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Colonial Houses of the Earliest Type

By JOY WHEELER DOW

FAR out upon the shores of Lake Superior, at Marquette, in that disjoined part of Michigan called the "upper peninsular"—which is often drawn in reduced scale upon the maps, and consequently difficult to locate—there is a newly erected dwelling, but architecturally focussed at a remote point down the historic vista of America where our wondrously bright sunlight which charms Europeans is somewhat dimmed and eerie, and the atmosphere is as hazy with the dust of the past as it is at Salem or Danvers or Topsfield in Massachusetts.

In this "misty mid-region of Weir" in our history, peopled by elves, by fairies, witches with broomsticks, and Indians with tomahawks—the inseparable denizens of the brave moonlight Judge Sewell talks about in his archaic diary—one might look for this sort of thing; but in a newly-reclaimed country—comparatively—no. Seeming to be sinking into the ground, in the center of an unclipped grass-plot, impinged by dense verdure permitting not so much as an artificial walk up to the front door, one is scarcely prepared to find a regular Père Marquette house like "Keepsake."

"For we knew not the month was October,
And we marked not the night of the year."

We all realize that we live in a climacteric epoch of the world's history. Even the Golden Rule, which has answered after a fashion, must now be revised and refined to read, *"Do unto others NOT as you would have others do unto you, but as others would have you do unto THEM,"* since Germany invokes the old version to spread its kultur and desolation, and reveal, to our confusion, that the conventional idea we have always had of Christianity is crude, selfish and inefficient. But in the vortex of our prodigious war preparations we have marked not that the silent hands on the dial of art have made the circuit of the numbers again, and that we are facing another day in the realm of graciousness. Only, it is not yet daylight, very much as it was in

ENTRANCE TO COLONIAL HOUSE OF EARLIEST TYPE, AT MARQUETTE, MICH.

that unforgetable scene from "Martin Chuzzlewit," where the London mail-coach began to rumble over the ancient cobblestones upon entering the city, and a confusion of strange lights, voices and moving objects began to enliven the eternal fog of London, when Mr. Pecksniff was constrained to put his head out of the window of the coach to investigate, and,

drawing it in again, to observe impressively for the benefit of his daughters "Merry" and "Cherry" as well as the rest of the passengers, "that it was to-morrow morning and we were there!"

Perhaps most curious of the psychic refinements of this Jacobean-Colonial house—"Keepsake"—in the yet pale dawn of to-morrow morning is that the house itself should not be painted white or yellow and white, or else have its trimmings in white, with the body of the house some other color. As by consensus of opinion among people claiming to be artistic, a Colonial house should always be painted white in part, at least, irrespective of the specific period to which it belongs. They forget that there was once a time when white lead for exterior work was practically out of the question, when brick-dust, red paint was considered somewhat of an extravagance; a time when the dwelling houses of our grandsires had to be content without an artificial color scheme—had to get along, in fact, with no paint at all; but never you mind. They got there just the same.

"Keepsake" has no paint upon its exterior; that is, none upon its beaded weather-boards, nor upon the huge timbers of its scowling overhangs, the fascinating laps and offsets (their purposes mysterious), nor upon the pent-houses of its windows. There may be a chance for captious criticism in that, as yet no venerable lichens or textural patina has made its appearance upon the transparent grain of the new woodwork; but—compose yourselves again—all that will be attended to in due season by that cleverest of housesmiths—"Father Time."

Twelve years ago the same author designed for one of the popular monthly magazines (I think it was *Country Life*) a dwelling house along these same lines; but at that now remote day the very stupid public failed to get any of its message or meaning. In the words of Disraeli after he became the Earl of Beaconsfield, I may explain that "other things have happened since then." They have tenderly restored the old Paul Revere house in the North End of Boston, the "House of Seven Gables" at Salem, the Capen house at Topsfield, and the Saltonstall house at Ipswich. The Colonial house of the earliest type now comes to us persona grata, with

"KEEPSAKE," MARQUETTE, MICH.

COTTAGE AT MARQUETTE, MICH. COLONIAL TYPE OF THE EARLIEST PERIOD
(Time of Charles II)

its wealth of credentials viséed by such rare and interesting autographs as those of Governors Endicott and Andrus, and Sir William Pepperel, Cotton and Increase Mather, and countersigned by the romances of Hester Prynne, Rebecca Nourse and other alleged witches. In its leisure moments the less stupid public of 1918 wanders off the thoroughfare of shops and merchandise into the historic by-ways of the land, perchance, into the peaceful and enchanting atmosphere of Puncheon Street, and returns with a changed view of the philosophy of life—with a new recipe for happiness it has found in a sure-enough Puncheon homestead, i. e., a Colonial house of the earliest type. In 1918 the less stupid

"KEEPSAKE," MARQUETTE, MICH.

public will hardly miss a letter of this architectural Marconigram from Marquette, but will hail it as perfectly intelligible contrasted with the meaningless commercial message of the building market, just as true comedy on a real stage contrasts with the decadent movies, their seismic vibrations, their irritating flecks of mica, their streaks of axle-grease, the smutty complexions, the vulgar close-ups amid the distracting noise of a jangling piano accompaniment.

But supposing the clients refuse to explore further afield than the highway of Mammon—of hideous, electric signs, shameless cabarets and movies. Sup-

DETAIL, "KEEPSAKE." COLONIAL HOUSE OF EARLIEST TYPE
(Time of Charles II. Circa 1675)

pose they prefer to live where a little of the incessant throb of the great city still reaches them, not too far from the dull impertinence of the skyscraper, an unholy percentage of which they seem to think is necessary to their existence—what then? It is true the Marquette clients I had, bargained for no Père Marquette house; but neither did they tax the architect with evading the responsibilities of a new golden rule by putting or trying to put his own kultur over on them, even if they ever thought of it,

KITCHEN ENTRY IN SHARP PERSPECTIVE, SHOWING THE BEADED WEATHERBOARDS

which I doubt. They told me, instead, that they were "absolutely delighted" with my efforts to give them what they wanted, and assisted to their utmost afterwards to have the local photographers grasp the ideas sufficiently well to produce these illustrations. Probably there is not a professional photographer in Marquette who has ever read "The Scarlet Letter," and anyway he would not have understood what "The Scarlet Letter" had to do with his taking a picture of a very distinctive, up-to-date house.

It is not the same, you know. Nobody asked Germany for her [deleted] kultur. It was entirely unsolicited; whereas, when you come to an architect you come as you do to a physician, in quest of pro-

LIVING ROOM, "KEEPSAKE," MARQUETTE, MICH.

fessional assistance. You may tell him you want chocolate bonbons in lieu of medicine; but he knows, and you know, that first, last and always, you want your health, and to that end you pay him for his skill, *not* his affections. Then people who think I can help them are usually a long way from the abecedarian class. Rarely does it happen in practice as it did to me once at a card party where a fascinating *ingenue* across the table, to whom I was explaining that five tricks scored two points in euchre, interrupted to inquire, naively: "Mr. Dow, what *are* tricks?"

Rarely have I to explain the difference between a cornice and a water-table. If I do have to explain that without the dramatic story and historic atmosphere we build the house in vain—we build anything in vain. There are less impatient teachers than myself for the primary grades. It is the fourth dimension of architecture that the pupils take up in my room. Only don't think by that I refer to any mathematical contortion—a last spasm of the human mind before losing its equilibrium. Nothing of the kind. It is the element of personality, of spirituality and companionship which may be embodied in an architectural design. "Keepsake" stands for this legitimate fourth dimension, for it is teeming with legends, memoirs and personalities. You don't have to send out for company; the folks

FIREPLACE IN COTTAGE AT MARQUETTE, MICH.

are already there. We may play in it the edifying game of "Let's pretend" over again with all the zest of childhood; and away down deep who is not a "Sentimental Tommy" as soon as someone happens to strike the responsive chord? You may have missed it in music. There is a nocturne by Frederic Chopin you have not heard. It is some cunningly pointed gable up in New England, in combination with a great, clustered chimney about which owls and elfin moonlight play—that finally gets you on the wire.

The Charles II gables of "Keepsake" are lop-sided gables. The rafters across the front pitch at different angle from that of those extending to the low eaves at the rear. The latter are a little less

DINING TABLE RECESS IN LIVING ROOM—COTTAGE AT MARQUETTE, MICH.

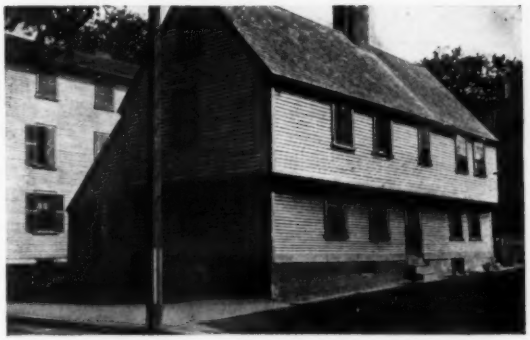
than forty-five degrees. I have forgotten just what I made them; but underlying certain structural advantages, there is the occult refinement of the thing. Take from the library the old-fashioned novel of "Man and Wife," by Wilkie Collins, and read that marvelous description of "Miss Sylvester" that occurs in the croquet scene. She had a slight cast in one of her eyes. Yet, it was a case, we are told, where a "sensitive something turned defect into beauty." Well—that's it.

THE CAPEN HOUSE AT TOPSFIELD, MASS., BEFORE RESTORATION

Light travels at so rapid a rate that I believe it requires only about four hours for the rays of that faraway planet, Neptune, to reach us on the earth. By comparison, so diffident and obscure is the light of these Colonial houses of the earliest type, like the

TYPE OF EARLY COLONIAL HOUSE AT FARMINGTON, CONN., SHOWING THE JACOBEAN OVERHANGS AND DROPS

flickering candle-light of by-gone days, that I figure it will be some time longer, perhaps years, before the light of this one reaches Marquette. I say this because I don't want to beguile myself or others into



DERBY-WARD HOUSE—SEVENTEENTH CENTURY—SALEM, MASS.

imagining that the inhabitants of Marquette are taking promenades out of their way in order to avail themselves of the spiritual uplift that the contemplation of "Keepsake" affords. More likely it is only the hundredth man or woman there that knows or cares to know anything about it.

But don't let this apathy of the public, now Ras-

ENTRANCE TO JACOBEAN-COLONIAL HOUSE AT HIGHLAND MILLS, N. Y.

putined by a tidal wave of bad taste, cruelty and immorality, discourage you. The world is big enough for everyone who seeks to make it a more decent, luckier, happier world to stop in—in spite of the fearful and inscrutable handicaps under which we work—even if this town or that town or your own town *isn't*. They would not give a three-cent postage stamp in Summit, New Jersey, where I live, for any of my work except as the great world without recognizes the merit of it.

Architecture as a Pastime

By WILLIAM ROGER GREELEY

"Life would be tolerable but for its amusements."

THE Yankee in his first enthusiasms regarded the arts as wicked wiles of Satan, but later, when he began to soften through contact with trespassers upon his continent, the Irishman, the Italian, and the Pole, he learned to contemplate the muses with a feeling of tolerance, albeit reluctantly and with a slight pang of conscience.

We find him to-day coyly allowing himself to be amused, with the inward conviction that although pleasant it is foolish to yield to the lures of entertainment or the spell of beauty.

We can see the result throughout his institutions. There are the art museums, established by those who have traveled abroad and whose eyes have been opened to the value of beauty. What has the conscientious Yankee done with these palaces of art? He has methodically and righteously turned them into musty museums of archæology. If they were to contain works of art at all he has felt that these must at least be ancient and honorable. Nothing really living must be exhibited to the chaste view of the Puritan.

Mummies there are, galore, but until within a few years native and living artists were left to the charity of sympathetic friends, unpatronized by the custodians of art, in order that all available funds might be properly and cunningly spent to support the tottering nobility of Europe by purchase of the dim and sepulchral portraits of their uninteresting ancestry at $60,000 to $80,000 a canvas. Interest centered in each new acquisition just so long as there was a dispute as to the "genuineness" of the authorship. Then it was forgotten. From the ashes of our musty "Museum" should some day arise a "Hall of Fine Arts."

In matters of sculpture the Yankee has been equally circumspect. The human form he naturally has regarded as indecent. Protests against the exposure of lewd figures like the Venus of Milo have at times been loud, while the work of the Yankee himself has filled our parks with uniformed generals of great respectability of demeanor, and orators in carefully tailored frock coats, both types usually emasculate. Boston has had the distinction of declining the gift of a bacchante for the courtyard of her library. The decision was made on the grounds of impropriety, although all the bibulous and libidinous tales of recorded history are religiously preserved on her shelves. Indecency, deliberate and offensive, is carefully guarded in the bound volume, but there is an imagined impropriety in the consummate beauty of the human form revealed in bronze or marble, which cannot be tolerated.

The proprieties have been no less religiously observed in poetry and in architecture. Poetry has been a synonym for rhymed metrical lines, no more, no less. Its function in society has been to amuse or to entertain. To have regarded poetry as a useful thing like coal or spy-glasses would have been and is considered a fantastic vagary of the mind. Only now during a period of intense thought and feeling has poetry begun to be used generally as a vital part of war preparation. Coal will keep the home fires burning and warm the body, all except the feet. Poetry will cure cold feet. It will send the volunteer on his way; it will cheer and comfort him in the camp and the trenches; it will be a solace to the bereaved at home. What hot soup does for the chilled limbs of the night-raider, the words of a thrilling patriotic verse do for his soul.

Music has been given the same treatment.

Architecture has suffered from a like misjudgment. Our buildings have been wrought under the same attitude of scrupulous mistrust of beauty. Whether it was a warehouse or a pumping station or a brewery it was done with the same old-maidenish habit of trying to conceal the truth under some sophisticated disguise or other. That it should be proper for a mill to look like a mill, or for a bridge to reveal its bones, the architect has in some measure learned from the engineer.

The architect himself has been regarded as a

parasite upon society—a person whom one might employ as a graceful tribute to his accomplishments, but who could scarcely be classed as anything but an expensive luxury. The contractor, on the other hand, was trusted, because he talked business only, and made no claim to a knowledge of design. It was therefore his privilege to build at his own price, and to receive his pay promptly and without question.

Architecture is still suspected of being a pastime by the rank and file of American citizens. Travel through the country and discover how few believe that it is of the slightest consequence whether houses for workingmen have an attractive and homelike exterior or not. The manufacturer says, "Our houses are roomy and convenient. They are from our own plans, and they meet all requirements, even if they are 'plain.'" By "plain" he doesn't mean "simple" or "unadorned." He means ugly, and he has applied the word advisedly. The same manufacturer lives in a house designed by an architect, and displaying the most sumptuous symptoms of elegance and taste. The owner's philosophy is puzzling. He would not admit that his *own* house was beautified for any *good reason*. He would explain it apologetically as his "whim" or as his generous impulse to humor his wife or his good friend, the architect. The thought that beauty could influence his life for the better, and make nobler men and women of his children not only wouldn't occur to his mind, but if preached to him would fill him with the utmost astonishment. Beauty to him is still only a plaything, perhaps innocent, perhaps not—but in any case only a plaything.

The man of large affairs in the city almost invariably entrusts to an architect the planning and superintendence of his bank or office building. He has two reasons. One is that he is busy to capacity and so must delegate to an agent the administration of so large a piece of work. The other is that he is shrewd enough to see the advertising value of beauty. He knows it will return him a large interest on what it costs.

In this man of money Beauty has a friend who loves her for the sake of her commercial value. He takes her seriously as a commodity to trade in. Who is to blame that she should not be taken more seriously by the country at large? Perhaps the architect himself can share the onus. If Beauty is Truth, Truth, Beauty, she must have devotees who are willing to die for her—martyrs. Martyrdom among American architects has not been common. Even whole-souled devotion to the profession as a fine art has not been widespread.

Architects have been guilty of using their art as a pastime. How often have we been loyal to her to the extent of flatly refusing to betray her at the wish of a willful client? The possible loss of the client has been the prior consideration, and loyalty to the art has followed after, where it could.

Constant pandering to the capricious taste of the client gradually starves the muse to fatten the purse. There is a lack of understanding. The client regards the design of the house flippantly, and would feel insulted if told that he had no right to do whatever his whim dictated. The architect, on the other hand, is struggling with the conviction that it is immoral to create an ugly thing, whether that thing is a lie, a plague, or a hideous house, and that all parties concerned in such an enterprise are guilty.

The chain is as weak as the weakest link. In a profession where the dilettante and the man with no training at all are as free to practice as the most able member, the weakest link is very weak. Some of our States attempt to remedy this condition by laws requiring architects to be licensed, as doctors are. The trouble with this method is that it is an attempt of the community to raise itself by its own bootstraps. You cannot legislate art into the mind of a cur or a colonel, a mare, a mayor, or a millionaire. The thing is a matter of evolution, and evolution is promoted by slow processes of experience and education. The former comes to all in greater or smaller measure. The latter will be influenced by the character of our schools, which have too often fostered the old prejudice that Beauty is a slippery creature, a siren, or at best a superficial refinement of civilization.

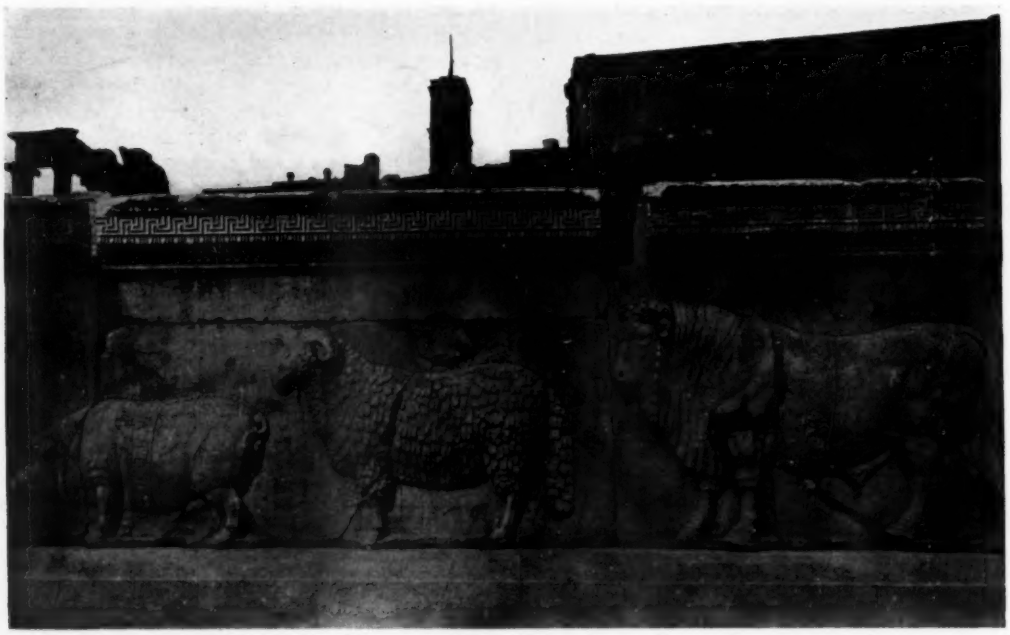
Here we have the tap-root of the trouble, a wrong conception of life. We have made morality—the exigencies and amenities of the common intercourse of gregarious beings—the prime *motive* of existence, whereas it is only the oil in the bearings. Morality is the limitation or suppression of life wherever it comes into contact with other lives. Art is the expansion and expression of life wherever it meets another. It is the completest unfolding of our consciousness to each other. If art is the highway of life, Morality is the fence. Those who want to make progress won't jump the fence, but will be guided and safeguarded by it. Those who regard morality as an end will always remain on the fence instead of in the road of life.

Art is almost the only thing that survives the individual. No other vehicle is worthy to bear the message of the dead to the living. The civilization of Egypt would not interest us to-day without the picturesque appeal of the pyramids. Middle-age mysticism grips us most strongly through the vaulted grace of the cathedral. No one cares who was rich or poor in Elizabeth's time except as that time lives again in the scenes of Shakespeare. The names of the merchants of Venice and the Princes of Florence survive only incidentally as they may

happen to have been patrons of the artists. The school children of to-day would not half understand or care to understand the meaning of the Civil War but for the consummate art of Lincoln's great sentences.

Art is the vestal flame of the ages. He who uses it as a pastime is playing with fire. We create nothing that has immortality without it. In the Hall of Fame we shall see Galileo as a mere point with a name at the small end of a telescope; but through the large end we shall behold Michael Angelo and his peers as giant constellations in the heavens. Pasteur will remain as a title associated with animalculæ, while Victor Hugo eternally holds us in thrall, stirring our blood and arousing our souls. And Krupp with all the combined din of his near supernal thunder reverberating to the moon shall not obscure the softest measure of Beethoven's least melody.

Not from a vain or shallow thought
His awful Jove young Phidias brought,
Never from lips of cunning fell
The thrilling Delphic oracle;
Out from the heart of nature rolled
The burdens of the Bible old;
The litanies of nations came,
Like the volcano's tongue of flame.
Up from the burning core below,—
The canticles of love and woe;
The hand that rounded Peter's dome,
And groined the aisles of Christian Rome,
Wrought in a sad sincerity;
Himself from God he could not free;
He builded better than he knew;—
The conscious stone to beauty grew.



SCULPTORED FRIEZE—SACRIFICIAL ANIMALS—FORUM ROMANO, ROME

A Note on Bryn Athyn Church

By Ralph Adams Cram

Note.—Recently the editors of The American Architect learned indirectly that the very interesting experiment in church building begun at Bryn Athyn, Pa., by Cram and Ferguson had either come to an end or was no longer being carried out under their direction. The editors therefore communicated with Cram and Ferguson asking for a statement as to the exact situation, and in response to this request, the following article was forthcoming. There appears to be one moral, if not more, deducible from this episode, which should not escape the attention of the members of the profession.

THERE is much connected with this church, of which Professor Goodyear has recently written so sympathetically and with such intelligence, that should, I think, be made of record. It was intended to be, in a sense, a protest against the general fashion of contemporary building and a return in spirit and in method to an earlier age. For my part I always thought of it as possessing its greatest value in those elements which connected it with the economic and industrial aspects of human activity, not in those which are essentially esthetic, and I believed, and still believe, that if it acquires fame in the future it will be for this reason; not because it embodies any new elements of design, but because it established a new (if at the same time an old) method of construction.

The great architecture of Mediævalism was an art of co-operation; not only did artists and craftsmen of every kind assemble in unity to produce a great work of art, not only were painters and sculptors and glass makers co-ordinate parts of a great whole, the workmen also were creators within their own lines, contributing of their own personalities, under the influence of a fine liberty and an eager enthusiasm, to the building up of a great synthesis. The architect was then only a master-workman, *primus inter pares,* neither a despot nor a dictator, but the man with the widest vision, a superior capacity for visualizing the ideal, and ability to co-ordinate the efforts of all those who were engaged on any given piece of work. For many generations another method has been in vogue: here the architect has been supreme, designing either with his own hands or by means of his well-subordinated employees every single element in a building, from its structural forms to its details of carving or other ornament. The carrying out of these paper plans was the work of a great boss or padrone, the "general contractor," by means of his own hired workmen, who had no interest other than that which was strictly pecuniary, who were allowed no freedom for individual expression, who owed allegiance to trades unions with all their dull, narrow and meticulous regulations, and who never, under any circumstances whatever, came in contact with the architect himself.

The result has been an architecture largely mechanistic, without inspiration, individuality, personality or enthusiasm. Workmanship has become at the best that of a sort of engineering efficiency, craftsmanship has entirely disappeared, and vitality has vanished from the face of architectural creation. Some six or seven years ago I became convinced that it mattered far less how a building was designed than how it was done. This conviction came largely through the inevitable disappointments that followed every effort to build a Gothic church. Time and study without limit were given to the determination of designs and of details to the final fraction of a hair-line, and always, however accurately these were carried out, the best work fell far below the second-rate of five centuries ago. The method of execution was wrong, there was no question about it, and the moment this was ascertained and the two methods scrutinized and compared, the reason for the failure was apparent.

But how was the problem to be met? The current method was part and parcel of the whole system of industrial civilization: architects were not master-workmen and knew nothing and cared less about workmen and their crafts; general contractors were not master-workmen either, but efficient organizers of business: the trades unions cared nothing for the obtaining and the maintenance of a high standard of product, and they bitterly opposed individual initiative and the spirit of personal emulation: workmen no longer took a pride in the work of their own hands and were allowed no field for the exercise of their own brains; finally the client demanded the most he could get for his money, dealing in the open market and under the competitive system. The problem seemed insoluble, except by process of a general industrial revolution so drastic that it could neither be desired nor anticipated.

The proposed church at Bryn Athyn offered itself almost in the light of a miracle, and after this fashion:

In the year 1912 John Pitcairn asked us to undertake the building of a memorial church in Bryn Athyn, a small community of Swedenborgians outside Philadelphia, gathered around a little denominational college. His first idea was to build a small church, as perfect in design as possible, at a moder-

ate cost. We made our first sketches, as for any ordinary piece of work, with no idea that it would prove anything out of the usual. In this we counted without our host, and the host was John Pitcairn. From the first it was apparent that he was a very notable character: an old gentleman of small stature, grave, courtly, keenly intelligent, vigorous beyond his years, an acute business man, and withal possessed of imagination and intense idealism. The type of Swedenborgianism in vogue at Bryn Athyn is even more mystical than that of the parent sect from which it is an offshoot, and expresses itself in a polity and a ceremonial constantly tending towards that of the Episcopal Church or perhaps the Irvingite or "Catholic Apostolic" Church. The soil was unusual, and from the first fertile and receptive. By insensible degrees, and in a short space of time, the idea of a sort of co-operative, neo-mediæval organization for the building of the church, grew into dominance, and every new suggestion along these lines was welcomed, put in force and further developed, until at last, by the time the walls began to rise above the ground, the system had reached a point of development never achieved in any place since the close of the Middle Ages.

A quarry was opened on the estate for producing the general building material of the walls; the whole neighborhood was ransacked for oak trees of the necessary size to furnish the huge truss members: some of the logs were stacked for seasoning—sticks 32 feet long and 2 feet by 3 feet in section—others were sunk in a bog to ripen for future use. Workshops were constructed for stone cutting and joinery; everything except the rough sawing of the blocks of limestone and sandstone being done by hand—the cutting and surfacing of ashlar, the fashioning of the richly moulded shafts and window tracery, the hewing and framing of the woodwork of the trusses. A model shop was established where scale and full-size models of every portion of the detail were made and re-made, and of whole sections of the building as well—porches, buttresses, pinnacles, vaults. Then came the forge and the metal shops, where hinges, bolts, great parclose screens and grilles were designed and wrought by hand; finally glass studios were created, and here began the experimenting in the making and designing and putting together of stained glass in strict accordance with mediæval methods. There remained for later installation shops for sculpture and stone carving, cabinet work and embroidery.

More than a hundred men were constantly engaged, and from the start the policy was followed of arousing their enthusiasm and emulation, giving them the widest leeway in original work, and crediting them publicly with everything done that deserved recognition and praise. At every visit of the architects the foremen formed a party of inspection, and the new work was examined and criticized, examples of notable achievement, even in the surfacing of a piece of ashlar, being traced back to the individual workman, who then and there was commended to his face. From time to time the whole body of workmen, with Mr. Pitcairn and his family, the church and college dignitaries, the architects and contractors, would come together in the enormous wood-working shed for luncheon or a talk from the architects. It was a great family, or rather guild, all working with the same enthusiasm to the same end.

Very early in history all question of cost was put to one side. One thing and one only was aimed at by Mr. Pitcairn—the creation of the most beautiful building possible to those in charge, built after the best fashion, in accordance with the mediæval principles of craftsmanship and under a system of close co-operation, from the lowest hod-carrier to the owner and architects. There was no hurry, no admission of anything half thought out. We soon found that a local architectural office was necessary, and this was provided with picked draughtsmen to handle the design, under our own periodical supervision, but with the utmost freedom of initiative. Sections of work actually built and not satisfactory in design or workmanship were instantly torn down and another start made—and this at the initiative of the owner himself. Sometimes two draughtsmen or more would compete with rival schemes for some portion of the detail or even of the fabric itself. Mr. Pitcairn's eldest son immediately became absorbed in the project with an enthusiasm that brooked no restraint, and little by little he also began to take a hand in the development of the design, through the draughtsmen attached to the local office. This course we heartily endorsed, for was it not the way the old bishops and abbots and princes worked with their master builders and craftsmen?

Slowly the building grew in all directions; the nave was lengthened, the clerestory walls raised higher than orginally intended; transepts were added, chapels and a great vaulted porch at the west; the great trusses were swung into place, the aisles and naves covered in, and all was ready for the beginning of the central tower.

John Pitcairn died in July, 1916. He had been in England when the great war broke out, and was perhaps the first American to get into Brussels after its occupation by the Prussians. Making provision for his hundreds of workmen in the glass works at Charleroi, he came back and later went on a business trip to South America. His health had been failing for some time, and at last he passed away with his great work half completed. He was a commanding figure of singular power, attractive-

ness and individuality; a type not often to be found in this day and generation. From beginning to end he was considerate, appreciative, sympathetic and generous, the very ideal of a client. May he rest in peace.

During his absence and his progressive feebleness the situation had been developing increasing embarrassments and difficulties. One or two revisions of drawings and details were increasing to eight or ten. The idea of co-operation, begun with such enthusiasm, grew to a point where a suggestion from any source—draughtsman, visitor, clerical assistant, workman, meant a fair trial in the shape of sketches, details, scale and full-size models, all perhaps to be rejected, with a return to the first or second scheme. The central tower was drawn and redrawn at least eight times, by three different men, with many quarter-scale models changed and modified incessantly in the clay. The small models of the whole church grew into huge structures at the scale of an inch and a half to the foot, complete inside and out in every detail, with removable pinnacles, buttresses, etc., and the whole set on a track so that they could be pushed back and forth from the shed to the full daylight for the studying of ultimate effect. Already entire columns with their caps and the arches above had been set up in model form within the church walls, studied, perhaps condemned, and if so, done over again after the same fashion. At last not an archivolt, a buttress offset, a crocket or a pinnacle could be finally accepted until out of many alternative drawings one had been tentatively chosen, the full-size drawings and models made, put in place, criticized in a sort of convocation of eight or ten persons, and at last approved. It was a great life, a fascinating experience, but the result was what perhaps we should have foreseen. Co-operation, free initiative, and the employment of full-size models made the judgment, experience and authority of the architects of less and less moment; in the end they became only one amongst many authorities, with equal rights of suggestion but bound to submit their recommendations in visible, full-size form, first to a sort of plebiscite, and finally to the official ratification of a single and supreme authority. In the end the authority of the architect was merged in the consultative function of the critic, and increasingly his initiative in design became submerged under the equal initiative of owner and draughtsmen.

A curious situation, and one for which no one apparently, except the architects, was to blame. The lesson they set had been learned too well, that was all; co-operation had achieved its perfect work, authority and an assumed professional capacity had been liquidated in a communism, the deciding factor in which was demonstrated experiment.

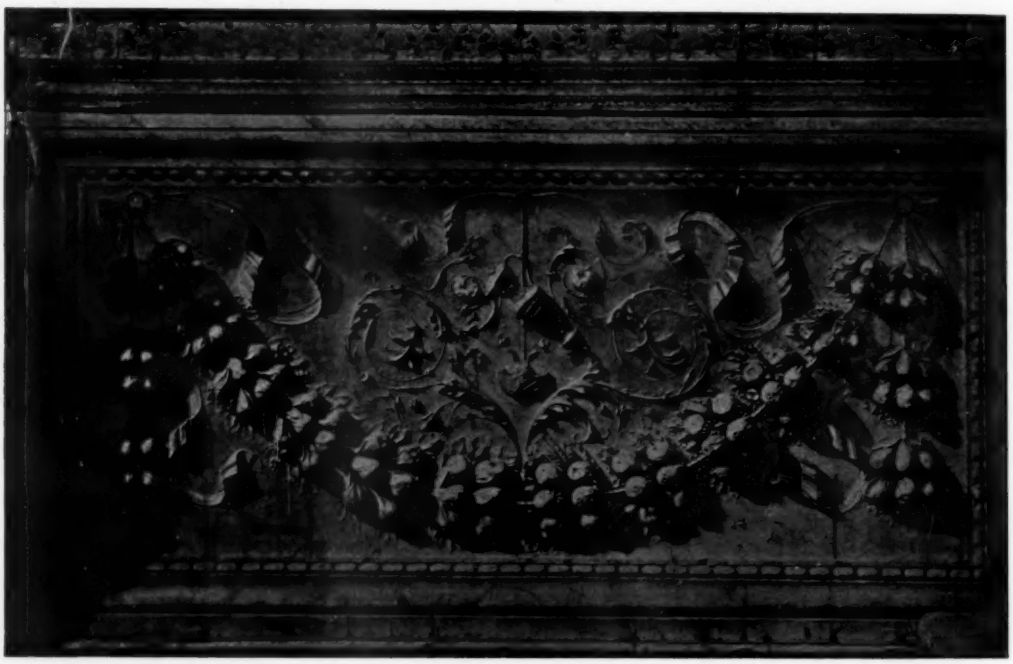
In spite of difficulties the work grew more and more absorbing as it slowly took form and shape. Whatever the merits or demerits of the architecture, however embarrassing the details of professional relationship, the method was justifying itself in its results, and the supreme moment was approaching when the great tower would be begun, and at the same time the furniture and the glass and the decorations of the interior would be taken in hand. In the vision of a real and fast-coming fruition troubles of every kind seemed less and less important, and only the crowning of the work by accomplishment really mattered.

On March 1st, 1917, while the tower design was being perfected, but before its construction had begun, the process of transfer of authority from architects to owner, which had been in process with increasing vivacity since the death of John Pitcairn, reached its conclusion. At that time everything which controlled the final architectural form of the church had been determined except the last details of the central tower; barring this the fabric was completed. Since March 1st, 1917, there has been, properly speaking, no architect for the work, the completion of the structure having been taken over by Mr. Pitcairn's son, working through the draughtsmen in the local office.

What is the moral of this tragedy, for tragedy it is? Not that the method is wrong, for it is right so far as co-operation and the guild system and the craftsmanship element are concerned. These are all absolutely sound, and the current methods against which they were aimed were and are fundamentally wrong. The results at Bryn Athyn were a revelation of the latent enthusiasm and creative power hidden in the most average workmen gathered from miscellaneous sources. The actual results were equally a revelation of craftsmanship quite comparable with much of that of the Middle Ages. So far as I can see the weak spot in the whole procedure was a combination of two quite separate defects. The first was that the very unmediæval multiplication of drawings, the introduction of models (actually of everything), the acceptance of suggestions from every source, the determining of nothing until it had been scrutinized with a meticulous insistence and had run the gauntlet (often in eight or ten forms) of a plebiscite varying from week to week in its personnel—that this process which could only get on the nerves of everyone concerned, while increasing the cost of drawing and model production to fabulous amounts, was not stopped at the start and before it had acquired a headway that ended in catastrophe. The second was that the vicious doctrine (not always excluded from what is known as "democracy") that one man can do any special thing as well as another, and that

as a matter of fact the judgment of one man in highly specialized matters is as good as that of the next, was ever allowed to take root in the fertile soil of Bryn Athyn, and was even fostered by the architects themselves. It was just another failure of a kind of "democracy," that is all. In architecture at least there must be a final and an unquestioned authority, and that authority is the architect himself. However much an owner may be persuaded to play the part of a building bishop or craftsman abbott in the Middle Ages: however fully his draughtsmen and other assistants may be encouraged to individual and original action and given scope for the fullest exercise of their own individuality: however insistently foremen and craftsmen and workmen may be incited to emulation and the exercise of their latent ability, with public and explicit recognition thereof—the architect must remain not only the co-ordinating force but the final and sovereign authority in all matters pertaining to his art. If he surrenders this which is both authority and responsibility; if he withdraws into a modest equality with owner, assistants and workmen, then the only adequate simile is that of a ship without a captain, navigated by a parleying committee of seamen and passengers. There is another figure that might be used, and that is the tragical-comical "communities" in the Russian trenches, debating and voting, in the face of the enemy, whether they shall obey their officers and advance or kill them and retreat.

A really promising and interesting experiment was made at Bryn Athyn. If other architects essay the same venture (and I hope they may, for it is worth it), let them surrender nothing of the authority and the responsibility that are theirs, but maintain both the responsibility and the authority unimpaired, however far they may go in their efforts to raise craftsmanship to its old position and to restore that mediæval sense of co-operation which was the essence of mediæval art and must be made the foundation of the art of the future.



DETAIL OF MARBLE BALUSTRADE—SISTINE CHAPEL, ROME

A New Phase of Architectural Responsibility

By THOMAS CRANE YOUNG

THE building processes almost invariably used in building operations heretofore have been based on the assumption that the owner and contractor were antagonistic forces, each bent on overcoming the other whenever possible. Over these presided the architect, who acted as judge or referee in deciding disputes, besides furnishing all the technical information needed by either party. Although employed and paid by one party, he was presumed to be always able to decide with fairness to the other also. This theory also furnished the basis upon which the present rules or methods of architectural practice were formulated.

The introduction of the "cost plus a fixed fee" system of payment to the contractor, which may become general for building purposes, completely changes the relations heretofore existing between the architect and both parties to a building contract and necessitates an entirely different form of business procedure. So great is the change that it may perhaps become necessary to invent a new nomenclature applicable to the new conditions.

Under the new system the word "contractor" itself is a misnomer, as it no longer expresses the function performed. He now furnishes his personal service and that of his business organization in the management of field operations of building and in return receives a fee from his client. Perhaps "constructor" or "supervisor" would more closely describe the service, although neither of these terms seems exactly satisfactory. His duties have become, therefore, as truly professional in character as those of the architect or engineer.

A building enterprise of magnitude may not now be considered as a speculative or commercial venture, at least on the part of the contractor, but has become more a matter requiring co-operative effort between the owner or financier (neither of these terms is exactly correct) and a group of technical experts all working collectively and harmoniously to the end desired.

Aside from this professional service the owner requires to carry on his enterprise only the machinery for the making of necessary purchases of raw or manufactured building material and to deal with labor. This might be done by him personally at great inconvenience, or through the agency of any one of his technical staff.

Any large building operation requires the co-operation of many highly trained and specialized experts, the list usually including structural engineers in steel or armored concrete or for foundations, mechanical engineers for heating, ventilation and power, electrical engineers for wiring, etc., and sometimes an "efficiency engineer" (also an ill-defined term). To this list must now be added the "constructing engineer," "supervisor," or what other title may be devised to describe the duties of the former "contractor." Finally, there is the architect who plans the building to meet the financial and material requirements of the owner and to co-ordinate the service of all the various other experts.

It would be quite possible, though inconvenient, for the owner to deal with each expert separately, but there seems to be no logical reason why all of these activities should not be combined under a single managing head with the result of greater economy and increased efficiency. It would be quite immaterial under which of the experts this union should be effected, it being entirely a matter of choice or expediency. It would be quite feasible for the architect to enlarge his organization to include the work and business of construction, or for the contractor to include an architect in his technical force. Of course, the present separation of activities might still continue, but as each is now acting in a purely professional capacity, with no financial stake in the transaction except his fee, there can be no ethical or moral reason against such a union of service between the architect or engineer and the contractor, if that should be desired. In fact, to conduct a building operation satisfactorily under present conditions requires a much closer co-operation between the architect and contractor than has heretofore existed. In drawing his plans the former should constantly consult with the latter as to materials and prices and with the owner as well, so as to keep the cost of construction within the desired limit, it being remembered that all risks caused by fluctuation of prices has been shifted from the shoulders of the contractor and that financial disaster to the owner may easily follow from excessive cost. The spirit of trading and business strategy has thus been eliminated from the building game and for it has been substituted a system of mutual interest done upon an honor basis. Surely such business methods are an improvement on the old and must be more satisfactory as tending to establish more confidential business relations for all and in no way derogatory to professional dignity.

It seems doubtful whether these altered conditions and changed relations can be expressed in the terms of a formal contract, but they may take the form of a written understanding or gentlemen's agreement. A contract with a fixed price is no longer feasible owing to the unsettled condition of the market for materials and impending changes in the labor world, which may involve collective bargaining with the various trade unions. Should the present tendencies continue, it will be within the possibilities of the future to see all building operations of magnitude carried on by great corporations, furnishing from a single source every sort of technical service, as well as building materials and labor. Nor would this be anything new, but would seem to be merely a return to the practice of mediæval times during which the great cathedrals and other important structures were designed and built by companies or guilds of artisans.

Should these new conditions prevail, it must be obvious that sweeping revisions may be required in the present code of architectural ethics.

The American Academy in Rome

The Annual Report (1916-17) of the American Academy in Rome has been received. It sets forth the activities of this institution in the field to which it is devoted. It is a recital of valuable achievement. It is good to learn that in spite of the disorganizing influences of the war there has occurred but little retardance of the very valuable educational work performed, nor have they served to lessen the numbers of students during the period covered by the report. It is stated in the report that a part of the student work in travel and observation has been interfered with, owing to the theatre of the war's activities overspreading the territory generally included in this part of the course. There will undoubtedly be recorded a lessening in the attendance during 1917-18, as it was decided to send no Fellows to Rome during that period, and there will naturally occur a limitation to the activities of the Academy. However, these things are but temporary, and when we have returned to normal conditions, the resumption of the usual courses will take place.

The death of Dr. Jesse Benedict Carter, late Director of the Academy, is referred to in the various reports. The high esteem and affectionate regard in which Dr. Carter was held by all of his associates is fittingly set forth.

As soon as sufficient funds are in hand it is proposed to establish at the Academy a Fellowship in Music. The advantages of such a fellowship are apparent. It is hoped that the Directors may soon be in a position to announce a department so desirable.

Shipbuilding in Revolutionary Days

Faded with age, a curious old advertisement of singular interest to-day, printed more than 100 years ago in the Salem, Mass., *Gazette*, has just been brought to light to remind us that one of our great war problems of the present time is almost identical with that confronting the country in 1798.

America needed wooden ships a century past as she does now. At Salem, "the witch town," there was building a frigate, or war vessel, "a noble structure to maintain our rights upon the seas." Enos Briggs, the contractor, found the work lagging because a sufficiency of timbers was not promptly forthcoming. So he inserted this advertisement in the *Gazette*, which appears to have been Salem's leading journal of the time:

THE SALEM FRIGATE.
Take Notice!

Ye sons of freedom! All true lovers of the liberty of your country! Step forth, and give your assistance in building the frigate * * *. Let every man in possession of a white oak tree be ambitious to be foremost in hurrying down the timber to Salem, and fill the complement wanting, where the noble structure is to be fabricated to maintain your rights upon the seas and make the name of America respected among the nations of the world. Your largest and longest trees are wanted, and the arms of them for knees and rising timber. Four trees are wanted for the keel, which altogether will measure 146 feet in length and hew 16 inches square. Pleased to call on the subscriber who wants to make contracts for large or small quantities as may suit best, and will pay the READY CASH.

SALEM, Nov. 23, 1798. ENOS BRIGGS.

History records that in response to this patriotic appeal the timbers needed were promptly obtained, and the Salem frigate was successfully completed, afterward performing valiant service on the high seas. So, too, is our wooden fleet of to-day rapidly materializing definite and important results. While only a few wooden ships were needed in 1798, hundreds are to-day being built for the Emergency Fleet Corporation. More than fifty have been launched since the first of the year, including the largest wooden steamer put in the water for the Government during the present emergency, a 4700-ton vessel, which was constructed at a Gulf coast yard. Contracts for a considerable number of new ships to be built of Southern pine will shortly be awarded Gulf and Atlantic yards. Shipbuilding in the South is declared by a Government official to be proceeding with "amazing" speed.

It is interesting to note that, judging by the length of timbers wanted for the keel, the Salem frigate was little more than 150 ft. in length. Wooden freight-carrying vessels now building are more than twice that size.

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Proposed Conference of Building Organizations

THERE has just been received from The American Institute of Architects a copy of an invitation to all organizations interested in the building industries of the country to join in a conference to be held in the Engineering Societies Building, New York City, on June 14th, 1918. A copy of the invitation appears elsewhere in this issue.

The object of the conference is to discuss the practicability of the formation of a national organization for the duration of the war, to collate and synchronize the knowledge, abilities and equipment possessed in so great a degree by those connected with the building industries, but not utilized to the extent they should be; and to place them unreservedly at the service of the Government.

The Federal officials have already gathered statistics and data covering all branches of construction, labor and materials, but apparently do not know how to make this material practically useful. The proposed organization, therefore, would find a field, now lying fallow, that could be made of the greatest value, both to the Government and to themselves.

Hence, from both the patriotic and personal motives, every organization and every individual interested in the subject of construction should get behind the proposed movement and do their utmost to make it a success.

Plan Now

IF "Experience teaches a dear school, and fools will learn in no other," why, by inactivity at a time when we should be most alert, enroll ourselves among the dunces?

Long before even the most pessimistic were willing to admit we might be drawn into this world conflict, a certain far-seeing group of men were, on every occasion, preaching the doctrine of preparedness. And long before there was even a cloud of war to be observed, while all the world was busily engaged in the arts of peace, these same clear-headed men were advancing their views of the necessity for universal military training, for a well-organized and largely increased army and navy. Another group, and unfortunately a group that comprised a large proportion of our population, with fatuous and smug complacency, were loud in their expression of horror of what to them was a proposed very wasteful use of money. Times certainly do change. Even the most peacefully inclined ten years ago are to-day violent agitators for a war to a finish. They fail to realize that a successful conclusion to this war will be a long delayed result, due solely to their previous strenuous efforts to keep us unprepared.

It is a curious phase of the human mind that so many are willing to acknowledge past errors and are yet so blind to the fact that they are, unless they mend their ways, slowly but surely moving toward a similar, and perhaps equally disastrous, condition. These things are apparent to-day in every field of human effort. Let us inquire just how they can, and probably will, affect the practise of architecture and the building industry.

Much ink has been spilled in bewailing the lack of governmental recognition of architects as architects. Loud criticism has been made of what has been regarded as unjust discrimination that has greatly retarded the advancement of building projects.

It is useless to waste time in nursing these grievances. The first is rapidly being remedied.

We may with certainty look, when peace is declared, for an activity so much greater than even in normal times that unless we are prepared we shall witness the return of early condition—the failure to recognize the value of the architect's services at a time when they should logically be in greatest demand.

Are we to be "caught napping" again? If we are, the fault will be all our own. What is the remedy? What is the logical course? There's only one answer. *Plan now.*

Don't wait until peace is declared, and all the many schemes that have lain dormant since the war began or the millions that are actually necessary

to repair the damage war has wrought become a certainty. Plan now, and *act* now, so that every possible thing that will serve to prepare for the future activity which every clear-headed man knows is bound to occur will have been done.

Act now, not altogether as a selfish personal measure, but as a duty which those who have been compelled to stay out of this fight owe to that splendid lot of men in the profession who have made every sacrifice, even in many lamentable instances to the giving up of their lives, to keep this world free for all of us.

Act now, so that on the return of the surviving men to their usual occupations in the profession they may find that we have been true to our trust and that there are in architectural practise the same undiminished dignities that they left to our care when they departed for the front.

While these men are fighting for us let us fight for them. Let us so act that we and they may be ready for the conditions that will exist when peace once more settles on the world.

Plan now to organize the profession into a large and efficient army so that when we set about repairing the ravages of war, we shall, every one, be ready to respond to the call that will surely be made.

Plan now to interest any client who even remotely considers some future operation in permitting you to proceed with all of its preliminary work.

Revive in the mind of every client, as far as possible, interest in some scheme that, owing to war conditions, he has halted. Show him, prove to him that now you have time for taking infinite pains in the preparation of his building, and that the result will redound to his advantage. Show him how futile it will be when every architect's office in this country is humming with the "rush orders" due to the return of peace, to hope for equally good results.

Make the client understand that the building resulting from a plan-now method will be better designed, more carefully planned and, owing to a closer attention to all its construction details, better built, than he will get if he waits until the eleventh hour to start the work.

Preparedness and Plan Now are two slogans on which the future success of architects will depend. There's no hysteria in this repetition. The reiteration is but the effort to drive home a fact that should be apparent to every man engaged in the practice of architecture.

If you don't plan *now*, the chances are you will miss the big opportunities to plan *then*.

Criticism and Comment

The Editors, THE AMERICAN ARCHITECT:

It has become a platitude to say that times are changing. We are entering upon some kind of a new order of affairs. What it is to be no man knows. The prophets are busy predicting according to their hearts' desires. We like to think that great things are in store, but so far we have not been able to agree on a program.

The great "wet blanket," as I see it, is the fact that there is no line of human activity about which the general public knows less and assumes to know more than architecture. How can you hope to educate the public when the public already thinks it knows it all, and is therefore not interested?

Also how can you interest the architectural profession itself in true and vital architecture for our own time when it has been taught with such deadly finality in most of its schools that the best has already been done?

The great root of the evils of our day, to my way of thinking, lies in the abuse of our freedom. With liberty of conscience, mind, and heart at our command we have voluntarily elected to enslave ourselves to the dead past.

When we prate about design and our draftsmen know that we are "cribbing" and our clients know it also, is it any wonder that the commercial or practical experience of the age has exposed the sham?

Is it any wonder that the woods are full of "practical-specialists" who boldly proclaim that it is a waste of money to employ an architect? Is it any wonder that conscientious, painstaking *striving* to design is so little practiced that under present conditions there is small hope for the inspirational, emotional and heart-uplifting spirit of architecture?

My humble opinion is that what is needed is not new organizations but an honest searching of our own hearts. When we as a people have agreed, with characteristic American good nature, to disagree about everything fundamental, how can we hope for an integration of this contradictory spirit through architectural expression?

A great blessing has come upon us, though perhaps in disguise. It is the great war which is uniting us, for the first time since the birth of the nation, in a flaming purpose of righteousness. Let us welcome this new national consciousness as the greatest thing that ever happened to the American people. If architecture "as she is practiced" falls to the ground because of it, let us not be dismayed. In sincerity and truth there is hope, though the fruits thereof may not be garnered in our own time. Individually we do not amount to much and though we all should go to war and die on the field of honor there will still survive in this great republic of ours "the will and the power to build."

WILLIAM L. STEELE.

Sioux City, Iowa.

The Editors, THE AMERICAN ARCHITECT:

Still apropos of your outburst of December 12, as time moves in these days, we might call that period the carnaliferous age, but nevertheless, Mr. Man, have you read the speech from the throne, that human, very sensible speech of Pres. Mauran at the erstwhile convention, re the power of the Institute and the work which the Institute has done? For example, that successful objection to the infamous smoke stacks on the Potomac. Do you know, sir, that the Institute has not yet appreciated that this result was not obtained through the usual channels where the superman stalks, but through publicity, and that this publicity dug out societies and clubs with more than a half million members throughout the country? This unusual publicity on the part of the Institute opened up more beehives than even Whittaker expected. Result: Success! Now the lesson, Mr. Editor, makes you play for more democracy, more publicity, less camera work. There be two in every agreement and contract with us, ourselves and the public. The times are gone, sir, when the architect must be compared with the doctor or with the lawyer; he is himself a constructive composer, of importance, but not of superimportance. Let him amalgamate himself with the engineers, or marry them all.

Again, Mr. Editor, read the *Journal* report on advertising. Thank God that I may advertise, but how? We have been advertising, but with astuteness. So will we continue to advertise; but, sir,

in modern life, even before this great turnover, this remaking of nations, of ideals and processes, business already recognized co-operation, intercommunication, a world with no geographical boundaries, a swapping of ideas and ideals, but we did not. We have wrapped ourselves in our artistic Invernesses, so that these people in Washington, who are but the same people back home, as President Mauran cleverly calls them, are the same going and coming, so they have us both ways. Now, Mr. Editor, do you see the great place which the Institute occupies, would they but become human and play with publicity, of the people, by the people and with the people? The public is the complete separator, and the public will judge those of us who have solid ivory from the ears up, those others who preach inconsistencies, those who worship selfwards, from the clean-cut, constructive public citizen, who holds in his control more potentialities than do the grain man, the hardware man or the banker.

The world do change, sir, but exceeding slow. But it changes, and this bloody war is moving the minute hand much faster toward a true appreciation of place and power than we may appreciate, being in the smoke of battle. Praise God, democracy or whatnot is affecting all of us.

F. E. WALLIS.

New York.

The Editors, THE AMERICAN ARCHITECT:

In engaging the services of an architect the owner admits, if not actually, at least tacitly, that the architect possesses something, either educational or practical, that he himself does not; otherwise there is no reason for his services. This being the case, collusion between the architect and contractor, due to the knowledge and experience possessed by the architect over and above the knowledge and experience of the owner is sufficient to enable them to take money from the owner for which he gets no adequate return, even though the architect is not to superintend the work and the work is thrown on the open market for bids. It follows, then, that the selection of an architect is quite an important item in the finances of the building world. The mere fact of the possession of a state license is no guarantee of the integrity of the man any more than a complete and profound knowledge of the law is a guarantee of honesty.

The State of Arizona is at the present time advertising an architectural competition with cash prizes, involving the expenditure of a large sum of money, requiring from the architects competing a five thousand dollar bond as a guarantee that plans submitted can be built within the appropriation. The bonding companies will write bonds for almost anyone, even an architect who possibly has no visible assets, provided someone with assets will go bond for him to the bonding company, their interest being simply in the commission and safety to themselves. The honesty or dishonesty of the man and his backing are of no moment so long as they get the fee and protection. Now, isn't it quite simple for an architect, desiring to enter such a competition, to go to a contractor for such backing; the owner not questioning a surety bond and knowing nothing of what is behind it?

Competitions of this nature are largely decided on quantity rather than quality and the architect guaranteeing the most building for the money is likely to win out. And he can make good on his guarantee because he already has a contractor ready and waiting to submit the necessary bid. The contractor can make good on his bid because, having complete access to the plans and specifications, during their preparation, and with the architect under such obligations, those plans and specifications are made for his benefit and not the owner's. When the bids are opened this contractor will show up very favorably against the background of competitors.

The contractor makes money, the architect makes money, the bonding company makes money and everyone is happy or not, in proportion to the lack of experience of the owner; anyway, they all make money, except the owner. What he doesn't get that he pays for would surprise a lot of inspectors, had he employed them.

By requiring the bond, the owner forces the architect into a self-preservation attitude, and instead of a confidential agent looking after the owner's interest he becomes a vulture, while the same man under conditions of trust and confidence might be of material assistance to the same owner. I say "might" because honesty and uprightness do not necessarily follow, but with careful selection the chances are strong in their favor.

The bond requirement of architects is of ancient origin and has been abolished in many states. It is an outgrowth of the general idea of classing the architect along with the mechanical constructors of the building industry. And for this the architect is himself to blame, for so long as he parades his sign along with the plumber, the tinsmith and the painter advertising his wares, so long will he foster in the minds of the general public the idea that his services like theirs are best obtained in competition, and fulfilment secured, by bond.

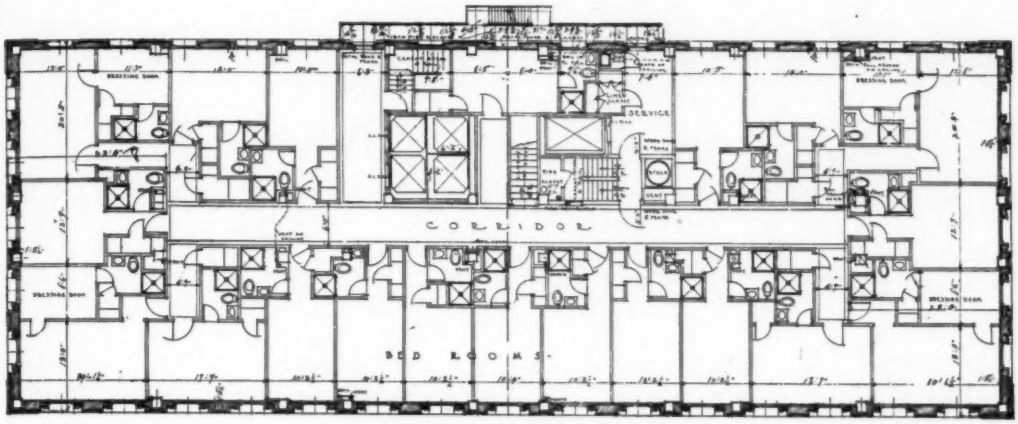
WALTER WEBBER.

Los Angeles, Cal.

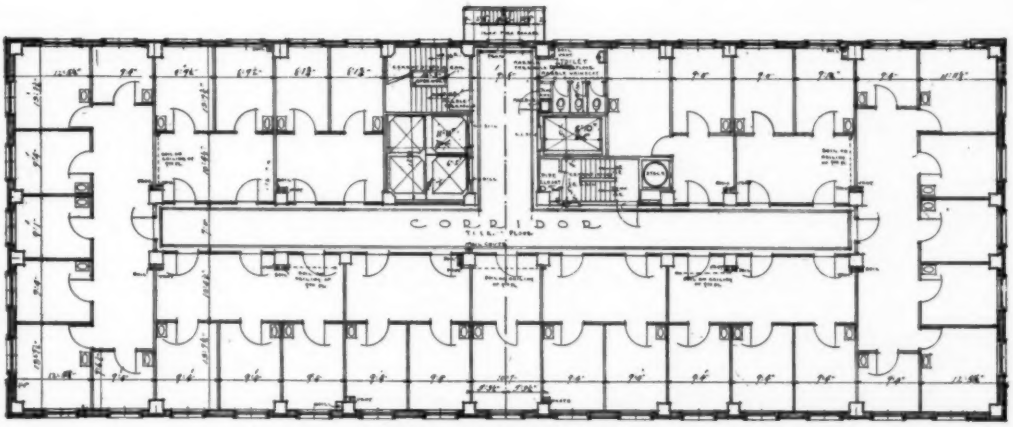
PLATE 182

BUILDING FOR UNIVERSITY CLUB, ST. LOUIS, MO.

EAMES & YOUNG, *ARCHITECTS;* GUY C. MARINER, *ASSOCIATE*



TENTH FLOOR PLAN.



TYPICAL OFFICE FLOOR PLAN.

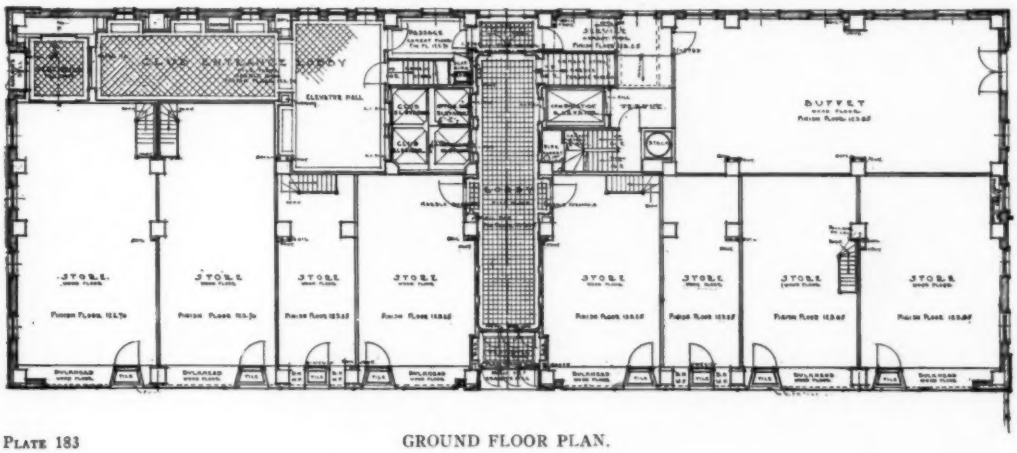
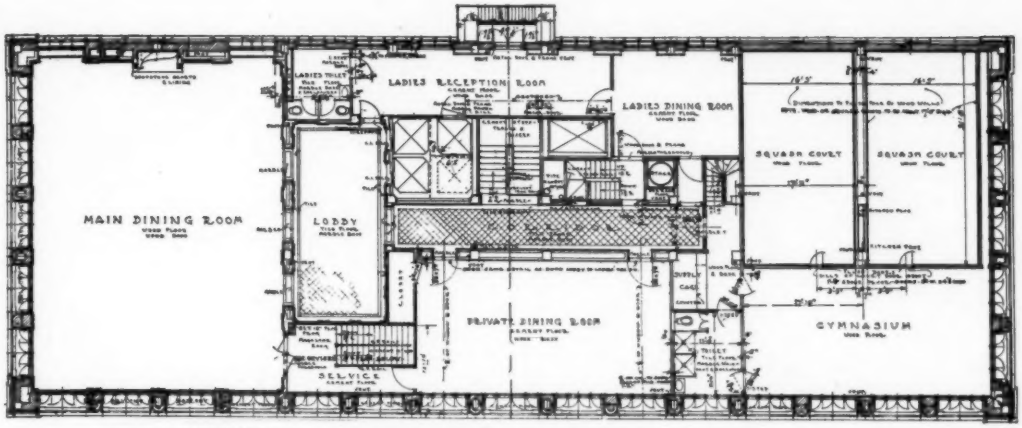


PLATE 183

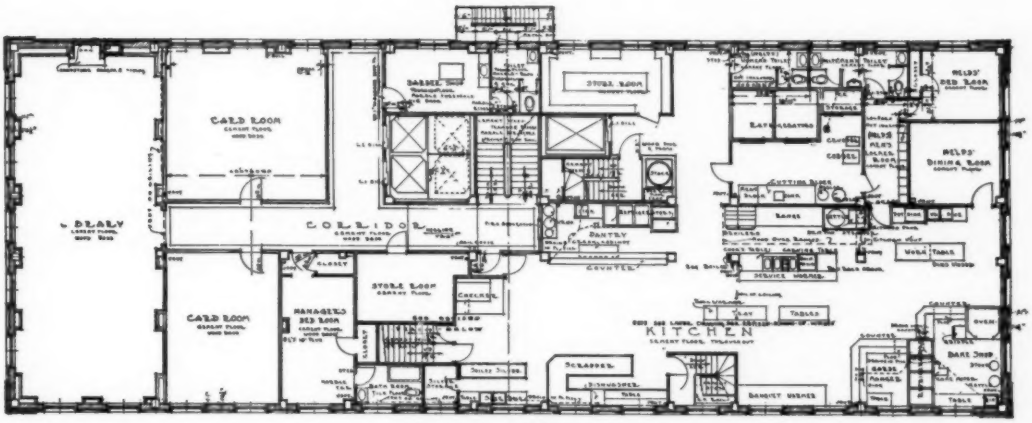
GROUND FLOOR PLAN.

BUILDING FOR UNIVERSITY CLUB, ST. LOUIS, MO.

EAMES & YOUNG, *ARCHITECTS;* GUY C. MARINER, *ASSOCIATE*



THIRTEENTH FLOOR PLAN.



TWELFTH FLOOR PLAN.

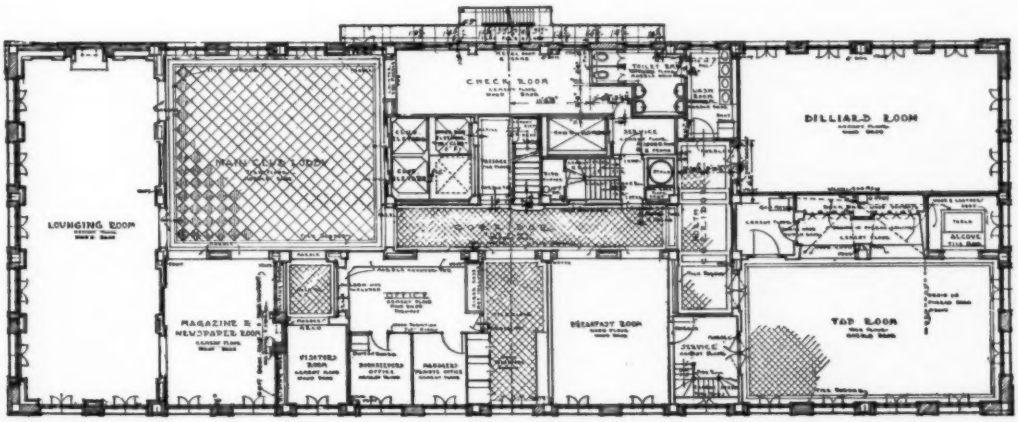


PLATE 184

ELEVENTH FLOOR PLAN.

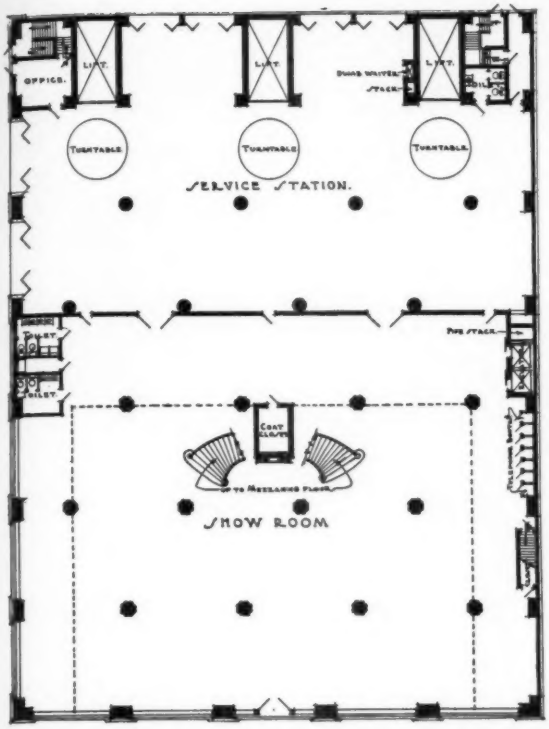
BUILDING FOR UNIVERSITY CLUB, ST. LOUIS, MO.

EAMES & YOUNG, *ARCHITECTS;* GUY C. MARINER, *ASSOCIATE*

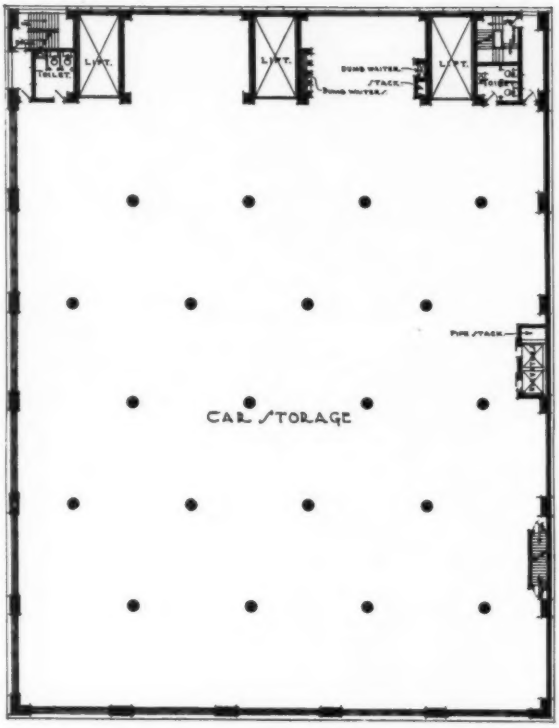
PLATE 185

SALES AND SERVICE BUILDING FOR GOMERY-SCHWARZ CO., PHILADELPHIA, PA.

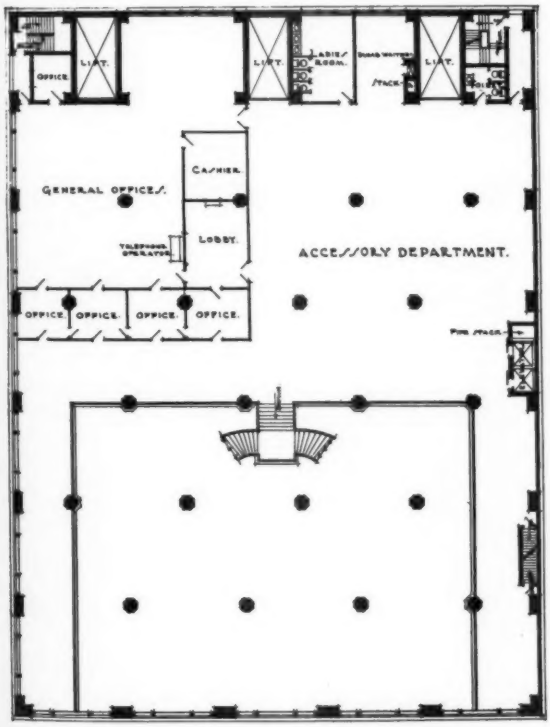
CHARLES E. OELSCHLAGER, *ARCHITECT*



·FIRST FLOOR PLAN·



·TYPICAL FLOOR PLAN.·



·MEZZANINE FLOOR PLAN·

SALES AND SERVICE BUILDING FOR
GOMERY-SCHWARZ COMPANY,
PHILADELPHIA, PA.

□ □

CHARLES E. OELSCHLAGER,
ARCHITECT

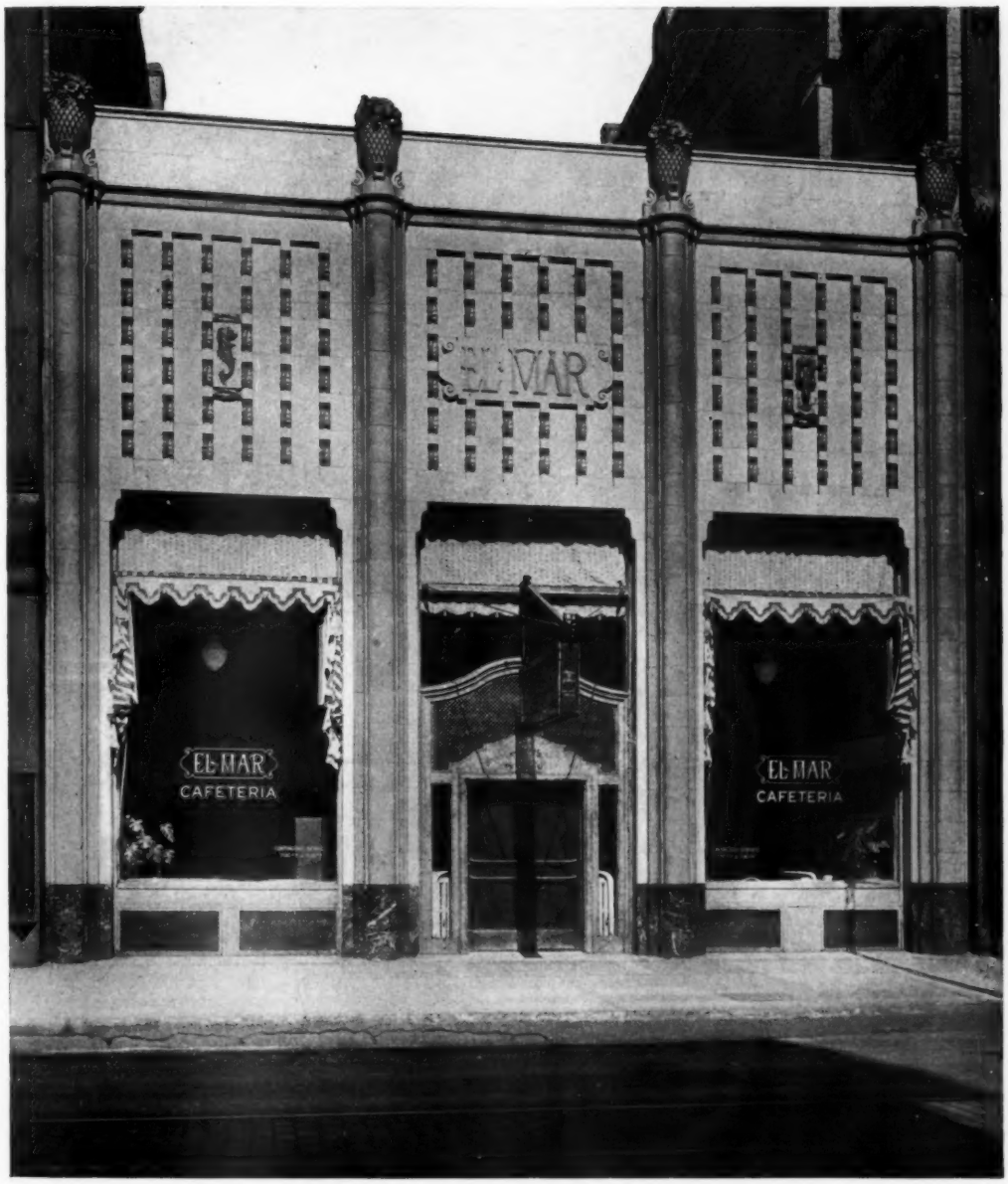
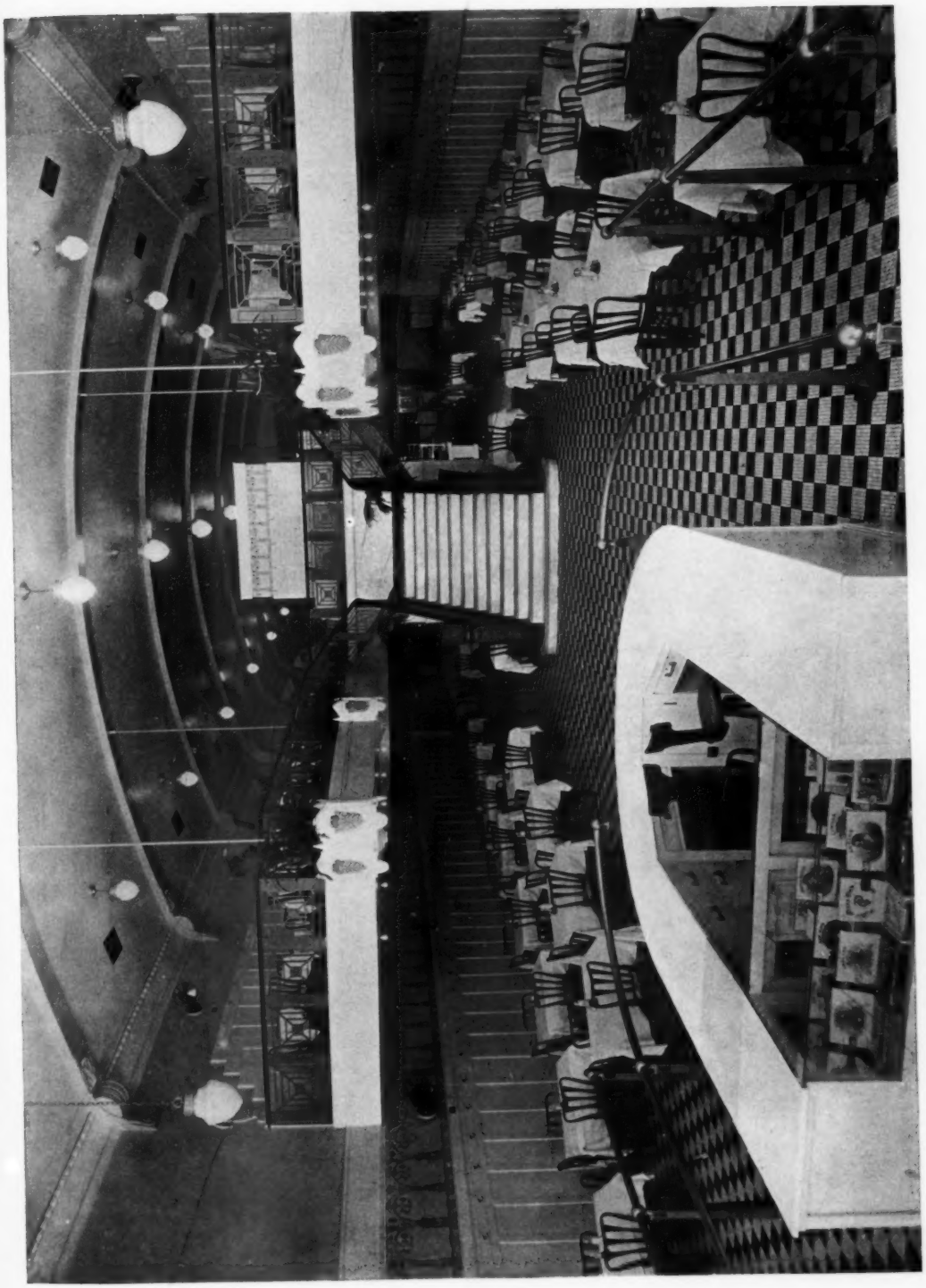


PLATE 187

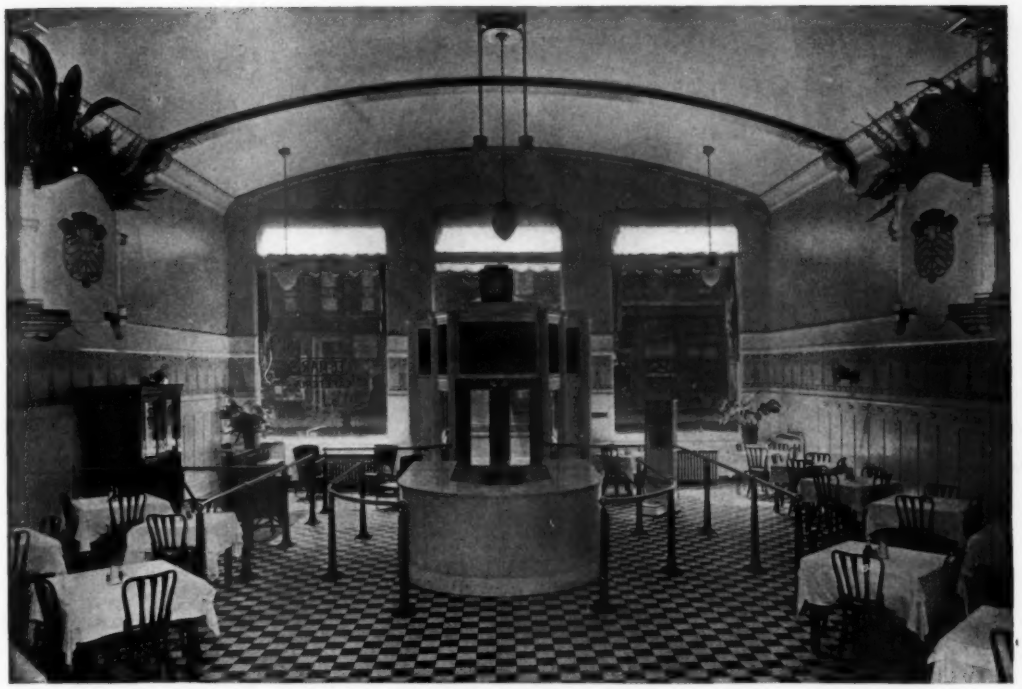
CAFETERIA FOR THE EL MAR COMPANY

OTIS & CLARK, *ARCHITECTS*, CHICAGO



CAFETERIA FOR THE EL MAR COMPANY
OTIS & CLARK, *ARCHITECTS*, CHICAGO

PLATE 188



LOOKING TOWARD FRONT

PLATE 189 SERVICE EQUIPMENT

CAFETERIA FOR THE EL MAR COMPANY

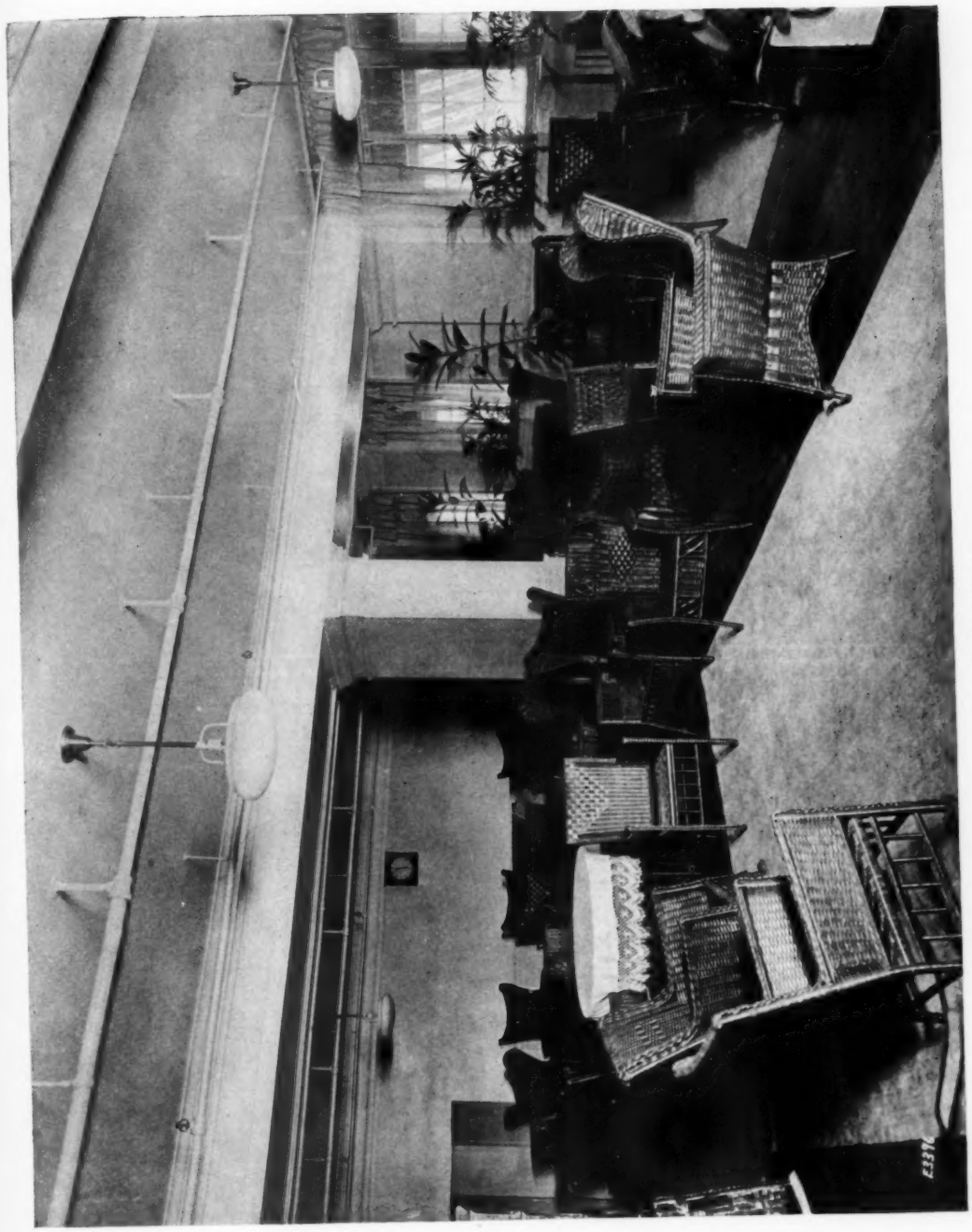
OTIS & CLARK, *ARCHITECTS*, CHICAGO

PLATE 190 LOWER STORIES OF BUILDING, 125 N. WABASH AVE. GROUND FLOOR, ONTRA CAFETERIA CO.
OTIS & CLARK, *ARCHITECTS*, CHICAGO

PLATE 191

ONTRA CAFETERIA

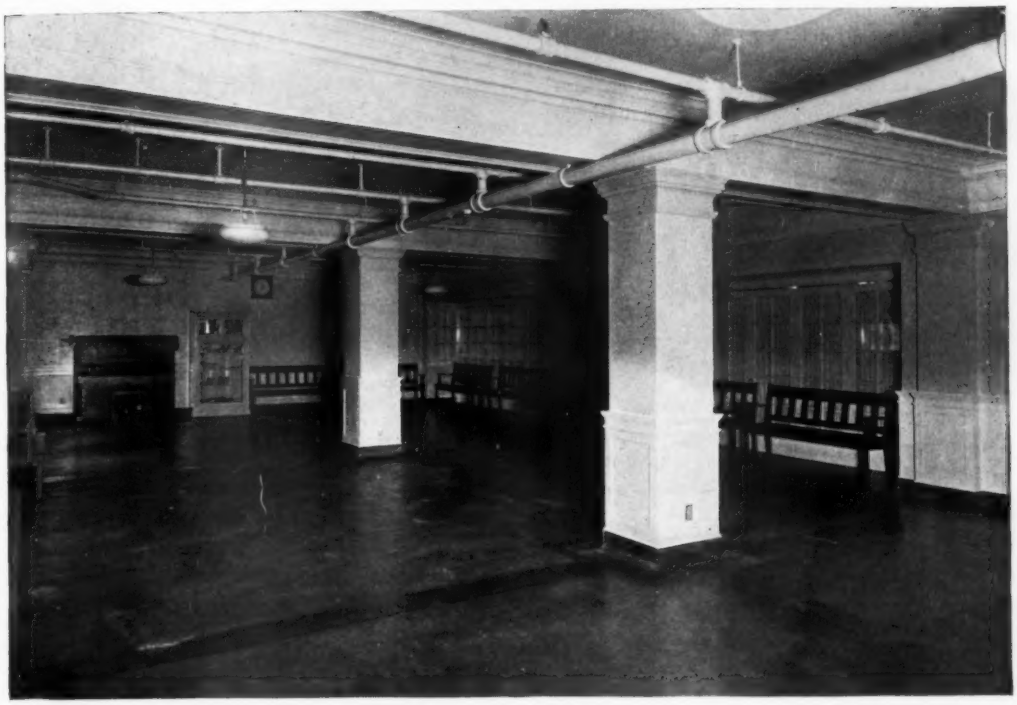
OTIS & CLARK, *ARCHITECTS*, CHICAGO



REST ROOM

CAFETERIA FOR EMPLOYEES OF WILLIAM WRIGLEY, JR., CO., CHICAGO, ILL.
POSTLE & FISCHER, *ARCHITECTS*

PLATE 192



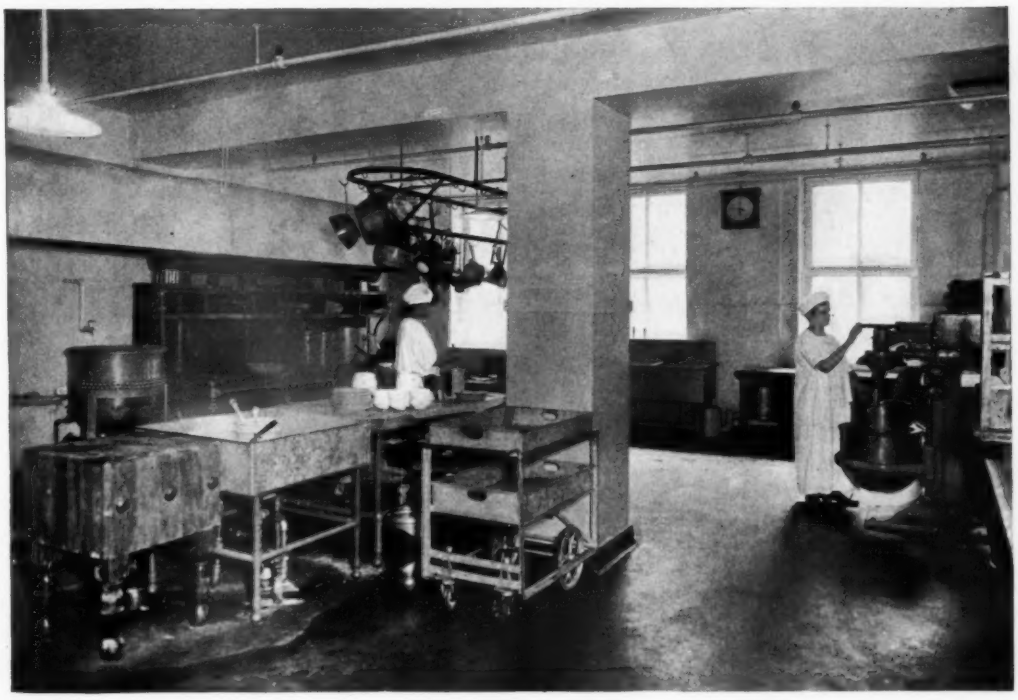


PLATE 193

CAFETERIA FOR EMPLOYEES OF WILLIAM WRIGLEY, JR., CO., CHICAGO, ILL.

POSTLE & FISCHER, *ARCHITECTS*

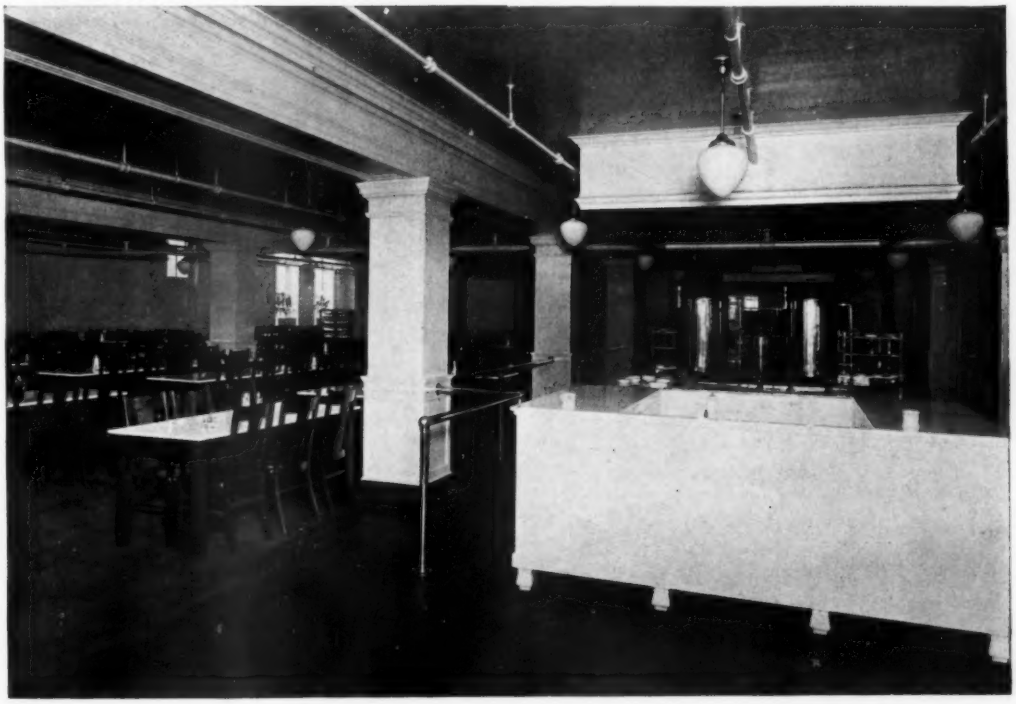


PLATE 194

CAFETERIA FOR EMPLOYEES OF WILLIAM WRIGLEY, JR., CO., CHICAGO, ILL.

POSTLE & FISCHER, *ARCHITECTS*

Current News and Comment

Federating the Building Industry

THE AMERICAN INSTITUTE OF ARCHITECTS INAUGURATES IMPORTANT MOVEMENT

The Editors, THE AMERICAN ARCHITECT:

The American Institute of Architects believes the time has come when steps should be taken toward federating the whole building industry of the United States, in order that the Government may have the most intelligent support and powerful co-operation of all the interests involved.

The war-time need of such action appears to be immediately imperative, and it would seem that the first and paramount duty of the building industry is to place its knowledge, skill, and equipment unreservedly at the service of the nation, involving as it does elements and factors of the widest diversification. That service can only reach its maximum of efficiency through intelligent adjustment of all the vital parts. The building industry also owes it to itself seriously to study from the broadest possible viewpoint the inevitable disorganizing influences of war which have already been felt, and through such study to determine what steps can be taken toward bettering conditions and minimizing any further unnecessary disorganization.

With a view to the possible formation of a national organization, which might assume the burden of this tremendous undertaking, the American Institute of Architects accepts the patriotic duty of initiating the movement. To this task the whole building industry should subscribe. As a first step the Institute invites you to send a duly authorized and accredited representative to a conference to be held at the Engineering Societies Building, 25 West Thirty-ninth Street, New York City, beginning at 10 A. M. on June 14, 1918, for the purpose of discussing the situation and determining the method and providing the means whereby such an organization may be created. This invitation is being issued to national and important local organizations, which represent the building industry—whether technical, manufacturing, contracting or labor.

We will greatly appreciate your prompt notification of acceptance of this invitation, and at the earliest possible moment the receipt of the name of the representative whom you will send.

Please address all communications to the Executive Secretary, the American Institute of Architects, The Octagon, Washington, D. C.

DIRECTORS OF THE A. I. A.
By THOMAS R. KIMBALL, President.

Annual Meeting, National Fire Prevention Association

The National Fire Prevention Association, assembled in Chicago for its twenty-second annual meeting, called attention to the unusual hazards to life and property created throughout America by the world war. These hazards demand the utmost vigilance and initiative not only from those in authority but from the private citizen as well. Every individual should consider himself a fire warden of the nation at this critical time and should equip himself to serve his country by safeguarding to the extent of his intelligence and ability every form of natural and created resource. The elimination of waste, at all times the duty of good citizenship, is at this moment our profoundest public and private responsibility.

In the furtherance of these objects the Association appeals for the co-operation of all citizens. It asks them to help in the dissemination of its valuable literature and in use of the standards of fire protection so carefully worked out by its committees to the end that the lives and substance of our people shall not continue to be dissipated by a reckless and easily preventable waste.

An American City in France

An American city, the population of which will be more than 100,000, is in process of construction in France. This city is not a cantonment in any sense of the word, but a regular American city, the great majority of the inhabitants of which will be civilians.

The great arsenal which the ordnance department of the army is building in France is responsible for the creation of this American town in the heart of France. The arsenal proper will comprise forty-eight buildings, each larger than an average New York city block, while one of the great ordnance plants alone will be larger than all the arsenals in the United States put together. The city will have its own police, fire and health departments, while thousands of small dwellings will be erected to house the workers.—*Argonaut.*

Lieutenant Conn Wounded

Second Lieutenant Robbin L. Conn, architect, was named on the casualty lists of May 15th as among those wounded in France. Lieutenant Conn was previously in the employ of Charles L. Platt.

Eliminating the Modern Shingled Roof

To eliminate the wooden shingle, even only in certain localities, would be about as wise a step as the elimination of bread and potatoes from our daily diet, is the opinion of R. S. Whiting, architectural engineer of the National Lumber Manufacturers' Association and H. R. Isherwood, trade representative of the Association, who have jointly published a treatise on "Why and How Wooden Shingles Should Be Used."

In view of the widespread attempts of promoters of new industries to supplant the time honored wooden shingle by substitutes of various kinds, Mr. Whiting and Mr. Isherwood undertook an investigation to ascertain the sentiment of various sections of the country regarding wooden shingles. Briefly their findings were:

1. That but a dozen or so of the larger cities where the use of wooden shingles is specially barred, is more than compensated by the fact, as follows:

2. That at least 45 of the largest cities, including New York, Chicago, Philadelphia, Cleveland, San Francisco, Dallas, Texas, Detroit, Michigan, and so on down the list even to the national capital, permit the use of wooden shingles within their corporate limits outside of the congested zone.

"This," the treatise says, "is sufficient proof that the advantages of the wood shingle in residential districts are still recognized." The paper continues: "It is rather unfortunate for the logic of some of those most strongly opposed to the use of wooden shingles that they house their own families under such a roof."

The investigation revealed further that some cities after enduring the results of an anti-shingle ordinance until their patience became exhausted by the harmful results in the retarding of building operations either have repealed or are planning to repeal such ordinances. Houston, Texas, for instance, the paper says, after passing through nine months of building stagnation, repealed its anti-shingle ordinance. In this city it was found that the effect of the ordinance was to retard just 40 per cent. the building of small homes as compared to the corresponding period of the previous year.

In refutation of the claim, by the makers of substitutes, that wooden shingles frequently cause great conflagrations, the investigation shows that of the 47 fires involving losses of more than $500,000 in 1917 throughout the country, only one occurred in a residence section where wooden shingles predominate.

Housing the Shipbuilders in Haddon Township, New Jersey

Haddon Township, near Camden, N. J., is to benefit by the recent housing appropriation to the extent of three million dollars. This township is the center of the activities of the New York Shipbuilding Company, the Pennsylvania Shipbuilding Company and the New Jersey Shipbuilding Company. The land for the project is being furnished by these companies, while the Government is furnishing the money to erect 907 houses, schoolhouses, fire stations and a sewerage and water plant.

It is announced that ultimately 3000 workers in the shipyards will be housed by this appropriation. From this statement it would appear that $1,000 was the capital cost of housing and living facilities for one worker, presumably the head of a family.

Government Ordnance Plant Planned

Arrangements have been made for the erection for the Government of a large ordnance plant by the United States Steel Corporation, on Neville Island, near Pittsburgh. A similar project is undertaken by the Midvale Steel Company. The administrative knowledge and executive forces for these plants, it was stated, are to be supplied by these companies, in large part without remuneration. The title will be in the Government, however, and will remain in its possession at the conclusion of the war.

Building in Italy

Building operations for the civilian population in Italy, says an exchange, have almost everywhere been suspended, owing to the high cost of building material (the manufactories of which are almost all closed down because of the fuel problem), the call to arms or to munition factories of labor hitherto therein employed, and the diminishing need of new buildings, which may be attributed to the absence of the male population and of foreigners.

Foreign Trade After the War

Significant in the plans for reconstruction after the war, which many nations are making, is the determination to seek a commercial footing in those countries whose natural resources are still undeveloped, or which, by reason of internal changes made as a part of their own programs for the fu-

ture, promise exceptional opportunities for the establishment of profitable relationships. This determination involves on the part of most of these nations a pushing of what they regard as their claims to a share in the new financial and commercial intercourse of these developing countries. It is the privilege of other nations to cultivate economic friendships rather than to impose them. Sentiment plays an important part in international trade, and a great advantage accrues to the nation with which to do business is a pleasure rather than a necessity.

Cheaper School Houses

The new city administration in New York having decided in compliance with platform pledges to throw out the Gary system, finds itself face to face with the necessity of increasing very largely the number of school houses. An appropriation of $13,000,000 is available, but the claim is made that the amount is entirely too small. The American Institute of Architects has been appealed to for advice and there is hope that some economical form of construction may be suggested. The cheapest permanent and fireproof form of construction is poured concrete. A few years ago somebody devised molds which would have made possible the erection of uniform workingmen's houses at slight cost. The *Brooklyn Eagle* expresses doubt whether a uniform model for rolled concrete can be applied to anything as large and complex as a school house for 2000 children. If it can be, the problem before the Board of Education should be considerably simplified. Another consideration is as to what the people of New York would say to big concrete barns or storage warehouses for school buildings in residential neighborhoods.

A Mediæval Method of Dismissing An Architect

Few architects, comments *Building News*, escape troublesome clients, and many no doubt have had their worries in the law courts, but few have shared the fate of the famous French architect, Langfred, in Norman days, whose tragic end was brought about at Ivry la Battaile, west of Paris, the scene of the victory of Henry IV over the Duc de Mayenne and the Army of the League, in 1590. Considerable remains are still visible of the great fortress which was demolished by Dunois in 1449. The early Norman records of Ivry are concerned, among others, with Raoul Count of Ivry, son of the Duchess Esprista and her second husband, Sperling, a rich miller of Vandreuit. Ivry had a famous tower attached to it, built by Albereda, Countess of Bayeaux. The citadel was long held against the Duke of Normandy by Hugh, Archbishop of Rouen. The Countess, who erected it, employed Langfred, and she created him Master of the Works after building the tower of Pithiviers. Langfred's far-reaching repute seems to have caused his lady client to become exceedingly jealous of him because of the likelihood of his obtaining further buildings to carry out of similar consequence, and without more ado she cut short his professional career by chopping off the unfortunate architect's head, a poor reward for all his labors and devotion. Retribution, the MS. says, awaited the Countess in the end, inasmuch as she was slain by her own husband, whom she had vainly conspired against to prevent him from occupying this same fortification of Ivry.

Columbia Architectural Annual 1918

The 1918 Columbia Architectural Annual has been received.

Following a custom of some years of observance, in dedicating each annual to some illustrious alumnus, the 1918 annual presents an excellent photograph of Edgerton Swartwout and a dedicatory inscription, setting forth with much appreciation the valuable services rendered by Mr. Swartwout to the cause of architectural education.

The present annual covers the work of the academic year 1916-17 in the fields of Design and Drawing.

In view of the fact that the war has served to deplete the student body largely, the Architectural School of Columbia might with much justification urge that the work accomplished be not compared with that of former years. It is a source of satisfaction to note the large amount of excellent work presented in this annual, and it serves to bring the assurance that those of the student body who have not yet, for one good reason or another, been called to the colors, are doing their bit by upholding for their own part and their fellow students in arms the high reputation of this architectural school.

This annual is of unusual interest.

A Proposed Housing Scheme in England

There was recently outlined in the British House of Commons a state scheme for providing 300,000 houses for the working classes after the war on a basis of a partnership system between the state and local authorities. In the scheme proposed, the state will provide 75 per cent of the estimated deficit on

the annual balance sheet. The houses would be valued at the end of seven years, and, of any excess of debt outstanding for loan purposes, the Government would provide 75 per cent. The remaining 25 per cent would be borne by the rate payers, but where, in special circumstances, this 25 per cent deficit amounted to more than a penny rate, the Exchequer would meet the additional rate.

Of 900 local authorities circularized, two-thirds have stated their willingness to provide an aggregate of 150,000 houses. Twelve houses to the acre is proposed in urban areas and eight to the acre in rural areas, each house to contain a living room, scullery, parlor and three bedrooms.

Towns Damaged by Earthquake Rapidly Rebuilding

The towns of Hemet and San Jacinto, seriously damaged by the recent earthquake in California, are rapidly being rebuilt.

It is satisfactory to learn that the lessons taught by this disaster are being made the basis of improved construction methods, and in order to insure these, both cities have decided to accept the services volunteered by the Southern California Chapter of the American Institute of Architects and the Engineers and Architects Association of Southern California, in drafting building codes.

The results of this earthquake shock have demonstrated that certain forms of construction cannot safely be used, and the new codes will seek to insure against future similar experiences.

For Truth, Justice and Liberty, a New Bell at Columbia University

Workmen are now installing a 2000-lb. bell in St. Paul's Chapel, Columbia University. Cast in relief, the bell bears the following inscription:

"To Ring Out Through the Ages for Truth, Justice and Liberty. Presented to Columbia University by the Class of 1893, School of Arts, Columbia College, on its Twenty-fifth Anniversary, June 5th, 1918."

Luminous Paint Instead of Electricity

A Boston hotel with a large electrical sign, when compelled to cut off its illumination under the recent Fuel Administration order prohibiting such uses of current, had the sign painted with luminous paint, which is said to be a fairly satisfactory wartime substitute.

John T. Fallon Dead

John T. Fallon, for a considerable period a valued contributor to THE AMERICAN ARCHITECT, died at the home of his sister in York, Pa., on May 18.

During 1914, and in company with W. G. Thomas, Mr. Fallon visited northern Italy, where was secured the large collection of Italian details later published in this journal.

The insidious character of Mr. Fallon's illness made it necessary for some time past that he should avoid the rigors of the New York climate. He was therefore out of touch with most of his associates of former years, but this absence in no way lessens the deep feeling of personal loss on learning of his death.

New York Merchants' Association Establishes Industrial Bureau

A service to keep manufacturers informed of all Government regulations affecting industry, as well as the methods employed by manufacturers to meet the numerous war problems, has been established by the Merchants' Association of New York, and will be known as the Industrial Bureau of the Merchants' Association. It is stated that the bureau will be glad to give information and assistance to manufacturers at any time.

Personal

William Luther Mowll, architect, announces the removal of his office from 185 Devonshire Street to 50 Bromfield Street, Boston, Mass.

William Pitkin, Jr., landscape architect in the Cutler Building, Rochester, N. Y., is closing his office to enter Y. M. C. A. war work.

Henry Ives Cobb, architect, has moved his offices from the Harriman Bank Building, 527 Fifth Avenue, to 1465 Broadway, at Forty-second Street.

P. Thornton Marye, architect, Atlanta, Ga., has been commissioned a Major in the Quartermaster's Construction Corps of the National Army.

He is now temporarily detailed for duty in Washington.

By reason of the appointment of Mr. Philip S. Avery to the field staff of the Bureau of Industrial Housing of the Department of Labor, his offices at 185 Devonshire Street, Boston, Mass., are closed for the duration of the war.

Beaux-Arts Institute of Design

Official Notification of Awards—Judgment of May 7th, 1918

PROGRAM

CLASS "A"—V PROJET

The Committee on Architecture proposes as subject for this Competition:

"AN OVERSEAS WAR HOSPITAL FOR ONE THOUSAND PATIENTS"

The buildings of the modern war hospital, as it has been developed during the past three years, divide themselves into four main groups, each with its distinct function, but each closely related to the other. These groups are as follows:

1. The Technical Group (ambulance-court, receiving pavilion, operating wards, etc.).
2. The Service Group.
3. The Wards.
4. The Barracks for Nurses, Doctors and Orderlies.

The Hospital must be placed in direct contact with a road, the Technical Group being reached through the Ambulance Court and the Service Group through the Service Court. All buildings must be connected together by covered corridors or board walks; steps being avoided, as all transportation is by means of wheeled vehicles, so that, once a patient has been discharged from the ambulance which brings him, he may be wheeled to any ward and, likewise, that supplies unloaded in the storehouses or kitchen may also be wheeled to their various destinations. The main axis of all wards must run north and south, with the service rooms and connecting corridors at the north end of each, and a sun porch at the south. For this reason, and to reduce traffic of all kinds, the Technical Group and the Service Group should be placed to the north of the wards.

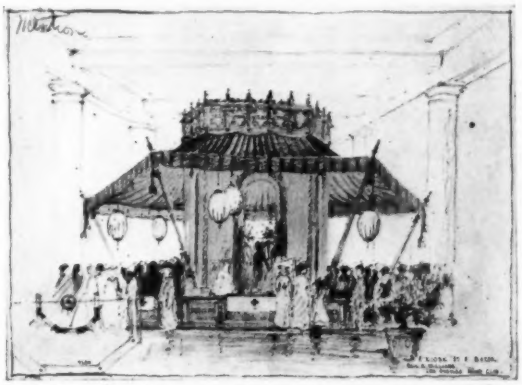
THE PROBLEM

Upon a tract of land not exceeding 1,500,000 sq. ft. in area, the greatest dimension of which does not exceed 1700 ft., it is proposed to erect an overseas War Hospital for 1000 patients. The ground slopes slightly toward the south, a main road passing along the northern boundary, with two minor roads along the east and west. This Hospital should contain the following:

GROUP 1—THE TECHNICAL GROUP

a. The Ambulance Court.

b. The Receiving Pavilion, where the patients are cleaned and put into hospital clothes, thence taken to the wards or operating pavilions.



MENTION P. R. WILLIAMS LOS ANGELES A. C.

CLASS "B"—V. ESQUISSE-ESQUISSE

A KIOSK AT A BAZAR

c. The Administration Building.

d. The Guard House.

e. Two Operating Pavilions.

f. Three smaller Operating Pavilions for operations on the eye, ear and teeth.

g. A Storage Building for patients' effects.

GROUP 2—THE SERVICE GROUP

a. The Service Court.

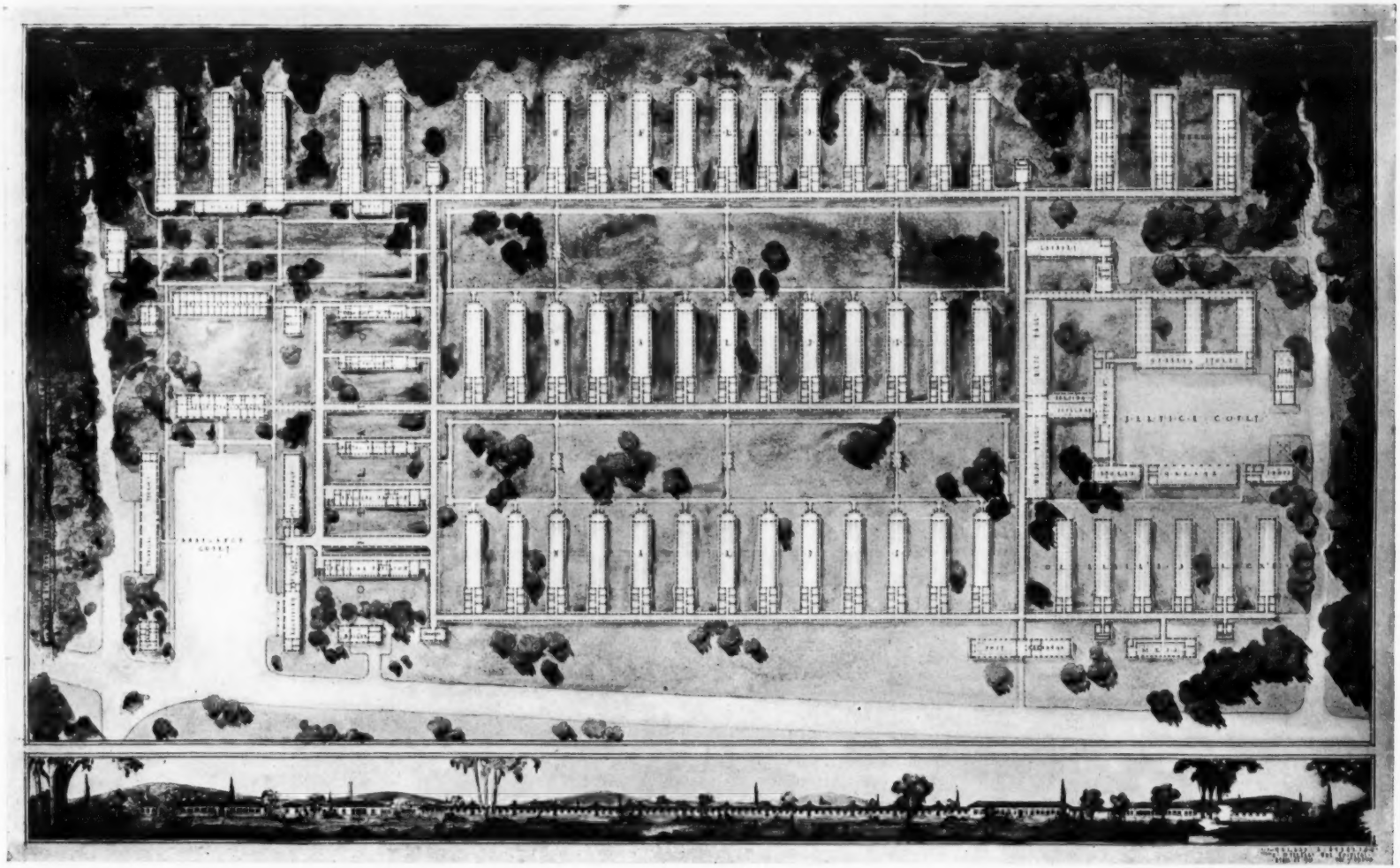
b. The Main Kitchen and Scullery—so arranged as to give convenient service to the wards.

c. Two or three Store-houses for various supplies.

d. Garage for ambulances and trucks.

e. Electric Power House.

f. Laundry and Sterilizing Plant.



G. A. ANDERSON | FIRST MEDAL | UNIV. OF PENNSYLVANIA

CLASS "A"—V. PROJET. AN OVERSEAS HOSPITAL FOR ONE THOUSAND PATIENTS

STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN

GROUP 3—THE WARDS

a. 35 or 40 wards. These wards should all open off cornered corridors, so arranged that there may be uninterrupted communication between them and with the other groups. They should each be about 22 ft. x 140 ft. and not less than 33 ft. clear between them. They are to be one story high.

b. Two Mess Halls for walking patients placed conveniently between the wards and the main kitchen.

c. The Post Exchange.

d. Two or three Shower Buildings.

e. Two Officers' Wards, one of which will contain the officers' mess.

f. Three Isolation Wards, slightly removed from the others, but still having wheeled communication.

GROUP 4—THE BARRACKS FOR NURSES, DOCTORS AND ORDERLIES

This group should be divided into two parts, the orderlies being separated from the doctors and nurses.

a. Six Barracks for the hospital orderlies, a building for their kitchen and mess and two lavatory buildings.

b. Three Barracks for the nurses, one of which will be devoted to the nurses' mess.

c. One Barracks for Doctors' Quarters and mess.

d. Quarters for the Commanding Officer of the Hospital.

Several Boiler Plants should be conveniently placed about the groups in order to avoid the necessity for large piping and to reduce the danger of complete shutdown in case of bombing raids. These boiler plants should be so arranged as to enable the coal and ashes to be handled without interfering with the circulation between the various units.

JURY OF AWARD: R. M. Hood, J. Wynkoop, F. C. Hirons, H. W. Corbett, J. A. Gurd, L. H. Burnham, M. B. Stout, D. J. Baum, J. O. Post, C. Butler, W. S. Wagner and J. C Levi.

PROGRAM: An Overseas War Hospital for One Thousand Patients.

Number of Drawings Submitted: 27.

AWARDS

First Medal.—M. J. Rosenthal and G. A. Anderson, University of Pennsylvania, Philadelphia.

Second Medal.—E. Rabasa, Jr., Columbia University, New York City; C. L. Levy and H. R. Weaver, Cornell University, Ithaca; R. Platt, "T" Square Club, Philadelphia.

Mention.—J. L. Baker, A. Lombardi and A. Z. Owen, Columbia University, New York City; Rosamond Wolcott, E. J. Truthan, L. C. Smith, H. B. Dryer and K. F. Coffin, Cornell University, Ithaca; C. J Schmitt, Syracuse University, Syracuse; C. F. Pyke, F. J. Kuchler, E. F. Cullity, A. C. Runzler, W. H. Livingston, A. M. Pyke, H. G. Stewart and A. V. Fisher, University of Pennsylvania, Philadelphia.

PROGRAM

CLASS "A"—V ESQUISSE—ESQUISSE

The Committee on Architecture proposes as subject for this competition

"A CARTOUCHE"

The crowning motive of the end pavilion is to be a large cartouche, expressing the union of the four great allies in the present war, France, Great Britain, Italy and the United States. Entire freedom is left to the competitor in the design of this cartouche; sculpture, carving and other ornamental forms may be employed, the only dimension be given is that of the end pavilion, which is not to exceed 25 ft.

JURY OF AWARD: F. A. Godley, L. Warren and H. R. Sedgwick. This jury also served as Jury of Award for Class "B"—V Esquisse-Esquisse, and Class "A" and "B" Archæology—V Projet and measured drawing.

PROGRAM: A Cartouche.

Number of Drawings Submitted: 9.

Awards: No Mentions awarded.

PROGRAM

CLASS "B"—V ESQUISSE—ESQUISSE

The Committee on Architecture proposes as subject for this competition:

"A KIOSK AT A BAZAR"

At a Bazar, for the benefit of our Allies, to be held in a large hall, an organization which raises money by the collection of subscriptions and the sale of small objects such as engravings, post-cards and small paintings, has received an allotment of 50 sq. ft. upon which to erect a kiosk for the sale of their wares. This space is free of access on all sides, being in a wide corridor flanked by other booths. The kiosk should provide counters for the exposition of prints and pictures and a space inside for those who are to sell them.

PROGRAM: A Kiosk at a Bazar.

Number of Drawings Submitted: 5.

AWARDS

Mention.—E. A. Bennett, Boston Architectural Club, Boston; P. R. Williams, Los Angeles Architectural Club, Los Angeles.

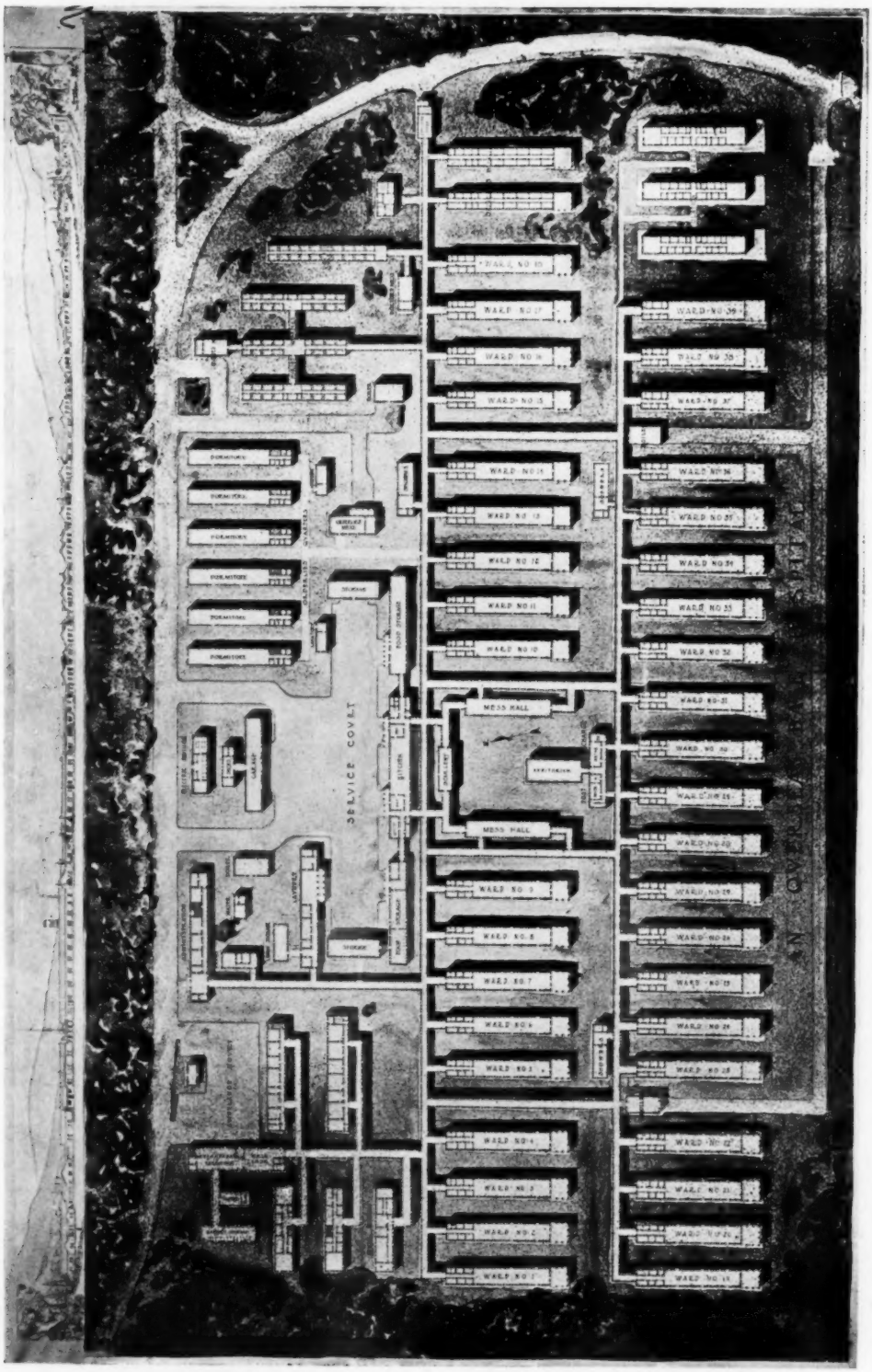
PROGRAM

CLASS "A" AND "B" ARCHÆOLOGY—V PROJET

The Committee on Architecture proposes as subject of this competition:

"A LOUIS XV STAIR HALL"

Introduction: One of the greatest achievements of the Renaissance was the discovery of the architectural value of the monumental interior staircase.



M. J. ROSENTHAL — FIRST MEDAL — UNIV. OF PENNSYLVANIA

CLASS "A"—V PROJET. AN OVERSEAS HOSPITAL FOR ONE THOUSAND PATIENTS

STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN

Previous to this epoch, the staircase was treated in a very insignificant manner, and was very often relegated to a space in the thickness of a wall, as is exemplified so many times by the circular stairs in the cathedrals and fortresses of the Middle Ages.

The staircase, as we know it to-day, owes its character and form to the architects of the Renaissance. As developed in Italy, at least in its earlier forms, it was usually built in straight runs between enclosing walls and was covered by a barrel vault, a type of which the Scala d'Oro in the Doge's Palace in Venice is perhaps the most famous example.

In France where the traditions of Gothic art clung strongest, the earlier forms followed closely the idea of the circular stair, but they were given a much greater importance, both in plan and elevation, and, in some instances, were made the dominant feature of the composition. At Blois and at Chambord are to be found two of the finest stairways of this period. At the time of the Louis, we find that the staircase has reached its full development. They are known as stairways *á la française* and were placed in open wells, which were treated with considerable richness. They were usually made in three runs, with landings at the two turnings. The steps rested on stone strings, cut in the form of voussoirs and forming an arch. The railing was usually of wrought iron. In the Palace at Versailles, in the Petit Trianon and many of the larger chateaux and private houses are to be found examples of great beauty.

Problem: The subject of this projet is a Louis XV stair hall. The staircase is to be placed in an open well and is to mount in three runs, along three sides of this well to the floor above. The only dimensions given are the height from floor to floor, which is 15 ft., and the width of the treads, which is 6 ft.

PROGRAM: A Louis XV Stair Hall.

Number of Drawings Submitted: 4.

AWARDS

Third Medal.—N. D. Kutchukian, Carnegie Institute of Technology, Pittsburgh.

Mention.—E. C. K. Schmidt, "T" Square Club, Philadelphia; A C. Runzler and F. J. Kuchler, University of Pennsylvania, Philadelphia.

CLASS "A" AND "B" ARCHÆOLOGY—V MEASURED DRAWING

Number of Drawings Submitted: 1.

Title: Henry Woodward Hall, Annapolis, Md.

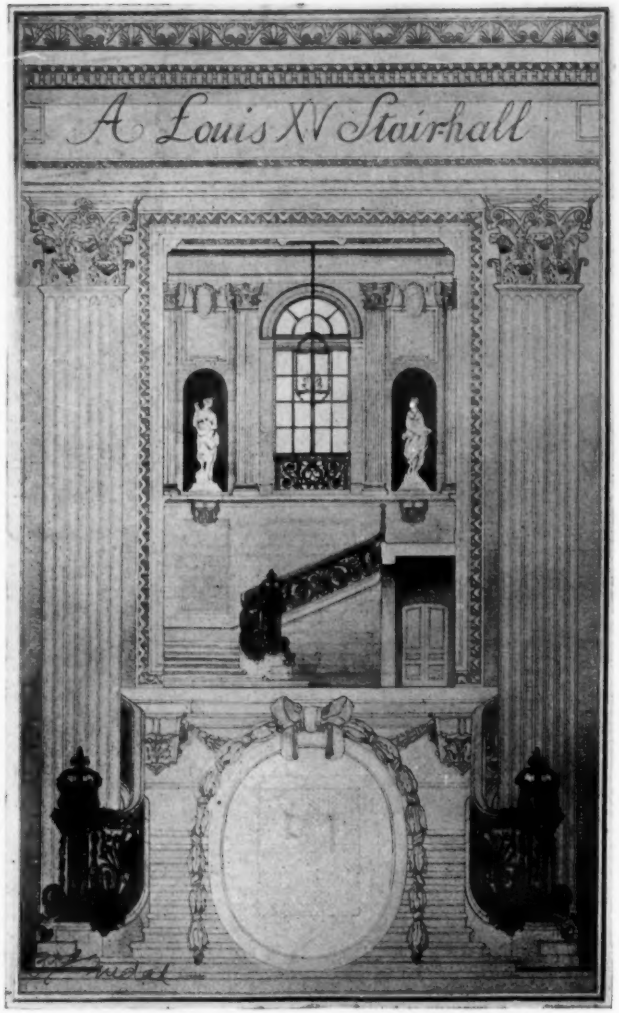
Award: Third Medal, H. F. Bremmer, Carnegie Institute of Technology, Pittsburgh.

Corrections

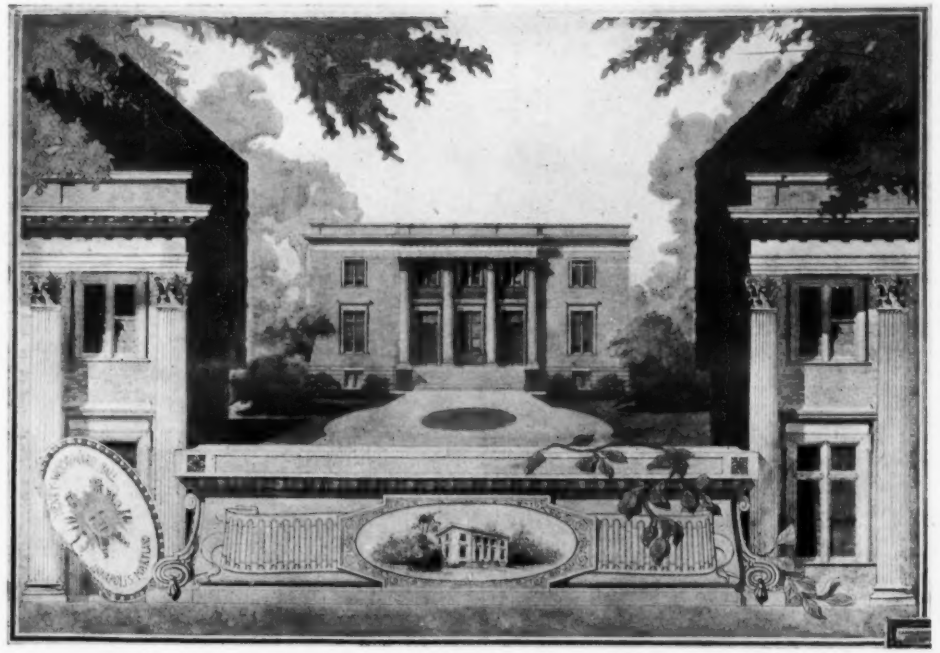
In the announcement of awards in issue of May 1, Class "B," Fourth Analytique, it was omitted to state that H. O. Beisner, University of Kansas, received a First Mention.

In the illustrations of student work, in this class, G. Roth and F. B. Post were accredited by error to Colorado University. The proper credit should have been to Columbia University, New York.

SCULPTORED RELIEF. ARCH OF TITUS, ROME



N. D. KUTCHUKIAN, CARNEGIE INSTITUTE
CLASS "A" AND "B" ARCHÆOLOGY—V PROJET

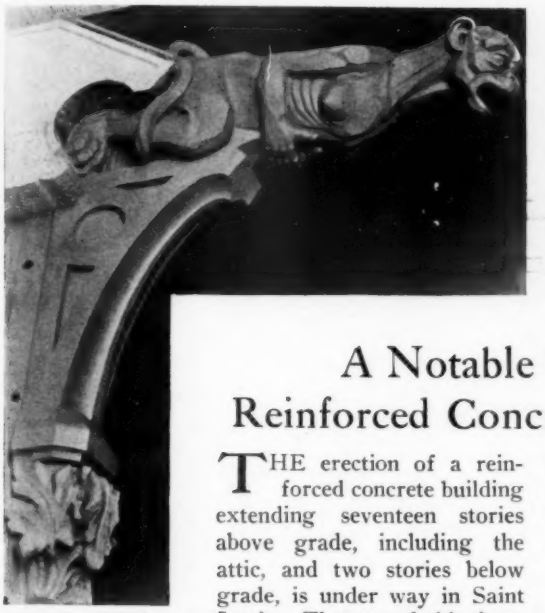


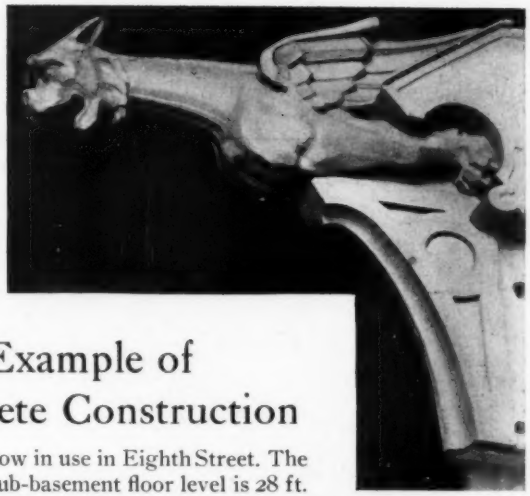
H. F. BREMMER THIRD MEDAL CARNEGIE INSTITUTE OF TECHNOLOGY

CLASS "A" AND "B" ARCHÆOLOGY—V MEASURED DRAWING

STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN

Department of Architectural Engineering





A Notable Example of Reinforced Concrete Construction

THE erection of a reinforced concrete building extending seventeen stories above grade, including the attic, and two stories below grade, is under way in Saint Louis. The use of this form of construction for buildings of this height involves features that are not common and are, therefore, of interest. The scarcity of structural steel and its excessive cost made it necessary to use a reinforced concrete skeleton for this structure in order to construct it at this time.

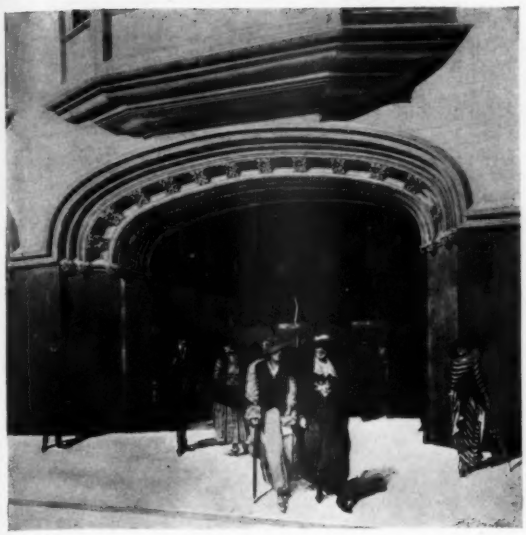
Known as the Arcade Building, it is located on the southwest corner of Eighth and Olive Streets and occupies one-half of the block, excepting the small area occupied by the Wright Building, shown at the left in the perspective. An alley adjoins the property on the west, thus insuring ventilation and quite an amount of light from that side in the lower stories.

The basement and sub-basement were designed to have access to a proposed subway or an entrance from the existing railroad subway now in use in Eighth Street. The sub-basement floor level is 28 ft. below grade and the columns are supported on caissons extending to rock from 70 to 80 feet below grade. These caissons were constructed under air pressure, owing to the nature of the soil, and have a bell-shaped base spread from 7 to 9 feet in diameter. The caissons are reinforced and have a diameter of 6 feet 2½ inches. Where twin columns occurred larger rectangular caissons were used. The columns in the sub-basement are 40 x 40 inches in size, reducing to 12 x 12 inches in the top story.

The girder spans are 21 feet and in general they are 15 x 28 inches in size and generally T-shaped in section. Especial attention was given to the wind bracing, which presented a new problem in construction for buildings of this kind and which will be discussed at a later time. The floor spans vary from 24 to 26 feet, and are of a rib construction made on collapsible wood forms. The floor panel ribs or joists are 6 x 12 inches and splayed or thickened at the ends

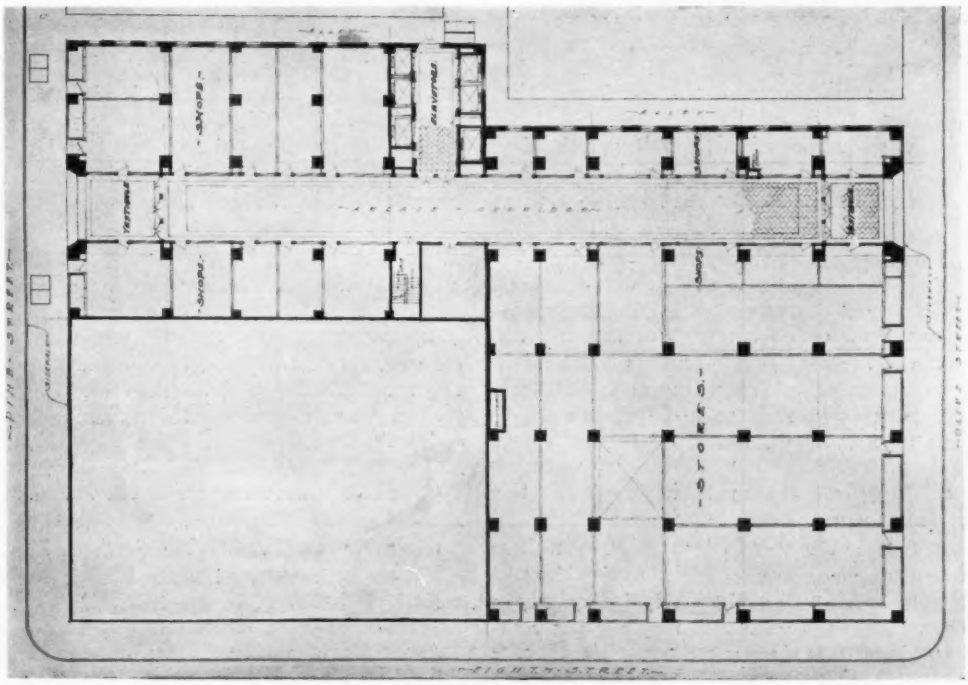
THE ARCADE BUILDING, ST. LOUIS

T. P. BARNETT AND COMPANY, *ARCHITECTS*



THE ENTRANCE

THE ARCADE



FIRST FLOOR PLAN OF THE ARCADE BUILDING, ST. LOUIS

T. P. BARNETT AND COMPANY, *ARCHITECTS*

where they join the girders in order to afford the necessary resistance to shear. The structural floor slab is 2½ inches thick.

The six lower stories are designed for the exclusive use of retail shops with corridor walls designed for show window purposes. The feature of the first and second stories is an arcade 40 feet in height and 238 feet long, extending through the building from Olive to Pine Streets. A balcony extends along the sides of this arcade, and the show windows are framed in marble and bronze. The vaulted ceiling is finished in Caen stone.

The base of the exterior walls is made of polished red Missouri granite and supports the heavily moulded arches of the first story. Above the granite base, the exterior walls are a monotone of gray granite terra-cotta with the upper stories and parapet enriched with grotesques, gargoyles and quarter foils in Gothic detail.

The cost of this enterprise is about $3,000,000. The plans and specifications were prepared by T. P. Barnett and Company, Architects, and the structural designs were made by Fred C. Taxis, Engineer.

The New Standard Fire Tests

THE use of a common basis of measurement affords the only possible means of establishing correct relative values. In some kinds of investigations it is possible to make corrections to reach true comparisons, but usually such a procedure is unsatisfactory. Producers of materials and constructions intended to have fire-resistive qualities have had recourse to private tests as well as those made in various laboratories. As these tests are often made in conformity to the ideas of the individual investigator, the results have not been satisfactory for the reason that they are not comparable to tests made on other materials or constructions tested under different conditions.

Recognizing the necessity of a standard fire test, the Committee on Fire-resistive Construction of the National Fire Protection Association, of which Mr. Ira H. Woolson is chairman, invited the co-operation of the Committee on Fireproofing of the American Society for Testing Materials. These two committees sought the assistance of other organizations that are interested in these matters. This action resulted in two conferences at which the organizations represented were:

Committee on Fire-resistive Construction, N. F. P. A.
Committee on Fireproofing, A. S. T. M.
National Bureau of Standards.
National Board of Fire Underwriters.
Underwriters' Laboratories, Inc.
Assoc. Factory Mutual Fire Insurance Co.'s.
American Institute of Architects.
American Society of Mechanical Engineers.
American Society of Civil Engineers.
Canadian Society of Civil Engineers.
American Concrete Institute.

These conferences included the best qualified technical experts that could be assembled in this country and their recommendations will be acceptable to those having the best interests of the cause at heart. The report of this joint committee was presented to the annual meeting of the National Fire Protection Association at Chicago, May 7-9, 1918, and adopted. The same report will be presented to the other constituent member societies for action.

One of the most important principles adopted by this joint committee is that fire-resisting materials and constructions should be classified into several grades based upon the degree of protection which they would afford when measured by a fire test conducted in accordance with a standard time-temperature curve. It was decided that classifications should be made in terms of "time protection" in agreement with the standard time-temperature control curve. In this way there will be established the classes of materials and constructions which afford "Four-hour Protection," "One-hour Protection" or any other time-temperature protection. The established fire-resistive value of any materials or constructions can thus be interpolated into such classifications as they naturally belong.

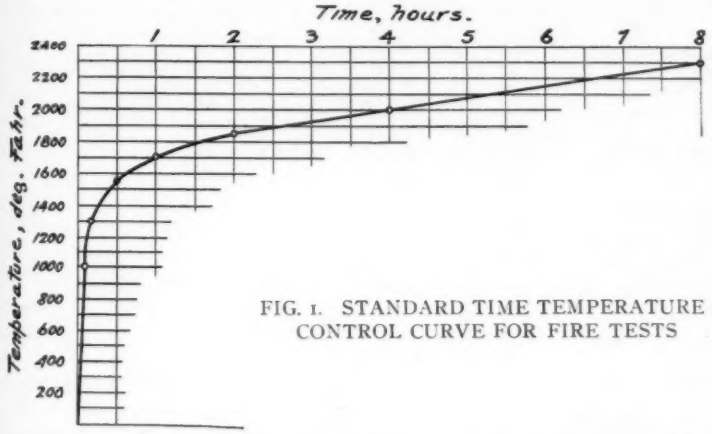


FIG. 1. STANDARD TIME TEMPERATURE CONTROL CURVE FOR FIRE TESTS

The great advantage of this system of classification is that it affords architects and engineers an opportunity to properly balance the parts of a structure based on fire-resistive ability. If a certain type of partition construction is selected, a door of equal fire-resistive merit can be used with it. This has been impossible heretofore, as all standard fire doors were based on a certain extreme test and their required use, under some conditions, was as reasonable as to require all men to wear clothes of uniform size, material and weight; this standard suit of clothes being designed to primarily afford the covering demanded by law and to afford protection from the most extreme cold that might be encountered, without reference to intermediate temperatures. By these means of classification a building can be designed consistently from a fire-resistive standpoint and the adoption of these rules marks an important event in the art of building fire-resistive structures.

The specification and time-temperature control curve are as follows:

Specifications for Standard Fire Tests of Materials and Construction

Control of Fire Tests.

1. The conduct of fire tests of materials and construction shall be controlled by the standard time-temperature control curve shown in Fig. 1. The points on the curve which determine its character are:

1000° F. at 5 minutes,
1300° F. at 10 minutes,
1550° F. at 30 minutes,
1700° F. at 1 hour,
1850° F. at 2 hours,
2000° F. at 4 hours,
2300° F. at 8 hours.

2. The temperature fixed by the curve shall be deemed to be the average true temperature of the furnace gases as obtained from the readings of several thermo-couples (not less than three) symmetrically disposed and distributed in such a manner as to show the temperatures of the gases near all parts of the sample.

3. The temperature shall be read at intervals not exceeding five minutes during the first hour, and thereafter the intervals may be increased to not more than fifteen minutes.

Classification as Determined by Test.

4. Fire-resistive materials and construction shall be classified in accordance with the degree of protection they afford when measured by a fire test conducted in conformity with the standard time-temperature control curve as,

4 hour protection,
2 hour protection,
1 hour protection,
½ hour protection,
¼ hour protection.

Other classes may be interpolated or added as needed.

Test Structures.

5. The test structure may be located at any place where all the necessary facilities for properly conducting the test are provided.

Entire freedom is left to each investigator in the design of his test structure and the nature and use of fuel, so long as the test requirements are met.

Test Sample.

6. The material or construction shall be truly representative of the regular practice.

Loading.

7. For any material or construction intended to carry load other than its own weight at least the full rated safe working load shall be applied during the entire fire test.

Duration of Test.

8. The fire test on the sample with its applied load, if any, shall be either (a) continued till failure occurs, or (b) stopped at the period for which classification is desired, allowed to cool and loaded to failure.

Application of Water.

9. A second and separate test shall be made to determine the effect of a hose stream on a sample under fire test, the water being applied not later than one hour after the beginning of the test.

10. The size of nozzle, water pressure and time of water application shall be indicated in the following table:

Parts of Structure	Type of Protection	Size of Hose Nozzle, in.	Water Pressure at Nozzle, lb.	Time of Application, min.
Floors and Roofs	4 hour	1⅛	50	10
	2 hour	1⅛	50	5
	1 hour	1⅛	50	2.5
Walls, Columns and Partitions	4 hour	1⅛	50	5
	2 hour	1⅛	30	3
	1 hour	1⅛	30	2.5

The hose stream shall be first directed at the middle of the sample and then at all parts of the exposed faces, changes in direction being made slowly.

Floor and Roof Tests

11. For floor and roof tests the sample shall be of such a size that the minimum span of the supporting beams of the floor arch shall be 12 ft., and the supporting beams and girders shall have a clearance of at least 8 in. from the walls of the test structure.

12. The floor may be tested as soon after construction as desired, but within forty days. Artificial drying will be allowed if desired.

13. If the construction is to be plastered in practice, the sample shall be plastered in the same manner.

14. The floor shall be loaded so as to develop in each member of the construction stresses up to the maximum working stress allowed in the material of the member.

15. The test shall not be regarded as successful unless the following conditions are met:

(a) No fire shall have passed through the floor or roof during the test.

(b) The floor or roof shall have safely sustained the full rated safe working load during the test.

(c) After a fire test that has not been carried to failure, or after a combined fire and water test, the floor or roof shall sustain safely the dead load plus at least two and a half times the designed live load applied not less than twenty-four hours nor more than seventy-two hours after the completion of the fire test.

(d) If the fire test has been continued to failure, the failure shall not have occurred within a period of 25 per cent in excess of the period for which classification is desired.

Non-Bearing Partition Test

16. For partition tests the area of the sample shall be not less than 100 sq. ft. and no dimension less than 9 ft.

17. Temperatures on the outer surface of the sample shall be read by thermometers, not less than five, symmetrically disposed and placed against the surface of the sample with their bulbs properly protected against radiation of heat.

18. The distance of the nozzle from the sample during the application of water shall be not more than 20 ft. when the hose stream is applied approximately normal to the surface of the sample, which distance shall be reduced by 1 ft. for each 10 deg. of angle from the normal when the hose stream is applied at an angle to the surface of the sample.

19. The test shall not be regarded as successful unless the following conditions are met:

(a) No fire shall have passed through the partition during the fire test.

(b) Transmission of heat through the sample shall not have been such as to raise the temperature on the outer surface of the sample in excess of 300° Fahr.

(c) Partition must have safely sustained the pressure of the hose stream, in case water was applied.

(d) Partition must not have warped or bulged or disintegrated under the action of the fire or water to such an extent as to be unsafe.

Recommendations for Emergency Housing Construction

TO the annual meeting of the National Fire Protection Association held in Chicago May 7-9, 1918, the Committee on Fire Resistive Construction presented recommendations on Emergency Housing and recommendations for improving the fire protection in existing cantonments and emergency buildings of wooden construction. The recommendations of this committee were accepted. These recommendations were made based on a condition of "war emergency" and are not to be considered as superseding established building regulations prevailing in any district where such regulations require better types of fire-resistive construction.

In general, the height of such dwellings, stores and halls for public assembly are limited to two stories, with cellar or basement. Hospitals and schools should be limited to one story in height. Dwellings, whether single, semi-detached or multiple type apartments, shall have a free or open area of not less than 15 feet from adjoining buildings at the side and not less than 60 feet at the front or rear. Foundation and exterior walls should be built of incombustible materials, except that wood studding may be used above the foundation walls provided it is covered on the exterior with metal lath and plaster, or other incombustible material. Wood roof framing, stud partitions and stud exterior walls should be adequately fire stopped. It is recommended that partitions be covered with metal and plaster or incombustible plaster board. Wood lath and plaster may be used; combustible wall board should not be used. Roof covering should meet the requirements of the Underwriters' Laboratories Class C specifications or better. Unpierced dividing walls of incombustible material not less than 8 inches thick should separate all attached dwellings, extending continuously to the exterior covering of the front and rear walls and from foundation to the underside of roof covering. In rows where combustible roof construction is used, at least every alternate dividing wall should extend 6 inches above the roof.

Areas for housekeeping apartments should not exceed 1200 sq. ft. and where two such apartments occur on the second floor they may be served by one stairway, provided it is covered with metal lath and plaster, plaster board or other equivalent material and enclosed with partitions so protected, to have exit openings to the outside and no openings to the inside of the building except door openings protected by 1½ inch solid, flush, wood, self-closing doors.

Boarding houses, clubhouses and barracks shall not exceed 3000 sq. ft. in area unless divided by 8 in. brick walls or their equivalent. Each such area shall have two exits, one of which from the second story shall be a stairway. Openings in such division walls shall be protected by self-closing chimneys, flues and smokestacks be made in accordance with the standards of the National Board of Fire Underwriters.

Further recommendations are that partitions which serve to sub-divide cantonment buildings into two or more main areas should be made reasonably fire-resistive so as to aid in restricting a fire to the portion of the building in which it originates.

Such partitions should either be built entirely of incombustible material, or metal lath and plaster; plaster board attached to both sides of wooden studding will serve fairly well where better construction is not feasible. If plaster board is used, it should not be less than ½-inch thick, and all joints should be cemented. A thin coat of plaster over the plaster board will greatly increase its efficiency. Metal lath and plaster will make a more dependable covering.

All such partitions should extend to the underside of the roof boards, and a tight joint should be made between them.

In buildings over one story high, the partitions should be adequately fire-stopped at the floor levels.

Such partitions should have no openings, except doorways, all of which should be protected by 1½-inch solid, flush, wood, self-closing doors. Cheap wooden panel doors would offer very little resistance to the passage of fire, and should never be depended upon for such service. Metal, or metal covered doors would be very desirable where conditions are such as to justify the increased expense.

Open interior stairways should not be permitted. They should be fully enclosed with substantial fire-resistive partitions similar to those described for "Dividing Partitions." All stairways should open directly to the outside of the building. Any additional openings to the interior of the building should be protected by 1½-inch solid, flush, wooden, self-closing doors.

Each barrack building over one story high should have at least two stairways as remote from each other as possible. Several severe injuries have already occurred from occupants of two-story cantonment barracks being forced to jump from second story windows because a fire had cut off the single stairway. Connecting corridors between buildings should be provided with substantial fire-resistive cut-off partitions extending at least 3 feet through the roof, and down each side of the corridor. Solid, flush, wooden doors should be provided for the passageway.

In some instances, buildings have been erected around enclosed courts with no direct outlet; these should be provided with openings affording access and exit to opposite sides of the courts.

All ventilator openings should be screened to prevent entrance of sparks.

It is important that all spaces between buildings, particularly those intended for fire breaks, be kept free and clear of all combustible material and additional buildings. There has been a strong tendency in some emergency camps to utilize such spaces for storage of combustible supplies, or refuse, and there has apparently been an irresistible temptation to erect other buildings in these vacant spaces. Such practice should be prohibited.

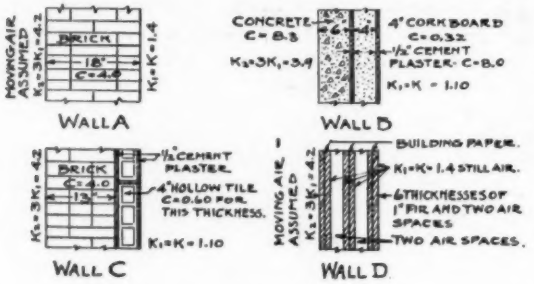
These recommendations are in accord with those mentioned in THE AMERICAN ARCHITECT, March 13, 1918. The results of fires that have occurred in cantonments show conclusively the necessity of better fire protection in their construction and that, with enemy activities and weather conditions favorable, another Augusta, Nashville or Fort Worth conflagration is possible. A condition that makes possible the destruction of the housing of thousands of men in many such units is inexcusable and can be rectified by those in authority.

Heat Transmission of Materials

THE very important and interesting subject of the transmission of heat through building materials is the subject of Bulletin No. 102 issued by the Engineering Experiment Station of the University of Illinois. This Bulletin is written by Mr. A. C. Willard, Professor of Heating and Ventilation, and Mr. L. C. Lichty, Research Fellow, Engineering Experiment Station. The different methods of conducting tests for heat transmission are described and their merits discussed. The tests which form the basis of this bulletin were made by the hot-air box method, the heat in the box being dissipated by means of an electric coil and the electric input measuring the number of British thermal units transmitted. The test boxes were about the height of an ordinary room and supported on small piers, affording air circulation on all sides of the box.

Still air and moving air tests were made, and in order to accomplish the latter, the test box was inclosed in a hooded metal covering into the top of which was introduced an air current by means of a Sirocco multivane fan. The air current was of a constant temperature, velocity and humidity. Comparison was made of the still and moving air tests and the effect of the latter determined.

It was found that for the difference of temperatures common to heating problems that dead air spaces were an important factor in the insulation value of walls. This is not true, however, where high temperatures are involved. Ray and Kreisinger state, in "The Flow of Heat Through Furnace Walls," U. S. Bureau of Mines, Bulletin 8, 1911, that the amount of heat passing through furnace



walls would be reduced if the usual air spaces were filled with brick or preferably with materials of poor conductivity, such as ash, sand or mineral wool. In other words, because of the radiation factor, when heat at low temperatures is to be insulated, use air spaces; when heat is at high temperatures, as in the case of furnace walls, use solids of low conductivity.

To apply the data the following formulæ are used:

Notation:

H = B.t.u. transmitted through one sq. ft. of wall per hour per degree difference of inside and outside temperature.

U = over all transmission coefficient from air inside to air outside in B.t.u. per sq. ft. per hour.

t = inside temperature, degrees Fahr.

t_o = outside temperature, degrees Fahr.

K = wall surface coefficient for still air per 1 deg. Fahr.

K_1 = inside wall surface coefficient per sq. ft. per 1 deg. Fahr.

K_2 = outside wall surface coefficient per sq. ft. per 1 deg. Fahr.

C = coefficient of conductivity per 1 in. thickness per sq. ft. per 1 deg. Fahr.

X = thickness of wall in inches.

Then

$$H = U(t\text{-}t_o) \qquad U = \frac{1}{\frac{1}{K_1}+\frac{1}{K_2}+\frac{X}{C}}$$

For the walls illustrated the data is applied as shown to determine the values for U.

For Wall A

$$U = \frac{1}{\frac{1}{1.40}+\frac{1}{4.2}+\frac{18}{.4}} = 0.18$$

For Wall B (from former tests on plaster $C = 8$)

CO-EFFICIENTS BASED ON HEAT TRANSMISSION TESTS

Material	C per 1" Thickness per Sq. Ft. per 1° F.	K Still Air 1° F.
Brick wall (mortar bond and dry conditions)	4.00	1.40
Concrete, 1 2 4 mixture	8.30	1.30
Wood (fir, one surface finished)	1.00	1.40
Corkboard	0.32	1.25
Magnesia board	0.50	1.45
Glass (actual glass 91.4% of total area)	2.06[1]	2.00
2 in. tile, ½ in. plaster on both surfaces	1.00[2]	1.10
4 in. tile, ½ in. plaster on both surfaces	0.60[2]	1.10
6 in. tile, ½ in. plaster on both surfaces	0.47[2]	1.10
2 in. tile, plastered as above and roofing covered	0.84	1.25
Asbestos board	0.50	1.60
Sheet asbestos	0.30	1.40
Double glass, ½ in. air space (glass 69.3% of total area)	1.56[1 2]	2.00
Roofing	5.30[2]	1.25
Air space	1.00–1.70[2]	....

[1]Per sq. ft. of actual glass set in wood frame but based on total heat transmitted.

[2]For thickness and construction stated, not per 1 in. of thickness.

$$U = \frac{1}{\frac{1}{3.9}+\frac{1}{1.10}+\frac{6}{8.3}+\frac{4}{0.32}+\frac{1}{8.0}} = 0.069$$

For Wall C.

$$U = \frac{1}{\frac{1}{4.2}+\frac{1}{1.10}+\frac{13}{4}+\frac{1}{0.60}} = 0.165$$

For Wall D.

$$U = \frac{1}{\frac{5}{1.4}+\frac{1}{4.2}+\frac{6}{1.0}} = 0.10$$

Factory Lighting Code of State of Wisconsin

Industrial Commission to Make Rules Effective July 1 on New Work and Give Two Years to Bring Existing Work Up to Standard

Work on the factory lighting code of the Industrial Commission of Wisconsin has progressed to such a stage that it is now expected to make it effective on new work after July 1, 1918. If this plan is carried out, existing installations will be required to be brought up to specification within two years after that date.

As the code now stands it makes adequate lighting mandatory. Intensities at the work are specified. The code gives data on what the commission will require as minimum intensities and also gives higher intensities as "recommended practice." These data are based on practice that has been found satisfactory. In its studies the engineering force of the commission has been able to bring out data to show that increased production has resulted from the installation of adequate lighting. Other features of the code are that it makes a provision against glare and also one for uniform distribution. Maintenance of lighting systems is provided for.

Industrial Information

Laces in Interior Decoration

John F. Patching & Company, makers of lace work for interior decorations, 20-24 East 20th Street, New York City, have published a booklet entitled "Lace Work in the Field of Decoration." This book is fully and beautifully illustrated with examples of different kinds of laces and with photographs of interiors in which the lace decoration plays an inportant part.

The value and, in fact, the need of laces and what they represent esthetically, indicated from the photographs, is amplified in the text by Mr. John F. Patching. Some hint of the craftsmanship involved in the making of lace is also to be found in this monograph, as well as the part which art plays in the trade, while the whole book in its composite form serves to bring to mind the large place in the decorative scheme of things which might be filled by this product.

Concrete in Shipbuilding

The Portland Cement Association, which maintains offices in a number of the principal cities, is publishing bulletins from time to time which are full of useful and valuable information. Their most recent publication deals with concrete ship construction. It contains a large number of photographs of the work being done in the French concrete shipbuilding yards, including construction photographs taken at various stages of the work. The views of a number of prominent people on the subject of the concrete ship are presented in reprints at the end of the bulletin, showing the trend of public opinion in regard to this issue.

Weir Heaters

Weir heaters are manufactured by the Meyer Furnace Company, Peoria, Illinois. There are warm air furnaces for coal, coke, gas, wood or lignite. They are of various types and sizes, some being portable, others brick-set. There is the Weir wood heater, combination heater, the circulating room heater, the New Peoria room heater, a new Peoria furnace, and a natural gas burner. In the company's literature on the subject full information is given regarding these products, and there is also to be found a large amount of useful information regarding heating and heating systems, which should be of value to the architect.

"Doorways" for May

"Doors that Interfere" is the subject of a very practical article published in the May issue of *Doorways,* the house organ of the Richards-Wilcox Company, Aurora, Illinois. In this discussion various methods are presented whereby the inconveniences of doors which obstruct each other can be eliminated. In most cases the remedies are effected by the use of sliding doors, which make possible the installation of Richards-Wilcox sliding door hardware.

"The Valve World"

The Crane Company, 836 South Michigan Avenue, Chicago, Illinois, to judge from its house organ, *The Valve World,* is doing most valuable patriotic service in the spirit which it is encouraging among its employees. In the issue for May the various patriotic activities carried on through the month are described in some detail, and it is announced that beginning with the June issue a war supplement will be published with each number of *The Valve World.*

Fences

Various kinds of fences are manufactured by the Anchor Post Iron Works, 165 Broadway, New York City. The range of these products extends from the most ornamental lawn and garden fences to thoroughly practical, utilitarian varieties for poultry and kennel yards, factory fences and the like. The catalog issued by this company on the subject contains photographs showing the varied uses to which this fencing can be put, and shows also some of the special products which they manufacture, such as wrought iron garden and driveway gates, vine arbors, trellises, lawn guards, automatic driveway gates, tree guards, etc.

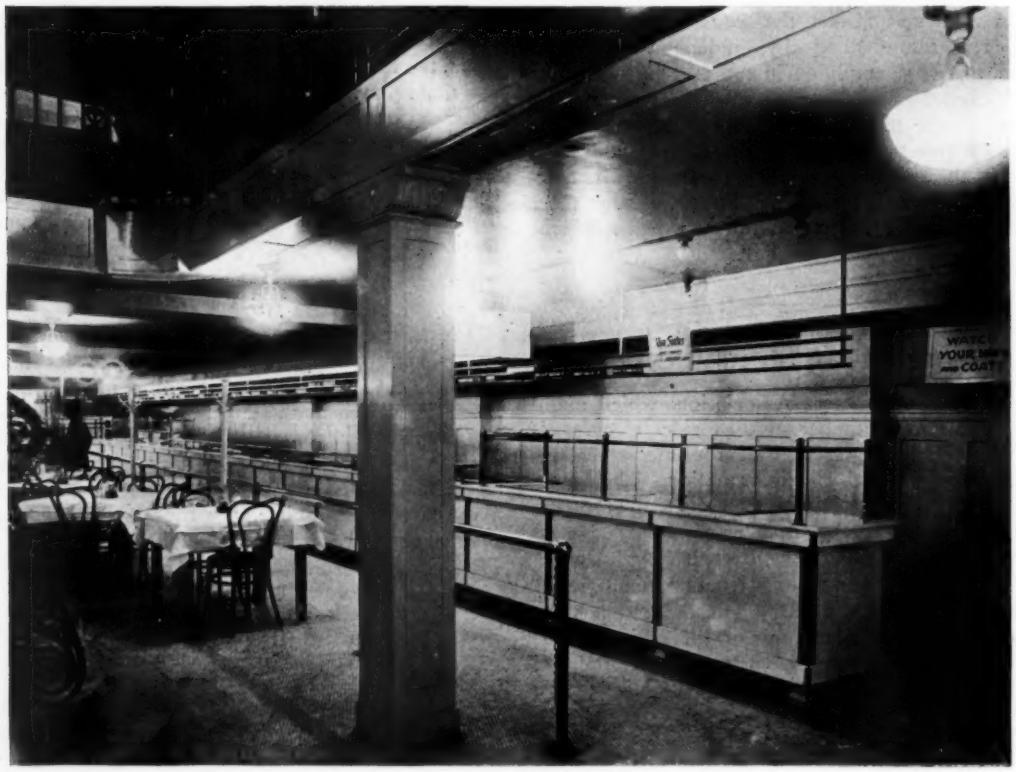
Art Wood Stains

The Marietta Paint & Color Company, Marietta, Ohio, issues a booklet on wood stains and fillers. The advantages of the Marietta stains are set forth in the first part of the booklet, while the last few pages are given over to a description of their other products, namely, Spartanite enamels, house paint, wall paint, and a paste filler. Sample panels of the company's products may be had upon request.

Concrete in Industrial Housing

"Alpha Aids" is the title of a very helpful bulletin issued by the Alpha Portland Cement Company, Easton, Pa. An article on industrial housing problems by Leslie H. Allen of the Aberthaw Construction Company contains an admirable summing up of present conditions, of essential housing needs, and of the methods employed at the present time in meeting the demand for housing.

"Building 100 Houses as One Job" is a discussion of the concrete operations undertaken for the American Steel & Wire Company at Donora, Pa., by the Aberthaw Construction Company. This material is fully illustrated with photographs and plans, and shows admirably what results can be obtained with concrete. Accompanying this bulletin is a supplement of suggestions on small houses which contains plans, elevations and construction details of small houses suitable for industrial workers.



SERVICE EQUIPMENT

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PIAZZA OF ST. PETER'S, ROME