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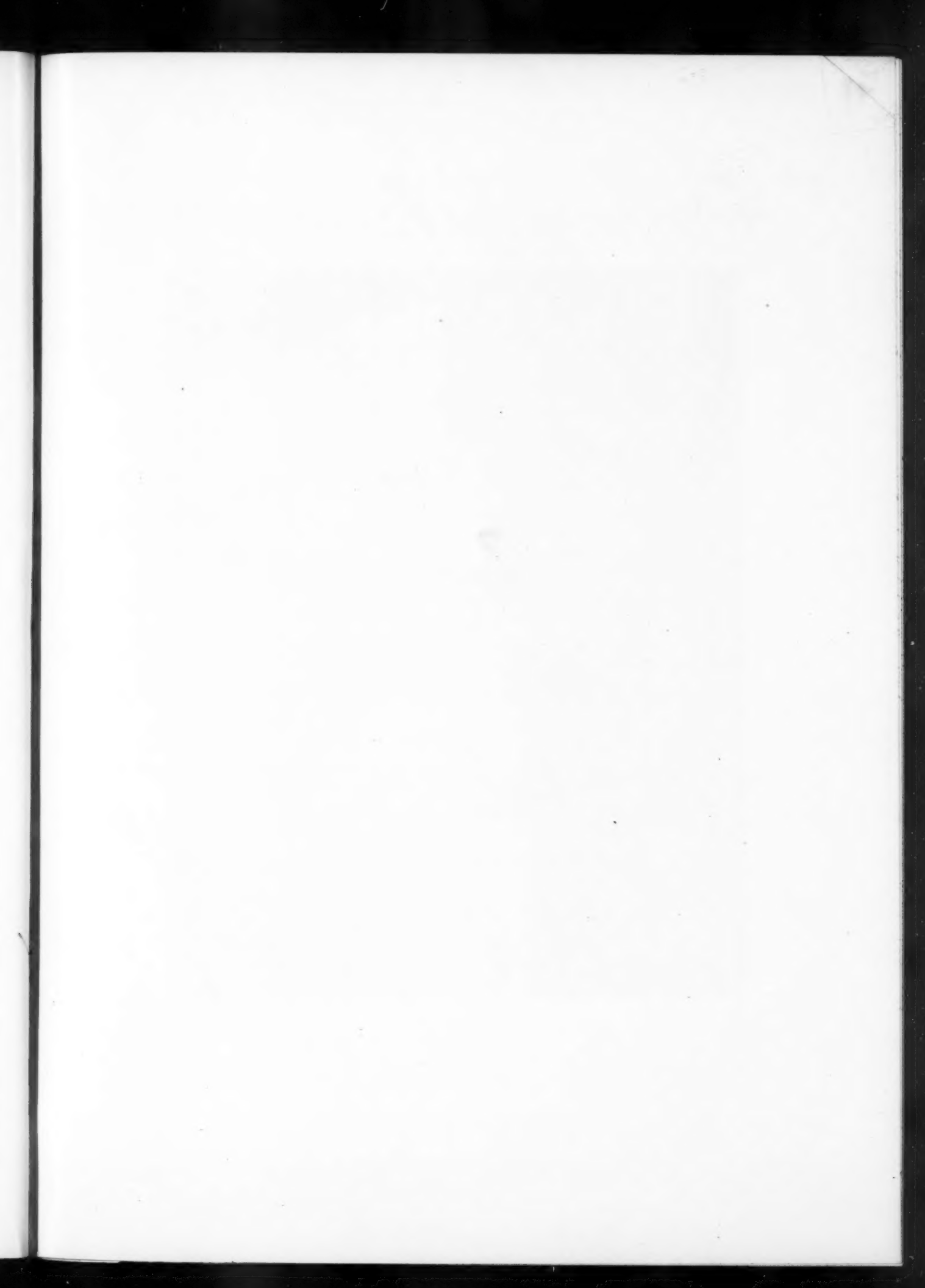
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HOUSES IN POND LANE, LOWER CLAPTON

The Small House of the Georgian Period

THE small house of the Georgian Period, unlike the small house of to-day, was not too insignificant a problem to engage the studious attention of even the greatest architects. Glancing through the pages of this book,* it will be learned that these gems of minor architecture were in many instances the work of the most distinguished architects of the period.

In noting the rare charm of design and proportion which they in every case present, the American reader will be put to it to locate an equal number of small houses in this country of similar excellence. The English architect of the Georgian period was much more fortunate in his client than is the architect of similar work at this time. It is

perfectly true, states a writer in the *Architects' Journal*, that a hundred and twenty years ago all sections of the public had a keener appreciation of building than the majority to-day. A knowledge of architecture, even though superficial, was as essential a part of a polite education as were those precepts of correct deportment, dancing and all the stately phases of polite correspondence.

What was affected by the higher grade of society was reflected in the lower, and the man, who in the eighteenth century set about to provide himself with a house, exercised all the refinement of suggestion of which he was capable or could to the extent of his purse procure through the services of his architect.

The average observer in this country associates with the Georgian only those stately types of houses that were built along our Atlantic Coast, for the

*Small Houses of the Late Georgian Period, 1750-1820. By Stanley C. Ramsey, A. R. I. B. A. 100 plates, size 8½ x 12¼, with introduction. Price, one guinea. The illustrations accompanying this article are reproduced by courtesy of the publishers.

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THORNCROFT MANOR, SURREY



THE GRANGE, ST. ALBANS

very reason that there has not been until recent years any widespread effort to impart the same elements of design to less expensive dwellings.

In England there are hundreds of examples extant in spite of the many waves of so-called improvement that displaced so many far less desirable types. There has always been, however, a tendency in this country to attempt the incorporation of certain elements of Georgian architecture into the low cost house, but in this incorporation there

has been so much of ignorance that the results have been unfortunate.

In fact, these attempts to design in the Georgian style resemble a result that the writer recently observed in an attempt to produce a Georgian type of furniture. This particular example was a Windsor chair with a fiddle back, a rush bottom and cabriolet legs. This nondescript piece of furniture was displayed in quantities by a certain manufacturer whose catalogue extolled the merit of the



HOUSES ON KENSINGTON GREEN, LONDON, S. E.

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NORTHFIELD HOUSE, HENLEY



"THE RUNNING HORSES," MICKLEHAM, SURREY
SMALL HOUSES OF THE LATE GEORGIAN PERIOD

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design as one inspired—save the word—from a “chair brought over in the Mayflower.”

This digression is made to illustrate how in a similarly atrocious manner has the Georgian style been handled in this country when applied to the low cost house. The remedy for this decadence

lages present the most correct types of low cost Georgian houses. The community planning in the City of Washington, where a large area was developed to house the great numbers of workers in the Government departments, is of a most satisfactory Georgian type. This development of the Georgian is in every case a part of a large undertaking, the cost of which runs into millions of dollars and is the work of our most skilled and highly trained architects.

These Georgian types, correct in every respect in design and planned to meet the domestic and social needs of the class for which they were provided, afford the most valuable suggestions for a widespread application in low cost housing in every section of our country. With so much good material to draw from and with this material placed in Government villages in every section of the country and therefore adapted to its regional location, there can be no excuse for poor design in low cost housing.

The problem is to make all of this vast material available, to spread broadcast the knowledge of its



DOCTOR'S HOUSE, NEW CROSS, LONDON, S. E.

lies of course in the handling of the problem of design of the small house by men who are trained in architecture. Again we shall digress to urge that this desirable condition be brought to pass and that it is the manifest duty of organized architecture in this country to devise a means whereby it will control the standardization of the designing and planning of the small house in every section of this country.

An encouraging indication in the United States is a development as the result of our war activities, in the application of Georgian types in the many housing schemes that were undertaken by the Government. Many of the newly designed shipping vil-



BROWN HOUSE, REIGATE

existence and to make it accessible to those who want it. Here again is the opportunity for the American Institute of Architects and the various State Societies to gather this material into such

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form that it may be readily distributed to that large number of people who, while they would never employ an architect, would gratefully receive and acknowledge such valuable assistance in their home building efforts.

Hundreds of millions of dollars of material have been scrapped since the armistice was signed, or sold at a very substantial loss. An amount of research the money value of which it is impossible to calculate, has been put into form in the most voluminous reports and filed away. Much of it is available for widespread use, and this work in the development of industrial housing is but a small part of the total. To edit and publish the result of the research of men high in the profession of architecture who spent many laborious months during the war in the solution of these problems,

would be to create an opportunity for every home builder to set about his task in a manner that would create an era of low cost house building, as excellent in result as the Georgian.

In setting down the foregoing, the inspiration in the discussion of this subject has been supplied by a valuable work just from the press of Technical Journals, Limited. This book is entitled, "Small Houses of the Late Georgian Period," and has been edited by Stanley C. Ramsey, A.R.I.B.A. Mr. Ramsey has gathered a series of approximately one hundred houses whose dates of creation range from 1750 to 1820. The present is most opportune for a publication of this sort, as the existing shortage of low cost houses in England and the United States will result in their erection in larger numbers than ever before.



STRAWBERRY HOUSE, THE MALL, CHISWICK

New British Institute of Industrial Art

THAT the British Institute of Industrial Art, recently inaugurated at the instance of the Board of Trade and the Board of Education, if run on proper lines as it bids fair to be, will fill a long-felt want, is made clear in a recent issue of the *International Studio*. During the present period of reconstructional effort, numerous societies, leagues, and associations have sprung up, filled with artistic effort, backed by men and women of repute schooled in thought of the right sort. There is a danger of each of these societies overlapping and covering the same ground unknown to the others, for the problems with which they deal, when investigated, are seen to tend to the same end—the general setting right of art in everyday life. The new Institute should be the means of co-ordinating the activities of such bodies and with their aid should bring home to the masses the real need for better standards in art.

The Institute has as its first Council of Governors ten gentlemen of repute in their widely different fields of activity. They are appointed by the Government and not by any particular society. The initial circular which has recently appeared in the press shows that a vast field is to be covered in the endeavor to secure for art full recognition in the new order of things. In the past, endless designs on which vast sums of money have been spent have been imported from abroad. It has been left to the distributor's buyer to decide what the public should have, and have it the public must. People from the provinces or from abroad have found no general headquarters to which they could go for advice as to where to buy a mosaic or a reredos, an umbrella-stand or a toasting-fork, hand-made lace or really fine needlework at a reasonable price, much less could they gain reliable information regarding a fresco, an illuminated address, or a war memorial which they proposed to purchase. Inquiries regarding war memorials are flowing in from all quarters to at least half a dozen bodies, each without the smallest knowledge as to the advice tendered by the other societies.

Within a few months the Institute hopes to have graphic and descriptive records of all the finest works effected in modern times, whether ecclesiastic, civic, or domestic. Bishops and deans have been asked for information regarding works of

applied art in the churches and cathedrals of Great Britain, while town clerks throughout the country are communicating information regarding the decoration and accessories of public buildings.

Architects have offered advice about artistic sculpture, craftsmen and manufacturers of artistic repute are supplying details in regard to things of the house, theatre, and garden. Preliminary reports on all modern craft movements abroad are being obtained through the consuls, who are supplying specimens of types of work in greatest demand in foreign markets. This collection, when complete, will be of the greatest utility to artist and manufacturer alike, as an indication to the one of the type of design for a particular market, to the other of the type of work to be produced for it.

It is proposed to open, at a not far distant date, a permanent exhibition of works produced both by individual craftsmen and by manufacturers. The works by the former will be sold on commission, while the latter will pay for space. The features of the exhibition, which makes the Institute unique in the annals of art in this country, are (1) that it will always be open; (2) that exhibits will be constantly changed and kept up to date; (3) that everything admitted will be submitted to the most competent body of experts procurable in each particular craft, selected from artists and manufacturers, consequently the standard will be extremely high.

It is hoped that a substantial sum will be available each year for the purchase of works for the nation. Thus the craft-worker will at last have his work exhibited in a National Gallery of Decorative Art in his own lifetime.

By the aid of the art masters in the kingdom it is proposed to keep a register under generic headings of all competent designers who leave the various schools year by year. Similarly a register of firms who employ designers will be formed with the aid of Joint Industrial Councils, Manufacturers' Associations, Trade Unions, and other bodies. While the Institute will, on the one hand, do all in its power to foster the small crafts throughout the country and to develop the traditional manual skill, it will, on the other hand, do its utmost to encourage those qualities of machine production which are capable of refinement through proper understanding and handling.

The Need of Architectural Instruction in American Colleges*

By GEORGE C. NIMMONS, F.A.I.A.

THE need of architectural instruction in American colleges has been felt so keenly by architects in recent years that the Illinois Chapter of the American Institute of Architects has undertaken to initiate a movement designed to bring it to the attention of the representatives of the colleges.

It should be clearly understood at the outset that this proposed architectural instruction is intended for the students generally of the colleges of this country and that it has no reference to architectural schools which are already provided for, as a rule, with very good courses of instruction for the students who intend to follow the practice of the profession of architecture.

While it is appreciated that the war has greatly interrupted the carrying on of the regular courses of instruction and in many cases has turned the colleges into military training camps for officers, necessitating changes in the curricula and organization of the administration of college affairs, still it is hoped that in the reconstruction now going on, consideration at least may be had of this subject which the architects believe is so important and of such great educative value to the students.

About a year ago, just after your last convention, a representative of the architects opened a correspondence with your president, Dr. Cowling, on the subject of architectural instruction and requested that an opportunity be given at this convention to present the subject to you. This request was very graciously granted and the architects proceeded to prepare for its presentation.

It was intended during the year to make a thorough study of the whole situation and formulate, if possible, some definite policy or plan for presentation at this convention. But the demands of the war service upon those who had intended to carry on this movement has made it impossible to have ready at this time any completed plan of procedure to present for your consideration. In lieu of this, however, it was decided that a brief paper should be read which would undertake to show in a general way the urgency of the need for architectural instruction in American colleges from the architect's point of view.

As the strength of the appeal which this subject may make to you will undoubtedly depend primarily

upon your conception of its educational value in college and its practical use in after life, the discussion will be confined to these two aspects of the subject.

To the uninitiated, institutions of learning are supposed to include in their courses of study, instruction both in the arts and sciences, as the arts have always been associated at least in name with the objects for which most colleges and universities have been founded. It always seems to be assumed that the proper education of anyone would naturally include some knowledge or information of the fine arts. The assistance which an understanding of the arts would be in the acquiring of good taste and refinement, and the appreciation of and preference for the finer and better things of life, are objects which alone would seem to be sufficient recompense for the time spent in securing some knowledge and understanding of this subject.

Yet the curricula of colleges generally stop short with the art of literature. Few of them, aside from those having special art or architectural departments, provide any material instruction in the fine arts, or more especially any means of giving the students even a fair understanding of the history or principles underlying the practice of these arts. It is my understanding that about the only information as a rule imparted to the students concerning architecture is that which is more or less incidentally referred to in the various histories of the world used in the different colleges.

While there has been as yet no definite plan agreed upon by the architects defining the exact scope and character of the subject, it seems that a clear understanding of it cannot be had at this time without at least some discussion of the nature of the architectural instruction proposed.

At the beginning it would have to be recognized that architecture is too large a subject to be treated at all completely in the limited time that might be found available in the already full courses of the colleges. There is no doubt that many subjects are being urged for consideration which cannot possibly be considered, and it is only on account of the extreme need of a better understanding of architecture, particularly among educated people, that the subject is urged so strongly for your consideration.

If the opportunity is given for the introduction of architectural instruction in colleges, the first consideration would be to select only such features and

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branches of the subject as would be of the greatest practical value.

It is not considered that the text books and lectures intended for strictly architectural schools would be at all adapted for the purpose in mind. These are designed for a much more extended and detailed treatment of the various branches of the subject than could possibly be included. Neither is it intended that any of the existing histories of architecture be utilized, as these do not include some of the most important topics to be presented and nearly all of them devote more space to some periods of the history of architecture than could be allowed.

The subject matter, therefore, that is intended for use in this case would have to be all newly compiled and specially prepared for the particular purpose in hand. It is probable that the best result would be secured by taking from a number of works the best treatment of the various subjects selected, and adding new material as might be required.

There are a number of works of recent publication that contain some of the best discussions of present architectural problems which would undoubtedly be considered in order to bring the work abreast of the latest thought and opinions of the day. Whether this instruction should be given entirely in the form of lectures or by the use of a text book is a matter to be determined, but the text book form recommends itself, as in that case the same treatment of the subject could be at once universally applied, while if the lecture plan were adopted as the principal means of imparting the instruction agreed upon, it would be difficult at first to secure a sufficient number of lecturers fully equipped with the means to illustrate their lectures. The study of any text book, however, should be supplemented as far as possible by such lectures as could be arranged for.

The establishment of a professorship in architecture is probably too much to be hoped for at the start, but in its absence the course could be conducted by the professor of history, with which subject it is so intimately connected.

Assuming then that the manner of providing instruction would be in the form of a text book, supplemented where possible by lectures, the character of the instruction would be specially prepared with the particular object of providing the student with just that knowledge and information of architecture which would be of the greatest benefit. There may be differences of opinion as to just what some features of that instruction should be, but it seems probable that there would be little differences of opinion as to the main features of the subject.

In order, therefore, to complete a foundation for the discussion to follow, it seems proper to predict

or at least to suggest in a tentative way the outline of a course of instruction in architecture for the purpose in hand.

The course of instruction in architecture, therefore, would consist, first, in the study of a text book specially prepared for that purpose; second, a series of illustrated lectures supplementing the text book; third, a brief course in drawing sufficient to teach the use of the square and triangle in laying out plans and elevations to scale; fourth, a brief course of field work in which buildings under construction and buildings which are accredited to be the best types of architecture in the vicinity would be visited and observed under the guidance of some architect or some one capable of explaining the application of the important principles learned, to the actual building.

The text book no doubt would contain a treatment at least of the following subjects:

Definition of architecture, its place among the fine arts, discussion of construction and its various types, the use of materials, a brief history of architecture, the present methods of the practice of architecture, the making of drawings, letting contracts and supervision of the work, the theory of design, the use of historic styles in connection with modern buildings, a national style, the relation of the art of the industries to architecture, a brief presentation of the principles underlying landscape gardening, painting and sculpture and their use in connection with architecture.

Whether or not the above headings happen to be the most comprehensive titles for the various branches of the instruction (and it is probable that they are not), still the important thing at this time is the value of the training and instruction to the student.

This course of instruction would be laid out and designed to exercise and train the mental faculties as well as supply useful and practical knowledge for after life. The study of it would be similar in effect in some ways to that of a study of the humanities.

No better agency than a knowledge of the history of architecture can be used to fix a good perspective in the mind, of the different peoples of past ages. We know a nation best by its works, and if we have a general knowledge of its buildings, we have then the best index of its character. We can compare the works of one people with another and with our own. We can interpret in a fairly accurate manner their aims, ambitions and aspirations.

One instinctively seeks to found an estimate of a person upon what he does, rather than upon what he says, when it is possible to secure the necessary information; a knowledge of architecture give us this foundation upon which we can judge best of the character of the people of the past. Therefore

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it would be a great aid in the study and understanding of history.

This same ability to judge of the character of the people of the past would apply just as effectively to the present.

The reason that a building is such a good indication of the character of the man who built it or caused it to be built is the fact that its erection as a rule represents the hard earned returns of his own labor or efforts; it is something for which he must usually give up all his savings and go in debt for a part of the cost besides. Then the building also furnishes him an occasion for giving material expression to the things which he likes and admires.

Architects can testify that the designing and erection of a building is as a rule one of the most serious and earnest undertakings in a man's life. It is sure to represent the best that is in him, according to his own standards, and the character and design of the buildings are very likely to represent more the ideas and standards of taste of the owner than they are those of the architect. It is the client's building; his desires, and his ideals must be incorporated and the architect is obliged to do the best he can to make the most of them. The building therefore as a rule truly represents the character of the owner.

A student who had received some training and instruction in architecture would have acquired thereby a new and wider scope for his judgment. The character of houses and buildings of cities must have meant little to him before; now with this instruction added to his store of knowledge he can discriminate between the good and the bad and the crude and the refined, in buildings, and therefore in the owners. He can at once make a better and more comprehensive estimate of certain qualities in an individual or of a whole community than he could have made without this knowledge. The student's character will have been improved and developed thereby to the extent of making him a better judge of the men of his day as well as of those of the past. If there is any one subject upon which the educators seem to agree as one of the important aims of education, it is upon the ability gained by education, of being able to judge men correctly. A study of architecture therefore would aid materially in this direction.

While this course of instruction would broaden the student's faculty of judgment, with respect to his fellow men, it would also at the same time develop and raise his own standards of taste. The instruction which would describe to him the finest of the world's accomplishments in building and explain to him the principles upon which their design was founded would thereby develop certain important traits of his own character in a manner that

no other agency in college can now possibly do.

The average American student in intercourse with almost any of the students of Europe is positively at a disadvantage, and sometimes embarrassed on account of his ignorance of the fine arts and architecture especially. If he is called upon for any opinion or to give expression to his conception of anything that has to do with architecture, his views are likely to be crude and his judgment is not only discounted but it is likely, on account of a lack of knowledge of the subject, to create a prejudice against him. In other words, the American student appears more or less like an unpolished, rough product of education, because he is deficient in a knowledge of the fine arts, although he may have, and usually does have, just as many other sterling qualities of character as his European brothers.

It is noteworthy in this connection to recall how the alumni of colleges universally regret their ignorance of architecture. With few exceptions they always appear eager to learn something from architects about it, and they are always anxious to know how they may recognize buildings and historic styles of architecture.

It is, nevertheless, a great regret that the American student does not have his rough spots polished off by an application in college of at least a little instruction in architecture so as to make him more a citizen of the world, equipped with a knowledge and understanding of those artistic things so important to the rest of the world, and so much neglected in the past in this country.

What a great benefit a little knowledge of architectural drawing would be, if acquired in college in connection with this proposed course in architecture.

A student may have learned something of drawing in his earlier days in school, but as he advances with the higher studies of college he is likely to neglect it, and to minimize the very important uses to which it may be put in after life.

The purpose of the instruction in drawing in this course would be to enable the student to lay out to scale the plans and elevations of a simple building and with the knowledge and skill so gained work out the arrangement and design of a few building problems, sufficient to fix in his mind some of the fundamental principles of architecture.

This training in the first place would tend to fix in mind for life a method of drawing by which the idea of almost any material thing could be projected on paper for examination, criticism and judgment. It would afford anyone, no matter what his profession or calling, the best possible means for studying and perfecting important problems and undertakings that were difficult to visualize sufficiently for examination.

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Then in an architectural way it would undoubtedly impress in the student's mind some useful rules of good construction, a definite idea of how properly to plan and arrange things, and some sound basis on which to found his ideas of good design and rational and beautiful ornament.

In addition to these objects, this practice in drawing might be further recommended on the basis of its educational value. There is probably no more authoritative advocate of it for this reason than the distinguished Thomas Henry Huxley, who said:

"I should make it absolutely necessary for everybody to learn to draw. You cannot begin this habit too early, and I consider that there is nothing of so great a value as the habit of drawing to secure these desirable ends, viz., attention and accuracy."

The last subjects suggested in the course of instruction are landscape gardening, painting, and sculpture in their connection with architecture. There has been a long and discouraging struggle in this country to establish a recognition of the fine arts, yet thanks to such institutions as the Metropolitan Museum of New York, the Art Institute of Chicago, and similar institutions of other cities, the coming generations are going to have sufficient knowledge and appreciation of the fine arts to carry on this development with increasing success.

There are few things in life that would add so much to the wholesome enjoyment and refinement of the hard-working, industrious people of this country as would a knowledge and ability to beautify and cultivate properly the surroundings of their own homes and improve and landscape the streets and open spaces of their towns and villages. Such things stand for contentment, much needed recreation, happiness and good citizenship, and are therefore some of the strongest influences for a higher and better life of the people.

It is beyond the scope of this paper to go into the fields of painting and sculpture and even attempt to recount the benefits that would result to the students from a real understanding and appreciation of these two great arts. But in this proposed course of instruction there might be introduced sufficient instruction to give the students some idea of the principles underlying these arts, the objects which the various schools of art endeavored to attain, and some guidance as to how best to enjoy and appreciate works of art. If there is any one thing which the people of this country need in their education and training, especially now since they have established a new relationship and a new comradeship with those people abroad who hold the arts in such a high esteem, it is that they should round out and complete their education with at least some knowledge and understanding of the fine arts.

Having dwelt to this length upon the discussion

of the nature and value of architectural instruction in college, the balance of the time for this brief presentation can probably be spent best in following the student after graduation and tracing the effect of this instruction upon his career in after life.

After he has entered upon his career in life, his first serious direct contact with architecture will probably be the building of his own home. Its plan and arrangement will be responsible to an important degree for the easy running of his household. The effect of its design and surroundings will be those silent and yet potent influences in crystallizing his own ideals and standards of taste and refinement and in molding those of his children.

As he progresses in life and begins to take part in constructive enterprises where building improvements are involved, his choice and decision on the arrangement and design of important buildings will naturally be sought. At this time his decisions and the results of his knowledge of buildings and architecture will increase in importance, because he will not only fix the character of his own buildings, but that of public buildings as well.

If his career lies in the field of business, then he may have to do with large and important commercial and industrial buildings. His judgment will have to be passed upon buildings whose plan and design may have much to do with the success of the business to be carried on. The army of employees engaged in the industries, together with their families, now constitute a third of the entire population of this country. Provision for housing them in wholesome and satisfying quarters is to-day one of the important problems of national concern. The workshops for the men, in order that business may meet competition and that wages sufficient for a decent living may be paid, must be models of efficiency and at the same time provide completely for the welfare of the employees. All these great questions are connected intimately with the plans and designs of buildings. Architects and engineers may draw these plans but their character and their final approval in the last analysis comes down to those in control of the business and their knowledge of building and architecture must guide them in their final decision.

Our industries need every help and encouragement they can get in these times of reconstruction. One of the greatest handicaps to some of the American industries in meeting foreign competition in the past has been the relatively poor appearance and design of some of our products as compared with those of Europe. American designers of industrial products often do not seem to understand the first principles of good design, neither do they understand as a rule the use of color and its com-

(Continued on page 175)

Editorial Comment

Labor and Increased Production

IT is noted with much satisfaction that the National Association of Manufacturers has adopted resolutions appealing to labor to increase production. The co-operation of legislative, church and other public bodies is asked to combat what is believed to be an incorrect theory that the curtailment of production will provide more opportunities for work, and to counteract an apparent decision of labor to lessen production.

There can be no proof of the contention that labor leaders have so persistently made to the effect that manufacturers are responsible for the present high prices of commodities. No view could be so false, so unjustifiable. Prices to-day, as always, are based strictly on the laws of supply and demand. Scarcity and high prices always go hand in hand. To restrict production is to maintain high prices. Ultimately, and as the result of dire experience, labor will be able to realize this fact. Labor leaders, like the average politicians, are keen observers of passing events, are alive to the necessity for a close following of public opinion.

It will therefore aid in bringing about a more correct attitude toward this vital economic problem if assistance is given to the efforts of organizations similar to the National Association of Manufacturers in a nation-wide campaign explaining the true meaning and ultimate result of a policy to restrict production.

Is a Knowledge of Building Essential for the Contractor of To-day?

VARIOUS ideas prevail among architects as to the duties and functions of a building contractor. By some he is looked upon simply as a broker, signing up a general contract and then parceling out the work of construction among various sub-contractors, who actually perform the labor. Meanwhile, having figured in his bid a sufficient margin to repay him for any risk or responsibility he may have undertaken, he collects the money from the owner and pays some of his receipts out to the real builders. He has an office and telephone, but no staff, no equipment and often no financial responsibility. His sub-contractors are usually sub-standard as well. He does no estimating, but passes all of this work along to them, and by simply compiling their figures and adding his own profit and "overhead" he is enabled to submit a bid at almost no expense. Consequently he bids often and from time to time is awarded a contract. Having only a limited knowl-

edge of building, he becomes a constant source of trouble and irritation to the architect. He is often sufficiently shrewd to add enough "extras" during construction that bring the cost of the building up to, if not over, the estimate of the next higher and probably more responsible bidder. Even a more conscientious contractor who attempts to perform some of the work himself and supervise the work of his "sub", often possesses far too little knowledge of building. This lamentable condition prevents the work from being carried out in accordance with the original intent. For rather than reject questionable work and delay completion the architect sometimes permits it to pass.

During the Building Officials' conference, held at Pittsburgh last February, the contractors received much unfavorable comment. This may be noted from the remarks of the superintendent of buildings, Borough of Brooklyn, New York City, who stated in part:

In our city, plumbers are licensed. They cannot perform any plumbing in any building unless they are licensed, and they are only doing about 5 per cent of the total cost of the construction of the average building. Here are a lot of so-called builders erecting buildings in our borough of two million inhabitants. We have all kinds of tradesmen calling themselves general contractors and entering into building operations, who haven't the slightest knowledge of building construction. I think the time has come when the art of building has passed. Formerly a builder was a mechanic. He used to be learned in the art of construction of buildings, but nowadays you don't find that any more, simply because moneyed institutions somehow or other assist these would-be builders, and it is a question purely of the lowest possible construction, and if it is the sense of you gentlemen, to consider safe construction and everything that complies with safety in construction, I think the first and most important part is to secure absolutely safe construction in the building, and then take up later on safety ideas as to how to supply a building to maintain whatever its occupancy calls for. We have in our borough as many as five thousand complaints coming in every year — of violations in building construction. Now, I believe that if a man is in charge of the construction, the owner may be a shoe string peddler, but I believe that the man who has charge of the construction should be licensed as well as the plumber who is doing the plumbing under his jurisdiction.

These sentiments were concurred in by practically all those attending the Conference, many of whom recited similar experiences with contractors. After considerable discussion, the following resolution was adopted:

Resolved, that it is the sense of the Building Officials' Conference that for the better protection of the public against unsafe and illegal building construction, suitable legislation should be enacted by which building construction shall be restricted to architects, engineers, builders, superintendents of construction, or others who have by proper

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evidence shown their ability or capacity for undertaking building operations and on whom individual responsibility for the safe prosecution of the work and a compliance with the laws relating to buildings, can be placed; and

Resolved, further, that the Secretary of this organization be directed to furnish, at the request of any member, copies of this resolution for presentation to legislative bodies in support of such legislation.

After reading such a discussion on the subject of contractors as that referred to above, it is somewhat refreshing and clarifying to find out just what a contractor is. This valuable bit of information is furnished us by the Associated General Contractors of America, and is entitled "Definition of a Contractor." It reads:

There is no class of work that takes as varying qualities or so many qualities as contracting. It appeals to men who are optimistic and to those who have born in them the longing for doing things. The contractor must be a man first, and possess that most uncommon thing, common sense; and he must have physical sense, the sense that tells a man without calculating where lies the center of gravity; the sense that tells a man values without estimating; the sense that tells a man quantities without measuring. He must have magnetism in order to gather his men about him. He must have a reputation for justice in order to hold them. He must be forceful in order to inspire energy in others. He must be a lawyer and buyer. He must have the ingenuity of the inventor and the grasp of the field marshall. He must be a diplomat, and he must be a politician. He must also know when not to be a politician. He must be a financier, and, I regret to say, in these days, an advertiser, and he must be a prophet, and, if he is up-to-date, he is a member of the A. G. C.

After a careful analysis of this definition, we are forced to the conclusion that the most important attribute of the successful contractor has been entirely omitted, for this definition fails to embody the statement that: "A contractor must be one who by education, experience and training has acquired the knowledge of how *properly to construct a building*. Why a contractor should have that sense which indicates "values without estimating" and "quantities without measuring" to be a successful operator it is not possible to determine. The man who can base his bid on a good guess may indeed be both a time and money saver so far as his estimating department goes, but he is also likely to be a loser when he balances his books after the job is finished. After all, is this not rather a sense acquired after years of successful work and not one inherent in the individual? There have been some very good guessers in the contracting line, but the day of guesswork is past, and absolutely accurate estimates on both quantities and value are to-day more essential than ever to the successful contractor, whether he makes such estimates himself, or has them made by a reputable quantity surveyor.

It is further to be noticed that among the suggestions made at a meeting of the executive board

of this association was one reading as follows:

That general contractors institute the practice of allowing 2 per cent discount on their payments on contracts, if said payment be made within ten days, i.e., adopt a practice now used extensively by material dealers, and persuade architects, engineers and their owners that this practice is a fair and equitable one and should be incorporated in standard specifications and contracts.

This leads to the question: "Do contractors generally add 2 per cent to their overhead on all estimates on the assumption of lax payments?" If so, on a million-dollar job, the owner under this system is forced to pay some \$20,000 to meet a pre-supposed financial contingency, based on a possible erroneous assumption of lax payments. If this is the case, then there is apparently much in favor of the suggestion that this amount be discounted when prompt payments are made. The practice of adding this to the bid in the first instance is basically wrong, and a better solution could be arrived at.

Building experience teaches us that in many cases there is a wide gulf fixed between what the contractor should be (generally what we think he is when the contract is awarded) and what he really is (the conclusion that slowly forces itself upon us as the work progresses) and it would seem that the architectural profession could render no greater service to its clients than to seek to raise the contractor's standard to what we realize it ought to be.

In answer to the query at the head of this article, "Is a knowledge of building essential to the contractor of to-day?" undoubtedly the answer is "Yes", and any contractor so styled who lacks such knowledge should be debarred from building.

A step in this direction would be accomplished if State laws licensing buildings were enacted as suggested at the Building Officials' Conference. Only those capable of passing a proper examination or submitting ample proof as to their ability to perform competent building construction should be able to obtain such a license, and this should be revocable under specific conditions. The architects would then be in a position to enter charges (through the A. I. A. or their State Association) against any contractor violating any of these conditions. But it is also possible to force out of business this undesirable class by a careful discrimination when inviting bids, and these two weapons, a State license and careful award of contracts, if effectually employed against the inefficient and undesirable contractor will do much to eliminate this dangerous element in the building industry.

It is quite certain that reputable contractors will welcome any effort to place the business of building on a higher and more efficient plane, and to eliminate the type of builder responsible for such remarks as those made at the Building Officials' Conference.

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The Need of Architectural Instruction in American Colleges

(Continued from page 172)

binations. Their products are often coarse, crude, and ugly as compared with foreign ones. The trouble is that they have never had any knowledge of architecture. Architecture is the mother art from which the ideas for construction, ornamentation and design of industrial products are taken. Some of the awful things of industry would never have appeared in the market if the industrial designer had only understood that one single basic principle of architecture, viz., that good design and ornamentation can only grow out of a logical development of construction, fashioned so as to meet the functions for which the thing was created. If a single instance were to be mentioned to exemplify the above statements there is probably no product of the manufacturing industries of this country that deserves this distinction so much as the American stove, and that variety so properly named the base burner. This product which is made up in its design of the most hideous gegaws and jimcracks, polished and silvered so as to vainly pronounce itself to the eye, is a creation which would seem to come from the lowest savage. As an example of design it might very properly be ascribed to the heathen as an altar erected after their own fashion to glorify some strange and hideous god. The tragedy of the whole matter is that this is the fireside of thousands of American families, who have to sit around it through the long winter months. Their children growing up have this thing in their homes to pervert their standards of taste and degrade their ideas of design and ornament.

Such things absolutely never could have been created, or never would have been bought, if the people generally had received some instruction in architecture. As the tendencies of a large proportion of American people are toward the industries and as a great many of them so engaged look to the colleges to train and educate their children to carry on their business, the need for architectural instruction in college so far as the industries are concerned is very pronounced.

The January Bulletin of the Art Institute of Chicago has very fittingly summarized this aspect of the industrial situation in the following words:

"A great industrial nation without an industrial art can after all be great in bulk only. When practically every industrial and commercial nation in the world excepting ours has long seen the light on this subject, it would be a perilous thing to venture forth with our wares upon the seven seas without a new reckoning."

If the student elects to follow any of the profes-

sions as his life work, then this instruction in architecture will be equally important. If he is a lawyer and his practice is with corporations or estates, much of his work will have to do with buildings and architecture. If he is a physician his practice will from the first be closely connected with hospitals. If he is a teacher or professor, the college buildings will become intimately associated with his work; and if he chooses the ministry as his calling, the architecture of churches will at once become a subject of the greatest importance.

As the student progresses in life and succeeds in taking his place in the control and direction of affairs, he sooner or later will be called upon to assist in determining and approving the plan and design of public buildings, and it will be his judgment and his standards of excellence and right planning that will determine the character of the architecture of his community.

If the student in his advancement is afforded the advantage of travel and study abroad, his deficiency in a knowledge of architecture will be felt all the more keenly. He who doesn't know one architectural style from another will probably fly to the rescue of Baedeker on the way over, in his haste to prepare for a first acquaintance with the world's great masterpieces of art.

It is a strange and unaccountable fact that these great works of art which the rest of the world prizes and appreciates so highly should arouse so comparatively little interest in this country, and when it is considered that these are the finest and greatest works of man in the building art, it is more surprising that the institutions of learning in this country do not teach at least enough architecture for the traveler to enjoy and appreciate them. It would seem that the proper education of a man was not complete without such instruction.

While this plea for architectural instruction may be founded somewhat on criticism of omissions in the present courses of college instruction, as well as on the benefits to be gained, still the writer is not unmindful of that purpose of college education which is the greatest of all, viz., the designing and the building of the highest form of Christian character. And it is most gratifying to know that in spite of the effects of the war, the French and British Educational Commissioners who have just visited this city are entirely in accord with this high ideal as indicated by their public utterances. Sir Henry Alexander Miers, a distinguished member of the British Commission, speaking at the University Club of this city concerning the war and the aims of education, said, "The real objects of education are truth, honesty and justice."

Even if the American colleges accomplish nothing beyond the cultural and moral training of the

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students, no one could properly have anything but praise for the good which they would do; yet it is recognized that it is essential for the sake of students and for the support from the people of the country that a college education must, without losing sight of its main object, include in its training and instruction as much as possible of that which would be of the greatest practical value in life after graduation from college. Certainly this proposed architectural instruction has much that would be of great value in that way as well as a strong cultural and refining influence in an educational way.

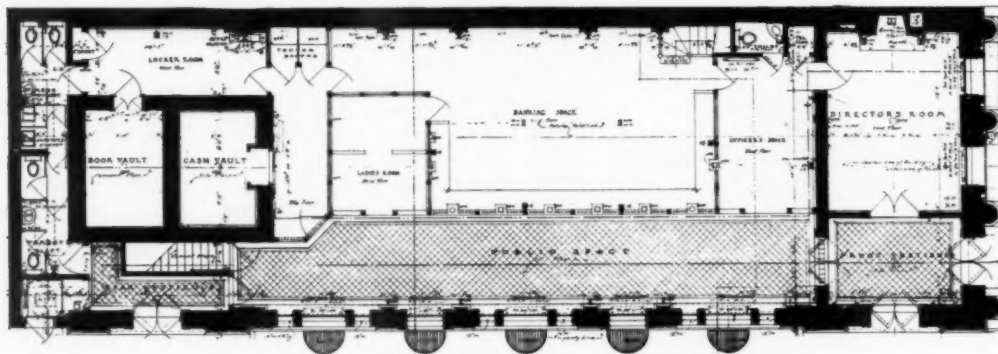
The profession of architecture needs your support and the whole country needs your assistance so as to abolish this ignorance among the people of the most useful and important of the fine arts. Our architecture cannot advance or improve without raising the standards of the people with respect to it. The architects and the architectural schools are doing all they can to educate the coming architects, but their work will be limited and held back from advancement unless their future clients, who are your students, are given an understanding and appreciation of architecture.

The client must be prepared in this way to cooperate with the architect in order to create a better architecture and one that really has roots or connection with the soil of this country.

No period of architecture has ever achieved greatness or distinction without the discriminating intelligent appreciation and support of the people of its time, and if we are ever to have a national style of architecture indigenous to our soil we must have

your support. As it is, we have never been able to advance far in the development of any architecture of our own, we have never been able to improve materially and in some ways not even equal the architecture of the past. We have the advantage which other nations of the past did not have in our photography and books with their illustrations. What we want now is to begin where they left off and progress. We want to get something more significant of ourselves into our buildings, we want to see the Greek fret, the acanthus and lion's head of Imperial Rome, or the fleur de lis of France, or such ornaments which have no national significance for us, give way to our golden rod and our wild flowers, our buffalo head, our Indian lore and all those reminders of our own national existence, which is full of opportunities, and we want to see our wonderful new steel skeleton and our reinforced concrete constructions clothed with an architecture American in spirit, representative of our institutions and worthy to stand as a fitting record and monument of our achievements for the people of the future.

America has already startled and amazed the world by the size and stupendous proportions and cost of our accomplishments, and the wonderful rapidity with which we accomplish our results. Now, let us in harmony with those higher ideals that we hope will come out of the war, let us forget size and bigness, and really try earnestly for quality and beauty. And our success, I trust you will all realize, is going to depend primarily upon you, the educators of our people.



PLAN OF MERCHANTS' NATIONAL BANK OF ASBURY PARK, N. J.

CLARENCE WILSON BRAZER, ARCHITECT

(See plate section for exterior view)

THE AMERICAN ARCHITECT

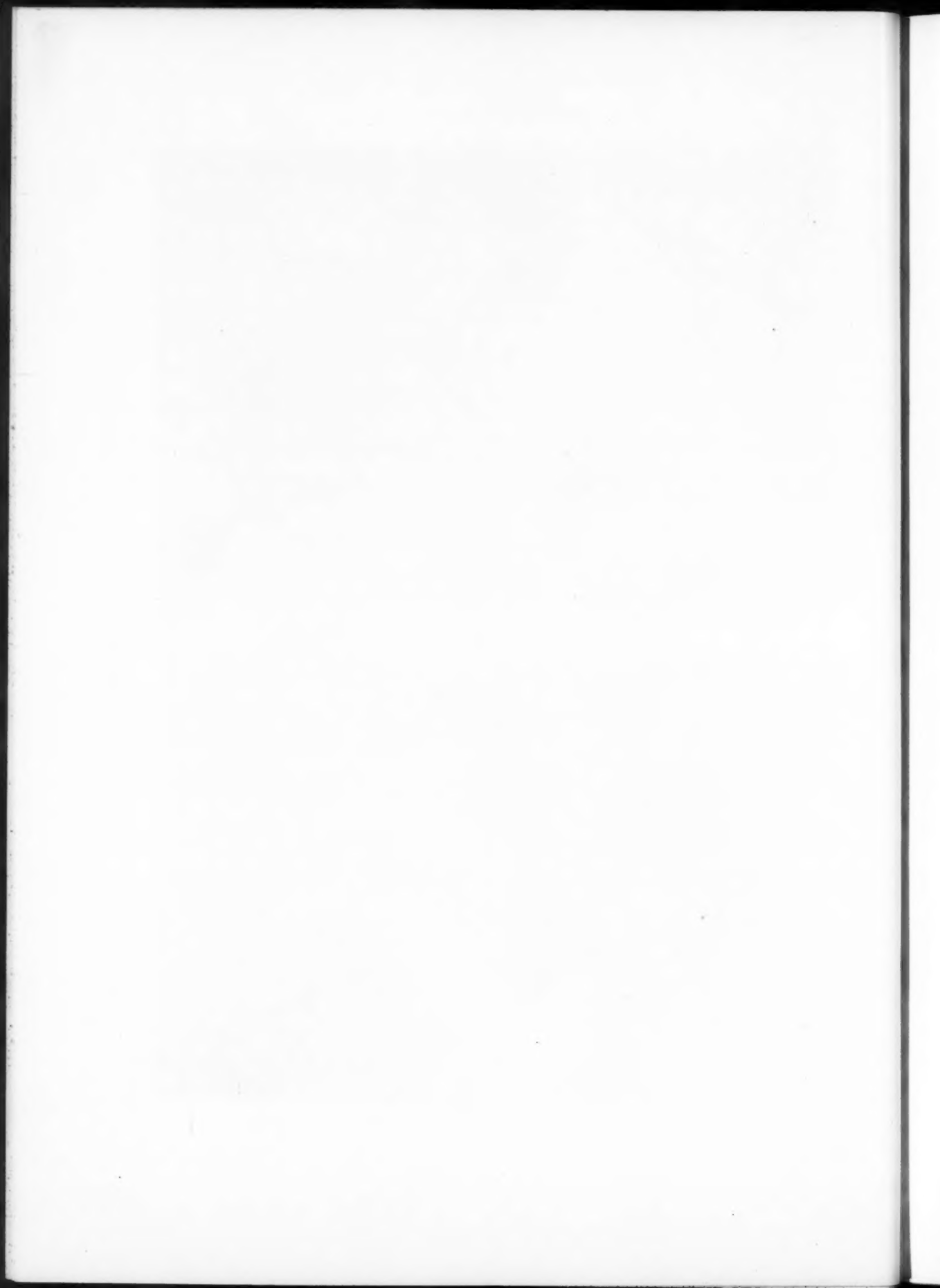
VOL. CXVI, NO. 2276

AUGUST 6, 1919



PLATE 46

HOUSE OF GEORGE F. ARMSTRONG, SAVANNAH, GA.
HENRIK WALLIN, ARCHITECT



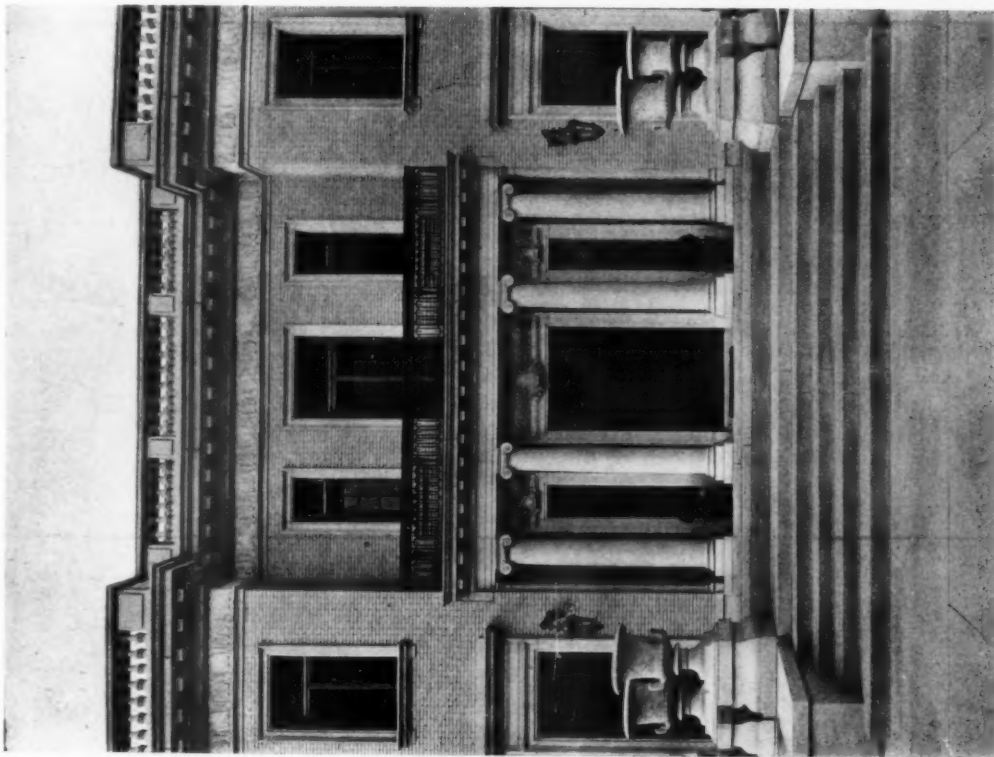
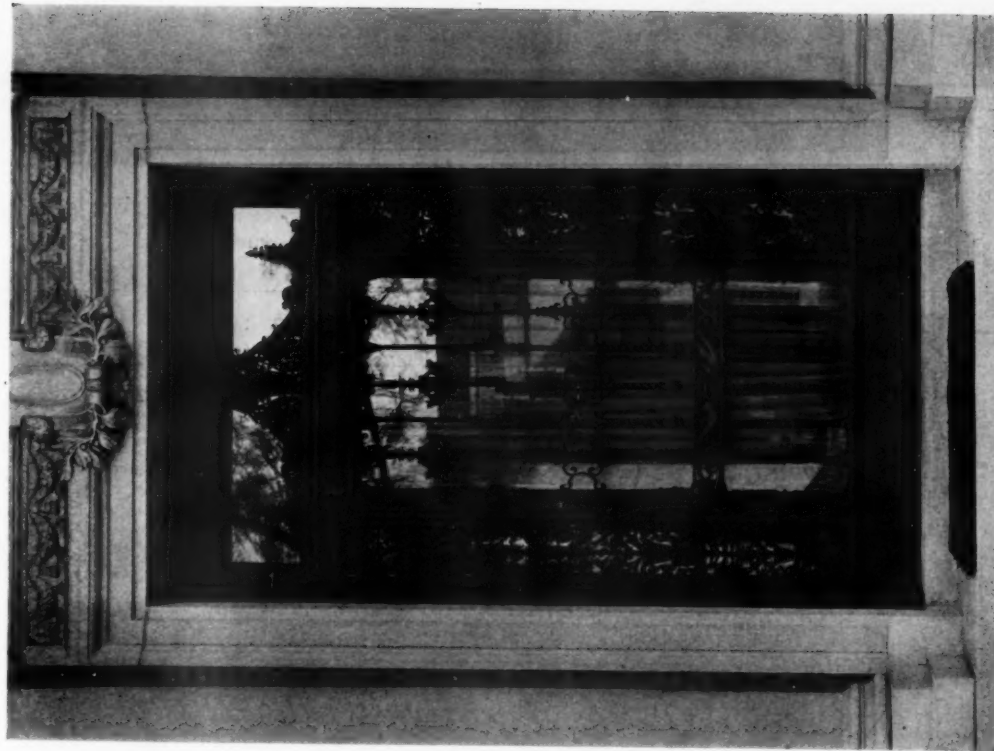


PLATE 47

DETAIL OF MAIN ENTRANCE



BRONZE ENTRANCE GATE

HOUSE OF GEORGE F. ARMSTRONG, SAVANNAH, GA.

HENRIK WALLIN, ARCHITECT





TERRACE VIEW

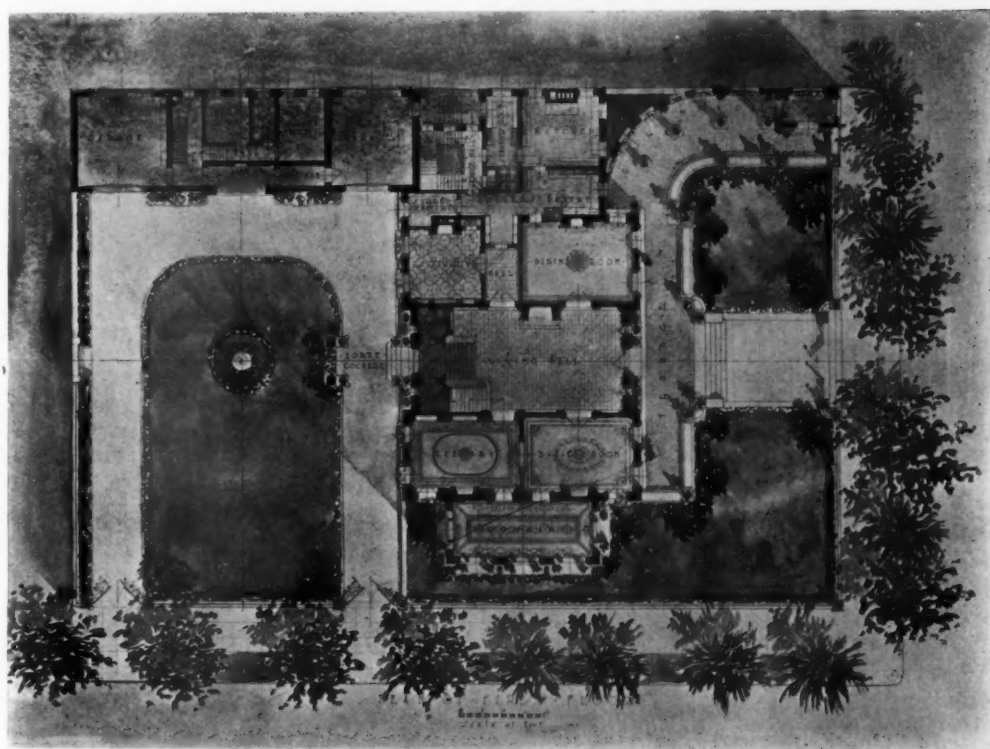


PLATE 48

HOUSE OF GEORGE F. ARMSTRONG, SAVANNAH, GA.
HENRIK WALLIN, ARCHITECT



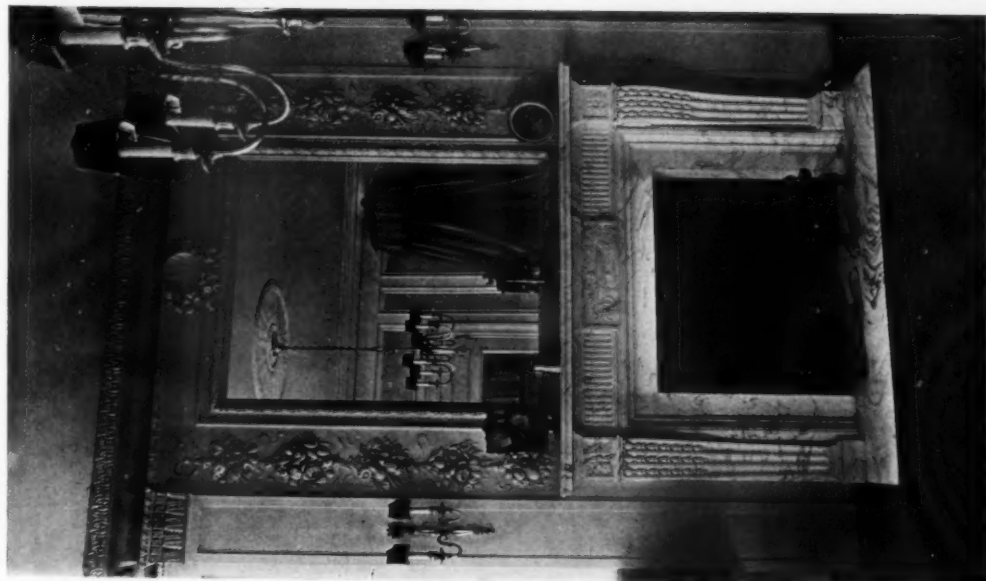


PLATE 49

A BEDROOM MANTEL



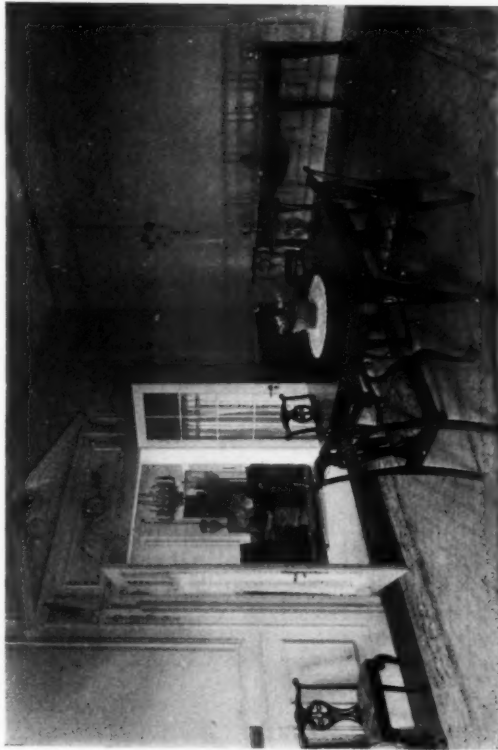
THE STUDY



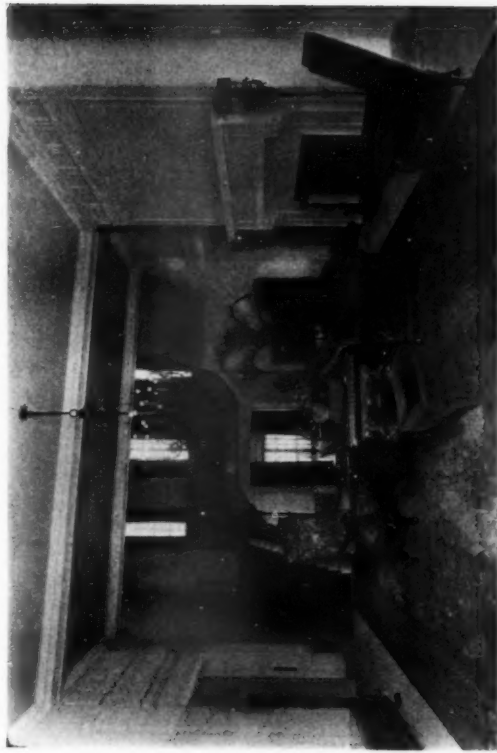
LIBRARY

HOUSE OF GEORGE F. ARMSTRONG, SAVANNAH, GA.
HENRIK WALLIN, ARCHITECT

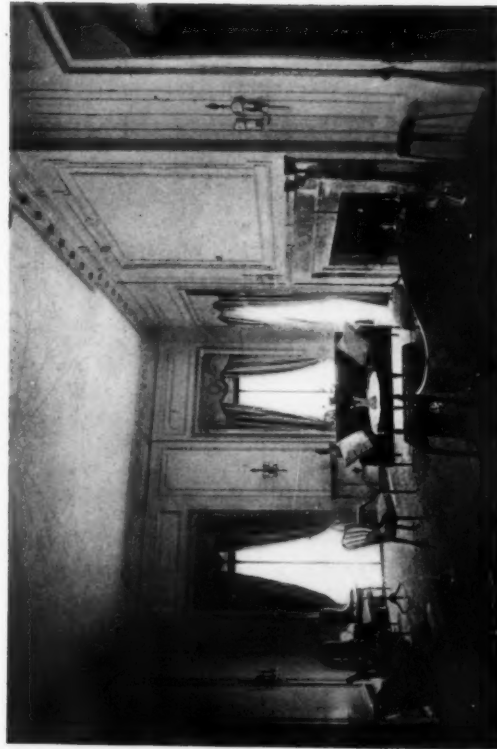




DINING ROOM



LIVING HALL



MUSIC ROOM

PLATE 50

HOUSE OF GEORGE F. ARMSTRONG
SAVANNAH, GA.



HENRIK WALLIN
ARCHITECT

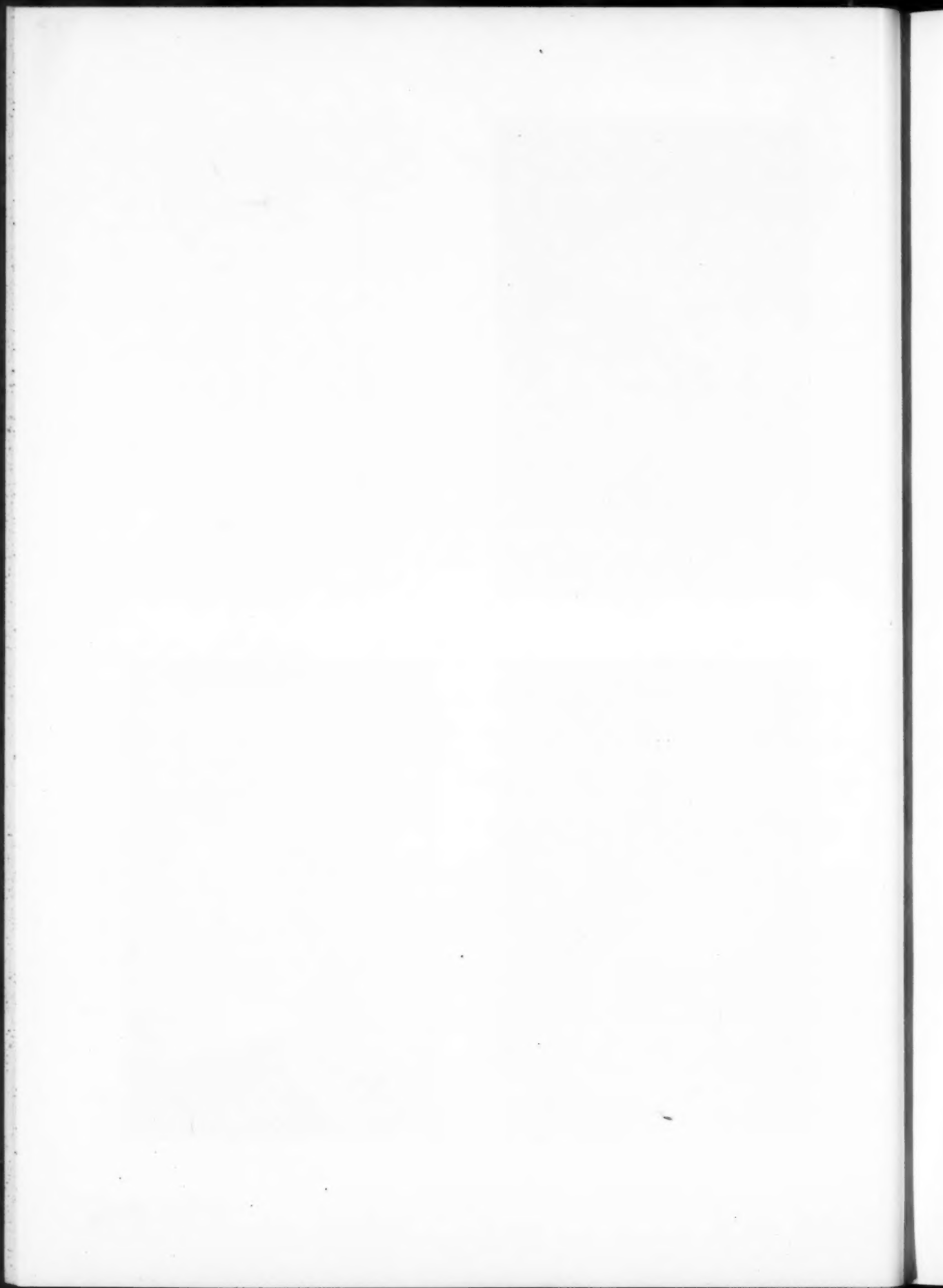




PLATE 51

BEDROOMS IN
HOUSE OF
GEORGE F. ARMSTRONG
SAVANNAH, GA.



HENRIK WALLIN
ARCHITECT





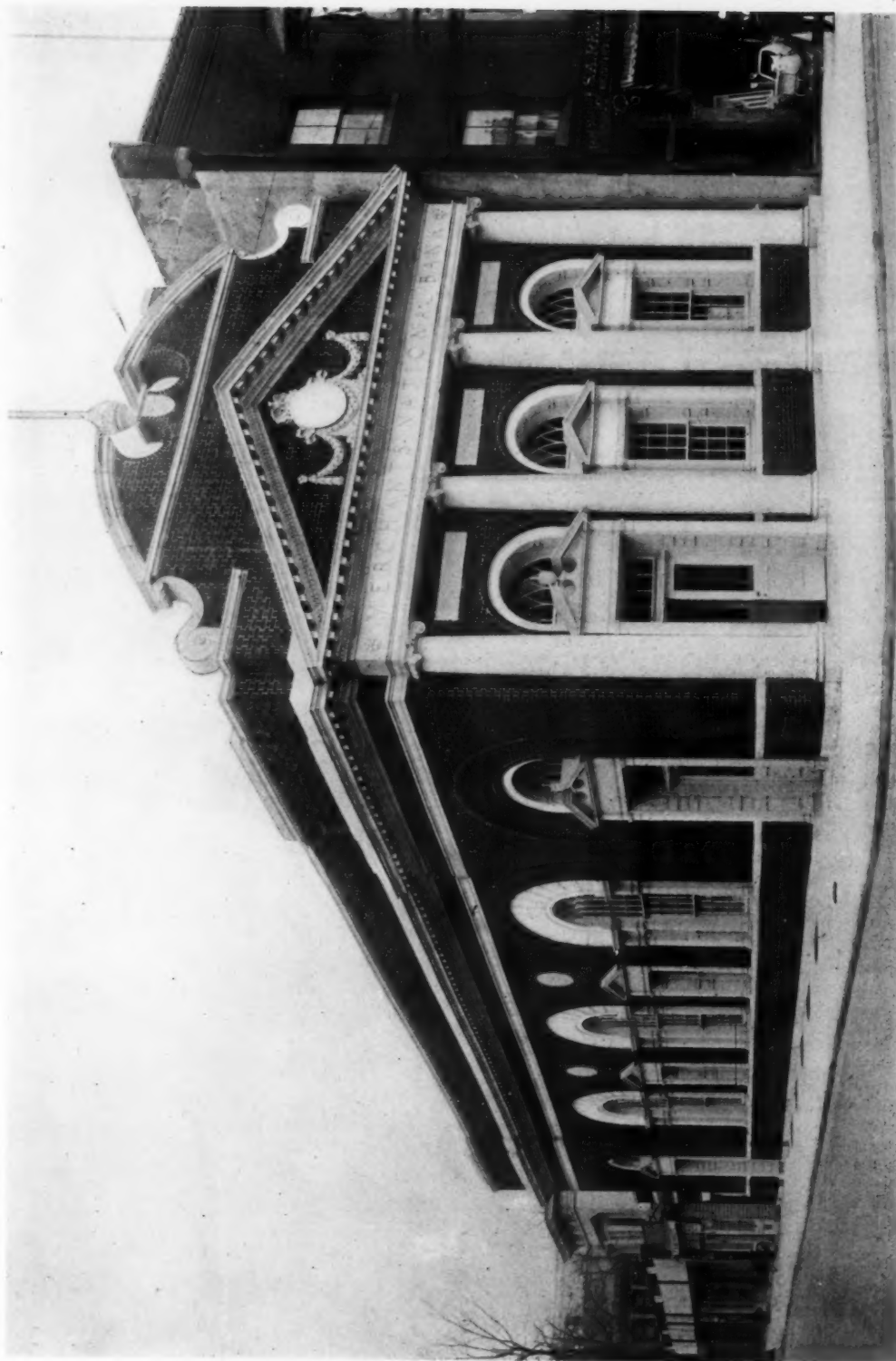


PLATE 52

MERCHANTS' NATIONAL BANK, ASBURY PARK, N. J.

CLARENCE WILSON BRAZER, ARCHITECT

(See page 176 for floor plan)





INTERIOR SHOWING VAULT



PLATE 53

INTERIOR SHOWING BALCONY

MERCHANTS' NATIONAL BANK, ASBURY PARK, N. J.
CLARENCE WILSON BRAZER, ARCHITECT



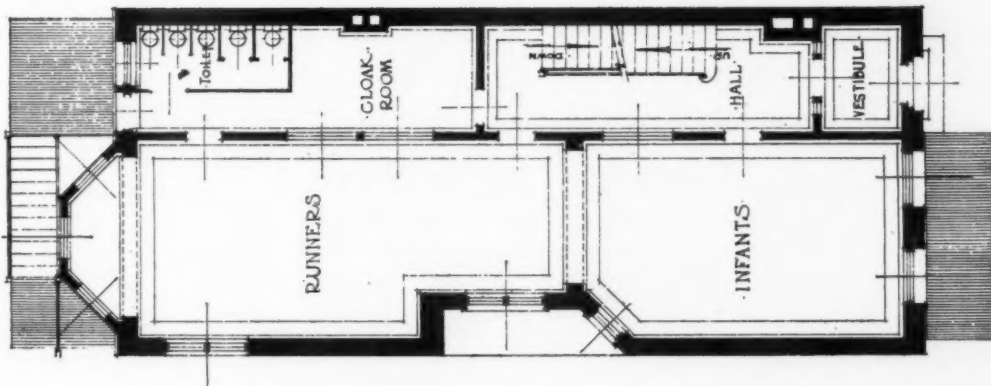
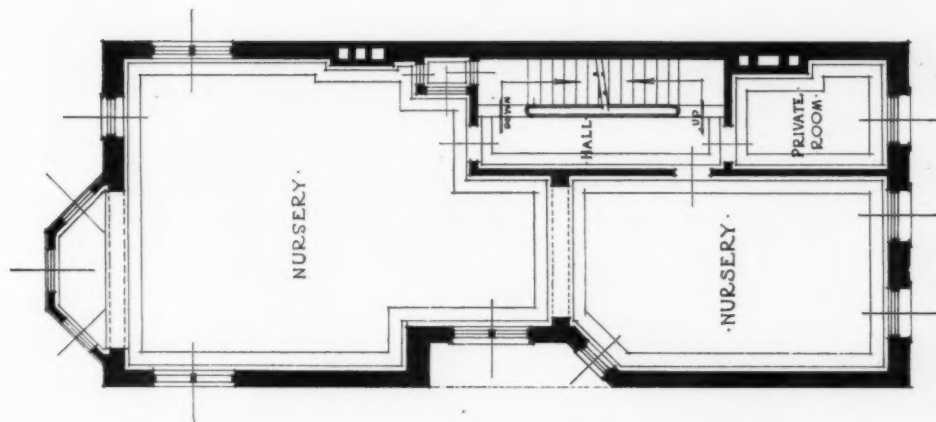
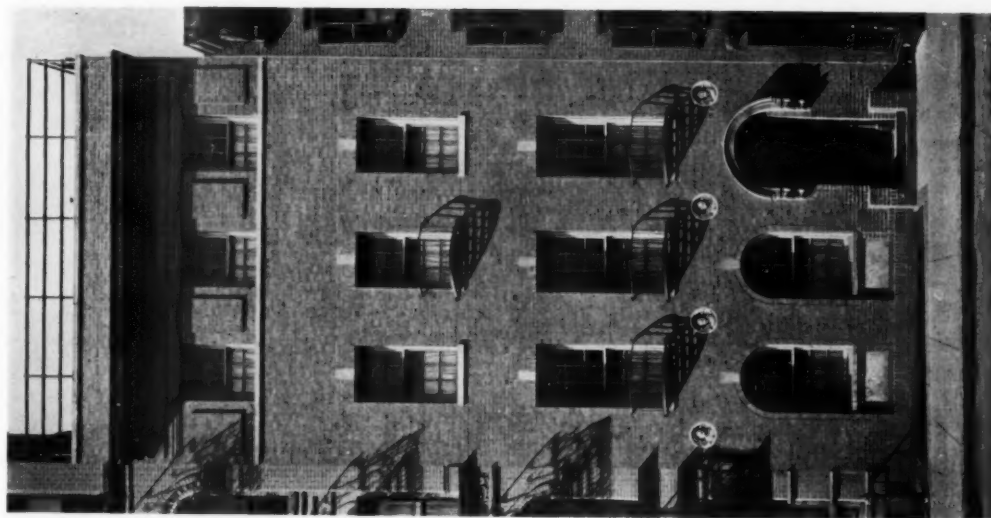


PLATE 54



SAINT PASCAL'S DAY NURSERY, EAST TWENTY-SECOND STREET, NEW YORK
REILEY & STEINBACH, ARCHITECTS





PLATE 55

HOSPITAL OF THE HOUSE OF CALVARY, PERRY STREET, NEW YORK
ROBERT J. REILEY, ARCHITECT

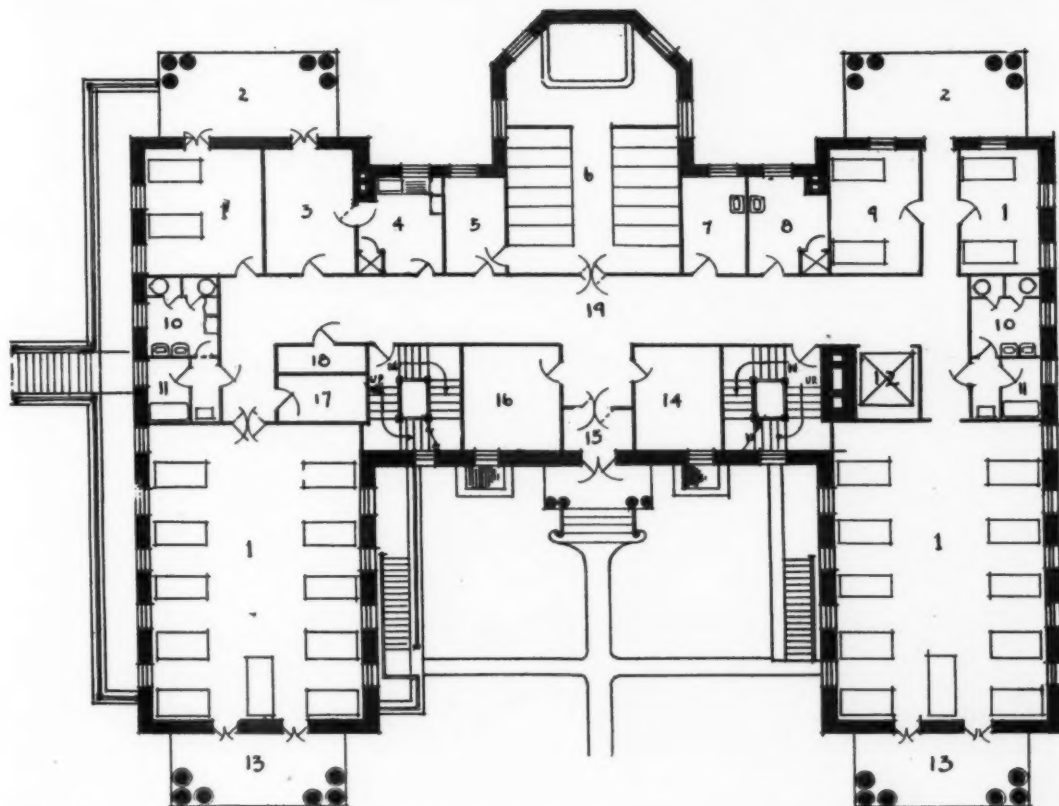


PLATE 56

HOSPITAL OF THE HOUSE OF CALVARY, PERRY STREET, NEW YORK

ROBERT J. REILEY, ARCHITECT





PLATE 57

DETAIL OF MAIN ENTRANCE

HOSPITAL OF THE HOUSE OF CALVARY, PERRY STREET, NEW YORK

ROBERT J. REILEY, ARCHITECT



GARDEN FRONT OF A HOUSE IN GUERNSEY

From Small Houses of the Late Georgian Period

Current News

Joseph Pennell Scolds His Native City of Philadelphia

Joseph Pennell, on his return to Philadelphia, is not satisfied with conditions as he finds them. In fact Mr. Pennell may be said to be frankly out of patience. His pen, like his pencil, is wielded with a strong regard for all the verities. He has sat himself down and written a letter to the editor of the *New York Times* (why to a *New York* paper instead of one in the city at fault is not clear), in which he takes roundly to task the people of Philadelphia.

Every man,—and woman and grown child,—in this country, who takes pride in an artistic and historical heritage will agree with Mr. Pennell in his criticisms. They should feel a sense of gratitude that a man so competent to sit in judgment on these matters should be willing in this busy age to take time to do so.

Mr. Pennell writes:—

On returning to my native city I find that the vandals of Philadelphia have been at it again. It is true that they have pulled down the two stands in front of Independence Hall owing to the letters which appeared in the *Times*. But to celebrate the Fourth of July they put up another one right behind it. This, on Saturday, was still standing,

still untouched, but evidently the authorities of the city are disturbed, for it is decorated with fire extinguishers.

On the front of the Hall still remain two pylons, and from them extend two canopies, stretching one to Congress Hall, the other to the old City Hall, only awaiting the sparks from our frequent fires to set them alight, and destroy those historic monuments. Further, some one unknown has removed the statue of George Washington from its pedestal—and taken the pedestal as well. Washington reposes under a tarpaulin on his back by the side of the State House. And in reply to local inquiries as to this matter we are informed that a new "Gregorian" base is being made, and when finished the statue will be re-erected.

Nothing whatever has been said, however, by the citizens of Philadelphia in protest against the inflammable stand.

Nothing has been said of the fact that the ancient City Hall is—like most of Philadelphia—a wreck, abandoned, with panes broken in nearly every window, paint peeling from the doors, covered with posters, surrounded with peanut and news stands, and junk heaps, perfectly typical of all our Philadelphia.

What does it matter—Cincinnati is going to erect "an exact copy of Independence Hall," and the Philadelphia Chapter of the Institute of American Architects possesses measured drawings of every inch of the buildings—so let them go.

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Only, by Act of Congress, approved June 8, 1906, the President of the United States is authorized to declare historic structures to be national monuments, and to protect them. As Philadelphia has proved itself incapable of protecting Independence Hall, our greatest historic structure, why will you not call upon the President to exercise his prerogative and save our greatest historic and architectural monument from the hypocrites and vandals who inhabit this city?

Philadelphia and Philadelphians are unable to appreciate the art they possess, unable to preserve it, yet they are squabbling over how they shall spend millions over two new art galleries, while far greater works of art than any that will be shown in any gallery in our very midst are crumbling and in the gravest peril of fire.

And not a soul in this city protests, and no paper will protest, and they howl when any one tries to expose the rottenness, the artlessness, with which the whole town is redolent.

JOSEPH PENNELL.

Institute Committee Considering Bureau of Housing Bill

WASHINGTON, D. C., Aug. 4.—The executive committee of the American Institute of Architects has under consideration a bill introduced in the House last week by Representative Tinkham. The bill provides for the creation of a Bureau of Housing and Living Conditions in the Department of Labor having for its purpose the increasing of the productive capacity and well-being of workers and promoting good citizenship. It is understood that the committee will approve of certain features of the measure and suggest amendments.

The proposed bureau will be charged with the duty of—

(a) Investigating the housing and living conditions of the industrial population; (b) conducting research and experimentation looking toward the provision and publication of such information as will make economically practicable the elimination of slums, the improvement of living conditions, the reduction of the construction cost of dwellings, and the financing of extended home-building operations without Federal appropriation; (c) assisting communities during the present housing shortage in making available to the utmost extent all existing housing facilities; and (d) serving as a clearing house of information on housing and living conditions.

A proviso authorizes the transfer of all plans and other material gathered by the U. S. Housing Corporation and by the Housing and Transportation Division of the Emergency Fleet Corporation. The director of the bureau will receive a salary of \$6,000. Mr. Tinkham asks for the authorization of a \$250,000 appropriation to carry out the provisions of the act.

Architectural Expansion of University of Virginia

The University of Virginia has established a school of art, architecture, and music, as the result of a gift of \$155,000 for that purpose from an alumnus, Mr. Paul G. McIntire of New York. Professional instruction in architecture will begin this fall. While in one sense new, this school will, however, be the revival of the first school of fine arts in America, which was included by Jefferson in the original organization of the university. The school will have the unrivalled background of the old classic group of buildings on the lawn, and its harmonious modern extensions by Stanford White and others.

Competition for Federal Reserve Bank Building in New York

COMPETITIVE PLANS TO BE SUBMITTED EARLY IN OCTOBER

During the summer of 1918, the Federal Reserve Bank of New York purchased as a site for a bank building, the block bounded by Nassau, Liberty, and William Streets and Maiden Lane, with the exception of a small building at the extreme eastern end of the block which is held at a prohibitive price, and the area covered by which is not essential for the proposed building.

The directors of the bank nearly a year ago retained Mr. Alexander B. Trowbridge, of the firm of Trowbridge & Ackerman, as consulting architect for both the preparation of the preliminary studies and the construction of the building, and after a thorough study of the problem are now preparing for the erection of the building on the site acquired.

On account of the public character of the Federal Reserve Bank, the directors decided that it was advisable to select the architect of the building through competition, and in order to expedite the selection, limited the competition to six firms and invited Carrere & Hastings, Delano & Aldrich, Cass Gilbert, McKim, Mead & White, Trowbridge & Livingston and York & Sawyer. The competitive plans will be submitted on October 9th, 1919.

While it cannot now be stated when construction will be begun, the bank is anxious to complete the building as soon as possible in order that it may bring together under one roof the immense volume of its work which is now transacted in scattered offices, not only in the Equitable Building, but at 35-37 Liberty Street and 19 West 44th Street, and in order that the more than 2,500 men and women who compose its staff may have more satisfactory working conditions.

Professional Salaries to be Higher in Sacramento

State architects, engineers and draftsmen at a recent meeting formed a temporary organization to look into the wage scale that the State is paying these employees. G. M. Simonson of the architectural department, and Thomas B. Waddell, engineer in the office of the Reclamation Board, were elected President and Secretary respectively. A constitution and by-laws have not been formulated.

The meeting had under consideration affiliation with similar unions in San Francisco and other Bay cities. But following the recommendation of a committee, appointed some time ago, the organization decided to remain independent, for the present at least.

Public Comfort Station Law in Wisconsin

Every city and incorporated city in Wisconsin must "provide and maintain a sufficient number of suitable and adequate public comfort stations for both sexes," under a law passed recently by the state legislature and signed by the governor. It is provided that the State Board of Health shall establish rules and regulations governing the location, construction, equipment and maintenance of such stations and may also prescribe minimum standards that shall be uniform throughout the state.

Asks if the English Are Employing Architects

A good deal of attention has rightly been given to the planning of English houses, and if the anxiously awaited houses which are to be built in every county do not reach a high standard, it will not be because their builders lack advisers. But it may be that some of them will lack the artistic feeling that is needed to insure a result that will not be an eyesore. Much depends on whether architects are employed by the building authorities or whether, in a spirit of false economy, they decide to use standardized designs and save architects' fees. Sir Aston Webb, in a recent letter to the *Times*, points out that there is plenty of unemployed talent available, but rumour says it is but scantily used. "If this is so," says Sir Aston, "I fear while we are building in haste we may have to repent at leisure."

All But One Own Their Homes

Dorsett Town, a colored settlement a short distance from Spencer, N. C., lays claim to being a unique village in that it is said 30 families out of 31 living in the neighborhood own their own homes. With but one exception, says a Spencer correspondent, every family in the place has bought a home in the past year, and most of them have been paid for. Every colored man in the place is said to be employed by the Southern Railway, and that purchase of homes by the employees has been especially urged by the officials of the company. In one instance an old darkey, too old and feeble to save money, was presented with a house and a lot by a son, Council Haden, a one-legged negro, who had saved enough money to pay for the home. He had it deeded to his "daddy" for the remainder of his life and then to revert to himself.

Revive Interest in Marine Architecture

WASHINGTON, D. C., Aug. 4.—The plans of the U. S. Shipping Board for the encouragement and fostering of courses in naval architecture and marine engineering in educational institutions are progressing satisfactorily. Fourteen universities and technical colleges have promised to revive interest in marine architecture.

Bronze "Buddies" to Commemorate New York Divisions

Among the monuments to be erected in commemoration of America's part in the great war, perhaps none will be more interesting than that chosen by the citizens of Spartanburg, S. C., not to their dead, but as a tribute to the men who trained there—the Twenty-seventh Division, New York's "Own," and the Thirtieth Division.

There, in a memorial park of 140 acres, already set aside as a permanent site, will be erected a bronze group, of heroic size, by Karl Illava of New York City, one of the best known of the younger American sculptors.

The working model of this group, entitled "Buddies," is completed and will probably be shown soon at one of the Fifth avenue galleries, New York.

The group represents two doughboys striding along to the front in battle equipment, squinting a bit in the bright

sunlight, alert, serious, but unalarmed at what may lie before them. "There is nothing unusually heroic about the types," asserts the sculptor, "but they are absolutely typical of the rank and file of American troops."

Young Illava is qualified to testify as to the kind of men who were turning the tide of battle in France at this time last year, as he served with the 102d Train's headquarters in action in France. Before that he served with the First New York Cavalry at the Mexican border.

The uniforms and equipment of his "Buddies" are quite accurate, Mr. Illava states, so the group will give a true picture to Spartanburgers yet unborn of the battlefield appearance of the husky thousands who swarmed the town in 1917-18.

Ruined Churches Being Restored

PARIS, July 30.—Over 3000 churches were either completely destroyed or seriously damaged by the German invasion of Northern France. The state in which these martyred churches now are found varies from those that have been absolutely wiped out to others which suffered only the damages of occasional stray shells.

The work of restoring the churches has begun. The first annual general assembly of the Society to restore the Churches of the Devastated Regions was held in Paris recently. At that time Vicar Odelin of Paris reported that over \$265,000 had been expended in beginning the work of restoration. He stated that sixty-three churches have been adopted by individuals who will personally bear all the expenses involved in the work of rebuilding. Help has come, said the vicar, from the United States, from Brazil, from India, in fact every nation of the allied world is helping France counteract the work of the destroyer.

Some of the churches will never be restored. Some are gone, completely shot to bits, leaving barely a trace of their former location. Others, famous cathedrals such as those of Rheims and Amiens, may be left as they now stand as a warning to posterity and as an indelible record of the savagery of the past five years.

In importance, architectural beauty and size the ruined cathedrals and churches vary from the stately ruin of Rheims, which will always symbolize the barbarity of the Huns, to the little country churches.

Beside the mound which figured day after day in the war communities as "Hill 304," in the midst of what used to form the quiet village of Esnes, just to the right of Verdun, stood the little church. It was almost demolished by the terrible effect of the artillery during the Verdun struggle of 1916, but until late in the summer of 1917 the altar of the church still stood unscathed.

The roof and walls of the church had long since been shot away, but the weatherbeaten, unprotected altar continued to give solitary evidence of the former presence of a house of worship. To-day nothing remains. But the little church of Esnes is only one of a great number which will never be restored.

Starts Large Community Center

William J. McGinley, supreme secretary of the Knights of Columbus, has announced that the city of Columbus, Ohio, has raised the sum of \$300,000 for the erection and maintenance of a large community center in that city, to be conducted along the lines of the "Casey" huts in France and the army and naval camps of this country. Mr. McGinley said New York and other cities have plans under way for the same object.

THE AMERICAN ARCHITECT

French Will Erect Monument to Our Soldiers

A monument to the American soldiers who perished in France will be erected in May of next year, near the tomb of La Fayette in the Picpus cemetery.

This announcement was made by André Tardieu at the close of the American tribute to La Fayette paid to-day when Hugh C. Wallace, the American ambassador to France, laid a wreath on the tomb of the French hero. M. Tardieu said the sculptor, Bartholome, had been entrusted with its designing. Monuments to commemorate the achievements of the Americans in the battle of the Argonne are being built, details of the work being attended to by different army units.

A series of concrete monuments adorned with German machine guns, and in some instances with German helmets and rifles, has been put up to mark the front line of a division advance or to tell of the capture of a certain village by some regiment. Most of the monuments are being placed in prominent places near the main roads, when possible, so that they will serve as guide posts for tourists visiting the scenes where the Americans fought their greatest battle on French soil.

Can Architects Help to Prevent Tuberculosis?

A letter received from the National Tuberculosis Association sets forth so clearly the present ravages of that disease that portions of the letter are here reprinted. It is believed that inasmuch as tuberculosis is practically in all instances preventable, and that good civic conditions are the largest factor in checking it, architects should give to the cause every mite of co-operation that they have.

First, it is learned, tuberculosis alone annually causes 150,000 deaths in the United States. Yet, to the best of present-day scientific knowledge, the disease is not inherited. Infection, it is now believed, generally takes place during childhood. It is a result of carelessness—or more often sheer ignorance of the nature of the disease and the methods of avoiding infection. "The 'tuberculosis problem,'" Surgeon B. J. Lloyd of the U. S. Public Health Service stated recently, "means the germ of tuberculosis on the one hand, and the new-born babe on the other. . . . If the two could be kept apart there would not be any tuberculosis problem." In other words, those 150,000 deaths from tuberculosis every year are preventable.

Second, examination of men for the National Army revealed that tuberculosis is far more prevalent in this country than even the best informed authorities were aware. The official records of the war department show that almost 100,000 men were rejected because they were suffering from unsuspected implantation of the germ. Here the white plague shows itself for the grim national menace that it is; for suppose the war had gone on, and drained our man-power to the limit. Fortunately this 100,000 was not missed from the firing line—but even so it represents a huge economic loss to-day, either actual or potential.

Third, tuberculosis has increased enormously in Europe. Such statistics as are now available for foreign countries during the war period show that as the food supply fell off, tuberculosis increased.

Disquieting facts like the foregoing might be cited at greater length, but these alone emphasize the seriousness of the present situation. It is not one that should give

cause for frantic alarm, but it is one that calls for action.

Public and private health agencies must be stirred to redoubled efforts; public opinion must be aroused and a nation-wide educational campaign must be undertaken.

We, whom this dread disease does not touch, are naturally less stirred by the conditions it imposes upon its victims. Insofar as the country at large is finally the worst sufferer, it becomes necessary for everybody to work along lines that will reduce the danger to a minimum. Charles J. Hatfield, President of the Association, has a fund of statistics and information available at 381 Fourth Avenue, New York, and will co-operate in every possible way with those who will accept a measure of responsibility in fighting the white plague.

Build Workmen's Homes at Cost

The Chicago Housing Association has just been formed to abolish the housing evils of the working class and enable them to procure houses at cost. The association, of which twenty-two prominent Chicagoans are directors, has opened an office in the North American Building and has started operations by buying a 40-acre tract of land on the south side.

Geo. C. Nimmons, architect, has submitted suggestions for a standardized system in building the homes. The Utopian scheme means that any workingman desiring a home of his own without paying the inflated prices for a lot and material, has only to apply at the offices of the association. An application will be made out for him, and this will be turned over to a social committee which will investigate the claim, to prevent speculators from taking advantage of the proposition. Then, if the claim is authentic, a home will be erected.

Prominent architects are offering their services without charge, and a loan bank has volunteered to do the collecting and recording, free of cost to the association.

James F. Basiger, head of the application department in the North American Building, explained the plan in detail.

"The chief aim is to protect the workingman from paying exalted profits to private concerns when he builds his home. Of course, costs are high anyway now, but the expense could be considerably curtailed by elimination of some profits. The association feels that if it is made easy for the workingman to own his home, the bad housing conditions of the working classes will disappear."

United States to Sell a Town

St. Helena, in Baltimore County, Md., is to be sold and the Housing Division of the United States Shipping Board Emergency Fleet Corporation is asking for bids.

This picturesque little village is made up of 296 houses, a cafeteria building and a power house. It is on the Sparrows Point branch of the Pennsylvania Railroad and also the high speed electric line between Baltimore and the Bay Shore Terminal.

Parcel "A" consists of approximately fifteen and one-half acres, exclusive of the streets and alleys. In it are the 296 houses, each having four rooms and a bathroom.

The streets of the town have concrete sidewalks and house walks are also of concrete. There are attractive lawns and shade trees. The streets are lighted with incandescent lights.

Parcel "B" consists of approximately 98,000 square feet, upon which have been built the cafeteria and power house.

THE AMERICAN ARCHITECT

Architects Help to Arbitrate Strikes

Organized labor, through the American Federation of Labor has joined with the large building employers' association, the American Institute of Architects and the Engineering Council to form a board to arbitrate so-called jurisdictional strikes, which make up a large part of the labor trouble in building operations. This board is to be known as the National Board for Jurisdictional Awards in the Building Industries, and consists of eight members, three to be selected by the building trades department of the American Federation of Labor, and one each by the American Institute of Architects, Engineering Council, the Associated General Contractors of America, the National Association of Builders' Exchanges, and the National Building Trade Employers' Association. According to the constitution, at least a two-thirds vote shall be required to render an award in all cases. Each signatory to the agreement agrees that the membership of its organization shall not take part in sympathetic strike in any case of jurisdictional dispute.

Appoint a Washington Zoning Commission

WASHINGTON, D. C., Aug. 2.—Plans of the Merchants and Manufacturers Association to make Washington an industrial city will prove ineffective through a law which prohibits factories in the District of Columbia. These facts were presented to the officials of the National Association of Real Estate Boards by Commissioner Brownlow at a dinner to John L. Weaver, president, here Thursday. The commissioner stated that the movement would obliterate the beauty of the city.

The building zone law, which has been reported favorably by Senate and House committees will effectively check erection of factories within the District of Columbia. The bill is expected to stabilize real estate values and solve the perplexing garage situation.

The act will provide for a zoning commission of five members having the power to determine the extreme height of buildings, divide the city into residential, mercantile and business districts and to prescribe how much of a lot shall be used for a building.

To Increase Museum's Influence

The annual report of George D. Booth, President of the Detroit Museum of Art, is a thought-provoking paper.

A system of exchange exhibits is one of the suggestions made. This would mean establishing branch museums or galleries throughout the city, perhaps at first in conjunction with the branch libraries, by the addition of a wing or a separate building. The exhibits could then be passed from one place to another in regular rotation. Each might remain intact for thirty or sixty days in one gallery and then pushed forward and replaced.

This would, in a measure, solve the problem of some of the large museums which are otherwise forced to house too vast a collection permanently in one building to do justice to it.

The attendant would be capable of giving intelligent information in reply to questions and should give carefully prepared instructive talks on each exhibit.

As the purpose is mainly educational, each exhibit should represent an idea covering a particular period or school. Some might be especially designed for children.

Discussing the matter in detail, Mr. Booth's report states he would like these buildings placed close to the street, easy of access, and not surrounded by very much park space. In a section thickly populated, he has in mind utilizing a lot, say fifty or sixty feet wide, with the building a few feet back from the sidewalk, with an inviting entrance on the sidewalk level, and the building occupying the width of the lot and nicely proportioned in depth—in the rear an attractive court or garden, surrounded by a wall, a pleasant spot to rest, accessible only from the gallery.

This might be a special urge to pass through the galleries at frequent intervals.

Cite Lessons from U. S. Housing Activities

A twelve-page pamphlet has been written by Frederick Law Olmsted, manager of the Town Planning Division of the United States Housing Corporation.

This covers briefly some of the experiences and results of this large undertaking, tracing the work done from its very inception. The pamphlet is reprinted from the Monthly Labor Review (May, 1919) of the Bureau of Labor Statistics, United States Department of Labor, and is illustrated with photographs and plans of Government housing developments.

To Build Homes in Bristol

At a meeting of the housing committee of the local chamber of commerce, recently held at the chamber of commerce, plans were worked out for forming the Bristol Housing Corporation with a capital of \$100,000. The organization will have as its object the building of homes there for people who are without money for building but already have a lot. The payments to be made on the house depends on the amount the corporation invests, but it is thought that it will not be over \$6 on every one hundred dollars of the cost of the house.

First White House of Confederacy to be Displaced

The old mansion in Montgomery, Ala., at one time occupied by Jefferson Davis and known as the first White House of the Confederacy will, it is believed, be razed shortly and its site occupied by a garage.

The building in late years had been used as a boarding house and ill usage and neglect had resulted in its becoming more or less of an eye sore. Many movements for its purchase as a memorial failed. The mansion, at the corner of Lee and Bibb streets, is surrounded by business structures.

To Erect World's Highest Church

Just how far the powers above propose to fraternize with big business in New York is not quite certain, but the Fifth Church of Christ Scientist in this city has in contemplation the erection of a combined church and office building.

The building which will be twenty stories high, is the tallest church on record. The site selected, Madison Avenue from Forty-third to Forty-fourth streets, was purchased at a cost of \$2,500,000, and the building itself is estimated at \$4,000,000. Arthur D. Pickering is the architect.

Drop New York Circular County Court House Plan

The circular Court House plan, proposed during the Fusion administration by Guy Lowell, has been definitely abandoned by the Hylan administration, and Mr. Lowell was asked to prepare plans for a much less pretentious edifice in which to house the New York County courts. The cost of constructing the Court House along the original lines was estimated at \$12,000,000, but experts have estimated that to carry out the original project now, with increased cost of labor and materials, would amount to from \$22,000,000 to \$25,000,000.

Comptroller Craig, President Robert L. Moran of the Board of Aldermen, and Frank L. Dowling, Borough President of Manhattan, are the members of the present Court House Board. President Moran had a conference with Architect Lowell and Lewis F. Pilcher, State Architect, who was asked last week by the Board of Estimate to advise the Finance Committee of the board. The architect was told that the city officials could find \$5,000,000 of city bonds which could be used, and it is understood that he agreed to set forth his views on the matter in detail.

Hotel Construction Exposition

Architects and builders who are particularly interested in hotel construction, which has lately shown a marked boom throughout the country, are finding much that is instructive and worth their while in the hotel exposition, now being held at the Coliseum, Chicago.

The exposition is one of the greatest gatherings to be held in Chicago this year. It is expected that at least 10,000 visitors are in the city in attendance upon it.

In connection with the exposition there are twelve conventions of organizations allied with the hotel and restaurant industry. All of these, also, are being held at the Colosseum.

The exposition itself shows the latest improvements in hotel construction and architecture, and is expected to give many valuable hints to those who contemplate the erection of new hotels and also to others who are interested in the question of location and construction, not only of new hotels but of restaurants and other places which will replace the saloon in the dry era.

Have Additional Year to Complete Gen. Grant Memorial

WASHINGTON, D. C., August 4.—The Secretary of War has granted an extension of time to Edward P. Casey, architect, and Henry M. Shady, sculptor, both of New York, for the completion of the Grant memorial in the National Botanic Garden here. The contractors were given another year to finish the work on the claim that delays were unavoidable.

The erection of the memorial was authorized by Congress eighteen years ago, when the limit of cost was fixed at \$250,000. The casting of the bronze equestrian group has not been completed, though it is hoped to have the entire group ready for setting before cold weather approaches. The memorial now consists of the marble superstructure, setting of four bronze lions and eight bronze lamp posts and a setting of bronze cavalry and artillery groups on the end pedestals.

Architects Will Exhibit at American Hospital Association

The twenty-first annual convention of the American Hospital Association is fixed for September 8-12 in Cincinnati, Ohio. Aside from lectures and discussions, several important exhibits will be held. These include an Architect's Exhibit which will embrace the chief phases of hospital construction, and well-known hospital consultants will deliver practical talks on hospital construction.

Plans for an unusually instructive and profitable display of hospital plans and principles of construction are in process of completion. Ample space in the form of a large room has been set aside for this, and the physical arrangement will be such that plans may be shown by classes of medical institutions. The arrangement contemplates the division of plans into fourteen groups, embracing the chief varieties of special hospitals. Further information may be obtained from Dr. John A. Hornsby, Munsey Bldg., Washington, D. C.

Air Navigation Opens New Field for Architecture

WASHINGTON, D. C., August 2.—The unparalleled and almost miraculous development of air navigation opens a new field for architecture. The United States Navy has already undertaken to provide new buildings designed to house the transatlantic dirigibles and other heavier-than-air machines. Aeronautical leaders believe the epoch-making voyage of the NC-4 and the R 34, the British "blimp," marks the beginning of a new era in architecture.

The navy hangar will be erected at Lakehurst, N. J., immediately. The inside dimensions of the structure will be 800 feet in length, 265 feet in width and 174 feet in height. The actual ground to be occupied by the dirigible hangar will cover a space 920 feet long and 325 feet wide, the building to tower over 200 feet. The four doors will be 174 feet high, 120 feet wide and 60 feet thick at the bottom.

More than 6000 tons of steel will be used. The cubic contents of the building will be 50,000,000 feet. Blended colored corrugated asbestos will be the covering, insuring protection from fire. The naval architects have designed a unique lighting and ventilating system through a series of windows and skylights. Shops will be installed in the spaces between the trusses.

These hangars will be crude structures as compared to shops for railroad conveyances. The construction of stations for passengers and freight will come eventually. It is conceded that it will be impossible to determine a style which will have permanency and grandeur. The constantly changing types of aircraft due to the advancement of science in the next decade will have a direct effect on the air stations of the future. The architect of the coming generation will have many problems to consider in designing his buildings. Chief among these will be atmospheric conditions.

Executive Committee of Institute to Meet in Detroit

WASHINGTON, D. C., July 28.—The executive committee of the American Institute of Architects will meet with the Michigan Chapter at Detroit, Aug. 15-16.

THE AMERICAN ARCHITECT

Children's Art Center Is Active

The Children's Art Center at Boston has just issued its first report, one that indicates a career of usefulness ahead of it. The attendance has numbered 7682 children and 877 adults.

To get young folk interested in good art while they are still boys and girls is without question the most fruitful method of raising to a higher plane the art appreciation of the future citizen. If this plan is carried actively forward wherever children are, the most salutary results may be anticipated. Not only is an intelligent curiosity stimulated, not only is there developed certain familiarity with what is good, not only is a standard of comparison set, not only is there encouraged a habit of going fearlessly to these and other exhibits, but there is also offered a gratifying substitute for hours of idleness and mischief making. If these things are incorporated in the schools and public libraries, if they are popularized by movies and story hours, it will be getting at the very foundation of an interesting and important development.

Obituary

John Edward Somes, of Brookline, Mass., died recently at the age of thirty-nine. He was of the architectural firm of Somes & Parsons, 1 Beacon Street, Boston. He was a Harvard man of the class of 1901, and a member of the Boston Society of Architects.

George T. Tilden, long a prominent Boston architect, died at the age of 74. He was for years of the firm of Rotch & Tilden, and continued the firm's practice alone after the death of Mr. Rotch. He was a fellow of the Institute, and a member of the Boston Society.

Arthur J. Malcomson, of the firm of Malcomson & Higginbotham, Detroit, is dead. He became associated with his father, W. G. Malcomson, after graduating from the University of Michigan and following post-graduate work at Harvard. He was one of the most popular of the city's younger architects. He died in his thirty-second year.

John Williams Beal, one of the prominent and most respected architects of the State of Massachusetts, died suddenly on July 7. He was perhaps best known as architect of county buildings throughout the State and the many business blocks he designed. His last work was the new tuberculosis hospital for Plymouth County, just dedicated. He was born in Norwell, May 19, 1855.

Word has been received in Minneapolis of the death at a sanitarium at Monrovia, California, of Victor F. V. de Brauwere, architect and engineer, who conducted an office at 824 Plymouth Building, Minneapolis. Mr. deBrauwere died of pneumonia. He was 32 years old.

Mr. deBrauwere came to Minneapolis eleven years ago and for a few years was identified with the firm of Long, Lamoreaux & Long. Later Mr. deBrauwere established his own offices.

As a member of the Minneapolis chapter of the American Institute of Architects and the Civic and Commerce Association, Mr. deBrauwere was active in matters pertaining to the betterment of the city. He was chairman of the Civic and Commerce Association's committee on municipal affairs.

Personals

Architect Frederick S. Scott opened office at 216 Kennedy Building, Omaha, Nebraska.

O. Eugene Adams, architect, has opened an office at 1263 Calvert Building, Baltimore.

George T. Tribe, architect, Worcester, Mass., has renewed practice at 306 Main Street.

E. A. Mayo, architect, formerly at 155 North Clark Street, has moved to 1103-53 West Jackson Boulevard, Chicago.

W. E. Hulse & Company, architects, have opened new office branch at Sioux City, Iowa, 320-21 Grain Exchange Building.

The National Engineering Corporation, general contractors, Boston, have moved from 40 Central Street to 27 School Street.

Delos H. Smith has removed his office to the Union Trust Building, Washington, D. C., where he will carry on the work of Kendall & Smith.

The Aberthaw Construction Company, of Boston, Mass., has opened a permanent office in Atlanta, Ga., which will be under the direction of Mr. N. Sage.

Philip G. Tillion has returned from duty as a detached engineer with the A. E. F. to the firm of P. Tillion & Sons, architects, 103 Park Avenue, New York City.

Charles W. Perry and Eugene B. Whipple, mill engineers and architects, have organized under the firm name Perry & Whipple, 17 Exchange Street, Providence, R. I.

Joseph Della Valle and Toby Vece, architects, announce the opening of their offices at 865 Chapel Street, New Haven, Conn. Manufacturers' samples and catalogs are desired.

C. L. Hutchisson, architect of Mobile, Ala., has moved his office from the City Bank Building to Room 33, Emanuel Building. He desires manufacturers' samples and catalogs.

Howard McClorey has returned from over-seas duty and has reopened offices at 506 Fourth National Bank Building, 18 East Fourth Street, Cincinnati, for the practice of architecture.

B. Robert Swartburg, architect, announces removal of his office from 51 East Forty-second Street, New York, to 103 Park Avenue. Samples of woodwork, marble, stone and mosaic are desired.

R. W. Pollock has been honorably discharged from the army and announces affiliation with E. G. Rust of Syracuse, N. Y. They will practice architecture at 1802 Chestnut Street, Philadelphia.

Announcement has been made of the opening of offices for the practice of architecture by Joseph Della Valle and Toby Vece, architects, at 865 Chapel Street, New Haven, Conn. Manufacturers' samples and catalogs are requested.

Rudolph P. Miller, formerly superintendent of buildings for Manhattan, and chairman of the Board of Standards and Appeals, and Geo. E. Strehan, formerly assistant engineer in the Bureau of Buildings and the Board of Standards and Appeals, announce that they have become associated in the general practice of engineering at 112 West Forty-second Street, New York City.

THE AMERICAN ARCHITECT

Professional Men of London Will Organize Brain-Workers' Union

The Society of Technical Engineers is forming a union of brain-workers, beginning with engineers, and extending in time to all ranks of qualified men, including doctors, scientists and chemists, and embracing buyers, experts and managers of businesses and industries. Employers are ineligible, and manual workers are to be left to their own union.

It has been calculated that there are at least 500,000 men coming within the scope of the new union. There is to be no interference with existing societies. The movement is political and industrial. It aims at giving the men whose knowledge is essential to the success of great undertakings a voice in all disputes and a place in industrial councils.

Urging Scientific Research

The far-reaching effects of a resolution such as the following, proposed by the American Federation of Labor at its Atlantic City Convention, will promptly commend themselves to every thinking man:

WHEREAS, scientific research and the technical application of results of research form a fundamental basis upon which the development of our industries, manufacturing, agricultural, mining and others must rest; and,

WHEREAS, the productivity of industry is greatly increased by the technical application of the results of scientific research in physics, chemistry, biology and geology, in engineering and agriculture, and in the related sciences; and the health and well-being not only of the workers but of the whole population as well, are dependent upon advances in medicine and sanitation; so that the value of scientific advancement to the welfare of the nation is many times greater than the cost of the necessary research; and,

WHEREAS, the increased productivity of industry resulting from scientific research is a most potent factor in the ever-increasing struggle of the workers to raise their standards of living, and the importance of this factor must steadily increase, since there is a limit beyond which the average standard of living of the whole population cannot progress by the usual methods of readjustment, which limit can only be raised by research and the utilization of the results of research in industry; and,

WHEREAS, there are numerous important and pressing problems of administration and regulation now faced by Federal, State and local governments, the wise solution of which depends upon scientific and technical research; and,

WHEREAS, the war has brought home to all the nations engaged in it the overwhelming importance of science and technology to national welfare, whether in war or in peace, and not only in private initiative attempting to organize far-reaching research in these fields on a national scale, but in several countries governmental participation and support of such undertakings are already active; therefore, be it

RESOLVED, by the American Federation of Labor in convention assembled, that a broad program of scientific and technical research is of major importance to the national welfare and should be fostered in every way by the Federal Government, and that the activities of the Government itself in such research should be adequately and generously supported in order that the work may be greatly strengthened and extended; and the Secretary of the Federation is instructed to transmit copies of this resolution to the President of the United States, to the President pro tempore of the Senate, and to the Speaker of the House of Representatives.

News from Various Sources

G. H. Cushing, managing director of American Wholesale Coal Association, told Congress that public should buy coal now and avert coal famine next winter.

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According to W. C. Marshall, United States Trade Commissioner, Italy needs machinery for paper making, textiles, printing, shipyard equipment, sugar, rope making, refrigerating apparatus, wood working and machine tools.

* * *

Dispatch from Paris states that directly after sacking of Louvain members of French Institute planned to make restoration of university and library great international manifestation; 150 universities have pledged adherence to scheme.

* * *

Wall Street Journal states that French Deputy, L. Du Bois, says damage done by Germans in France amounted to \$40,000,000,000, comprising \$23,800,000,000 material damage, \$7,400,000,000 military expenses and \$1,200,000,000 for pensions.

* * *

United States Geological Survey announces that it has ready for distribution its annual statement on sand-lime brick industry in 1918. This report contains statistics of production of sand-lime brick since beginning of industry in the United States in 1903.

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Wall Street Journal states that Carnegie Steel Co. is canvassing its employees at Youngstown to ascertain their views on company-employee co-operation in building homes. United States Steel Corporation is fathering movement for workmen's homes through its real estate subsidiary.

* * *

Bureau of Foreign and Domestic Commerce states that it has issued a list of materials required for industrial reconstruction of Belgium, together with list of groups into which Belgian industries have been organized for reconstruction purposes. List can be obtained from bureau by referring to file No. 40436.

* * *

Two gigantic ocean racers, swifter and larger than anything afloat, are to be built by the Shipping Board. Vessels will have 1000 ft. in length with speed of 30 knots an hour; are to be oil burning and are designed to cross Atlantic in 4 days. Board has in view construction of two more of same type and is considering Fort Pond Bay as Atlantic terminal.

* * *

American Chamber of Commerce at London reports six main causes of industrial unrest in Great Britain, as decided upon by joint committee of employers and employed appointed at recent conference of London manufacturers. They are: Suspicion, fear of unemployment, unfair division of profits and products, status in industry, extremist propaganda, economic fallacies.

A Correction

The illustration of the Minneapolis Central Y. M. C. A. Building in our issue of July 2 was attributed to Long, Lamoreaux & Long. The authorship of this building should have been stated as Long, Lamoreaux & Long and Shattuck & Hussey, associated architects and engineers.

Urges Elimination of Income Taxes from Real Estate Mortgages

Report of Special Committee on Housing of the New York Merchants' Association
States that Lack of Money Is by Far the Most Serious Hindrance to
Construction—Mortgages Must Be Made More Attractive
to Investors by Increasing the Net Return

In a report just issued by Burt L. Fenner, of McKim, Mead & White, architects, as chairman of the special committee on housing of the Merchants' Association of New York, a very thorough treatment of the situation as it exists to-day has been made by members of the committee, which includes, besides Mr. Fenner, Leo S. Bing of the Bing & Bing Construction Co.; G. Richard Davis of A. L. Mordecai & Son, Inc., real estate operators; Ernest F. Eidlitz, counsel of the Building Trades Employers' Association; Francis N. Howland of Candee, Smith & Howland, building material supplies; Clarence H. Kelsey, President of the Title Guarantee & Trust Co.; Charles D. Norton, Vice-president of the First National Bank; Robert E. Simon; Walter Stabler, Comptroller of the Metropolitan Life Insurance Company, and Charles H. Strong of Strong & Mellen, lawyers.

While the report deals with conditions as they exist in New York City, it can truly be said to reflect conditions as they exist in other sections of the country. It is most complete in scope, treating all phases of the situation. In part it follows:—

The Committee is firmly of the conviction that the problem is so immense that no palliative, while it may assist to some extent, is capable of meeting the situation satisfactorily. The rapidity with which the situation improves will depend directly upon the extent to which these two adverse factors are eliminated.

It has appeared to the Committee that the lack of money for building operations is by far the most serious hindrance to construction. This lack of money is manifest by the difficulty of obtaining adequate mortgage loans, which in the past have furnished not less than 80 per cent of the capital invested in building construction, and by the reluctance of either investors or speculators to finance the equity.

The unattractiveness of real estate mortgages as investments is of recent origin and is due to the fact that the net return to the investor has decreased materially on account of the income taxes. The investor has been unable to maintain his net income by increasing the interest rate on his mortgage investment. Consequently, individuals subject to income taxes, which applies to practically all investors, and especially individuals subject to sur-taxes, cannot afford to invest in real estate mortgages, as the net return to such investors often falls as low as two or three per cent. To make conditions worse, investors are not only refusing to invest further in real estate mortgages, but they are exerting every effort to liquidate those they now hold. It was inevitable that the decreasing demand for real estate mortgages as investments, coupled with the liquidation of present real estate mortgage holdings, would result in almost complete stagnation of the real estate mortgage market and of new house construction.

There is only one way in which a demand for real estate mortgages can be increased, namely, by increasing the net return to the investor, either by raising the interest rate or by eliminating taxes. The former method is im-

practicable, if not impossible; the latter method is advocated by your Committee.

The Committee believes that it has excellent grounds for advocating the elimination of income taxes on real estate mortgages. In the first place, the housing shortage is nation-wide, if not world-wide, and seriously threatens the industrial efficiency, peace and prosperity of this country and the health and contentment of its people. For this reason, it warrants the earnest attention of Congress. In the second place, Congress has already established the principle of assisting in the financing of urgently needed projects by the elimination of income taxes from securities, as in the case of the Government Loans, those of the Federal Farm Loan Banks, War Finance Corporation and municipalities. The urgent necessity for building construction all over the country is such as to place real estate securities in the same class with these others, from the standpoint of exemption from income taxes. In the third place, the present housing situation is due in large degree to curtailment of construction by government order during the war.

At first consideration, it may be thought that such legislation would deprive the Government of a substantial revenue but further consideration shows that such would not be the case.

A single illustration will demonstrate the effect on the Government's revenue of exempting new loans.

An operator intends to build one hundred houses at a cost of \$5,000 each, a total building cost of \$500,000. They are to be erected on land owned by him worth \$250,000. He will furnish the land and \$100,000 capital and must borrow \$400,000, divided into one hundred mortgages of \$4,000 each. This money will be furnished by from ten to 100 individuals. For the purpose of illustration, let us assume that it will be furnished by twenty individuals, taking \$20,000 each, upon which the income would be 5 per cent, or \$1,000. The Government would thus collect a tax upon twenty incomes of \$1,000 each. All this is, of course, based on the assumption that the mortgages could be placed, which to-day is not the case.

On the other hand, if the tax on these mortgages were removed, the money would be readily secured and the operation would proceed. On completion, the operator would sell the houses at a profit of \$500 each, a total of \$50,000, which would accrue to one individual and be subject to both the normal tax and sur-taxes. Thus the Government would collect, in one year, taxes equal in amount to at least five years' income from mortgages.

At approximately this figure, the amount of taxes which the wealthy would avoid would be immaterial, while an appeal would be made to a sufficient number of small investors to create the mortgage demand required.

The question has also been raised: Why should not this exemption from taxation be limited to new construction, inasmuch as funds are needed for new construction rather than for investment in buildings already erected? The

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Committee discussed this point very thoroughly and is of the conviction that the real estate mortgage market is indivisible and must be treated as a unit. If money is brought into the real estate mortgage market, the demand for new mortgages will automatically increase; but if the market for new mortgages only is stimulated, the advantages received will be largely, if not entirely, offset by the stagnating effect on the market for old mortgages. To be more specific, if the elimination of taxes is confined to new mortgages, the liquidation of old mortgages will not only continue, but increase, with the result that the real estate market will be called upon to place a great volume of old mortgages with new investors. It is inconceivable that property owners, who are having difficulty in replacing old mortgages, will be desirous, or able, to finance the equity on new construction. Furthermore, a decided and disastrous slump in the values of existing buildings will undoubtedly follow.

Inasmuch as this plan of relieving the present housing situation has been discussed more or less in a public way by persons connected with large loaning institutions, especially savings banks and life insurance companies, who have stated that this change in the income tax law would not promote investment by such concerns in real estate mortgages, because they are not now subject to these income taxes, the Committee wishes to point out that it was not the intention of stimulating the mortgage market by attracting such large investors. These concerns, in most cases, have their funds so tied up in Liberty Loan bonds, which in many cases they have borrowed money to purchase, that they are unable to invest extensively in real estate mortgages, which is an important reason for the present situation in the mortgage market. It is from the small investor whom this plan will affect, and who after all is the source of the bulk of mortgage money, that the mortgage market must obtain relief.

The Committee believes that the elimination of income taxes from real estate mortgages is so urgently needed that it did not wait until its investigation was completed before requesting The Merchants' Association to advocate this measure and, accordingly, it presented to your Board a preliminary report, with recommendations, which was accepted and adopted on June 2. This report urged exemption from income tax and sur-taxes of interest on a certain amount of mortgage holdings in any tax-payer's hands, say \$40,000.

After mortgage money has been made available, the builder must still finance the equity. In order to be induced to undertake this responsibility, he must be assured of obtaining an attractive return on his capital invested in the enterprise.

For a number of years the returns from ownership in real estate property have not been, in general, high enough to attract capital in competition with other more attractive investments. Even this low normal return has greatly decreased recently because the cost of operation has increased in a much greater ratio than rentals. For this reason the Committee believes that recent rent increases have, in most cases, been a legitimate and reasonable attempt on the part of honest landlords to take advantage of the present situation of supply and demand and to fix rentals at a figure which will produce a fair net return on investments.

The situation is complicated by the efforts at real profiteering on the part of a few landlords. The Committee desires to point out, however, that a marked increase in rent, even when large, is not necessarily an indication of profiteering. In some cases, landlords have been compelled to carry property for years without a reasonable return on their investment, or even with no return at all; and now

that the law of supply and demand makes the necessary increases possible, the size of the increase may often appear to be evidence of real profiteering. In fact, the attention of the Committee has been called to large holdings of houses economically constructed and efficiently managed, which have never paid more than a normal return on the money actually invested and which, during the past few years, have yielded a constantly and rapidly decreasing return, until, at the present day, the property produces a net return appreciably lower than that which the owners could obtain by investment in tax-exempt, absolutely safe, Government and municipal bonds.

Recent increases in rent have taken place during a comparatively few months, while the underlying conditions making these increases necessary have been developing for a period of years. Consequently it is natural to lose sight of the fact that the general increase in rents, if spread over the entire period of increasing cost of construction and operation, would appear to be only normal and far less than the increase in most living costs.

(To be concluded)

Building Material Market Reports

(From Our Special Correspondent)

CHICAGO, ILL., August 4.—With all building activities at a standstill because of the lockout of 110,000 workers, the employees of the surface and elevated lines striking for an advance in wages, and a race war between blacks and whites, this city is facing a most serious crisis both as to business and the safety of its law-abiding citizens. It is the belief of many of the city's financial and business leaders that the present situation has reached the point where labor and capital will fight to a finish in an effort to bring about some readjustment and final settlement of the post-war wage question.

The lockout of the carpenters was ordered July 18, and since that time work on building has been completely paralyzed. Owners, architects, building men and tenants who are anxious for relief from the house shortage are bringing pressure to have the differences settled and work resumed. President Simon O'Donnell, representing the union men, has announced that the men approved a plan to return to work at the old scales pending mediation, but Secretary E. M. Craig of the Building Construction Employers' Association, announces that while in the past the employers always have favored arbitration, the building trade situation is so involved with labor disputes they believe the situation must be cleared up, and that no work shall be resumed until all of the differences are settled.

It is apparent that this also is the attitude of some engaged in the building material industries. The retail lumber and building material dealers have closed down their yards. They are not delivering lumber to any building projects in Cook County. Prominent building material men have openly expressed an opinion that the wage question has reached its crisis and that now is the time to come to some settlement which will insure against strikes and repudiation of working contracts in the future.

A statement issued by the Building Construction Association sets forth eight principles, adoption of which they say should tend to bring about a readjustment of the labor situation. The eight cardinal principles are:

1.—That there shall be no limitation as to the amount of work a man shall perform during his working day.

(Continued on page 194-A)

Department of Architectural Engineering

Future Possibilities of Push Button Control for Electric Elevators

By ALEXANDER MARKS

IN these days of wireless telegraphy and telephony, of transatlantic flights by aeroplane and dirigible, the novelty of yesterday becomes the commonplace of to-day. This is no less true in building construction than in other fields of scientific endeavor. We boast of our skyscrapers and marvel at the feats of modern engineering which make their construction possible, too often forgetting the fact that the Woolworth Building and many others would become but useless monuments of steel and masonry, were it not for the modern elevator, which makes feasible safe access to their dizzy heights. We can therefore see that developments in building construction are intimately linked up with the development of hoisting machines, more commonly termed "elevators".

An elevator controlled entirely by those who desire service but wish to dispense with a regular attendant has heretofore been generally considered not only a novelty but also more or less of a luxury, with the result that its use has been largely restricted to private residences, banks, private hospitals, and the smaller but higher class business institutions. The fact that in many localities the Building Ordinance governing the installation of elevators has prohibited this form of elevator except in private residences, also explains its rather limited use. The latter restriction, however, is rapidly disappearing, as those having to do with the preparation and revision of ordinances pertaining to elevators have been brought to realize that the discrimination against



IN THE HIGH CLASS RESIDENCE THE PUSH BUTTON ELEVATOR IS NOT ONLY A LUXURY BUT A NECESSITY AS WELL

this elevator which has existed in the past was mainly the result of the mistaken conception that an automatically controlled elevator could not be made adequately safe, while as a matter of fact the automatic push button controlled elevator,

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equipped with the requisite safety devices, represents one of the *safest* forms of elevator control.

The City of New York now permits the installation of automatic push button operated elevators in all classes of buildings, and in other cities throughout the country wherever elevator rules are being prepared and revised there is evidence of the absence of discrimination against push button elevator control.

The removal of mandatory restrictions against

At the outset, it must be admitted that in its present stage of development this type of elevator has certain limitations, as will be evidenced by the following description of the apparatus in general and the method of operation. An increased demand for its use will, however, encourage the manufacturers to overcome these limitations, which are by no means insurmountable.

The hoisting machine does not differ from that used with elevators having other forms of control,



IN THE APARTMENT HOUSE THIS TYPE OF ELEVATOR COMBINES EFFICIENCY AND ECONOMY. NOTE THAT CAR GATE AND SHAFT DOOR ARE CLOSED AND CAR IS READY TO RESPOND TO A CALL FROM ANY FLOOR, OR DOOR MAY BE OPENED TO RECEIVE A PASSENGER ENTERING MAIN HALL

such type of operation opens up a very broad field for its use, and this article purports to point out that an elevator employing full automatic push button control is by no means a luxury, but on the contrary, is a logical and most economical type for many classes of buildings. At the same time there is here given some general data regarding the present developments as well as the future possibilities of the push button controlled elevator.

and may be either the winding drum type, having a drum on which the car and counterbalance cable is wound or unwound, or the traction sheave type where the cable passes over a grooved sheave from the car to the counterbalance weight. In either case the hoisting machine, with its attendant controller, may be located at the top of the hoistway or in the basement. The question of machine location deserves serious consideration for each installation,

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THE SAFETY DOOR LOCK IS HERE SHOWN IN PLACE. NOT UNTIL THE SWINGING DOOR IS CLOSED CAN THE CAR BE OPERATED

especially where noise is an important element, and in the case of private residences, apartments, hotels and hospitals it is recommended that it be located below, particularly where the source of power is alternating current, or where it is expected that the construction of the building will be conducive to the intensifying of noises. This is not intended to convey the idea that the noise resulting from the operation of a push button controlled elevator is greater than that attending the operation of any other type of elevator, and as a matter of fact this question should be carefully considered for every passenger elevator installation.

The motive power may be derived from either a direct or alternating current motor. In the latter case, a polyphase motor is of course preferable, but for light loads and where the service is not severe, a single phase motor may be employed. The usual safety devices should be provided for stopping the driving motor at the terminals of elevator car travel, and where a winding drum type of hoisting machine is used at least two stopping devices should be employed to guard against winding the car or counterbalance into the overhead. One terminal stopping medium is generally sufficient in

the case of a traction sheave type of hoisting machine, for with this type of machine the driving effort is lost with the landing of either the car or counterbalance weight, therefore there is no danger of either being drawn into the overhead. A device for stopping the driving motor in the event of the hoisting cables becoming slack, as result of the car being obstructed in its descent, should also be provided in the case of a winding drum machine. This condition, however, cannot obtain where the traction sheave type elevator is used, so no such device is required.

The car and counterbalance guide rails may be of steel or wood, steel of course being preferable, and generally required by Building Ordinances. The safety devices in the lower member of the car supporting frame, designed to grip the guide rails and stop the car in case of excessive speed in descend-

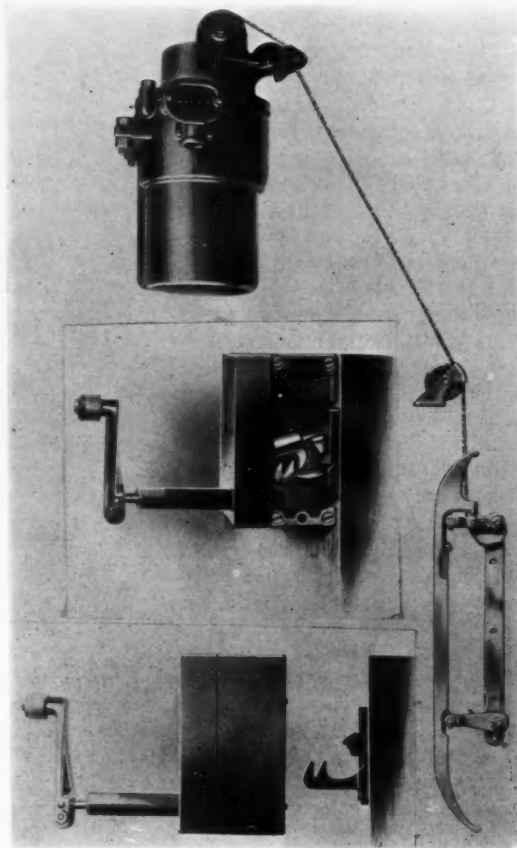


FIG. 1. DETAILS OF SAFETY DOOR LOCK: ELECTRO-MAGNET IS SHOWN AT TOP. THIS IS CONNECTED BY CABLE TO MOVABLE CAM SHOWN ON RIGHT. UPPER VIEW OF DOOR LOCK SHOWS CONTACT FINGERS ENGAGED, CLOSING OPERATING CIRCUIT. IN LOWER VIEW, DOOR IS UNLOCKED AND CAR CANNOT BE OPERATED

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ing, may be arranged to instantaneously arrest the downward motion of the car when it develops a speed of approximately 150 feet per minute where the normal car operating speed does not exceed 100 feet per minute. For normal car speeds in excess of 100 feet per minute, the safety mechanism should gradually arrest the motion of the car at overspeed. In either case the grips should be actuated by a centrifugal speed governor located at the top of the hoistway, and driven by a cable attached to the safety mechanism.

The hoistway door lock for an automatically operated push button elevator is of paramount importance. This will be appreciated when attention is called to the fact that records taken from the Coroner's office in the Borough of Manhattan, City of New York, indicate that approximately eighty-five per cent of all fatal elevator accidents occur at the hoistway entrances. These records have been kept over a period of years, and the push button elevator represents but a very small percentage of the total number of elevators in New York City. If this form of elevator control should increase, the doorway accidents would likewise increase unless proper safety devices were provided. When the installation of push button elevators is contemplated in localities where no ordinances requiring such safety devices are in effect, the architect should never neglect to specify them.

A number of insurance companies hesitate to take risks on push button elevators, and this is due to the fact that so many elevators of this type have been installed without adequate doorway protection. Other insurance companies who recognize the merits of certain door-locking devices have no hesitancy in taking risks, and as a matter of fact prefer these elevators to other types having no hoistway door protection devices. More intimate knowledge of the push button elevator will no doubt remove any objections which the insurance companies may entertain at the present time.

Persons using automatic push button elevators very soon become acquainted with the fact that when a hoistway door can be opened from the out-

side, the elevator car is at the landing, and it is for this reason that every precaution should be taken to insure that the elevator car does not leave a landing until the hoistway door is closed and securely locked. This very important requirement is recognized by most reputable elevator manufacturers, with the result that proper devices are provided on the hoistway doors at a subordination to cost.

To insure a proper door lock, certain fundamental principles must be embodied in its design and application. The control circuit must be carried to each door, and so inter-connected with the mechanical lock that the unlocking or opening of the hoistway door positively interrupts the circuit controlling the car operation. This circuit must not be closed unless the door is in the full closed position and the car must not respond to a pressure of the call or send push button until the door lock has assumed the locked position, or at least must not permit the car to move more than a few inches unless the lock assumes this position. Once locked, the door should remain so until the car again stops at some particular door, or is passing a door. In the latter case the car should be immediately stopped automatically by the opening of such door, and it is obviously preferable that a locking arrangement which does not permit momentary unlocking of a door as the car passes is the most suitable form.

Figure 1, page 189, indicates a reliable door lock and operating unit furnished by one of the

larger manufacturers, with elevators employing automatic push button control. This device embodies in a most positive manner the highest degree of safety and a description of it is here given.

A lock is mounted on the jamb or lintel of each hoistway entrance with the operating level projecting slightly into the hoistway. Two separately insulated contact fingers carrying the control circuit are integral with the latch lever which engages the hook mounted on the hoistway door, and coincidentally completes the circuit when the latch is over the door hook and when the contact fingers are resting on the insulated contact bridge which



FIG. 2.
BANK OF OPERATING BUTTONS

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is an integral part of the hook. A moveable cam is located on the elevator car in such a position as to engage the lock operating lever. Normally, this cam rests against the lock lever holding the latch above the door hook and the contact finger away from the contact bridge. Under this condition the door is unlocked and the control circuit is open. The movable cam is connected by means of a small bronze cable or chain to the core of an electro-magnet which is mounted on the top cross beam of the car girdle or sling. The winding of this magnet is so connected with the motor control that the momentary pressure of a call or send push button lifts the magnet core collapsing the cam which moves away from the lock operating lever, permitting the latch lever and contact fingers to engage the door hook and contact bridge, locking the door and starting the elevator driving motor. It will be observed that the opening of the hoistway door removes the door hook and likewise the contact bridge and the elevator motor positively cannot be started unless the door hook and contact bridge are in the correct relation to the lock latch. The doors are not momentarily unlatched as the car passes each entrance, as the cam remains collapsed until the car reaches its destination and stops.

It is recommended that springs and force of gravity or any other indirect means should not be employed in a hoistway door lock to perform a safety function unless the failure of the force employed manifests itself in no less a manner than that of holding the car inoperative. The contact carrying the control circuit should be so inter-connected with the latch that they will positively work in unison and the opening of the door positively open the control circuit. These statements, while they particularly refer to locks and contacts used with elevators having push button control, are equally applicable to hoistway door safety devices installed with elevators having other forms of control.

An ordinary door lock arranged to be opened from either side of the hoistway door should be furnished in addition to the automatic interlock, as most forms of automatic locks are normally in the unlocked position when the elevator car is at a landing, and some other means must be provided to hold the door in the closed position.

In addition to the hoistway doors being equipped with safety devices, the elevator car should in all cases be provided with a collapsible gate. An electric contact should be operated by this gate so that the car cannot be started in motion until the gate is in the closed position. The opening of the gate should open the contact and interrupt the control circuit. The opening of the contact should be positive in its action.

In the push button elevator the common car operating switch is of course omitted and a bank of operating buttons as shown in Figure 2 provided in lieu thereof in the elevator car. There is one button for each landing, and the buttons are electrically connected to the elevator motor through a suitable floor selector and controller so that a momentary pressure will send the elevator car to the desired floor if the hoistway door and car gate have been previously closed. A push button-designated "Stop" is located in line with the

sending buttons, so that the car may be stopped in the event of an emergency, or if a person should desire to travel to some floor other than the one to which the car had been originally dispatched. An alarm button is connected to a gong outside of the elevator hoistway, so that a person in the car may call for assistance in the event of the elevator car stopping between landings.

A push button similar in appearance to an ordinary call button or annunciator button is located at each hoistway entrance, and also connected to the motor controller and the same floor selector above mentioned, to call the elevator car if it is not in use. The call buttons at the elevator landings



ANOTHER INSTALLATION SHOWING THE SAFETY DOOR LOCK. BANK OF OPERATING BUTTONS CAN ALSO BE SEEN ON THE RIGHT SIDE OF CAR

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are so connected that they are inoperative while the elevator car is in motion, and if the car is operated from the buttons within, the hall buttons will remain inoperative until the car gate and hoistway door have been opened and again closed. This prevents the car being taken from the person within and insures it proceeding to the destination designated by the passenger without interference.

The non-interference feature is provided for obvious reasons, and this, coupled with the fact that the hoistway door and gate must be manually closed before the car can respond to the pressure of one of the operating buttons, are the two main points that limit this form of elevator control to

and, after closing the door and car gate a button in the car corresponding to the first floor is pressed. The car will descend to that floor and remain there until the passenger opens the car gate and hoistway door and again closes them before the car will respond to another hall call button, also possibly from the top floor. During this period several persons may be awaiting service at intermediate floors, but their call buttons are rendered inoperative. As there can be no interference from the halls while the car is in motion or after it has been operated from within, until the gate and door have been opened and closed as previously explained, it will be seen that these non-interference features very largely limit the use of the elevator to buildings where the traffic is not heavy.

It is evident that in order to obtain the proper degree of safety the car gate should be closed before the elevator car is set in motion if there is anyone in the car. This, however, is not essential if the car is empty and elevators of this type have been arranged so that the car can be operated from the hall push buttons with the car gate open. Automatic gate and door opening and closing devices have also been provided on this form of elevator, but these refinements have not been given extensive use as the demands in the past have not warranted it. Floor indicators, either electrical or mechanical, are a valuable asset to this type of elevator, but these, too, have not been generally used.

There is no reason why all of the obstacles pointed out above cannot be entirely overcome, and it only remains for the Architects to create a demand for a more extensive use of the push button elevator. Even in its present stage of development, this elevator will meet the requirements in many classes of buildings where elevators requiring operators are now installed.

The questions of loads and speeds are no longer a deterring consideration, as automatic push button controlled elevators can be arranged to make accurate landing stops for any load or speed. For loads up to about 2,500 lbs., with speeds up to 150 ft. per minute, no special apparatus is required for making the floor stops, but above these limits such special devices are necessary.

The duty loads for a passenger elevator car must, of course, be based on local building ordinances. In a number of localities, however, there are no ordinances governing elevators, but it is strongly recommended that the area of a car be based on an allowance of two square feet per person, assuming 150 lbs. as the average weight of a person. This meets with most requirements, although in some localities the duty load must be



A HOSPITAL INSTALLATION. CAR GATE AND SHAFT DOOR HAVE BEEN LEFT OPEN TO HOLD CAR AT LANDING FOR PATIENT

buildings where the traffic is comparatively light. This will be better understood from the following hypothetical case.

Let us consider an automatic push button controlled elevator installed in an eight-story building and assuming the elevator car to be at one of the lower floors and a prospective passenger presses the call button at the eighth floor—if the hoistway door, where the car is standing, is closed and also the car gate, the car will ascend to the eighth floor. When the car stops at this floor the door will be unlocked, allowing the passenger to enter the car

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based on 80 lbs. per square foot instead of 75 lbs.

The space conditions in the machine room and also in the hoistway are the same for a push button elevator as for those employing other forms of control, except at the entrance side of the car. Where a swinging door is used, the door should be set back at least $3\frac{1}{2}$ in. from the sill line, unless the door jamb on the latch side is approximately in line with that side of the car enclosure, in which case $1\frac{1}{2}$ in. to 2 in. is sufficient. Where a sliding door is used, the distance from the sill line to the door should not be less than 2 in., but preferably $2\frac{1}{2}$ in., except that the door may be practically flush with the sill line if 7 in. clearance is provided at the return on the lock side, so that the door lock can be installed in direct line with the door. These space requirements are necessary for the automatic interlocks. Hoistway doors for push button elevators should never be set back more than 10 in. from the sill line, as this would provide a shelf or platform within the shaft of sufficient width for a person to stand on, which is dangerous.

Single swinging or horizontal sliding doors, arranged to slide in one direction, are the most suitable type for push button elevators, as where double swinging doors opening from the center, or two-part horizontal sliding doors dividing at the center, are used, the interlocking arrangement is more complicated and consequently more expensive to install.

Power consumption and the wear and tear on the apparatus is considerably reduced in the case of push button controlled elevators, as the proper acceleration and stops are entirely automatic and consequently the machine is not subject to the unnecessary starts and abuses that the car switch controlled elevator generally receives at the hands of an inexperienced operator. Aside from these facts, it may be said that while the initial cost of a push button elevator installation is slightly above that of the ordinary car switch controlled elevator, the saving made, due to dispensing with a regular attendant to operate the elevator, will in a short time offset this difference.

While the foregoing deals entirely with full automatic push button controlled elevators, this method of control may be installed as an auxiliary feature, in which case the regular type of car operating switch is provided in the elevator car, in addition to the operating buttons, so that the car may be operated by an attendant if desired. The change in operation is accomplished by throwing a multi-pole switch, generally located on the motor controller, and when the elevator is arranged for operation from the switch in the car,

the hall buttons are inoperative, except as annunciator buttons to signal the operator. This system is known as the "Dual Control", and a typical car showing both the control buttons and car switch is illustrated in Figure 3. The use of such a system would be advantageous, for instance, in an apartment house, where the day traffic was too heavy for push button control, and an operator was required, but in which the night traffic was light, during which period the operator could be dispensed with at a considerable financial saving, and the push button control used, without in any way inconveniencing the tenants.

With the increasing difficulty of obtaining ele-

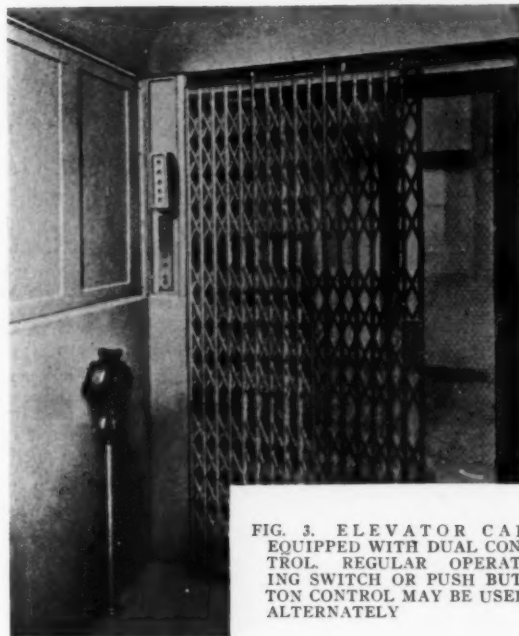


FIG. 3. ELEVATOR CAR EQUIPPED WITH DUAL CONTROL. REGULAR OPERATING SWITCH OR PUSH BUTTON CONTROL MAY BE USED ALTERNATELY

vator operators and the attendant expense, the question of either dual or full automatic push button controlled elevators should, of necessity, demand careful consideration, not only for elevators anticipated for new buildings, but also for elevators which are already installed. There are numerous buildings at the present time having elevators with car switch control, where the push button elevator would be unquestionably more economical and at the same time give entirely adequate day and night service.

As already mentioned, the future development of the push button form of elevator control depends largely on demand, and there should be no

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limit to its future possibilities for both passenger and freight service, when the relative simplicity of this apparatus is compared to the numerous automatic devices in everyday use, such as the automatic telephone, adding machines, linotype machines, printing presses and the like.

It would seem that these elevators should find a ready field in high class apartment houses of four or five stories and over, where the expense of an operator is not warranted, but in which the tenants demand the many conveniences now possible. In a five-story building, where the income from the top floor is usually less than in the lower stories, the installation of such an elevator would cause the reverse to be true. The next few years should show a marked increase in the use of this type of elevator, and a corresponding development in its construction and operation.

Engineering News Notes from Washington

The National Public Works plan fostered by the Conference of Engineers, Architects and Constructors is being pushed forward by a complete campaign organization in each state, which is to handle the state work according to local requirements under the direction of the Washington office. The plan to finance these organizations is complete and will be announced shortly.

The Supervising Architect has recommended that a lump sum of \$4,000,000 be entrusted to that office for 116 urgently needed structures. This would care for the cost increases of from 5 to 100 per cent that have taken place since the cost limits were set on this work in 1913 on the basis of 1912 prices and would obviate the confusion and delay caused by Congress considering each project separately. Congress is apparently opposed to this method and as a result, practically all work on these public buildings is tied up.

* * *

United States Shipping Board contemplates establishing courses in shipbuilding for the large universities and technical schools. Fourteen such institutions have signified their interest in courses on naval architecture marine engineering and ship construction. The experiences of the war are to be embodied in these courses. This is to be the backbone of the plan to have this nation continue its headway in maritime strength.

* * *

Patent Committee in the House has opened hearings on bills aimed to remove the Patent Office from the Interior Department, create a Court of Patent Appeals and increase the personnel and salaries in the Patent Office. The former bills were drafted and have the backing of National Research Society; they should stimulate inventions and improve the handling of inventions, while the latter bill, it is hoped, will enable the Patent Office to restore the quality and number of its personnel to at least a pre-war basis.



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Harland A. Perkins, Architect, Boston

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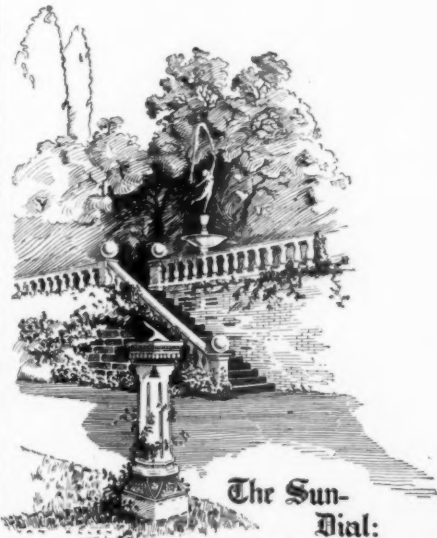
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Danville, Illinois

THE AMERICAN ARCHITECT

Building Material Market Reports

(Continued from page 186)

2—That there shall be no restriction of the use of machinery or tools.

3—That there shall be no restriction of the use of any raw or manufactured material except prison made.

4—That no person shall have the right to interfere with workmen during working hours.

5—That the use of apprentices shall not be prohibited.

6—That the foreman shall be selected by and be the agent of the employer.

7—That all workmen are at liberty to work for whomsoever they see fit.

8—That all employers are at liberty to employ and discharge whomsoever they see fit.

In the meantime general business is exceptionally good for outside wholesale distribution. There is an exceptionally good demand for lumber from the factory and country

yard trade, with prices of all items showing a tendency to advance. The steel mills in the Calumet district are busy, although there is some talk of strikes among the workers in the near future. Steel orders are heavy and the industry is fast getting back to normal in the matter of capacity production. The furniture and the automobile industries are exceptionally active, and they are in the market for material in heavy volume. Manufacturers of agricultural implements also are heavy buyers of the wood and metal products.

Prices of all material are holding firm, and there is a growing tendency on the part of manufacturers to bring about a stabilization of prices based to a great extent on present values. In an effort to bring about stabilization some manufacturers are now quoting prices holding good for a certain period. There is little or no speculation in this market at this time, but consumers are buying freely and they are paying the high prices for all necessary requirements.

Late Quotations in Building Material Markets

(Price quotations now current on building materials and supplies as quoted by dealers and jobbers for delivery in New York and Chicago follow. The quotations set forth are placed before readers of THE AMERICAN ARCHITECT to afford an accurate review of market conditions rather than for use as a basis for actual purchase. They will not only provide knowledge of the exact state of the market as to items quoted, but will also present a basis to judge conditions as affecting correlating materials. Items marked (*) indicate an advance over last week, while those marked (†) record a decline. Other prices did not fluctuate during the week.)

BRICK

	New York	Chicago
Face brick (delivered on job):		
Common (Delivered at job in Borough of Manhattan only), per thousand.....	\$17.85	\$12.00
Rough red	29.00	40.00
Smooth red	26.00	40.00
Rough buff	32.00	40.00
Smooth buff	32.00	40.00
Rough gray	38.00	42.00
Smooth gray	40.00	42.00
Colonials	24.00	30.00

BROKEN STONE

(Delivered on job):		
1½ in. per cu. yd.....	\$2.75	\$2.50*
¾ in. per cu. yd.....	2.75	2.50*

BURNED CLAY

(Delivered on job)		
Block partition:		
3 in., per sq. ft.....	.13	.10
4 in., per sq. ft.....	.15	.11
Chimney tops:		
12 x 12 for 8 x 8 flues.....	\$3.50	\$2.25
Flue lining:		
4½ ft. x 13 ft., per lin. ft.....	.24	.12
4½ x 8½, per lin. ft.....	.18	.16
8½ x 8½, per ft.....	.24	.16
8½ x 13, per ft.....	.35	.20
13 x 13, per ft.....	.60	.45
8½ x 18, per ft.....	.60	.50
13 x 18, per ft.....	.95	.75
18 x 18, per ft.....	1.25	.85
Wall coping (double slant):		
8 in., per lin. ft.....	.18*	.14
12 in., per ft.....	.33	.26
18 in., per ft.....	.54	.30
Wall coping (single slant):		
8 in., per lin. ft.....	.16	.14
12 in., per ft.....	.26½	.30
18 in., per ft.....	.54	.30
(Corners and angles four times the price of one foot of coping the same size.)		

Hollow Tile

(Delivered at job, in New York below 72nd St.)		
2 x 8 x 12 partitions, per 1,000 sq. ft.....	\$70.15	
3 x 12 x 12 partitions, per 1,000 sq. ft.....	102.00	\$67.90
4 x 12 x 12 partitions, per 1,000 sq. ft.....	114.75	72.50
6 x 12 x 12 partitions, per 1,000 sq. ft.....	153.00	99.60
8 x 12 x 12 partitions, per 1,000 sq. ft.....		135.80
10 x 12 x 12 partitions, per 1,000 sq. ft.....		167.50
12 x 12 x 12 partitions, per 1,000 sq. ft.....		194.60
2 x 12 x 12 split furring, per 1,000 sq. ft.....	63.75	45.30

CEMENT

Per bbl. in 20 cent bags (Rebate 80c. per bbl. for bags), 15 cent bags in Chicago.....	\$3.45	\$3.00*
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COPPER SHEETS

At the mill, hot rolled, 16 oz. base-price, per lb....	33½c.*	33½c.*
(From jobber's warehouse add 2 to 3 cents.)		
Cold rolled per lb.....	35½c.	35½c.*
From stock in 100 lb. lots and over.....	35½c.	37½c.*
For less than 100 lb. lots 2c. per lb. advance.		
Polished, 20 in. wide and under, 1c. per sq. ft. extra; over 20 in. wide, 2c. per sq. ft. extra. Planished, 1c. per sq. ft. more than polished.		
Bottom, pits and flats, 1 oz. and heavier, per lb....	41c.	41c.
Tinning one side, per sq. ft.....	.06c.	.06c.

CORNER BEAD

Per foot	.02	.05
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FIBRE

Per bushel	.36	.30
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FINISHED IRON AND STEEL

(Mill Shipments)		
Bar iron, refined grade.....	2.77c.*	2.62c.*
Bar iron, double refined.....	3.77c.*	
Soft steel bars.....	2.62c.	
Shapes	2.72c.	
Plates	2.92c.	2.65c.

GALVANIZED SHEETS

No. 18 and 20 gauge, per lb.....	\$6.40*	\$6.12
No. 26.....	6.70*	6.42
No. 27.....	6.85*	6.57
Structural shapes	3.47c.	3.47c.

GLASS

(Discounts from manufacturer's price lists)		
Single strength, A quality, first three brackets.....	77%	77%
Single strength, B quality.....	77%	77%
Double strength, A quality.....	79%	79%
Double strength, B quality.....	81%	81%
Plate—up to 5 sq. ft.....	82%	80%
Plate—over 5 sq. ft.....	84%	80%
Plate—up to 10 sq. ft.....		80%
Plate—over 10 sq. ft.....		80%
Polished plate glass (commercial run of thickness and quality) sizes to 5 sq. ft., inclusive.....	80%	
Sizes over 5 sq. ft.....	82%	

GRAVEL

1½ in. (Borough of Manhattan only), per cu. yd....	\$2.75	\$2.50*
¾ in. (Borough of Manhattan only), per cu. yd....	2.75	2.50*

Plaster Board:

GYPSUM

Delivered at job, Boroughs of Manhattan and Bronx.		
27 x 28 x 1.....	.37c.	
27 x 48 x ½.....	.34c.	
32 x 36 x ¼.....	.22c.	.25c.
32 x 36 x ⅜.....	.22c.*	27½c.
32 x 36 x ½.....	.24½c.	

Plaster Blocks:

Delivered at job, Boroughs of Manhattan and Bronx.		
2 in. sold, 12 x 30, per sq. ft.....	.11c.	
3 in. hollow, 12 x 30, per sq. ft.....	.11c.	.10c.
4 in. hollow, 12 x 30, per sq. ft.....	.12½c.	.11c.
6 in. hollow, 12 x 30, per sq. ft.....	.18c.	

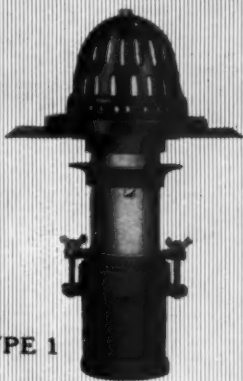
LATH

Eastern spruce, per thousand.....	\$7.50	
No. 1 white pine, per thousand.....		\$7.50
No. 1 hemlock, per thousand.....		6.50
No. 1 yellow pine, per thousand.....	7.50	

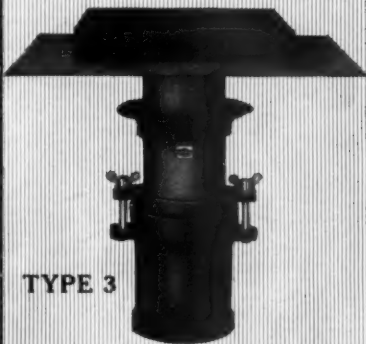
(Continued on page 194-B)

Use Holt Roof Connections with

Barrett Specification Roofs



TYPE 1



TYPE 3



TYPE 4



TYPE 5



TYPE 6

Watertight, Flexible, Permanent

Holt Connections are just as permanent as Barrett Specification Roofs. They are made of heavy cast iron, brass and copper and are adaptable to all types of roofing on buildings having interior drainage.

But permanency is not the only factor necessary for the successful roof leader or vent connections.

Holt Connections are positive safeguards against the most severe cases of shrinkage, settlement and vibration in roof or building.

Holt Connections withstand expansion and contraction. Unlike the ordinary metal outlet boxes, quick changes in temperature which affect the leader lines will not push them out of place and thereby cause leakage. The Holt Expansion Joint provides a permanent, flexible water and gastight connection, and permits a range of movement of the leader lines of from 1½ to 3 inches, according to type of connection used, and construction of leader lines and roof decks.

Holt Connections are made in a variety of types and sizes, to meet every need for a high-grade, dependable roof leader, vent, pipe, brace, or flag-pole connection.

Even a poor roof is made better by the use of Holt Connections.

They have never failed.

Send for details and Specifications.

The *Barrett* Company

New York	Chicago	Philadelphia	Boston	St. Louis	Youngstown	Elizabeth	Toledo
Cleveland	Cincinnati	Pittsburgh	Detroit	New Orleans	Seattle	Columbus	Atlanta
Birmingham	Kansas City	Minneapolis	Nashville	Salt Lake City	Latrobe	Peoria	Richmond
Milwaukee	Washington	Johnstown	Lebanon	Dallas	Buffalo	Duluth	Bethlehem
		Baltimore			Bangor		

THE BARRETT COMPANY, Limited:

Montreal	Toronto	Winnipeg	Vancouver	St. John, N. B.	Halifax, N. S.	Sydney, N. S.
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THE AMERICAN ARCHITECT

Building Material Market Reports

(Continued from page 194-A)

LEAD			New York	Chicago
American pig, per lb.	6 1/4 to 6 3/4	6 1/4 to 6 3/4	6 1/4 to 6 3/4	6 1/4 to 6 3/4
Bar, per lb.	7 3/4 to 8 3/4	7 3/4 to 8 3/4	7 3/4 to 8 3/4	7 3/4 to 8 3/4

LIME			New York	Chicago
Common, 200 lb. bbls., per bbl.	\$2.50	\$1.50*		
Finishing, 300 lb. bbls., per bbl.	3.70			
Hydrated, in paper bags, per ton.	18.50	17.50†		

LUMBER			(Retail prices per M. delivered.)
Yellow pine, 2 x 4	\$68.00*	\$52.00	
Yellow pine, 2 x 6	65.00	50.00	
Yellow pine, 4 x 4	70.00	55.00	
Yellow pine, 8 x 8	68.00*	60.00	
Yellow pine, 12 x 12	75.00	65.00*	
Yellow pine, No. 1 boards, 1 x 6	75.00	60.00	
Yellow pine, No. 1 boards, 1 x 12	80.00	65.00	
Yellow pine, B and better flooring (plain)	80.50*	72.00	
Yellow pine, B and better flooring (quartered)	100.00	85.00	
Douglas fir, 6 x 6 to 12 x 12	67.50	60.00	
Douglas fir, 12 x 12 to 14 x 14	78.00*	70.00*	
Norway pine, 2 x 4	60.00	55.00	
Norway pine, 2 x 12	75.00*	62.00	
Hemlock, 2 x 4	57.50	52.00	
Hemlock, 2 x 12	60.00	54.00	
Oak flooring, 13/16 quartered white	200.00	165.00*	
Oak flooring, 13/16 quartered red	190.00	143.00	
Oak flooring, 13/16 plain white	125.00	105.00	
Oak flooring, 13/16 plain red	125.00	108.00*	
Maple, 1" F. A. S.	85.00	80.00	
Basswood, 1" F. A. S.	88.00*	80.00	
Maple flooring, 13/16 clear	95.00*	85.00	
Maple flooring, 13/16 select	85.00	82.00	
Maple flooring, 13/16 No. 1 factory	75.00	62.00	
Mahogany, 1" F. A. S.	300.00	300.00	
Quartered oak, 1" F. A. S.	200.00	185.00	
Plain oak, 1" F. A. S.	130.00	110.00	
Red gum, 1" F. A. S.	100.00*	95.00*	
Sap gum, 1" F. A. S.	75.00*	65.00	
Chestnut, 1" F. A. S.	95.50*	100.00	
Poplar, 1" F. A. S.	135.00	120.00*	
Birch, 1" F. A. S.	85.00	80.00	
Spruce, random 2"	60.00	55.00	
Spruce, wide 8"	65.00	60.00	
Spruce, 10"	70.00	65.00	
Spruce, 12"	75.00	70.00	

METAL LATH		
Under 100 sq. yd., per sq. yd.	40c.	35c.

MORTAR COLORS		
Red, per lb.	.05	.05
Brown, per lb.	.05	.05
Chocolate, per lb.	.05	.05
Black, per lb.	.05	.05

OILS		
Linseed, city, raw	\$2.25*	\$2.48*
Linseed, boiled, advance, per gal.	.01	.02
Out of town, American seed, at.	2.25*	2.48*

PAINTS		
American white, in oil, kegs; lots over 100 lbs.	13c.	13c.
White, in oil, 25-lb. tin pails; add to keg price.	1/4c.	1/4c.
Red, bbl., 1/2 bbl. and kegs; lots over 100 lbs.	13c.	14c.

Dry Colors:		
Red Venetian, American, per 100 lbs.	\$2.00 to \$4.50	\$2.00 to \$4.00
Metallic Paints:		
Brown, per ton	\$32.00 to \$36.00	\$24.00 to \$32.00
Red, per ton	35.00 to 40.00	24.00 to 32.00

PIPE		
Cast Iron:		
6 in. and heavier	\$52.30*	\$53.80†
4 in.	55.30†	56.30†
3 in.	62.30	68.80

(and \$1 additional for Class A and gas pipe.)
(Discounts to jobbers for carload lots on the Pittsburgh basing card; freight rates from Pittsburgh to New York, and also from Pittsburgh to Chicago, in carloads, per 100 lbs., are 27c. An additional 5 per cent discount is allowed to large jobbing interests over those listed below.)

Wrought:			F.O.B. Pittsburgh	F.O.B. Chicago
Steel:			Butt Weld	
Black, 1/2 to 3 in.	50 1/2 to 57 1/2 %	42.6 to 49.6 %		
Galv., 1/2 to 3 in.	24 to 44 %	14.6 to 34.6 %		
Iron:				
Black, 1/2 to 1 1/2 in.	29 1/2 to 39 %	19.6 to 29.6 %		
Galv., 1/2 to 1 1/2 in.	2 1/2 to 23 1/2 %	9.4 to 11.6 %		
Steel:			Lap Weld	
Black, 2 1/2 to 6 in.	53 1/2 %	45.6 %		
Galv., 2 1/2 to 6 in.	41 %	31.6 %		
Iron:				
Black, 2 1/2 to 6 in.	34 1/2 %	24.6 %		
Galv., 2 1/2 to 6 in.	21 1/2 %	9.6 %		
Steel:			Butt Weld, Extra Strong, Plain Ends	
Black, 1/2 to 3 in.	46 1/2 to 56 1/2 %	33 to 43 %		
Galv., 1/2 to 3 in.	29 to 44 %	10.6 to 18 %		
Iron:				
Black, 1/2 to 1 1/2 in.	28 1/2 to 39 1/2 %			
Galv., 1/2 to 1 1/2 in.	11 1/2 to 24 1/2 %			
Steel:			Lap Weld, Extra Strong, Plain Ends	
Black, 2 to 6 in.	48 1/2 to 50 1/2 %	35 to 37 %		
Galv., 2 to 6 in.	37 to 39 %	10 to 12 %		

Iron:		
Black, 1 1/4 to 6 in.	25 1/4 to 34 1/2 %	
Galv., 1 1/4 to 6 in.	10 1/2 to 22 1/2 %	

PLASTER			New York	Chicago
Neat wall cement in 15 cent bags, per ton	\$21.30*	\$19.00*		
Finishing plaster	24.00	19.00		
Lath mortar, in cloth bags, per ton	15.05			

PUTTY			New York	Chicago
In bladders, per 100 lb.	\$6.25	\$4.25		
In 1-lb. to 5-lb. tins, per 100 lb.	6.75	6.50		

RADIATION
(A further discount, effective April 4, of 15% on direct radiators, 12 1/2% on wall radiators, and 10% on steam and hot water boilers is announced. This approximates a drop of 36% on radiators and 33% on boilers from prices in effect before the 1st of January, 1919.) Chicago reports a 57% discount on standard heights.

REGISTERS		
Cast iron semi-steel or steel, in black or white japan or electro plate and small faces and borders	40%	40%
Wall frames	40%	40%
Large faced, 14 x 14 in. and larger	60%	60%
Base board registers	40%	40%
Base board intakes	40%	40%
White enameled goods	15%	15%
Solid brass or bronze goods, except grilles	net	net
Grilles in black and white japan or electroplate in cast iron, plain lattice design—smaller than 14 x 14 in.	40%	40%
—Larger than 14 x 14 in.	60%	60%

REINFORCING BARS		
High carbon steel from mill	\$48.50	\$49.50
Medium steel from mill	48.50	49.50

ROOFING MATERIAL		
Tarred Felt Paper:		
No. 1—25 lbs. to 100 sq. ft., per ton	\$62.00	\$75.00*
No. 2—16 lbs. to 100 sq. ft., per ton	63.00*	75.00*
No. 3—12 lbs. to 100 sq. ft., per ton	64.00*	75.00*
Rosin sized sheathing, per ton	60.00	65.00*
Corrugated roofing, galvanized, 2 1/2 in. corrugation, over flat sheets, 30c. per 100 lbs.		

ROSIN		
Common to good, strained (wholesale), 80 lb. per gal.	\$17.10*	

SAND		
Mason, per cu. yd.	\$1.80	\$2.50*
Torpedo, per cu. yd.	1.80	2.50*

SHINGLES		
Red cedar, 5 to 2, clear, per thousand	\$10.75	\$7.00
White cedar, extra star, A star, per thousand	10.00	6.50

SLATE ROOFING		
Pennsylvania:	F.O.B. cars, Quarry Station	F.O.B. Chicago
Best Bangor	\$6.50 to \$9.00	\$10.20 to \$11.45
No. 1 Bangor Ribbon	6.75 to 7.25	9.20 to 9.70
Pen Argyl	7.25 to 9.00	9.70 to 10.45
Peach Bottom	10.00 to 12.50	12.45 to 14.45
No. 1 Chapman	7.25 to 8.25	8.70 to 9.95

Vermont:		
No. 1 Sea Green	3.50 to 6.75	5.95 to 9.00
Unfading Green	5.50 to 9.00	8.30 to 11.05
Red	13.00 to 16.00	14.80 to 22.80

Maine:		
Brownsville, U'f'g Black, No. 1	10.00 to 12.50	14.10 to 15.10
Slaters felt, 30 lb. roll	.92	
Slaters felt, 40 lb. roll	1.22	

SPIRITS TURPENTINE			New York	Chicago
Per bbl.	\$1.37 1/2*	\$1.10		

STONE SCREENINGS		
Lime, per cu. yd.	\$2.35	\$2.50*

STRUCTURAL STEEL		
Beams and channel, 3 to 15 in., per lb.	2.72c.	3.47c.
Beams and channel, over 15 in., per lb.	2.72c.	3.57c.
Angles, 3 to 6 in.	2.72c.	3.47c.
Zees and tees	2.72c.	3.47c.
Steel bars, half extras, from mill	2.35c.	3.37c.

STUCCO		
In cloth, per ton (white, mixed)		\$19.50†

STUCCO BOARD		
Medium weight stucco board, plain, per M sq. ft.	\$42.50	\$45.00
Medium weight stucco board, creosoted, per M sq. ft.	50.00	50.00
Heavy weight stucco board, plain, per M sq. ft.	55.00	55.00
Heavy weight stucco board, creosoted, per M sq. ft.	60.00	60.00
Medium weight stucco board, plain, narrow key, per M sq. ft.	50.00	50.00
Medium weight stucco board, narrow key, creosoted, per M sq. ft.	55.00	55.00
Insulating board, heavy felt background, per M sq. ft.	50.00	50.00

SHEATHING BOARD		
Heavy weight sheathing board, per M sq. ft.	\$50.00	\$50.00
Medium weight sheathing board, per M sq. ft.	45.00	45.00
Stucco or plaster board, sheathing board and insulating board are in rolls containing one sheet 25 ft. long and 4 ft. wide (100 sq. ft.)		

WALL BOARD		
Wall board, shipped any length, 4 ft. wide, per M.	\$45.00	\$45.00
Packed flat in cars if ordered in less than car lots. Add \$5.00 per M ft. for crating.		