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MAY
1925
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SIR EDWIN LANDSEER LUTYENS
Awarded 1924 Medal

BERTRAM GROSVENOR GOODHUE
Posthumously Awarded 1925 Medal

GOLD MEDALISTS OF AMERICAN INSTITUTE OF ARCHITECTS
ARCHITECTURE has given America efficient and beautiful buildings. Its next task is to create with these buildings beautiful and efficient cities. The ideal of finer cities is no longer visionary, but has become a stern necessity under the pressure of the industrial age, which is slowly forcing the people to demand surroundings where they may live and work in comfort and in reason and under the inspiration of beauty. This need the American architect must be ready to meet.

This is the significant truth which seemed to animate the annual Convention of the American Institute of Architects, held in New York in this the closing year of the first quarter of the twentieth century. President Waid in his opening address thus eloquently called the attention of architects to the situation:

"If it is a fact that great cities in this country are going mad with a craze for lofty buildings and canyon-like streets filled with choking gases; if it is true that masses of great buildings are a maw full of human beings out of all reasonable relation to horizontal transportation, architects should understand the danger and be the first to give sane warnings. If Commissions report great masses of poorer people living in out-of-date, unsanitary dwellings left to them by more fortunate people who refuse to live in such places, and pronounce the problem of housing for wage earners an impossible problem, should our profession sit supinely by and agree that cheap new houses for the laboring class are impossible? No, I believe that architects will make cheap houses for workingmen entirely possible.

"Architects should be thinking of underlying problems, finding solutions for them and be moulding public sentiment by imparting a knowledge of the best that history and culture and good taste can contribute for the future welfare of the race."

Mr. Waid's noble appeal was fittingly uttered in the central hall of the Exposition of Architecture and the Allied Arts, where sat the Institute "in convention assembled." Looking down from the walls on the Convention was a glorious array of beautiful buildings, the "White City" of 1925. They seemed to cast a glamour over the proceedings. More than any one thing, the Exposition brought home to all who beheld it a profound realization of the power and beauty of American architecture. Not only the architects felt its influence, for others among the public, the press and representatives of the building industry who were gathered there, noticed it also, and as if to reinforce these words of the President, the Exposition pointed silently to the future and what it holds.

And what a remarkable progress did the Exposition record! Here, on the walls of the Grand Central Palace, in actual buildings, was realized the vision of the White City of Chi-
The Principal Side of the Court of Honor in Front of Entrance to Main Stairway

cago of 1893. The vision, which then was born in lath and plaster in one kind of building, the monumental type, has, in a little more than 30 years, spread to every sort of structure in permanent and enduring materials. It proved that in less than 50 years the American architect has wrought a revolution. Here is a complete new architecture developed, an architecture comprising all sorts of buildings—domestic, business, industrial, institutional and public, suitable for city, town, village and countryside. In architectural grasp of reality, the comparison with work done 50 years ago marks the difference between the student's school project and the work of the practicing architect many years later.

The Exposition bore witness that the first quarter of the twentieth century, just closing, has been a period of preparation, in which the architect has taken in hand every type of building known to the contractor and speculator in the nineteenth century—the home, the school, the church, the public office, the institution, the store, shop, skyscraper, railroad station, club, theater, warehouse and factory—and has transformed it, making it over to the last detail, planning it more efficiently, cutting out from it areas of costly waste space, as a surgeon removes a cancer, constructing it more soundly and durably, and—finer still—making it more human and more beautiful. It was as if the architect, in this evolution, had created a marvelous new mechanism of buildings, intricate beyond anything known before, yet practical and perfected, but as if, still unsatisfied with a bare display of technical skill, he had thought to give it poetry. He has opened the floodgates of art upon all this machinery which he and his band of experts had invented, letting a full tide of beauty sweep over the ugly, dreaded machines until they "had suffered a sea-change into something rich and strange." In subduing Caliban to the rule of beauty and of reason, the architect has wrought to vindicate and to express our age.

Only one further demonstration of the architectural revolution could be made, not possible in this exhibit, and that is an historical record showing by comparison the progress made in American architecture. Such an exhibit would display each perfected type of architects' building of to-day side by side with its predecessor of 50 years ago—ugly, inefficient, poorly constructed, ill-equipped—the new with the old. The comparison would include a thorough statistical analysis of the economy which the architect has brought in plan, function and construction. The demonstration would astonish architects as well as the public. Perhaps in the next exposition such an educational record will be shown.

For the success of the Exposition, the Institute has to thank Howard Greenley, who conceived its splendid decorative scheme, and who carried it to execution in a colossal effect which dazzled all beholders. Mr. Greenley has, in the course of years, through long experience gained in staging the exhibitions of the Architectural League of New York and numerous other exhibitions—especially the "Silk Show"—developed a technique of the art of arranging exhibitions which is a real contribution to American art. In this exhibit, greater than anything known in architectural exhibitions in this country, Mr. Greenley's technique came to fruition.

South-End of the Court of Honor
He wrought a complete new interior in the Grand Central Palace, changing it into an art gallery for architecture designed on architectural lines, and he filled it with architectural paintings, drawings and photographs, and combined these with exhibits of other arts and of the building material trades, but making the architecture dominate all, in a simple, overwhelming effect. In this effect the fine decorations made by J. Monroe Hewlett played an important part, particularly that splendid group of colossal tapestries which enclosed the upper part of the central hall in a frieze, and which was lent to the Exposition through the courtesy of a resident of Newport. In a word, this Exposition of Architecture succeeded in giving an effect most difficult and illusive—an effect colorful, interesting and monumental. From the point of view of the impression made on the public, too much praise cannot be given to those responsible for its success.

Will the second quarter-century carry forward this architecture of wonderful buildings toward the goal of beautiful, modern cities? Transcendent opportunity, such as comes but a few times to architecture in history, places a huge responsibility upon the architect. To temper the exaggerations which were caused by the nineteenth century revolutions in science, economics and politics, which still wrack our feverish modern society—how can this be done better than by giving the people beautiful cities in which they may live and work in comfort and in reason? If architects will but realize it, a large part of the future progress and development of civilization rests entirely in their hands.

There is another significant fact about this Exposition. It goes far to prove that the impression that the architect does not control the design of buildings in this country, is wrong. Not only the visible evidence of the Exposition, but statistics appear to bear out the fact. Expressed in terms of money value, the architect now controls the design of the majority of all buildings costing over $5,000. Below that figure of cost the architect finds it difficult to operate, but the Small House Service Bureau is making progress in opening up a vast new field in low cost construction, which has seemed the most hopeless problem in present-day architecture.

The evidence of this Exposition, backed up by statistical facts, establishes the position of the architect beyond all doubt and question. How it demolishes the pessimism found in some circles, where the impression prevails that architects control the design of only a small portion of American buildings! Only a year ago, on the floor of the Institute Convention, the figure was asserted to be about 5 per cent, whereas it is probably well over 50 per cent, if not 70! Let us trust that this proof of progress will quiet the last echo of the unfortunate "post-war" agitation in the profession. Those who fought that pessimism five years ago are now vindicated, and no more will architects listen to any diagnosis of the ills of architecture which threatens the end of the patient!

Too much significance cannot be attached to this evidence of progress. It marks out more clearly our future path. That direction seems to be, since quantity has been attained, that we must now seek quality—the new White City. More significant
still, it changes the old relation of the architect to his public. Gone is the theory that the rich patron is his sole support. Today architecture is something more than a luxury, a plaything of the rich, and no longer is the architect dependent solely on the favor of some powerful personage in private or public life. Architecture is at last becoming a democratic art, and it must hold the favor and gain the interest of democracy if it is to succeed.

Thirty years ago this situation would have seemed visionary indeed. It is said that Stanford White advised Edward Bok, the editor, that Bok's scheme to raise the standard of American taste by a campaign of publicity of small house architecture in the Ladies' Home Journal was impossible. Later, however, White was glad to admit that he was mistaken. At the Convention, President Waid called attention to our ugly cities, and he was quoted with approval in editorials in the New York press, whereas ten years ago he might have aroused resentment.

This new demand—the public be pleased—will undoubtedly govern the future. It will call for new policies and for renewed progress. The American Institute of Architects must be as favorably known to the public and to its leaders as are the American Medical Association and the American Bar Association. There is required a new impetus to the program of the Institute for establishing better relations with the public. The program should be pursued with vigor, through the various channels of education and publicity open to the Institute. The importance of this work was emphasized at the Convention in the reports of the Committees on Education and Public Information and City Planning, and in the conferences which were held by representatives of the Architects' Small House Service Bureau from all parts of the country.

This popularity of democratic architecture is rare, if not entirely new, in the history of architecture, bringing its heavy responsibility as well as its dangers. One recalls the episode of the building of the Parthenon, when a public agitation arose over the letting of the contracts. Phidias' honesty was attacked by a faction apparently anxious (so 'tis written) to "get" Pericles; the statesman who was the Roosevelt of his time. It is even said that Goodhue's death was hastened by a similar situation, which, however was smoothed over, but not before it was too late. Democracy will be an exacting patron, and it is said to be fickle as well; but if we be honest we must admit that it is probably no more so than the aristocrat or the plutocrat. Recall the experience of Michaelangelo with his commission for the Medici tombs, by which he was made the victim of a series of intrigues and lost what otherwise would have been his most produc-
tive years. The point is that democracy will demand from architecture the same progress, the same inspiration and the same leadership that it does from education, science and the Church. Whenever, as sometimes with the Church, this leadership falters, democracy turns elsewhere.

In this program for the future, one purpose must be foremost—always higher standards. Mr. Waid gave a clear warning of danger in his address. Architects must not allow themselves to be swamped by quantity, and they should never think that democratic architecture means a poor, cheap architecture. Democracy will not tolerate poor service long. Democracy expects leadership from the profession, and she is quite willing to pay the price when she understands the value of the services rendered. Think of the example set by the men of the medical profession, who have long served the public in private practice, hospital and clinic, and who, not satisfied with that achievement, have created in the course of years a whole new profession of sanitation and of public health which clamps down on the public a thousand restrictions which the public willingly regards. The architect has the same opportunity, and, in designing the new city, he may perchance receive more aid from the man in the street, who must live in the city and who must bear the burden of its ugliness, than he will from the rich patron who can easily and readily escape from it.

Other cities should be rescued from the fate which is slowly overtaking New York, beginning in the lower half of Manhattan Island. There today people occupy and work in buildings which are the most costly and mechanically perfect ever known in the world, yet which do not receive daylight. Many people work under lamplight most of the day, then travel under ground the remainder of the daylight hours, to sleep in the rear rooms of tall apartments, overlooking yards and courts which are so small in proportion to the extraordinary height of the building that they might as well be at the bottom of a mine shaft so far as those two fundamentals of daylight and fresh air are concerned. What an absurdity is this! What progress architecturally does this condition show over the condition of the cave dwellers? Man is not a burrowing animal, and the greatest work of architecture in city planning must be to restore to people daylight and fresh air as well as recreation space and a sight of growing things. When you think of it, these necessities of daylight and garden have been, next to shelter and convenience, the two blessings which architecture throughout history has struggled to procure for mankind. It is the growth of this congestion in cities which will force city planning; and be sure that the people will hail the leader who
conducts them from out of the bowels of the earth. In this great task it is essential to realize that, no matter what form the development may take, the artistic purpose must be kept foremost, because only insofar as he is an artist can the architect hope to maintain his control over the design of buildings. Another set of technical experts might be as practical as he, but only an artist can make buildings and cities attractively human. This means, on the part of the architect, the artistic mastery of the use of building materials, to be had by working in cooperation with craftsmen and with manufacturers of building materials to adapt the historic traditions of architecture to new conditions.

To this artistic side of professional service should be added the support brought by higher standards pertaining to the many practical sides of the profession—in construction, organization, administration and in the cooperation of the architect with industry. Preéminent among these standards is the obligation of maintaining integrity, of respect for the laws, and for fellow architects. The promulgation in the Convention of the new Canon of Ethics, enforcing observance of the registration laws, was commendable. All these advances are necessary for progress, but they require long experience to be determined and applied for the best interests of all. They form the groundwork of progress, but they are not spectacular, and the Institute does not, I think, receive enough credit for them. One should but think back to the chaotic condition in the building industry 30 years ago, before the architect aided in restoring order, to realize how essential they are. At the Convention, city planning was a constant theme. Concurrent with the sessions of the Institute, including two joint sessions and sharing in the Exposition, there was held the Convention of the International Council of City Planners. The close cooperation between the two bodies, the exchange of views, the emphasis on city planning as the architect's work, given point by the announcements of the vast plan for New York and of the still vaster Regional Plan of New York state—all these ideas and events added inspiration to the week. A multitude of fellow artists and experts and their organizations shared in the gathering, to name all of whom would sound like a roster of the national defense which it is—the defense of art. Particularly pleasing features were the large gathering of foreign visitors and the evening reception at the Metropolitan Museum of Art at which the Institute's 1925 gold medal was presented to Sir Edwin Landseer Lutyens, and a similar award made posthumously to Bertram Grosvenor Goodhue.

All this promise of the future which was so inspiringly recorded at New York, in Convention and in Exposition, will require for fulfillment the cooperation of every practicing architect and every recruit from the schools. Architects have secured, or at least in a very few years they will secure, the quantity control of building design. But progress lies in the sphere of quality, and they have only begun to approach the field of social usefulness—the city of the future, which is the vastest field of all.
The International City and Regional Planning Conference

By CHARLES DOWNING LAY

THE International City and Regional Planning Conference, held in New York April 20 to 24 inclusive, was a successful and inspiring meeting of eminent men, and it will long be noteworthy in the history of town planning. The Conference was organized by the International Federation for Town and Country Planning and Garden Cities, and our own National Conference on City Planning. The list of societies participating gives a vivid conception of the strength and vitality of the city planning movement, since all have a professional interest in the subject, and look with confidence to the day when forethought will replace accident or greed in the planning of cities. These societies include the American City Planning Institute; American Institute of Architects, City Planning Division; American Society of Civil Engineers; American Society of Landscape Architects; National Association of Real Estate Boards; American Institute of Consulting Engineers; American Association of Engineers; American Civic Association; National Automobile Chamber of Commerce; American Society for Municipal Improvement; National Housing Association, and the New York State Commission on Housing and Regional Planning. It was a gathering truly representative.

Though all the conferees look forward to better city planning, their opinions on the subject were as varied as their interests. There were some who considered the traffic problems of cities as of chief importance, and they were divided in their interests between the control of traffic in existing cities and the planning of future cities for a traffic which no one can now estimate. Noulan Couchon, of Ottawa, spoke of the necessity of making a fresh start, discarding our old lot and block system for something better, which he thinks will be a hexagonal block with interior courts. The zig-zag avenues of this plan, all of equal importance, will permit a change of direction on a 120° angle instead of the sharper right angle, and this will tend toward the reduction of danger of collisions at corners. Other speakers were interested in freight transportation, which now clutters our city streets; still others were concerned with super-highways, which give high speed roadways with no grade crossings, thus relieving city streets of through traffic. Platting or site planning was discussed by Prof. Pedersen of Trondhjem, Norway, who was followed by Philip Nichols of Boston and by Frank B. Williams of New York, experts on the legal control of street layouts and other city problems. Those interested in the social aspect of city planning, which was in the thoughts of all, were most concerned with the amenities interesting to the British delegates, who are always for distribution, de-centralization, garden cities and other schemes which appeal to sentiment. There were none to raise their voices and to sing a pean for the modern city itself, which, aside from occupying their thoughts for the moment, made it possible for them all to meet. The value of the airplane surveys for preliminary studies of the city plan and the possible necessity of having airplane landings in the modern city were fully expounded.

The great event of the Conference was the Wednesday evening meeting, held in conjunction with the Association for the Regional Plan of New York, at which Col. W. J. Wilgus read his paper on "Transportation in the New York Region," which considered all transportation of goods and people, whether by water, railroad, or highway. The plan proposes a complete reorganization of railroad tracks and terminals throughout the region. They will be arranged so that freight which now passes through the city will go around it on one of two belt lines. Freight in less than carloads will be handled in freight subways from the railroad yard to its destination at the door of the consignee. Many passenger terminals are proposed, giving better distribution and greater convenience, especially when linked with the unified suburban rapid transit system as proposed by D. L. Turner. More startling, though no more revolutionary, is the proposal to run a causeway from Rockaway Point to Sandy Hook, thus enclosing the lower bay except for an opening at the channel, where the railroads and highways would be carried under the channel in tunnels. This causeway, besides giving a location for the belt line railway and highway, would provide many miles of new beach and seaside parks, which, because of the intimate relation of railway and highway and beach, would be easily accessible to all in the region. Filling in parts of the lower bay to provide more land for parks or for industrial and business or residential uses, though not considered in the report, would be a consequence of building the causeway.

As Col. Wilgus says in his summary, unification of all transportation and planning for transportation in the whole area is the only hope, and to deny the possibility of this is to deny our capacity for self-government. As the railroad is responsible for the existence of our great city, it is clearly the function of the city to control the railroad in order that its reasonable and healthy growth may not be interfered with. Col. Wilgus' studies set us a long way forward toward the time of unified control, for he has vision to see that all these things involve a valuable by-product in creation of usable areas, in the reduction of costs, in greater convenience, and in the individual's liberty to pursue health and happiness; all of which justifies their great cost to the public.

A joint session with the American Institute of
Architects concerned itself with the relation of the architect as designer of buildings to the city plan, and the restrictions on building which are part of the plan. Sullivan W. Jones, State Architect, and Clarence S. Stein, Chairman of the New York State Commission on Housing and Regional Planning, spoke of the need for planning both in city and state. There were on exhibition in the meeting room charts and maps prepared by this Commission, showing graphically and by statistics the physiography, agriculture, industry and distribution of population in New York state. The inter-relations of these factors in the planning of the state were made clear, so that the conclusions were obvious.

A morning conference was devoted to "Zoning in Practice," at which Edward M. Bassett of New York led the discussion. Zoning is one of the greatest accomplishments yet made in city planning, and it has been managed so skillfully that the law has won the approval of everyone. It is remarkable that a revolution of such tremendous importance has been put through without conflict, and almost without dissent. Architects accept it gladly, knowing that its limitations do not make the designing of a building more difficult; real estate owners welcome it for its protection, and stabilization of values, and all see in it a reasonable control of individual activity for the benefit of all. Artistically it has had a great, but unexpected influence. We see now that the cornice line required by the height restriction gives unity to all the buildings on a block or on an avenue, and that the set-back privilege allowed above the cornice gives a chance for the delightful and imaginative arrangement of towers and of pyramidal groupings which has added much to the beauty of the city. The benefit is already apparent.

There was, it seemed throughout the Conference, a clear division between those who think of the city as something to make excuses for, who think of it as a great behemoth devouring the innocent and playful children of the fields and the countryside, and those who see in it the faults of any new organization, but who look forward to perfecting the machine. The excusers are always proposing means to restrict its growth, to distribute its people and its industries, and to return to a more primitive kind of life. They see the suffering of many people; they feel annoyed and inconvenienced by its crowding, and they would, it seems, like to end it all, turning the clock back to, say, 1830. How this is to be accomplished, they do not tell us. The defenders of the city, being less sentimental and more forward-looking, see the modern city as the natural result of industrialization, made possible by steam and electric railroad transportation, and fostered in its growth by all the later applications of power to human affairs. The oldest modern city is hardly more than a century old, and its greatest growth has been during the last 40 years. It is ridiculous, they think, to suppose that the cruelty, hardship and inconvenience inevitable to such rapid growth cannot be remedied during the next 40 years. They would make the city greater and greater in size, more perfectly adapted to the needs of working people, and they resent any suggestion of limiting its size.

The characteristic delights of the city, which are to be found in the lively, crowded highways and in the formal squares and parks, without any suggestion of the real country, are as real, they claim, as those of the country, though different in kind. They look with equanimity on the time when most of the people will live in cities, going forth from them to work in the fields, and to the time when large areas of the country will return to their primitive forested conditions. Their love for the city seems to be shared by nearly ten million people in this region, who make no effort to leave, but who are all the time demanding more of the city in convenient living and easy transportation. Besides this, they gladly pay every year more for the benefits which it gives.
ARCHITECTS AND TOWN PLANNERS IN JOINT SESSION LAST NIGHT

ROBERT D. KOHN INTRODUCES DISTINGUISHED EUROPEAN AND AMERICAN SPEAKERS

The Tuesday evening session of the A. I. A. Convention was given over to a consideration of city and regional planning with particular stress laid on the architect's logical interest in this subject and seasons for close cooperation between architects and city planners.

The evening session was opened with Robert D. Kohn presiding and was a joint meeting of the Institute Committee on Community Planning, of which Clarence S. Stein is Chairman, and the Architectural League Regional Planning Conference which is being held in annual convention this week in New York at the Hotel Pennsylvania where over 200 city planners are representing American and foreign cities.

It will be remembered that a very interesting annual meeting of the International City and Regional Planning Conference was held in Amsterdam last year attended by city and regional planners from practically every country in the world. The result of such conferences has been a great stimulation of intelligent planning in cities and towns and entire districts and has led to a comprehensive study of the economic value of planning and controlling urban growth, both in physical plan and through zoning and kindred restrictions.

It is basic natural that the architect should be deeply interested in each work not only because of its value to the community but because it establishes the once a demand for good architecture for all types of buildings. The fact is that perhaps few of the times that whatever have been developed in recent years have had much influence.

The city is marked by the city and the country it is planned for.

A fine draftsmen are naturally divided into the two groups, A. I. A. and the Architectural League, and the meeting of the evening was arranged for the...
TUESDAY LUNCHEON A HUGE SUCCESS

Capacity Crowd Hears Pite and Howard

The ballroom at the Hotel Roosevelt was packed to accommodate the num-
ber of architects and their guests at-
tending the first architectural luncheon of Convention Week. The TUESDAY lunc-
cheon committee, consisting of Walter D. Blair, Fred Matthesen, bowor
Phelps, A. Jacobson, and A. Steuart Walker, deserve great credit for the in-
teresting speakers and detailed arrange-
ments provided.

After the luncheon, the tables cleared, President Waid rapped for atten-
tion and gave out a few notices in regard to the Wednesday and Thurs-
day luncheons plans for the women's for-
ums and the arrangements for the after-
once tour around Manhattan Island.

He then spoke on the un-
expected and unfortunate absence of Mr. William Howard Taft.

Mr. Barber's letter extended a hearty welcome to all the dele-
gates, members and guests, and ex-
pressed his keen disappo-
tment in not being able to appear in person to greet them and wish them an
enjoyable visit in our "big village."

The ballroom at the Hotel was packed to accommodate ber of architects and their tending the first architectural of Phelps, H. A. Jacobs and A. Stewart Walker, deserve great credit for the m terreresting speakers delick lunch con provided

After coffee tables cleared tor attention an in regard to the Wednesday day luncheon plans for the tors and the ... Ness ot Chairman, Convention whem all the arrangements for tertainment of the out-of-town had most painstakingly and suc

The Architect's Opportunity

"When one starts with the community a whole instead of the par-
ter of land or owner, it is possible to
make up the cost of a building are be-

TUESDAY LUNCHEON

A HUGE SUCCESS

A. L. A. CONVENTION DAILY, WEDNESDAY, APRIL 22, 1925

by an indifferent structure. Columbus Circle is an excellent example of this.

"The architect has to gain from the forces of imertia, forces that are heaping more

Architects At Home Today

The following will be "At Home" 2 to 4 P. M.: Donn Barber, 101 Park Avenue. Grosvenor Atterbury, 139 East 53rd Street. Carrere & Hastings, 52 Vanderbilt Avenue.

LADIES PROMINENT

LADIES PROMINENT IN DAY'S CALENDAR OF SOCIAL EVENTS

Mrs. J. R. Gordon and Mrs. Plea-
ants Pennington Hostesses

The business session at the Palmer will be taken up with reports of the A. I. A.

Draftsmen will be the guests of the
to the luncheon, to be presided over by Harvey W. Corbett. Hugh Ferris, Scott Williams, H. Van Buren Ma-
gonigle, and Kenneth M. Marchand are among those expected to make the dis-
fressures, the winners of the Octagon Competition will be announced.

At the afternoon session, which will be held at The Roosevelt, talks will be given by Professor D. C. Milled and Dr. Arie Keppel.

Ladies Active in Day's Doings

At the Roosevelt luncheon Mrs. J. R. Gordon, assisted by a committee of executive women, will preside. Mrs. Pennington will give a tea for the women and a tour of the new Union League Club, 133 East 64th Street. Mrs. Pennington and Mrs. Pennington will act as hostesses.

Ladies and gentlemen are looking for ward eagerly to the theatre party sched-
uled for later in the afternoon. Miss Fiske has taken over the entire theatre for the entertainment of the members of the A. I. A., and much gaiety is expected to develop in the course of the evening.

Mr. and Mrs. Delano to Entertain

All the delegates to the Convention and their ladies are invited by Mr. and Mrs. Delano, 14th East 28th Street, telephone 25, to an entertainment on Thursday evening, 7:30 to 9:30, with dancing. Mr. and Mrs. Delano, who have been in this city all week-end, give frequent entertainment and are known for their hospitality to the architectural profession.

Unfortunately, due to the vast number of activities and in order to save space, only a few notices could be published in the Conven-
tion Daily. All the information will be forwarded to the Daily Editor, care of A. L. A. Conven-
tion Daily, 5547. Fifth Avenue.
Exclusive Photos of Convention Notables

More Will Be Published Tomorrow

(Left to right) Abram Garfield, Cleveland; E. J. Russell, St. Louis; Alfred Grainger, Chicago; C. H. Walcott, Chicago; George D. Mason, Detroit

(Left to right) Hugh Martin, Birmingham; Mr. and Mrs. William F. Warren, Birmingham; A. Ten Eyck Brown, Atlanta

Guy Lowell, Boston

Charles Z. Klauder, Philadelphia; Eliel Saarinen, Chicago; Irving K. Pond, Chicago; Professor Beresford Pite, England

William L. Steele, Sioux City

William A. Delano, New York; Ellis F. Jackson, Providence; E. B. Green, Buffalo; (Top row, from left to right) Roger Gilman, Providence; F. Y. Jones, New York

(Left to right) Franklin J. Kidd, Buffalo; Louis Gromestein, Buffalo; H. F. Hedson, Buffalo
TOWN PLANNING AND LANDSCAPE EXHIBITS IMPRESSIVE FEATURE

Beautiful Examples Shown of This Important Work

The impressive exhibits made by the town and city planning group at the Exposition of Architecture and Allied Arts prove that the public is quite aware of the importance of the work which they do as well. Photographic work and in miscellaneous instances actual models, show what has been planned for towns in all parts of the world. From England, for example, comes an impressive plan for the development of “Greater London”; Leeds and Bombay have likewise engaged the attention of town planners; and Paris and Hufaz, the one devastated by war and the other ravaged by fire, have been rebuilt and will be rebuilt upon improved lines. To come nearer home these important changes prove to be relieving the congestion of downtown Boston. An other recent work is one of the Boston suburbs planned by J. W.冯 (Appleton, in connection with a memorial bridge at Springfield, designed by the late Charles Willard Leavitt, and the beautiful layout at the Cooper River Park. The third of these exhibits is shown here by Charles Willford Leavitt & Sons. The site of the latter’s plans have been drawn, including (among others) the central city in all of part of the upper bay and the East River, to greatly strengthen the area—a large scheme, if it be true, but probably not as vast as so many undertaking for New York in this day as the filling in of the Rock Bay was for Boston some decades ago.

The Exposition is rich in its exhibits of what is regarded as the landscape architecture proper. No better work in this field has been done than that for Boston’s park system, work which transitionally excels in every possible system of great beauty; other fine work is done at Grand Rapids, Chicago, where landscape architecture has been carried out by the eminent man of flat Illinois prairie. Both these achievements are a part of a great southern development. Landscape architecture, which so far as America is concerned, has been best. From many cities have come exhibits of work which is typical of the great achievement which architecture place upon the work of the landscape architect. Chicago is a city which has been developed by a large group, the exhibit of the Union is composed of handsome buildings and landscapes. It is particularly important that those who wish to take this trip leave word at the Convention information desk, as it is most probable, or any of the following members of the Thursday Committee: Livingston Mall, Stowe Phelps, Edward Tilton, John A. Teindle, Stephen F. Voorhees.

Women’s Work

TOWN PLANNING AND LANDSCAPE EXHIBITS IMPRESSIVE FEATURE

OFFICIAL NOTICES

Partial List of Attending Delegates

Alabama
Frederic Biggin
Hugh Martin
Salle J. King

Arkansas
Eugene J. Steer

Baltimore
Laurence Hall Fowler
Walter M. Griswold

Boston
Harry J. Carroll
Charles Collins
Gordon Allen
Frank A. Bourne
William Stanley Parker
Arthur Waller Kin
Ralph T. Jackson
Vince E. Anderson
Miss Eleanor Manning
Hubert G. Holley
Frances A. Roussan

Brooklyn
William P. Conover
Alexander Macintosh
Frank H. Quinley
William H. Cumbert
John E. Sibley

Buffalo
Will Allan Cameron
Louis Tarrington
Franklin J. Kold
Simon D. Mann
Paul F. Mass

Central Illinois
Rester Newcomb
L. H. Meehan

Chicago
Charles Henry Conrad
George Roethlingshler
Charles R. Neaverson

Pierre Blaude
J. C. Rollsenberger
Howard L. Davidson
E. C. Neaverson

Edwin F. Peters
Alfred H. Granger
Henry K. Holman
Herman T. Young
Richard B. Schmidt
Howard Van Doren Shaw
Robert L. Reardon
Chester H. Westcott

Connecticut
H. Story Granger
Charles H. Loomis
Delbert R. Perry

Dayton, O.
Pere M. Mabron
Harry J. Schenck
Harry J. Williams

Florida
Harry Francis Carman
H. J. Kletos

Georgia
A. Tom Eay Brown
Flippin David Burge
A. Neal Robinson

Indiana
Herbert W. Paul
Merrin Harrison

Iowa
William L. Strong
William J. Brown

Kansas
Goldie Goldsmith
Paul Weigall

Kentucky
Ernest Brostom
Edward K. Delt
Jesse F. Black
Walter C. Fost

Lowell
Charles R. Armstrong
Irving L. MacDermott
M. H. Goldsmith
Frances J. Marchall

Michigan
H. J. Maxwell Griffith
C. K. Bell
Charles Cuneo
Alvin F. Harle
Walter R. Miller

Thanks to the Ladies

The Ladies’ Home Committee on the host role was headed by Mrs. Robert D. Kohn, assisted by Mrs. Charles Barler, Mrs. Frank H. Carus and Miss Katherine Beutler.

The Hostess Committee at the banquet consisted of Mrs. Albert Clarence Levit, Captain Charles V. Giddings, Mrs. Henry F. Taft, Mrs. Burt L. Faun, Mrs. Governor Almery, Mrs. Charles H. Higgins, Mrs. Robert D. Kohn, Mrs. W. Labrador, Mrs. John J. Wad, Miss Edith Swanson and Mrs. Charles Barler.

The Architectural Press at the Palace

The A. I. A. Journal, the official organ of the Institute as located in Booth No. 115, where all Institute members and visitors are cordially invited to call.

The American Architect is located in Booth No. 130.

Architectures is located in Booth No. 166.

The Architectural Record is located in Booth No. 165.

Pencil Points is located in Booth No. 179.

The Architectural Forum is located in Booth No. 160.
Competition for Small Structolite Concrete Houses and Bungalows

REPORT OF THE JURY OF AWARD

An unusual number of drawings were submitted in the U. S. Gypsum Co. competition,—some 600 in all. This was partly due to the fact that competitors could submit designs in both classes of houses included in the competition.

In the opinion of the jury, the general standard of the designs submitted was unusually high. Particularly noticeable were the interesting and attractive presentation of the problem and the excellence of the draftsmanship found in a majority of the drawings. In comparison with those submitted in a competition for a small face brick house five years ago, it is evident that much progress has been made in recent years by our younger architects and draftsmen. This very general and marked improvement in the quality of the design and the character of the draftsmanship is undoubtedly due in large part to the greatly increased number of architectural schools and night ateliers now open to draftsmen and students of architecture all over the country. The standard of rendering in pen and ink, as evidenced by these drawings, has improved enormously during the last few years.

First Prize Design: Six-Room, Two-Story Dwelling. John Floyd Yewell, New York. This design combines practically all of the features the jury felt to be necessary to a complete and logical solution of the problem. The plan is compact and well arranged. The design, which fulfills every requirement of the program, possesses an excellent cottage character. The presentation itself is well composed as to surroundings and is superlative in execution.

First Prize Design: Five-Room Bungalow. Angelo De Sousa, Berkeley, California. A charming presentation of a well designed plan and agreeable massing of elements. This shows the English cottage, done as it should be but seldom is.

Second Prize Design: Six-Room, Two-Story Dwelling. Howard S. Richmond, Los Angeles. This design shows good character for a tropical climate, and the presentation of the chosen atmosphere and surroundings is excellent. Perhaps the flight of steps is rather large and important for so small a house, although this feature can hardly be severely criticized, as an ample flight of stone or tile steps is often an adjunct of a building in this style of architecture.

Second Prize Design: Five-Room Bungalow. Harrison Clarke, Los Angeles. The Spanish tradition is here found arrayed in New England clothing as it were, combining the advantages of each. In this case we do not object to the porch being on the front, since it is given privacy by the enclosing fence, and a pleasing outlook by the garden.

Third Prize Design: Six-Room, Two-Story Dwelling. Howard R. Hutchinson, New York. This is a thoroughly good presentation of a more mountainous type of architecture, our only criticism being that the porch should be more secluded. Its close proximity to the front door and its location on the front of the house make it practically useless for everyday use. The slight difference in levels between the cornices of the main portion of the house and the living room wing is not sufficiently marked to gain the effect desired, and the fact that the owner's room is situated in the low wing and that there is rather too much area in the halls, are the weak points in this design.

Third Prize Design: Five-Room Bungalow. Albert W. Ford, Anaheim, California. This is an academic presentation of the Spanish style of house, well planned and well composed in all its surroundings, and appropriate in every way for American use.

Fourth Prize Design: Six-Room, Two-Story Dwelling. Angus McD. McSweeney, San Francisco. This is another good southern design, showing an excellent feature in the second floor overhanging gallery, which makes interesting what would otherwise be rather unpromising exterior composition. The enclosed court or garden makes a charming and useful adjunct, but why are all the flower pots in the drawing shown empty? The plan is excellent. All the rooms are well shaped and occupy corner positions. Space used for the halls is reduced to a minimum, and the stairs are in proper scale.

Fourth Prize Design: Five-Room Bungalow. P. Donald Horgan, Chicago. This design shows the distinction of simplicity of mass and the restfulness of unbroken, well proportioned wall spaces. The plan deserves particular mention for the way in which, in so small a house, the bedrooms are well separated from the kitchen.

MENTION DESIGNS: Six-Room, Two-Story Dwellings

Harry and Hazel S. Brodsky, Pleasantville, N. Y.
Fred H. Elswick, Ashland, Ky.
A. B. Gallion, Chicago.
Clarence Jahn, Milwaukee.
C. W. Lemmon, Los Angeles.
Charles Mink, New York.
Daniel Nelinger, New York.
Walter W. Wefferling, New York.

MENTION DESIGNS: Five-Room Bungalows

Will Rice Amon, New York.
Harry and Hazel S. Brodsky, Pleasantville, N. Y.
R. M. Eskill, Sacramento, Cal.
William A. Glasgow, Los Angeles.
Elmer E. Nieman, Colorado Springs, Colo.
W. Pell Pulls, Boston.
Bruce Rabenold, New York.
John J. Regan, New York.
William M. Stryker, Los Angeles.
H. Ross Wigg, New York.

JURY OF AWARD

Dwight James Baum, New York.
Edwin H. Brown, Minneapolis.
E. Ellis Jackson, Providence.
William T. Warren, Birmingham, Ala.

All drawings are being held pending selection of those to be published.
FIRST PRIZE DESIGN: SIX-ROOM HOUSE
SUBMITTED BY JOHN FLOYD YEWELL, NEW YORK
FIRST PRIZE DESIGN: FIVE-ROOM BUNGALOW
SUBMITTED BY ANGELO DE SOUSA, BERKELEY, CAL.
SECOND PRIZE DESIGN: SIX-ROOM HOUSE
SUBMITTED BY HOWARD S. RICHMOND, LOS ANGELES
SECOND PRIZE DESIGN: FIVE-ROOM BUNGALOW
SUBMITTED BY HARRISON CLARKE, LOS ANGELES
THIRD PRIZE DESIGN: SIX-ROOM HOUSE
SUBMITTED BY HOWARD R. HUTCHINSON, NEW YORK
DESIGN for
A FIVE ROOM STRUCTOLITE
CONCRETE BUNGALOW
Submitted by "Adobe"

SUGGESTIONS
Clipped Eaves, Stairs a
Wooden covering all
Rapids Roofs and
Standard Woodwork Built
Wooden Trim and Windows
- Sides Painted
Orange Colored with Blue
Roof

Key Section

Guest Room over Garage

THIRD PRIZE DESIGN: FIVE-ROOM BUNGALOW
SUBMITTED BY ALBERT W. FORD, ANAHEIM, CAL.
Architectural Library
ST. PAUL'S CATHEDRAL, LOOKING UP LUDGATE HILL

From a Print Published by Messrs. Lloyd Brothers, London, May 1st, 1852.

The Architectural Forum.
The St. Paul's Controversy

By A. R. Powys

It is difficult for us in England to know whether the architects of America are familiar with the controversy now in progress regarding the condition of St. Paul's Cathedral. It seems, however, that a statement of the facts should be interesting to them, explaining what is a complicated situation.

The dean and chapter constitute the authority responsible for the maintenance of the cathedral which they serve, and this in spite of a general feeling that the great cathedral churches are national buildings in a closer sense than that they were built by Englishmen and stand on English soil. It is, then, quite lawful for any cathedral chapter to decide to remove altogether or alter in any way the building in its charge. Harm has befallen many a cathedral church at the hands of its chapter, harm which proceeds from neglect or from that stupid kind of repair which has come to be recognized by the word "restoration." Architects know of many such instances, in buildings of historic and architectural importance.

From this it will be seen that without the authority of its Dean and Chapter no repairs to St. Paul's can be undertaken, and further that on them rests choice of the means to be employed in the repairs. Attached to the staff of every cathedral and appointed by its dean and chapter is an architect or surveyor, whose duty it is to advise on what works are desirable. In most cases this architect is chosen from among the best known men of the country, yet in some instances he is a comparatively unheard-of person, whose home is in the city and whose life is spent about the cathedral and in caring for the buildings within the precincts of the church. At St. Paul's the surveyor to the cathedral has been for many years Mervyn Macartney. Mr. Macartney is an architect who has a very considerable reputation as an authority on Renaissance buildings in England. He is typically an Englishman, satisfied with traditional methods, slow-moving and safe. He is not a man likely to inaugurate great undertakings or to originate any large scheme for repairs based on engineering methods. During the time he has held office a succession of individuals and commissions have reported, officially and otherwise, on the condition of St. Paul's, and all that time he has been absorbing what they have had to say; he has watched the cathedral, and now he knows it very thoroughly,—probably better than anyone else, the result of experience, which he has acquired during many years.

Before outlining the three important stages in what may be called the Controversy of St. Paul's, it may be well to suggest what the problem to be considered is. The dome rests on eight piers, which in their turn rest on a layer of earth which has a depth of from 4 to 6 feet. In its turn the earth rests on a bed of gravel and sand, which is coarser near the surface, and fine and water-bearing beneath. This bed is some 30 or 35 feet deep and lies on the London clay, over which the subsoil water works its way down to the bed of the Thames, carrying with it, so the authorities say, fine particles of the sand through which it passes. This sand may therefore be held to be "running sand." The mediæval cathedral had its foundation on the same bed as the present building. Each of the eight piers which support the dome is 30 x 9 feet at the level of the nave floor. Those who have calculated the weight of the dome estimate variously the loading of the piers. Sir Frank Baines, whose calculations I prefer to trust, gives them thus: Each pier just above the nave floor takes a mean load of 16.8 tons per foot; at the crypt floor a mean load of about 7.50 tons per foot, and on the earth a mean load of 5.6 tons per foot. None of these figures represents the maximum pressure at some points within the piers and on the earth, since the pressure varies.

None of these loads on the piers is excessive if received by masonry which is built of coursed Portland stone, hard brickwork, or modern cement concrete. Although in theory the loading of the earth is excessive, Mr. Macartney can show that no change has taken place in the levels of the bases of these piers in recent years. But in regard to the piers themselves it must be remembered that they are constructed with faces of Portland stone, the thickness of which varies very considerably from 6 inches upwards, and with a core of rubble laid in lime mortar. And this is not the worst, for the nature of both rubble and mortar is not uniform; in one place both are of good quality, in another one is good and the other bad, and in some parts both rubble and mortar are bad. The rubble stone was undoubtedly taken from the older cathedral. It is in part a kind of limestone known as "Kentish Rag," generally a stone that is little better than hard chalk. Little if any of the rubble appears to have been curved. Most of it is of a porous nature, and some is liable to decomposition when wet with water. As a result of this poor core, which must have settled considerably when it was setting, the facing stones are so overloaded that they spall and crack. At the renewal of one such cracked stone, its neighbors take an increased load and are actually liable to suffer from immediate fracture. The dome, the great brick core and the drum are comparatively sound; the 32 buttresses, which connect the inner wall with the outer drum, are for the most part fractured, especially those which are above the solid bearing of the piers. There is little doubt that the masonry above the arches of the nave and transepts would have remained sound but for the early movement of the foundations and the condition of the piers, and when once these are sound it will not move.
again. For the design is excellent, and the equilibrium is assured even without the chains which Sir Christopher Wren placed there to resist thrust. The report of Sir Aston Webb’s commission states that changes of temperature are the chief cause of movement of the dome. Such are the actual conditions.

During the years immediately before the World War there was considerable anxiety felt as to the stability of the eight piers supporting the dome, and in about the year 1913 the Dean and Chapter appointed an expert commission to report on the condition of the buildings. Two engineers, Sir F. Fox and Mr. Davidson, and two architects, Mr. Caroe and Mr. Macartney, were appointed. A full examination was made, and the engineers were impressed with the very serious condition of the building; indeed to such an extent was this true that their opinion was generally held to be alarmist. The two architects were less apprehensive. The Dean and Chapter inclined to the opinion of the architects and ordered a careful survey to be made by them of all signs of movement inside and out. Together the architects set to work. Day after day they worked, as often as not being suspended in baskets at great heights, hanging from cornices and balustrades many feet above them. Much data resulted, and the work of repair continued. Cracked stones were drawn out and new inserted. Tons of cement were poured into the masonry, under great pressure or by gravitation alone. The northwest pier had been treated in this way. After the war a second commission under the presidency of Sir Aston Webb was appointed, which has only just rendered its report. Again, and rightly so, the cathedral surveyor was on this board, and together with him was Basil Mott, an engineer who gained his eminent position in the profession through the construction of the underground railways of London. Other members were G. W. Humphreys an engineer, and E. C. Trench.

Briefly, the report of this commission recommends that the grouting of the piers on a carefully prepared program, together with the repairs to the stonework, should be proceeded with. It is recommended that this should be done forthwith. The commission expresses the opinion that unless this work be vigorously pressed to a conclusion, the situation may rapidly become grave, followed by irreparable disaster.

About two weeks before this report was issued the District Surveyor for the City of London felt it his duty as a public officer to issue a “dangerous structure notice.” This is a document which the law requires him to serve on the owners of a building which has become a menace to the public. Concurrently with the last months of the commission’s examination, The Times started a fund to pay for the work of repair, to which the public contributed, funds being received from all classes.

It must be remembered that the essence of the commission’s report is advice to grout the eight piers supporting the dome and to remove the cracked and broken stones. It is now, under these conditions, that a number of engineers and architects and with them the Society for the Protection of Ancient Buildings, acting in the interests of the public, have felt it necessary to state their opinion that this method is inadequate, and, some even hold, actually dangerous; inadequate, because grouting may not increase the strength of the piers sufficiently. The result of this process will be to leave the masses of mortar and poor rubble embedded between strips and fillets of cement. So embedded the core might stand, but the tireless loads would continue to exert not only direct downward pressure but powerful shearing strains, strains which would be likely not only to reopen the old grout-filled cracks but to tear the poor material away from it, leaving attached to the cement only a thin shell of their substance.

This method of repair is held to be dangerous, because the water from the grout is absorbed by the porous stone and mortar which tend to be decomposed thereby; and the grout, having surrendered a part of its water, does not reach its full strength. In this regard it must not be forgotten that the dust and loose particles of sand and mortar should be washed out before the grout is poured in, as is the usual custom in such operations, for the piers might be too much weakened thereby and the stones and mortar too much saturated. Furthermore, grouting under heavy pressure may be held to be dangerous, for so heavily are the piers already loaded that to increase the pressure in them is to increase the risk. Under these critical conditions grouting under great pressure has been known to blow stones from their positions like shells shot from a cannon. Grouting by gravity only is usually considered inadequate, for it does not completely fill the openings within the piers, and they must be filled to create stability.

To these men and this society it appears that it will eventually be found that the way to make sure of the stability of the dome is to recore the piers with sound material, capable under ordinary building custom of bearing with an adequate margin of safety the loads that come on them; in fact, to make the piers as certainly strong as they would be if built today. To do this it is clear that the dome must be temporarily supported by a combination of steel centering and stanchions. To any man of common sense, it at once becomes obvious that it is desirable to seize the opportunity given by centering to place the eight piers on a concrete bed of much greater area than the present foundations afford, thus securing complete safety forever.

Various schemes have been devised to secure this end. At the time of writing none of the plans has been accepted by the Dean and Chapter, but public opinion is so strong and so emphatically demands that what is done must leave no room for doubt that it is hardly possible to believe that some such course will not be adopted to save this historic building.
Six Modern Bank Buildings
DENNISON & HIRONS, Architects

In the phenomenal development of architecture in the United States during the past 25 years, no type of design has received more serious study or achieved greater success in its solution than the individual bank building. Both in beauty of exterior treatment and in its interior arrangement, the modern bank equals in architectural importance the towering office building and the monumental municipal structure. The bank has reached a high standard.

Among several well known architectural firms specializing in this type of building, Dennison & Hirons occupy an enviable position. Six of the many banks designed by this firm during the past 15 years have been selected to illustrate a variety of successful solutions of this problem. The delightful pencil renderings of these buildings tell their own story of dignified and monumental exterior treatment, while a study of the plans will show in each case a logical and practical arrangement of the banking floor. One's first impression is that the plans are similar in arrangement. This is due to the fact that modern bankers have learned through experience the best locations for the various departments of their institutions. It is the consensus of opinion that in all national banks and trust companies the center of the banking floor should be devoted to the public. This arrangement allows the various wickets of the receiving and paying tellers to be grouped along the sides of the public space. The location of rooms required for the officers of the bank, committee, directors' and women's departments, varies somewhat according to the preference of each individual banker. One advantage of this type of plan, in which the public area is located in the center, is that the working space and the various offices can have outside light, unless a building is located in the middle of a block. Skylights are commonly used to provide additional light for the center of a banking floor, especially where only one side of the building has windows. Light is so important a factor in the success of a banking

Building of the Trenton Banking Co., Trenton, N. J.
Plan of The First National Bank

room that corner locations are selected whenever possible. Banks in the smaller cities and towns are more fortunate in this respect than similar institutions in the large cities, where corner lots are often unavailable or far too costly. A location at the meeting of two streets gives an unusual opportunity for outside light on two sides, as may be judged by examination of the interesting plans of the Essex County Trust Company's building at East Orange, N. J., and the Union Market National Bank at Watertown, Mass. A department usually located at the rear of the main floor in the smaller city banks is the safe deposit department. Twenty years ago it was an accepted custom to place this department in the basement of the building, but greater accessibility of this department has always been accompanied by greater patronage. Today a safe deposit department is practically never located in the basement of a bank if it can be avoided.

To consider briefly the salient features of the banks illustrated in this article, the plan of the Trenton Banking Company's building is particularly interesting, not only because it occupies a prominent location, but also because there are entrances from two streets into an oblong banking room lighted on two sides. The exterior of this building is designed in a style of the Renaissance and is executed in white marble. The four walls surrounding the large open banking room are lighted by eight large windows located on two sides and by a ceiling light. The architectural treatment of the entire building, both exterior and interior, shows an unusual harmony of line and color. The coffered ceiling of the main banking room, the travertine walls and the careful use of different marbles, wood and bronze, give altogether a rich and pleasing effect to the interior. The departments of the bank are grouped around the spacious center public area which connects with entrances on two streets, insuring satisfactory circulation during business hours. The officers of the bank are accessible to the public on account of their convenient location at the right and left of one of the entrances, where a low marble balustrade in Italian style encloses the space reserved for them. A well appointed women's reception room is one of the pleasing and serviceable features of this bank. The vault is conspicuously located at the end of the public lobby, furnishing an excellent example, not only of good mechanical equipment, but of the most modern type of protection. An elevator connection with the basement makes the fireproof storage vaults there located accessible to patrons who wish to store silverware and other bulky valuables.

The First National Bank of Blairsville shows a typical oblong plan arranged over a location at the corner of two streets. The length of the building is approximately twice its width, which allows for a somewhat different plan from that developed in the Trenton Banking Company's building, which was also built on a corner lot. The greater length of this building provides more space for the various working departments of the bank. The vault itself, which is divided into three parts, is of unusual size. The center portion of the floor is used for the safe deposit department, which is thus easily accessible.
from the public space. The convenient location of
this department follows the plan developed for the
Trenton Banking Company. The exterior of the
building is built of limestone in a severe Classic
style, large Ionic columns flanking the entrance door,
with an arch above. The banking room, which is 32
feet high, has a flat paneled ceiling, in the center of
which is a large skylight. A court-like effect is pro-
duced by the use of a mezzanine gallery around three
sides of the room, on which are located additional
officers' rooms, a large board room, rest room and
toilets. Additional working area for future growth
of the bank is provided on the third floor, lighted
by windows in the frieze at the top of the building.
Imitation travertine has been used for the pilasters
and screen work in the banking room, and painted
plaster for the ceiling and walls. A marble floor
covers the public space, while linoleum is used in
the working areas. Metal furniture has been em-
ployed throughout. Monumental wrought iron gates
protect the entrance to the building, which shows a
granite base below the limestone walls and large
arched windows in which steel frames and sashes
are used. The entire building is richly dignified.

The Citizens' National Bank at Waynesburg, Pa.,
possesses monumental character of high quality. The
architecture of banking buildings throughout the
country has vastly improved during the past five
years, both as to quality of construction as well as
design. In fact it is generally conceded to be of
a higher quality than that of other modern buildings
erected in our smaller towns and cities to meet the
requirements of industrial and commercial growth.

As an illustration of this, it is possible to cite the
case in Pennsylvania, where throughout the western
part of the state particularly many banking build-
ings have been erected during the past few years
which are sure to remain as monuments not likely
to go out of fashion,—if one may use the phrase,—
because they follow faithfully the best traditions of
'Classic architecture and because their designers

thoroughly understood how to express this tradition
in a worthy manner. The best of these banks are
designed not as pretentious expressions of wealth
but as buildings which will function adequately to
meet the definite and exacting requirements of bank-
ing institutions, which briefly are: efficiency of op-
eration, comfort and convenience of patrons and em-
ployees, and adequate security. This bank at Waynes-
burg, which is located in the heart of the town,
exhibits well studied architectural proportions. Exe-
cuted in Indiana limestone, the
building rises to an approximate
height of 50 feet above the side-
walk. Four engaged Ionic columns
ornament the entrance facade, while
the seven large windows of the side
elevation are enframed by flat pil-
asters equal in height to the col-
umns on the front. Set between
the entrance columns, the wrought
iron grille, simply designed and sol-
dly constructed, is in keeping with
the appearance of strength and se-
curity which characterizes the entire
design of this admirable building.

The plan is so arranged as to take
advantage of the corner plot on
which the building is located. The
banking room shows the usual cen-
tral location of public space, flanked
on each side by the various departments of the bank protected by the strong banking screen. Ample accommodation is provided for the officers and customers near the entrance of the bank and outside of the actual banking enclosure. The screen is built of Tavernell marble and statuary bronze. The floors of the public area and the vestibule are of gray Tennessee marble. The walls of the banking room are enriched by a pilaster treatment and by decorative painted panels. The walls throughout are laid up in imitation travertine of a soft, yellowish gray. The ceiling is of plaster and, as usual, it shows a large central skylight. The vaults are planned in a manner somewhat different from the usual arrangement, as the security vault is independent of the safe deposit vault. In some respects this seems an excellent departure from the usual custom in smaller banks of combining storage, safe deposits and securities in one large vault. The purpose of giving each of these departments a separate vault is to provide bookkeepers and tellers with immediate access to the security vault without interfering with the customers visiting the safe deposit vault. Both vaults are of the most modern type of reinforced concrete construction and steel plate linings and are electrically protected. The safe deposit vault has a capacity of about 3,000 boxes. The bookkeepers are placed adjacent to the tellers' cages, an arrangement interesting and unusual. Between the spaces assigned to the bookkeepers' and tellers' cages is a plate glass partition, insuring a measure of privacy and quiet without reducing the amount of general light obtainable in the tellers' cages. These last are furnished with metal furniture and are planned on the arrangement, as the security vault is independent of the safe deposit vault. In some respects this seems an excellent departure from the usual custom in smaller banks of combining storage, safe deposits and securities in one large vault. The purpose of giving each of these departments a separate vault is unit system, under which each teller is at once a paying and a receiving teller. The floor of the working area throughout is of heavy linoleum, while in the officers' and customers' spaces cork is used. The banking screen is furnished with upward and downward reflectors and with a daylight hold-up alarm station. The basement of this building contains a large community room, boiler room, silver and trunk storage vaults, locker rooms and toilets. Taken as a whole, this bank at Waynesburg is an excellent example of efficiency in modern bank designing, planning and construction.

The next two banks to be considered both show use of an interesting "pie-shaped" plan, due to the side of each bank's being located at the junction of two avenues. In plan these two banks are so similar that they may easily be considered together. The Essex County Trust Company's building at East Orange, N. J., occupies a lot broad at the rear and coming almost to a point at the front. In difference of shape only are the plans of these two banks dissimilar. The Union Market National Bank at Watertown, Mass., shows a much broader front at the junction of two streets which do not form quite as high an angle as is the case with the plot of the building in East Orange. Both of these plans show ample central public spaces, and large, centrally located deposit vaults.
with coupon booths located conveniently. The exteriors are of Indiana limestone supported on granite bases. The buildings set back sufficiently from the streets to permit low planting on the sides and rears. The interiors show banking floors of approximately 45 by 80 feet, with ceilings 35 feet high in the shape of low barrel vaults. Five large and well placed windows break the two sides and walls of each bank, while very monumental and imposing entrance doors in the style of the Italian Renaissance, with beautifully designed wrought iron grille doorways, adorn the narrow ends of the buildings. In the exterior design of the Union Market National Bank at Watertown, round instead of flat arched windows are found. A very elaborate wrought iron grille protects the main entrance to the bank, which here again is located at the narrow end or point of the triangle. The additional width of this entrance end of the building adds much dignity and scale, not only to this entrance facade, but to the entire design of the skillfully planned building.

In the Rye National Bank, a free-standing building with light on four sides, there is seen a compact and practical oblong plan, similar in general arrangement to that of the other banks discussed in this article. The large safe deposit vault has one end divided off for a book vault, which opens directly into the bookkeepers' department, often designated as the "machine room," as this is where the various types of bookkeeping machinery are located. All four facades are executed in limestone, showing a dignified design in the Adam style of Georgian architecture, such as is found at Bath. The careful study of the proportions of the various details and parts of the building has produced a design of unusual dignity. The arrangement of the interior of the bank may easily be understood from the plan shown here. As usual, the public area is at the center. The interior also shows

Georgian influence, the design being carried out simply in plaster painted a warm gray. Additional interest is given to the design of the room by the vaulted treatment of the ceiling with its penetrations over each of the side windows. Much of the beauty of this vaulted ceiling is due to the fact that it was not necessary to break into its surface with the usual ceiling light. Architectural ornamentation is used as sparingly as possible, with the result that the building possesses unusual dignity, refinement and distinction. The banking screen enclosing the public space is of Italian walnut, wrought iron and glass, a detail simple yet effective; and the warm tone of its woodwork adds much to the inviting quality of the room. This banking screen, as is the case with all of the screens of the banks described in this article, is equipped with upward and downward indirect lighting, giving an abundance of light when required. During the hours of daylight the high arched windows on either side afford excellent light, softened by transparent ecru draperies which harmonize in color with the warm gray of the walls and the gray-green of the terrazzo floor. As a mural decoration at the inner end of the banking room above the vault, the large wall arch is filled in with a decorative map in many soft colors, harmonious
with the rest of the room. In making use of this type of mural decoration and in realizing the possibilities offered by a decorative map of the immediate locality, the architects of the bank have succeeded not only in giving an excellent treatment to the walls, but also in keeping alive a certain sentiment for the neighborhood and its history. This type of mural decoration is becoming more and more popular for banking rooms and the offices of large business institutions.

In a recent discussion of this subject, Mr. Dennison said: "It is a fact that practically all bank buildings in our smaller cities are built with an eye to economy. If you are looking for economy, dignity and simplicity, it is quite difficult not to more or less repeat in problems of a similar nature. There is always a chance to depart from the ordinary design by using a roof above the cornice, perhaps of an Italian character, which is generally very successful but is expensive; it costs a lot more money than a flat roof, which we have been obliged to use on practically all our buildings. The designs shown here are in most cases of banks in towns of 50,000 or 75,000. All bankers subscribe to banking periodicals in which every new bank building in the country is published, so the character of a bank has become quite clearly defined in the minds of bankers through a constant study of what is being done by others. Thus when their turns come they usually have very definite ideas of what they want."

The erection of a new banking building is an important undertaking for any bank, and since even with all the economy possible the cost is certain to be great, the architect must make many compromises between what he would like to have and what he can actually obtain. The result is that provision is made, first of all, for the essentials, and beyond securing the necessities it is not always possible to give the building quite the grace the architect might desire.
The modern municipal market building is a logical product of the more enlightened standards of living which have been evolved in the consciousness of the modern community. Discriminating housewives and public caterers manifest increasing intolerance toward the usual type of community market accommodations, such as have been perpetuated without distinct change from the inception of mass marketing up to very recent years. This familiar type of market, with its usual open or closed sheds, wood fittings, unsanitary floors and its heterogeneous collection of ice boxes, counters and show cases, arranged according to the tastes, wares and limitations of the butcher and huckster, has outlived its usefulness and no longer meets the demands of American food buyers and consumers.

The municipal market recently completed for the city of Norfolk, Va. was conceived and designed to overcome, as far as possible, these usual unsatisfactory conditions and to make attractive and visually sanitary the facilities for displaying and marketing food products. The practical ideals of this community are epitomized in the legend that is inscribed above the monumental windows of the building that translates into reality the implied promise: "That pure food may be kept in the best manner and sold at a fair price, this building is erected by the City of Norfolk." These are the market's functions.

The plot, an irregular parallelogram, with an average width of 133 feet and average length of 240 feet, is bounded by streets on all four sides. Physical features for occupancy and service, as determined by appropriate study of possible requirements, are 56 refrigerated stalls, 40 fruit and vegetable stalls, 16 fish stalls, a cold storage department, rooms and platforms for receiving and delivery, and certain auxiliary service rooms. These features are divided into three general groups, and the building is correspondingly arranged in three general sections.

The largest section consists of a main hall, with a high ceiling lighted by clerestory windows, and two lower ceiled side aisles, this section being devoted entirely to all food products except fish. The other public section is the fish market, which is located in one corner of the building. The third section is the service division, which embraces the delivery room and platform, machinery rooms, heating and ventilating equipment rooms, elevators, incinerator, receiving room and platform, locker rooms, storage rooms, toilets, and about 900 square feet of subdivided cold storage space on two upper floors.—every possible convenience. An abattoir for
killing and dressing of chickens has been provided in this section, so equipped and finished that its odors and steam do not get into the main market, and so arranged that it can be kept reasonably clean and sanitary at all times. The toilet facilities as incorporated are planned to provide public comfort stations for both sexes, white and colored, and are so arranged as to make them accessible from the streets.

The principal market section is planned with stall sections 8 feet deep against the side walls in the low ceiled areas, and with the more lofty central area divided into islands about 23 by 32 feet in size, separated by aisles varying from 6 to 8 feet in width.

All counters and show cases holding food products are enclosed with clear glass and tops of white glass. Vegetable and fruit stalls along the side walls have narrow counters of white glass above the glazed brick barrier, behind which are wide oak display counters. The fish market is planned and equipped in a similar manner, with stalls of approximately 8 feet by 12 feet, and finished with refrigerated show cases, storage boxes and enameled slabs.

The lighting system is designed to produce, as far as possible, the same relative values of light and shadow as are afforded by natural daylight, and a uniform diffusion throughout the building. Indirect lighting is employed exclusively. A brine-circulating system, which supplies cold storage and refrigeration, is operated by a duplex plant of units, consisting of 30-ton compressors directly connected to 2200-volt synchronous motors and accessory brine and water pumps. Condensers and cooling towers are on the roof. Power is purchased on the prime current plan and transformed in the building to 220 volts for small motors and to 110 volts for lighting.

It is believed that the building is rat-proof, except for such as might get in through open doors. The fly problem has been satisfactorily met by a carefully studied scheme of screening the openings, and by the installation of revolving blade fans in the ceiling of each entrance vestibule, which is only 8 feet high. The exterior is of limestone and granite, with bold symbolic ornamentation. Window frames, sash and doors, with few exceptions, are of metal. The interior finish is largely broad surfaces of glazed brick walls, buff in color, enriched with bands of blue and buff terra cotta.

From a financial standpoint the actual operation for more than a year has given corroboration to the original estimates through the success attained. The Norfolk Market presents a practical example of a municipal market built by the city and meeting the needs and tastes of the buying public and the requirements of market merchants, which is at the same time financially self-sustaining as to operating and overhead expenses and to amortization of cost.
ALLEN & COLLENS AND HAROLD B. WILLIS, ARCHITECTS

By HAROLD STARK

As it is seen either from the highroad or from the opposite shores of the small neighboring lake, "Stillington" tops a wooded hill overlooking Gloucester harbor. It is built on a plateau of rising terraces, in the architectural mood of timbered Jacobean, prevalent in England when Gloucester was being settled. The terrace walls of fieldstone, the towering brick chimneys, the white plaster facade cut by the solid tracery of the timbering, and the leaded windows are reflected in the waters of the lake below. That reflection embodies the charm as well as the aloofness, the comfortable welcome of an old English home, and the beautiful solemnity of New England woods gone red and yellow in the riot of autumn which follows a vigorous frost.

The "Stillington" grounds comprise some 30 acres of wooded land adjoining Ravenswood Park, a stretch of protected woods, given a few years ago to the city of Gloucester. Having its source in the park, and running down a ravine near the house, is the brook, which, by the clever contrivance of a dam and spillway, has been widened into a picturesque lake. The dam was constructed parallel to the highroad. The brook, which once meandered through a flat marshland, was the favorite haunt of the mosquito. After the construction of the dam and the clearing of the marsh, the water backed up and formed a deep lake, mirroring the house and the tall trees. The mosquito was eliminated, and a thing of beauty was added to the neighborhood. A few yards below "Stillington" is Freshwater Cove, into which the overflow from the lake finds its way. In the old days, the fishermen and the ships leaving the harbor stopped in the Cove to stow fresh water from the brook for their voyages. Even today it is a beautiful little bay, where boats are moored, and on its shores stand abandoned fishing huts. The top of the hill, once a rocky plateau, is now converted into green lawns with flowering borders. The lawns are terraced and are supported by walls made from the native stone. Cut into the terrace walls are seats from which one can see the blue harbor, with its sailing vessels plying between Gloucester and the Banks, and beyond Cape Ann, with the open sea farther off.

The problem for the architect was to create a house proper to this milieu of woods and lake, and at the same time provide a setting for a most interesting collection of early and rare American furniture, made during many years in Salem, Newburyport, Portsmouth, and other towns around Boston. He was to incorporate into the building paneling and bricks taken from demolished houses of the eighteenth century, many heavy 12-inch beams hewn out a century and a half ago, wide pine floor boards, old doors and corner cupboards. He was to use in those windows giving upon the entrance drive some fifteenth century English glass, long in his client's possession. He was to provide an antique house, and yet retain the convenience of modern domestic mechanism, bathrooms, heating and kitchen appointments. The combination was achieved with admirable success. "Stillington" is an authentic Jacobean house with all of the practical advantages of this century, ancient grace with modern utility of every kind carefully concealed.

The exterior treatment of the brick is interesting. The sympathetic Gothic handling of building materials persisted as a tradition in the vernacular house long after it was lost in the great buildings. Consequently, one is not surprised to find Gothic detail, such as fans, finials, and windows in the Jacobean house. The only way that Gothic came to America was through the Jacobean tradition as it was developed in the early American settlements.

The chimney, towering from a broad base, varies in its texture from a soft, light red to a dark brown; it is narrowed at the second story and terminates in characteristic Tudor angular stacks. The wall space adjacent to the chimney is carried along in brick as far as the door leading in from the terrace.
The apex of a gable is brick in herringbone; on the entrance facade that pattern has been used in the brickwork surrounding a half-timbered oriel window resting on a timbered fan. In this window, as well as in others of the same wall, iridescent fifteenth century glass in octagonal panes has been used to insure privacy from the roadway. Adjoining the oriel window is the timbered entrance porch, partly screened by a panel of brickwork in the timbering, surmounted by ancient balusters. The door, composed of four oak planks, with its glazed "gichet" through which some long dead housekeeper peeped stealthily at the caller, and solid iron hinges, leads by a narrow passage and steps to the long living room. The telephone booth and coat closet are concealed under the stairs at the left of the passage, convenient yet unseen.

The living room, resembling the principal room of an early American tavern or perhaps a kitchen of the period, is 40 feet long and 20 feet wide. The broad chimney opening, surmounted by a hewn beam, the fire banked high against an iron fireback from the first American iron foundry at Saugus, greets one upon entering. The chimney has been constructed of mellowed brick. Their soft texture and somber color have been maintained in the floor, which is of the same old brick, laid end to end, with circular inserts to give variety to the pattern formed in brick.

The broad vertical wainscot boards which line the
walls, the huge beams supporting the ceiling, the capacious cupboards, incorporated into the walls, the simple and direct stairway, turning once on a landing lighted by a mullioned window, the primitive chairs,—Carvers, spindlebacks, low Windsors, high Windsors, and the pine fireside chair with its protective wings,—the unadorned tables ranged about the walls and down the central axis of the room, express the frugality and simplicity of an early American kitchen, where the settler cooked, ate, received his occasional visitors, and read from the Bible to his host of children. To relieve this appearance of frugality and austerity, a warm orange material has been used for the hangings and the upholstery of the long settle placed under the windows at the far end of the room. Old quilted stuff of a deep blue was used for the chair cushions. The intimate grouping of the chimney seat, a rare Connecticut paneled settle of pine, and the chairs and stools about the fire, the dull brilliance of historic American pewter on the scalloped-edged dresser, the gay designs of the hooked rugs, the warm tones of the glass bottles on the window ledges and of the Pennsylvania pottery stored in the wall cupboards, make the room welcoming, livable, and interesting, with indefinable Old World charm.

The necessities of electric lighting and steam heating have been skillfully adapted to the design of the period. Lanterns of the Paul Revere type
"STILLINGTON," HOUSE OF LESLIE BUSWELL, ESQ., GLOUCESTER, MASS.
ALLEN & COLLENS AND HAROLD B. WILLIS, ARCHITECTS
THE EAST CHAMBER

FIREPLACE CORNER IN THE EAST CHAMBER

"STILLINGTON," HOUSE OF LESLIE BUSWELL, ESQ., GLOUCESTER, MASS.

ALLEN & COLLENS AND HAROLD B. WILLIS, ARCHITECTS
hang at intervals from the ceiling, radiating light below and casting reflections of their pierced designs on the ceiling. Old iron candle lamps, in which the candles have been simulated, light the tables. Under what appears to be an old chest or a wide window ledge with paneled cupboards below, the radiators are concealed, space also being provided for the storage of logs for the capacious fireplace.

The dining room represents a later and more sophisticated period of American building. The eighteenth century blocking paneling is of pine, the floor is of broad boards, and the furniture,—a maple sideboard, an inlaid applewood table, with Spanish feet, and rush seats,—is evidence that all early American cabinet work was not of the rough hewn type. Here one finds delicacy of design and finished craftsmanship. Over the sideboard is a delightful signboard, an early painting in direct elevation of Turner Center, Maine, where it was hung outside the local tavern. It now serves as an interesting mural, an undoubted American “primitive.” In the corner cupboard is a rare collection of spatter ware, and against the wall a seventeenth century bridal chest from the shop of a Connecticut woodworker. The adjoining pantry and the kitchen below stairs are modern in equipment, with no attempt at period.

Through a passage, the library joins the dining room. It is a bright, book-lined room, with windows on three sides, orange linen hangings and window seats, tan painted woodwork and a classical printed paper. This room was built around some pieces of English and Dutch marquetry inherited by the owner, the kind which were popular during the late seventeenth and early eighteenth centuries. In this room hang on either side of the fireplace two interesting “courting mirrors.” These mirrors, now seldom to be found by the collector, were carried by the hopeful suitor to the young woman upon the occasion of his proposal of marriage. If she accepted him, she hung the mirror in her boudoir. Their rarity is probably due to the large percentage of rejections! The library is likewise lighted by hanging lanterns of the square type long carried through the Boston streets before the advent of street lamps.

The stairway leads from the living room to characteristic corridors winding down the wings of the house. Over the living room, with a like expanse of windows giving upon the sea vista, is the master’s bedroom with its white paneled walls, white board floor, maple furniture and hangings of red toile de Jouy. The bed cover and valance of pictured toile give an air of gaiety to the otherwise dignified poster bed. In all of the bedrooms glass lamps with colored silk shades give a practical and well diffused light.

Joined by well appointed bathrooms are other bedrooms. One is in apple green, with a fireplace and corner cupboard containing Staffordshire ware, and with a sailor’s chest with his ship painted on the lid, and dainty silhouettes in maple frames grouped in the chimney corner. A second bedroom is painted in café au lait, with flowered chintz for curtains and canopy, and a cabinet of American glass. Further down the hall are two diminutive guest rooms and a bath. One has chocolate walls, with red as the motif of the chintz and rugs, a Franklin stove, and an early map of the western hemisphere, interesting for what was unknown at the time. In the corner of this wing of the house is a blue and white room lighted by a French window which opens onto a semi-circular balcony of wrought iron. At the end of the hallway is a service stairway, leading up from the kitchen entrance to the servants’ rooms, the study and the cedar closets on the upper floor.

An appearance of newness has been avoided in the house, yet there is no strained effect of antiquity. The unobtrusive age of the materials and the natural arrangement of the furnishings give one the feeling that the place has been there for decades. It is a truly “old-new” house, the ambition of the collector of antiques, but unfortunately not often realized.

“Stillington” affords all of the indoor comforts, and outdoor pleasures as well. The lake provides boating and swimming in summer. Ducks, muscovies and mallards, swim about its shore. There is the sea hard by for sailing and fishing. In winter, there is skating, and skiing and toboganning down the road. A few yards above the lake, built on the banks of the brook, sheltered from the winds by evergreens, is an outdoor chimney of fieldstone, with a circle of seats hollowed out of the rocky hillside.
"STILLINGTON," HOUSE OF LESLIE BUSWELL, ESQ., GLOUCESTER, MASS.
ALLEN & COLLENS AND HAROLD B. WILLIS, ARCHITECTS
SECOND FLOOR

FIRST FLOOR, SHOWING SMALL THEATER NOW BEING BUILT

"STILLINGTON," HOUSE OF LESLIE BUSWELL, ESQ., GLOUCESTER, MASS.

ALLEN & COLLENS AND HAROLD B. WILLIS, ARCHITECTS
LIVING ROOM

SOUTHWEST CHAMBER

"STILLINGTON," HOUSE OF LESLIE BUSWELL, ESQ., GLOUCESTER, MASS.
ALLEN & COLLENS' AND HAROLD B. WILLIS, ARCHITECTS
Architectural Library
WEST SIDE OF THE LIBRARY


Allen & Collens and Harold B. Willis, Architects
PLANS, OFFICE BUILDING FOR CLARENCE WHITMAN & SONS, INC., NEW YORK
TREANOR & FATIO, ARCHITECTS
PRIVATE OFFICE, ENTRANCE FLOOR

DETAIL, ENTRANCE FLOOR

OFFICE BUILDING FOR CLARENCE WHITMAN & SONS, INC., NEW YORK
TREANOR & FATIO, ARCHITECTS
CHICAGO ALLERTON HOUSE

MURGATROYD & OGDEN, ARCHITECTS; FUGARD & KNAPP, ASSOCIATE, ARCHITECTS
LOUNGE

MAIN DINING ROOM

CHICAGO ALLERTON HOUSE

MURGATROYD & OGDEN, ARCHITECTS; FUGARD & KNAPP, ASSOCIATE ARCHITECTS
The shortage of housing and the high cost of building today have made any new project an economic problem; therefore in crowded areas or where land values are high, we find commercial buildings, apartment houses and hotels designed as skyscrapers, rising from 20 to 30 stories in height, on the average. We also have cooperative ownership to further reduce the ever-increasing costs. Then we have still another problem—the housing of bachelors, both male and female. The antiquated boarding house with its limited accommodations becomes costly if one desires the comforts of home. The club is costly too, if it has living accommodations with few to carry the burden. Therefore in housing a large number under one roof, with all the home and club life comforts, the operating cost is naturally distributed among more units and is reduced per capita, making comfortable living possible.

The first examples of the type of building to benefit this class are found in the numerous club residences erected in New York by the Allerton House Companies, and recently in the completion of such a structure in Chicago, which this article will attempt to describe briefly. In every large or small city there are many single men and women who desire club life. This is why the Allerton Houses in New York are so popular, and Chicago is now the first city outside of New York to have such an institution. These club hotels have solved an economic problem for the class of people for whom they are intended. The keynote of this type of building is economy, not only in space, but in so planning it that it is economical in operation, thereby benefiting the guests because they are able to obtain all the privileges of a residence club at moderate rentals. The new Chicago Allerton House, recently completed, is located on one of the finest thoroughfares in the city, at the corner of North Michigan Avenue and East Huron Street. Its tall shaft, 26 stories in height, towers above the surrounding buildings, and shares prominence with other tall structures of the city, going up now on all sides.

The building is the shape of an H in plan, which gives the maximum amount of outside wall space for windows facing the south and the streets. In a building of this size, containing 1010 bedrooms, one finds various requirements fulfilled by having rooms of various sizes, with or without baths, rooms en
FOYER ON THE SECOND FLOOR

END OF THE LOUNGE OPENING INTO THE LIBRARY
CHICAGO ALLERTON HOUSE
MURGATROYD & OGDEN, ARCHITECTS; FUGARD & KNAPP, ASSOCIATE ARCHITECTS
GRILL ON THE ENTRANCE FLOOR
CHICAGO ALLERTON HOUSE
MURGATROYD & OGDEN, ARCHITECTS; FUGARD & KNAPP, ASSOCIATE ARCHITECTS
suite and rooms overlooking Lake Michigan or any desired exposure, making possible any combination.

The type of architecture used is somewhat different from that generally found in Chicago; it is of the early northern Italian style, with a solid three-story base of limestone in an arcade motif consisting of broad pilasters and triple arches, with a double-arched window motif in the upper portion and single or double windows below. At the main entrance this arcade motif is open, forming a loggia, over which is a smaller open arcade, and at the same level around the building there are arched windows in brick panels surrounded by stone, making it in reality a three-story base motif to carry the towering brick shaft of the building above. This shaft, which is all of brick, has pilasters at the corners of the pavilion motifs, with smaller intermediate pilasters. Windows occupy the fields between the pilasters, which are made interesting by a pattern of projecting headers. These pilasters terminate in a wall at the top where the square pavilions become of an octagonal shape, forming interesting crowning features where an arcade motif adds lightness to the top. The arcade is recalled in the main shaft of the front of the building by two-story arches divided by panels at the floor level. The sides of the building between the octagonal shaped towers show the walls set back and capped by bracketed overhanging balconies on heavy corbels, with trellised pergolas above. These four corner towers flank the main shaft of the building, which rises higher, forming a massive center tower crowned by the overhanging cornice and tile roof, on which stands an octagonal cupola containing the chimney. The structure is graceful and distinguished.

One enters the ground floor on Huron Street through a loggia which opens into the main entrance hall, two stories in height, where two flights of stairs lead to the first floor above. Between the two flights of stairs is an entrance on the ground floor to the elevator lobby, off of which are the grill room, coat room, cigar counters, telephone booths, entrances to the Michigan Avenue shops, main toilet rooms, and the spacious barber shop. The main dining room, lounge, library, women's reception room and a private dining room open off the elevator lobby. From this floor, up to and including the 22d floor, the space is occupied by bedrooms. On the 23d floor are a solarium, game rooms and lounges, while on the 24th, facing east and west, there are open roof gardens cooled in summer by lake breezes.

The architectural treatment of the interior is in the same style as the exterior, based on the best northern Italian precedent. Passing through the entrance loggia with its vaulted ceiling, the main stair hall is entered through three doorways. The walls of this hall are rusticated up to the level of the second floor, where plain ashlar continues up to the spring line of the stone architraves around the arches. At the head of the double stairway are three arches, recalled on the opposite wall by a triple arched window motif, which looks out upon the main entrance loggia. The office lobby, which is also in the Italian style, has walls of stone laid in ashlar up to the cap mould, from which springs the low vaulted painted ceiling. The showcases, office screen, etc., are in rich dark brown walnut. Entering the main lounge, a new note is found in both treatment and style of architecture. It is a typical Tudor room, with high paneled oak wainscot, and a carved window and door trim in stone. A carved cornice crowns the wainscot and supports an angular vaulted ceiling, inspired by that of the long gallery of Hever Castle, Kent. On the side wall is a massive stone fireplace, characteristic of this period, adding to a distinguished room. The main dining room has rough stucco walls with stone door trim and a flat-vaulted ornamented ceiling divided into two parts by a heavy beam supported on piers at the center of the room, and richly painted in gold and colors in the Italian style. The main grill and its lobby on the entrance floor are also this style, with painted decorative beam ceilings, the lobby having stone walls, and the grill stucco walls, stone floors and window trim. The floors of the principal public rooms and halls are either of marble or cloisonne terrazzo in two or three colors, designed appropriately to the style of each. The solarium, game rooms and lounges on the 23d floor have trim, base and hand courses of brick, stucco walls, and in the octagonal corners are vaulted ceilings resting on terra cotta cornices.
The Smaller Civil Architecture of England

V. THE CUSTOM HOUSE, KING'S LYNN, NORFOLK

By ROGER WEARNE RAMSDELL and HAROLD DONALDSON EBERLEIN

The Custom House at King's Lynn was built in 1683. It is a building of exquisite dignity and is most satisfying to look upon. Its goodliness lies in a felicitous union of distinguished proportions, virile and scholarly design, beautiful material, and the judicious employment of appropriate detail. With the exception of the wooden cornice, the cupola and the balustrade enclosing the roof deck, the exterior is entirely of Portland stone. As is so often the case, the stone is bleached and scoured by the action of wind and weather in some places, while in others it is blackened by the deposits of murk and sea mists, thus creating sharp contrasts.

The Custom House was built originally as an Exchange for the merchants of King's Lynn, but soon after its erection it was bought by the government and devoted to the business of the port. At first it was intended that the three arches of the entrance front, the two arches opening on the quay, and the three arches of the southeast front overlooking the Purfleet should be open. Whether it was intended that the two arches on the remaining side should be open or closed it is impossible to say, but in all likelihood they were to be open. This would have been in accordance with the usage prevalent in other exchanges and town halls built about that period. Early pictures and various items of structural evidence together bear witness to the use at one time of open arcades on three sides; on the fourth, structural evidence points in the same direction. The walling up of the arches, however, very obviously took place not many years after the building's erection, probably at the time when it ceased to be the Exchange and became the Custom House, transforming a building with what was in effect an enclosed upper story above an open loggia—after Italian precedent—into a structure with four solid walls from the ground up. On the southwest side, overlooking the Purfleet, the wall rises sheer from the brick masonry of the dock. Here the doorway in the middle arch of the triple arcade seems to be original; the architrave is of stone, the mouldings are all carefully finished, and there is every evidence that it formed part of the original design and construction. This doorway appears to have opened on some sort of balcony or platform overhanging the water. Before they were walled up, at the date of the early alterations, the two arches at the side had low protecting paneled parapets of stone across the bottom. These are still clearly visible, and there can be no doubt of their having formed part of the original construction. In the main or land facade, the doorway is plainly not original; the architrave and the panels in the head of the arch are of wood, and it is easy to see where they were fitted in when the changes were made.

The Exchange, to call it by its first title, was conceived in the broad, robust spirit that characterized the spacious days of the late seventeenth century—the days when King's Lynn was at the zenith of its commercial glory, and when its wealthy merchants lived in a manner more like that of the Dutch merchant princes than that of the traders in their own land. Relations with the Dutch ports were intimate, and Dutch influence can everywhere be seen in the architecture of King's Lynn dating from this period. It was even more clearly defined and pronounced than the contemporary Dutch trend elsewhere visible in England, a trend largely attributable to the repeated editions of Vingboons's book. The Batavian flavor can readily be recognized in the roof contours and general composition of the Custom House. The same may be said of divers other buildings erected in the town, and especially of the "Duke's Head" Inn, a hostelry since the latter part of the eighteenth century, but at one time the home of Sir John Turner, the wealthy and public spirited vintner who, at his "own cost and charges," built the Exchange and presented it to the town.

The design of the Exchange or Custom House has been sometimes mistakenly attributed to Sir Christopher Wren. Sir Christopher Wren need
CUSTOMS HOUSE
KING'S LYNN NORFOLK

SCALE 1/8" = 1'-0"
SCALE 1/8"=1'-0"
have had no cause to feel ashamed of it; but he was not its creator. Along with sundry houses and several other public structures in King’s Lynn and the neighborhood, it was designed by Henry Bell, a local architect with whom the practice of architecture was an avocation indulged in at odd moments and not an all-engrossing profession. On one occasion when he had received ten pounds for designing a mural monument, he gave his whole commission to pay for gilding the work. It is much to be regretted that Bell did not practice continuously and that he left behind him so few proofs of his ability. Besides his church and domestic work, and some altar pieces and wall tombs, Bell designed the King’s Lynn Market Cross with its flanking sheds, finished in 1710 and pronounced “one of the most finished small works of that time in England,” a “graceful and accomplished” performance that would have done credit to Wren. This Market Cross was an octagon, surmounted by a dome and cupola. On the four sides which had no windows were statues, and a balcony went round it, supported by pillars. “On either side were the markets, which came in quadrants, finished with handsome fronts, and on which were painted emblems suggestive of their use.” In an unpardonable fit of stupidity and blindness on the part of the town authorities, this little gem was demolished in 1831. Only a couple of old prints remain to show the present generation what it was like.

Henry Bell, descended from Sir Robert Bell, a Chief Baron of the Exchequer in the reign of Queen Elizabeth, was born in 1653. He was an Alderman of King’s Lynn and twice Mayor of the Corporation. As well as being a person of means and local consequence, a man of parts and general attainments and an amateur skilled in the art of architecture, he also had some ability in the direction of painting and engraving. He engraved a number of plates of local architectural subjects, and two of his engravings, one of the Market Cross and the other of the Custom House, are shown in the accompanying illustrations. It will be seen, on reference to the latter, that there are several points of difference between the appearance of the building in the engraving and its actual appearance at the present time. Apart from the walling in of the arcades,—which we know was subsequently done,—it is impossible to say whether there was ever a balustraded parapet above the cornice, whether the upper parapet ever had Palladian obelisks* at the corners, or whether the cupola was ever of slightly different design. Lower parapet, obelisks and superstructure may have existed in Bell’s mind as a vision of what he would have liked to see, and may have been closely akin to the angels frolicking in the upper air.

Bell died in 1717. What few things he left are sufficient evidence of his genius. Sir Reginald Blomfield says, “His few undoubted designs show a distinct and charming manner of his own,” and with him we may well deplore “that such scanty record remains of this modest and very able architect.”

* Within the past year His Majesty’s Office of Works has removed the disturbing chimney stacks that previously marred the roof. The flues are now brought up through the piers of the balustrade surrounding the roof deck. The brick chimney stacks recently removed were unquestionably not a part of the original construction. The flues now completed through the balustrade piers are old flues, a fact that strongly favors the hypothesis which has been suggested here.
The Cost of Heating Office Buildings

By SAMUEL M. GREEN COMPANY, Engineers and Architects, Springfield, Mass.

For the purpose of analyzing maintenance costs and to determine upon types of heating plants, the architect will find the accompanying figures on heating costs of particular reference value. These figures were determined after careful analysis by the Samuel M. Green Company, Architects and Engineers, of Springfield, Mass.

Seven office buildings in Springfield were taken as subjects, and the heating costs were determined after careful observation. The buildings are described hereafter, and the table below gives these heating costs in detail:

<table>
<thead>
<tr>
<th>Building</th>
<th>Description</th>
<th>Heating Plant Details</th>
<th>Radiation Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1</td>
<td>177' 9&quot; x 189' 8&quot;, 4 stories and basement</td>
<td>Boilers: 2 66&quot; horizontal tubular; 98 3&quot; x 16' 0&quot; tubes; 10 years old; grate surface 66&quot; x 66&quot;.</td>
<td>Cast iron direct: 2,673 sq. ft.</td>
</tr>
<tr>
<td>No. 2</td>
<td>73 8&quot; x 73' 7&quot;, 4 stories and basement</td>
<td>Boiler: cast iron sectional; 20 years old; grate surface, 42&quot; x 48&quot;.</td>
<td>Cast iron direct: 3,366 sq. ft.</td>
</tr>
<tr>
<td>No. 3</td>
<td>131' 6&quot; x 90' 5&quot;, 2 stories and basement</td>
<td>Boiler: 1 42&quot; horizontal tubular; 50 2½&quot; x 13' 0&quot; tubes; 12 years old; grate surface 42&quot; x 54&quot;.</td>
<td>Total radiating surface: 10,406</td>
</tr>
<tr>
<td>No. 4</td>
<td>61' 0&quot; x 99' 7&quot; and wing 51' 0&quot; x 44' 0&quot;.</td>
<td>Boiler: 2 54&quot; horizontal tubular; 72 3&quot; x 14' 0&quot; tubes; 24 years old; grate surface 48&quot; x 56&quot;.</td>
<td>Total radiating surface: 5,793</td>
</tr>
<tr>
<td>No. 5</td>
<td>169' 5&quot; x 43' 10&quot; and wing 18' 5&quot; x 40' 9&quot;.</td>
<td>Boiler: cast iron sectional, 18 sections; grate surface 36&quot; x 72&quot;.</td>
<td>Total radiating surface: 3,366</td>
</tr>
<tr>
<td>No. 6</td>
<td>190' 0&quot; x 171' 0&quot; with court in center.</td>
<td>Boiler: 2 60&quot; horizontal tubular; 76 3&quot; x 16' 0&quot; tubes; 14 years old; grate surface 54&quot; x 60&quot;.</td>
<td>Total radiating surface: 7,770</td>
</tr>
<tr>
<td>No. 7</td>
<td>157' 6&quot; x 121' 0&quot;.</td>
<td>Boiler: 1 54&quot; horizontal tubular double pass; 36 3&quot; x 12' 0&quot; and 36 3&quot; x 9' 0&quot; tubes; 29 years old; grate surface 48&quot; x 54&quot;.</td>
<td>Total radiating surface: 7,770</td>
</tr>
</tbody>
</table>

## COMPARATIVE COSTS OF HEATING VARIOUS TYPES OF OFFICE BUILDINGS


The following table gives the cost of heating certain office buildings located in the business center of Springfield, Mass. All of the buildings are occupied on the first floors by stores and on the floors above for offices, with the exception of No. 1 and No. 6, which are occupied on the first floors by stores and on the floors above for hotel purposes.

The fuel used is bituminous coal, and its average price in the bins was $10.57 per net ton.

<table>
<thead>
<tr>
<th>Building</th>
<th>Cost of Fuel</th>
<th>Cost of Labor</th>
<th>Total Cost</th>
<th>Cubic Feet in Buildings</th>
<th>Cost per Cu. Ft. for Heating</th>
<th>Squ. Ft. of Radiation for Heating</th>
<th>Cost per Sq. Ft. of Radiation for Heating</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 1</td>
<td>$3,593.32</td>
<td>$1,120.00</td>
<td>$4,713.32</td>
<td>823,815</td>
<td>$0.00572</td>
<td>11,000</td>
<td>$0.42848</td>
</tr>
<tr>
<td>No. 2</td>
<td>$798.52</td>
<td>490.00</td>
<td>$1,295.52</td>
<td>253,170</td>
<td>$0.00512</td>
<td>2,673</td>
<td>$0.48467</td>
</tr>
<tr>
<td>No. 3</td>
<td>814.47</td>
<td>418.00</td>
<td>$1,232.47</td>
<td>193,651</td>
<td>$0.00563</td>
<td>2,980</td>
<td>$0.41359</td>
</tr>
<tr>
<td>No. 4</td>
<td>2,068.15</td>
<td>640.00</td>
<td>$2,708.15</td>
<td>407,441</td>
<td>$0.00665</td>
<td>5,793</td>
<td>$0.46749</td>
</tr>
<tr>
<td>No. 5</td>
<td>1,544.70</td>
<td>204,233</td>
<td>$3,731.91</td>
<td>797,006</td>
<td>$0.00719</td>
<td>10,406</td>
<td>$0.55863</td>
</tr>
<tr>
<td>No. 6</td>
<td>4,611.91</td>
<td>1,120.00</td>
<td>$5,747.91</td>
<td>420,519</td>
<td>$0.00743</td>
<td>7,770</td>
<td>$0.42484</td>
</tr>
<tr>
<td>No. 7</td>
<td>3,200.00</td>
<td>430,519</td>
<td>$3,200.00</td>
<td>30,519</td>
<td>$0.00743</td>
<td>7,770</td>
<td>$0.42484</td>
</tr>
</tbody>
</table>
According to reports of contracts let (F. W. Dodge Corporation) the month of March showed a great increase in building activity. In fact March was a record-breaking month, being 11 per cent higher than the corresponding month of last year. Public Works and Utilities continue to increase, and, School Buildings, which amounted to 9 per cent of the total, show an increase over last month. Residential and Commercial Buildings show some falling off. The total value of new building construction started in the first three months of this year is $1,076,569,300, which is an increase of 4 per cent over the same period last year. It is interesting to note, however, that there has been a great decrease of activity in the metropolitan area of New York City with new building contracts reported amounting to 32 per cent less than in the same period last year. In the Northwestern states there has been a decrease of about 8 per cent, but all other districts in the country show a substantial gain. The territory outside of New York shows a general increase of 21 per cent over the first quarter of 1924, which is convincing indication that building activity is being decentralized, and that more prosperous conditions throughout the country will result in a general increase of investment in new buildings.

The plans filed during the month of March assume record-breaking proportions, totaling in all over $770,000,000 of contemplated new work. This condition would seem to indicate a heavy volume of contract letting during the months of April and May.

Building labor conditions as reported from various sections of the country are encouraging. It seems to be the consensus of opinion on the part of organized labor that the prevailing rates of last year are not to be disturbed during the present year, and to a great extent this phase of construction cost has become fairly well stabilized, because in most of the trades a fair and steady volume of production is to be noted. Transportation conditions are good, and manufacturers' stocks are such that orders are being filled with no unreasonable delay. It would appear that a very large volume of construction will be started during the spring building season, and conditions promise a speedy completion of these jobs. Finance still continues to operate on a liberal basis.

**ANNUAL CHANGES**

1913 BASE

<table>
<thead>
<tr>
<th>MILLIONS OF DOLLARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td>300</td>
</tr>
</tbody>
</table>

**MONTHLY CHANGES**

1924 1925

<table>
<thead>
<tr>
<th>JAN FEB MAR APR MAY</th>
<th>JUNE JULY AUG SEP OCT</th>
<th>NOV DEC</th>
<th>JAN FEB MAR APR MAY</th>
<th>JUNE JULY AUG SEP OCT</th>
</tr>
</thead>
</table>

**THESE** various important factors of change in the building situation are recorded in the chart given here: (1) **Building Costs.** This includes the cost of labor and materials; the index point is a composite of all available reports in basic materials and labor costs under national averages. (2) **Commodity Index.** Index figure determined by the United States Department of Labor. (3) **Money Value of Contemplated Construction.** Value of building for which plans have been filed based on reports of the United States Chamber of Commerce, F. W. Dodge Corp., and Engineering News-Record. (4) **Money Value of New Construction.** Total valuation of all contracts actually let. The dollar scale is at the left of the chart in millions. (5) **Square Foot Area of New Construction.** The measured volume of new buildings. The square foot measure is at the right of the chart. The variation of distances between the value and volume lines represents a square foot cost which is determined first, by the trend of building costs, and second, by the quality of construction.
Important Principles of Architectural Economics

PART I. PRELIMINARY INVESTIGATION BEFORE PLANNING A NEW BUILDING

By JAMES M. GREEN, JR.

The actuating motive for the construction of all buildings, other than those serving municipal, county, state and federal governments and those for religious and social purposes, is to yield revenue. This revenue or investment return is regarded strictly in terms of money value, excepting in those particular instances where advertisement and prestige are of studied commercial importance. It is obviously impossible to foresee all the contributing elements which may determine the success of a structural venture, or to correlate all those elements which may be opposing; careful study, however, conducted by men with discriminating judgment, can determine with reasonable accuracy the possibilities of good investment or the chances of there being an inadequate yield upon the capital outlay which will be involved in the venture.

Owners primarily base their pride in ownership upon money returns rather than upon desirable qualities of architecture, but artistic merit in a building will not be discounted by intelligent and successful ownership, for inappropriateness of design is a fundamental which tends to impairing income values. While readily demonstrable that architectural beauty is a commercial asset, it is apparent at just what point increased expenditure for ornamental features will cease to develop a correspondingly increased revenue. It is, therefore, essential that the designer should frankly recognize the fact that there is a line of demarkation beyond which he must not pass if the maximum revenue is to be obtained.

Economic Study Important to Architect

The greater part of an architect's service combines knowledge of economic science with a highly technical art. It is the duty of the architect to produce a design well balanced in architectural quality, although only a meager part of the total expenditure is devoted to the architectural "picture." It is likewise the duty of an architect to protect the financial interests of his client by producing a design well balanced in terms of commercial success. These things can be done only by an exhaustive study of the financial opportunities offered, since no matter how handsome the structure may be, utility is expressed in actual money values. The average architect cannot maintain a specialized force, familiar with the intricate design peculiar to the functions of some modern buildings. It is the duty of the architect, however, to thoroughly understand the business of building design and construction as well as to bring into contact with his problems in its special phases those whose specialized knowledge must be asked to cooperate for the success of the project.

When a cursory examination points out a good opportunity for profit, a thorough study should be made before the financial plan is prepared for presentation to possible investors. In grouping the various elements of a problem of this kind, so as to make them more readily studied, it requires balanced perception to assimilate facts and avoid preparing a perfunctory estimate based merely upon more or less accurate hearsay, tinged with self-interest. The growing concerns of a community are the units upon which the success of a building enterprise depends. It is, therefore, obviously necessary that every relative element between different forms of business be recognized. While it is impossible to prepare a rigid schedule upon which economic investigation may be made, the chief fundamentals reached are herein set forth. They are derived from admitted premises, reached by valid steps of reasoning, and subject to local inquiry. While the rules for obtaining successful results manifestly cannot be standardized, no doubt these theoretical demonstrations will assist in forming the proper fundamental considerations.

The three cardinal elements essential to an economic investigation and of prime importance toward determination of the type the building is to assume, may, for consideration here, be thus defined:

The amount of gross investment, which includes the total cost of the land, fees, interest during construction, taxes, cost of improvement, operative capital and all costs incurred up to the time of occupancy.

The amount that can be borrowed upon mortgage on the completed structure and land.

Consideration of the net periodical receipts.

These elements are all subject to subdivision, and
the details of each are so intertwined and reciprocal in relation that it is impossible to consider each one in a particularly individualistic manner. For further convenience, our problem will be discussed under these prime headings:

I. Location.
II. Determination of Investment Type.
III. Planning.
IV. Financial Analysis.
V. Variable Fundamentals Affecting Returns.

Location (I): Essentials of determination.
- Extent and demand of permanency of service.
- Existing and potential competition: size; growth; profits.
- Rentable ratios.
- Rental rates.

Determination of Investment Type (II): To be in accordance with laws of supply and demand.

Planning (III): Functions determined by design:
- number of rentable stories; ratio of rentable area to gross area; ratio of building area to lot area; cost of building.
- Cooperation with specialists.
- Construction with reference to: efficiency; artistic design; depreciation.

- Ultimate cost affecting investment.
- Carrying charges and operating expenses.
- Independent variables: taxes; mortgages.
- Depreciation.

Variable Fundamentals Affecting Returns (V):
- Cost of land.
- Average annual gross rental.
- Cost of building.
- Cost of operation.
- Rentable stories.
- Ratio of rentable area to gross area.
- Ratio of building area to lot area.

Determination of Investment Type (II):

Men with experience in the construction and operation of commercial structures will ask in relation to each prospective site these questions:

Will the site be developed to its highest and most permanent use by an office building, a hotel, an apartment house, or what?

Will the rentals justify a substantial investment now and later?

How many stories may the building be given without there being danger of an excessive number of vacancies?

Will the store rentals be adequate to meet the demands higher rentals.

Locating a specialized type of building in a community of low grade tenants may throttle the building's economic life. If rentals around the proposed site are studied, they often appear inadequate. Analysis will generally show that the store fronts are shoddy or carelessly designed, that the offices are poorly planned or inaccessible, and that the equipment and service are unsatisfactory. In a better building, however, higher rentals could be obtained.

If the present owners in any given district were to organize and to terminate bad leases, remodel store fronts, improve street lighting and generally tone up the neighborhood character; if they were to induce high grade tenants to locate in the remodeled buildings, even if the first few years' rentals were inadequate, the value of the land would soon be enhanced and a higher type of tenants attracted to the office floors, thus improving the buildings' character.

1. Functions of Locality and Structure.

Considerations that tend to create high values in a mercantile section are central location, corner influence, a reasonably wide street, level ground, and the presence near by of institutions rendering banking, professional and other supplementary services dependent upon or responsible for the density of traffic. On the other hand, adverse influences are vacant buildings, parks, buildings used for purposes other than those to which the district is devoted, dilapidated and unsightly structures, buildings in process of construction, difficult grades, and in fact anything that interferes with the homogeneity of the district.

2. Cost per Square Foot or Front Foot of Land.

Local municipal legislation controls this situation.

3. Regulations Controlling Lot Area Utilized.

The square foot, the adopted standard of floor measurement, varies in the rental rate for ground floors and upper floors according to utility in various parts of a city. Unit rentals are usually highest in jewelry stores, show rooms, millinery and haberdashery shops. Spaces for banks and trust companies are also costly, and such rates are very stable in comparison with those for areas for mercantile purposes.

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5. Changes Incident to Civic Growth.

By a study of the future limitation of function, it is possible at the very outset to definitely plan an extraordinarily long economic life for the building. This may be done by designing for future conversion of the building, and by preparing by means of a sinking fund for financing improvements.

6. Corner Influence.

Plots at the intersections of streets possess greater value than inside lots. In such a location a business will command superior transportation advantages, will make a stronger appeal to the passing public, and will offer as well to the tenants of the building abundant light and air. All this, naturally, commands higher rentals.
requirements of prospective tenants. These requirements may vary widely, due to diverse methods of conducting business; the seclusion or accessibility of the heads of firms; the volume of business conducted individually, and customs as to sizes of office units and service. So much for a commercial venture. One readily understands that for hotels, apartment houses or other types of buildings, the investigations must assume a specialized nature covering an individual field. In each phase of the undertaking the inquiries must be substantiated by men of experience, and actual comparisons should always be made where possible. Neither mathematics, regulations nor computations can act as a substitute for common sense and good judgment. Undue optimism during a preliminary survey, added to an underestimation of capital requirements, might sell stock, but the securities of the holding company would be depreciated and indeed seriously imperilled. Failures can almost always be avoided by means of thorough analyses made by persons familiar with the phases of structural investment. The laws of economics are rigid, and the theories involved in the solution of an investment problem are no less definite than the theories of architectural design. Financial analysis is not particularly complicated, and the substance of inquiry is arrived at by simple thinking. The probable rental of a proposed building can be best determined by basing the estimate of rental return on the rates obtained for space in the same class of building in the immediate vicinity. If there exists no development of as high a class as that proposed, a comparative analysis can be made and a reasonable decision reached regarding rental rates by a study of the ratios between types. For instance, these general types of construction exist: Fireproof; semi-fireproof; slow-burning; ordinary construction; poor construction.

Assuming that the proposed building is to be of the most approved known construction, it will then be rated, theoretically, upon the basis of 100 points for each of these considerations: General aspect; character of planning and construction; owner's service.

By comparing one type with the other, the ratio of advanced percentages between the types can be discovered, and these differences in the scale of rentals can be built up to fix the ultimate rental rates of the new building.

Inasmuch as rental rates are based upon the square foot as the unit measurement, it is necessary to understand just how to arrive at the actual footage of income-producing space. This will be discussed more completely later, but here I shall briefly define the different divisions or topics under which a building is considered:

Table of Rentable Ratios; Areas of No Return, which are areas of walls, partitions, toilets, halls, elevator shafts, stairways, etc.; Rentable areas which are income-producing; Gross areas, which means the entire area within the perimeter of the building.

These schedules will be of assistance in comparing the various types of utilitarian buildings:

**General Aspect—100 points total.**
- 20 points, Neighborhood character.
- 20 " Appearance of the building.
- 20 " Accessibility for business.
- 20 " Proximity to banking, commercial, and professional services.
- 20 " Class of tenants.

**Character of Planning and Construction—100 points total.**
- Type: 50 points.
  - 50 points if Fireproof.
  - 35 " Semi-fireproof.
  - 25 " Slow-burning.
  - 18 " Ordinary.
  - 10 " Poor.

**Interior Finish:** 25 points.
- 3 points, Corridors.
- 3 " Stairs.
- 8 " Lobby.
- 8 " Walls and ceilings.
- 3 " Floors.

**Planning:** 25 points.
- 15 points, Ventilation.
- 10 " Orientation.

**Owner's Service—100 points total.**

**Engineering:** 40 points.
- 15 points, Elevator.
- 12 " Heating.
- 8 " Hot water.
- 5 " Lighting.

**Sanitor Service:** 30 points.
- 10 points, Condition of entrance.
- 10 " Cleaning of public spaces.
- 10 " Individual service.
  - 5 points, Cleaning.
  - 3 " Repairing.
  - 2 " Personnel.

**Toilets:** 5 points.
- 3 points, Access.
- 3 " Sanitation.
- 3 " Fixtures.
- 3 " Ventilation.
- 3 " Service.

**Good Will:** 15 points.
- 7 points, General maintenance.
- 5 " Tenants' good will.
- 3 " Public good will.

**Planning (III.)**

The problem of design is not to be discussed here excepting in its general relation to the investment. Each building presents its individual and specific consideration, and each must be thoroughly analyzed in respect to itself. This applies not only to types of buildings but to each scheme prepared for any one type. To explain the psychology of planning would require an architectural education, but to analyze a plan in relation to its economic possibili-
ties involves merely a comparatively small knowledge of business principles.

The Functions Determined by Design are:
1. Number of rentable stories in the building.
2. Ratio of rentable area to gross area. Ordinarily, normal ratio of area would be:
   - Office buildings ....72 per cent of gross area.
   - Loft buildings ....85
   - Stores and show rooms ....67
   - Apartment houses ....64
3. Ratio of building area to lot area.

The percentage of the total land area occupied by the building depends upon its function, the plan arrangement and local conditions. Light, air and architectural symmetry determine this. Corner buildings and tall structures with low adjoining buildings of a permanent nature are at a considerable advantage. There is always risk of investment impairment when cooperation of surrounding land owners is depended upon too much, since ownerships and conditions may change.

4. Cost of building per cubic foot.
This cost will vary largely with the quality of workmanship, kind of construction used, the skill of the architect and contractor, and the governing contract documents. Cost is greatly reduced by uniformity in design of fabricated steel, reinforced concrete and other building materials.

The height of the building likewise affects the unit costs, because the taller it is the greater the column and footing loads, so that the cost of columns and footings is about in proportion to the number of stories. Since the cost of girders, beams, walls, windows, etc., will be in proportion to the cubic contents of the building, and since the cost of these items in total is far in excess of that of the columns, footings and excavations, it may be concluded that the cost of the building is in proportion to its volume.

To present the principles upon which success depends and in such a manner that practical application may be made with accuracy and convenience is a vast undertaking, and one that is well worth while. Heartily cooperation between the architect and prospective management will develop to a high degree efficiency in control and service, with a subsequent reduction in operating expenses.

The feature of depreciation in structural development is of such vast importance that it may mean the difference between the success and failure of the enterprise. Study and observation prove that the economic or commercial life of a building does not exceed 50 years, and perhaps less. Physically it may last 100 or even 200 years, but new devices and new methods of construction or changes in business requirements will destroy it as a competitor with newer buildings.

How then may this loss be best provided against? By a study of the changes incident to civic growth it is possible to design a building which can be altered later to serve another purpose, but such a provision usually adds considerably to the initial cost. The most conservative method of offsetting future limitation of utility is to set aside an annual depreciation sum and to invest the principal and its accrued interest in safe securities. If a sum equal to 1 per cent of the cost of the building is set aside annually and invested at 4 per cent, it will about equal the cost of the building in 40 years.

The average owner usually feels that depreciation will be amply offset by unearned increment on the land and the value of the building as a going concern. Even if such be the case, it is necessary to actually consummate a sale in order to profit thereby. It is far wiser to face the issue frankly, and to meet depreciation with funds in the bank and thus maintain high standards which attract good lessees,—those who will pay reasonable rental rates.

(The Second Part of This Article, Covering the Financial Analysis, Will Appear in the July Issue)
The second group of street facades in Dijon includes not only several charming examples of early French Renaissance town houses, but also two interesting views of the front of the Church of Notre Dame. In a way the main facade of this church, which rises abruptly from the sidewalk level, suggests a type of ecclesiastical design prevalent in the large cities of America, where land is so costly and so difficult to secure that the church edifice usually occupies every square foot of available land.

The Romanesque-Gothic spirit of the Church of Notre Dame is in marked contrast to the refined Renaissance detail and charm of proportion of the several house facades found on the Rue de la Prefecture and the nearby streets, six of which appear in this group of the Forum Studies of European Precedents. An interesting use of wall panels combined with rusticated pilasters, rugged wheel-guards and fine entablature surmounted by a balustrade in classic feeling, marks the courtyard entrance, between the wings of the building in Plate 43. The street facades of these two narrow wings show an unusual treatment of quoins, in which the masonry joints do not line with the breaks in the quoins themselves. The windows in each of these bays are dignified and monumental in treatment; the lower windows have shallow balconies of wrought iron, unusually fine in design. The upper windows break through the Mansard roofs.

In the Place des Ducs a small, two-story building on one of the street corners shows an interesting shop window, surmounted by a niche, flanked by ornamental panels executed in Renaissance details. The corner of this same building has a most unusual and interesting round turret, supported well above the sidewalk level by massive mouldings and crowned by a mosque-like roof and finial. The architectural details of this corner turret are suggestive of the work of the period of Francis I. The four houses in the Rue de la Prefecture, shown in this group, have restraint and dignity in design. Carefully studied fenestration, including the interesting dormer details, no two of which are alike, is full of inspiration to the modern architect who wishes to adapt French Renaissance architecture to present-day American city house facades.
ENTRANCE DETAIL, CHURCH OF NOTRE DAME, DIJON

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Photos, Paul J. Weber

The Forum Studies of European Precedents; Plate 48
A STREET FRONT IN DIJON

The Forum Studies of European Precedents; Plate 44
CIRCULAR CORNER BAY, PLACE DES DUCS, DIJON

The Forum Studies of European Precedents; Plate 44
Architectural Library
NO. 58 RUE DE LA PREFECTURE, DIJON

The Forum Studies of European Precedents; Plate 45
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NO. 41 RUE DE LA PREFECTURE, DIJON

The Forum Studies of European Precedents; Plate 46
NO. 22 RUE DE LA PREFECTURE, DIJON

The Forum Studies of European Precedents; Plate 47
SMALL BUILDINGS

Small Houses in the Colonial Style

By HENRY B. HUMPHREY

This is the age of the small house,—of every kind of dwelling for that matter, from apartments to huge mansions,—but it is especially the age of the small house, because for the first time architects are creating artistic and picturesque designs for small houses. During the greater part of the last century no one seemed to care much about domestic architecture; at least no one produced anything that was pleasing. At the beginning of this century architects took up the problem of building beautiful large houses, mansions befitting the wealth they represented, and now architects, magazines and the public generally are interesting themselves in the problem of making beautiful small houses.

When one surveys the little horrors that have sprung up in the suburbs of our great cities, one regrets deeply that this small house movement did not begin years ago. But the past is past, and the sins that have been committed must be visited upon this and a few succeeding generations. However, since the tide has turned, and since we are building now in great numbers the dwellings that will make or mar the landscapes of the future, it is our duty to consider the problem, as carefully as we may and to produce our very best work in this particular line.

First of all, it seems reasonably apparent that we should build each of the long rows of small houses that are now going up, and that will go up, in some one style. This does not mean, of course, that all the small houses should look alike. It means only that they should all speak the same language, using any dialect or inflection they wish, and that a pink plastered villa should not be allowed to shout imprecations at a quiet, dignified old white Colonial house. The ideal countrysides are certainly those of France and Italy, where there is everywhere a visible homogeneity in the architecture. Even the roof lines blend into one another where the houses are built closely together. We have no such ideal state of things as that here, and it seems doubtful if we ever shall have; but at least we can, and certainly should aspire to it, and secure of it as much as we can.

Just how this is to be accomplished is difficult to say. America is an enormous country, and although
Americans are content to be alike in almost everything else, those who can call one or two of the architectural styles by name are anxious that their houses should not look too much like those of their next door neighbors. This makes it difficult for the architect to further the movement for coherence in design. If his client wants “something in the French style,” he cannot say, “Go to; you shall have Colonial or nothing.” But it would be helpful if he could talk persuasively about the Colonial style, and perhaps take his prospective client to see some beautiful little houses he had designed in that style. The point is that if we are to have any homogeneity at all, architects,—or a goodly number of them, at least,—must definitely favor some one style of design.

To build successfully in any style, an architect must of course “catch the spirit.” If he is going to build a really good English cottage, he must know a lot about early English methods of construction, English builders’ usages, and a little about English
history. It is not enough that he know, as many architects now do, how to design a good example of English, French, or Italian architecture. An imitative reproduction of ancient work is not enough,—he must breathe into his work some of the ancient spirit without which the house is a mere shell of stones and timbers, beautifully decorated perhaps, but lacking the reality the ancient homes possessed. Since it is necessary to "catch the spirit," it is suggested that architects seek out the Colonial spirit first of all, and "catch" the other spirits whenever the need demands. A scorn of Colonial architecture and of the spirit which formed it is unworthy of anyone.

The advantages of using the Colonial style are numerous. First of all, it is popular with the public. The only difficulty about this is that the public is conspicuously lacking in architectural taste and appreciation. People go to exhibitions of architecture, but they do not know what is good and what is bad. They "revere" it all. Then when they call in architects to build them houses, they ask them to reproduce something they have seen; it may be an old Colonial house which they are sure is good (because it is old), or it may be a friend's house which they are sure is good because someone told them so. However, the architects militant that I envisage here
would patiently explain, and persuade refractory clients to do just what they ought to do. The clients wanted Colonial houses,—but bad ones; the architects give them Colonial houses,—but good ones.

A second great advantage of using Colonial architecture for small houses is that it is our one (not counting modern office building architecture) indigenous style. Although the public has no definite architectural allegiance, many of the aesthetes disdain early American work because Colonial architecture does, in a way, bear the “made in America” hallmark; but on patriotic grounds alone, Colonial should be the one style most used on American soil. This is more than just a jingoism. When we think of an Italian villa, we see beside it tall cypresses; before French manoirs we visualize rows of slim poplars, and similarly in the American landscape, more particularly that of the North, we should see the style of architecture which the first colonists used there. These colonists took English styles and made them something different. They did not do so to be spiteful or to start an “art nouveau”; they did it because they were forced to do so by the exigencies of life in America. The demands of American life should determine our architecture of today to make it successful.

A third reason for the use of Colonial design is that no architecture, save that of European farmhouses and English cottages, was ever before used so entirely for small houses. Not until Colonial architecture was on the wane did large houses begin to be built in this
Style. Before that time the inhabitants of America, from whatever stock they may have come, lived sedately and with dignity in small, well kept houses. Poor though they were, fighting a hard battle against the forces of nature, their houses reflect their pride of race and their disregard of moneyed ostentation. Such pride and such fine disregard can be built into the small Colonial houses of today. It would be difficult to incorporate these qualities in the design of an European farmhouse or, for that matter, in that of an English cottage. Living in these humble dwellings we picture the peasants of feudal and early Renaissance times. These houses are lowly and "quaint," but scarcely suitable for homes of twentieth century Americans used to better standards.

The hold of Colonial architecture upon the American public persisted after the colonial era itself had closed, although the sudden fondness for things Greek about 1820, at the time of the Greek war for independence and the publication of several books on Greek architecture, cut short its last period. Into what it might have developed by now, had it been left to follow its own course, it is impossible to say. Probably it would have died in the welter of styles produced toward the end of the last century. However, it is certain that the intelligent study of Colonial architecture by a number of architects today is resulting in the complete revivification of this style, and is bringing before the eyes of the world a new beauty, of which Americans may well be proud.

Working in the Colonial style is not, of course, a simple matter. There are as many lessons to be learned in handling this style as in handling any other. Its very simplicity presents a real problem. Few things are harder to achieve than a dignified simplicity which is neither too dignified nor too simple. Three chief pitfalls which lie before the designers of a Colonial house are: First, a cold imitation of ancient work. Second, use of an ultra-sophisticated design, quite out of keeping with the true Colonial spirit. Third, a bleak and austere simplicity. Into the latter class falls the work of those architects who think of a Colonial house as nothing more than a rectangular box, with perhaps a little decoration at the entrance door. There are also to be found in this class a great number of jerry-built houses which are given the name of Colonial only because they are so called by the men who built them. It is these abortions which we should wipe off our landscape. In this same class are those houses which attempt "quaintness," those "love cottages" and little houses, overloaded with details, that mock the true spirit of Colonial design.

One who thinks of Colonial houses as stiff, formal boxes should make a study of the architectural development of those times. In its first period; the era of the small house from 1630 to 1730, the houses were irregular in shape, as unbalanced in fenestration as any lover of English architecture could wish. These houses were not built all at one time, nor were they planned as complete entities. They were put up primarily to shelter families, and they were added to as conditions required. Consider, for instance, the famous old Fairbanks house at Dedham, Mass,
built in 1636, which is the oldest dwelling now standing in the northern part of the United States. To the original gable-roofed house were added shortly after its construction two little gambrel-roofed ells. The whole house is now shaded by immense, stately elms, which make it seem as much a part of the landscape as if it had been there since the beginning of time. The truth of the matter is that Colonial architecture which followed in the track of contemporary English architecture, in the days when English architecture was informal and rambling, the days of the Jacobean period, shows a similar looseness of design. In the days when English architecture grew formal and balanced, the Renaissance Anglo-Css was used by the architect of today, save the plans of the buildings. We must study the later periods to get the details with which to ornament our modern houses. The early dwellings, with their numerous additions in the form of the ell, lean-to, and so forth, give charming, informal plans, with interior arrangements which can be made to fit the needs of any family. But these early houses were practically bereft of ornament. It was not a period in which house builders could afford to give much attention to the appearance of their facades and ornamental details, and they did not.

One of the dangers to be avoided in Colonial design, and a fault which appears in much of our modern work, is an over-use of such features as arches, pedimented doorways and Palladian windows. It is ridiculous to stick these on anywhere, even to suit the wishes of a client. A Palladian window needs a good wall space to set it off, and a pedimented doorway is not suited to every house designed in the Colonial style. It must be remembered, furthermore, that those ornamented doorways were a comparatively late development, and that not until the middle of the eighteenth century did doorways begin to be ornamented with columns, which at that time were seldom free-standing. In the first quarter of the century there appeared entrance decoration in the form of friezes supported by console brackets or pilasters. The pediment also passed through the same development, beginning as triangular and then going on through the "segmental circle" and "broken" stages. The development of the window was similar to that of the door. As the years passed the size of the panes increased, and their number decreased. Prior to the Revolution semi-circular arches were only used for windows on stair landings, and before the middle of the century Palladian windows were only very rarely used.

Certainly the Colonial style can meet all needs, as few architectural styles can. It can be developed in any material and be built for any climate; it can be formal or informal, large or small, as the owner and architect wish. And furthermore, and finally, it has a charm that accords perfectly with our American life today. With a garden, a picket fence, and a coat of white, cream or yellow paint, the Colonial house is as intrinsically beautiful and bright as any Italian villa, and at the same time it is indigenous to our soil and climate, besides meeting American needs.
Colonial Details

By JOSEPH F. HIGGINS

The fact that many of the first and foremost colonial architects, builders and workmen served their apprenticeships in the shops of the shipbuilders as designers, shipwrights, and carpenters, we owe much of the delicacy and refinement of detail so characteristic of Colonial work. As may be judged from the ship models of the seventeenth and eighteenth centuries, so much sought after today, great elaborateness of detail marked the design of many of the larger ships. Ornamental figureheads, carved from wood, adorned the prows, and tiers of richly decorated mullioned windows pierced the sterns of the "ships of the line" and the early square-rigged clippers. The work of providing decoration for the ships of that day produced men of great artistic skill, who possessed more than ordinary intelligence and ability.

As the merchants in the port towns and cities through foreign trade increased their wealth and raised their standard of living, they built for themselves larger and more elaborate houses. Since architects and designers were scarce in America in those days, these merchants were forced to turn to the shipbuilders to construct their buildings. Among the foremost of these early house builders was Samuel McIntyre of Salem. He, like the other architect-builders of the time, plunged eagerly and enthusiastically into the new task. Books on architecture, which were being published by several architects in England, were imported by these early colonial builders for their inspiration and instruction. In England the Georgian period was at its height; Sir Christopher Wren was rebuilding London after the Great Fire. Through the influence of the work of the Italian architect Palladio, which was at that time being published in books, the Classic orders again came into use and popularity in England. Through other books published at this time by such leaders as Robert Morris, Inigo Jones, William Halfpenny and others, our Colonial style naturally took on a close resemblance to its contemporary, the Georgian style in England. An understanding of architecture in those days was a part of the scholastic training of every educated man, many of the colonists who had received their educations abroad aided through their knowledge of the basic principles of architecture in developing the Colonial style. This was particularly true of the South, where wealth promoted travel and education.

Due to the simplicity of Colonial work, there are not as many decorative details which characterize it as in the cases of certain other styles of architecture. The chief characteristic of the detail of this period can be found in the decorative treatment of door and window openings, dormer windows, fireplaces, built-in cupboards, wall paneling and stairways. A greater richness of detail is usually found in the interior rather than the exterior details, although in some of the fine houses built during the latter years of the eighteenth century great elaboration was found in both. By following the precedent of the Georgian period, various adaptations of the orders were used to frame door openings. Combined with the use of the orders, in which free-standing and engaged columns as well as pilasters were employed, use of pediments, plain or broken, became the custom in the treatment of door heads. Thin, vertical side lights and oblong and often semi-circular leaded glass lights were used to enrich the sides and tops of the door openings. These lights were often elaborate and aided in giving architectural character.

The decoration of window frames also grew more elaborate as the style was developed. Architraves of Classic mouldings supported flat entablatures and, later, pediments. The 24 and 32 panes of glass, used in the earlier windows, were replaced later by 12 and 18. At first the wood muntins were quite heavy, but later they became as thin and delicate as strength of construction would permit. In door lights the early wood muntins later gave way to lead, which permitted the use of smaller and differently shaped panes of glass. Double-hung windows were universally used. To increase the sizes of the windows on the first floor the lower sash would often have one more row of panes of glass than the upper. Outside wood shutters were commonly used on the early Colonial houses. These shutters usually showed two panels of equal size. Dutch influence led to the use of two or three panels, the upper of which was quite small and often contained a pierced design. These designs were commonly in the shape of a crescent, placed either vertically or horizontally, although a variety of designs are found in different parts of the country. It was not until the middle of the eighteenth century that shutters containing the fixed louvers, which we now call "blinds," came in.

The windows were almost always placed flush with the outside walls of the houses, thus making possible deep window recesses on the inside, as the construction of these early houses was usually a combination of brick shell, covered with sheathing and clapboards or shingles. Even houses constructed entirely of wood were built so solidly and of such heavy timbers that the walls were often a foot thick. These deep window reveals permitted the use of seats and flower shelves on the inside. Also shutters which folded back into the window reveals were very common during the first half of the eighteenth century. In many of these houses solid paneled shutters made to slide back into the thickness of the walls were used to cover the insides of the windows. This type of shutter formed an excellent protection against attacks from Indians or robbers, which were not uncommon in rural districts.
Great variety and charm are found in the details of the moldings, which varied in different sections of the country. In New England they were refined, delicate and rather light in weight, while in the South they were bolder, more vigorous and heavier in design and weight. Great care and thought were spent upon the profiles of moldings of all kinds.

In early Colonial houses the plaster walls were usually left bare and painted, but as the colonists grew richer and more prosperous and visited Europe more frequently, French and English wallpapers were used above low wainscots, which came to the levels of the window sills. The wainscot cap was composed of simple moldings with slight projections. In the more pretentious houses, particularly prior to 1750, wall paneling extending from floor to ceiling was found. Such paneling was particularly used for the fireplace side of the room; the other three walls being left with the plaster exposed. The new American wing of the Metropolitan Museum shows a number of splendid examples of these early paneled rooms. In a later issue of THE FORUM it is intended to devote several pages to the illustration and consideration of these delightful paneled rooms.

The fireplace openings in all houses, large or small, were given particular attention. In the early houses the wood mantels, surrounding the narrow brick facings of the fireplaces, were extremely simple in design, and often showed no mantel shelves, in which cases heavy bolection moldings formed frames around the fireplace openings. This treatment was very generally used where the wall of the fireplace end of the room was paneled from floor to ceiling. Later on the mantelpiece became ornate, with the introduction of fluted pilasters or columns supporting an elaborate entablature, decorated with carved ornamentation and moldings. The elaborateness of these carved decorations increased gradually up to the end of the eighteenth century. A detail for fireplaces which became quite popular were the "ears" of the architrave, also known as croisettes. This detail of decoration was used also in the architraves of doorways and windows.

Another characteristic detail of Colonial houses is the cupboard, which was usually built in the corner of the principal living room of the house; often there were two cupboards in opposite corners, forming a balanced design. These were composed of two parts; the upper parts were sometimes open and sometimes had doors with glass panes, under square or round heads. The interiors of the upper parts of these cupboards were usually semi-circular in plan and contained shelves with scalloped edges. Often a niche effect was used, terminating in a fluted shell-like design at the top. This treatment was particularly popular in the later colonial period, when doors were seldom used for these corner cupboards.

In the stairways of this period the love for fine decorative detail is evidenced in the carved newel posts and the variety of turned balusters and riser ends which often were beautifully carved. The number of balusters to each tread was usually three, but in the earlier and more rugged work only two balusters to a tread were used. Balusters of three different designs were frequently grouped on each tread. Besides the columnar type and the richly carved post, the twisted spirals, often quite elaborately designed, are found in late Colonial work.
This simple but pleasing building, with its whitewashed shingled walls and large end chimneys, is suggestive of many early Colonial farmhouses found throughout New England. The Colonial trim of the entrance door as well as the five well proportioned windows, with their solid green-painted shutters, makes a simple but pleasing composition for the entrance facade. The severity of the front elevation is pleasantly relieved by sharply projecting bay windows and small arched center door on the garden facade of the house. The simple, straightforward handling of these bay windows is characteristic of the few examples of this motif found in Colonial work. The plan is typical of small Colonial houses of today. A center hall, which is 8 feet wide, separates a living room, occupying the entire end of the house, from the
(Specifications on Next Page)
OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:
Wood frame, concrete foundation.

EXTERIOR WALLS:
Sheathing and shingles.

ROOF:
Hand-rived cypress shingles.

WINDOWS:
White pine, double-hung, small panes.

FLOORS:
Oak throughout master portion; comb-grain yellow pine elsewhere.

HEATING:
Hot water.

PLUMBING:
Enamed iron fixtures.

ELECTRICAL EQUIPMENT:
Lighting and range.

INTERIOR MILL WORK:
White pine trim, base and wainscot in first and second floor stair halls.

INTERIOR WALLS:
Hard finished plaster.

INTERIOR DECORATIVE TREATMENT:
Wallpaper throughout, except in bathrooms and service portion of first floor, which have enamed paint.

APPROXIMATE CUBIC FOOTAGE OF BUILDING:
43,674.

COMPLETED COST PER CUBIC FOOT:
61 cents.

DATE OF COMPLETION:
December, 1923.

(Perspective and Plans on Preceding Page)

This house owes a considerable part of its interest to the beauty of its setting. Flushing is a place in which there lingers much of the atmosphere of the period during which its part of Long Island was settled, and the whitewashed shingle walls of the house are set forth by smooth green lawns and by trees of many years' growth. The little estate fits well into its setting in a pleasant old town.
BRICK COLONIAL HOUSE AT NEW HAVEN
CHARLES G. LORING, ARCHITECT

First Floor
- LIVING ROOM
- HALL
- DINING ROOM
- KITCHEN
- TOILET
- PANTRY

Second Floor
- BED ROOM
- STAIR HALL
- BED ROOM
- TOILET
- PANTRY
- BATH

SCALE OF FEET
OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:
Wood frame.

EXTERIOR WALLS:
Brick veneer.

ROOF:
Slate.

WINDOWS:
Wood frames and sash double-hung; small panes.

FLOORS:
Maple throughout.

HEATING:
Hot air.

PLUMBING:
Enameled iron fixtures.

ELECTRICAL EQUIPMENT:
Lighting.

INTERIOR MILL WORK:
White pine.

INTERIOR WALLS:
Hard finished plaster.

INTERIOR DECORATIVE TREATMENT:
Painted walls and trim in service portion.

APPROXIMATE CUBIC FOOTAGE OF BUILDING:
39,700.

APPROXIMATE COST PER CUBIC FOOT:
49 cents.

YEAR OF COMPLETION:
1922.

(Perspective and Plans on Preceding Page)

SIMPLE and straightforward in design, this successfully studied adaptation of the late Colonial style as found in the cities of New England has every appearance of age and old fashioned hospitality. The entrance door and first floor windows have the segmental brick arches typical of the period. Large chimneys and quarter-round windows add to the interest and dignity of the gable ends of the house. The plan is in keeping with the plain exterior, which shows no covered porch, sun parlor or open flagstone terrace, so popular in so-called Colonial houses of today. It is as simple as the exterior. The center hall, with lavatory at the rear end of the main stairs, divides the living room from the dining room, these rooms occupying respective ends of the house. Back of the dining room are the pantry, servants' stairway, good-sized kitchen and rear entrance, the kitchen being in an ell.
HIS small Colonial house shows unusual thought and care taken in its proportions, details and plan. A story and a half of clapboard-covered walls, with two large, small-paned windows and a pleasing segmental arched entrance door, flanked by old fashioned entrance seats, are the main elements of the design of the front elevation. The three openings in the first story are balanced by three small, well proportioned and simply designed dormers which are located low on the roof, but which fortunately do not break the line of the eaves. Paneled pilasters mark the corners of the front of the house. The plan shows an oblong living porch or loggia connecting the main house with the garage, which pleasantly terminates the design with the long, low slope of its outer roof. The segmental arched doorway of the garage repeats the two archways of

(Specifications on Next Page)
FORUM SPECIFICATION AND DATA SHEET — 35
Colonial Cottage at Glencoe, Ill.; R. C. Hunter & Brother, Architects

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:
Wood frame.

EXTERIOR WALLS:
White pine siding and finish.

WINDOWS:
White pine, double-hung.

ROOF:
Cypress shingles, stained.

FLOORS:
Oak, except for loggia, where brick is used.

HEATING:
Vapor steam; temperature control.

PLUMBING:
Vitreous china fixtures.

ELECTRICAL EQUIPMENT:
Lighting, and cooking range.

INTERIOR MILL WORK:
Birch, and enamel paint.

INTERIOR WALLS:
Hard plaster, covered with wallpaper.

INTERIOR DECORATIVE TREATMENT:
Floors, stained dark; woodwork, painted light; ceilings, white calcimine.

APPROXIMATE CUBIC FOOTAGE OF BUILDING:
33,800.

COST PER CUBIC FOOT:
61 cents.

DATE OF COMPLETION:
May, 1923.

(Perspective and Plans on Preceding Page)

The loggia. Painted white, with green shutters, the house and garage are extremely attractive in the impression which they give to the passer-by.

The large living room occupies more than half of the first floor, with the front door opening directly into it. At the right is a small dining room with pantry, kitchen and servants' porch at the rear. The single staircase of the house is located between the living room and kitchen, making it accessible from both. The second floor shows three bedrooms and two baths, with storage space under the roof of the loggia which connects the house with the garage. This loggia is 12 by 23 feet in size, with open archways on either side, suggestive of the Palladian motif. One large chimney is logically located at the end of the house nearest the garage, thus emphasizing the axis or center line of the entire design, with its long frontage.

There is a subtle charm about the proportions and details of this design, combining house and garage as it does in one group, which a glance at the illustrations will readily make evident. The house possesses a notable architectural character which combines old fashioned, homelike simplicity with dignity.
SMALL COLONIAL HOUSE AT PERRYSBURG, OHIO
ALFRED HOPKINS, ARCHITECT

THIS white house with green shutters forms part of an unusually attractive farm group. An old fashioned covered arcade connects the rear of the house with the stable and garage. The exterior design is very simple, having two end chimneys and no dormers to break the graceful slope of the roof. In place of dormers, five small windows, which are located just below the eaves in a sort of frieze treatment, help to light and ventilate the second story rooms. As the first floor height is only 7 feet,
FORUM SPECIFICATION AND DATA SHEET — 36
Small Colonial House at Perrysburg, Ohio; Alfred Hopkins, Architect

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:
Wood frame.

EXTERIOR WALLS:
Hand-split cypress shingles.

WINDOWS:
Double-hung; wood frame and sash, old fashioned farmhouse size, about 2 feet, 4 inches by 4 feet, 8 inches.

ROOF:
Red cedar shingles.

FLOORS:
Quartered oak, stained dark.

HEATING:
Steam.

PLUMBING:
Enamelled iron fixtures.

ELECTRICAL EQUIPMENT:
Lighting.

INTERIOR MILL WORK:
White pine trim, and doors, painted.

INTERIOR WALLS:
Hard finished plaster, painted in some rooms, papered in others.

INTERIOR DECORATIVE TREATMENT:
Simple, old fashioned farmhouse style.

YEAR OF COMPLETION:
1919.

6 inches, it is possible to get a vertical wall of 4 feet, 10 inches on the outside of the rooms on the second floor under the slope of the roof. In the upper part of this 4-foot, 10-inch wall are located the small, oblong windows, surrounded by smooth siding, which together form a frieze across the front and back.

The walls of the house are covered with 24-inch, hand-hewn shingles, painted white, which if kept painted should remain in good condition for at least a century. The chief decorative features of the house, as is usual in Colonial domestic architecture, are the front door and the entrance porch, which in this case possess unusual delicacy and beauty of detail. Leaded glass ornaments the narrow side lights of the front door, while the semi-circular louver set against a solid panel above repeats the arched effect of the porch opening which breaks up into the pediment formed by the porch roof in characteristic English fashion. Graceful coupled colonnettes support ornamental panels in the entablature above. A dentiled moulding enriches the cornice which supports the overhang of the roof eaves on the front and back of the house. Brick steps and a brick walk lead through shrubbery and flower beds to the low brick entrance porch, at the sides of which are placed old fashioned benches.

Corner of Living Room

Entrance Porch
ALTHOUGH stucco is not often used for the exterior of modern houses in the Colonial style, there is ample precedent for its use in and around Philadelphia, Baltimore, Washington and the cities of the South, where stucco was very frequently used in the colonial period as an exterior covering for brick or stone walls. The use of wood lathing for stucco was less common. This house at Great Neck shows a straightforward, well balanced design with a spacious and hospitable covered entrance porch and long casement windows on the first floor, which are balanced above by three pleasantly proportioned windows located directly under the slight overhang of the eaves. A roof of graded rough slate, laid random, crowned by a low, Colonial railing, still further heightens the Colonial effect of the house. The two ends carried up above the roof line are coped with brick. Each of these gable ends shows a well proportioned Palladian window on the third floor. The soft tint of the stucco is relieved by the brick sill course, entrance steps and

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Stucco House in Colonial Style at Great Neck, N. Y.; Oswald C. Hering, Architect

OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:
Frame superstructure on poured concrete foundation.

EXTERIOR WALLS:
Stucco on metal lath; brick coping set in copper.

ROOF:
Slate, graded in thickness and variegated in color.

WINDOWS:
Wood, casement and double-hung.

FLOORS:
Oak.

HEATING:
Hot air.

PLUMBING:
Extra large supply and waste pipes, to insure quick filling and emptying of bowls, tubs and sinks; fixtures, enameled iron.

ELECTRICAL EQUIPMENT:
Lighting.

INTERIOR MILL WORK:
White wood, painted.

INTERIOR WALL FINISH:
Wall board in place of plaster.

INTERIOR DECORATIVE TREATMENT:
Painted walls and ceilings; sponge finish on last coat.

APPROXIMATE CUBIC FOOTAGE OF BUILDING:
50,000.

YEAR OF COMPLETION:
1922.

(Perspective and Plans on Preceding Page)

Path, the coping of the roof gables and the two one-story enclosed porches. Shutters painted blue-green show a good combination of solid panels and louvers.

The plans also are interesting on account of the arrangement of the rooms, which is different from that of the usual small Colonial house. This attractive and convenient arrangement is partly due to the location of the entrance porch and front door at one end, instead of at the center of the front elevation. This end location of the front hall and stairway makes it possible to have a large living-room across two thirds of the front of the house, connecting at one end with the large sun room and at the rear with the dining room. The unusually long pantry has a bay window at one end, arranged with table and seats as a breakfast alcove.

The kitchen is good sized and connects with the main stairway by three steps. At the right of the entrance hall is a large library, equal in size to the sun room at the opposite end of the house. Under this library is a single-car garage, which opens onto the lower level of the rear part of the property.

Entrance Door

Front Hall
THE charm of this variation of the Colonial style in modern domestic architecture lies in the free and successful handling of the plan and the details. The continuation of the long roof line over the living porch, the introduction of the entrance door and terraced platform at the end instead of the center of the plan, and the balancing of the design by low, one-story wings, give this house unusual character.

One of the attractive features of this house is the way in which it sets low and spreads out above the ground, producing an effect of solidity and security. The less foundation showing below a house, the more attractive is the resulting appearance. The green painted shutters and blinds make a pleasant note in contrast with the white painted shingles of the house. The long roof slope with the cut-in dormer windows over the living porch gives the appearance of a story-and-a-half house. The delicate detail of the entrance door with its broken pediment is reminiscent in scale and character of some of the beautiful

(Specifications and Costs on Next Page)
### OUTLINE SPECIFICATIONS

**GENERAL CONSTRUCTION:**
- Wood frame.

**EXTERIOR WALLS:**
- Cedar shingles; cypress trim and cornice.

**ROOF:**
- Cedar shingles.

**WINDOWS:**
- White pine, double-hung.

**FLOORS:**
- Oak in principal rooms; pine in service portion.

**HEATING:**
- Hot water.

**PLUMBING:**
- White enameled fixtures and galvanized iron piping.

**ELECTRICAL EQUIPMENT:**
- Lighting.

**INTERIOR MILL WORK:**
- White wood.

**INTERIOR WALL FINISH:**
- Living room and hall, sand finish plaster; dining room, paneled with moulds, painted; second floor, wallpaper throughout.

**APPROXIMATE CUBIC FOOTAGE OF BUILDING:**
- 52,000.

**DATE OF COMPLETION:**
- January, 1922.

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Work at Homewood, in Maryland. Graceful engaged colonnettes support the fluted entablature blocks upon which there rests the vigorous pediment.

The first floor plan shows an entrance hall, out of which the stairway leads to the second floor. Beyond the hall is a large living room, which occupies one of the low wings of the house. In the other one-story wing are located a servants' bedroom and bath, and stairs to the cellar. The second floor contains three bedrooms; two baths and an unusual number of large closets of several different kinds, some being beneath the eaves.

The house is noteworthy as possessing considerable old fashioned charm and yet being both practical and comfortable. It might easily have been standing upon its site for considerably more than a century.
SMALL COLONIAL HOUSE AT FLUSHING, N. Y.
ROGER H. BULLARD, ARCHITECT

This homelike and snug little farmhouse needs no description, since it speaks for itself. The hospitable little entrance porch, with its side seats, small front entrance with its outside louver door, and the two happily proportioned small-paned, well balanced windows, are satisfying and appealing to the artistic soul. The gambrel roof, with its simple dormers and large, squat center chimney, heightens the old fashioned atmosphere so successfully caught in this simple design. It possesses marked individuality and a dignity rare in so small a building.

The plans are as compact and convenient as the exterior is simple and charming. A small entrance hall separates the living room and dining room. A kitchen, butler's pantry, back hall and glassed-in porch occupy the rear of the first floor. The second
### OUTLINE SPECIFICATIONS

**GENERAL CONSTRUCTION:**
- Wood frame.

**EXTERIOR WALLS:**
- Narrow, red cedar siding, laid 3 inches to the weather.

**ROOF:**
- Red cedar shingles, stained.

**WINDOWS:**
- White pine, double-hung.

**FLOORS:**
- Comb-grained Georgia pine.

**HEATING:**
- Vapor steam.

**PLUMBING:**
- Enamelled iron fixtures; brass piping throughout.

**ELECTRICAL EQUIPMENT:**
- Lighting.

**INTERIOR MILL WORK:**
- Stock doors of birch; all trim white wood.

**INTERIOR WALL FINISH:**
- Hard finished plaster, papered throughout except kitchen, pantry and bathrooms, in which enamelled paint is used.

**INTERIOR DECORATIVE TREATMENT:**
- Early Colonial details; cornices, mantels, arches, etc.

**APPROXIMATE CUBIC FOOTAGE OF BUILDING:**
- 35,295

**COST PER CUBIC FOOT:**
- 51 cents, including all equipment, such as screens, fixtures, plumbing, wiring, hardware, grading, etc.

**DATE OF COMPLETION:**
- April 1, 1923.

* (Perspective and Plans on Preceding Page)

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Floor has three master bedrooms and bath, as well as a servant’s bedroom and its own individual bath. The house owes much of its distinction and charm to the restraint which has been exercised in use of ornament. The entire trim has been designed in faultless taste, and if any details were to be singled out for particular commendation they might be the graceful transom of leaded glass above the main entrance doorway, and the quiet, simple living room mantel which is illustrated in detail upon this page.
THIS little house gives an impression of dignity and cheerfulness. The windows are large but well proportioned, suggesting light, sunny rooms within. The green shutters of the first floor and the blinds of the second floor give color to the walls, which otherwise would be glaring in their whiteness. The entrance door, in its almost monumental treatment, gives a note of dignity to the design in keeping with the correct severity of Colonial design. Free-standing columns, of pleasantly slim proportions, and paneled pilasters are grouped at either side of the entrance door, supporting a broken frieze, cornice and pediment above. Into this broken pediment the semi-circular arch and slim keyblock of the door architrave are projected. The door itself is set back into a deep reveal, which suggests a sub-
OUTLINE SPECIFICATIONS

GENERAL CONSTRUCTION:
- Wood frame.

EXTERIOR WALLS:
- Cypress shingles, painted white.

ROOF:
- Shingles, stained green.

WINDOWS:
- Wood, double-hung.

FLOORS:
- Oak throughout.

HEATING:
- Vapor steam.

PLUMBING:
- Enamed iron fixtures.

ELECTRICAL EQUIPMENT:
- Lighting.

INTERIOR MILL WORK:
- White wood, Colonial trim.

INTERIOR WALL FINISH:
- Hard plaster, painted.

INTERIOR DECORATIVE TREATMENT:
- Painting, and wallpaper in the Colonial style.

APPROXIMATE CUBIC FOOTAGE OF BUILDING:
- 38,800.

COST PER CUBIC FOOT:
- 29 cents.

YEAR OF COMPLETION:
- 1917.

(Perspective and Plans on Preceding Page)

Living Room

Entrance Detail

stantial but fictitious thickness of the walls. The semi-circular arch above the door is filled in with a solid louver sunburst. This characteristic detail was often painted green in late colonial days, to correspond with the green painted louver doors used in summer to admit the air and keep out the glare.

The glassed-in porch at one end of the house is handled with satisfying skill. Corner pilasters support the entablature and the low parapet above. The openings of the porch, divided into thirds, are filled in with well designed small-paned window sashes. The plan shows a typical arrangement of a small rectangular house, with a center hall separating a large living room on one side from a small dining room on the other, with sun porch off the living room, and butler's pantry, kitchen and servants' porch at the rear. A short flight of stairs connects the kitchen with the upper landing of the front stairs, thus obviating the necessity of having two flights of stairs. Three bedrooms, bath, and a large stair hall make up the plan of the second floor. The third floor contains two servants' bedrooms and bath.
The Hotel Senecterre, aside from being a masterpiece of rare beauty, holds great interest for the architect as being one of the few private works extant of the great master Servandoni. Ward in his “Architecture of the Renaissance in France” definitely decides the style of Louis XVI to be the creation of two architects—Jean Nicholas Servandoni (1695-1766) and Jacques Germain Soufflot (1714-1780), both citizens of Lyons, a city always in close contact with Italian thought. Servandoni, going to Florence as a young man to study under Giovanni Paolo Panini, a painter of the Campagna and of the Roman ruins, and afterwards to Rome itself, fell under the influence of the new Italian classicism.

Returning to France in 1724, he soon became the designer of the decorations of the Paris Opera. An enthusiasm for ancient art inspired his work there, as well as that of his master Panini, who was employed to design the decorations in honor of the birth of the Dauphin (1729). His idea excited admiration, which though not very widespread was sufficient to secure for him the first prize in the competition held for the facade of St. Sulpice in 1733. This dignified design, of virile simplicity and with entire absence of affectation, made a profound impression upon an age which was already beginning to tire of the restless Rococo. Men like Bouchardon, Soufflot and Gabriel immediately felt the effect of this return to simplicity and became champions of the puristic revolt, with the result that only a few years later some of the best work in France was done.

At a time not far removed from that of the design for the facade of St. Sulpice, Servandoni designed the Hotel Senecterre, the subject of our sketch, for M. de La Monnoye, on ground forming a part of the Pre Aux Clercs, a neighborhood which is very familiar to all students at the Ecole des Beaux Arts. This house is justly considered one of the most gracious in the entire Faubourg St. Germain.

The petit salon of our sketch is a room of very excellent lines, interesting in plan. The mantel unfortunately is missing, but the overmantel remains intact with its graceful arch enclosing a mirror, the surrounding moulding of which is unusually vigorous, the whole surmounted by a garland with a basket of fruit and flowers of exquisite beauty and rarest carving. The mouldings of this room are among the best to be found. The cornice is bold and vigorous and well scaled to the lofty height. The entire effect is that of regal simplicity and nobility, satisfying to the last degree in the vigor of detail and mouldings. In Senecterre we see to the best advantage, in a work of intimate interpretation, the real Servandoni, who, although devoted to classical severity, sowed the seeds of the puristic reaction.
DETAIL OVER ARCH

Scale $\frac{3}{4} = 1$ Foot

DETAIL OF CENTERPIECE IN CEILING

Scale $\frac{3}{4} = 1$ Foot

ONE HALF F.S. DETAIL OF SHUTTERS

DETAILS
SALON
HÔTEL SÈNÉCŒURE
PARIS
ELEVATION C-C
Echelle 1/1 foot
SALON
HOTEL SENECTERRE - PARIS

ELEVATION D-D
Echelle 1/1 foot
SALON
HOTEL SENECTERRE - PARIS
Design and Craftsmanship in Early American Silver, Part I

By EDWIN J. HIPKISS

During the eighteenth century, the numerous silversmiths of colonial America produced objects of fine design and craftsmanship, and their work may be ranked with the architecture of the time as two forms of artistic achievement with marked native character. There was a relationship between the two, just as there is a kinship between other decorative arts and early or late phases of architectural treatment. For, while individual skill and manual dexterity in the craft produced an ever-fresh variety in old forms, the general conception of line and mass at a given time left its mark. Pieces of the early eighteenth century are obviously akin to interior woodwork of the time, just as the silver made during the latter part of the century had forms and decoration consistent with the slender grace of furniture in the style of Hepplewhite, Sheraton and their contemporaries.

Many of the silversmiths, or goldsmiths as they were called after an earlier custom, were men honored with public responsibilities, and their names come down to us familiarly in history. There was John Hull, the mintmaster of "Pine Tree" Shilling fame, early in the seventeenth century, and the versatile Paul Revere at the end of the eighteenth. The names of many master smiths have been brought together, and their marks have been verified through the work of keenly interested investigators. We know that there were over one hundred at work in Boston during the earlier half of the eighteenth century, and that number does not include assistants and apprentices, nor the men working in other communities, such as Charlestown, Roxbury, Dorchester and other nearby places.

Small groups of men worked in small shops; the apprentices were bound by agreement to their masters and grew up in the craft. Ingots and plates of silver were hammered up by hand into basins, cups, bowls, tankards and numerous other objects; the only device used which approached the nature of a machine was the draw-bench, used for drawing wire or moulded bands of silver through dies of the re-

American Silver, Made About the Middle of the Seventeenth Century

American Chair, Late Seventeenth Century

Room in Chase House, Newburyport, Mass.
required shapes and sizes. Needless to say, modern ideas of standardized parts and mass assembling were undreamed of, for the old idea of individual skill prevailed, and wrought silver was sold in the shops where it was made and by the men who made it. Church services, domestic tableware, even silver coinage, came out of very humble workshops, and so we can easily understand the note in Judge Sewell’s diary, under date of June 21, 1707, which reads: “Billy Cowell’s shop was entered by the chimney, and a considerable amount of plate was stolen.” William Cowell (1682-1736) lived and worked in Boston, and some of his handiwork is illustrated herewith. William Cowell, Jr. (1713-1761) carried on his father’s work well into the third quarter of the century. The Cowells were well-known crafts- men, and much of their silver still exists.

To appreciate the skill of the artisan and the quality of his wrought silver, we must realize that “hollow ware” was usually “raised” from flat pieces of silver to seamless bodies of cylindrical or cup-like forms, each out of one piece. Much of the skill of the craftsman was required for the successful “raising” of a beaker without a seam or joint in it. The hammered disc of silver had scribed lines laid on with a compass in regular spacing as guide lines for in concentric circles. Annealing became necessary from time to time as the metal hardened under the hammer. This of course softened the silver.

American silver was simply stamped with the maker’s initials or name. It was not made under the supervision of a guild or under legalized requirements, as in England during many centuries to the present day, and therefore it is not “hall marked.” Assay office and year letter marks on English silver enable us to determine, as a general rule, the place where a piece of silver was made and the year in which it was wrought as well as the name of the maker. But with American silver we depend on design, inscription, and the approximate working dates of a known maker. The marks of over 600 early American silversmiths, mostly of the eighteenth century, have been identified.

Paul Revere had several marking dies, but he generally used the stamp with his surname, REVERE, in a rectangle, found on so much of his work.