin. Con't: Day & Sachs. Rfr.: George F. Wheelock Co. All of Birmingham, Ala.



Federal Reserve Bank, Atlanta, Ga. Arch.: A. Ten Eyke Brown. Con't: Gude & Co. Rfr.: G. P. Murphy's Sons All of Atlanta, Ga.



Market Street Title & Trust Co., Philadelphia, Pa. Arch.: W. L. Blüher. Con't: Cramp & Co. Rfr.: Clausen-Lincoln, Inc. All of Philadelphia, Pa.



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BOOK NOTES

OVER THE DRAWING BOARD

INTEENDED as a draftsman's handbook, this book is also of use to the student. Its popularity is evidenced by the second printing with revisions and added materials.

Over the Drawing Board, by Ben J. Lubschez, F.A.I.A. Cloth, 132 pages, illustrated, 5 x 7 1/4 in. Press of The American Institute of Architects, New York. Price \$2.00 postpaid.

ARCHITECTURAL COMPOSITION

IN this work, Prof. Curtis has departed from the usual form of books that treat of this subject. Heretofore, the subject of the elements of composition has been discussed in a very exhaustive manner, with minor consideration being given to the plan. With this in view, the author has given the major consideration to the plan. This is but reasonable because the plan includes two of the three dimensions that comprise a building and its study naturally implies the third dimension. If the plan is carefully studied and correctly disposed of, there will be no structural difficulties to be encountered as the design develops. The author does not claim to have brought to light any new ideas relating to the theory of architecture nor to have sought to produce an impression of originality. He has, however, presented a well balanced study of the subject that is well worth the attention of all those concerned with architecture.

Architectural Composition, by Nathaniel Cortland Curtis, A.I.A., Professor of Architecture and Head of the School of Architecture in the Tulane University of Louisiana. Cloth, 280 pages, 1 double plate with 270 illustrations, 7 x 10 in. J. H. Jansen, Cleveland, Ohio. Price \$6.00.

BLUEPRINT READING

BOOKS on this subject are still in the pioneer stage. This one is evidently written to serve the needs as determined by the author after twelve years' experience. The aim of the book is to enable a student of elementary school training, with little or no knowledge of mechanical drawing, to read the drawings on commercial blueprints. A feature of some of the illustrations is to show a photograph of the object drawn, thus aiding the student to visualize the blueprint.

The book is recommended for use in evening and apprentice schools as well as trade and vocational schools so that students should be competent to read a commercial blueprint when they take their places in the industries.

Blueprint Reading. For the Machine Shop and Related Trades. By Joseph Brahdy, Brooklyn Vocational School. Cloth, 108 pages, profusely illustrated, 11 x 8 in. D. Van Nostrand Company, New York. Price \$2.50 net.

THE 1924 CONVENTION OF THE A. I. A.

AT the meeting of the Board of Directors of the American Institute of Architects, held in New York City on November 8 and 9, it was decided that the next annual convention of the Institute would be held in regular order in Washington, D. C., in May, probably from the 21 to the 23 of May. It is a custom of the Institute, fixed more or less by precedent, to hold two conventions in the same city, and the third in some other city.

The regular convention in 1925 will be held in New York City. The exhibition and convention committee is already being organized to plan for the exhibition and convention in 1925. There was not sufficient time to work out this joint exhibition for 1924 and that is why it has been decided to hold this in 1925. The Institute, The Architectural League, the Sage Foundation and the International Housing Association are all co-operating to make a notable exhibition in 1925.

While the Board of Directors of the Institute was in session in New York, the executive committee of the New York Chapter of the Institute, entertained the members at a luncheon on November 9, held at the Transportation Club. Mr. Waid, as president of the chapter, presided, and Mr. Faville, president of the Institute, responded with a speech. There were many informal addresses.

THE HIGHEST BUILDING IN EUROPE

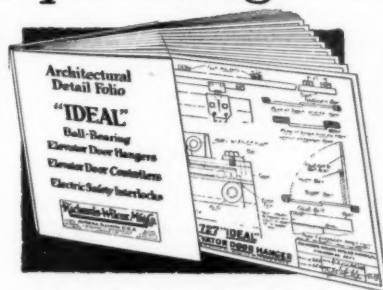
FROM the architectural press of London, it is learned that a hotel is now being constructed near the summit of the Jungfrau at a height of over 11,000 feet, and a short tunnel through the rock will lead from the electric railway to the hotel. Cooking, heating, cleaning and lighting will all be done by electricity. The hotel is to be built in a cleft of the mountain which will form its back and side walls. It would be very interesting to know what the cost per cubic foot of such a building actually amounts to. In any case, the charges at such a hotel would have to be enormously high, especially in consideration of the fact that at such an elevation the open season must be a short one. It is supposed that in such a region the production of electric power would be very cheap, otherwise the cost of heating would form an enormous item. Interesting as it is as a feat, it is a matter of doubt whether this would form a paying speculation.

MODERN ENGINEERING TO SAVE MEDIAEVAL TOWER

REINFORCED concrete is to be used to prevent the collapse of the great tower of the Strasbourg Cathedral designed by Jean Hultz in 1439, states a recent issue of *Engineering News-Record*. The original footings of the tower are of stone masonry on wooden piles. At the time of construction these piles were entirely submerged.



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About 1750, a new drainage system so lowered the level of the ground water that the tops of the piles were no longer submerged and they have subsequently decayed and permitted the tower to settle. Moreover the tower as finally completed was considerably higher and heavier than the one planned by Hultz at the time the footings were laid. In order to reinforce this old foundation and to replace the decayed piles, the columns of the tower have been encased in concrete to provide a hold for jacks and the whole tower has been jacked back into proper place and the old footings are being replaced by larger footings of reinforced concrete.

REBUILDING BIDEFORD BRIDGE, LONDON

THE famous Bideford Bridge, first built 600 years ago and extolled by Kingsley in "Westward Ho!" is undergoing repair, it is learned from press announcements. Built originally as a pack-horse bridge, it was widened, in the early days of the last century owing to the development of wheeled traffic, and now the heavy motor vehicle has made further widening necessary.

THE IMPROVEMENT IN LETTERING

NO one who has kept an eye on the fascia boards of shop fronts can have failed to be struck by the improvement that has taken place within recent years in the art of public lettering, states a recent issue of *The Architects' Journal*, London. The vogue of the clumsy block letter, and the distorted and elaborately decorated variant of it much affected by the imaginative sign writer, is obviously passing away. Much of the credit for this very welcome improvement may be awarded to architects, who, though themselves (may it be whispered?) often among the offenders about a decade ago, have now, generally speaking, given wholehearted allegiance to the Roman model or to one or other of its eighteenth century variants. Architects should and do lead the way in this matter of lettering. In the case of the County Hall, Ralph Knott has seen to it that the names, directions, and notices on the walls and doors are of a properly dignified character, the services of Percy Smith, the etcher, who has made a close study of the art of lettering, having been enlisted to this end; Harvey Corbett, architect, of New York, has insisted upon a uniform standard of lettering for the name panels in the entrance hall of Bush House; while the Architects' Department of H. M. Office of Works has set an exemplary standard of Government offices. If a general criticism may be allowed (there is, of course, no reference to the instances cited above) it must be directed against the tendency of lettering to become too attenuated. Delicacy of outline is all very well for close range, but it loses significance on a distant view. In lettering, as in architectural

composition, scale and proportion must be considered if the parts are to be properly related to the whole.

A CORRECTION

WE are advised by the Beaux-Arts Institute of Design, that in the issue of October 24, 1923, illustrating Class "B"-VI *Projet, An Open Air Swimming Pool*, by W. Ferrari, who was awarded a "First Mention Placed," Mr. Ferrari was by them incorrectly attributed to Yale University, New Haven. He is of the Atelier Hiron, New York.

SKYSCRAPERS ALARM PARIS

PARIS, it is learned, is soon to have skyscrapers. These will be eight and nine story buildings, which are to be constructed in the Rue des Vignes and the Rue des Marronniers and to be used for apartments.

When plans for these enormous structures were filed in the Hotel de Ville recently they created a furor. Despite the modern tendency to build upward and the congestion of the French capital, Parisians at present are building for the most part two story dwellings.

A TREE CEMETERY

DISGUISED under the name of the Municipal Museum of the Wood Industry, in the Bois de Vincennes, not mentioned in any of the guide books and unknown even to Parisians living near it, the City of Paris has a mausoleum of trees, states *The World's Bureau*. Probably the name has little to attract, but a corner of this museum is of remarkable interest and has a noble pathos of its own. It is the last resting place of famous monarchs of the forest and lesser noted trees of the city, all now crumbling into dust. Each has its epitaph bearing its name, its place of origin and often the cause of its decease.

Here is a sugar pine from California, which lived in its native clime for more than 700 years. Oliver Wendell Holmes would have outlined its history from the rings on its trunk, showing how it was already a sturdy tree when Columbus landed in America. When and why it came to France are not mentioned in the epitaph.

Here is another, the remains of a giant beech 200 years old, from the Forest of Montargis—a hoary old age compared to the poor trees of the city growth such as "Elm, from the Avenue de Clichy, thirty years, death presumed natural."

Many have this strange inscription, "death presumed natural," but not all. Here is an "Elm, Avenue de Batignolles; killed by escaping gas." Causes of death are various. A pitchpine from Florida was eaten by insects, while toadstools and fungus are prominent among the destroyers chronicled in this strange cemetery.

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THE ARTIST AND ADVERTISEMENTS

WE are all glad to see indications of improvement in public advertising, largely owing to the good example set by the Underground Railway authorities, states *The Builder*, of London in one of its recent issues. But advertisement is not the only field for art, and to some of us this too great identification of art with advertisement as almost the primary field for its expression is of evil augury. Have the arts no place unless they can advertise whiskey? And is it the best field for the best artist that they should do so? These thoughts are given emphasis in looking at a recent advertisement. Is art now to find its best inspiration through trade, whereas it once found it through the noblest ideas? It is a fundamental change, and a question to which an answer will have to be found. When Lord Robert Cecil tells us so weightily that "we must either Christianize Europe or Christianity will destroy Europe," we are reminded of these things. That the bad should sell itself to the bad is understandable, but that the good should sell itself to the bad is a more frightful infidelity. John Milton has told us that "the devil can quote Scripture for his purpose." Let us not mix up the making use of art for commercialism with its more legitimate aims, for there is another side to all this—one which the artist has much need to understand.

INDUSTRIAL SAFETY IN THE UNITED STATES

DURING an address before the International Labor Conference of the League of Nations at Geneva, Switzerland, on Accident Prevention in America, W. H. Cameron, Managing Director of the National Safety Council of the United States, demonstrated the remarkable growth of the industrial safety movement in the United States, by lantern slides, motion pictures, photographs and posters used in accident prevention work in this country. Mr. Cameron spoke on invitation of the League of Nations. He said in part:

"The safety problem is a world problem. Its solution is of vital importance in our international industrial life. The prosperity of any nation depends on the productiveness of its workers, which in turn depends to a large extent on their safety, health and welfare. Stopping the tremendous waste of accidents will improve the condition of industry of the worker and of the nation as a whole.

"The quickening interest of employers, of governments and of this great body (the League of Nations), devoted to the solution of world problems, is a most encouraging sign. With the co-op-

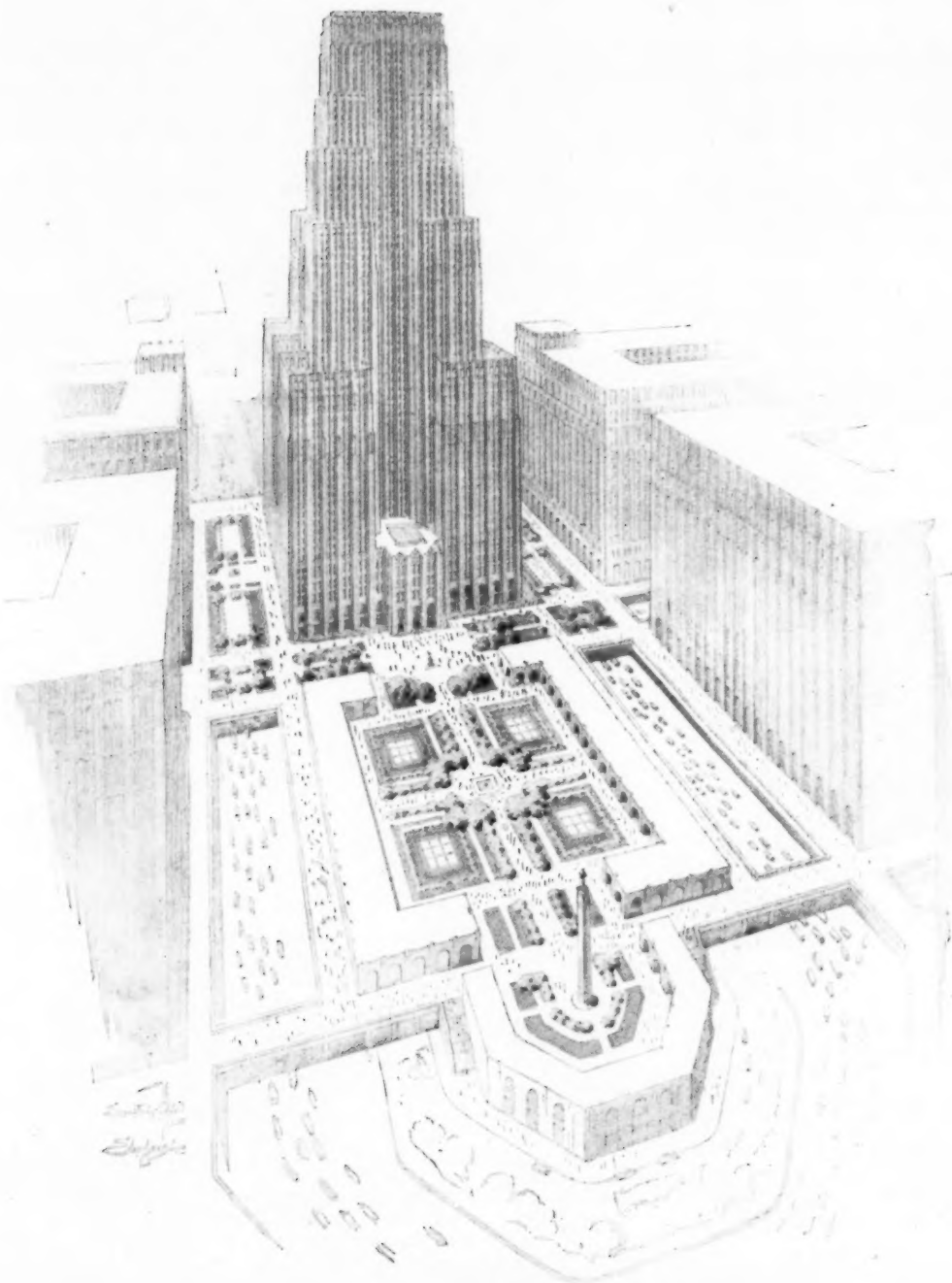
eration of these forces, great strides in accident prevention are possible. I firmly believe that the time is not far distant when accidental death and serious injury in industry will be the exception. Earnest effort in reducing the casualties of peace is an expression of the highest type of patriotism to one's country and of service to humanity as a whole.

"Of much significance to us in America has been the inability of any government to arouse the enthusiastic interest of the employer in accident prevention by a blind method of labor law enforcement, the use of the 'policeman's club.' We have found that when the governmental authorities express a sympathetic interest in the complicated task of the employer and his safety problems, invite him to participate in the making of the safety laws through committees, encourage him to eliminate the accident hazards by showing him how to do so, and advocate and assist in the introduction of safety organization, then—and only then—has respect for the law resulted and with it a more ready spirit of conformity.

"The American method of solving the accident problem is a democratic one. The individual industry determines its own method. The safety organization and methods are likely to be evolved through conviction that the principle is right and not because the task or the requirement is imposed by the state. If there is a distinctive note in the American method of technique for minimizing accidents, it is the manifestation of a real industrial democracy, the method and results depending upon the co-operation of employer and employee. In many instances this has led to a better understanding of industrial problems and has shown the possibilities of effective co-operation.

"Safety will never have universal acceptance until its constructive and reasonable aspects become universally known. The words 'Safety First' have done serious injury. This slogan is negative and destructive. No permanent advance in civilization is made on a negative principle. The inner meaning of safety is the preservation of life to continue the adventure of life. If life is worth while, if it is worth continuing, then the safe piloting of life's adventure must depend upon facing the risks of life fearlessly but with a knowledge of their inherent qualities. Some of the thrill of life is in meeting its dangers. Our workers, our citizens must first understand what safety is; it must become a desirable and sought for attribute of living. It must be worked into the habits and consciousness of children as they are taught to talk and live."

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