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RITUALISM in ARCHITECTURE

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IT has been frequently stated that among all living creatures man alone is "incurably religious" and all records of human development testify to the truth of this statement.

The soul of man, tossed about in the constant struggle for existence has always demanded some spiritual refuge from the cares and distractions of the world and in its effort to get in touch with the Infinite and to express its highest adoration for the Divine it has always depended upon some form or ritual to guide it in worship.

The author of the Mosaic law recognized this fact and in the Book of Exodus, chapters 25 to 30 inclusive, we find a formal ritual very exactly defined to the smallest detail and later, when Solomon began to build his temple at Jerusalem the specifications of the temple describe a building intended solely for the worship of God in accordance with the ritual laid down by Moses.

All earlier religions were equally explicit in defining the order of worship of their various gods so we may safely say that ritualism in worship is and has always been an inherent necessity of the human soul.

In studying the civilizations of the past our most valuable and authentic records are the temples of worship. Other buildings of the past are completely swept away by the ravages of time but the temples remain and prove the oft-repeated statement that Art is the handmaiden of Religion.

The ritual of worship for the Hebrew people continued unchanged until the time of Christ, and after, and was the inspiration and guide of the Apostles in establishing the ritual of the Catholic Church.

Christ Himself said "I came not to destroy the law but to fulfill." The one innovation established by Him on the night before His supreme Sacrifice was the Holy Eucharist, The Supper of our Lord.

Recognizing the Divine origin of this Sacrament the Apostles made it the supreme act of worship and in establishing the order of worship for the Catholic Church the mind of the worshiper was gradually led by means of prayer and praise and instructions from the scriptures up to the final act of worship by which the Soul of man is brought into actual intimate communion with the Son of God who is God Himself. This perfect

communion between God and man is at once the goal and purpose of ritualism.

Until the early days of the third century the Christians were so persecuted in various parts of the world that they had to worship wherever they could, using such buildings as they could acquire and maintain, so that no distinct type of Christian architecture was developed. In the year 313 Constantine, who had been converted to Christianity a few years previously, won the battle of Saxa Rubra and became undisputed master of Rome. Christianity was not at once proclaimed the religion of the Empire but it was declared free from persecution by the Act of Toleration issued at Milan in that same year. In 325 a council of the church was held at Nice over which the Emperor presided. At this council Christianity was officially recognized as the religion of the Empire, the doctrines set forth in the Apostles Creed were more clearly defined in what we know as the Nicene Creed and the Ritual of Christian worship definitely established.

This question being settled, the Fathers of the Church recognized the fact that Christ's purpose had always been to bring to all His children the benefits and blessings of communion with Himself and that this could only be done by the process of education and that for this universal education adequate and appropriate buildings must be provided. As the process of building was slow in those days and human needs were crying for that inward peace which religion alone could bring to the Soul of man, the process of converting the Roman basilicas into houses of God began and this was the real beginning of Christian Architecture. It is not my purpose, in a brief article such as the Editors of *THE AMERICAN ARCHITECT* have asked me to write, to tell the story, fascinating as it is, of the development of Christian Architecture from the converted basilicas through the early simple buildings of Asia Minor, which sprang up everywhere after the founding of Constantinople, through the heavy Romanesque churches of Southern France, Northern Italy, the Rhine Valley and Norman England to the marvellous efflorescence of Gothic Art which produced such triumphs as Notre Dame in Paris, Canterbury and Lincoln in England and culminated in the cathedral of Chartres, the nave of Winchester,

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King's College Chapel at Cambridge and Henry VII's chapel at Westminster Abbey but, in order to understand the vital significance I might almost say vital necessity of ritual in worship, it is necessary to emphasize the fact that in every stage of the development of Christian Architecture certain principles have been steadily adhered to.

No man, in our day, has worked more consistently or unselfishly to establish the vital principles of Christian Architecture and to impress them upon the modern mind than Ralph Adams Cram. In his book entitled "Church Building" first published in 1899, he defines the four essential qualities of a church so clearly and withal so reverently that I quote him as follows:

"First of all, a church is a house of God, a place of His earthly habitation wrought in the fashion of heavenly things, a visible type of heaven itself. From the day when God gave to Solomon the plans and the fashion of the temple down to those wherein our own forefathers lavished their scanty wealth and toiled with devout hands to raise the awful fabrics of the medieval cathedrals and abbeys, this thought has lain as the cornerstone of everyone of the great and splendid churches that brighten Christendom with the memory of devout and reverent times. They were building a house of God and the treasure and labor lavished so abundantly were consecrated as they might never be on any other structure. All the wonders of Art—the handmaid of Religion—all the treasures gathered from many lands, were lavished here in gratitude and praise and thanksgiving; and nothing was too precious, indeed all things failed in a measure to show the deep devotion of faithful men and their solemn knowledge of the majesty of that presence that should enter and dwell therein. * * *

"This is the first and highest reason for church building and the second is this: the providing of a place apart where may be realized the sublime mysteries of the Catholic faith; a temple reared about the altar, and subordinate to it, leading up to it, as to the center of honor, growing richer and more splendid as it approaches the sanctuary, where is concentrated all the wealth of obedient and loving workmanship that may be obtained by means of personal sacrifice through the years that gather into centuries. Previous to the 16th century the churches of England were stupendous treasure-houses, in which every jewel and statue and picture, every bit of metal work and carving and embroidery, voiced some personal devotion, some gratitude of man for mercies and blessings. * * *

"It is unnecessary to argue for the importance of this exalted quality in church building. Conscience, instinct, impulse, all urge us to glorify, with the extreme of our power, the sanctuary of the Lord. It seems incredible that in the last few centuries this, the eminent reason and law of church building, should have been so grievously obscured, until men should wrong-headedly have reared their auditoriums and show structures, forgetting the supremacy of the sacramental nature of the Church in the zeal for the glorification of her prophetic nature. Such has, however, been the case; but, thanks to recent events, it is no longer necessary to argue for a more just conception of things.

"The third aspect of church architecture is this; the creation of spiritual emotion through the ministry of all possible beauty of environment; the using of art to lift men's minds from secular things to spiritual, that their Souls may be brought into harmony with God. The agency of Art to this end is immeasurable and, until the time of the Reformers, was always recognized. Not in the barren and ugly meeting house of the Puritans, with its whitewashed walls, three decked pulpits and pew boxes, were men most easily lifted out of themselves into

spiritual communion with God,—not there did they come most clearly to know the charity and sweetness of Christianity and the exalting solemnity of divine worship, but where they were surrounded by the dim shadows of mysterious aisles, where lofty piers of stone softened high overhead into sweeping arches and shadowy vaults, where golden light struck down through storied windows, painted with the benignant faces of Saints and Angels; where the eye rested at every turn on a painted and carved Bible, manifesting itself through the senses to the imagination; where every wall, every foot of floor, bore its silent memorial to the dead, its thank offering to God; where was always the faint odor of old incense, the still atmosphere of prayer and praise. * * *

"But for its manifestation of supreme art in painting and architecture and ritual, the Church would never have won the allegiance of the civilized world.

"And this for the reason, that Art is in its highest manifestation, the expression of religious things, and that only so, only through the spiritual power of color and form, light and shade, tone and harmony in a word, through art in all its varied forms—may religion find at once its fullest expression and its most potent incentive. The triumphant architecture, the sublime art, the solemn and splendid ritual that have grown beneath the beneficent influence of Christianity,—nay, that have owed their existence to the church as surely as they have accompanied her periods of health and vigor,—are the instinctive expressions by men, through the symbolism of art, of the religious emotions she has created. Art is at once the flower and fruit of an age, its glorious manifestation, its guarantee for the future, its fertile seed that needs but to fall in good ground to spring up in tenfold strength. * * *

"That part of the Church which deliberately rejects the ministry of art in her service does so at her own peril,—a peril that history has shown to be grievous indeed and inevitable. If we are to see speedy restoration of Catholic Christianity to universal acceptance of the church to final authority we must abandon our niggardly and parsimonious giving, forsake our flimsy, temporary chaotic architecture and build, once more, churches that by reason of their massive stability, their richness and their splendor, the voiceful pictures of their walls and windows, the storied stones of their niches and porches and pinnacles, shall not only be worthy of acceptance as the temples of God, but shall show forth to men the mystery and sublimity of the Catholic faith, satisfy their stifled cravings for art and beauty, lift them into the exaltation of spiritual conviction. * * *

"The fourth aspect of church building is the one which is considered exclusively, and is precisely the last in importance of the four—the arrangement of a building where a congregation may conveniently listen to the instruction of its spiritual leaders. I do not mean for an instant that this quality must be sacrificed to the others; a church, if it is properly designed, may be a perfect sanctuary, a perfect temple, a perfect auditorium. I only protest against that custom of refusing to consider any plan that shows a single seat behind a column, a nave longer than it is wide, or that does not provide a picture-gallery light during the day and the illumination of a theatre at night."

I have quoted from Mr. Cram's book at such length because he has with Addisonian clarity and simplicity, laid down the fundamental principles upon which a church should be built. Since these words were written, a quarter of a century ago, a great change has taken place in the attitude of the Protestant denominations toward church building. Today the Presbyterians, the Methodists, the Baptists have all built, both in England and in this country, churchly edifices fit to be consecrated to the worship of God. The most notably

successful denominational church building erected in America during this period is the Baptist church in Pittsburgh in the Schenley Park district designed and erected by Cram, Goodhue and Ferguson. It would be hard to conceive of a building better adapted to a solemn and mysterious ritual of worship, but to the churchman the building is disappointing because, on entering, his eye is not led to the altar where the extreme sacrament of worship is celebrated.

From the very earliest stages of human history man has demanded the softening influences of symbolism and mystery as the highest aids to communion with his gods. This is true in all religions and most supremely true in the worship of the Triune God. A gratifying sign of the architectural trend of today is the fact that all the churches are conforming more and more to the ritual of the Catholic Church as established at Nice two thousand years ago.

It has been said that every civilization reaches its highest expression in the buildings it builds and that from these buildings future generations learn of the history, the aims and ideals of each period of human progress. A recent writer has stated that ours is not only a commercial but a pagan age, that, like the Israelites of old, we worship the golden calf, and as proof of this statement, calls attention to our towering banks and office buildings as the temples of our day.

As in all extreme statements there is an element of truth in this statement, but only an element. The Great War taught many lessons. While it showed man at his worst, it also showed him at his best. The youth of the world today, those who are to be the leaders and carriers on of our civilization are not irreligious at heart but they are profoundly disgusted with the shams and hypocrisies of the latter part of the 19th century and the first part of the 20th and for many of these things they blame the churches. Youth demands truth, sincerity and beauty as its inherent right; in its struggles to get near to God, the Infinite Source of all things, it feels the need of symbolism to explain the great mystery. That is why the Roman Catholic Church is increasing more steadily in membership than are the Protestant denominations. Youth demands independence while it seeks the guidance of authority—but it must be a real authority founded on something more solid than the individual whims of any man or group of men. Universal education and the printing press have made the lengthy sermon unnecessary and unheeded, but they have not stifled the human cry for communion with God, the need for worship. To those who cannot accept the autocratic authority of Rome, the Anglican Church, an integral part of the universal Catholic Church, offers the open door to such communion with God and it is an interesting fact that in those

parishes of the Anglican Church where the Catholic Ritual, as set forth in the book of Common Prayer as established in the reign of Edward VI is most closely followed, we find the greatest spiritual activity and the strongest faith.

Mr. Cram says again "What then is her (the Church's) duty? What is the attitude she must maintain toward art and her own Architectural Expression? First of all, she must realize that architecture is in no manner a matter of fashion, of predilection, of personal or individual tastes; that a style is good if it expresses the spiritual ideal of the power that employs it, the genealogy and the history, the ethnic affiliations and the temper of a people. Also she must know this: that a style cannot be called out of nothingness into being but that it must be a continuation, a development, reaching back through the ages to the very beginning of all."

As with her architecture, so with her order of worship—her ritual.

"The church's one foundation
Is Jesus Christ, the Lord.
She is His new creation
By water and the word.
From Heaven He came and sought her
To be His holy bride.
With his own blood he bought her
And for her life He died."

Upon this one foundation the christian church has builded through the centuries. Her duty today, architecturally, is to face the conditions of the modern world and so plan her buildings that they shall stand out predominant among the vast structures of our day as did the cathedrals of the Middle Ages which have been for centuries the inspiration of the world.

In one of his recent books, "Hail Columbia," W. L. George enthusiastically praises American commercial architecture but speaks very slightly of our churches, even while acknowledging that many of them are beautiful in themselves, saying that it is as necessary today as it was in the 13th Century that the Temples of God should dominate all civil structures in beauty and strength and that loftiness which unconsciously uplifts the soul of man to higher things. I believe that in our large cities the church should erect great cathedral groups, where every church activity can have its central home, all subordinate to and depending upon the church building proper which should dominate the entire group, lofty and vast in its proportions, rich in the beauty of its stone work, its pictured glass, where the Ritual of the Church established by Jesus Christ Himself may bring to tired souls that inward peace which only comes through closest communion with Him in that Holy Sacrament which He gave to His Apostles and to all the ages as the supreme act of human worship.

THE SEVENTEEN TRADITIONAL ABOMINATIONS*

1. *A Retiring Tower*, pushed back into the nave of the church, had its origin some years ago, when an architect designed a church 16 feet too long for the lot. To remedy matters, the tower was crowded back into the nave. Such scrunched back towers have been imitated by stupid designers ever since. Nothing is more hideous—and it robs the church of several rows of pews besides.

2. *Corner Towers*. The proper place for a man's head is between his shoulders, and the proper place for a tower is on the main axis of the nave, the tower projecting its full depth away from the building. A corner tower means a lopsided composition, ugly from any angle.

3. *High Basements*. The proper place for a basement is in the ground, and not half-in-and-half-out. A basement high out of the ground means a long flight of steps up to the church's main doorway, and huge basement windows. Avoid these things.

4. *Big Windows* in a small church are as much of a caricature as a man with eyes three inches in diameter and a mouth eight inches wide. Small windows, high above the floor, give more effective lighting than big windows with sills within three feet of the floor.

5. *Down in the Pit*. A basement, at best, is a hole in the ground. Fortunately several states have passed laws making it a misdemeanor to imprison school or Sunday-school children in a basement. A finished basement eats up from 20% to 25% of your building fund. Eliminate your basement entirely, and use the money to build a low wing, extending at right angles to the chancel.

6. *The Long, Long Flight* of stairs up to the main entrance of many a church, is psychologically forbidding in fine weather, and a crime in icy weather. Sink your basement windows into light areas, and thus gain an inviting entrance to the church proper.

7. *A False Ceiling*, suspended six or eight feet below the true roof line, was called "a \$2,000 fake" by one who saw it. Such a ceiling soon shows lath marks and water stains. It is costly to keep painted. It creates a pocket of dead air, hard to heat in winter, and acting as a huge radiator in summer. Avoid it.

8. *Too Much Light* destroys the devotional atmosphere, which all churches ought to have. Small windows, high above the floor, and electric lights of the lantern type for night use, will give the proper play of light and shade.

9. *Flood-Lighting*, directed on the altar is a

theatrical stunt, to be avoided. The chancel and sanctuary ought to be just a trifle shadowy, to produce the proper emotional effect.

10. *Sloping Floors* give you an advantage of just one-half an inch of better vision. Try it with your level and pocket rule, and be convinced. Elevating the chancel two or three steps gives the same effect, at one-tenth the cost—and is symbolically and artistically much better.

11. *Bungalow Roofs* belong to bungalows, not to churches. "Church pitch" means a pitch a little steeper than 45 degrees. Only when we have a clerestory, with enormously high walls, dare a low-pitched roof be used.

12. *Opalescent Angels and Saints*, in the windows are more gaudy and theatrical than anything else. If figures are used, they should be very small, and treated in a flat, decorative manner, without any perspective whatever. Opal glass ought never to be used.

13. *Shiny Varnish and Black Filler* ruin the finest of oak. To preserve its beauty, use no filler. Use a light fume or a light stain, and finish with liquid wax, rubbed with a woolen rag.

14. *Folding Doors*, and a "Sunday-School thrown together with the auditorium" create a church that is highly unsatisfactory, and a Sunday-school that is a failure.

15. *A Round-House Sunday-School*, invented in Akron, in 1866, fits our Lutheran requirements about as nicely as a skating rink would do for a college dormitory. Our Sunday-schools are departmental, and should be housed accordingly.

16. *Pointed Arches* and round arches are structural, not ornamental. They belong with brick or stone construction. In a frame building, they are as laughable as a pair of trousers patched with a piece of boiler iron.

17. *Quack Architects*. Dr. Cram declares that there are now fifty men who know how to design a church. We could name 500 quacks, who learned their methods in a carpenter shop, but who issue booklets of stock designs "free to the reverend clergy," and who advertise as "specialists in ecclesiastical design." Avoid all catalog men, whether they be architects, glass men, organ builders, ecclesiastical furnishers, vestment makers, or what not. Have your work designed by a reliable craftsman. If you don't know the names of such men, write us.

Other Abominations. There are forty other proverbial abominations in church building. But if you avoid these seventeen, you will have made a good start. Some day we will list the remaining ones.

* Reprinted from *Lutheran Church Art*.

ARTIFICIAL LIGHTING in CHURCHES

BY KENNETH CURTIS

NO man could truthfully say that he had built a church if the edifice itself did not inspire the spirit of reverence and worship.

We are all inclined to think of churches as structures sheltering religious bodies with their several modes of Sunday worship. It would be far better if we regarded them, as Bernard Shaw suggests, as places for "spiritual recreation." To fulfill this larger purpose, every church should be endowed with that rare quality of appeal in its atmosphere that, whether visited by a single individual or occupied by a congregation, it will bring everyone who enters it into consciousness of a sublime relationship with the Infinite.

In consideration of this concept we might agree that few churches have ever been built, or, with more lenient judgment, in few churches have all the elements that contribute to an ecclesiastic atmosphere been placed in harmonious unity. Every detail in an artist's canvas serves to emphasize the theme of the *ensemble* and the significance of each is interpreted by the accents of light. That same principle, applied to the interior architecture of churches might also aid in converging all thought and impulse in one inspiration: worship.

One of the most important, and at the same time subtle, influences that lend atmosphere to the church interior is the lighting. Anyone who has visited Trinity Church in New York City, or St. John's (Episcopal) in Washington, during the late afternoon hours will better comprehend what we imply. That "dim religious light" of which Milton wrote pleases many of us more than the brightness of our modern churches, but we must remember that since the candle-burning days of

Milton, people have become accustomed to intensities of illumination, many times brighter and the "dim lights" of the old churches would appeal as funeral gloom to our present-day congregations.

In ritualistic churches where the altar is the center of interest and should stand out in radiant contrast with the remainder of the church, it is a delicate problem, indeed, to furnish adequate general illumination without detracting from the glory of the sanctuary. This means that two separate lighting plans should be worked out; one for the sanctuary and one for the nave. Both are strongly influenced by church tradition which has



ST. MARK'S-IN-THE-BOUWERIE, NEW YORK

CLAUDE BRAGDON, ARCHITECT IN CHARGE OF LIGHTING PLAN

been handed down for centuries. Even though the architect and the illuminating engineer are concerned almost exclusively with the general lighting, these ceremonial aspects of lighting should not be lost sight of.

Whether or not we trace the ancestry of the basilican type of church architecture to the ancient Egyptian temples, we can associate another relationship of interior plan with those early temples; that is the almost theatrical treatment of the lighting problem. Rows upon rows of massive columns filled the outer courts of these temples to which only the kings and priests were admitted. As the worshipper proceeded through the temple to the inner shrines the interior became darker and darker until he entered the most sacred precincts. These were flooded with light from a clerestory. It is believed that this form of architecture was inspired by the symbolization of the darkness of death and the final triumph of life after death.

We have no reliable knowledge of the lighting plans of the Greek temples. All traces of the

wooden roofs have been destroyed for centuries and we can only conjecture from the ruined walls what the interior plan was. However, it is commonly believed that they, too, followed the plan of darkened outer rooms surrounding the inner *cella* which contained the sacred statues and altars. These inner rooms must have been brightly lighted either by artificial means or from openings in the ceiling, for it is difficult to imagine that the Greeks would keep their art treasures in darkness.

The early Gothic cathedrals were not brightly lighted by natural means and had almost no artificial illumination other than the candles on the altars. Wax candles were very costly and the need for general lighting did not warrant the expense. During the day there was sufficient light for the worshippers to find their way about. Light for reading was quite unnecessary; very few people could read and the fortunate few who had books generally knew the services from memory.

The majority of the communicants of the early church were simple, unlettered folk who obtained



TIMOTHY EATON MEMORIAL CHURCH, TORONTO, ONTARIO, CANADA

WICKSON & GREGG, ARCHITECTS

most of their understanding of religion from the symbolism of the ceremonies. Against the somber backgrounds of the old churches, the masses presented a brilliant spectacle, and the altars with their many candles stood out in radiant splendor. The altar was the visible symbol of the Divine Presence, the Holy of Holies.

We can easily understand how, in such lighting, the altars were more than ever emphasized as holy shrines, undefiled and far removed from worldly corruption, and as such, how they could inspire almost ecstatic reverence. Kneeling in a dim light and with eyes fixed on the altar, the worshipper could easily forget the world and its cares and probably enjoy a spiritual translation that those of us who now sit in crowded pews never experience.

In the old churches, one became oblivious of



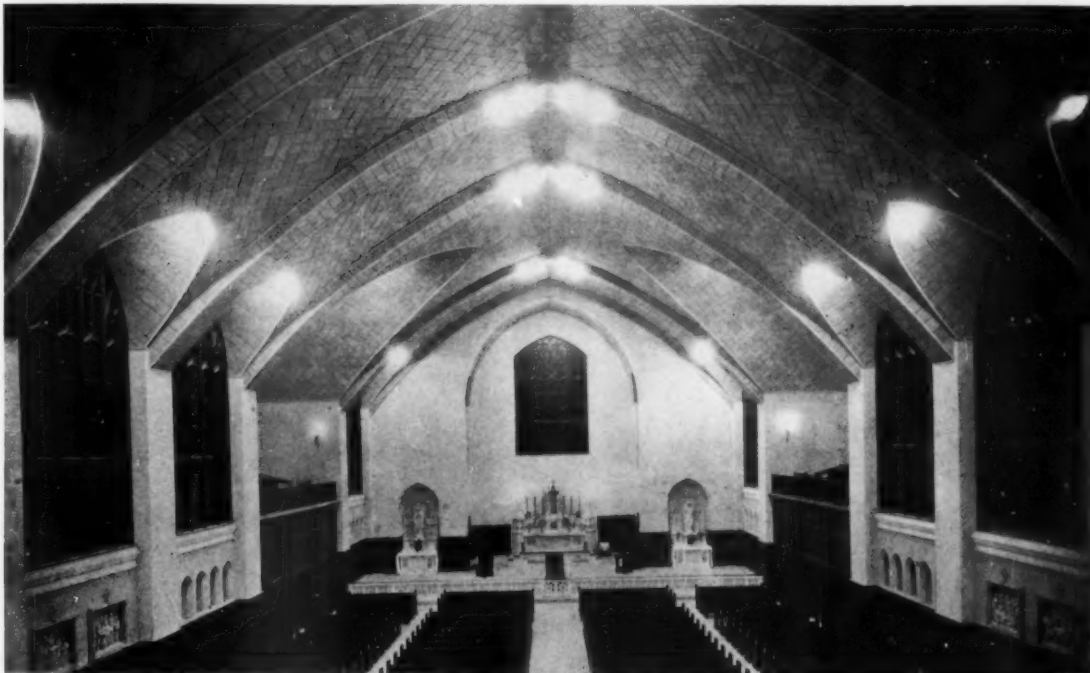
ST. HELENA CATHEDRAL, HELENA, MONT.

A. O. VON HERBULIS, ARCHITECT

everything but the altar and its religious inspiration. There is a danger of this feeling being lost in our modern liturgical churches because little effort has been made to reconcile the requirements of an illumination that will be bright enough to read by and yet not distract the attention from the altar and the priest.

Flexibility, then, is a feature to be planned for in church illumination. And it is not difficult for those of us who have watched the trend in this field of lighting to imagine that with the continual improvements and refinements in the methods of controlling and "placing" light, the

churches of the future will have a "ritual" for lighting that will accompany the other rubrics of the established service. In fact, this seems an inevitable necessity. Next to music, light is perhaps the most powerful agency that can keep the



LOYOLA CHURCH, DENVER, COL.

MONTJOY & FREWEN, ARCHITECTS

CEILING HEIGHT 48 FEET AT CENTER

congregation in a state of emotional accord.

In the evangelical churches where the audiences do not take an active participation in the entire service, the effects of unassertive variations in the lighting intensities should have an even greater influence.

A few years ago a New York church, St. Mark's-in-the-Bouwerie, made an extensive application of this principle and included some color lighting in its scheme. The installation exacted a considerable amount of comment, favorable and otherwise, through its semi-theatrical effects which were used chiefly to bring the congregation into sympathy with the rector's message.

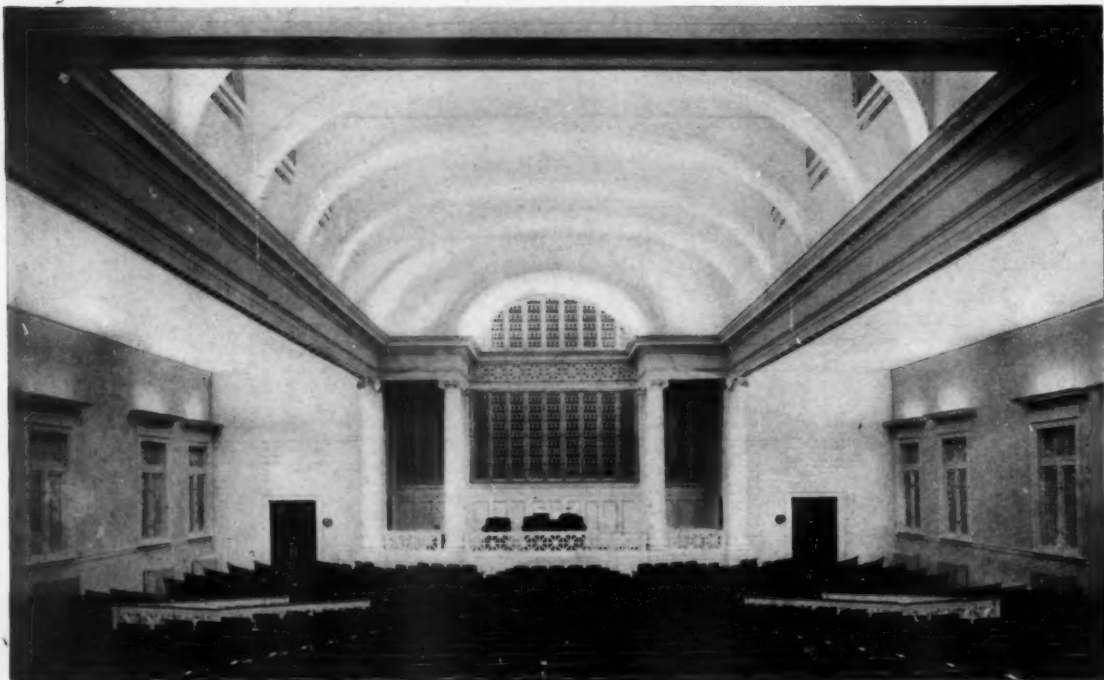
Each of the central units contains four 200-watt lamps in one pieced silvered glass direct lighting reflectors. Colored glass plates of amber, green, red, and blue are placed over the openings of these reflectors so that the resulting illumination can be colored as the rector wishes (each lamp in these luminaires is on a separate circuit). From a room adjoining the chancel the operator manipulated the controlling equipment from a predetermined schedule and by bringing the color sequences on slowly the church was filled with a vague, mysterious atmosphere that lent new meaning to the service.

A small 250-watt floodlight concealed on the

side of the central luminaire nearest the altar serves to illuminate the face of the rector during the sermon. Above the chancel arch another floodlight directs a strong intensity of white light down on the altar.

All this lighting is for the enhancement of the aesthetic appeal of the church interior and of the service, as well. The utilitarian purposes of the lighting, that is, the provision of enough light for reading the prayer and hymn books, are served by five floodlighting projectors mounted above and under the balcony at the rear of the church. These units are so constructed and adjusted as to give ample light for the entire congregation, and at the same time are not unsightly or glaring. They are brought into the service on dimmers, as are all the lights, so there will be no sudden shock from a high intensity of clear light.

In common with all pioneer undertakings, the lighting of St. Mark's offers numerous opportunities for criticism, but it is signally successful in four ways: The chancel and altar are maintained as the conspicuous center of attention; the interior of the church is rendered more beautiful by the mysterious atmosphere which pervades it; the higher intensities of lighting which might detract from the religious atmosphere, are only introduced when needed and then without disturbing abrupt-



FIRST CHURCH OF CHRIST, SCIENTIST, OAK PARK, ILL.

LEON STANHOPE, ARCHITECT

COVE LIGHTING FROM REFLECTORS IN CORNICE UNDER CENTRAL AREA ARCHES AND ABOVE WINDOWS

ness; and lastly, all the lighting has been planned for the maximum comfort to the eyes of the congregation.

Although this church dates back to the days of Peter Stuyvesant, when the problems of lighting came up with other plans for restoring the interior, those in charge of the lighting did not revert with slavish fidelity to the candle chandeliers of Dutch Colonial days. The new lighting, however, could not be considered any more anachronistic than glaring electric candles in place of the wax—and certainly the effect is much more beautiful and less tiring to the eyes.

There is a tendency among designers to adhere too closely to the traditional in the selection of luminaires for churches. Borrowing ancient style for modern usage does not apply with as much success to lighting as to purely structural features. A church following the Gothic style may have rough stone walls, hewed timbers and a flagstone pavement, but if the lighting is made correspondingly primitive in style, it will have a sad effect on the eyes of the congregation.

Substituting electric candles for wax candles on a wrought iron fixture resembling a corona may be fidelity to style but not to good judgment. Each electric candle may be 25, 50, or a 100 times brighter than its wax prototype and when this unmodified light flux is multiplied by ten or twenty candles, the effect is more distracting than beautiful. The same may be said of candle brackets that are not provided with shades.

Medieval designs may be successfully adapted to modern use, however, as is exemplified in the lighting fixtures of the Timothy Eaton Memorial Church in Toronto. Pierced bronze luminaires with opal glass panels conceal the lamps and reflecting equipment which produce a soft direct illumination along with a relatively strong indirect lighting. This combination of the two systems has contributed greatly to the preservation of a rare, old-church atmosphere in a modern evangelical church interior.

Taste in matters of luminaire design is subject to constant mutation and rare discretion is necessary to select a fixture that will not appear antiquated or tawdry in the course of a few years. This is one consideration that has brought cove lighting into favor as a type of installation that is particularly suitable for buildings in which the lighting system, once placed, must serve for many years.

Frequently, the architecture of the interior imposes certain limitations on the solution of the lighting problems. Coffered or groined ceilings, high narrow arches, dark wood ceilings, etc., are common conditions to be found in churches and demand particularly thorough consideration in determining the most favorable scheme. A common error in churches of the type of the Cathedral of

St. Helena is to use suspended lighting fixtures. These all too often look dwarfed in comparison to the lofty dimensions of the vaulted ceilings, and frequently the clear view through the nave is confused by the numerous chains and massive units. From the traditional standpoint, the sticklers for close adherence to the preservation of old church atmosphere and fittings prefer the elimination of visible units wherever possible.

The Cathedral of St. Helena, Montana, presents an example of a cove lighting installation that eliminated the use of suspended units in a high narrow nave. Individual silvered glass reflectors concealed in the column capitals and powerful direct lighting reflectors placed at the converging point of the groined arches, remove all light sources from the field of vision and yield a soft, general illumination that reveals every detail of the interior without harsh shadows or gloomy corners. One is impressed with the feeling of lofty spaciousness on entering this church.

Loyola Church, Denver, affords an interesting example of what may be done in a church to provide a satisfactory temporary installation until the funds for a more elaborate alternative system may be raised. While this system is a direct lighting installation, the units are set flush with the ceiling and are at sufficient height to be out of the range of vision of anyone seated in the pews.

In many churches where the principal part of the service is the sermon, a common oversight in the lighting plans is the lighting of the rostrum and the choir loft. Auxiliary lighting is generally necessary for the pulpit but this lighting should be concealed at all times. The glare from glowing lamp filaments shining into the eyes of the congregation has probably put as many people to sleep as poorly delivered sermons.

The same care should be exercised in lighting the stations and shrines of ritualistic churches. Individual reflectors, similar to those used for picture lighting, may be placed at each station and will concentrate the light on the plaques and serve to light each plaque during the time the illumination of the entire church is not required.

It was once aptly said by Augustus D. Curtis that an exposed light source in the house of worship would soon be as much out of place as a harsh word loudly spoken. The fulfillment of this prophetic remark is becoming more evident every day. Intensities in all branches of lighting practice are being constantly increased with the result that our high-powered lamps, when permitted to burn unshielded or with too translucent shades, are well-nigh intolerable. With the light sources entirely concealed, contrasts in brightness can be eliminated and intensities may be increased to high levels without the eye being subjected to any annoying glare or fatiguing brightness.

To summarize the points which the architect

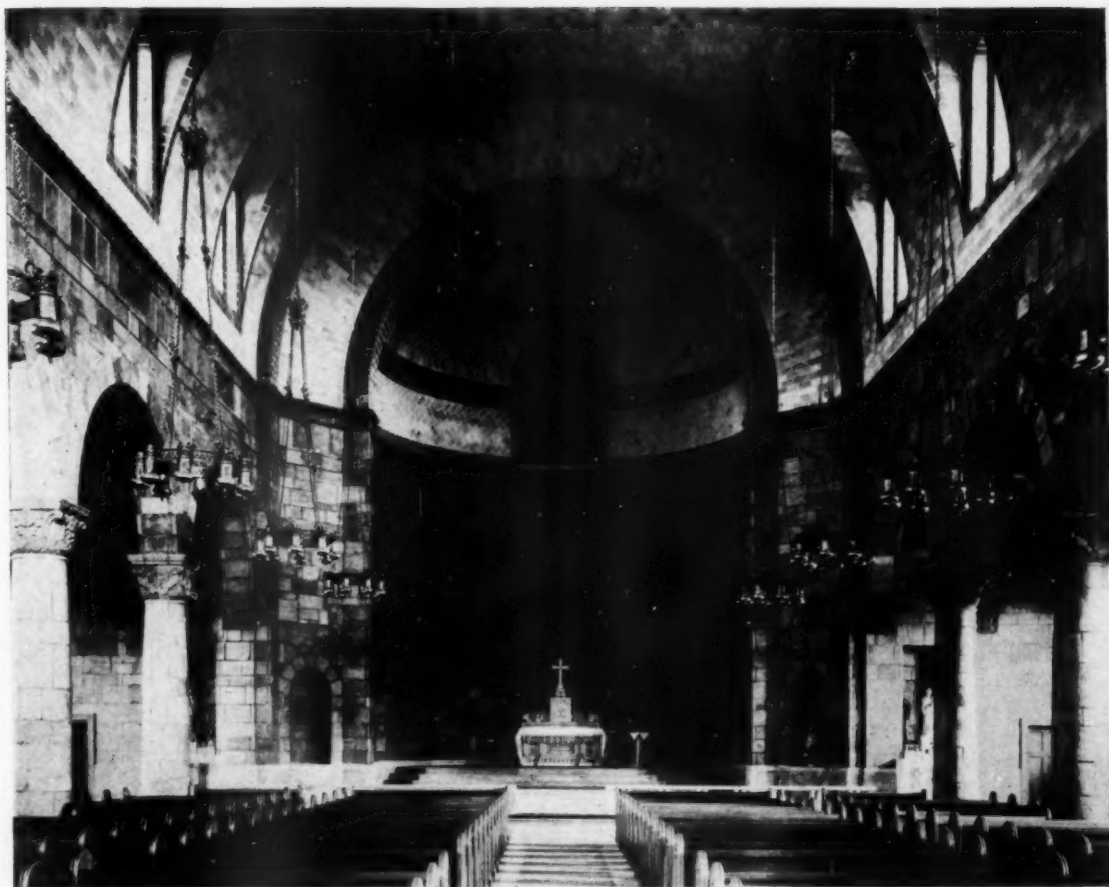
and the illuminating engineer should both strive for in the artificial lighting of churches, we have essentially these: the lighting should contribute to the church atmosphere in such a way as to create a harmonious background for the service;

it should preserve the aesthetic appeal of the architecture and the decorations and present them in their proper relationship; and lastly, it should be designed for the absolute comfort of the congregation.



MEMORIAL CROSS, KENSICO CEMETERY, N. Y.

HAROLD A. CAPARN, LANDSCAPE ARCHITECT



THE SANCTUARY

(Altars are temporary)

CHAPEL of OUR LADY of VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.

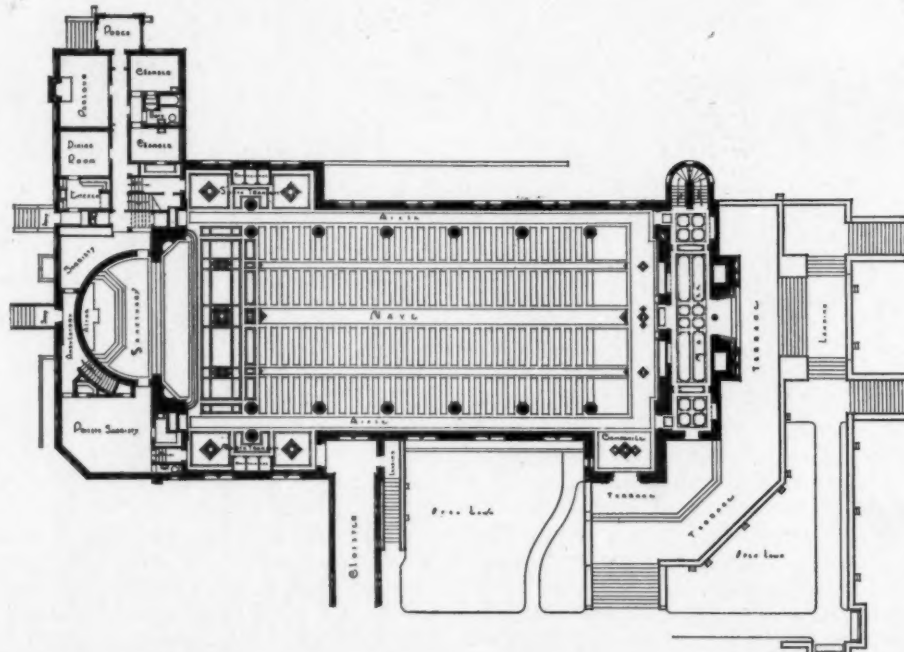
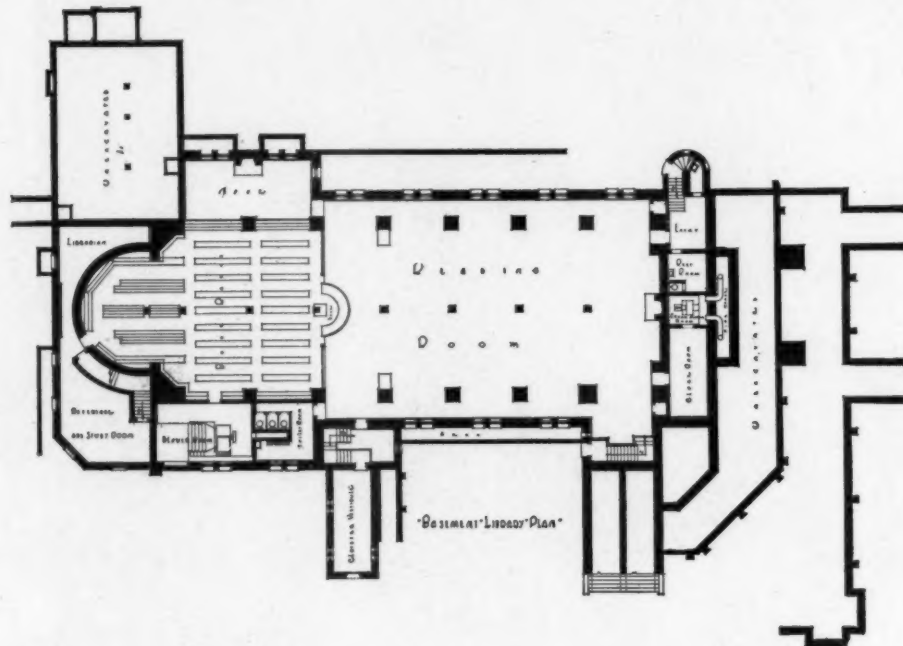
H. A. SULLWOLD, Architect

FROM the XI to the XIV centuries there were built in Greece, at Epirus, Thessaly, Athens and other towns, Byzantine chapels. These chapels were constructed of a combination of stone, brick and polychrome tile. The mortar joints were large and the color schemes especially pleasing and unusual. In casting about for materials to give wall texture and color, we learn that the architect for the chapel at St. Catherine's College drew upon these ancient chapels for inspiration. About the same period there was being built in Southern France the Cathedral of St. Trophime at Arles. This was distinctly Romanesque, with a marvelously carved stone portal. This portal was also adopted as a precedent for an entrance to the

chapel of Our Lady of Victory. From the foregoing it is evident that if the chapel must have a style it would be Modern-Byzantine-Romanesque.

The problem in designing the chapel was first affected by its location. As a part of the future college group as laid out by George Nason, landscape architect, it had to be so located with reference to Derham Hall as to make possible a physical connection. The campanile is 126 feet high, and is located on an axis running directly north in front of Derham Hall and west of College Hall, so that a beautiful vista is obtained from the principal entrance to the college group.

The stone selected for the exterior is what is known as shot-cut Bedford travertine. Some of



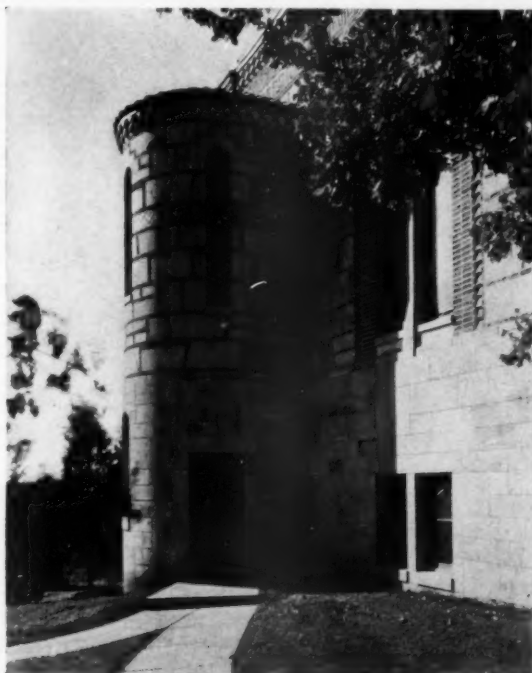
CHAPEL OF OUR LADY OF VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.

H. A. SULLWOLD, ARCHITECT

the shot remain in the stone and becoming rusty give the stone a warm, mellow tone, and the appearance of age. The campanile entrance is in polychrome tile from Los Angeles, as is also the tile band that encircles the chapel and enriches the exterior.

The chapel is straightforward with the usual sacristies, a large library in the basement, and visiting priests' quarters, including kitchen, dining room, living rooms, bedrooms, and baths. This is the wing that joins the priests' sacristy on the southeast corner of the chapel. Physical connection is made between the chapel and Derham Hall by means of an enclosed cloister so that access can be had both to the chapel proper and the library, without going out-of-doors. The roof is tapered-barrel mission tile, and shades from a light buff to a deep red, and is a good copy of roofs

and buff. The caps are Romanesque, and each pair is of different design and color. The tile inserts and panels present bits of color which almost sparkle in their brightness. The 14 stations were modeled by the art department of the school, and were cast and fired in polychrome tile.



CIRCULAR STONE STAIR TO THE CHOIR

seen in southern France. It is the first roof of this character in the northwest. The interior of the chapel is of barrel vault type, with side aisles and clerestory windows, which together with the west Rose window adequately light the chapel. The vault is built of sound-absorbing tile, and is 52 feet from the floor to the crown, and is entirely self-supporting. Six steel columns on each side support trusses to carry the roof. These trusses are above the vault and do not show on the interior. The columns and all walls below the dome are faced with tile in colors from light blue to green



NORTH WALL OF THE NAVE

The organ above the choir balcony is concealed by a tile organ screen in brilliant colors. The tile is perforated and back of it is hung a colored fabric.

Both the Swell and Choir organs have been enclosed in built-in expression chambers, which makes possible a much better degree of expression, and increases the effectiveness of the organ.

In this organ every stop represents a complete set of pipes, as practically no duplexing or unifying has been done. There is a total of 2,399 speaking pipes, in addition to a set of cathedral chimes of 20 tubes and a Marimba harp of 49 bars. In the console there are 121 separate movements, including 80 stop keys and couplers, 24 combination pistons on the manuals, eight toe pistons, and several special pistons.

Over 1000 miles of wire were used in the wiring of this organ, and a 7½ horse-power blower is required to furnish a sufficient wind supply. A feature of the air supply is a large reservoir in the blower room, which steadies the wind pressure and prevents any noise of the blower from coming up through the air conductor.

The tile holy water founts are arranged on either side of the main entrance. All sash in the main chapel are steel casements. Those in the clerestory, double glazed, and those below at present glazed with rough glass. Provision is made to insert future leaded glass on the inside. The confessionals are in antique oak with blue tapestry panels. They are hand carved throughout, and were built from the architect's design. The altar rail is blue Mantorville travertine with carved stone balusters and an unusual pair of wrought iron altar gates, also of the architect's design. The lighting fixtures are in polychrome wrought iron, and the globes of these fixtures are Byzantine in character, of changeable glass, running from spun gold to purple. The floors are a combination of Mantorville stone for border and tile. The tile, in size from 12 inch square down to 3 x 3 and 3 x 6, is laid random pattern, making a most picturesque floor.

All hinge plates, door push plates, handles, bolts and holders were hand made from the architect's designs. The main entrance hinge plates are particularly striking, as they practically cover the door with three on each door, both inside and outside; even the bolt heads which fasten the hinges are hand cut with Old World designs. The entire entrance is in Bedford travertine and already gives the appearance of age. All radiators are hidden by specially designed grilles in Byzantine style in recesses under the windows. The heated air is supplied by a fan through coils, and is brought up under each pew. This air is outside air. The upper air of the chapel is exhausted through grilles in the tile frieze below the vault. It is not necessary to open any windows in the chapel in winter for ventilation.

Set upon a hill about 20 feet above a small pond the chapel is like an Old World painting, especially in the afternoon when the porch and tower are mirrored below.

NOTES AS TO DETAILS OF CONSTRUCTION

IN a letter received from H. A. Sullwold, the architect of the Chapel of Our Lady of Victory, St. Catherine's College, St. Paul, Minn., he states:

In the October 8 number of *THE AMERICAN ARCHITECT* there is an article called "Dignifying

By-Products." As a similar instance it is interesting to note that in selecting stone for the chapel we learned that at Bedford, Indiana, there were 40 thousand cubic feet of shot-cut Bedford travertine. This had been piled up in one corner of the quarry for years, and it was from this pile we obtained the exterior stone for the chapel. A certain number of shot were left in the stone and had rusted. The texture and color seen on the photographs is the combined result of the groove formed by the shot and the warm sienna of the rust. Portland cement and brown lime mortar were used throughout, and no attempt made to waterproof the stone in any way.

* * *

The interior tile wall facing and organ screen are remarkably soft in color, and all interior tile has a hand surface texture.

* * *

Both main altars and side altars are temporary and will be replaced later by others more suitable.

* * *

Much of the success of the exterior detail is due to excellence of craftsmanship. The men employed, each the best obtainable in his craft, were allowed a certain latitude of execution under the artistic control of the architect. For example, the medallions of the windows having been placed in position each brick mason was instructed to fill in around it as he saw fit. Naturally each one strove to outdo the other. As a result each window has a pronounced characteristic, differing in technique of execution, but each presenting a finished result that could not have been as satisfactorily attained in any other way.

The frieze, as presented in the photograph, does not convey the impression that it is composed of brick. It is laid $2\frac{1}{4}$ inches of mortar and $2\frac{1}{4}$ inches of brick. The long joint is made by placing the brick together without mortar between the joints. An interesting effect when seen at a distance, where the space between the stones conveys the impression of a large mortar joint, was secured by placing the brick between.

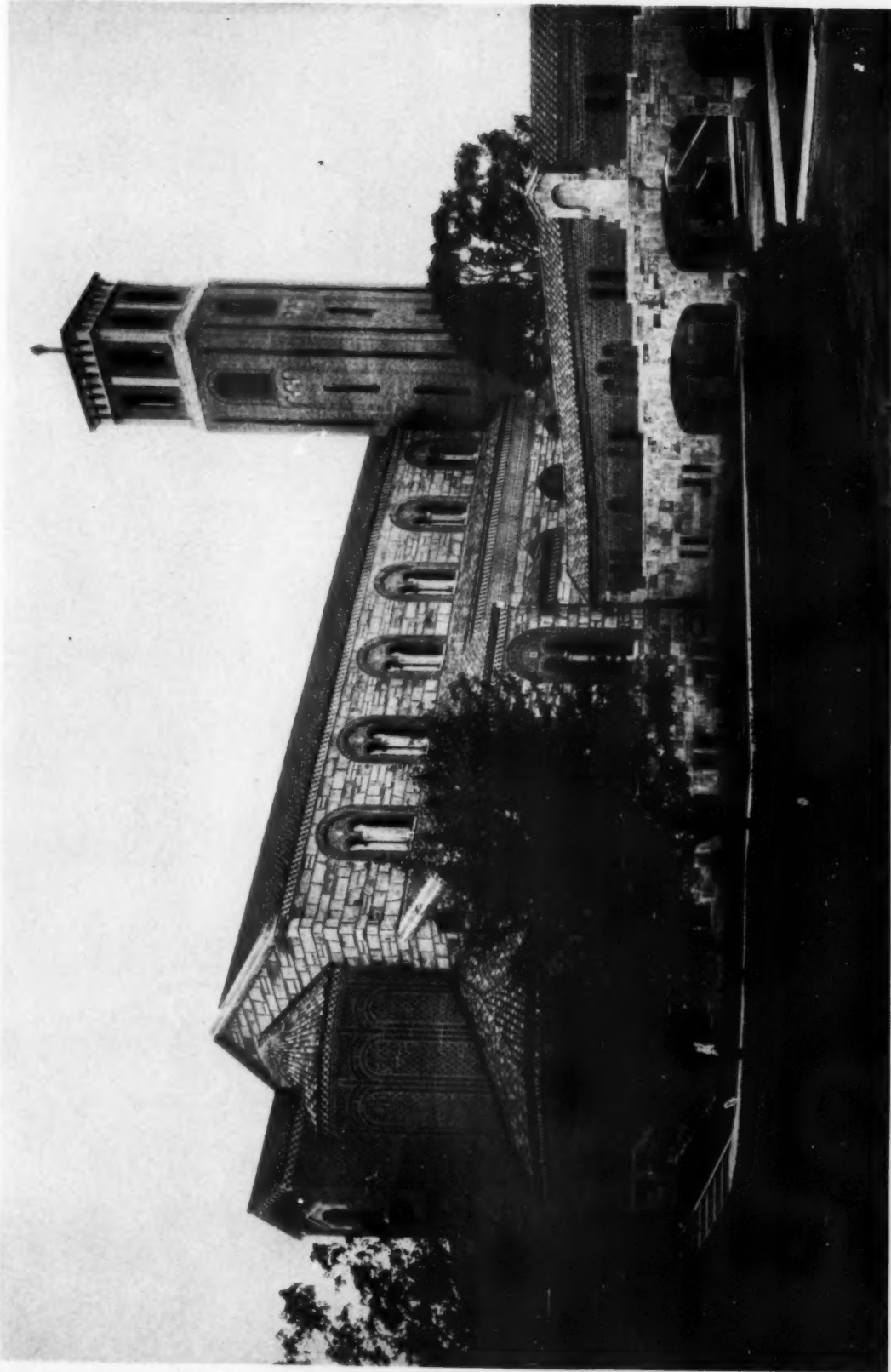


SOUTHWEST ELEVATION

CHAPEL OF OUR LADY OF VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.

H. A. SULLWOLD, ARCHITECT

THE AMERICAN ARCHITECT
December 31, 1924. Plate 209

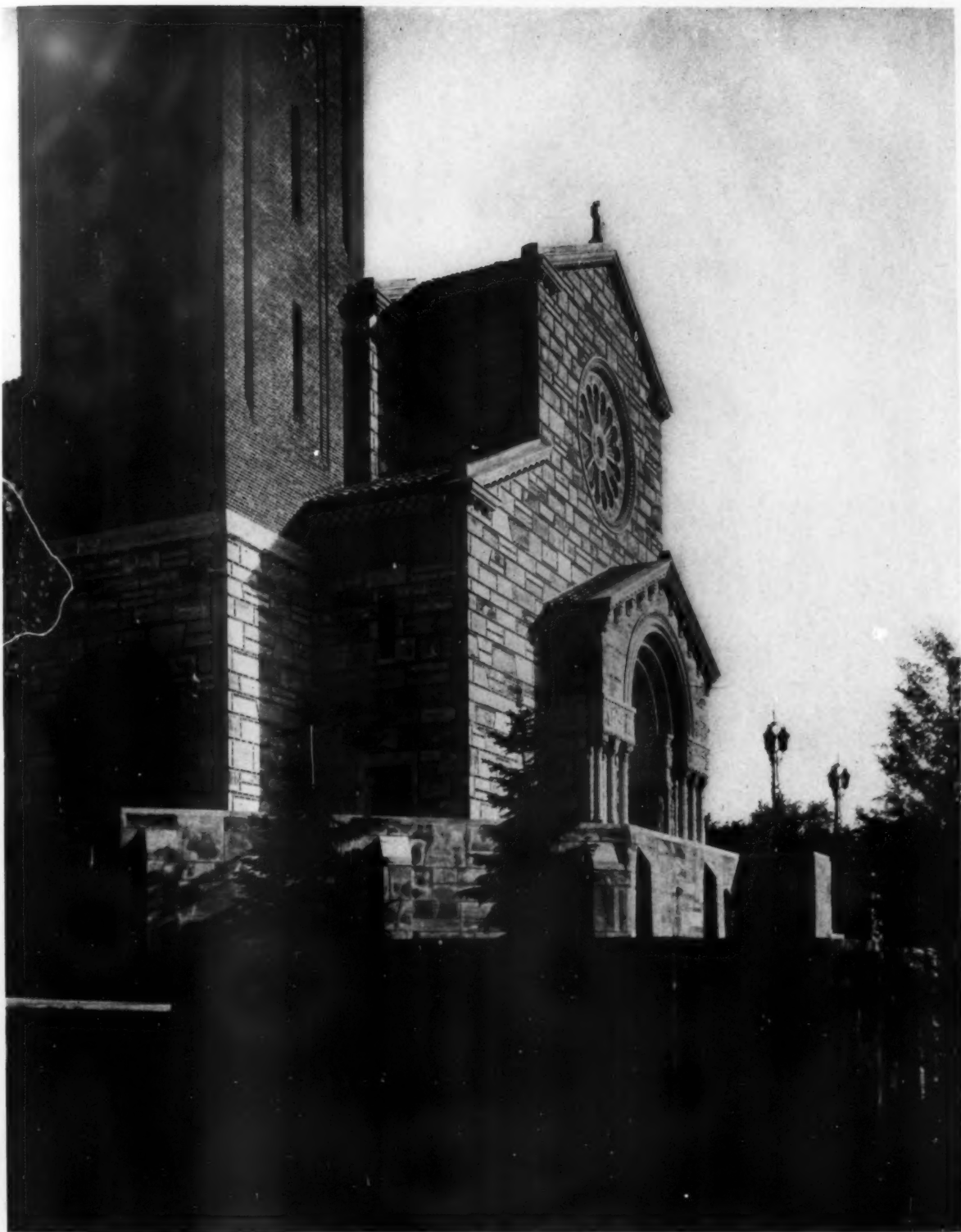


NORTHEAST ELEVATION

CHAPEL OF OUR LADY OF VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.

H. A. SULLWOLD, ARCHITECT

THE AMERICAN ARCHITECT
December 31, 1924. Plate 210



DETAIL OF NORTHWEST CORNER

CHAPEL OF OUR LADY OF VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.

H. A. SULLWOLD, ARCHITECT

THE AMERICAN ARCHITECT
December 31, 1924. Plate 211

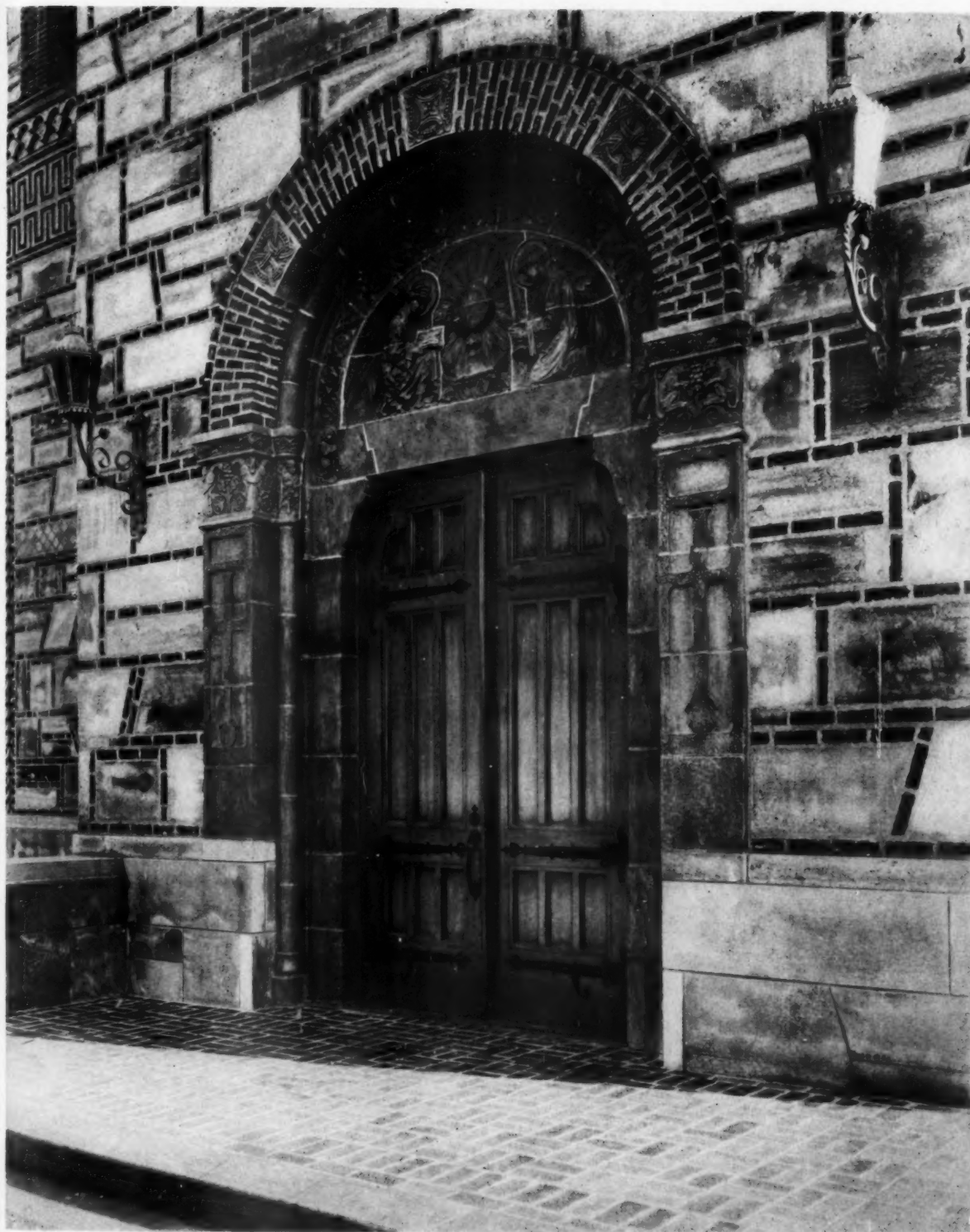


FRONT PORTAL

CHAPEL OF OUR LADY OF VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.

H. A. SULLWOLD, ARCHITECT

THE AMERICAN ARCHITECT
December 31, 1924. Plate 212



CAMPANILE ENTRANCE
 CHAPEL OF OUR LADY OF VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.
 H. A. SULLWOLD, ARCHITECT

THE AMERICAN ARCHITECT
 December 31, 1924. Plate 213



DETAIL OF NORTH ELEVATION

CHAPEL OF OUR LADY OF VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.

H. A. SULLWOLD, ARCHITECT

THE AMERICAN ARCHITECT
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DETAIL OF SOUTH TRANSEPT
CHAPEL OF OUR LADY OF VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.
H. A. SULLWOLD, ARCHITECT

THE AMERICAN ARCHITECT
December 31, 1924. Plate 215

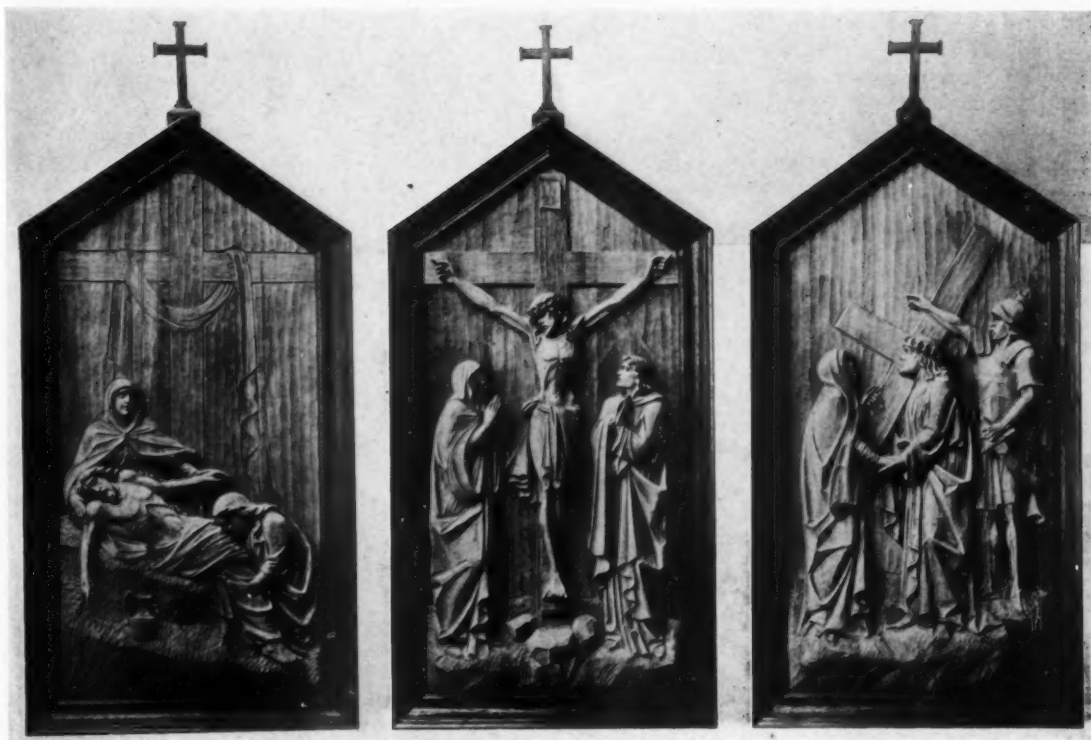


CHOIR BALCONY AND ORGAN SCREEN

CHAPEL OF OUR LADY OF VICTORY, ST. CATHERINE'S COLLEGE, ST. PAUL, MINN.

H. A. SULLWOLD, ARCHITECT

THE AMERICAN ARCHITECT
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ST. DENIS CHURCH, HANOVER, N. H.

SOME STATIONS OF THE CROSS DESIGNED BY THE MASTER WOOD CARVER

WOOD CARVING *in* ECCLESIASTICAL ARCHITECTURE

The Work of Adalbert Zwink,* Master Wood Carver

SINCE the beginning, the spirit of the church has been expressed by its physical manifestation—the church building. It is the human conception of the immutable message of God which naturally takes different forms, according to the interpretation of the builder. The structure, as an enclosure, and its interior embellishment, as a more intimate element, should both be in harmony and not dissociated in the spirit of design. Consistency is secured when the entire designing is under the control of the architect, or, if the furnishings are designed by another, there must be complete accord between them.

This interior embellishment creates a different impression on the observers according to the materials used. To some, the use of marble, stone, granite, or metals does not interpret the spirit of the living church of a living God because they lack the spirit of life. Dug from the dark recesses

of the earth, they have never lived in the light of the life-giving sun and their crystals are inert and devoid of those components which belong to a living organism. On the other hand, the embellishments which are fashioned of wood, in various forms, make a direct appeal to our sense of living. From the germination of the seed, the ducts and cells of the tree have pulsed with its seasonal life—the seasons of awakening, of blooming, or maturing and rest. The tree has furnished to man his food, his shelter and his warmth so that when we look upon wood in its carved form, we see the beauty and glory of its living contour, and the tree having had life, we instinctively sense its appeal.

The art of wood carving, fostered in Europe since the Middle Ages and nurtured especially in Germany, where it received particular impetus from the works of Albrecht Durer, and subsequently vital inspiration from that of Grinling

* Thomas & Company, Worcester, Mass.

Gibbons, has its present day American exponents. Spreading as it did wherever Gothic architecture was practiced—that style which was handed down from medieval times and which is in more general use in ecclesiastical buildings—it furnishes today examples in abundance of its handiwork in our modern churches. Among these exponents who have plied their craft on our altars and choir-stalls, rood-screens and pulpits, prie dieux and baptismal fonts—those skilled sculptors in wood for whom a broad, well defined trail has been so signally blazed by the famous John Kirchmayer now widely known through the architectural press—and whose work is now attracting attention, is Adalbert Zwink, a master wood carver.

In the carving of the panel group of the tryptich, depicting the Holy Family and St. John, can be seen a fine decorative quality and a commendable variety of detail, while the two figures on the cresting offer a clear conception of technique and happy variation which results from a permissible freedom in the design and a fervent devotion to handwork. The carving of the almost paper thin relief of the Crucifixion Group of the prie dieu, reveals skillful execution and a sure touch, with which the deep significance of the subjects

is interpreted through this medium. This same versatility is displayed in the carvings of figures in the round, such as the inspired Evangelists. Here, despite the compulsory conformity with tradition and theology, a wide latitude of treatment is possible, and the carver eagerly welcomes the opportunity of interpreting a client's or an architect's



GOthic TRYPTICH IN A NEW YORK CHAPEL. THE CENTRAL PANEL SHOWS THE HIGH RELIEF CARVING OF THE HOLY FAMILY AND ST. JOHN



PRIE DIEU IN THE PRIVATE CHAPEL OF THE RT. REV. THOMAS M. O'LEARY, BISHOP OF SPRINGFIELD, MASS.

JOHN Wm. DONOHUE, ARCHITECT

conception; of handling it to harmonize with the requirements of style, or to give free expression—whenever that is possible—to his own interpretation.

To his craft he also brings a thorough knowledge of and a felicitous aptitude for the ornament carving in its different architectural styles. A running border in Gothic or Romanesque; tracery in its many variations; decorative carvings in Renaissance or Colonial—all give evidence of the craftsman's keen personal interest and artistic appreciation.

The master carver has been particularly well endowed by nature for his vocation. Tall and rugged, big of frame, with the broad, capable



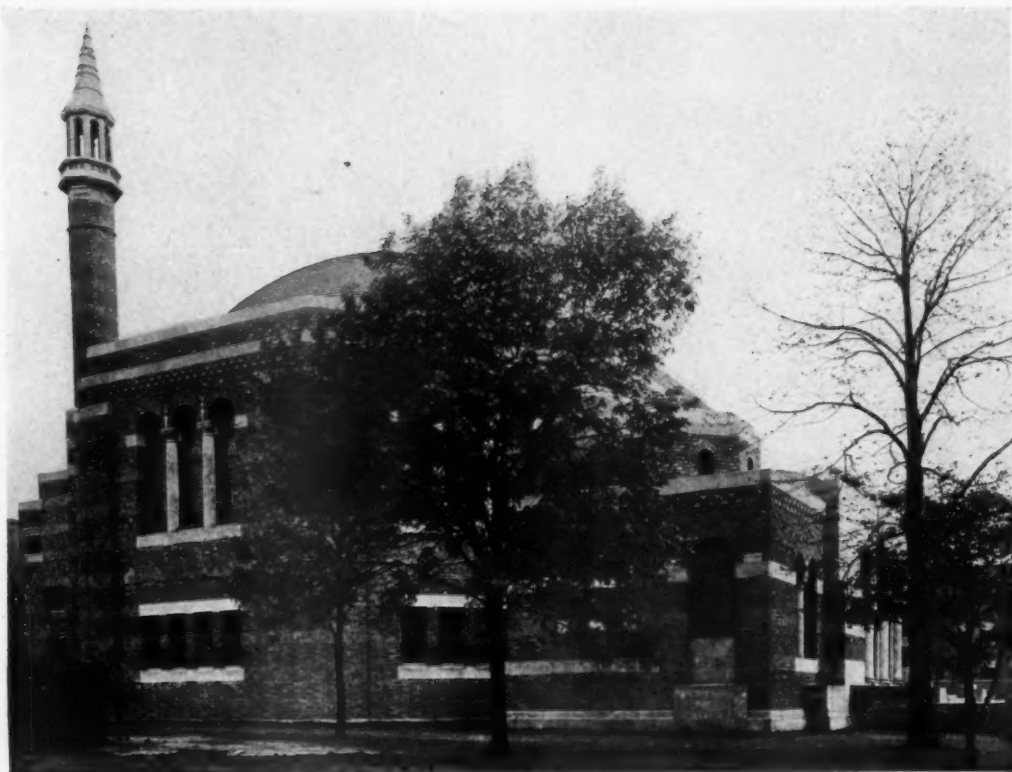
HIGH ALTAR, ST. LUKE'S GERMAN LUTHERAN CHURCH, NEW YORK CITY

hands of the skilled artisan, he possesses the well-nigh prodigious strength necessary for the dexterous treatment of his unyielding medium. A visitor to his workroom might find him wielding a weighty mallet and a massive chisel, hewing with might and main amidst flying chips, wresting from a huge block of wood a life-size figure of rare character of beauty, and constantly delineating, the better to develop it. He would then apply the

finishing touches on the delicate modelling of the hands and features, with tools of almost infinite variety, selected from a lengthy array before him; always striving for its individual character, and ceasing only when he is satisfied that he has attained his goal. Or one might happen on him eagerly explaining to priest or donor the biblical background, in order to describe his translation of the concept in his mind into wood.



THE FOUR INSPIRED EVANGELISTS



ISAIAH TEMPLE, CHICAGO, ILL.

BY ALFRED S. ALSCHULER, *Architect*

CENTURIES of persecution so scattered the Jewish race that no great ancient edifices stand definitely to point the way to the development of a distinctly Jewish style. Temples erected during the past few decades have been, in too many instances, without architectural individuality and even those designed and executed masterfully in the Greek, Roman, Gothic, or Renaissance styles seem upon consideration, neither well suited to nor properly expressive of their function. Accordingly, it stood to reason that parrot-like reproduction of any one of the many existing beautiful Byzantine examples would carry a similar effect.

It therefore seemed that it was necessary to strike a different architectural note. Archaeology teaches us clearly that art must be modern, that it must express its own age. It has been so in the past and it must be so in the future. But architectural styles are not created suddenly by radical and absolute departure from what has gone before; rather do they develop through consideration, analyzation and modification of themes that exist.

The advice of the Prophet seemed to point the true direction—"State super vias antiquas, et videte quatenus sit via recta et bona, et ambulate in ea" (Stand ye in the old way, see which is the right and good way and walk therein). We therefore studied examples of early Byzantine architecture. The architects and builders under Constantine and Justinian drew their inspiration from and developed the arts and styles of races subject to the domination of the Roman Empire and it is reasonable to assume that the development of the Byzantine style of architecture embraced and incorporated then existing themes of Jewish origin.

It is interesting to recall that during the development of the design for Isaiah Temple, we obtained photographs of fragments from an ancient Hebrew Temple recently unearthed in Palestine. These fragments contain motifs that closely resemble those used in the architecture of the Byzantine period. These motifs we incorporated into the design of the new Temple.

So the design was developed after the Byzantine style not in the sense of slavish imitation,

but following the spirit of its principles, meanings and derivations, taking it as tutor rather than as a model. Thus we have not designed a Byzantine building but have endeavored to produce in concrete, stone, brick and steel, the mental picture developed by the study of this style modified by its contemporary influences and co-ordinated with the proper spirit and functioning of the modern Jewish synagogues.

The plan adopted was somewhat influenced by that of the Synagogue at Essen en Ruhr, Germany;

any part of the congregation too remote from the pulpit, a balcony had to be introduced. This was planned, semicircular in form, following the center of the dome and being kept shallow in projection to preserve at the main floor level vision of the arches and piers from which the dome would spring.

It was planned that the arches and dome be built in Guastavino construction, a true masonry construction based soundly upon Byzantine engineering principles, and that they be faced with



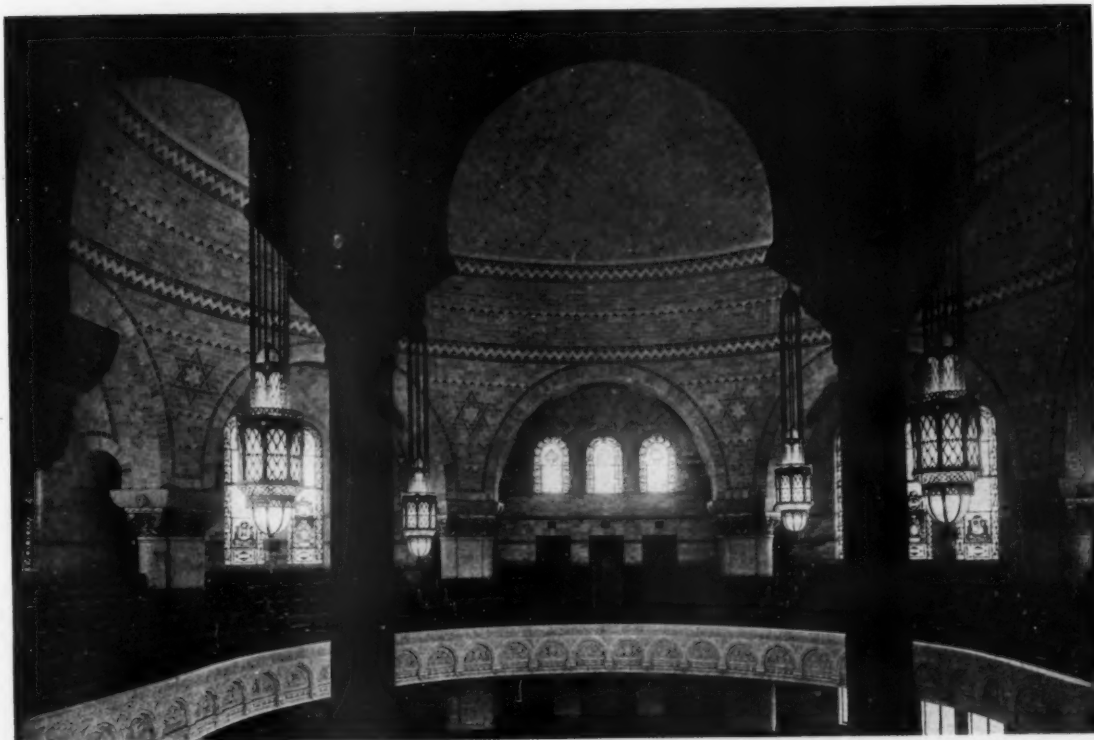
ISAIAH TEMPLE, CHICAGO, ILL.

ALFRED S. ALSCHULER, ARCHITECT

one of the few really meritorious examples of Jewish Temple architecture. It was planned that the main room or auditorium of Isaiah Temple should be enclosed by walls forming an octagon rising high above and dominating the adjoining portions of the building. This octagonal space was to be surmounted by a lofty dome supported on penetrating vaults springing from eight piers free-standing within. This, it was hoped would produce a dignified interior, unmistakably a Temple devoted to the worship of God. In order to develop the necessary seating capacity and still maintain a room whose dimensions would not place

tiles possessing sound absorbing qualities. It was also determined by exact calculation that this tile be carried down the walls to the balcony level in order to obtain the necessary area of absorbent surface to eliminate conflicting sound reverberations and produce desirable acoustical conditions. The piers and walls were designed in a stone treatment of texture and color calculated to produce the effect of age, dignity and stability.

The ark was placed below the vaulted penetration at the east end of the Temple directly opposite the main entrance and placed forward of the choir balcony above, which blending into the grille treat-



ISAIAH TEMPLE, CHICAGO, ILL.
ALFRED S. ALSCHULER, ARCHITECT

ment screening the organ was planned to form a pleasing background for it. The ark itself was designed in carved travertine marble in combination with richly colored mosaics.

The lobbies and other spaces were designed in harmony both in style and materials with the main auditorium, it being the intention that every room should recall and reflect the thought that it was within the Temple, the House of God.

The exterior and interior of the building were developed as one—each modifying to a certain degree the design and aspect of the other. Thus the exterior follows intimately its plan and expresses its construction free from elaboration except where restrained ornamental features were introduced in the development of the entrances.

It was decided to use a combination of brick and limestone for the facing of the exterior walls carrying a consistent treatment on all sides of the building. The brick was designed in varying sizes and tones of color laid up in a random

bond to eliminate rigid monotony and produce the soft effect of old, hand made, sun baked bricks.

The exterior of the dome was designed in a perfectly simple treatment of flat tiles of color to harmonize with the brick work below. The smoke stack, necessarily tall to meet the demand of an efficient and economical heating and ventilating plant, was treated to assume the aspect of a minaret. In this last development, we felt justified in applying the tower of prayer—a Moslem origination—to the Synagogue, feeling that its aesthetic meaning and its picturesqueness were preferable to the factory-like appearance the stack otherwise would have assumed.

In this article, we have attempted but briefly to cover the development of the design for Isaiah Temple and have not dwelt at all upon the many structural and mechanical problems that had to be solved in order to make the design a practical possibility.



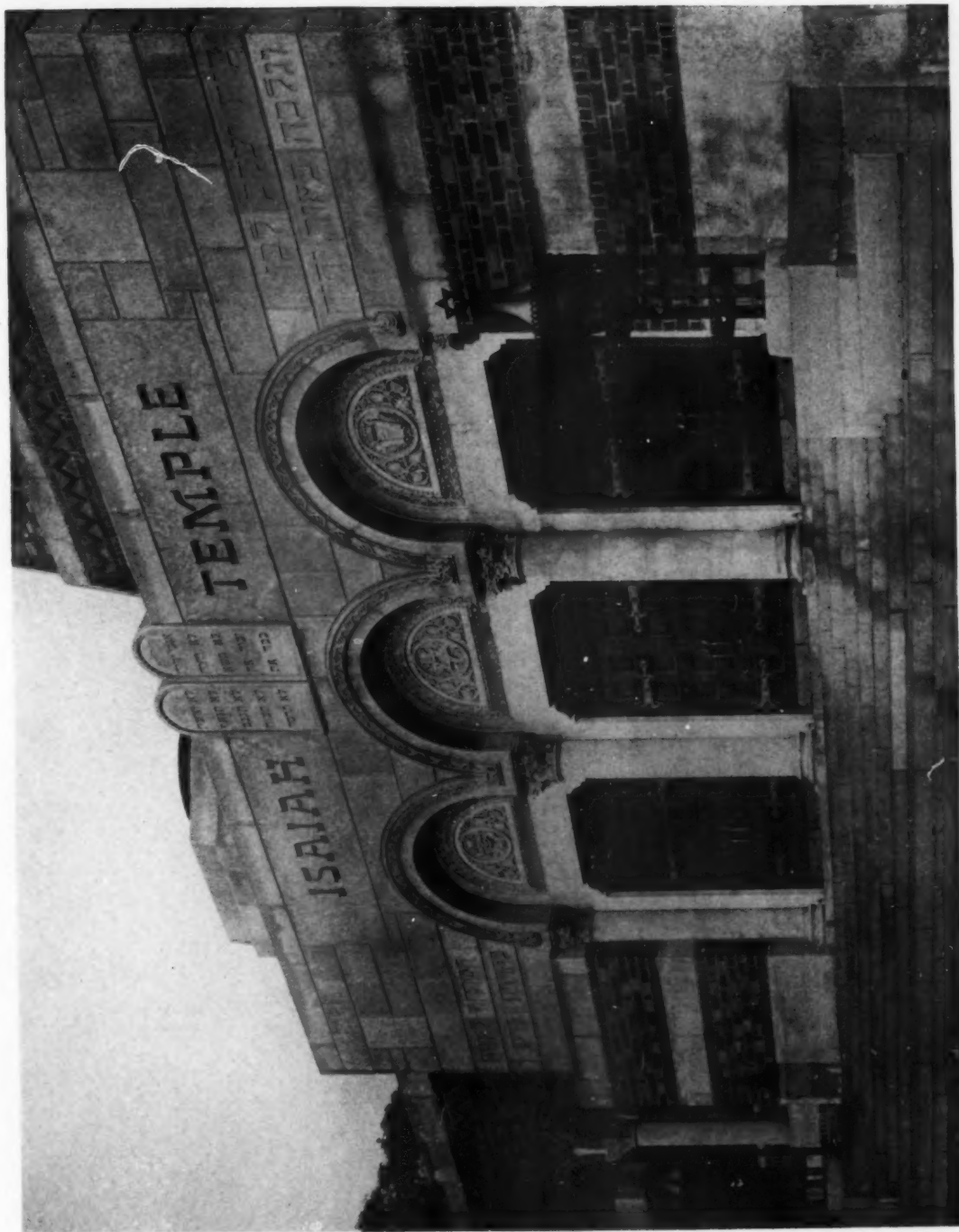
CARVED CRESTING ON THE GOTHIC TRYPTICH IN A NEW YORK CHAPEL

BY ADALBERT ZWINK, MASTER WOOD CARVER



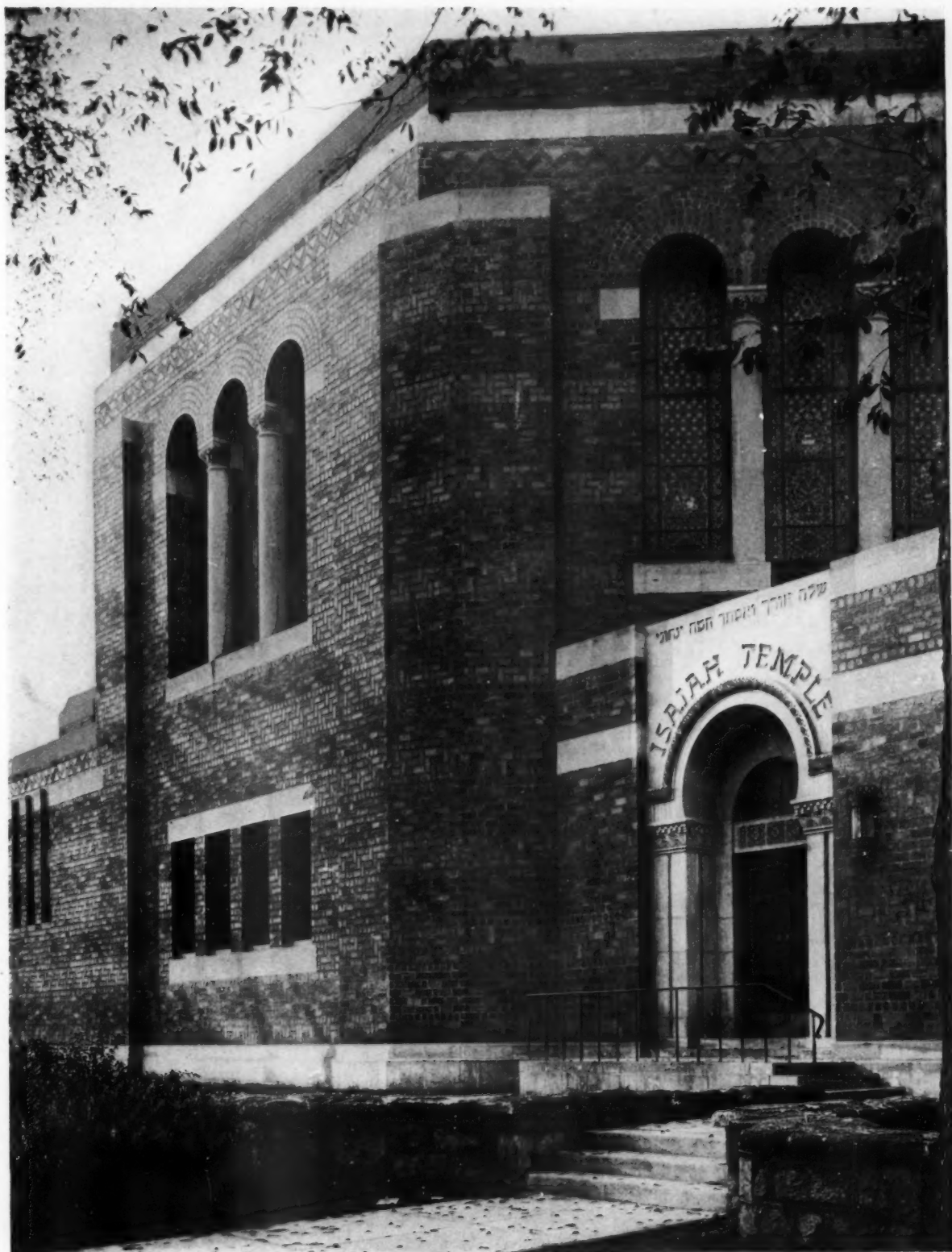
ISAIAH TEMPLE, CHICAGO, ILL.
ALFRED S. ALSCHULER, ARCHITECT
(See plans on back)

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ISAIAH TEMPLE, CHICAGO, ILL.
ALFRED S. ALSCHULER, ARCHITECT

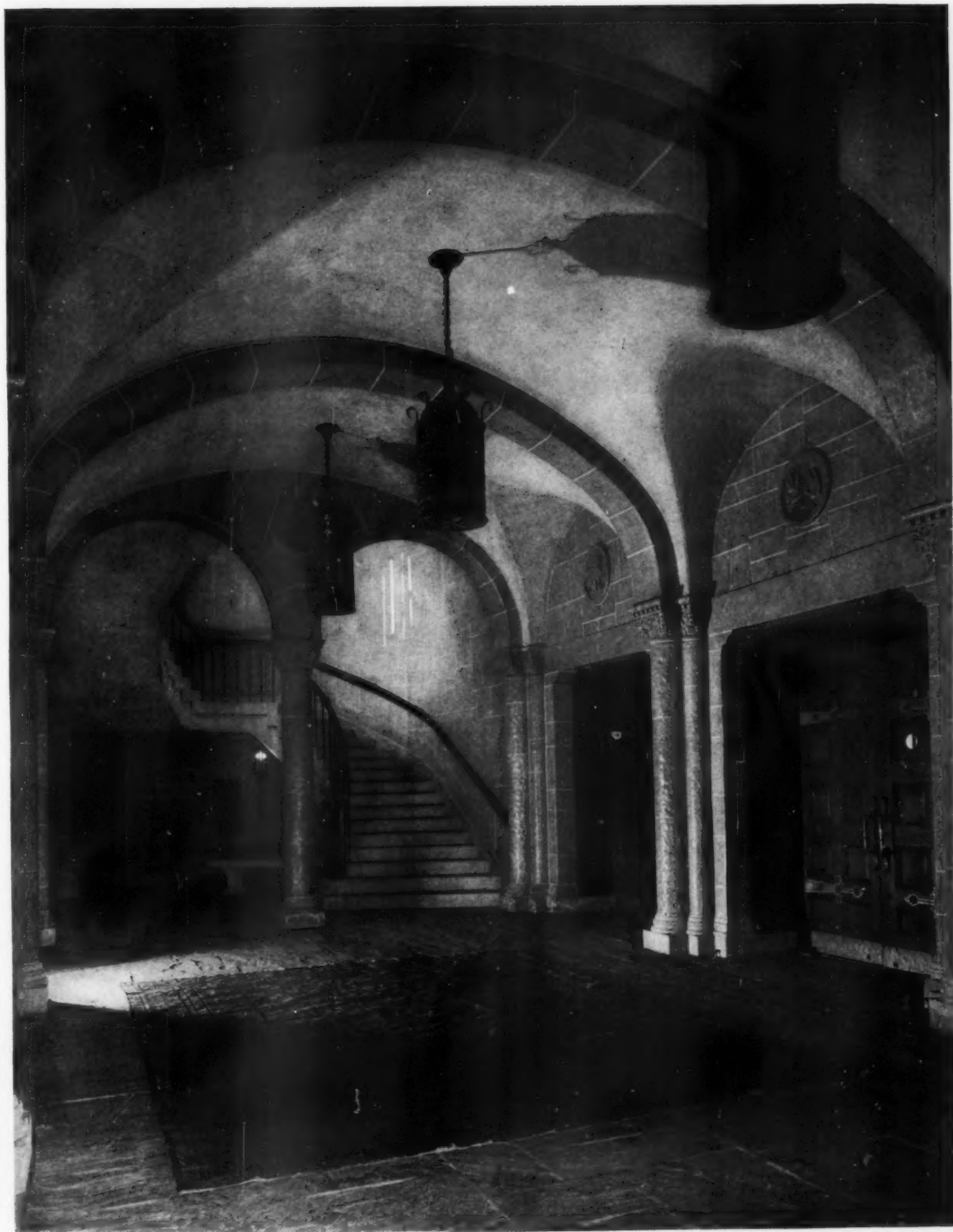
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ISAIAH TEMPLE, CHICAGO, ILL.

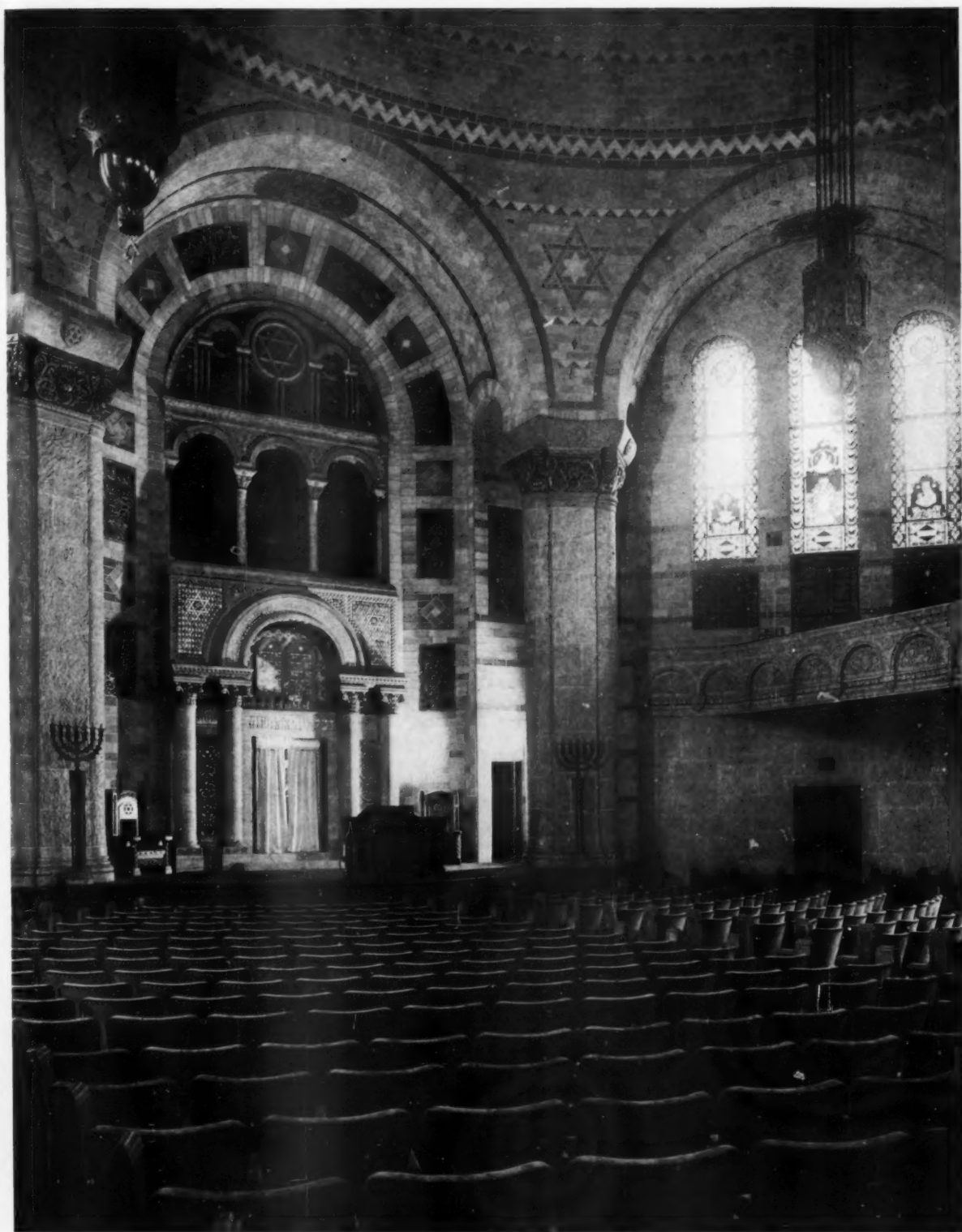
ALFRED S. ALSCHULER, ARCHITECT

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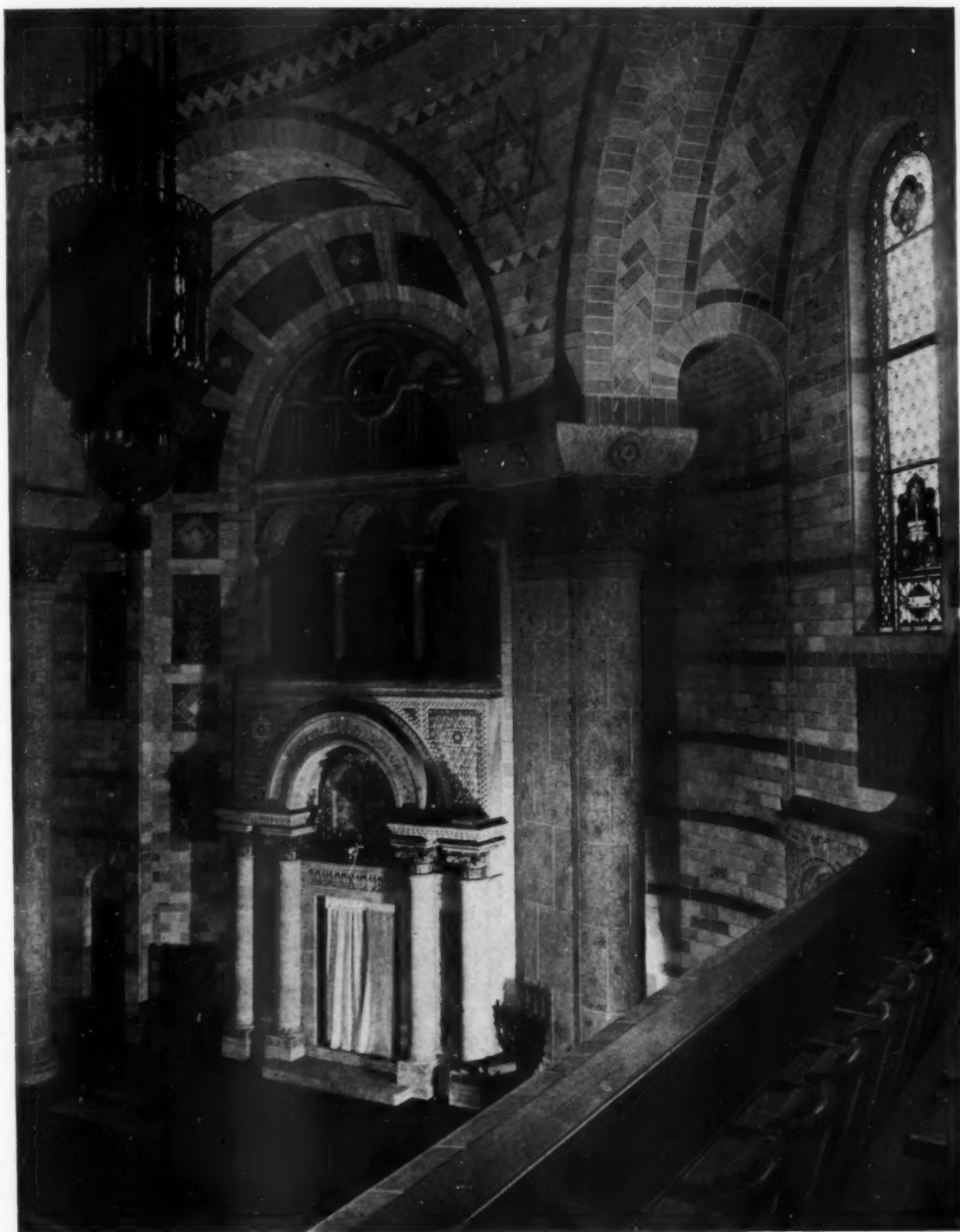
ISAIAH TEMPLE, CHICAGO, ILL.
ALFRED S. ALSCHULER, ARCHITECT

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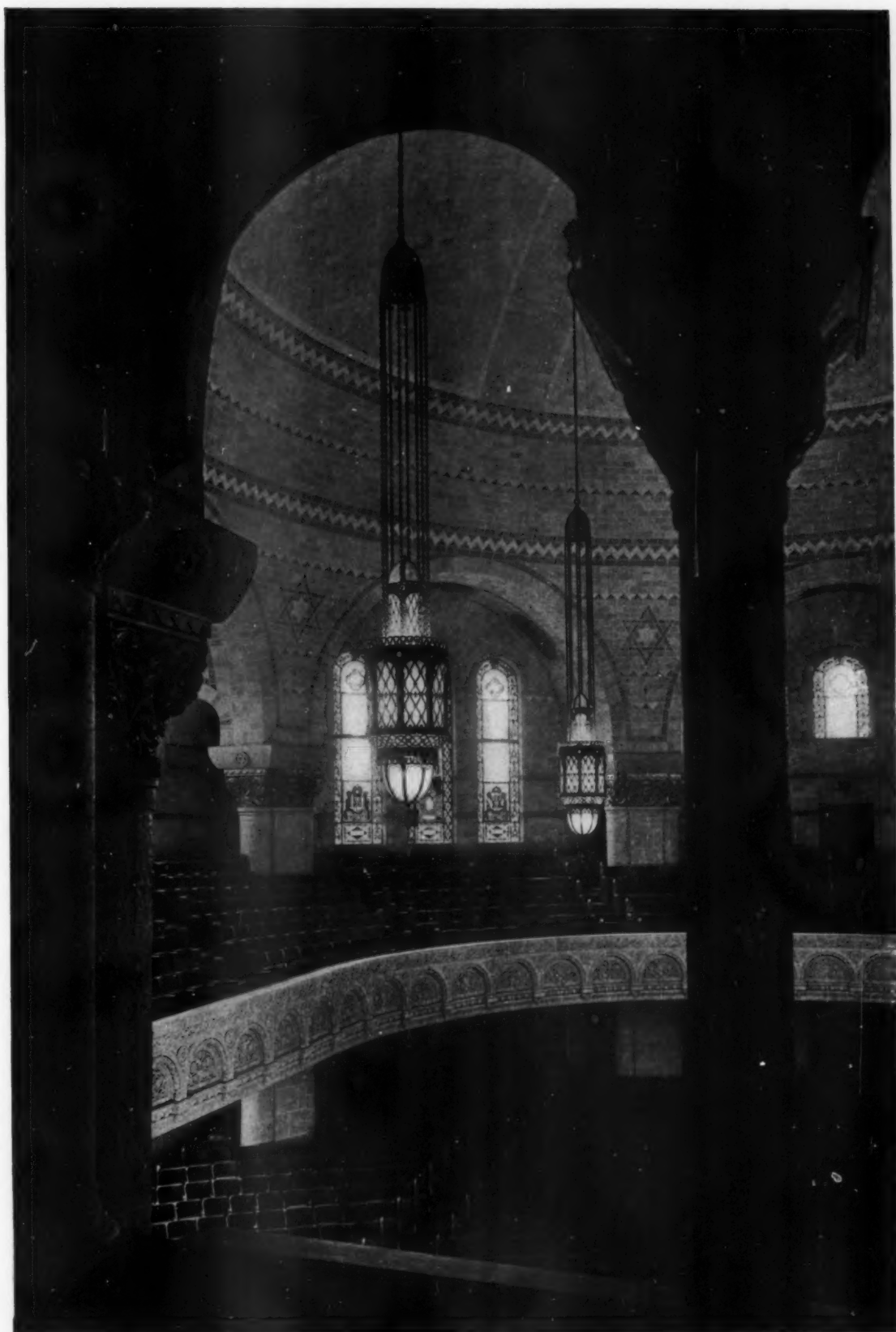
ISAIAH TEMPLE, CHICAGO, ILL.
ALFRED S. ALSCHULER, ARCHITECT

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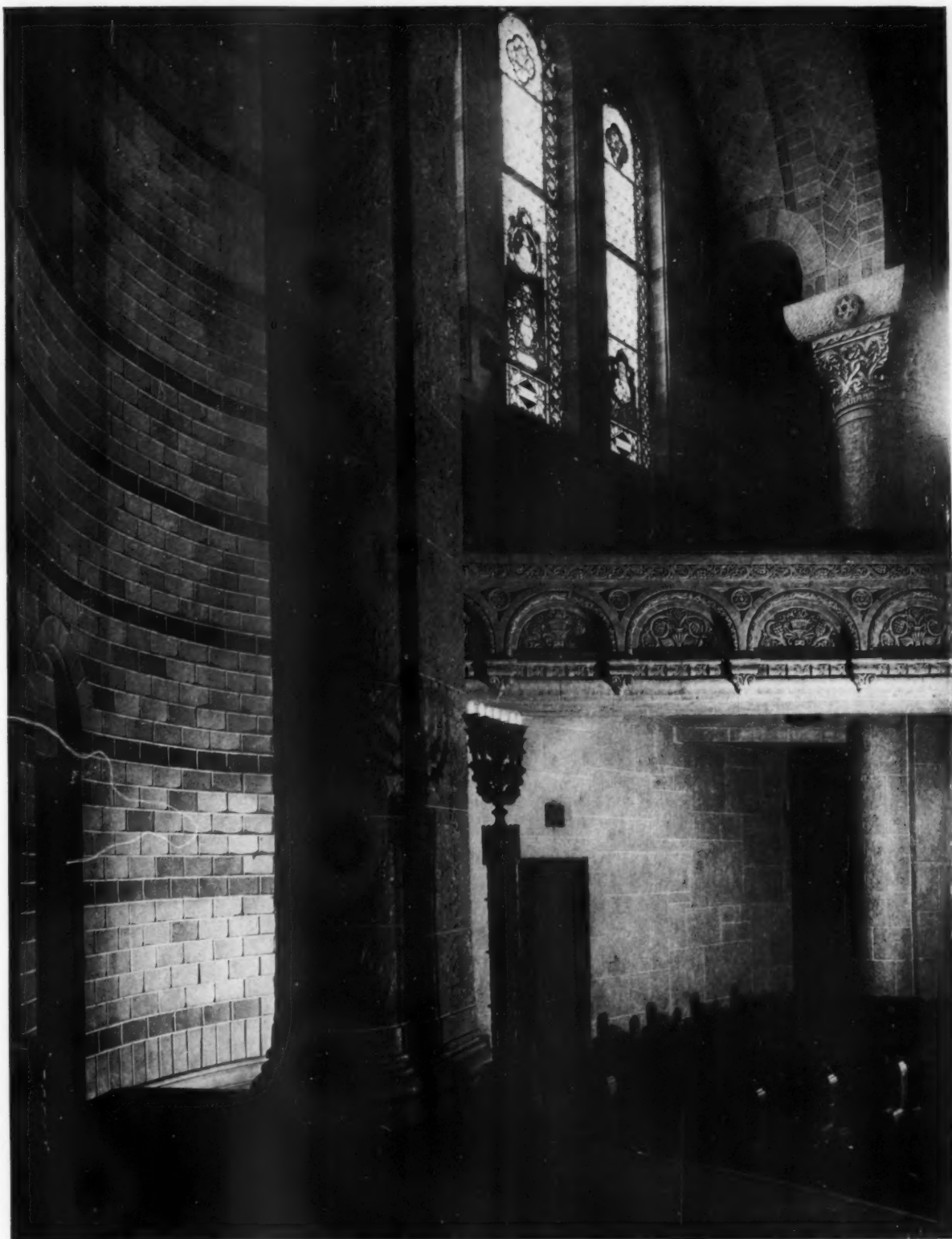


ISAIAH TEMPLE, CHICAGO, ILL.
ALFRED S. ALSCHULER, ARCHITECT

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ISAIAH TEMPLE, CHICAGO, ILL.
ALFRED S. ALSCHULER, ARCHITECT



ISAIAH TEMPLE, CHICAGO, ILL.

ALFRED S. ALSCHULER, ARCHITECT

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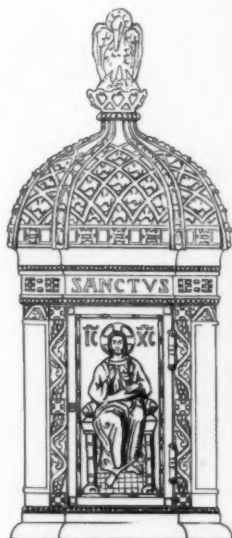
INTERIOR ARCHITECTURE

The Design of Church Accessories

ONE of the most important considerations in the development of the design of the interior of any room—or the exterior of any building, for that matter—is the purpose to which that room—or building—is to be put. It is often difficult to draw a distinct line by which this purpose may be marked, as, for example, was found in a recent article of this Department, to be the case of the lobby of an office building. Its pur-

article will deal with the design of church furniture and accessories.

No matter how decided may be the purpose of the church, or how slight may thus seem to be any chance for monotony of detail, the design of its pew-ends offers a real problem for the architect. A repetition of the same motive several hundred times in one scheme of decoration seems at once to present a sure case of monotony in design. It is this fact, then, that makes the problem of the design of the pew-ends a difficult one. Their great number and the influence which their design thus bears on the entire scheme mean that their design must be in the same style as the design of the church generally. This fact alone forecasts unity between a big item of the church furniture and its architecture, strictly speaking. In many Episcopal

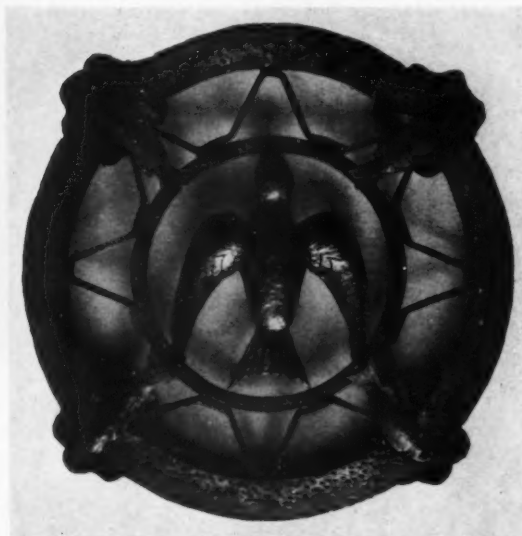


TABERNACLE IN HAMMERED BRONZE DESIGNED AND EXECUTED BY RAMBUSCH DECORATING CO.

The door with the Christ figure blessing was inspired by the painting in the Church of Maria Del Morte in Florence. Notice the symbolical meaning of the crowning feature, which is described in the text

pose is so variable that it can have little influence on its design. The purpose of a church, however, is very definitely established; so much so, in fact, that the serious and ecclesiastic character of its design may be carried to even its remotest corner without fear of monotony or distraction. The result is thus stamped by unity between the character of the design of its architectural treatment, its decorations and its furniture which cannot fail to appeal and to impress the most critical. The more strictly architectural details of church interiors were discussed in a previous issue* while this

* May 7, 1924 issue of *The American Architect*.



BAPTISTERY FIXTURE OF POLISHED WROUGHT IRON DESIGNED AND EXECUTED BY RAMBUSCH DECORATING CO.

The emblems of the sacrament of baptism, namely the descending dove and the fish, are gilded in dull gold. The outlets are concealed by copper canopies, and the fixture hangs by four iron chains

churches, for example, the design of the pew ends is given its cue from the design of the more ornate ends of the choir stalls, which, on account of their close proximity to the altar, the pulpit and the lectern, are, in turn, often treated in the character of these more important features. Unity through-



PART OF THE PULPIT AND CHOIR STALLS IN THE CHURCH
OF THE HOLY COMMUNION, NEW YORK CITY
CHARLES C. HAIGHT & ALFRED MORTON GITHENS,
ARCHITECTS

The design of the choir stalls, in the same character as the pulpit, in no way detracts from it, but rather leads up to it and, therefore, emphasizes its prominence

out the entire interior scheme is thus attained and its success thus materially strengthened. There is here shown a photograph made in the Church of the Holy Communion, New York City, which illustrates well the relation of the design of the ends of the choir stalls to the more elaborate detail of the pulpit which closely adjoins the stalls. The reduced reproduction of the full size drawing on another page shows in detail the design of the end and front elevations of the book board, a part of the choir stalls, in the same church. It can be visualized how readily this design and that of the ends of the choir stalls might be adapted to the ends of the pews of the auditorium.

The same idea can be just as easily applied to a church of much simpler details. On page 630, as an instance, is reproduced the architects' perspective sketch of the interior of the Methodist Episcopal Church at Jamaica, L. I., N. Y. The Colonial details of the architectural treatment are of the simplest type. The ends of the pews are

severely plain, being square shaped, appropriately panelled, and capped with a small mahogany moulding. Yet that mahogany capping is enough to inject into their design the character of the architectural treatment, for a similar mahogany mould caps the altar railing, is repeated in the design of the pulpit and in the chancel. It at once stamps the pews as a part of the architectural scheme of the church. This is as it should be.

While stressing the value of unity of design, do not overlook the necessity of an occasional note of contrast, which will always prevent any lack of interest. In a church interior the windows offer, probably better than anything else, the opportunity for a contrasting element. This is primarily due to the contrast between any form of window glass and any other material used in the architectural



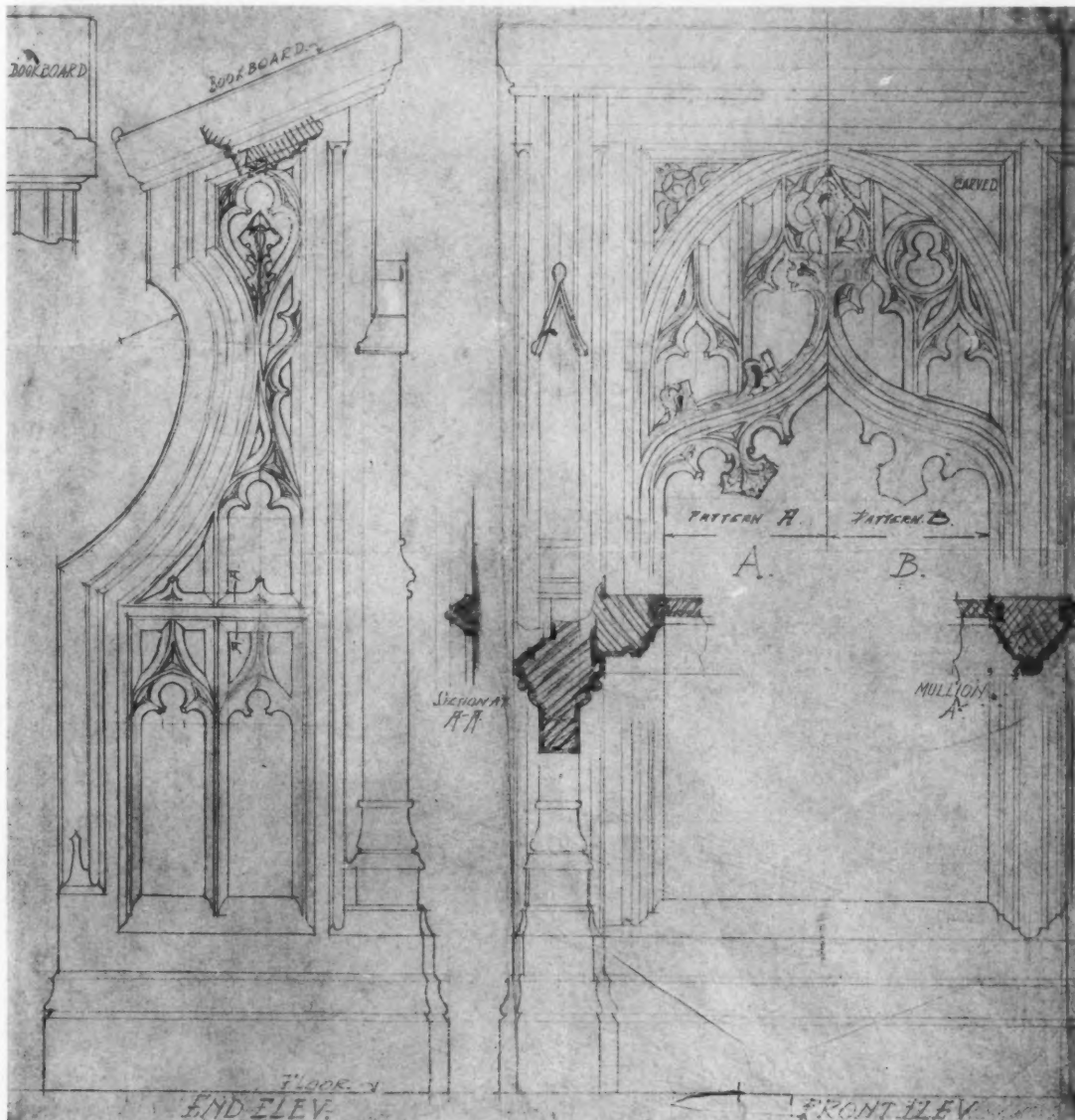
A STOCK PEW-
END WHICH HAS
AN ECCLESIASTI-
CAL FEELING IN
ITS SIMPLE DE-
SIGN

treatment. Of late years, especially, large stained and painted glass windows have become so common in church schemes that even their designs have now become somewhat stereotyped and commonplace. With this fact then in mind, it is of more than ordinary interest to note the painted window which has recently been installed in the same Methodist Episcopal Church at Jamaica, already referred to. The window was designed to be a feature of a simple yet dignified church interior. It is of very generous proportions, and is so placed in the chancel that it focusses the attention of anyone immediately on entering the auditorium. Its prominence in the scheme is somewhat in-

licated by the sketch of the interior illustrated herewith. The architect of the church and the designers of the window agreed that to treat it more like a beautiful, rich embroidered hanging or panel than like a window of glass, it would seem more as a part of the architectural scheme, and, at the same time, serve better as a decoration. A geometric repeating pattern forms the design of the field, painted in grissaille, which is surrounded

by a border, a repeating geometric pattern also, in rich reds, blues and greens. The result was most successful, and the designers feel that they have opened a new field in the treatment of church windows. One photograph shows in detail a section of the repeating motives of the window, and the other shows the window in its entirety.

In the ritualistic church as well there is striking evidence of unity between the design of the



REPRODUCTION OF THE FULL SIZE DETAIL OF THE BOOK RACK IN CONNECTION WITH THE CHOIR STALLS IN THE CHURCH OF THE HOLY COMMUNION, NEW YORK CITY

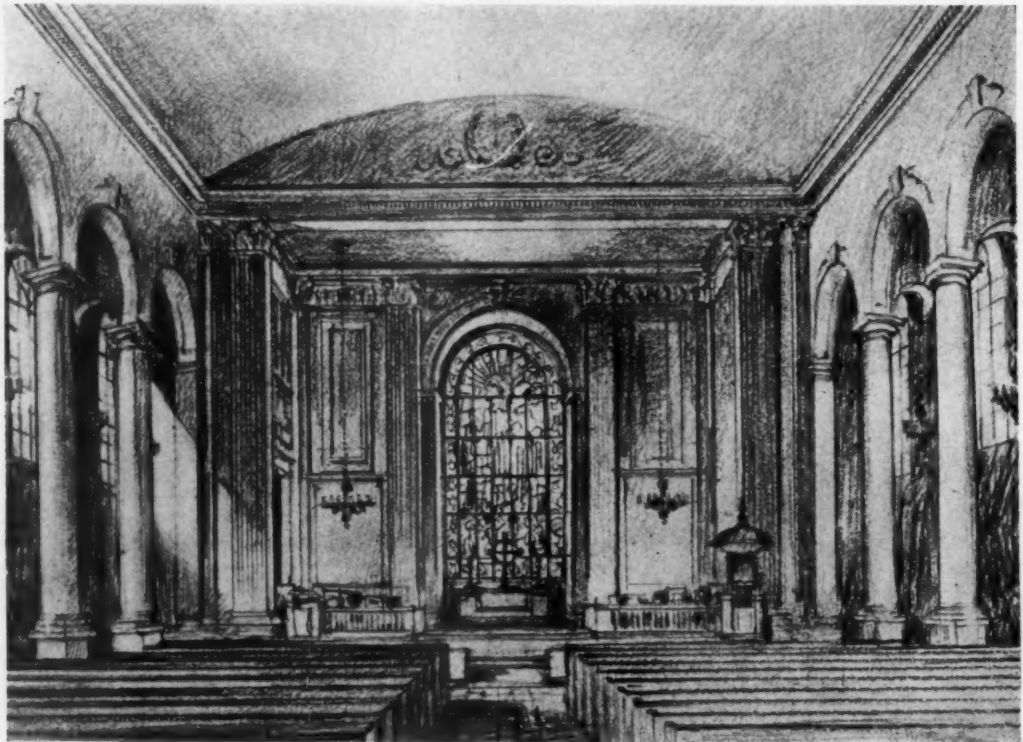
CHARLES C. HAIGHT & ALFRED MORTON GITHENS, ARCHITECTS

How easily this design might be adapted to the ends of the pews in the auditorium is very evident, if the design of the church warranted an ornamental treatment to its seats. Compare this detail with the ends of the choir stalls and the more important pulpit on the opposite page

architectural scheme and the decorative accessories, although their manner of worship makes somewhat different use of many of the ornamental features. The altar, for example, must be given the prominence in its design which it is accorded in the services of the church. It is, no doubt, for this reason that the baldachino type of altar is so frequently employed in the Catholic churches, although the historic idea of placing a canopy over the king's throne formed a precedent which the church long ago adopted. It stands out prominently away from the wall, and can thus be made

similar ornament on the dome of the church proper is *al secco*.

Both the ritualistic and the non-ritualistic churches make free use of symbols in their designs. Perhaps the ritualistic church offers a greater field in this respect which is often taken advantage of by the architects and decorators. On the first page of this article are shown two important features of the Catholic service in the design of which symbols of their creed play a very prominent part. The crowning feature of the tabernacle, for example, represents a pelican plucking



THE METHODIST EPISCOPAL CHURCH, JAMAICA, L. I., N. Y.

JOSEPH HUDNUT, ARCHITECT—W. E. MANHART, ASSOCIATE

Showing the position of the window as illustrated on the opposite page and the architecture of the church interior of which it is a part

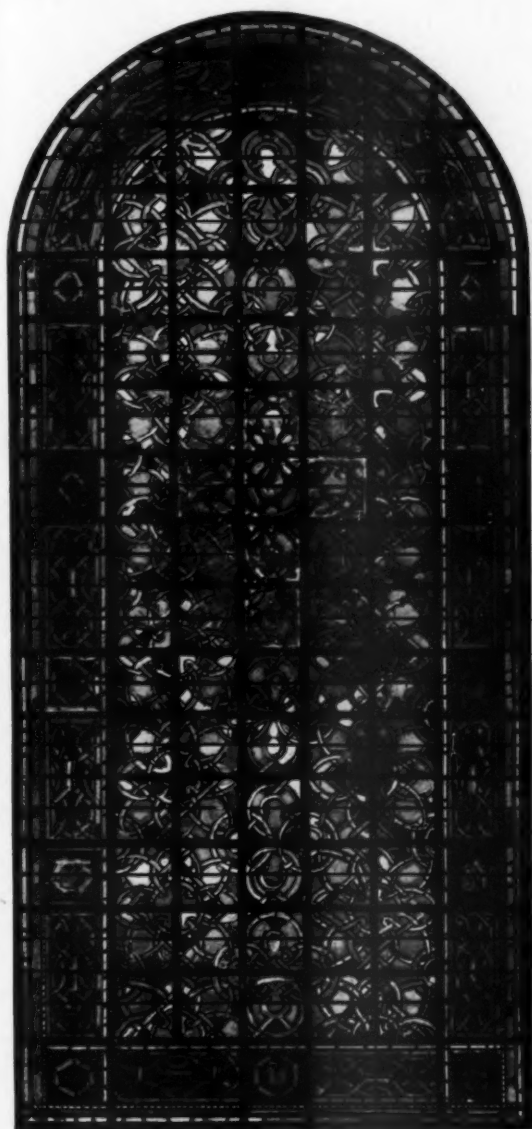
of much more decorative importance. In the design of the baldachino, there should be the same unity evidenced between it and the architectural setting, as already emphasized. In the illustration showing the altar in Holy Trinity Catholic Church, Newark, N. J., due prominence is given to the baldachino, while in certain materials and even in motives of the design it harmonizes perfectly with the wall of the chancel. The ornament, for example, in the circular panels above the columns of the baldachino is *al fresco*, while

its breast to give blood to its hungry young, emblematic of Christ shedding his blood for mankind. The result is certainly decorative as well as symbolical. Again, in the baptistery fixture, the emblems of the sacrament of baptism, the descending dove and the fish, are attractively woven into the design. Attention might properly be called to the quality of workmanship of these particular fixtures here illustrated. The tabernacle, the most sacred and valuable article in the Catholic church, containing its communion vessels, is here

made worthy of its high purpose. It is made of hand-hammered bronze, electroplated with several hundred dollars worth of pure gold, and studded with lapis lazuli. The inside of the door, which opens into a steel safe, is set with amethysts. The baptistery fixture is of hand wrought iron, polished, with the emblems gilded in dull gold. The producing craftsmen, who are also the designers, specializing in Catholic church decorations, pride themselves on the fact that all their work is

actually done by hand. Upon investigation, it seemed quite remarkable in these modern times that even in the cutting out of pieces of metal for a fixture which might call for a dozen or many more of the same shape, each piece was cut by hand, where a punch would do all at one operation. The firm, however, insists that their work be hand-wrought and abide by what they say.

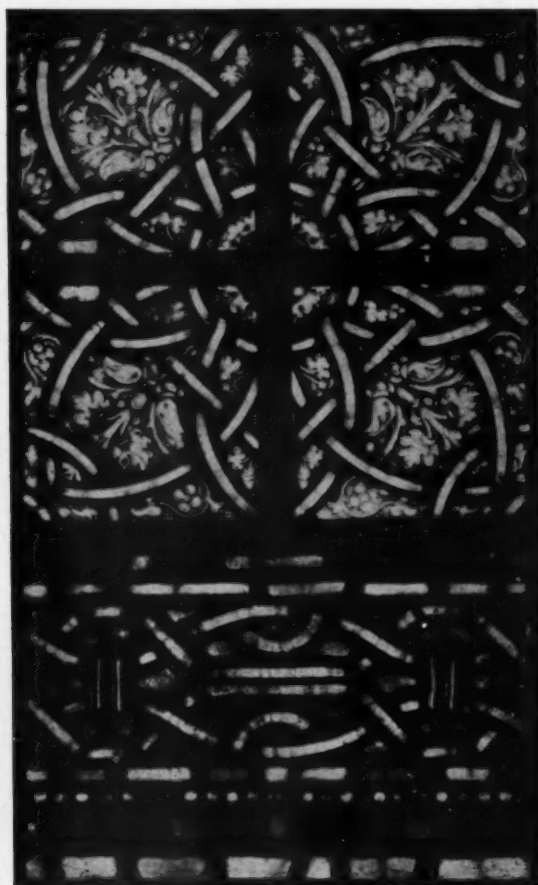
The style of church architecture and decoration, as was so specifically pointed out in the earlier article on church design, is generally ecclesiastical, which is after all only another way of saying Gothic. This puts all church designs on a somewhat similar standard, and thus is the door open for stock goods. The expression, for some reason or another, has a stereotyped sound which is not pleasing to the ear. This is, however, unfortunate, for when an appropriation does not allow the expense of made-to-order goods, stock goods, or goods



THE ENTIRE WINDOW

PAINTED GLASS WINDOW IN THE CHANCEL OF THE METHODIST EPISCOPAL CHURCH, JAMAICA, L. I., N. Y.

FROM THE STUDIOS OF FRED WILEY & W. FRANCKLYN PARIS



ITS DETAIL

The design of the window, which is nine feet wide by nineteen feet high, consists of a repeating geometric pattern painted in grissaille, surrounded by a border in reds, blues, and greens

produced by the manufacturer in quantity at a great saving of cost, are resorted to, not to diminish in any way the quality of the design, but to make it appear richer, perhaps, than its appropriation would seem to allow. Thus can stock goods of the right design and workmanship serve a valuable purpose. The seating facilities offer a chance for stock goods which can effect a tremen-



BALDACHINO ALTAR IN HOLY TRINITY CATHOLIC CHURCH, NEWARK, N. J.

HUGHES & NORTON, ARCHITECTS

RAMBUSCH DECORATING CO., DECORATORS

dous saving for the church constructed at a limited cost. There is reproduced on another page, a photograph of one of a number of designs for church pews which could be used in churches of a certain type of Gothic or even Colonial design.

There is quite a decided tendency today to use chairs instead of pews for seating accommodations in many churches. There are several reasons for this. One of the most important is that the chair does away with that "rubbing" of one's neighbor which, to some, may be distracting. Another is that the



BAPTISMAL FONT IN THE MADISON AVENUE REFORMED CHURCH, ALBANY, N. Y., DESIGNED AND EXECUTED BY TIFFANY STUDIOS

The font is a combination of Sienna marble and Favrile glass mosaics

pew should properly be made a part of the architectural design of the church, and, on account of their great quantity, they detract from the main features thereby. On the other hand, the permanency of the pew is very much in its favor, especially in the ritualistic church, where it is almost impossible to rearrange the disordered chairs after one service in time for the one immediately following. The permanently placed pew brings up a point which enters into the design of the architecture. It really cuts about three feet off the bottom of the design. The problem is then whether to design the pews as pieces of furniture and allow them to so effect the architectural design, or to treat them as a part of the architectural design and make it so that the pews conceal nothing of importance. To illustrate the point, consider that there were columns in a church wholly surrounded by permanent pews, as is often seen. If the plinth block and base mouldings rest directly on the floor, they are not seen, and the shaft of the column appears to rest on the tops of the pews. The problem then is, should the column be supported by a pedestal that will allow the plinth to be on a line with the top of the pews? It is an interesting point, anyhow, but the decision must be determined individually rather than collectively, for the design and construction of the building are actually the determining factors in each case.

EDITORIAL COMMENT

IN THIS COUNTRY the province of architecture in the domain of religious worship has only on rare occasions been clearly understood. And in speaking of architecture and its relation to religious worship, we are assuming that architecture is art in its best and richest interpretation.

Does architecture function in the administration of religious life? There can only be one reply to this question—it does. And it functions in a manner and to a degree so insistent and important, that any church architecture not founded on the most perfect knowledge of the relation between architecture and religion will never be vital, and it may, lacking that proper feeling, become sacreligious.

Discussing the functioning of architecture in religious life, Allen B. Pond, in a scholarly review of Von Ogden Vogt's "Art and Religion," printed in our issue of February 1, 1922, clearly sets forth this idea. Mr. Pond wrote:

"Does man try to make temples and church buildings beautiful merely for his own aesthetic satisfaction, or also and chiefly because he hopes that beauty which his inmost being so passionately craves is also dear to Deity and will be credited to him as the offering of propitiation, or as the paying of due honor?"

Perhaps one answer to this question may be found in the report of an interview with a high prelate in this country, whose church building is nearing completion and in its design, plan and accessories, has been pronounced a perfect expression of ecclesiastical art. When asked, who in his judgment was responsible for the indifferent class of church architecture, he said:

"First of all, with few exceptions, I blame the architects. Many of them are devoid of any liturgical knowledge, and consequently are quite unprepared to provide for the liturgical requirements that are essential to the needs of a traditional Christian church. They are asked to build the walls of a local Sion, and in the end, they build the walls of a defective synagogue, in which neither the rite of the new Law or of the Old may be properly observed or carried out. They do not know the object and purpose of a church, and consequently, cannot design one.

"Yet, the fault is not entirely with architects. Since Colonial days, the persons who have been responsible for the building of churches in this land have been dictating to the architects employed by them, and unfortunately, the architects so employed have often submitted to such dictation for

the small price of their fee. It is thus that an age-long art is prostituted in exchange for a fee and sacred principles are given a price in the market place. And think at what cost this is done, when the honor of both sides is stained and the result becomes a laughing stock for those that look on.

"A competent architect who has long been a student of liturgic requirements and who by reason of such study, has become well grounded in the principles of church architecture, may be safely trusted to produce what is required. I would no more think of interfering with him in the execution of his task than I would of interfering with the navigation of the 'Berengaria.' I have every right and, as I see it, it is my plain duty to tell my architect of every parish requirement and once I have become satisfied with his solution of those requirements, it then becomes my duty to sustain and support his every effort to make a success of the building that is to be erected."

Religion, as expressed in church buildings, needs art to be impressive. And the art expressed in the building must have its foundation in the history of the church. Religion may not dispense with art. Art is the one big material thing that dignifies and elevates every religious expression. Probably no phase of art has been more completely developed nor more beautifully expressed than that allied to church architecture. Knowledge of it may be had for the searching. To fail to give to church design that great dignity that art contributes is to declare incompetence of the architect and a lax attitude toward the outstanding thought that has made the world worth living in.

* * *

"ELIMINATION of national waste" is the keynote of Secretary Hoover's annual report, made public by the Department of Commerce. Under this head Mr. Hoover reviews the accomplishments of the Department during the first three years of the present administration, notably in the fields of unemployment, seasonal construction, coal, superpower, standardization, simplified practice, co-operative marketing, and the reduction of housing costs.

A definite constructive national program has been developed for the elimination of waste in our economic system, says Mr. Hoover. The need is plain. The American standard of living is the product of high wages to producers and low prices

to consumers. The road to national progress lies in increasing real wages through proportionately lower prices. The one and only way is to improve methods and processes and to eliminate waste. Just as 20 years ago we undertook nationwide conservation of natural resources, so now we must undertake nationwide elimination of waste. Regulation and laws are of but minor effect on these fundamental things. But by well-directed economic forces, by co-operation in the community, we cannot only maintain American standards of living—we can raise them.

We have the highest ingenuity and efficiency in the operation of our industry and commerce of any nation in the world. Yet our economic machine is far from perfect. Wastes are legion. There are wastes which arise from widespread unemployment during depressions, and from speculation and overproduction in booms; wastes attributable to labor turnover and the stress of labor conflicts; wastes due to intermittent and seasonal production, as in the coal and construction industries; vast wastes from strictures in commerce due to inadequate transportation, such as the lack of sufficient terminals; wastes caused by excessive variations in products; wastes in materials, arising from lack of efficient processes; wastes by fire; and wastes in human life.

The high cost of housing construction brought to the front the necessity for the elimination of waste in that field as a contribution to lowering costs within the purchasing power of the community, and so maintaining activity. Aside from the work of the Department upon the simplification of building materials, the Division of Building and Housing was established to attack such problems as the development of uniform municipal building codes, the investigation of losses and wastes in financing home building, and the study of city and town zoning.

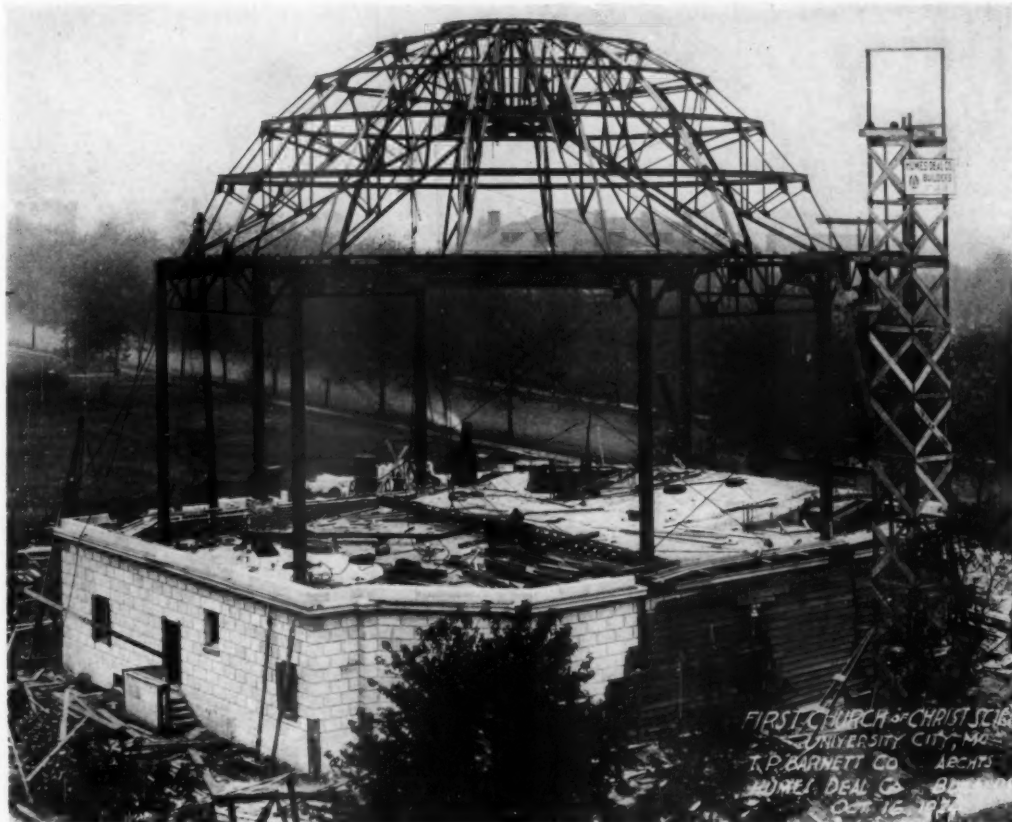
The report showed conclusively that custom, not climate, is mainly responsible for the seasonal ups and downs in building, and that these evils are largely unnecessary and can be eliminated, stated Mr. Hoover. For most types of construction it is now possible to build the year round in all parts of the United States. The elimination of these wastes would strengthen the entire business structure, for construction is the balance wheel of American industry. The value of yearly construction in the United States is more than \$5,000,000,000. If building falls off, there is always a slackening in many other lines of industry, resulting in unemployment, decreased purchasing power of employees, and further depression.



BOY AND PANTHER CUB, BY MALVINA HOFFMAN

(Copyright by Malvina Hoffman)

ENGINEERING *and* CONSTRUCTION



VIEW OF THE STEEL FRAMEWORK OF THE DOME AND ITS STRUCTURAL SUPPORT
FIRST CHURCH OF CHRIST, SCIENTIST, UNIVERSITY CITY, MO.
T. P. BARNETT CO., ARCHITECTS

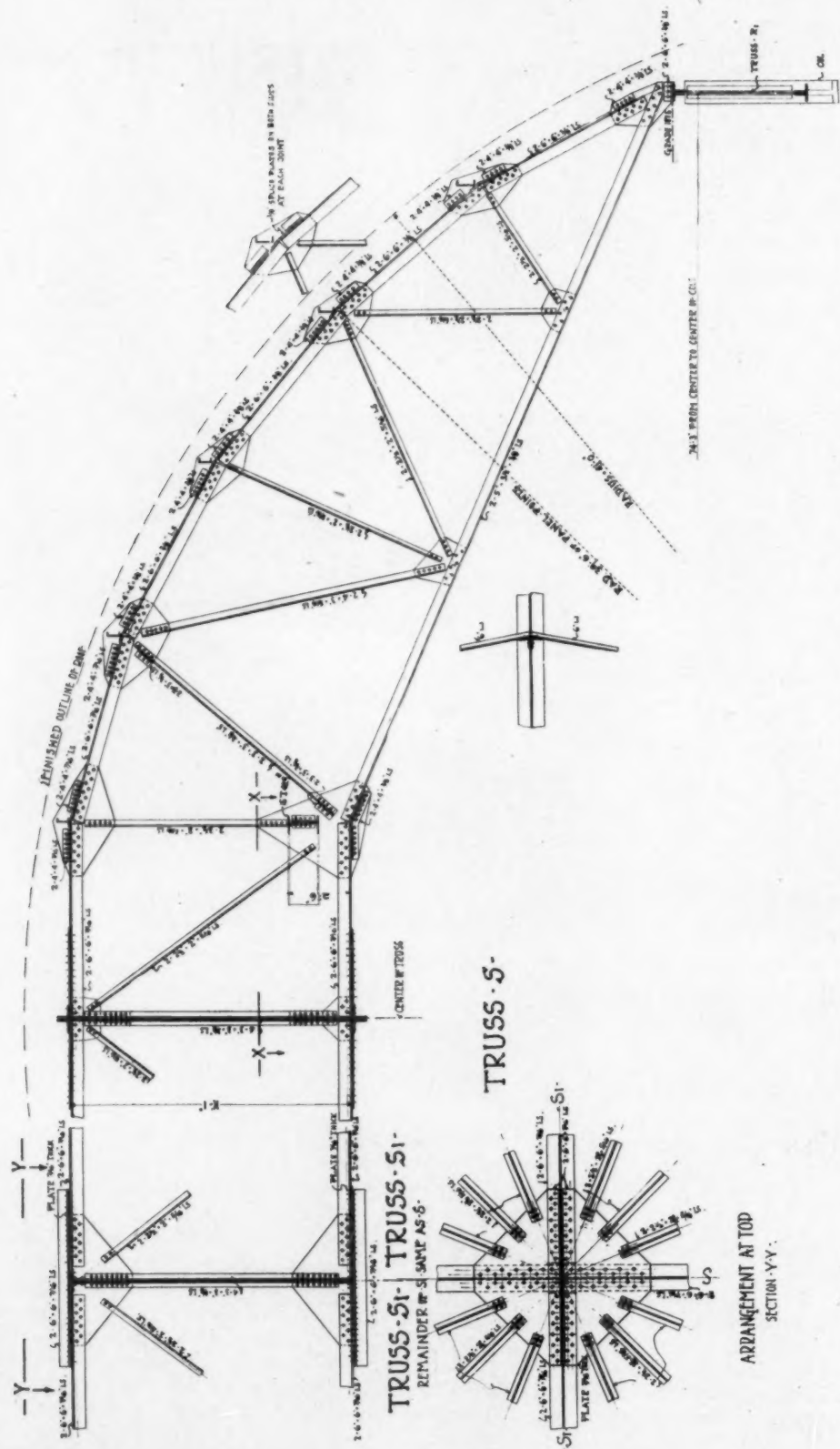
A DOMED ROOF CONSTRUCTION

First Church of Christ, Scientist, University City, Mo.

T. P. BARNETT CO., Architects—FREDERICK C. TAXIS, Engineer

IT is the unusual requirement that challenges the ability and ingenuity of the architect and engineer. It often results from conditions imposed by the architectural design which have no logical relation to the structural system of the building. The old-time idea that the structural elements of a building should be indicated in the architectural design is fast disappearing. We

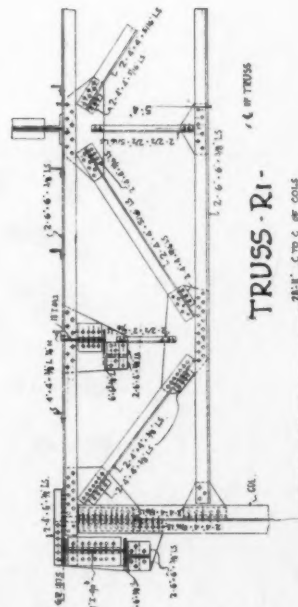
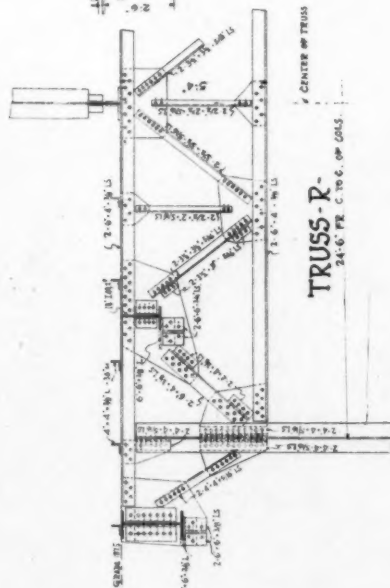
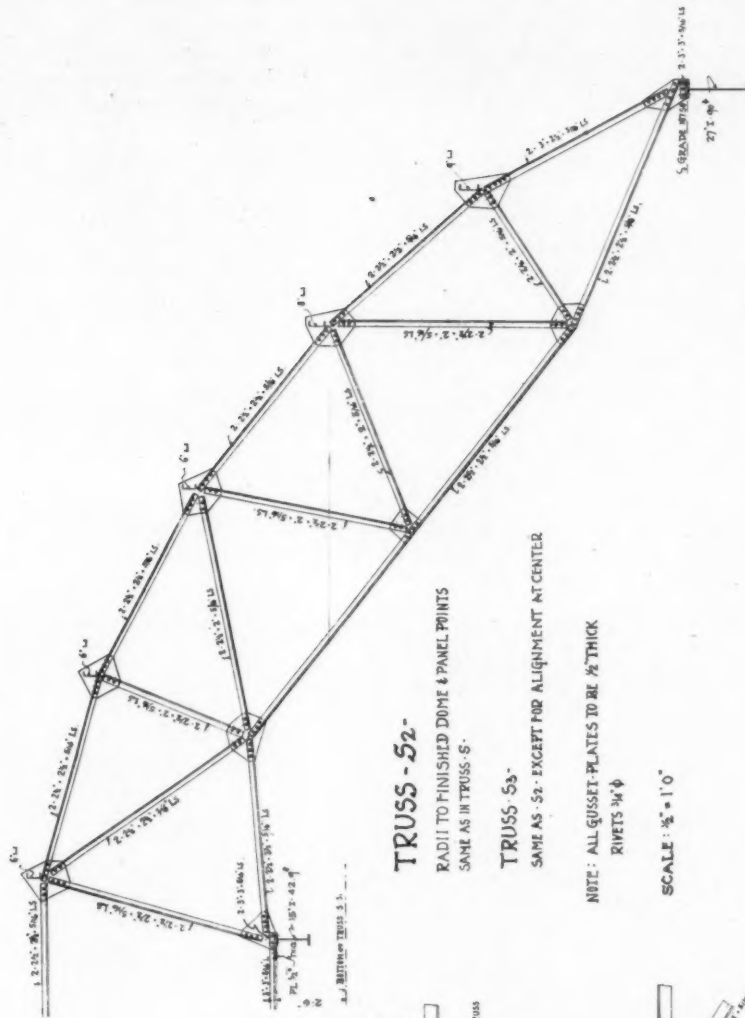
know that the engineer, by the use of steel and reinforced concrete hidden within the architectural envelope, assures the stability and durability of the structure. When these problems of unusual requirements are solved in a simple and economical way, the result is always worth consideration. The designing of the dome of the First Church of Christ, Scientist, University City,



DETAILS OF TRUSSES S AND Si AND THE ARRANGEMENT AT THE INTERSECTION OF THE TOP CORDS

FIRST CHURCH OF CHRIST, SCIENTIST, UNIVERSITY CITY, MO.

T. P. BARNETT CO., ARCHITECTS

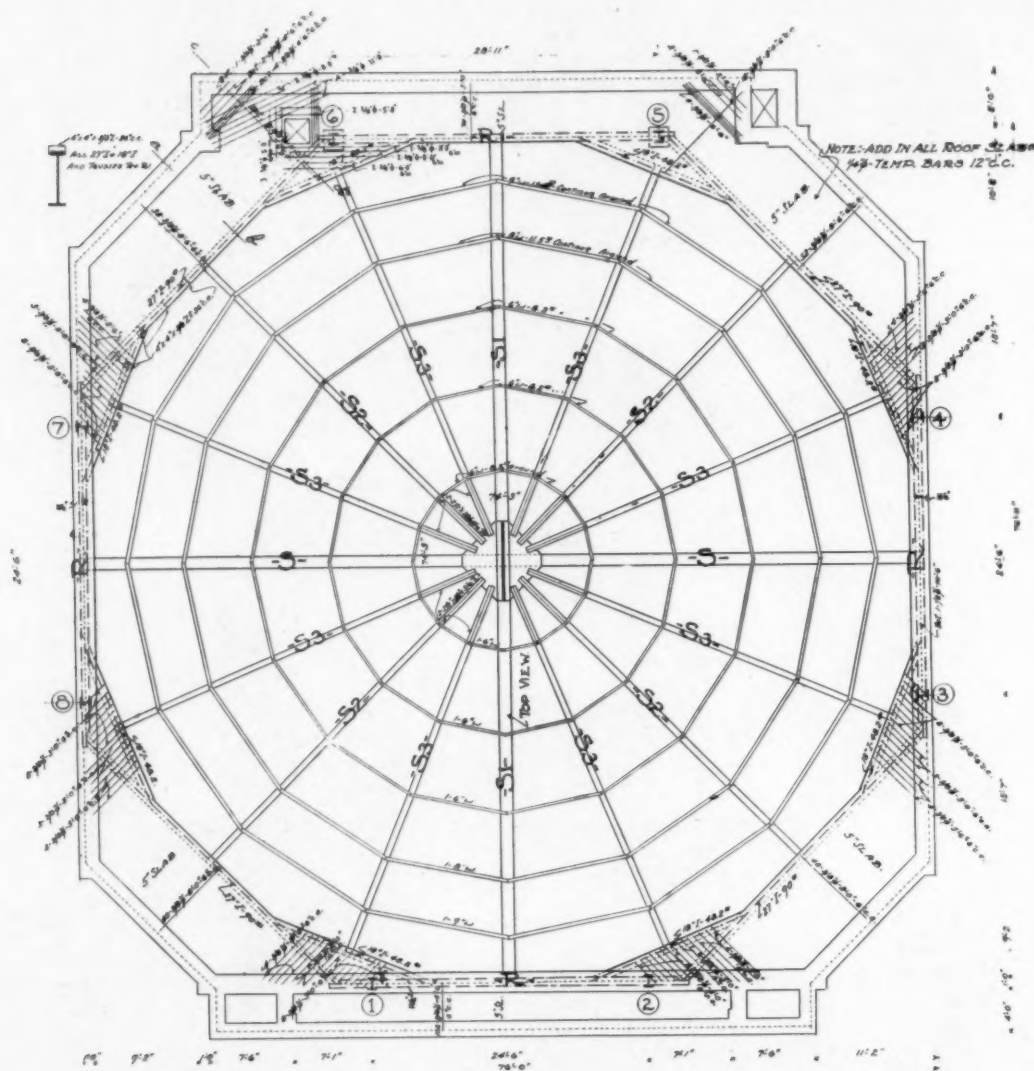


STRUCTURAL DETAILS OF TRUSSES S2, S3, R AND R1
FIRST CHURCH OF CHRIST, SCIENTIST, UNIVERSITY CITY, MO.
T. P. BARNETT CO., ARCHITECTS

Missouri, is a fine example of such a problem.

The dome has a span of approximately 74'-0", the inner and outer surfaces being segmental in form with radii of 58'-8" and 41'-0" respectively. The roof is constructed of reinforced concrete

ing. Primarily, the roof is carried by two trusses, S and S1, placed at right angles to each other and supported by horizontal truss girders R and R1. The trusses R and R1 support at their ends 27" I beams which complete the horizontal octagonal



ROOF FRAMING PLAN SHOWING THE ARRANGEMENT OF THE TRUSSES, THE SUPPORTING FRAMEWORK AND THE PURLINS

FIRST CHURCH OF CHRIST, SCIENTIST, UNIVERSITY CITY, MO.

T. P. BARNETT CO., ARCHITECTS

slabs, covered with sheet copper finished in Pompeian verde antique. The domed ceiling is constructed of panelled and ornamented plaster which is suspended from the steel structure above.

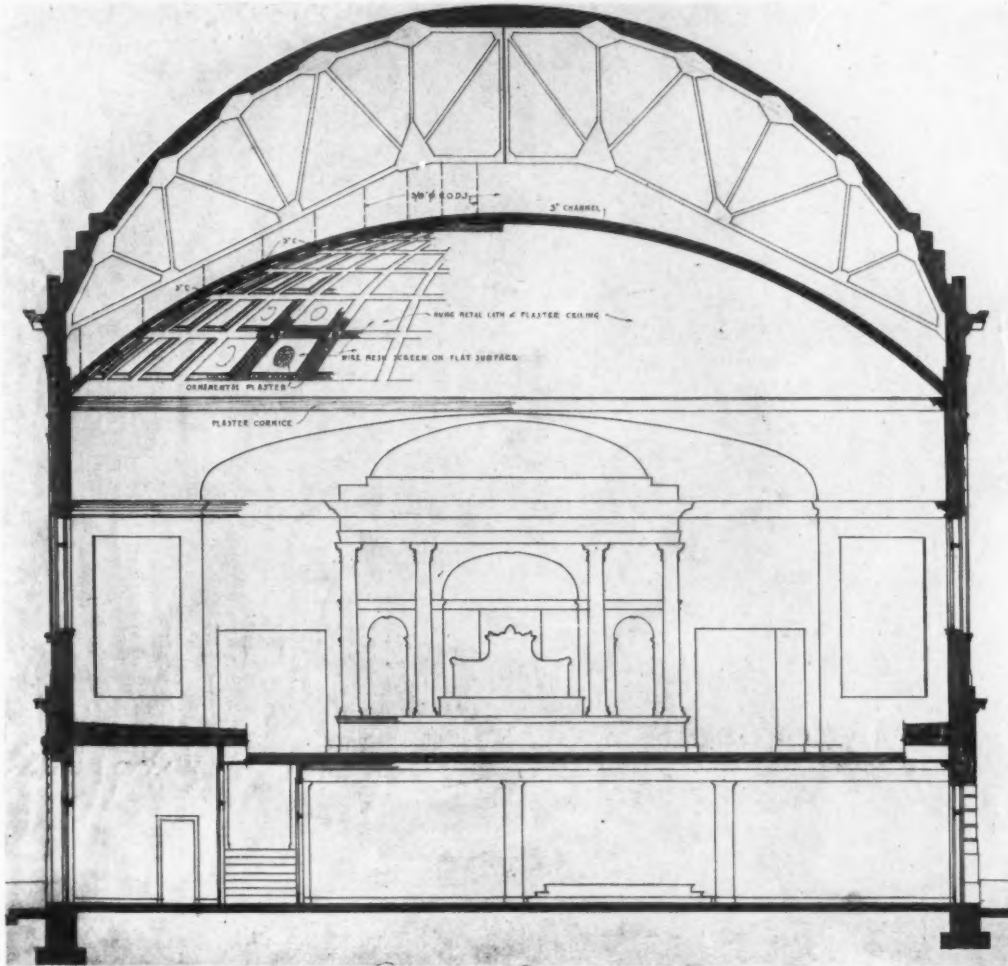
The outline of the finished roof and ceiling made it necessary to design an unusual roof frame

at the base of the dome. Owing to the architectural design, the eight steel columns which support this octagonal frame are not placed at the intersections of the octagon. This necessitated that the ends of the trusses R and R1 be cantilevered to support the 27" I beams. To this

octagonal frame are attached eight 18" I beams which support the trusses S3.

The central segment of the top and bottom cords of the main trusses S and S1 are made horizontal. Above the lower cord of these trusses and between them, are framed four 15" I beams which

of the upper cords of trusses S and S1 is placed a 7/16" plate to which are attached the upper cords of trusses S2 and S3. By extending the gussets at the top cord panel points, the purlin connections were simplified, and a material reduction made in the cost of the shopwork. The purlins are placed



CROSS SECTION SHOWING THE RELATION OF THE SUSPENDED CEILING AND THE ROOF TO THE SUPPORTING STEEL CONSTRUCTION

FIRST CHURCH OF CHRIST, SCIENTIST, UNIVERSITY CITY, MO.

T. P. BARNETT CO., ARCHITECTS

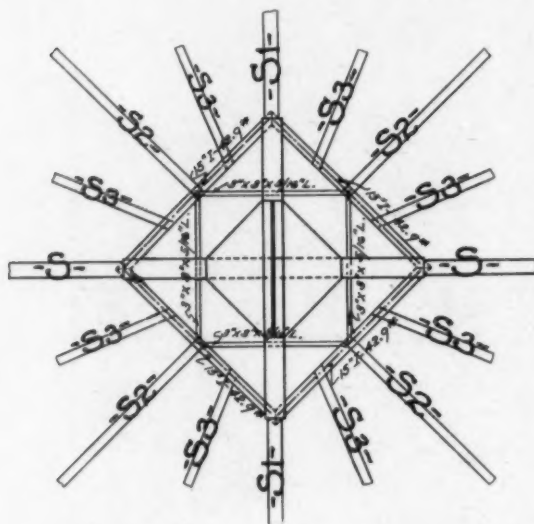
support the ends of the lower cords of trusses S2 and S3. In this way a very simple arrangement was realized and it was possible simply to brace the top flanges of these I beams with a rectangular system of angle iron struts. Those struts that form a continuation of the top cord and trusses S2 and S3 combine to form a very rigid system in the center. Over the intersection

concentrically on the upper cords and are made of channels.

The concrete roof slabs, which are intimately tied to the base of the dome by means of lug angles on the steel framing, serve to transfer any lateral forces to the walls and assure the integrity of the structure as a whole.

The dome originated with Imperial Rome and

was developed to its highest perfection in the time of the Renaissance. It was incorporated in buildings for the purpose of expressing the domination of the State and Church and its employment has been largely confined to these two uses through the succeeding centuries, even until the present day.



DETAIL OF THE INTERSECTION AT THE LOWER CORDS OF TRUSSES S AND S1 AND THE SUPPORTS FOR THE LOWER CORDS OF TRUSSES S2 AND S3, WITH THEIR RECTANGULAR SYSTEM OF STRUTS

The employment of the dome in America has not been fortunate. It is most frequently found on buildings such as state houses, county court houses, city halls, and other public buildings. The history of these buildings is that, as a rule, their design and construction have been controlled by political interests which took no cognizance of architecture. It was more often a job from which profit was to be derived. In order to construct the domes of these buildings as cheaply as possible, they resorted to the use of wooden or steel framework covered with galvanized iron; exuberant ornaments, and the inevitable blind Justice.

About three decades ago the first segmental domes were introduced into this country. This was a distinct advance in American architecture as compared with the type formerly used. In addition to its rather restricted use in public buildings, it has become a feature of ecclesiastical buildings.

The advantage of the segmental dome is that it serves the apparent dual purpose of a roof and as a feature of architectural design. It has shown itself to be more adaptable to our structures than the typical Renaissance dome for the reason that it can be better incorporated as a logical and well proportioned element of the building. We accept the dome without considering the structural principles involved. The great facility with which steel, reinforced concrete and thin built-up masonry arches are adapted to this purpose, makes it acceptable without questioning the type of construction.

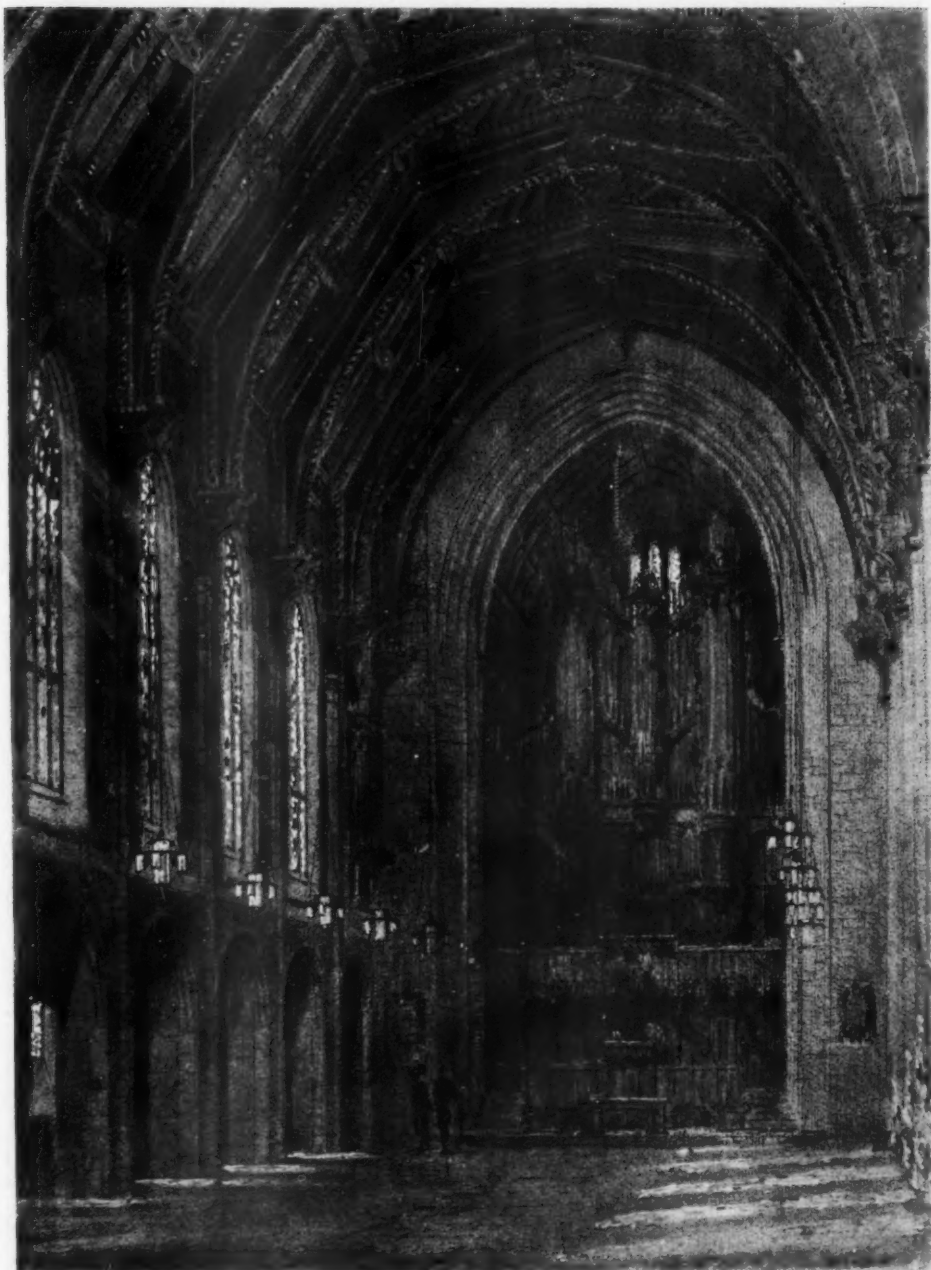
CERAMICS IN ARCHITECTURE

THERE is a growing sentiment that color should be used more freely in American architecture. This matter is receiving the attention of architects and designers generally and in order to assist them to a better understanding of the subject, a series of fourteen monographs is being published. These monographs, two of which are printed ready for distribution, have been written by Rexford Newcomb, Professor of History of Architecture, University of Illinois. Monographs Nos. 1 and 2 are entitled "Ceramics in Architecture" and "Ceramic Architecture in Ancient Egypt, Babylonia and Assyria." In the following monographs the ceramics of other countries will be illustrated. They consist of about thirty pages each, fully illustrated with colored and black prints. In the text Professor

Newcomb treats of the subject in a historical and very interesting manner. The entire series will constitute a fine library on this subject. Each number contains a bibliography pertaining to the particular subject of that number.

The series is not intended to afford simply a pleasant historical diversion but to be eminently practical and therefore valuable to the designer of tile installations. It will be the purpose of the series not only to familiarize the designer with the various motifs, patterns and colors used upon interior walls and floors but also to show how tile inserts have served a fine decorative function upon exterior walls, domes and cupolas during those historic periods which are replete with suggestion for the modern designer.

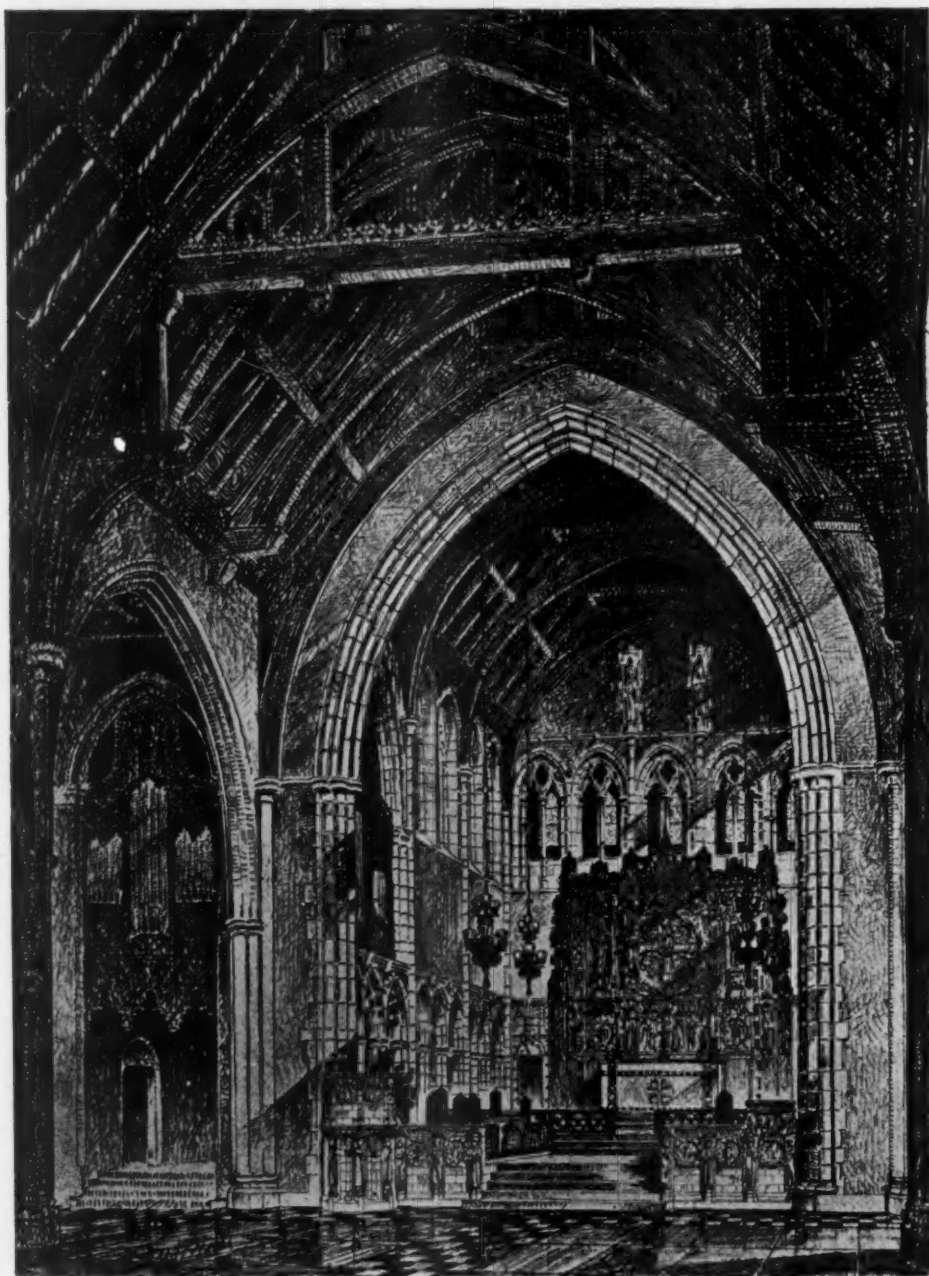
The series is published by The Associated Tile Manufacturers, Beaver Falls, Penn.



JEFFERSON AVENUE PRESBYTERIAN CHURCH, DETROIT, MICH.

SMITH, HINCHMAN & GRYLLS, ARCHITECTS

(From the 1924 Exhibition of The Thumb Tack Club of Detroit, Mich.)



ALTERATION AND ADDITION, ST. JAMES CHURCH, NEW YORK

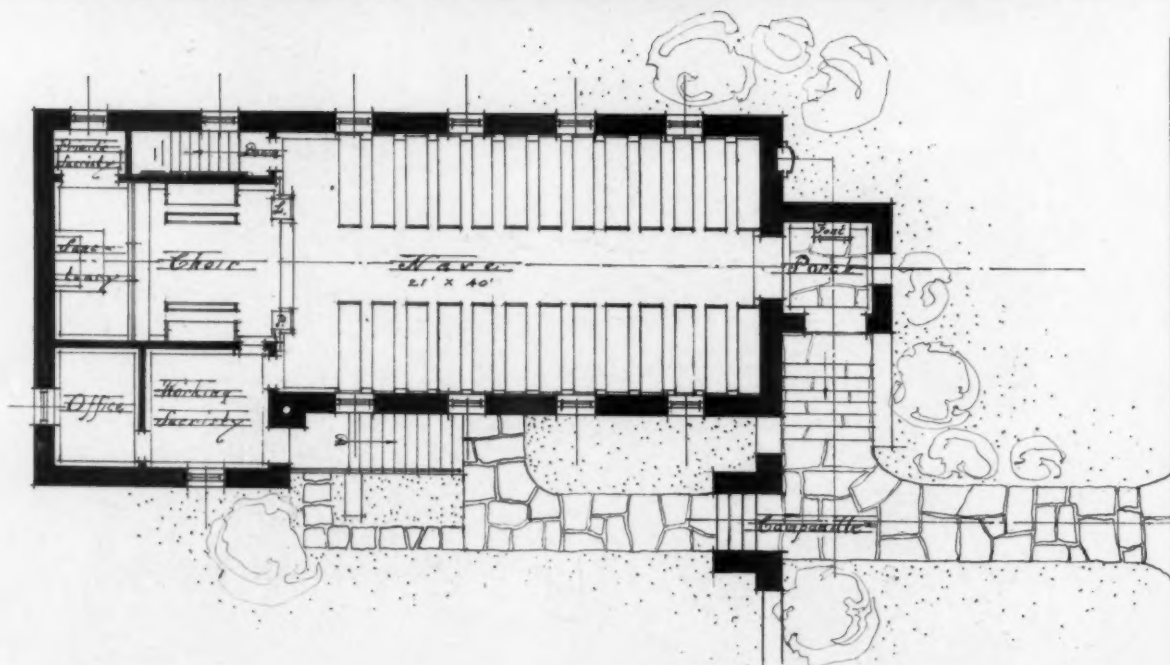
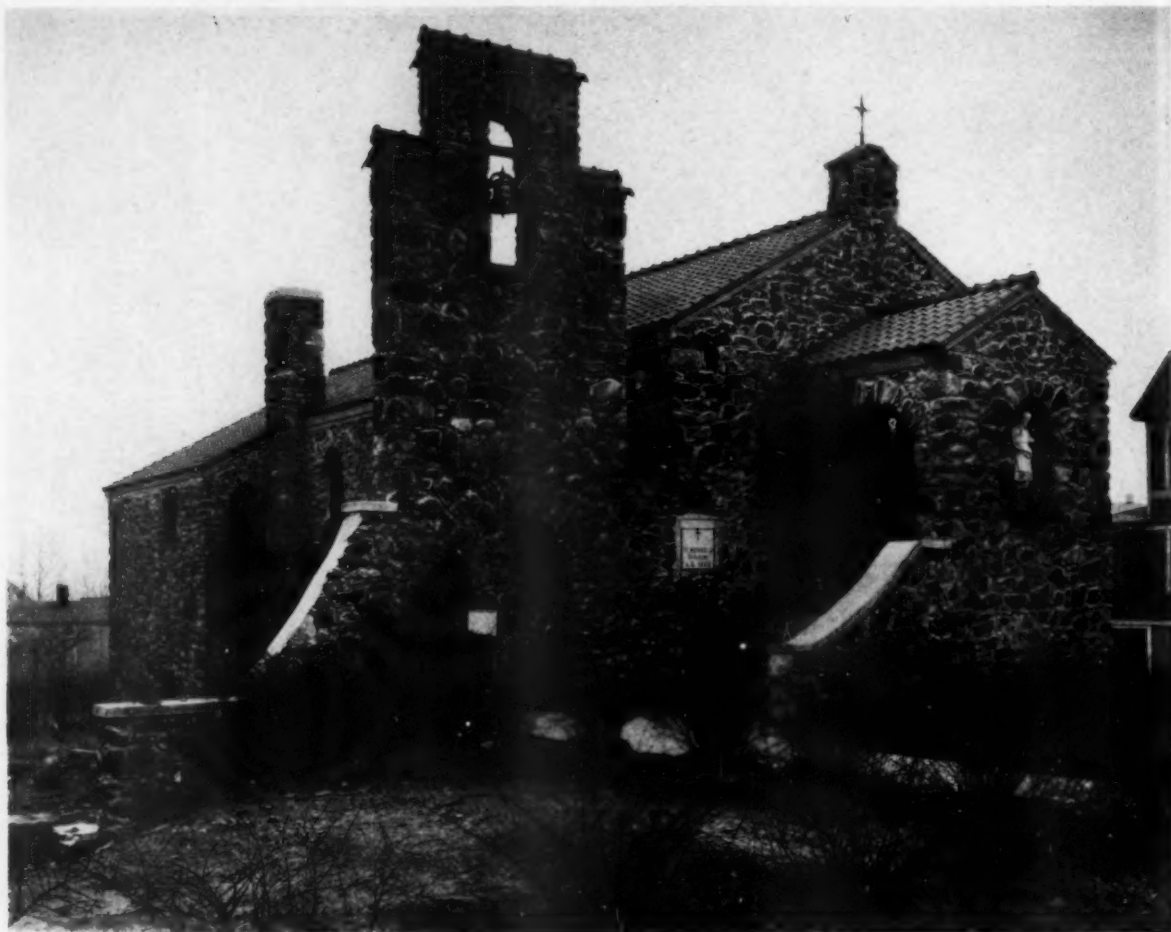
CRAM & FERGUSON, ARCHITECTS

(From the 1924 Exhibition of The Thumb Tack Club of Detroit, Mich.)



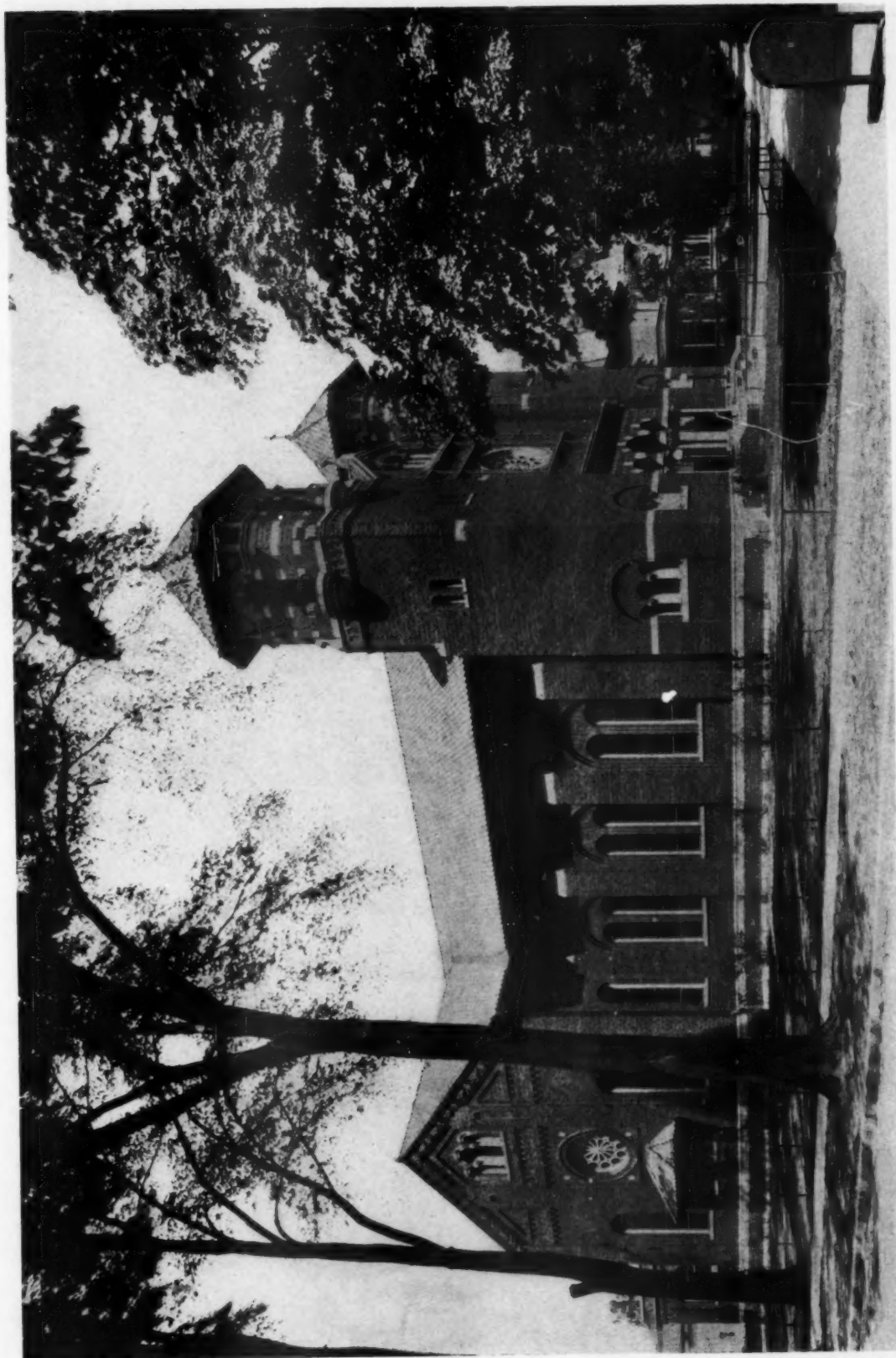
ST. MICHAEL'S P. E. (ITALIAN) CHURCH, FAIRFIELD, CONN.

EDWARD B. CALDWELL, JR., ARCHITECT

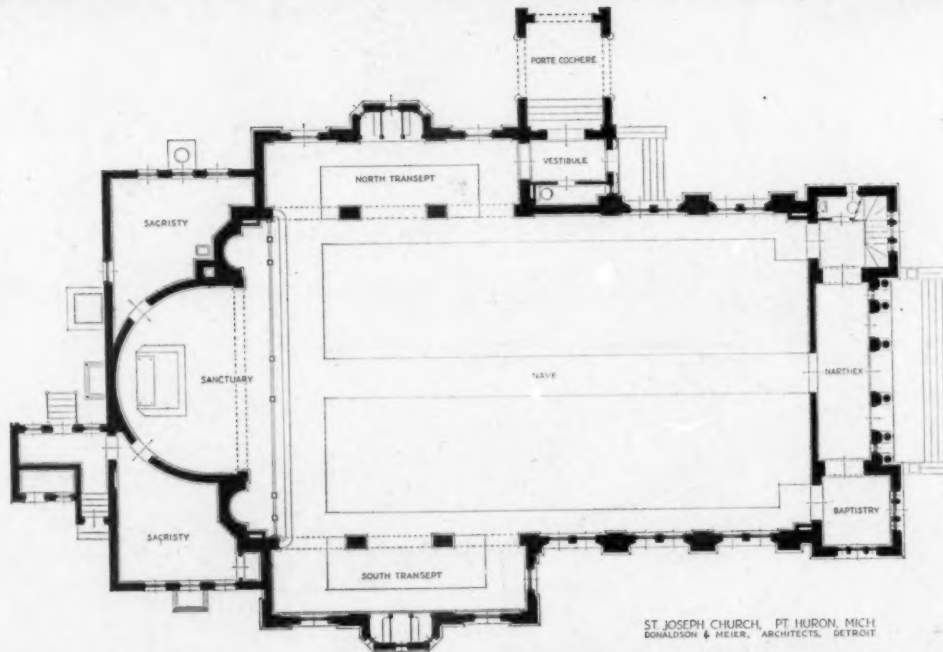


ST. MICHAEL'S P. E. (ITALIAN) CHURCH, FAIRFIELD, CONN.

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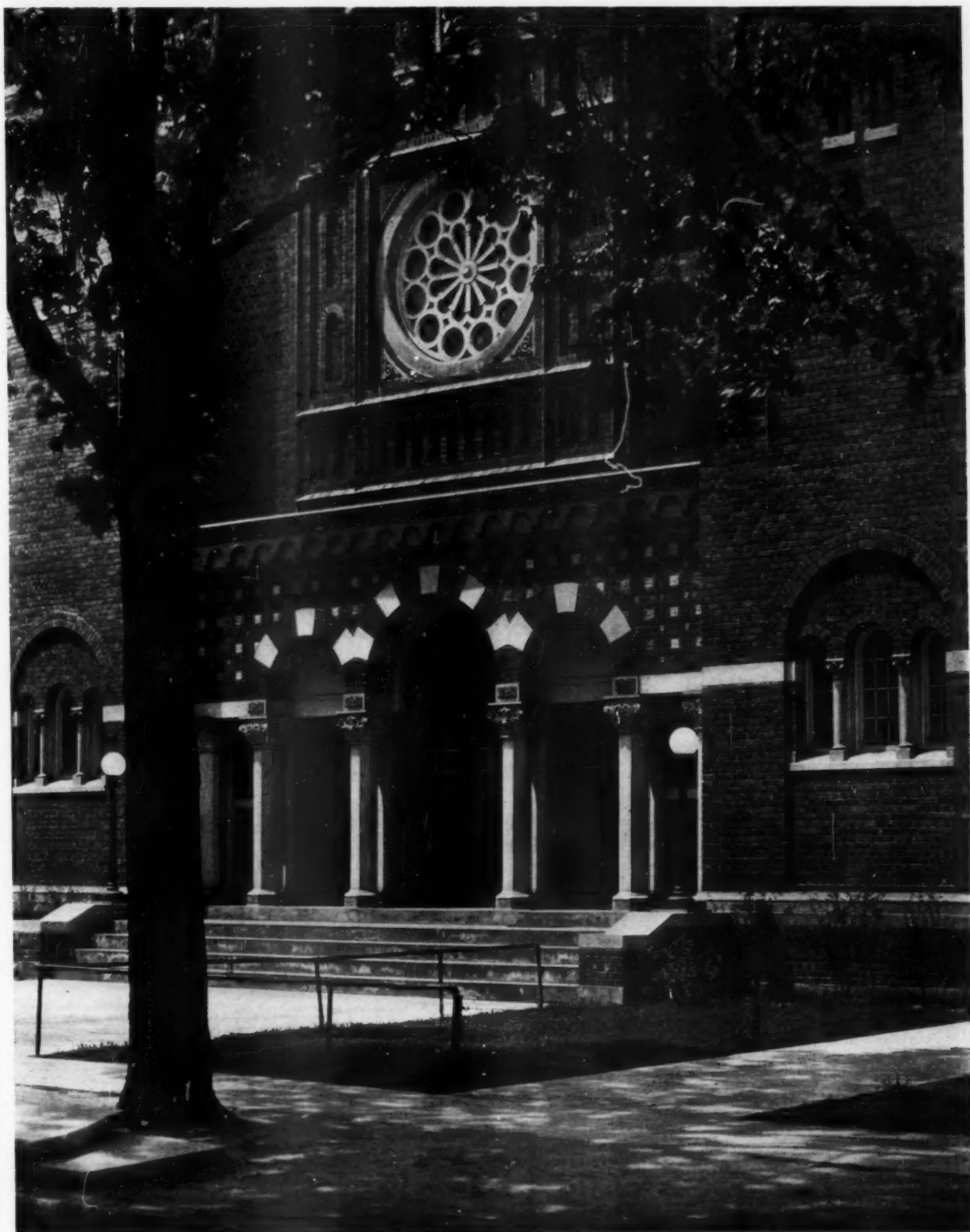
ST. JOSEPH CHURCH, PORT HURON, MICH.
DONALDSON & MEIER, ARCHITECTS



ST. JOSEPH CHURCH, PT. HURON, MICH.
DONALDSON & MEIER, ARCHITECTS, DETROIT

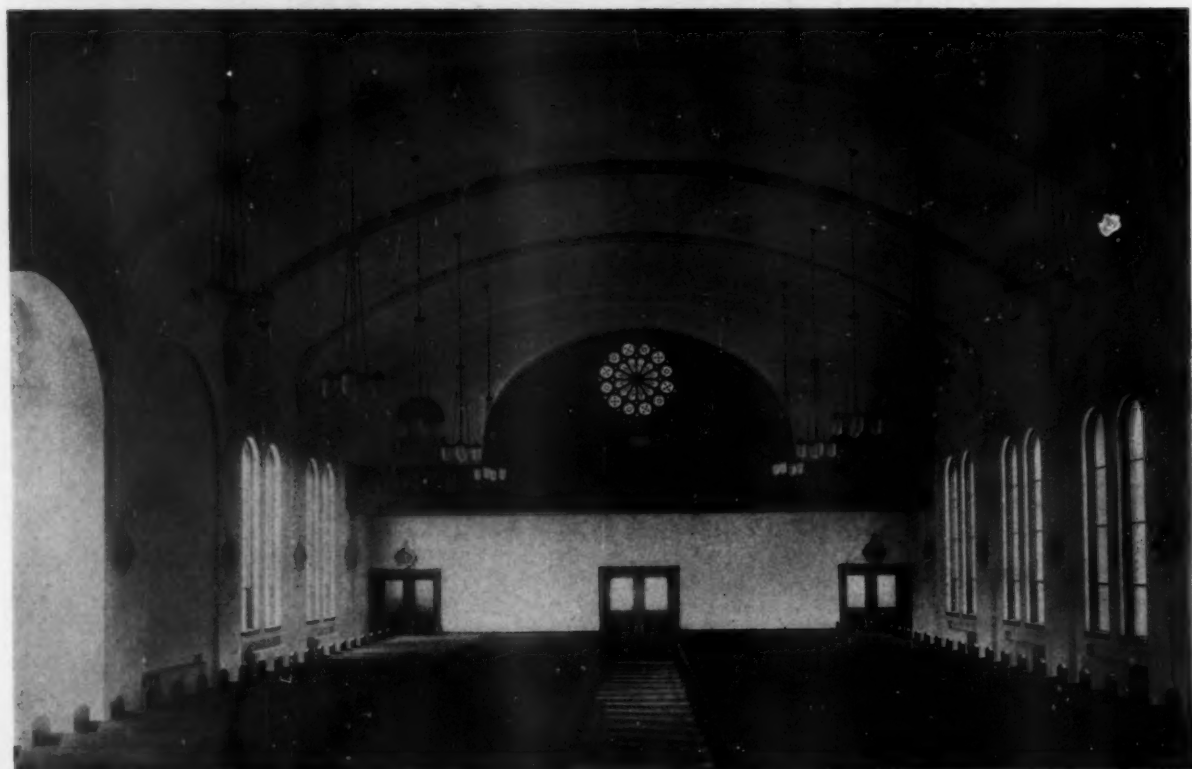
ST. JOSEPH CHURCH, PORT HURON, MICH.

DONALDSON & MEIER, ARCHITECTS



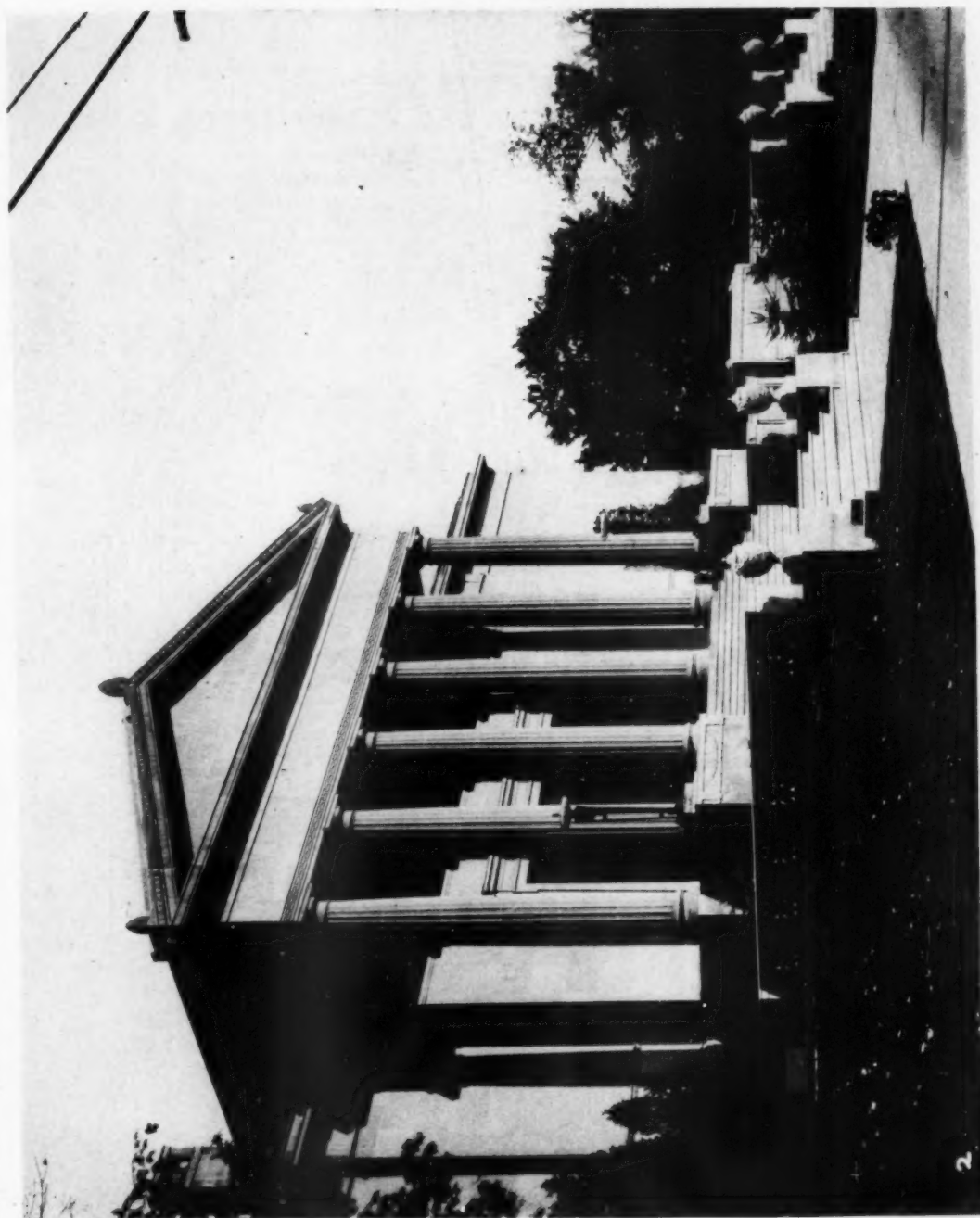
ST. JOSEPH CHURCH, PORT HURON, MICH.

DONALDSON & MEIER, ARCHITECTS

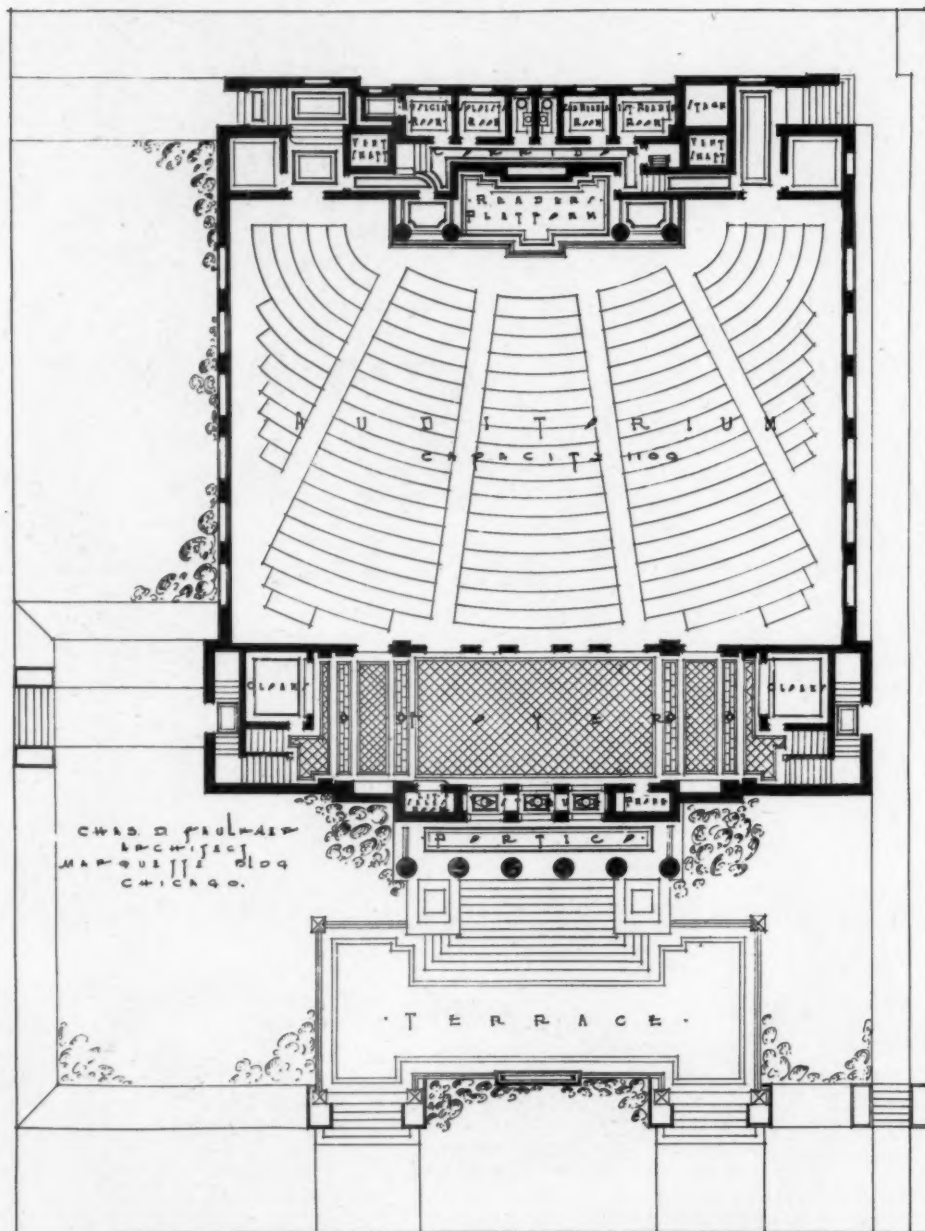


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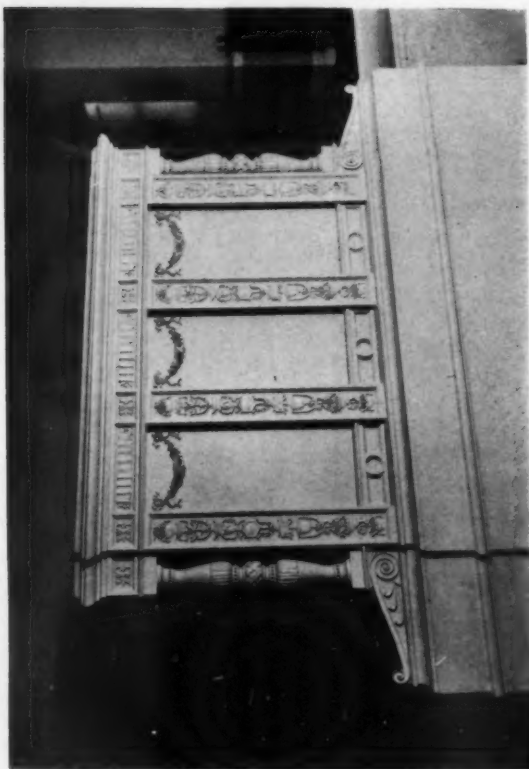
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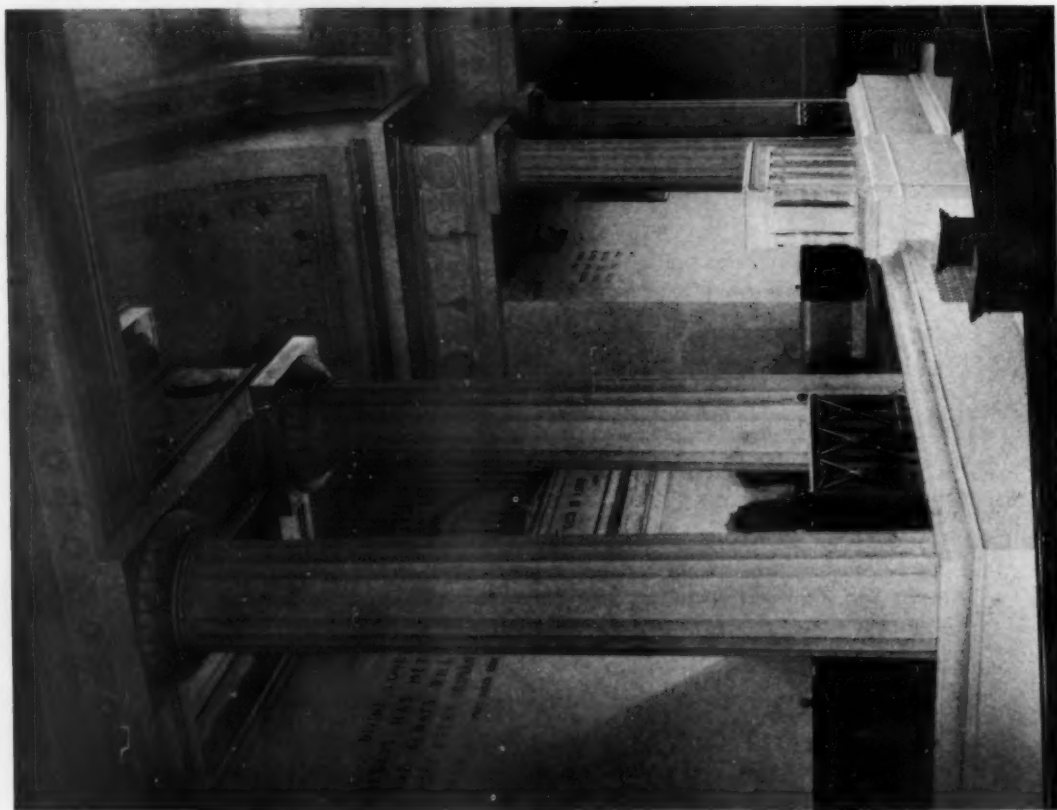
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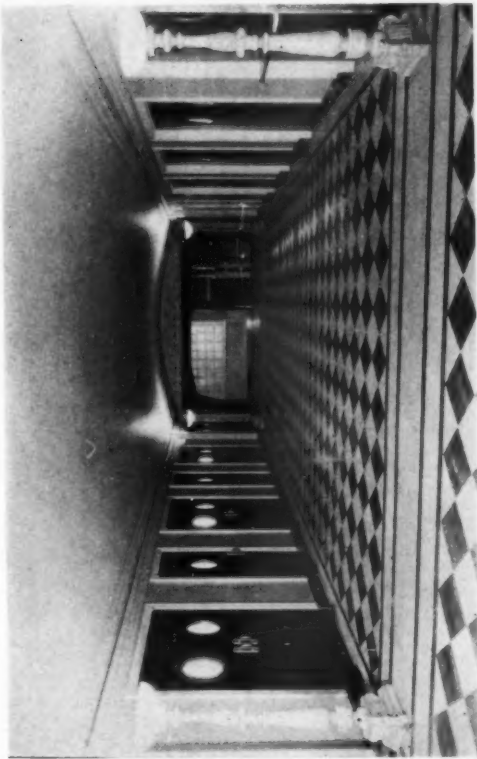


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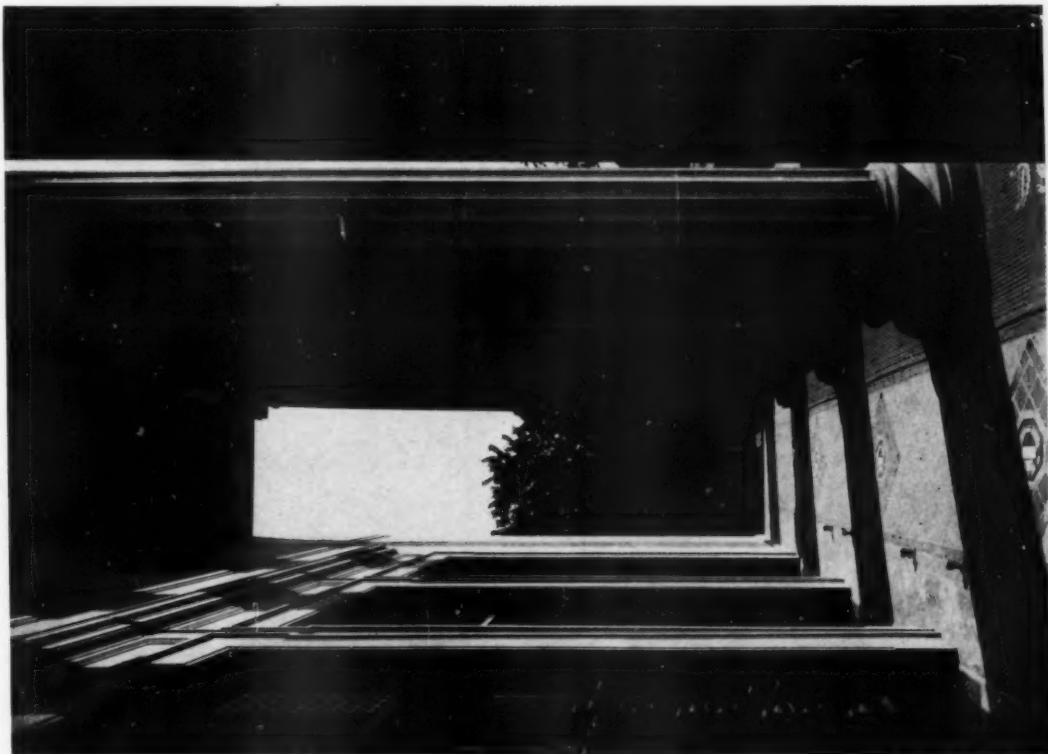
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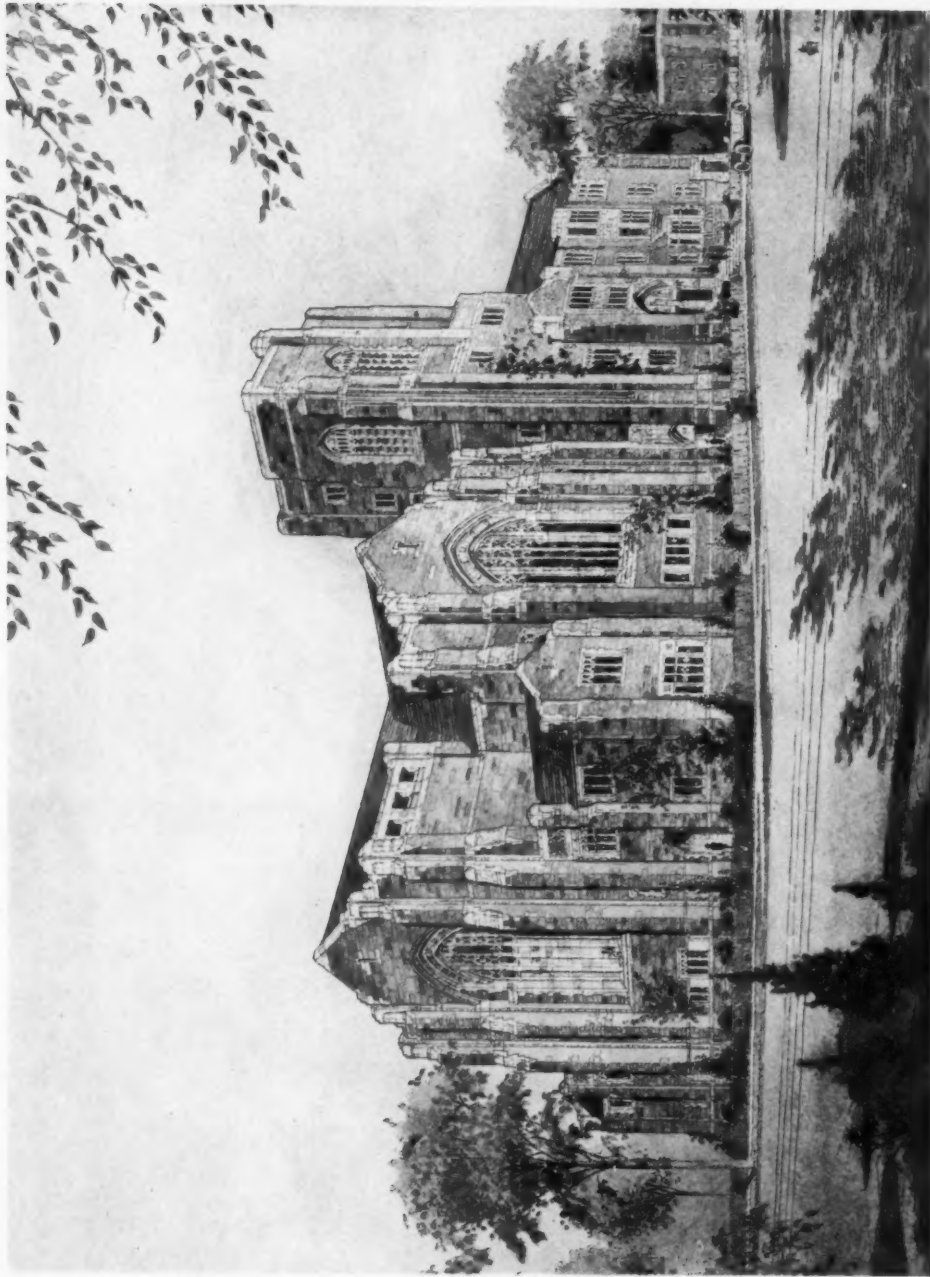




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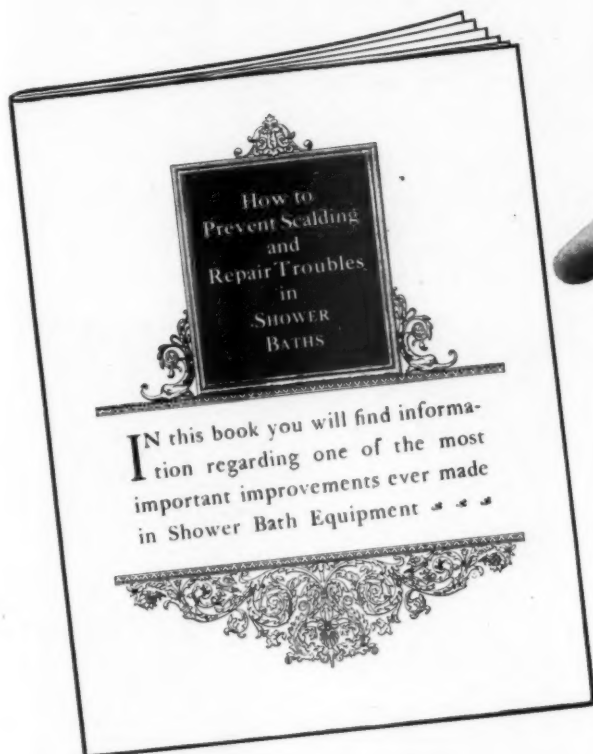




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"THE WORSHIPFUL COMPANY OF CARPENTERS"

AN INTERESTING LETTER FROM A FAR AWAY SUBSCRIBER

The Editor, THE AMERICAN ARCHITECT.

AS an old Liveryman and Freeman of the "Worshipful Company of Carpenters" of the City of London I have read with great interest Mr. Carl A. Ziegler's article on the "Carpenters' Company" of Philadelphia in the issue of your valuable journal, dated October 8, just to hand through the Burma Society of Architects. The interest is increased when I notice that the coat of arms as shown in the pediment and on the wall behind the chair in the meeting room is apparently identical with that of my own Company. The three compasses appear plainly on the shield in the pediment but not the chevron while the chevron is quite visible in the internal photo but the compasses are hard to discern, likewise the presence of a motto: our tinctures are "Silver and Sable" or white and black. The shield in the meeting room looks as if it was on a banner such as used to be carried in procession. I am therefore wondering whether among the original builders of the Hall there was a Freeman of the City Company.

I enclose the last report to the Livery of the Company which shows the coat of arms at the head with the motto and which may also prove of interest to Mr. Ziegler as showing the activities of the present day Guild which though shorn of its one-time functions in controlling the "Mystery of Carpenterie" yet still keeps very much alive by its training and examination of students in carpentry and other building trades, as well as its care of its own members who have fallen by the wayside in their latter years.

With reference to Mr. Ziegler's remark as to the important use to which the Philadelphia Carpenters' Hall was at one time put, it may be of interest to mention that the old (London) Carpenters' Hall (the existing one built on the site thereof only dating from the early '80s of last century and of which the present writer's grandfather was architect) was the only Hall not burnt down in the Great Fire of London and was accordingly placed at the disposal of the Lord Mayor and of the other City Companies until their own halls were rebuilt. In return for this accommodation the Carpenters' Company is the first Company that the Lord Mayor dines with in his mayoralty, which as the Company is not one of the great "Twelve" is considered a high honor!

The London Guild is a very old foundation, having been incorporated some time early in the 15th century though it is certain that it was in existence long before then.

A. WILLMER POCKOCK, L. R. I. B. A.

19, Sula Pagoda Road, Rangoon, Burma.

19th November, 1924.

A. R. POWYS, A. R. I. B. A., SECRETARY OF SOCIETY FOR PROTECTION OF ANCIENT BUILDINGS, VISITING IN THIS COUNTRY

MR. A. R. POWYS, A. R. I. B. A., is now making his first visit to the United States, in order to study the modern architecture being done here.

Mr. Powys is the fourth son of the Reverend C. F. Powys of Dorset, England. His two brothers, John Cowper and Llewelyn Powys, are already well known in the United States, the one as



A. R. POWYS, A. R. I. B. A.

a lecturer and author, the other as a writer. Mr. A. R. Powys was educated at Sherborne School in Dorset and was apprenticed to the firm of C. Benson & Sons, architects, in 1899. After he had served his articles and had passed the R. I. B. A. examinations, he worked for some five years as foreman in charge of the repair of many ancient buildings in England under the auspices of the Society for the Protection of Ancient Buildings. In 1911 he was appointed Secretary to that society in succession to Thackeray Turner, F. R. I. B. A., G. S. A., and in the same year became partner in the firm of Balfour & Turner, architects. During the war he served in France and was taken prisoner by the Germans in the collapse of the fifth army in 1923. When he returned to England he resumed the architectural work he had left and when J. C. Squire founded the *London*



IS there any finer bathtub for a fine bathroom than the Kohler "Viceroy" bath—from the architect's standpoint or the plumber's, the bather's or the housekeeper's?



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We do not think so. No matter whether the bathroom is to be simple or elaborate, it is difficult to imagine anything more completely satisfactory in practicality, sanitary fitness, and simple beauty, than a "Viceroy" bath with its graceful lines and its rich and lustrous covering of pure white enamel.

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Mercury, he was appointed architectural critic to that journal.

During the course of an interesting conversation Mr. Powys showed a very fine appreciation of those of our buildings done, as he expressed it, "in the vernacular and which cannot be said to be stylistic, or of any period," but which express the building impulse natural to the conditions of the day. He would like, while here, to tell architects of this country about the work of the Society he represents and to learn in exchange what architects of this country are doing to insure the protection of older buildings in the United States.

BOOK NOTES

THE NATURE, PRACTICE AND HISTORY OF ART

MR. MAGONIGLE'S book is one, the reading of which can be anticipated with real pleasure. Compared with many of those mystery books devoted to art, this one is a distinct achievement because it is entirely intelligible and interesting. When Mr. Magonigle says—"Of Beauty, I decline to attempt any definition."—he immediately gains our entire confidence. Books have been written in the attempt to define Beauty and whether they are successful or not, the general reader is not always able to decide. A popular conception of art and the critical analysis thereof is well illustrated by the following quotation from Kenelm Digby in a recent issue of *The Literary Review*, reading as follows:

* * * Which reminds us that we only recently stumbled again over a passage in *John Trotwood Moore's* "Uncle Wash: His Stories." One slave asks another what "de anatomy" is. The other replies: "De anatomy is divided into th'ee pahts. De haid, de chist and de stomach. De haid is wha de brains is, ef any; de chist is wha de lungs and liveh is, and de stomach is wha de bowels is. Dey are five bowels: a, e, i, o an' u, an' sometimes w and y." * * * We wonder what fun the shades of our immortals have when they overhear critics analyzing art. Are critics as quaint and ignorant? * * *

This reference to critics may appeal to many persons as unwarranted, but be that as it may, it is very refreshing to read Mr. Magonigle's book. Responding to a suggestion that the students in high schools and colleges were coming forth ignorant of art, "its attributes and its relation to life," Mr. Magonigle undertook to write primarily for the use of students in high schools and colleges. As the work got under way, he changed the scope of the original scheme so as to make it acceptable to the general reader. In this he has succeeded.

If art can be said to possess the characteristic

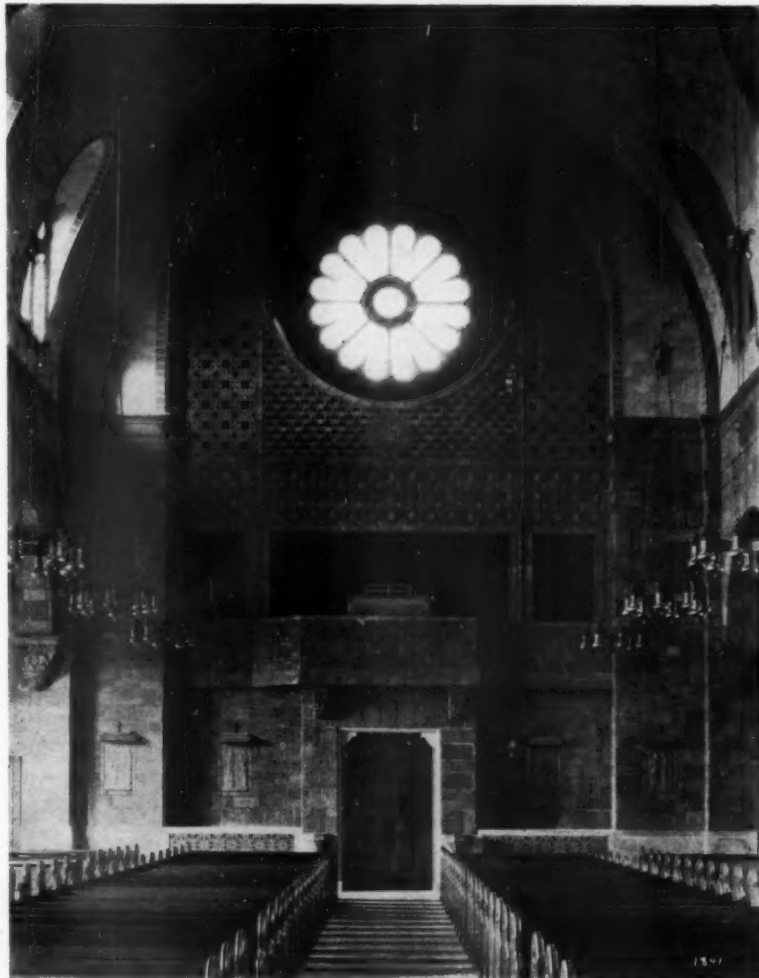
of allotropy, it is here described in all of its different forms, but more particularly in the forms of architecture, sculpture and painting—the visible arts. The technique of these arts is described and compared, and the techniques of graphic methods of representation, other than painting, are briefly stated. The qualities common to all forms of art are defined and their relative importance explained. Perhaps the influence of art forms, non-visible, such as music and poetry could have been stressed to a greater degree. That such non-visible forms of art are an inspiration to the production of architectural expressions, is known.

That poetry and music are living sources of inspiration of architecture is undeniable. Dull indeed must be the architect who does not envision the structure under their influence. Conversing one day with George W. Maher about the beauties of a certain residence, its fine proportions and appealing harmony, he attributed the design to the influence of the Preislid of which it is a worthy visible manifestation. As temperaments vary, so must these visible manifestations of music differ. The Preislid conjures a different manifestation of architecture to the writer of this review and that is the difference between himself and Mr. Maher. Poetry is expressed by words and its purport can be made definite; and as fine, delicate or powerful as it may be, it is doubtful whether its influence can be as subtle and, at the same time, as compelling as that of music. Perhaps this is because audible poetry is a monotone while music is a multitone of infinite comprehension. But this is a digression.

The succeeding thirteen chapters are devoted to the development of architecture through the ages, with its contemporary political and social conditions and its allied arts. The text is not overburdened with dates which encumber the majority of books to our confusion and discomfort. It is illustrated with pictures of buildings, paintings and sculpture arranged to accord with the chronology of the text. The illustrations have very complete titles which include dates and other historical data which would detract from the critical character of the text. By merely making a study of the illustrations and carefully reading the titles one gains an orderly impression of the development of art in its visible manifestation, more particularly that of architecture.

The text is written in that intimate and lively manner that characterizes the author; its reading is a pleasure and the past unfolds vividly in an orderly pageant. This book is but another gratifying evidence of the growing ability of American architects to write on an equality with the best writers abroad; it appeals to us more because the author is one of us and writes to us. Mr. Magonigle has done a splendid piece of work that

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*Chapel of Our Lady of Victory—Collegiate School of St. Catherine's
H. A. Sullwold, Architect*

BUR material—in Terra Cotta form—was used throughout this chapel for the ashlar walls, columns, caps, corbels, inserts, organ screen, etc.—also for the exterior campanile entrance. It offers unique opportunity for variation of color and texture within a general tonal scheme. The effect is peculiarly harmonious and pleasing. The organ screen presents a richer coloration with glazed mosaic introduced by way of contrast.

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should have a hearty and generous reception among all people who are interested in art in all of its phases and architecture, in particular.

The Nature, Practice and History of Art, by H. Van Buren Magonigle, F.A.I.A. 314 pages, 5½ x 8, profusely illustrated, cloth. Published by Charles Scribner's Sons, New York. Price \$2.50.

PORTRAITS OF COUNTRY HOUSES

THE ten country houses designed by Delano & Aldrich, whose portraits from life have been cleverly drawn by Chester B. Price, are a notable group and worthy of the very high commendation of Royal Cortissoz who writes the text of the book.

Throughout his article Mr. Cortissoz has set down many facts as to the development of the pretentious country house in the United States. To provide a background for what he later has to say, he reviews the progress of domestic architecture in this country. The architectural owner of this book does not need to be told how good these houses are and the artistic layman will, with Mr. Price's fine assistance, arrive at the conclusion that Delano & Aldrich's work is marked by the most cultured refinement. These ten country houses will probably rank with the best fifty that have been built during the past decade.

If we ever arrive at a typical regional style in architecture, the foundation of such a style will undoubtedly be based on our domestic architecture. And, it will be by careful study of such work as so picturesquely presented in this book, and houses of similar importance by other men and firms, that we shall improve our domestic types and redeem even the house of moderate cost from its present commonplace aspect.

For years it has been the vogue to exploit the work of English architects and lament our shortcomings in this country. The inherited acres of England and the accumulated fortunes of her noble born made possible the stately homes of England. In this country at the close of our Civil War, we had no similar class, and but few men whose fortunes would enable them to build pretentious houses. When the few did venture, the result was disastrous and the "follies" as these places were often called, were but sorry attempts of ostentatious wealth.

From the late 60's up to the present time, much history has been made. There has been a tendency to out-of-doors life, and with the development of motor transportation, locations that were at one time considered inaccessible, were brought almost to the very rim of our large cities. No other factor has been so largely responsible for this marvelous change than has the gasoline engine and the harnessing of electricity. Vast areas were acquired and the most pretentious "estates"

projected. It was exactly at this point that the architect became the arbiter of elegance, and the *nouveau riche* were glad to listen to his counsel and abide by his judgment. But a fact that Mr. Cortissoz overlooks is that in most cases of the early types of costly suburban houses, the owners had to be taught how to live in them, to re-educate themselves to new surroundings, and it was the influence of the architect more than anything else that was responsible for an education of refinement and an acquired poise of good breeding.

A portrait of a house, when developed by men like Delano & Aldrich, would in a certain sense be suggestive of the character and taste of its owners. Mrs. Harry Payne Whitney's house, for example, proclaims the home of an artist designed by artists who know the temperament of their client and, what is essential, know how to design to meet it. We could go on through the other nine designs and find the same characteristic of fitness.

It would be superfluous in an architectural magazine to endeavor to prove to an architectural reader that these ten houses are unusually good and that they will pay careful analysis. But, it will be proper to state that of the many books that have been prepared to illustrate the work of men or firms, none has been better done or is more worthy of a place in the architect's library.

Portraits of Ten Country Houses, designed by Delano & Aldrich, drawn by Chester B. Price. Paper boards, size 10 x 14, 61 plates, with introduction by Royal Cortissoz. Published by Doubleday, Page & Co., Garden City, N. Y. Price \$15.00.

THE MANORS AND HISTORIC HOMES OF THE HUDSON VALLEY

TO those who are interested in the architecture and the social life of those who built and lived in historic houses, this book will have a strong appeal. It clearly illustrates the relation between the characteristics and the social and political status of the occupant, and the structures themselves. Genealogical data concerning the families that established these manors is interesting and valuable to students of Colonial history.

The work is comprehensive and contains forty-five chapters devoted to as many manors and houses. It also clearly defines the different forms of land tenure that were involved in ownership and the history of their establishment. The distinction between the Dutch patroonships and the manors of the English is interestingly described.

Although the book is illustrated with one photogravure and eighty-one doubletone reproductions, mostly from photographs by the author, it cannot be considered as an architectural book owing to the lack of plans and details. It does, however,

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well illustrate in a fine manner the architectural expression of the times, which, taken in connection with the vivid description of the social and political conditions of Colonial days, should be a source of inspiration to architects who aspire to do the better kind of designing in the Colonial manner.

A limited edition has been printed from type and the type distributed.

The Manors and Historic Homes of the Hudson Valley, by Harold Donaldson Eberlein. 328 pages, one photographure and eighty-one doubletone illustrations, 6 x 9½, cloth. Published by J. B. Lippincott Company, Philadelphia, Pa. Price \$10.00 net.

REGISTRATION IN ARIZONA

WE have received from V. O. Wallingford, Secretary of the Arizona State Board of Registration, a copy of the law creating and regulating the activities of the Board.

This law includes others than the architect alone, but is becoming effective in the elevation of standards for all of the professions included.

The Board consists of two architects, one mining engineer, two civil engineers, one electrical and one mechanical engineer. The Chairman and the Secretary are both architects.

This Board is a member of the Council of State Boards of Engineering Examiners, with reciprocal registration provisions within the Council.

Copies of the law may be obtained by addressing the Secretary of the Board at Phoenix, Arizona.

PERSONALS

Vincent Jarrobino, architect, has moved his office from 629 Fifth Avenue, Astoria, L. I., N. Y., to 699 Crescent Street, that city.

Raseman & Freier, architects, announce the removal of their offices to 522 Murphy Building, Detroit, Mich.

Van F. Pruitt, architect, has moved his office from 300 to 342 Madison Avenue, New York City.

Koehl & diNardo, architects, have moved their offices from the Park Building to the Rogers Building, 1720 Euclid Avenue, Cleveland, Ohio.

J. Bedford Wooley, architect, has moved his office from 210 South Quince Street to 1935 Chestnut Street, Philadelphia, Pa.

Ralph Henry, architect, has moved his office from 165 East 105th Street, New York, to 1123 Avenue T, Brooklyn, N. Y.

Jardine, Hill & Murdock, architects, are now located at 347 Madison Avenue, New York City. They were formerly at 50 East Forty-second Street.

Stevens & Lee, architects, announce the removal of their Boston office from 9 Park Street to 45 Newbury Street. Their Canadian office remains at 62 Charles Street, East, Toronto.

Alexander Fraser Rose, engineer and architect, specializing in apartment hotels, has moved his office from 1007 Builders Exchange to 510 Essex Building, Minneapolis, Minn. Manufacturers are requested to send catalogs and samples.

J. B. Brower, Jr., designer and architect, has moved his offices from 18 South Liberty Street to 119 Baltimore Street, Cumberland, Md., with the same mailing address as heretofore, namely P. O. Box 393.

Jonathan Ring, architect, for many years located in various New York offices, has opened his own office for the general practice of architecture at 1401 Hibernian Building, Los Angeles, Cal., where he would be pleased to receive manufacturers' catalogs and samples.

