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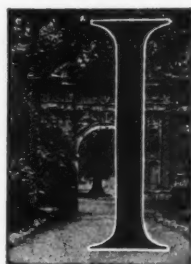


MONUMENTAL PORTALS, CHARLOTTENBURG BRIDGE

AMERICAN CITY PLANNING—PART VII

By FRANK KOESTER, Consulting Engineer

WATERWAYS AND BRIDGES



IT would not appear at first glance that waterways are of any especial interest to architects, as the problem is one that is usually left entirely to the engineering profession. Nevertheless, the proper architectural treatment of waterways is highly essential to the success of city planning, yet it is unfortunately, much neglected by American cities, whose water fronts have largely been abandoned to commercial purposes, when they should be

important architectural features of the city as well as being of commercial value.

The architect and engineer should cooperate especially upon works of this character, for the engineer is too apt to build whatever is good in an engineering sense however ugly it may prove, while the architect is apt to devote too much attention to the embellishment of non-essentials rather than to the beautification and æsthetic unification of important parts of the city's works.

Successful city planning abroad is carried out by the coöperative work of architect and engineer, and much greater success

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BRIDGE ON THE RHINE, DUSSELDORF

is to be obtained in this country by such coöperation, since the American city is devoted so much more to purely practical and utilitarian purposes.

Notable great opportunities for the co-operation of architect and engineer in the treatment of waterways are to be found in American cities, where the subject has been so largely neglected. Although practically every large city in the world is a city of important waterways, they are too often regarded as mere adjuncts to the city's commerce. Waterways will be found, however, in almost every case, if not the chief reason for the existence of such cities, to be factors of the first importance in their development and steady progress.

Cities which neglect their waterways fall behind in growth and prestige, and those that improve their harbor facilities forge ahead, in many instances, with wonderful strides.

The question of harbor improvements is thus one of the greatest importance, and it deserves the most careful consideration on the part of those in authority and the support of all classes of citizens. Cities having great natural advantages must keep their equipment up-to-date,

while cities with limited natural facilities may, by well designed improvements, lift themselves into positions of the first consequence, as many European cities have done in recent years, coming into successful competition with existing ports.

The port of Hamburg, which is fifty miles from the sea, is almost entirely a made port. For thirty-five miles, the river Elbe has had to be dredged. The harbor, when it is reached, is a great sluiceway of piers, basins and channels, dredged out of the lowlands, but affording unlimited docking facilities. The harbor, thus, which in convenience and equipment is the equal, if not the superior of any in the world, is wholly the result of German progress and energy. Some \$100,000,000 has been spent



NIGHT ILLUMINATION, THE ORANIEN BRIDGE, BERLIN

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in the harbor developments and it is planned to spend \$50,000,000 more.

The example of Hamburg is one that should inspire other cities to improve their facilities and increase their traffic.

Another example is found in Montreal, which though a thousand miles from the sea, has become the greatest summer port of the north, \$40,000,000 having been spent on it, and its commerce increasing from \$25,000,000 a year to \$71,000,000 a year within fifteen years.

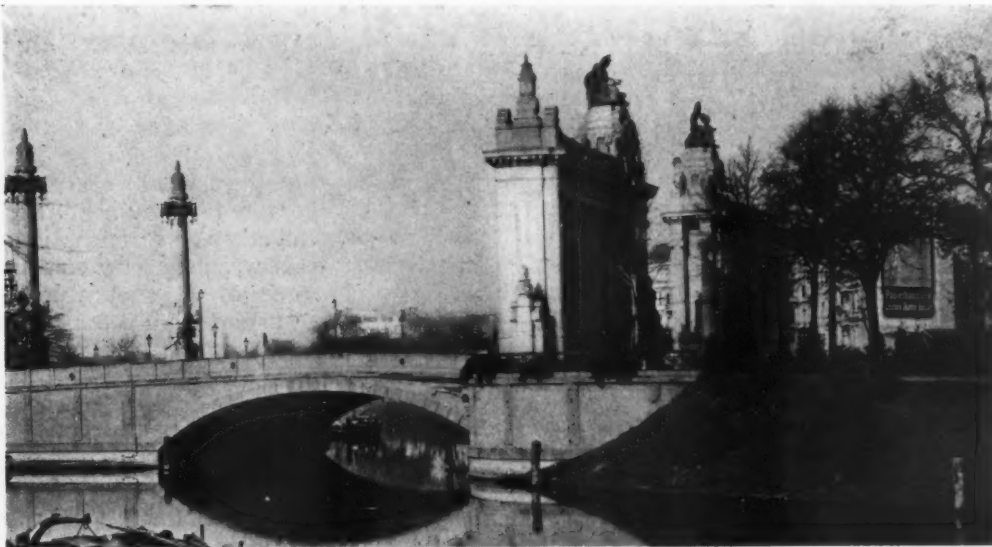
In making harbor improvements, the true purpose and reasons for harbors should be kept in view, and the improvements planned to be successful both from an engineering and a commercial point of view.

The principal purpose of a harbor is to furnish a means of transference of freight between inland and sea-going carriers. The harbor which affords the cheapest and most expeditious means of transference will attract the greatest patronage, provided its location is not such as to be a handicap. Vessels do not seek, so much, a spacious



LUDWIG BRIDGE, OVER THE RHINE AT WORMS. AN EXAMPLE OF THE MASSIVE PORTAL TOWERS POPULAR IN GERMANY

harbor, as they do one in which they may quickly discharge their cargoes and reload at small expense, so that a city, by the erection of a breakwater, the dredging of a creek or river and the construction of modern docks laid with railroad tracks, permitting cars to be brought alongside the vessels, and fitted with the latest facilities and mechanisms for loading and unloading, will be in a more advantageous position than a city in which the natural



BRIDGE OVER THE SPREE, CHARLOTTENBURG, BERLIN

harbor is better, but in which modern systems have not been installed.

The commerce of a maritime city is composed of freight handled by inland carriers, such as railroads, river steamers, canal boats and other forms of transportation in the city itself. The facilities of the city should, therefore, be planned so that the freight for each of such purposes is handled in a different manner. Freight intended for immediate trans-shipment from cars to vessels or vice versa, should be handled in piers laid with railroad tracks, equipped with loading and unloading appliances, so that the cargoes may be transferred with as little intervention of labor as possible and with the greatest speed.

Such piers need not be placed in close proximity to the business districts of the city, as any point in the harbor to which railroad tracks may be conveniently run, will answer the purpose. A ship receiving part of its cargo from railroad cars may also, at the same time, take on freight from canal boats, and for this reason the transshipping piers had best be placed near canal and railroad freight terminals.

Freight intended to be stored in the city for future shipment, should be placed in elevators or storage warehouses accessible to both rail and water transportation, but similarly away from the business districts of the city. Particular care should be taken to avoid the placing of terminals and storage warehouses in such a manner that freight has to be handled by being trucked across the city.

Freight intended as material for manufacture in the factories of the city, should, whenever possible, be delivered by rail or water direct, while finished products should be removed in the same manner. The advantages of rail connections are appreciated by manufacturers, who accordingly have a spur or switch run into their factories wherever possible, but the value of canals is not so well understood.

A system of canals in a manufacturing district proves of the greatest utility, especially for products of a bulky nature.

Freight intended for consumption in the city itself should be arranged for delivery to a number of points, in the most direct manner possible.

The principle to be followed in handling the freight of a city, is to carry it as nearly as can be to its final destination, in its original carrier, without breaking bulk or transshipping, and with the least expenditure of time and labor. The use of the truck, a most unsatisfactory and expensive method of transportation should be avoided or minimized.

In the handling of passenger traffic to and from vessels, it is desirable to have the railroad depots adjoining the piers, especially for passengers not intending to make the city their destination. In this way, the city streets are freed of a great volume of transportation of no useful purpose, and the time of the passengers is saved. In Hamburg and Bremen not over half an hour is spent in transferring passengers and baggage from vessel to cars, including customs inspections.

Cities on rivers at some distance from the sea, may



NIGHT ILLUMINATION OF FRIEDERICH'S BRIDGE, BERLIN

increase their commerce greatly by improving their harbor facilities in the manner adopted by Hamburg, while inland cities on rivers have an almost equal opportunity. Frankfort on the River Main, borrowed \$18,000,000, of which \$6,000,000 was spent in acquiring lands and \$12,000,000 in making improvements. An area of 110 acres was excavated, and a river port with the latest equipment constructed. The city will, eventually, however, not only not be put to any expense, but will realize a direct profit from its operations, since 720 acres have been reserved as sites for factories. The river traffic encouraged by the harbor improvements will serve to develop new industries and the city will thus indirectly benefit generally, while directly disposing of its factory sites at a figure over the whole cost of the improvements. The wisdom of such a course is obvious.

Düsseldorf on the Rhine has carried out improvements and has developed an enormous river traffic, while at the same time the traffic of St. Louis has decreased to almost nothing.

Practically every city of any size located on a river is built on both sides of the stream, though as a rule the portion on one side predominates, while the portion on the other side will often be known as another city. Unless, however, the river is of unusual width, the two portions should be treated as a unit in the development of their city plan, and certain structures only, should be permitted on one side or the other of the river. A city of a most interesting character can thus be created, as the river adds to the picturesqueness and variety of a city's plan, besides setting definite limits from which the city may be developed.

Cities which are sea ports offer similar opportunities for the working out of interesting features and the sea wall may be varied with parks, docks, terminals, gateways and the like.

Water approaches with sea gates or landing piers may often with advantage



HOHENZOLLERN BRIDGE OVER THE RHINE AT COLOGNE. OPENED IN 1912. NOTE THE ARCHITECTURAL TREATMENT OF APPROACHES AND PIERS.

be made an integral part of a city's plan, with a broad avenue or boulevard leading to the civic center, and the most prominent building of the center facing or in the vista of such an avenue.

Sea gates should be made of a monumental character and sea walls and other structures should be of a permanent and well designed character. Piers facing streets should be treated in the proper architectural spirit, and in construction should be of a fireproof nature. It is usually desirable to run boulevards parallel to the water fronts, with a narrow park along the whole front, thus providing a convenient place for recreation along the water, usually the most agreeable part of the city, but too often taken up for business purposes.

Recreation piers should also be built in adequate numbers, and reached through the riverside parks. Inland cities in the United States, on rivers have in almost all cases surrendered their riverside park sites to business purposes, the residential districts being driven back into the land districts.

Water fronts should be reserved for park purposes instead of being taken up by railroad yards and tracks, storage yards and other accumulations, for since railroad haulage in cities is today largely by electric locomotives, the railroads if they must run along the water front, may be put in tun-

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nels, which will leave the space for parks.

Numerous examples may also be found in foreign cities of the practice of utilizing water fronts and canals both for business and park purposes.

As has been indicated, in harbor improvements, one of the chief features is to arrange the docks so that railroad cars may be run alongside the vessels and freight be quickly exchanged. This is best accomplished by modern forms of cranes, and great economies are effected when such apparatus is properly designed. In certain harbors, the engineering features are such that vessels may be loaded from cars on four or five tracks simultaneously. The very latest and best machinery, however, should be adopted, as great advances have recently been made in this field, and the difference between new equipment and out-of-date equipment will prove of the greatest importance to the commerce of the port.

Hamburg, where advantage has been taken of the latest developments in harbor engineering, has thus a great advantage over New York, where very few piers are laid with railroad tracks and where the truckman is found in all his glory, his charges for small lots equalling in many cases, the cost of long railroad freight hauls.

Among the most important of civic features and one that has been almost exclusively left to engineers, with, in many cases, unfortunate æsthetic results, is that of bridges. A bridge in reality, is an architectural structure and one in which the greatest genius in designing may be shown and yet, so important is the mechanical side, that the engineer is usually in full control and pays little or no attention to the architectural features.

A prominent bridge, however, being one of the most striking features of the city's design, should be designed by engineers of the greatest ability and experience, and such engineers should be associated with architects equally qualified.

The designs of the bridge should, of course, have the approval of a municipal art commission, or of a qualified expert, and the city should be free to adopt the best design submitted for the purpose.

It is therefore of the highest importance that ample preparation be made when a

bridge is to be erected, so that every possible criticism may be made in advance, and not after the bridge is completed. The suggestions and objections of the public as well as of experts should be invited.

The occasional failure of bridges, or the necessity of remodelling or removing tracks, shows that the most competent engineers are not by any means always selected, while the unsightly appearance of many bridges shows want of architectural skill.

Among the principal types of bridges are the suspension, the cantilever and the arch, and all of them, may in their various forms, be treated with great architectural effect.

The suspension bridge is a very popular form in the United States, while abroad, the arch, owing to its more varied possibilities of æsthetic effect, is most generally used.

The principal forms of the arch are the latticed steel, stone and reinforced concrete, and the type is susceptible of much variety, as the roadway may be either above or below the crown of the arch.

A small form of bridge of a highly useful nature but usually very ugly is the draw-bridge. It may, however, be made of a highly ornamental character, if the trouble is taken.

Small bridges in parks are frequently of much architectural beauty, especially those of stone, with low but graceful spans and with the roadway above the crown, protected by a stone balustrade.

A bridge, like a water gate, may often be made one of the city's main approaches, and in practically every instance, it should be the focal point of a number of streets, not alone for æsthetic reasons but for the dispatch of traffic. The proper arrangement thus, of a bridge and its approaches will prove of great advantage to the city in every way.

The type of bridge to be adopted at any particular point, will depend on a wide variety of factors, among which are the volume and kind of traffic to be handled, the conditions of traffic on the waterway which it spans, the nature of the soil determining the kind of piers which it may be practicable to erect, the kind of æsthetic effect that may be desired and the nature

(Concluded on page 96)

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RESCUING OUR COLONIAL ARCHITECTURE

IN our current news columns in this number we reprint an editorial from a recent issue of the *Boston Evening Transcript* that seems to be a concise and pertinent discussion of a subject many times referred to in the columns of *THE AMERICAN ARCHITECT*. The proposed demolition of a house the design of which is attributed to Bulfinch, and which is "pronounced the most beautiful in Boston," moves the editor of the *Transcript* to protest against what is very properly regarded as an act of vandalism.

Similar occurrences are so often noted and so many times vainly deplored that we have practically come to regard the passing of our venerated landmarks as something that cannot be avoided and must therefore be submitted to with such resignation as we may be able to command.

However, it would seem that a movement having for its purpose the saving of rare examples of our colonial architecture might have some chance of success if it had for its basis a proper feeling of civic pride present in a greater or less degree in every community.

This feeling would be increased immeasurably if we could, for example, organ-

ize and prosperously maintain in different sections of the United States organizations similar to the Society for the Preservation of New England Antiquities. This Society, working in a quiet, but forceful way, has, as will be noted, effectually checked the hand of the vandal in important instances, and it is hoped will be further successful in the case of the building now in question.

KEEPING THE COST WITHIN THE ESTIMATE

HOW to build a \$34,000 house for \$25,000 is substantially the problem which the average owner vaguely expects architects to solve. Possible variations seldom reduce the inherent difficulties of the task proposed. When a California architect recently failed to perform this financial stratagem, he was deprived of his fee by the court, on the ground that "he should have kept the price within the original estimate, if he desired to collect for his services under his contract."

We are not informed as to the exact provisions of the architect's contract with his client, but from published statements it would seem that the client's action in acceding to an expenditure of \$9,000 more than was originally contemplated, was in itself sufficient to release the architect from responsibility in the matter of cost. However, with our confidence in the infallibility of judicial decisions on matters architectural, we are forced to believe that the architect was at least lax in the protection of his own interests, when he entered into a contract that could be interpreted with such unfortunate results to himself, or failed to have it properly supplemented when it became evident that the owner's demands could not be supplied at the stipulated price.

Everyone concerned in building knows the tendency of wishes to outstrip wealth, but if the client really desires to keep the cost within a stated amount, there is, of course, a way by which the architect with the owner's cooperation can accomplish such a result. It consists in making the specifications both definite and comprehensive, and in so restricting the plans, that the full contract price plus the archi-

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tect's fee, will be within the appropriation, and leave a small balance as a factor of safety.

If the cost must in some manner be made a condition of his employment, he should conserve the right to modify the specification in consultation with his client, so that the investment may not eventually exceed the contemplated sum. The responsibility for any subsequent deviation from the specifications tending to increase the cost, should then be borne in writing by the client. Such procedure will tend not only to prevent financial disappointment of both architect and client, but also to minimize popular criticism of the supposed extra costs sustained through the employment of an architect.

The method of making the architect's fee contingent in a sense upon the cost of a building, in that a certain amount may not be exceeded without nullifying the agreement upon which he is employed, may or may not have points in its favor, but if the mere mention of a sum as the desired limit of expenditure before plans are drawn, has the legal effect of depriving an architect of remuneration in the event of a larger sum being required to meet the owner's demands, it is important that architects take cognizance of the fact. Moreover the architect should bear in mind that he is not a contractor in any sense of the word and should not enter into any agreement which might prevent his giving disinterested advice to his client.

AMERICAN CITY PLANNING

(Continued from page 94)

of the bridges existing or planned over the same waterway. The last is a consideration of weight, since it is undesirable to have all the bridges over a waterway alike in design, yet at the same time there should be a certain harmony between them.

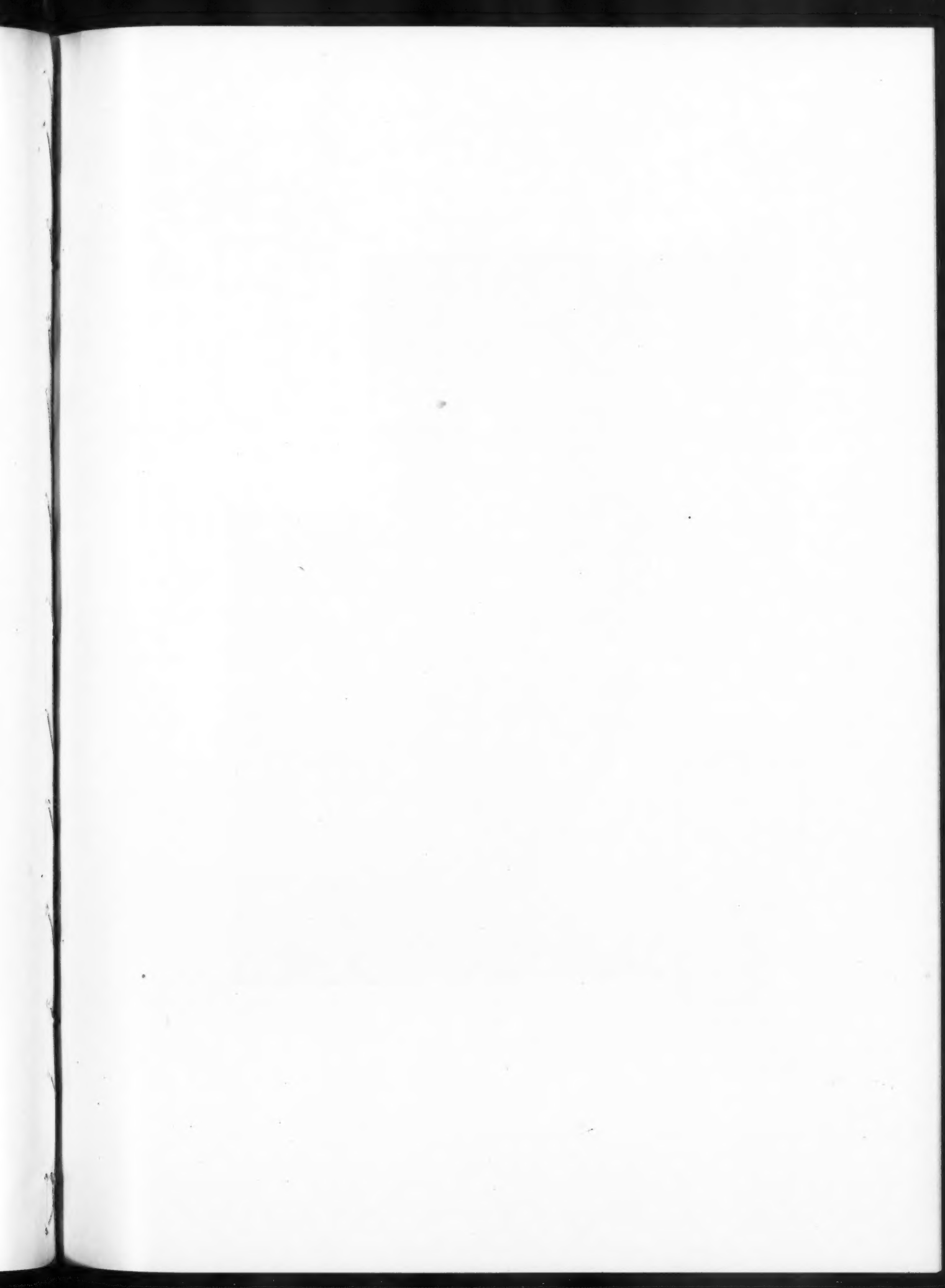
In design, the lines of a bridge should be suited to its purpose and its construction. For heavy traffic, the bridge should be substantial and strong in construction and its æsthetic effect bold and massive. For bridges intended for lighter traffic, having long spans, an effect of a more delicate and graceful kind will be more desirable. The form of construction of the bridge will also have its bearing on the artistic effect,

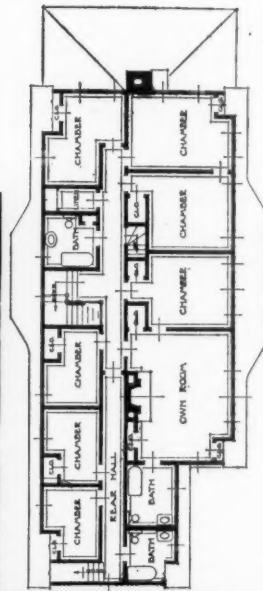
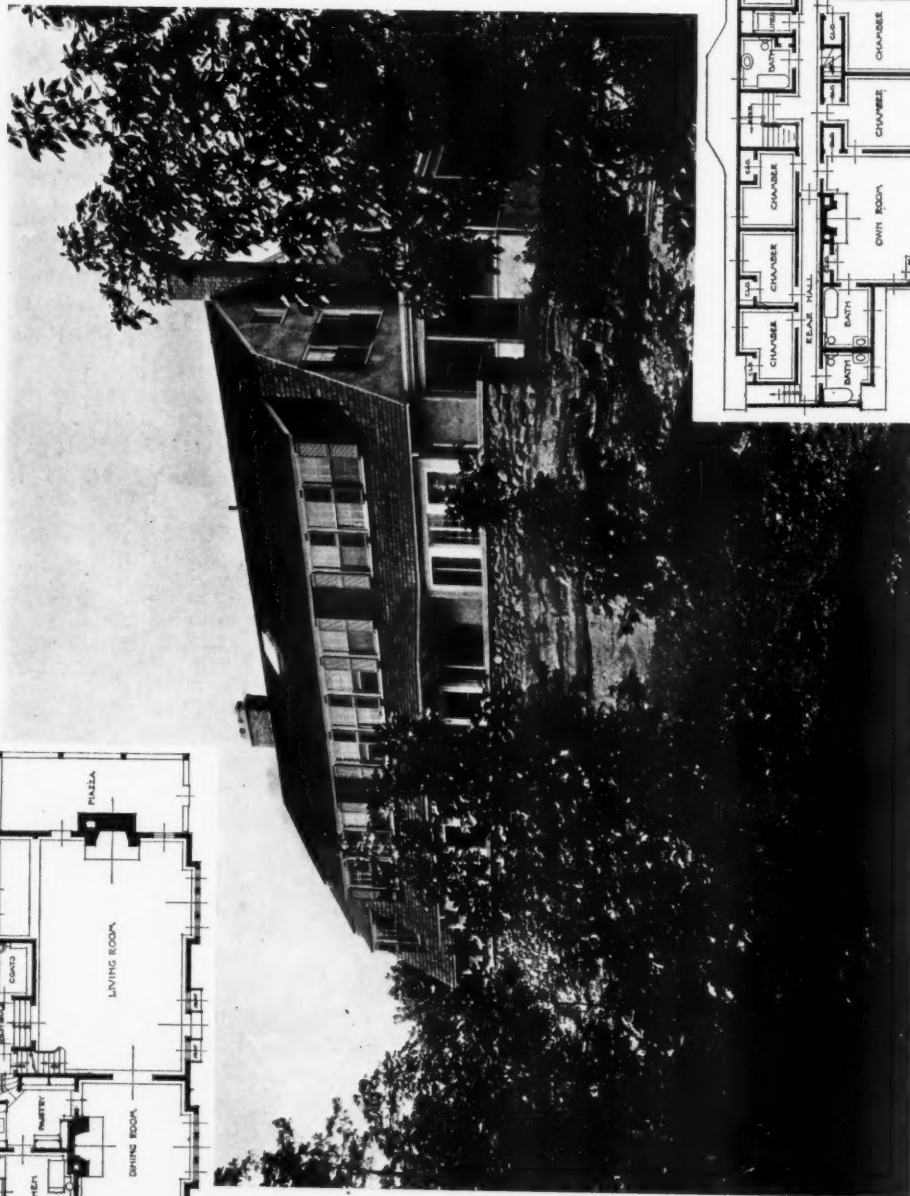
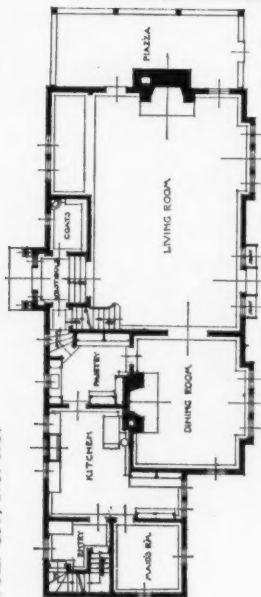
as with suspension bridges, the effect tends to gracefulness as compared with the solidity of the arch type.

The type of bridge and nature of the approaches will determine whether towers and portals should be employed, or whether the transition from the streets to the bridge should be gradual and unmarked by monumental entrance effects.

Bridges of whatever style or design should always be simple, and all unnecessary ornamentation should be avoided. The simple, strong lines of a good bridge require no embellishment, for in bridges, as in other works in which artistic considerations enter, the best designing is that in which simplicity is secured and which is not betrayed into meaningless ornamentation.



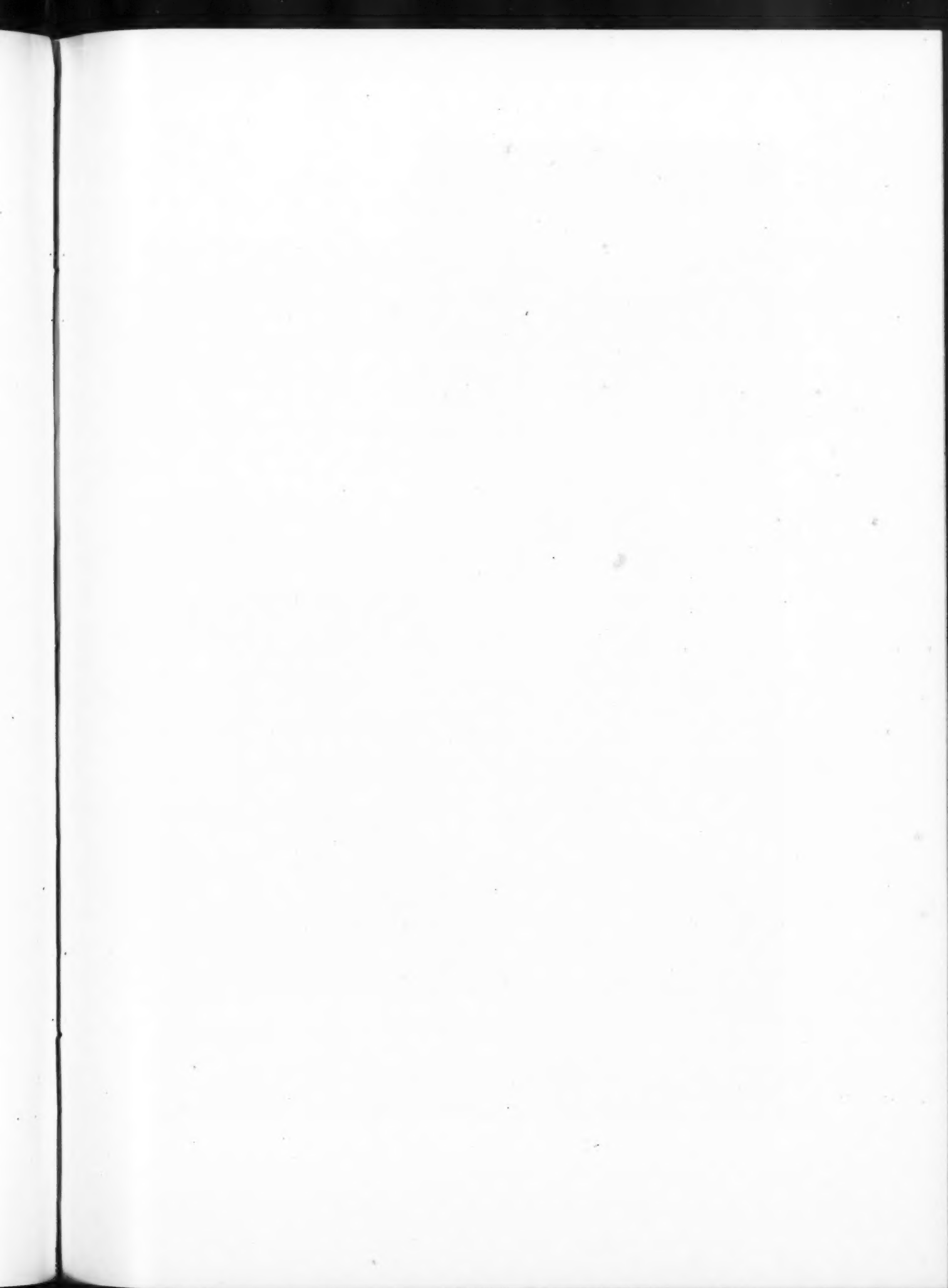


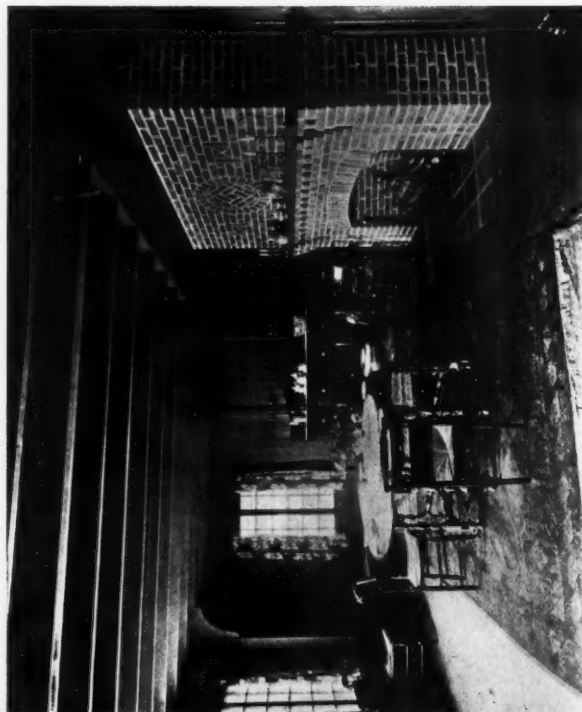
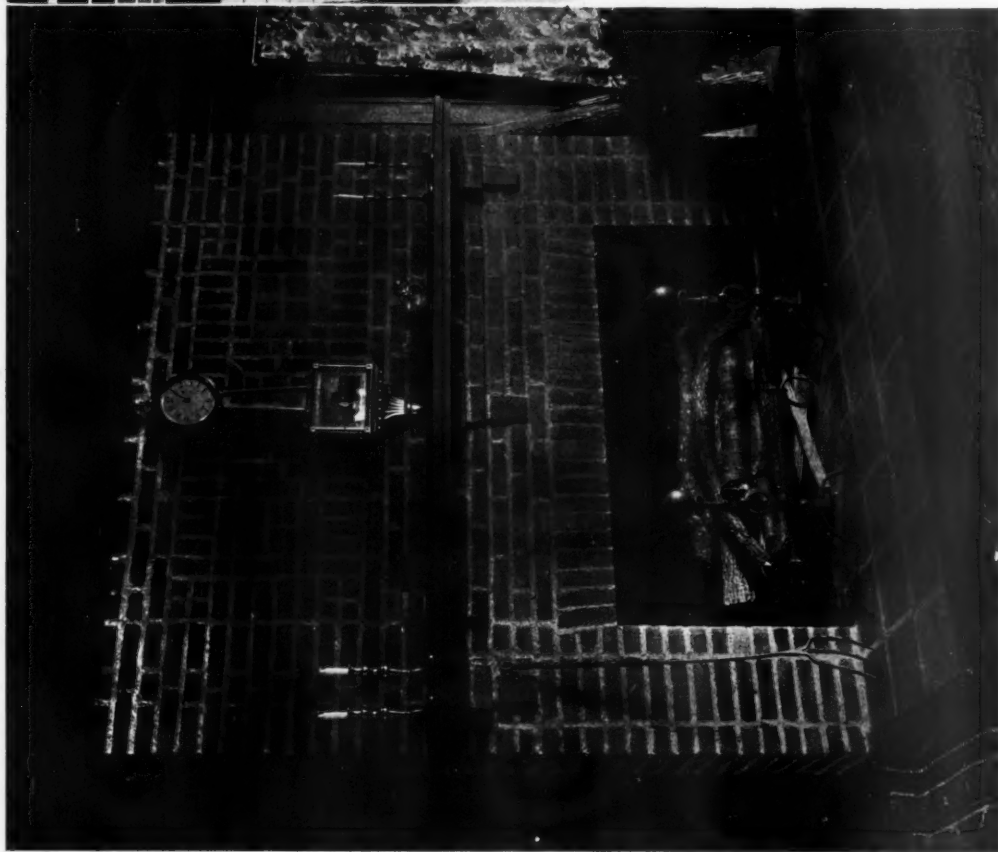


TERRACE FRONT

HOUSE AT CAPE ELIZABETH, ME.

JOHN CALVIN STEVENS, F.A.I.A., AND JOHN HOWARD STEVENS, ARCHITECTS

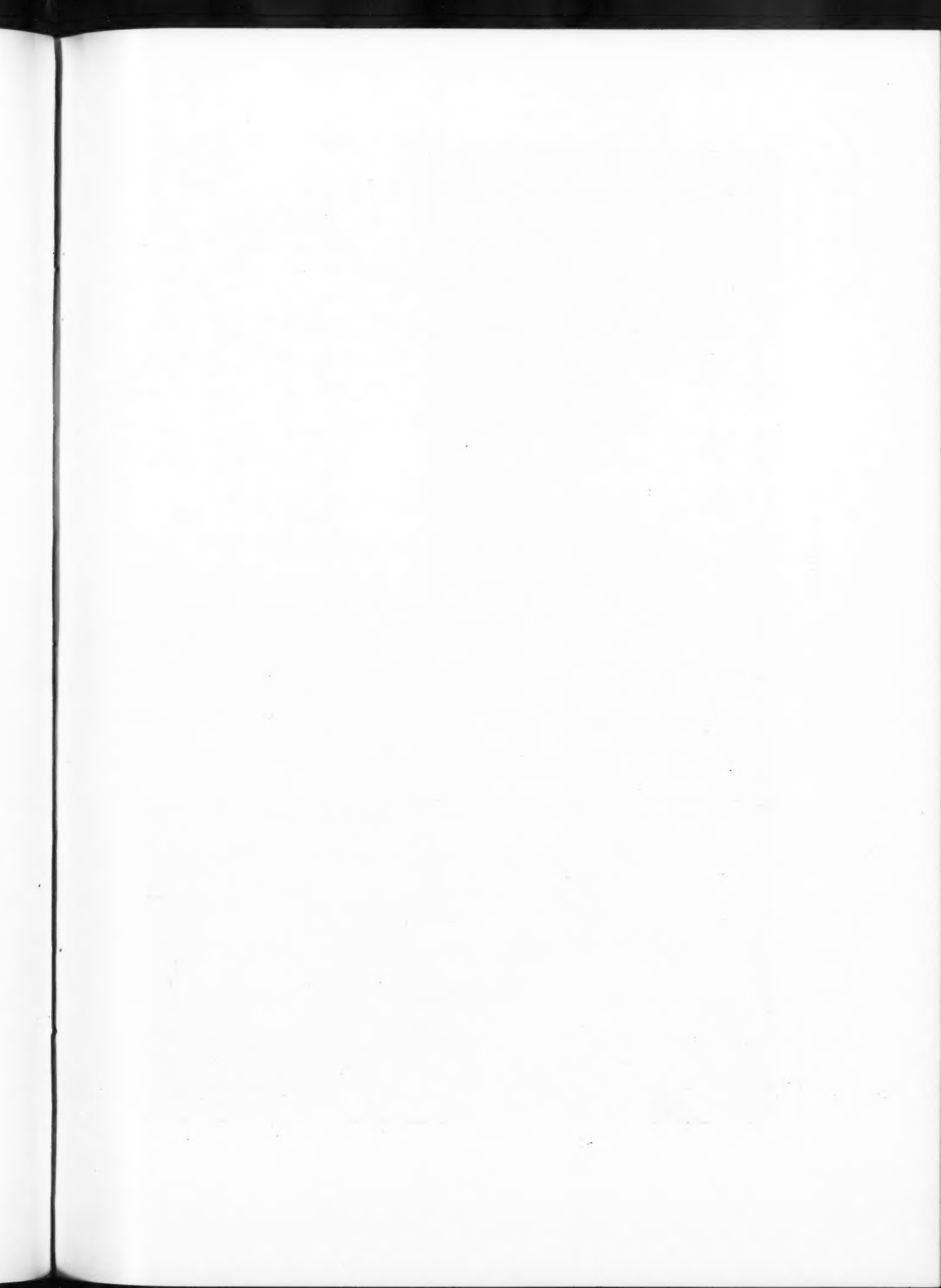




ABOVE, DINING ROOM
AT LEFT, LIVING ROOM MANTLE

HOUSE AT CAPE ELIZABETH, ME.

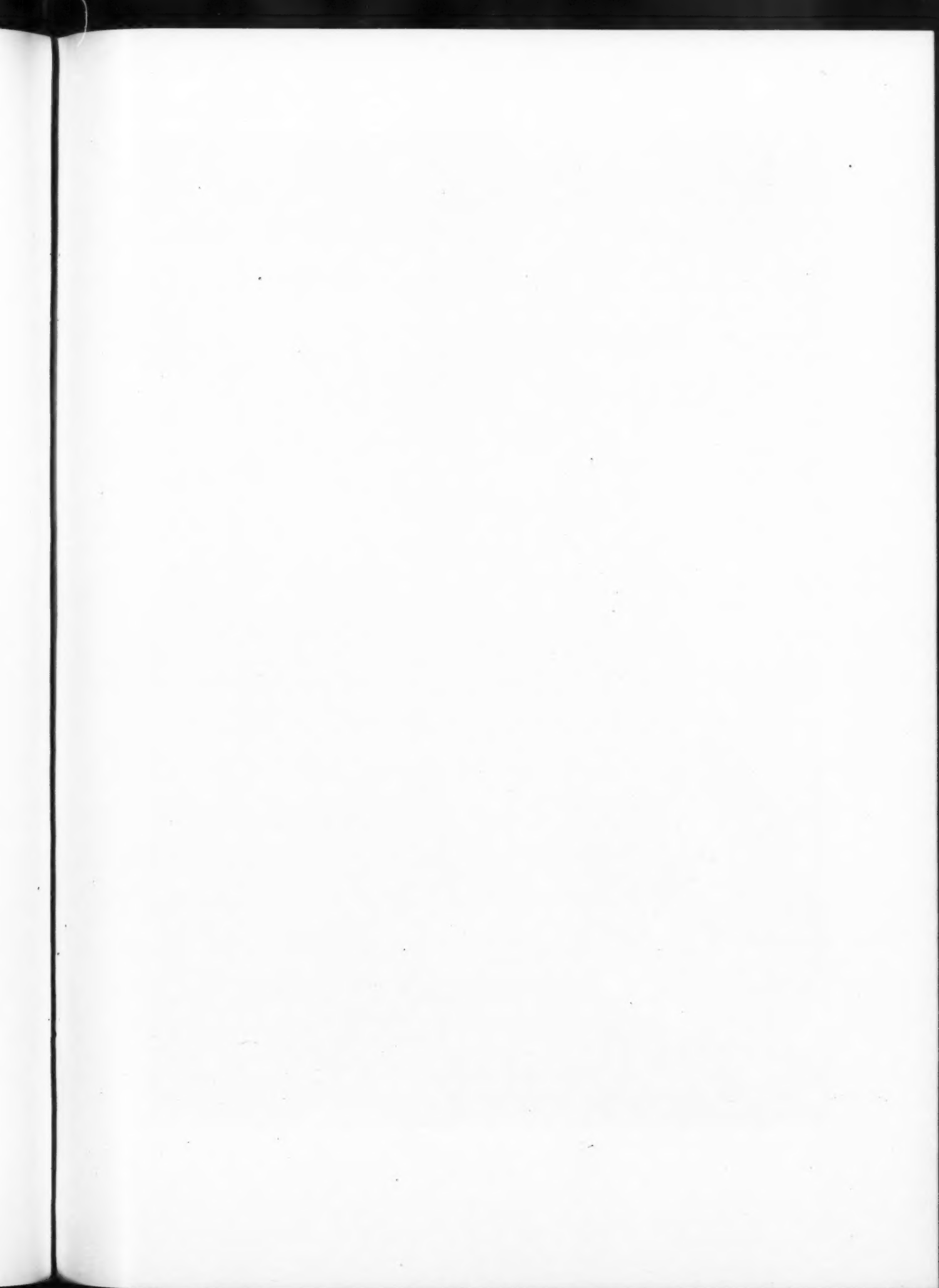
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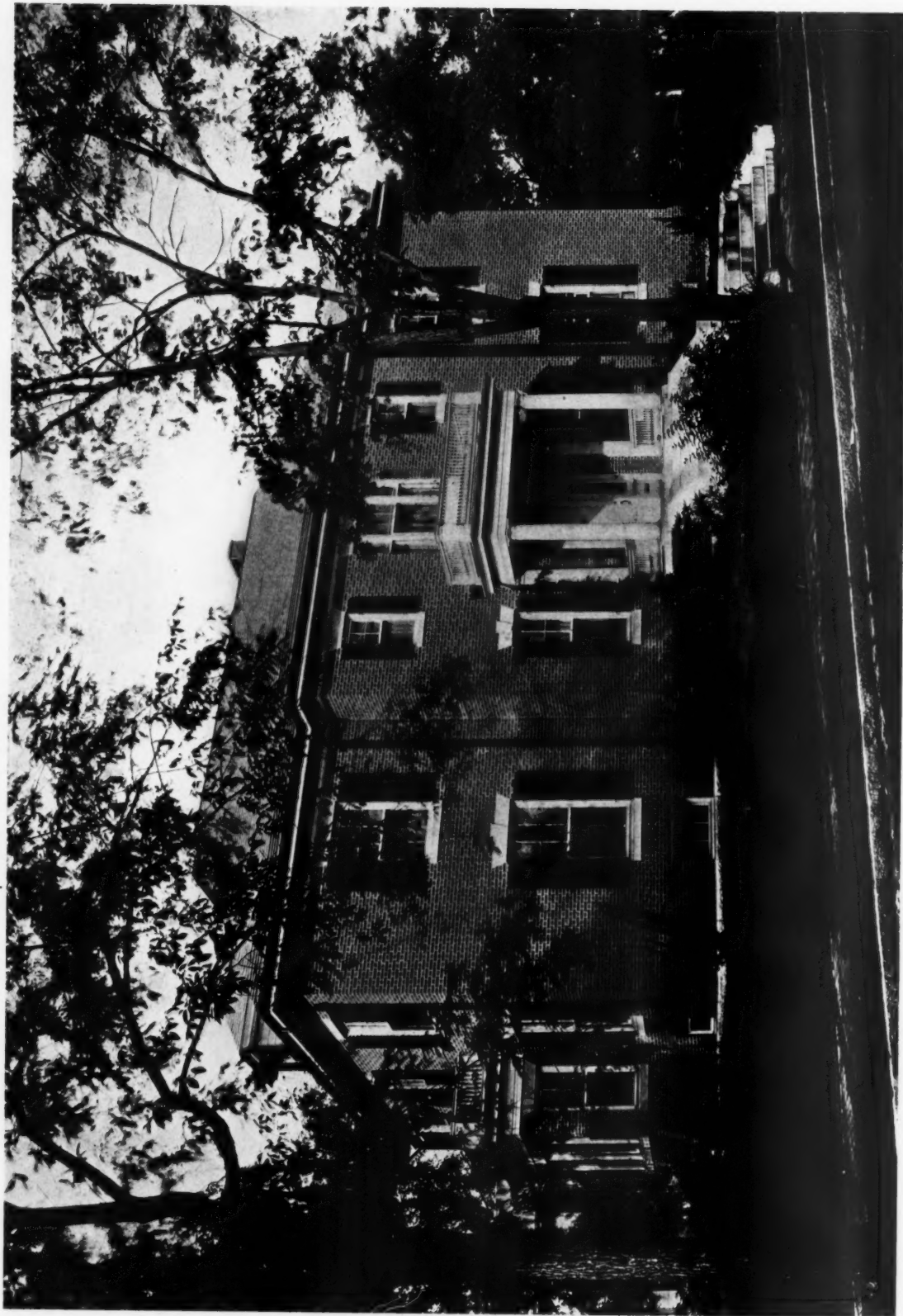




HOUSE AT CAPE ELIZABETH, ME.

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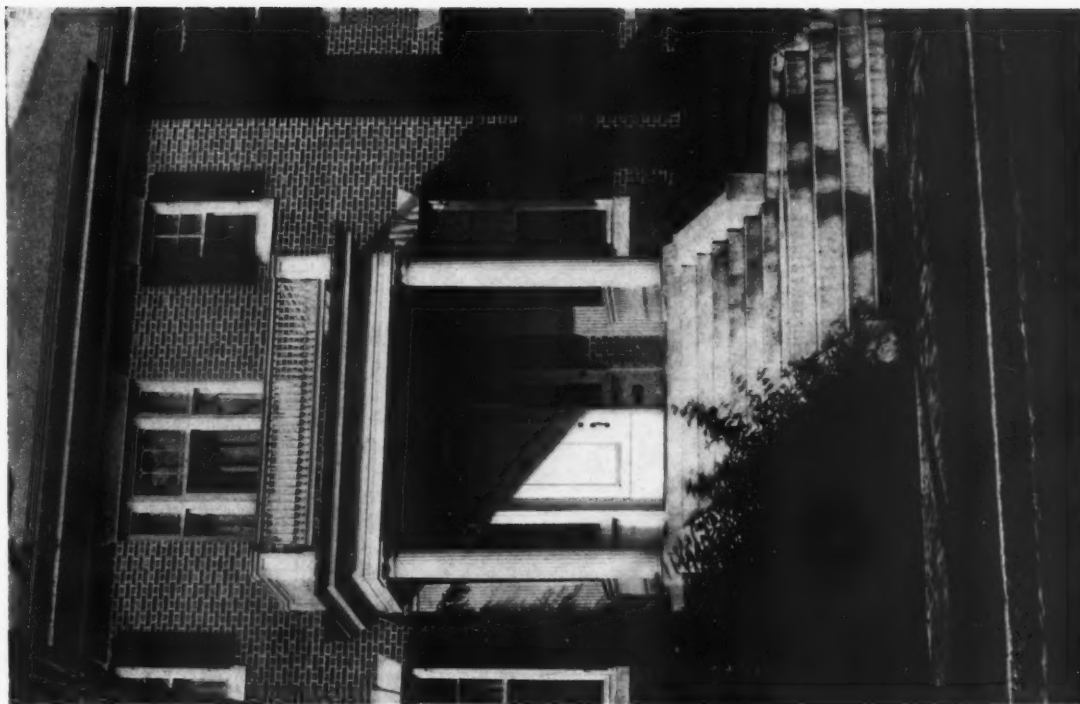
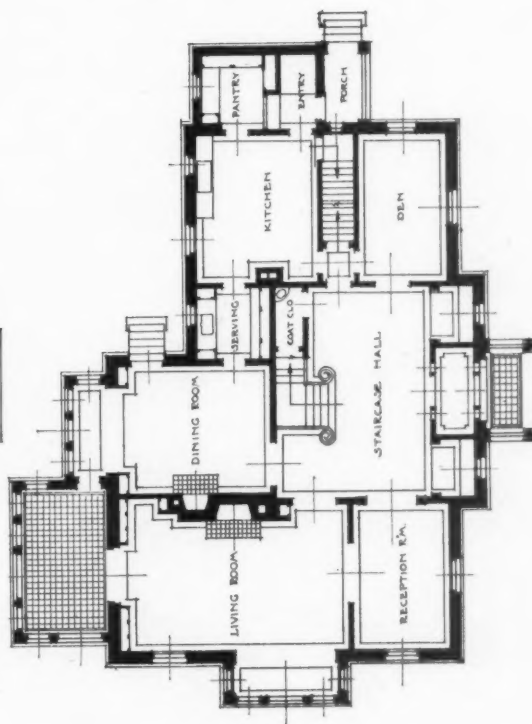
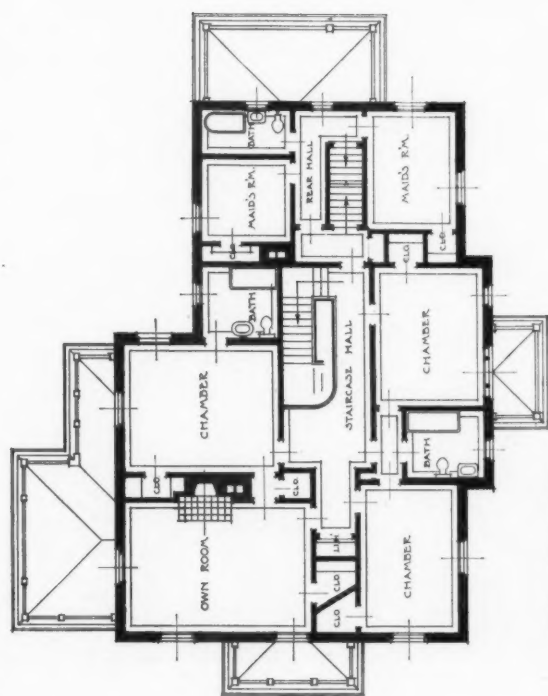


HOUSE OF A. P. CHAMPLIN, ESQ., PORTLAND, ME.
JOHN CALVIN STEVENS, F.A.A., AND JOHN HOWARD STEVENS, ARCHITECTS

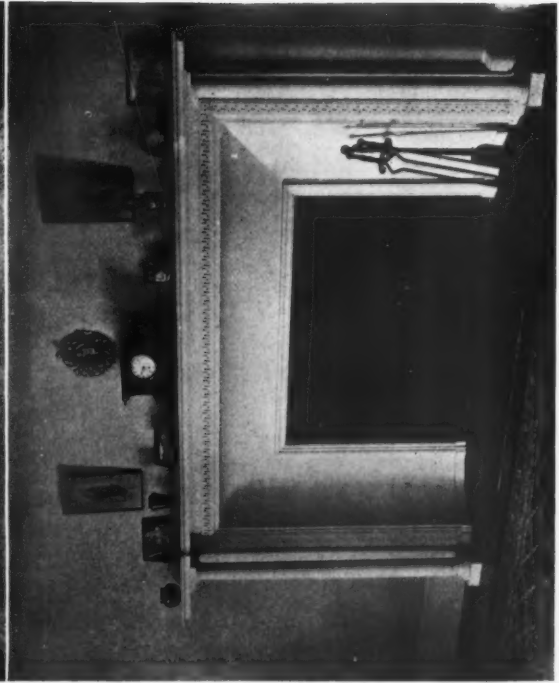
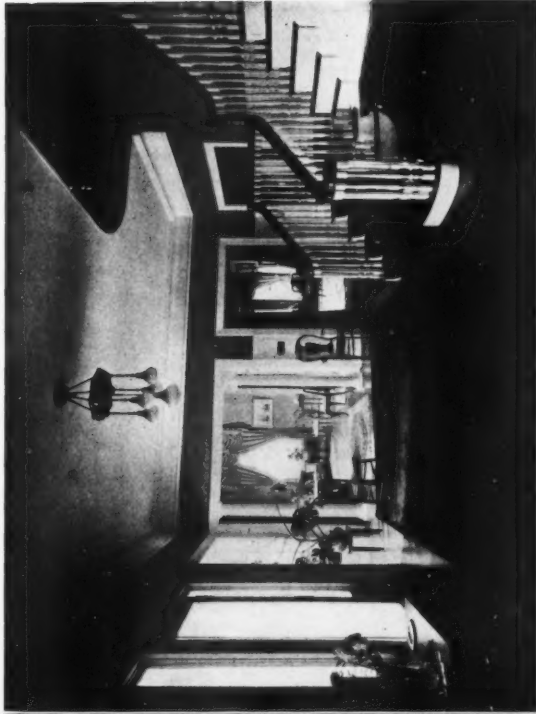
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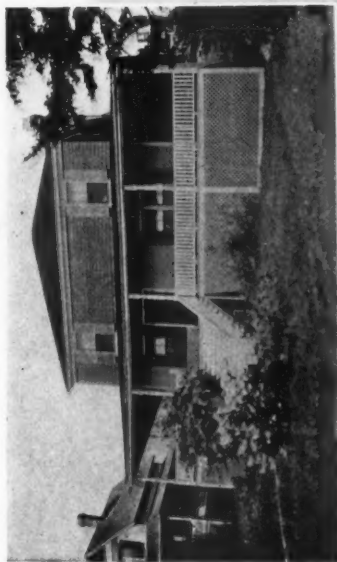


HOUSE OF A. P. CHAMPLIN, ESQ., PORTLAND, ME.
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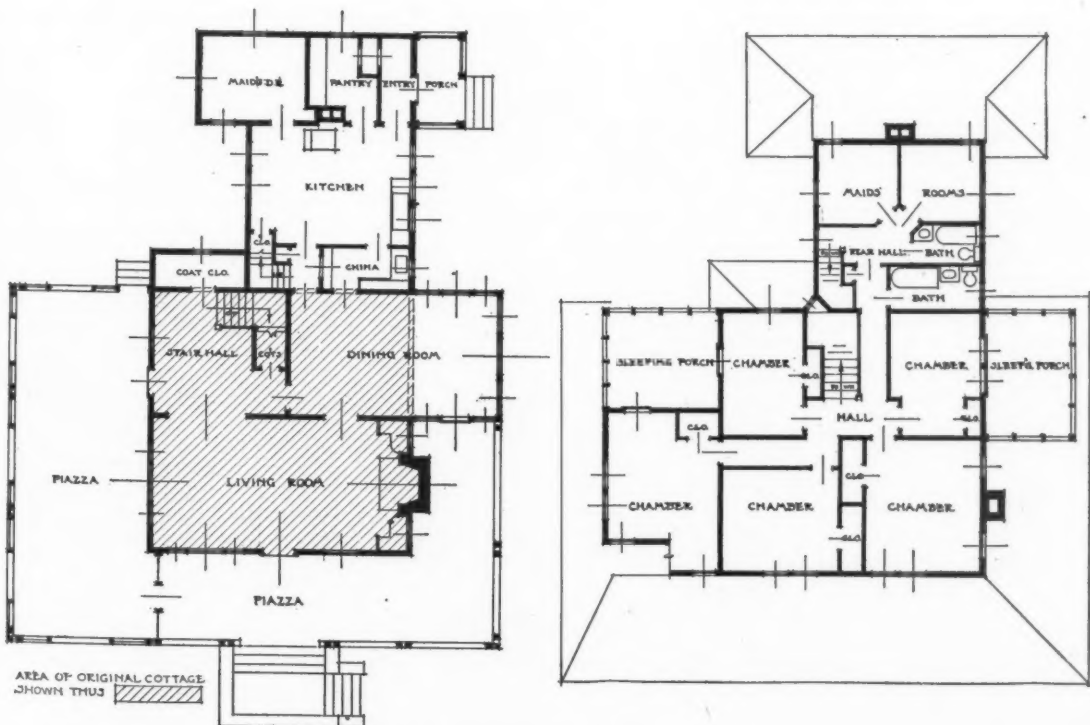
HOUSE OF A. P. CHAMPLIN, ESQ., PORTLAND, ME.

JOHN CALVIN STEVENS, F.A.I.A.
AND JOHN HOWARD STEVENS, ARCHITECTS



ALTERATIONS TO A COTTAGE AT MERE POINT, ME.

JOHN CALVIN STEVENS, F.A.I.A., AND JOHN HOWARD STEVENS, ARCHITECTS



PRELIMINARY SKETCH AND FLOOR PLANS

ALTERATIONS TO A COTTAGE AT MERE POINT, ME.

JOHN CALVIN STEVENS, F.A.I.A., AND JOHN HOWARD STEVENS, ARCHITECTS

CURRENT NEWS AND COMMENT

RESCUE MISSION FOR COLONIAL ARCHITECTURE

As often as an historical landmark of architectural distinction is threatened with destruction—a building for the loss of which the city will be the poorer—it is remarked that there should be some agency to prevent such vandalism. There is such an agency and it has begun to do effective work. The August Bulletin of the Society for the Preservation of New England Antiquities records a list of undertakings finished or begun during the past year. Three splendid old houses stand in the possession of the society today—the Swett-Ilsey house at Newbury, the Cooper-Austin house in Cambridge, a sixteenth century dwelling, and the Samuel Fowler house at Danversport, a fine example of the Georgian of a century ago. At the society's headquarters in the new building of the Historic Genealogical Society two interesting exhibitions have been assembled, one a colonial parlor of the eighteenth century reconstructed from loaned furniture, the other, still on view, an exhibition of mourning jewelry, watches, needlework, pictures and samplers. The value of such exhibitions as educators of a discriminating taste in furniture is too obvious to need comment, though prompting to the remark that this furnishes an argument for a permanent museum of such a character.

A museum is built and ready for occupancy; did the society enjoy the financial support which its record and services deserve? The house at 40 Beacon street is pronounced the most beautiful house in Boston, and is supposed to be the work of Charles Bulfinch. It is not only threatened with demolition—there is reason to apprehend that the building which would unworthily usurp its site would be an apartment house of not very good type. One such mischance has already befallen the hill slope of Beacon street. There is every inducement for avoiding another. The matter is of the more interest because it raises the whole question of preserving the dignified and unique aspect of that part of Beacon street between Charles street and the State House. To save No. 40 would be to save perhaps the finest specimen of domestic architecture on the street—one of the finest in New England. If there is any public appreciation of the earnest work done by the Society for the Preservation of Antiquities it should show itself in relation to this fine old building in the heart of the city. After all, visitors tell us that it is this sort of building which constitutes the charm of Boston. Other cities can boast their new office towers and wide streets; we have our old buildings and picturesque vistas. They cannot be duplicated, and it behooves us to keep them. We

would laugh at the family which traded its ancestral mahogany for the cheap golden oak of today. Let us beware of doing as a city what we would deride doing as a family. The house at No. 40 Beacon street would serve admirably as a headquarters and museum of the society, shared, it might be, with other organizations, since the building is large. But whether it can be acquired by this vigorous and aggressive society or for the uses of a private residence it deserves to escape the hammer of the building demolishers.

The issue is, of course, typical of the work which the society does—a work made trebly difficult by the need of funds for the acquisition and care of these buildings. No one will deny that this work needs doing. The older public buildings are safe. Community pride protects them. But the old houses which are the ornament of New England's towns and countryside need champions when family pride and the family purse fails them. If we prize these things, as we do, it should be our business to aid the organization which preserves them to give pleasure to the eye and distinction to the locality.

—Boston Evening Transcript.

CRAM, GOODHUE & FERGUSON REPORTED AS CONTEMPLATING DISSOLUTION OF PARTNERSHIP

It is reported to the daily press that the partnership now existing between Messrs. Cram, Goodhue & Ferguson will soon be dissolved. M. Goodhue, it is stated, will remain in practice in New York City, while Mr. Cram and Mr. Ferguson will continue in Boston.

PROFESSOR DUQUESNE VISITS DETROIT TO ARRANGE PRELIMINARIES TO COMPETITION FOR SCOTT FOUNTAIN

Professor Eugene Duquesne, a leading architect of France and now of the faculty of Harvard University, visited Detroit recently in company with Professor John D. Humphreys, also of Harvard. The purpose was to arrange the preliminaries of the competition of the proposed Scott fountain.

Professor Duquesne has been selected by the City Plan and Improvement Commission of Detroit to draw up the program and select the exact site for this important civic improvement, to defray the expenses of which there is now available, it is stated, about \$450,000.

The competition for the Scott fountain will provide an occasion, rarely offered, where the sister arts of architecture and sculpture may be employed in the most dignified manner.

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GUARDING THE FORESTS FROM FIRES

The steel towers that support electric power transmission lines are being increasingly used by forest rangers as fire lookout stations in national forests. With the harnessing of the mountain streams a network of these lines is gradually being woven over the forests, and in the absence of other convenient lookouts, the rangers find the steel towers helpful in their fire patrol work.

CONSERVATION IN CHINA

A conservation movement has been started in China, said to be richer in natural resources than any other nation. The Chinese use the word "conservancy" instead of conservation. One of their plans for the Hwai River contemplates dredging and tillage together to control floods.

AN ADMIRABLE PLAN TO PREVENT PANICS IN THEATRES

As a result of a recent conference held by Fire Commissioner Johnson, of New York, with representatives of theatrical interests of this city, certain reforms are to be at once instituted, designed to prevent audiences from their own disposition to indulge in panics.

Commissioner Johnson is reported to have stated to the theatrical men who attended the conference that the experience gained by a personal inspection of New York City theatres led him to the conclusion that there could never be a recurrence of the fire horrors that have caused the loss of so many lives in the past. In the course of his remarks he is further quoted as follows:

"I realize that the task of making the theatres safe as to fire risks is a finished one. Our modern theatres are the best buildings as to fire hazards that we have. The danger is no longer that fire will burn up members of the audience, but that panic will destroy them in their own haste to flee from a danger that no longer menaces them.

"Now the reason for this is simple. When panic seizes people they cannot think of getting out by any other door except the door through which they came in. Most of the people, of course, are admitted by one or two main doors. I have made a study of fire panics and I have learned that people in a panic will pass right by doors and rush to the door by which they were admitted.

"The girls who died in the Triangle shirt waist fire on the ninth floor of the Asch Building were stacked up fifty deep behind the door by which they had come in. If they had merely pressed against it it would have given way, for the lock didn't amount to much. And there were other doors and other exits."

Having pointed out what he considers to be the only remaining danger, Mr. Johnson very logically sets out to devise means of overcoming it, and has suggested to the theatrical owners certain measures that it is hoped will in a degree accomplish the end desired.

These are mainly by means of printed notices in the programs and prominently displayed on the walls of the theatre. It is proposed to suggest that each person before the beginning of the performance locate the nearest exit, and in case of any excitement verging on panic, move toward it at a walk and avoid any unusual haste. To secure this quietness of exit it is further proposed to print a statement of the fireproof character of the structure and the impossibility of any fire gaining enough headway to imperil the safety of those either before or behind the curtain.

It is gratifying to note the ready co-operation promised by the theatrical men. The best of results will undoubtedly ensue.

AMERICAN SCHOOL OF ARCHAEOLOGY IN CHINA

A committee has been appointed by the Council of the Archaeological Institute of America to investigate and report on the plan of establishing an American school of archaeology in China; its object being: (1) To prosecute archaeological research in eastern Asia; (2) to afford opportunity and facilities for investigation in Asiatic archaeology, and (3) to preserve objects of archaeological and cultural interest in museums in the countries to which they pertain, in co-operation with existing organizations for a kindred purpose, such as the China Monuments Society, organized by Mr. Frederick McCormick in 1908 at Peking.—*Scientific American*.

FINDS LOST ART IN GLASS

UNIVERSITY CHEMIST PREDICTS GREAT THINGS IN TRANSLUCENCY

Professor Alexander Silverman, head of the chemical department of the University of Pittsburgh, announced today that recent chemical formulas will bring developments in the glass industry in the future that will be as markedly revolutionary as those in the manufacture of steel in the past.

Professor Silverman, through experiments, has already perfected selenium ruby glass, which has completely displaced the old copper ruby glass. Along the same lines he has developed amber cadmium glass, which transmits a bright gold light. Another of Professor Silverman's discoveries is a glass which resists sudden changes of temperature. He said today:

"I believe that the chemist will completely revolutionize the manufacture of glass within twenty to twenty-five years, and that effects will be produced that have been undreamed of. At the same time the cost will be reduced, and by-products which are now wasted will be utilized."—*Philadelphia Record*.

INDUSTRIAL INFORMATION

In this section will be found information concerning late catalogues issued by manufacturers of building materials, fixtures or equipment. Also under this head will be printed, from time to time, certain data relative to new devices or methods of construction considered to be of interest to architects. Architects are invited to make use of THE AMERICAN ARCHITECT'S Catalogue Files and Information Department whenever they can do so to advantage. Any assistance we can render or information we can furnish in this connection will be freely given.

SEVEN-RIB HY-RIB

Under the above designation the Trussed Concrete Steel Company of Detroit, Mich., has recently placed upon the market a new product to which attention is directed in a folder printed for free distribution.

Seven-Rib Hy-Rib shown in the accompanying cut is designed to replace Four-Rib Hy-Rib, as constituting a very great improvement over the origi-



nal form. The advantages claimed for the new material are economy of both time and labor in installation and the fact that it is more than twice as wide as Four-Rib, and of greater strength because the ribs are $\frac{1}{8}$ inch deeper. Incidentally the increased stiffness of the material permits a wider spacing of supports, thus contributing another element of economy.

The standard dimensions of sheets are as follows:

Width, 24 inches between centers of outside ribs.

Ribs, 15/16 of an inch high and 4 inches centers.

Gauge of metal, Nos. 22, 24, 26, or 28.

Lengths, 6, 8, 10 and 12 feet. Other lengths to order.

Further information is contained in the folder referred to above.

SUDAN GLASS

The Holophane Works of the General Electric Company, Cleveland, Ohio, have recently issued a series of pamphlets and leaflets describing Sudan glass shades for electric light illumination. This glass, the makers state, is an absolutely new chemical composition and entirely different from any existing so-called opal glass.

The design, to which particular attention is directed, is called "Panelex," the reflecting power of which is said to possess efficiency equal to, if not exceeding, the usual opal reflecting shade. When not lighted, the glass is pure white in color and under illumination takes on a faint amber tint, glowing over its entire surface, it is stated, with a uniform light, giving complete diffusion without any glare or bright spots.

The makers are anxious to acquaint architects with the value of this glass as applied to electric illumination and will send full particulars on request.

STEAM PUMPS

From the offices of A. S. Cameron Steam Pump Works, 11 Broadway, New York, there has been recently issued a bulletin illustrating and describing the Cameron pumps. The makers state that these pumps have fewer working parts than any other pumps constructed, that they possess, owing to the high quality of material used in their construction, unusual durability, and it is believed they can run faster with less danger of breaking than pumps constructed with a greater number of parts. These and many other features are fully described in the pamphlet referred to, which may be had on request.

"A BOOK OF ONE HUNDRED HOUSES"

Samuel Cabot, Inc., Boston, Mass., has recently issued a book of photographs of one hundred houses which, it is stated, have been treated with Cabot Creosote Shingle Stain. The houses illustrated present a wide range of domestic architecture by men prominent in this line of work and indicates the dignified character of the structures to which these shingle stains have been applied.

The application of color in any form to the exterior of houses can only be successfully accomplished when the color scheme has been seriously considered with relation to the surroundings, and its use intelligently directed. Any application of color that will serve the two-fold purpose of preserving the wood to which it is applied and at the same time impart an artistic effect to the building is worthy of consideration.

The pamphlet referred to contains many letters from actual users expressing satisfaction with the results obtained. This pamphlet, and any further information desired, may be had by addressing the manufacturers.

HEATING AND VENTILATING APPARATUS

In a recently issued pamphlet Peck & Williams Heating & Ventilating Company, of Cincinnati, Ohio, discuss at some length the subject of economy of fuel in its relation to heating apparatus.

A line of "Underfeed" boilers, made by this company, is illustrated and described. The contention

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is made that the only proper way to introduce the fuel is below the fire, and not above, as generally employed. This method of feeding the fuel gives rise to the name of "underfeed," as used to describe this line of furnaces. The arguments set forth will be found interesting to those who contemplate the installation of furnaces as a means of heating.

CONCRETE REINFORCEMENT

The Gabriel Reinforcement Company, Penobscot Building, Detroit, Mich., have compiled, they state, for the assistance of architects the information contained in a pamphlet recently issued with reference to the use of the Gabriel complete truss bars as employed in concrete construction. They refer to many important structures wherein this method of reinforcing concrete has been successfully employed. They will send the pamphlet referred to on application.

BRICK FIREPLACES

A pamphlet with many examples in color illustrates a number of designs for fireplaces constructed of brick made by Thomas Moulding Brick Company, Chicago, Ill.

The varying sizes and features and wide range of colors in which modern brick are made afford an unusual opportunity for originality in design, and permits architects to preserve those unities in the interior treatment of houses that have become recognized as essential.

The various designs illustrated have accompanying explanatory text as to method of construction and modifications possible, together with prices for the complete designs as shown.

Architects will receive this pamphlet on application.

BUILDING PROGRESS

Building Progress for August, the "house organ" of the National Fire Proofing Company, Pittsburgh, Pa., contains interesting articles on brick and brickwork, designed to illustrate the wide adaptability of brick in construction. The leading article in this issue deals technically on fireproof hospitals and asylums, and is illustrated by a number of important examples.

PETZ BARS FOR STORE FRONT CONSTRUCTION

The Detroit Show Case Company, Detroit, Mich., desire to make known to architects the merits of Petz bars as applied to window construction of large area. These bars, it is stated in a recently issued pamphlet, which may be had on request, have been subjected to severe tests in many large buildings and have been found to withstand with unusual efficiency the stress of storm, shock and accident to which store front construction is subject.

INSULATION

A method for the prevention of "sweating" of cold water pipes is described in a leaflet issued by H. W. Johns-Manville Company, New York and other principal cities.

A wide stitched covering made up of alternate layers of waterproof asbestos and insulating felt, will, it is stated, when properly applied, keep the covering dry and prevent the loss and damage often the result of dripping from sweating pipes.

This covering is furnished in sectional form, split on one side only, thus insuring a minimum of joints and preventing the admission of warm air to the pipes.

MOLDLESS CONCRETE CONSTRUCTION

Henry L. Lewen, New York City, states in a pamphlet recently issued that he is the originator of the Lewen system of moldless reinforced concrete construction.

The claims advanced for this system are that it obviates the necessity for the use of wooden frames or molds, that it therefore cheapens the cost of construction, and, due to the simplicity of the method, skilled labor is not required for its installation.

The pamphlet states that the object of this invention is to provide a reinforcing element and concrete slab applicable for use in the construction of hollow walls and partitions, especially in cases where shock is liable. The method employed in this system is described with much detail. The pamphlet will be forwarded on application.

KLING KOAT

In a pamphlet issued by the Waterproof Paint Company, Builders Exchange, Philadelphia, Pa., it is stated that Kling Koat has been evolved as the result of experiments long carried on to secure a material that could safely and efficiently be applied to walls and ceilings of new buildings too damp to receive and hold ordinary paint.

The makers state that this material adheres to the surface of brick, plaster, cement or wood, and penetrates to a depth sufficient to become a part of the material to which it is applied. It is further stated that it requires no greater skill to apply Kling Koat than the usual paint, as it flows freely from the brush. It is claimed that it has an elastic nature and when dry has no tendency to crack or peel. Further particulars together with the pamphlet referred to may be had on application.

RAYMOND CONCRETE PILE CO. OPENS BRANCH OFFICE IN BUFFALO, N. Y.

The Raymond Concrete Pile Co., 140 Cedar street, New York, announce the opening of a branch office in the Ellicott Square Building, Buffalo, N. Y., which will be under the charge of Mr. Edward Phelan.

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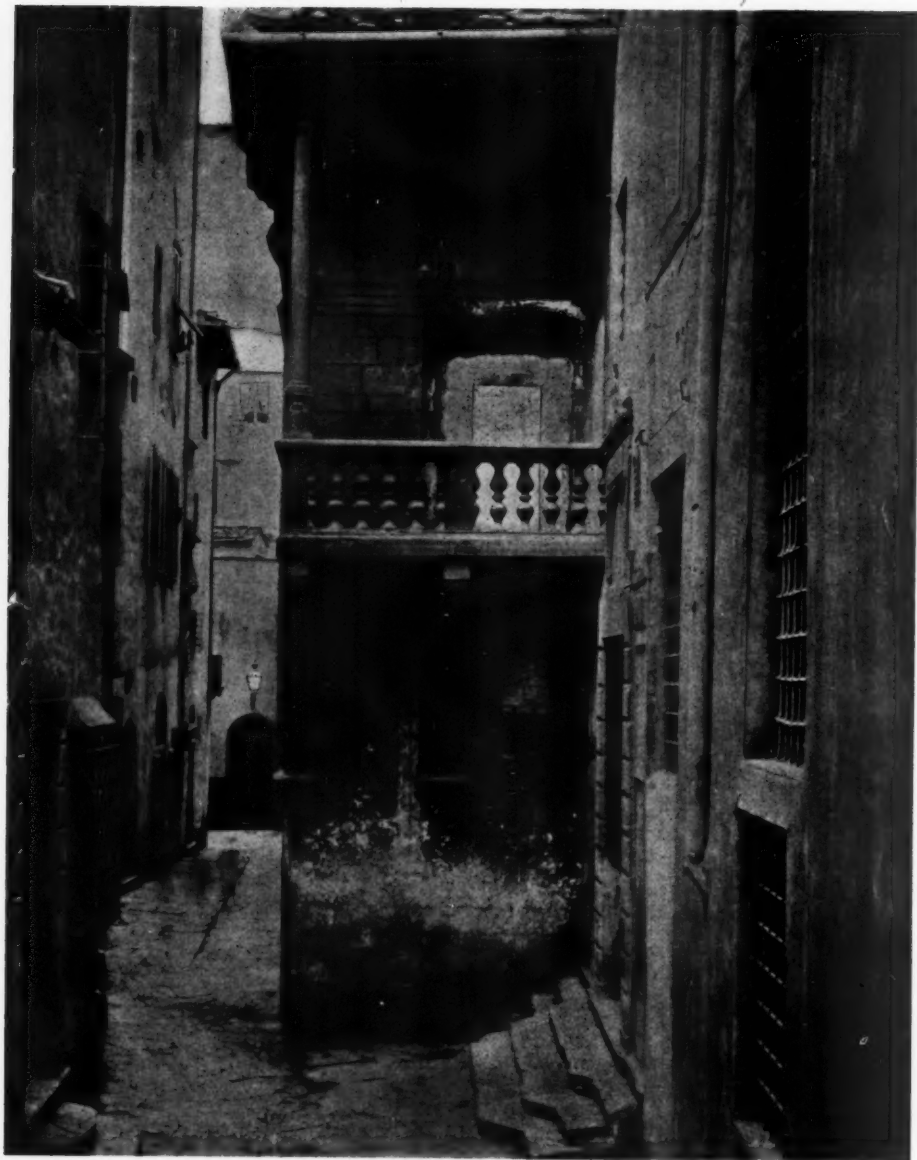
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