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THE AMERICAN ARCHITECT AND BUILDING NEWS.

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THE City of Boston possesses a large fund, originally bequeathed by Benjamin Franklin, and allowed to accumulate, which is now available for the benefit of its citizens. It had been decided to utilize it for the establishment of a trade-school, but the Mayor recommends the repeal of the order establishing the trade-school, and the appropriation of a part of the money to public baths, and the rest to the construction of a building, to contain a "forum" for the gratuitous use of orators, and offices for the labor-unions of the city. It is well known that labor-unions bitterly and consistently oppose anything like the technical instruction of young people. Some of their strictest rules limit, by severe penalties, the number of apprentices that may be received in a shop, and, in New York, the unions tried hard, at one time, to suppress Colonel Auchmuty's noble institution for training children to earn their own living; and Mayor Quincy, who is an ardent friend of the unions, seems to have adopted their view of such matters. Granting, however, the propriety of maintaining, at the expense of the taxpayers of Boston, a "forum" for the gratuitous use of anarchists and agitators, the arguments by which the establishment of trade-schools is opposed do not strike us as very convincing. Mr. George E. McNeill, a professional labor orator, said, at a hearing on the subject, that the unions opposed such schools because they believe them to be "antagonistic to the best interests of organized labor, consequently against the best interest of Boston and her citizens," apparently with the idea that the welfare of Boston and her citizens depends on having everybody forced to employ a certain small clique of mechanics, to the number of which no accessions are to be allowed from the younger generation. Evidently perceiving this inference from his observation, he went on to throw a mist of rhetoric around it by saying that the unions preferred to have boys trained to be "citizens," rather than to have them put through the "reactionary" process of educating them to do some useful work. What they wished was, he said, "blacksmiths capable of being Congressmen, even if they were not able to be elected," meaning, apparently, that the unions considered it desirable to have boys learn mainly to work with their mouths, instead of their hands. Fortunately, Americans generally have got beyond this notion. Fifty years ago, the stump speaker and bar-room spouter had a certain influence in the community, and, if he could not win votes, could often make himself conspicuous enough to secure some public office, but in these days it is the practical men, the manufacturers, editors, lawyers and merchants, who more and more fill the halls of Congress, to the exclusion of the orators; and the blacksmith candidate of Labor's dreams will certainly be more likely to reach the goal of his ambition by learning his trade well, and practising it so honestly and intelligently as to gain the respect of his fellows, than by devoting himself to the cultivation of a big voice.

THE possible removal of the Boston Museum of Fine-Arts from its present location, on account of the danger which the Trustees fear from the increasing number of high buildings around it, has given occasion to a good deal of discussion. The owners of the most recent high building, the Westminster Chambers apartment-house, observe, with a good deal of force, that their building is as thoroughly fireproof as any building could well be, and that its height makes it valuable, rather than otherwise, as a protection to neighboring property, as was shown at the time of the fire in the Engineering Building of the Institute of Technology, close by, when the firemen, by going to the upper story of the Westminster Chambers, were enabled to pour streams of water down upon the Engineering Building, and thus quickly control what threatened to be a destructive conflagration. On the other hand, while the fireproof quality of the Westminster Chambers may be conceded, there are several other buildings in the neighborhood which are very far from fireproof, and some of them are so large that a conflagration in one might well be dreaded by the Art Museum Trustees, while even a fireproof building, if high, might throw into the Museum skylights a colored reflected light which would be very prejudicial to the proper exhibition of pictures. For these reasons, the public would have little reason to regret the transfer of the Museum collections to the neighborhood, perhaps, of the Back Bay Park, where land enough could be secured to protect them against any risk from neighboring buildings, and where the light would never be obstructed. As Copley Square is rapidly becoming the most important centre of traffic in Boston, and the amount of land fronting on it which is available for business purposes is limited, the Museum property, as it includes more than two acres of ground, could probably be sold now for something like two million dollars, which would pay for a building of which the City might well be proud, in a locality which will very soon be filled with fine public buildings. It is said that, under the conditions of the deed, the land now occupied by the Art Museum will revert to the donors or their heirs if it ceases to be used for its present purpose; but such restrictions can generally be modified, if the attempt is made while the interested parties are, as in this case, for the most part still living.

A RATHER unedifying discussion is going on in the Washington newspapers, between the former Superintendent of Construction of the City Post-office and the friends of the Supervising Architect's office. As the original contracts for the building were made long before the present Supervising Architect received his appointment, it would be very unfair to hold him responsible for any oversights in them; and the confusion incident to a change in the administration of the office might well account for a want of strict sequence in the award of the contracts, which seems to be the main point of the former superintendent's criticisms; but the whole controversy tends to confirm the opinion which several Supervising Architects have expressed, and which the present one is understood to share, that it is impossible for a great public office, subdivided into many departments, and crowded with work, to plan any building, write the specifications for it, and superintend its execution, with the efficiency which would be expected from any good private architect. That the Supervising Architect of the Government has a useful work to do, in counselling private architects as to the peculiar requirements and traditions of Government planning, and in revising specifications, contracts and bids, to make sure that they conform to the strict letter of the Federal Statutes, is obvious; but, apart from these matters, the man who can best carry out any building, public or private, is the one who has himself studied the plans, and holds in his mind a clear and complete idea of what he proposes.

THE late Colonel Waring left almost no property, and it is proposed to raise among the citizens of New York a fund of one hundred thousand dollars, the income of which shall be paid to his widow during her life, and, after her death,

shall be devoted to the maintenance of a professorship at Columbia College, to be known as the "Waring Chair of Municipal Affairs." An excellent committee has been appointed, and the fund will undoubtedly be raised. Meanwhile, one can hardly help speculating on the sort of instruction which is to be sustained by the fund after Mrs. Waring's death. Colonel Waring's brief connection with municipal affairs in New York affords an impressive lesson on the hopelessness of the struggle, in our cities, of intelligence and energy against the overwhelming power of corrupt ignorance; but a professor cannot content himself, year after year, with rehearsing the history of one man's life, and a course of instruction in abstract theories of honest and efficient administration seems a little ludicrous in a place like New York, where an acquaintance with such theories is anything but a recommendation to a candidate for municipal preferment. We hope, however, that this well-intentioned undertaking will be so amended as to include as one of the beneficiaries of the trust-fund not only Colonel Waring's widow, but also his daughter by an earlier marriage, who, we understand, is left wholly unprovided for.

THE second competition of the Municipal Art Society of New York, for designs for a cast-iron drinking-fountain, was decided a few days ago, by the award of the first prize, of two hundred and fifty dollars, to Mr. Henry Linder, and the second and third prizes, of one hundred and fifty, and one hundred dollars, respectively, to Mr. Charles H. Niehaus. The programme called for designs for a fountain which could be cast in large numbers, at a cost of about two hundred and fifty dollars, and set up in the public places of the city. The jury did not consider that any of the models submitted fulfilled the conditions completely, but thought it best, on the whole, to award the prizes. The Society does not propose to execute the design, but will recommend it for adoption by the city. Meanwhile, the prize models will be exhibited, together with those for a bronze base for a flagstaff, for which prizes were awarded some time ago.

IT seems to us that too much can hardly be said in praise of these competitions of the Municipal Art Society as a factor in the artistic development of the community. By offering prizes for what may be called abstract designs, without making any promises in regard to their execution, the element of wire-pulling "to get the job," independent of the design, which is the curse of competitions, is eliminated, and the competitors have to think only of pleasing themselves and a jury of fellow-artists, who will probably like what they do, instead of striving to call public attention by some startling novelty, or to flatter the known prejudices of some influential committee-man. It is often said that no really beautiful building was ever designed in competition, and it is certain that the best artistic work has been that carried out without the distractions and anxieties of the ordinary competitions; but the friendly rivalry of the great schools is found to be invaluable in the development of artistic talent, and the Municipal Art Society seems to have found the secret of keeping artists and the public interested in the creation of beautiful things, without the meannesses and injustices and disappointments which generally attend the actual carrying-out of public work.

THE Cornell Travelling-fellowship in Architecture for the present year has been awarded to Mr. W. Herbert Dole, of the class of 1894, an assistant in the office of Mr. Ernest Flagg, of New York. Messrs. Floyd Y. Parsons, of the class of 1898, and Ira C. Sheldon, of the same class, received honorable mention. Our readers will remember the novel scheme for this fellowship, the holder doing much of his work at the University, under Professor Van Pelt, crossing the ocean twice, for summer study. The success of such a course must depend very much on the professor in charge of the advanced studies of the scholar, but Mr. Van Pelt, who was a distinguished pupil of the French School of Fine-Arts, will be as good a guide as could be found anywhere, and the advantage, not only to the student, in working under such direction, but the University, in having such work going on within its limits, must be considerable.

THE T-Square Club, of Philadelphia, has made an appropriation of one hundred dollars toward a fund for the erection of a suitable memorial of the "successful termination of the late war with Spain," and invites the coöperation, to this end, of all citizens, as well as kindred clubs and societies. We cannot say that we would not like to see the generosity of the Club applied to the commemoration of some exploit of the United States more heroic than the Spanish War, but the spirit that it displays is excellent, and it certainly will not be the fault of our architectural and artistic organizations if American cities, within the next generation, do not become models of interest and beauty.

THE successor of Garnier in the French Academy of Fine-Arts is M. Constant Moyaux, who, as head of one of the most noted *ateliers* in Paris, is probably known to many of our readers. M. Moyaux was one of the most brilliant men who ever entered the Paris School of Fine-Arts. In his seven years' stay in the School he won twelve medals in the first class, and several in the second class; he was six times *logiste*, and won the second grand prize, the great Emulation medal, and, finally, the first grand prize, in 1861. His drawings, sent from Rome, gained for him the medal of the *Salon* in 1869. He has, however, been known rather as an accomplished artist, and very successful teacher, than as the author of any very noted buildings, and it is only recently that the French Government has commissioned him with the execution of the new court-house for the Cour des Comptes, in Paris.

DR. HENRY J. BARNES, of Boston, a well-known writer and lecturer on matters of hygiene, read before the American Public Health Association, not long ago, a paper on "The Arid Atmosphere of our Houses in Winter," bringing up the usual arguments to show that the air of our furnace-heated houses was too dry in cold weather, and that it would be better to add moisture to the air from the furnace, in some of the ways once common, but now rather neglected. As this is an important matter in arranging a heating-plant, it would be interesting to know whether experience, in this climate, is altogether favorable to the views of Dr. Barnes and other experts. It may be conceded that the air of the Riviera, at the same temperature, is more agreeable, and, probably, more conducive to health, than that of the Sahara; and, in warming a hospital, or factory, or any other place where people remained long at a time, a suitable amount of moisture should undoubtedly be added to the heated air; but for ordinary families, the members of which are constantly running from the warm rooms to the outside air, we have serious doubts whether it is not advantageous to keep the atmosphere of the house dry, rather than moist. Every one who has occasion to visit a greenhouse in winter knows that it is difficult to avoid taking cold in coming from the warm, saturated atmosphere into the frosty air outside; and in travelling from the South to the North in cold weather great precautions must be taken against exposure. No doubt, there is little danger of moistening furnace air so far as to make it resemble that of a greenhouse, or of the Florida seacoast, and there is probably a certain degree of saturation which is, on the average, most favorable to the health of any given family; but a little comparison of statistics of colds in houses with and without artificial moistening of the air in winter might be valuable.

INTERNATIONAL and professional comity induces us to publish here, and in his own words, a request handed to us by a Japanese architect, Mr. H. Mamizu, who as a commissioner from his government has been visiting Boston to examine the Library and other notable buildings. "I have been sent to this country to gather new informations and to buy something wanted for a large public building in proposal. I should like to visit, besides the architecture in the city, the most of the chief stores and factories which are closely connected to our line of business, but I don't know them, and have no more time to do so even if I had known them. It will be very happy to me if the contractors and manufacturers of hardwares, office-furniture, furnishings for wall and ceiling, lighting apparatus, heating and ventilating plants, supply of sanitary works and engines like dynamo, gas-engine, hoisting-engine, and modern improvement on any other branch of work in building, would forward their latest catalogues and price-lists to the following address: To Educational Department of Imperial Japanese Government." We leave the trifling inaccuracies of English uncorrected so that our readers may have evidence of the degree to which education is now being carried by the modern Japanese. Few European visitors would do as well.

SOME PALACES ON THE GRAND CANAL.[1] — II.

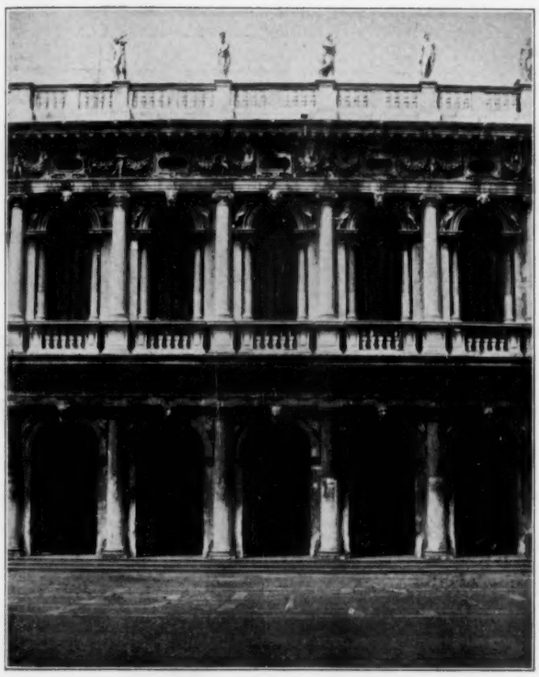


Fig. 8. Detail of the Library.

OPPOSITE to the Doges' Palace, and facing on the Grand Canal, rises the Palazzo Reale, a vast structure of many parts. The most important one of its subdivisions is the Library of St. Mark (Fig. 7). This was built to enclose a gift of books made by Petrarch to the city, a gift amplified from time to time by Cosmo de' Medici, Cardinal Bessarion and others. Its architect was Sansovino (1479–1570), perhaps the most brilliant and original architect of his time, a man similar in genius to Pierre Nepveu, architect of Chambord, or to the late M. Garnier.

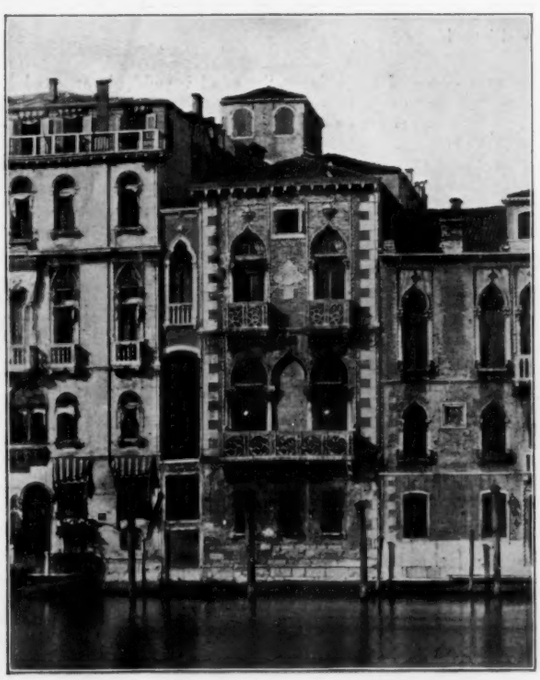


Fig. 9. Palazzo Contarini-Fasan [Casa Desdemona].

Sansovino had the misfortune to live in the days of Palladio and Vignola, the grammarians of architecture, who, notwithstanding the beauty of their own work, had reduced architecture for others to mere mathematical rules and formulas. These men were like teachers of rhetoric, men to whom *style* (an acquired thing) is more important than substance, which can only be evolved. Sansovino, on the contrary, only read Vitruvius to *correct* his proportions, not to create them; and the happy marriage of taste and utility in his work has earned him the naïve praise of posterity.

The Library of St. Mark is his masterpiece. It consists, generally speaking, of two arcades, one supporting the other. The lower is Doric, the upper belongs to the Ionic order, and is freely treated. Above rises the usual Renaissance balustrade punctuated at intervals by statuary (Fig. 8). Ignorant critics and, alas, men whose names are too great to be mentioned, have found fault with the proportion of the upper arcade, claiming that "it does not follow the rules of the Roman orders," that "the entablature is too broad." But these fault-finders seem to forget that the Library is not a Roman building;

Fig. 10. Palazzi Fini and Ferro [Grand Hotel].

it is Renaissance, an adaptation of Roman forms to the needs and requirements of the time. One of the requirements of the problem was an extra row of windows, hence the frieze was broadened to admit them. Again Sansovino was confronted by the alternative dilemmas which met Alberti in the Rucellai Palace at Florence. These were as follows: Should the main entablature be made proportional to the whole height of the building, it would appear too heavy for the sustaining order; if, on the other hand, it were made

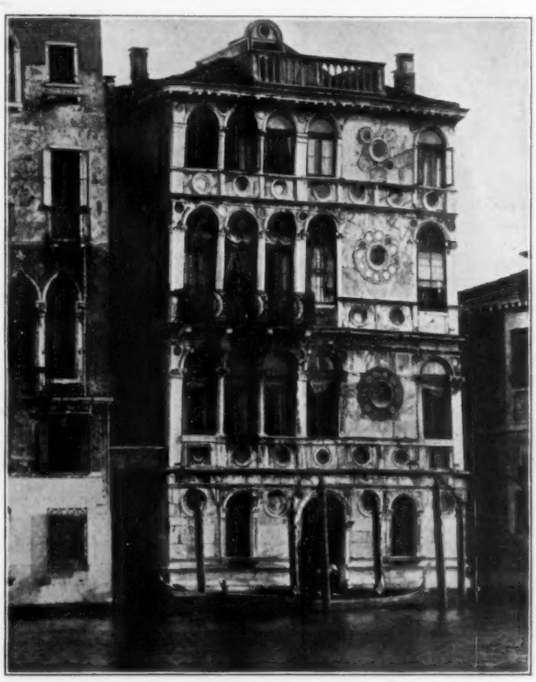


Fig. 11. Palazzo Dario.

proportional to the sustaining order (according to the rules) it would appear too small. Hence the main entablature was made larger, and the lower entablatures were made smaller, than would be proportional to their respective orders, thereby harmonizing the whole. This was the method pursued also by Sansovino — and who shall say that he was wrong?

[1] Continued from No. 1193, page 45.

"Imitation is the sincerest flattery," and it only requires a glance at the upper arcade of the Library (Fig. 8) to perceive that it has been more copied than almost any other in modern times. We see it in the Army and Navy Club, in London, and in quantities of theatres and small opera-houses. Even the sculptured enrichments have had their imitators over all the world. Finally, we must agree with Mr. J. A. Symonds, the most reliable student of the Renaissance, when he says: "It is impossible to contemplate its noble double row of open arches without echoing the judgment of Palladio, 'that nothing more sumptuous or beautiful has been invented since the age of Ancient Rome.'"

Many illustrious women have inhabited this palace at various times: Lucretia Conaro, Cariera Rosalba (the portrait-painter) and Marietta Robusti (the daughter of Tintoretto), a young girl so richly endowed with her father's genius as to have been invited to the Imperial and Spanish courts. She gave up all, however, to marry a humble jeweller, and, after a few years, died in obscurity. Even her grave is unknown, but occasionally, in Venice, one sees a bit of color glowing like a Giorgione on a dark panel, and the old cicerone shakes his head and murmurs: "Pauvra Marietta Robusti!"

Leaving the Piazza, and drifting down the Grand Canal, past the worn gray stones of the palaces, the mind is suddenly arrested by a modest building, exquisitely refined in execution, and with a dainty play of light and shade running in and out along its curves and carvings (Fig. 9).

It is called variously the Casa Desdemona or the Palazzo Contarini-Fasan, and was once the home of Eleonora Duse, the actress. At present it is occupied by Mr. Robert Hargous, of New York.

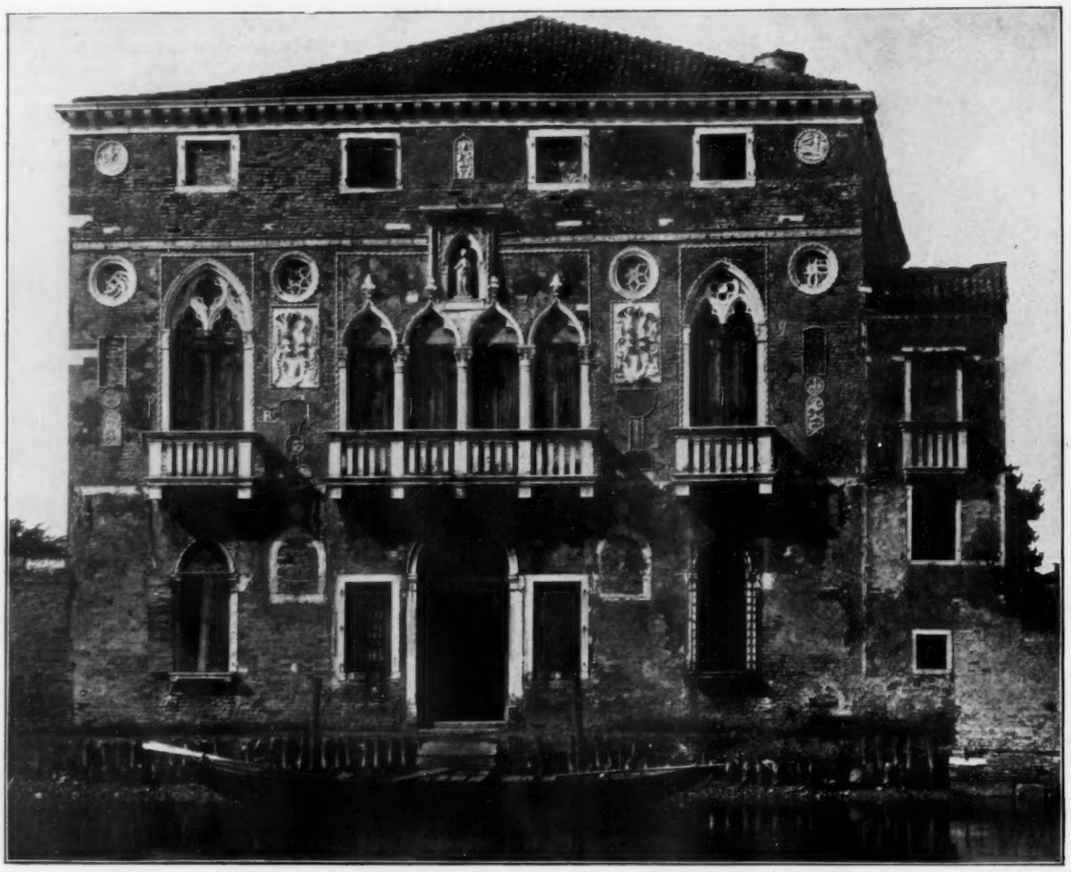


Fig. 12. Palazzo da Mula [Murano].

Fig. 14. Palazzo Contarini dei Scrigni.

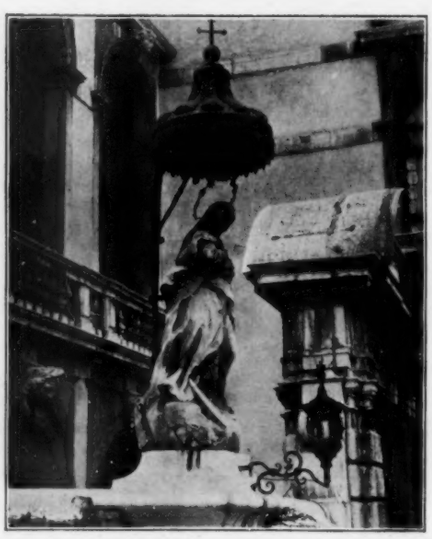


Fig. 18. Shrine at the Corner of the Palazzo Rezzonico.

This building is singularly characteristic of Venice, in that it is Gothic with Byzantine feeling and enrichments. The window arches, somewhat Saracenic in shape, define the major part of the structure as belonging to the transitional phase of the early four-

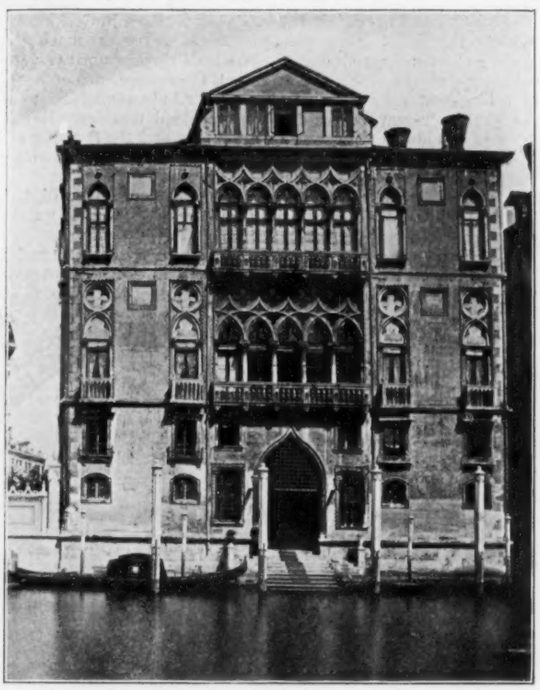


Fig. 13. Palazzo Cavalli.

teenth century. The finials are evidently additions of the fifteenth century — concessions to fashion, as it were. In the "*entresol*" (or perhaps we should say "*entre-l'eau*," in speaking of Venetian buildings) we find a similar concession to the fashion of a later date in the square windows belonging to the Renaissance. The same may be said of the Renaissance quoins at the corners and the modillions beneath the roof. But the modillions are mediævalized by carvings of grotesque heads, and even the quoins are modified by the cables

Fig. 19. Palazzo Giustiniani.

at the corners. Notwithstanding the variety of these elements, they all blend and accord with singular success — perhaps because of a recent general restoration of the whole. Each feature appears and melts into the harmony of the mass, like fugues in a dainty piece of musical orchestration, and the overhanging Gothic balconies are as beautiful as any in all Venice.

The Palazzi Fini and Ferro (Grand Hotel, Fig. 10), standing next door, have been so ruthlessly restored and remodelled that they have lost all character save that of hostelries. A more interesting example is the Palazzo Dario (Fig. 11), composed of Dalmatian stone and adorned with purple-veined alabasters, yellow marbles, and green serpentine. It belongs to a late development or Renaissance phase of the Lombard style evolved by a family of architects called the Lombardi, whose slender colonnettes, long pilasters and open arcaded galleries one learns to recognize occasionally in Piacenza, Verona, Pavia, or Milan.

Now the Lombard style was a phase of architecture which arose

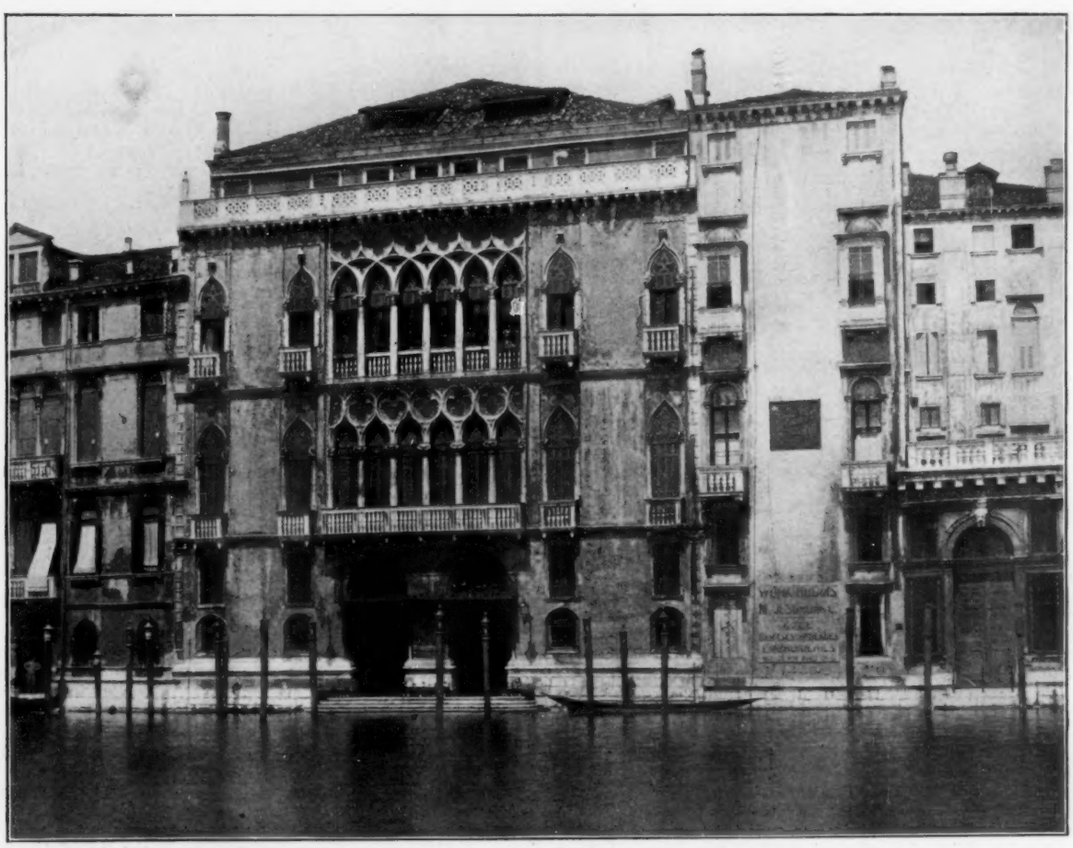


Fig. 15. Palazzo Pisani-Moretta.

among the descendants of the Goths and Ostrogoths, who in the fifth century, under Alaric and Alboin, poured in large hordes over Italy, and sojourned there. At first these northern fighters paid little attention to the arts of peace. They employed Italian builders for the sake of convenience, and, as a result, their churches and dwellings were frankly Roman or Florentine according to the taste of the architects employed. But during the eleventh and twelfth centuries these northern tribesmen ceased to feel sympathetic with their surroundings. The force of old traditions and previous environment began to make itself felt, and to associate its influence with their architecture. It showed in a peculiar form of sculptural imagery on their churches, and in a heterogeneous collection of pagan, Christian and Scandinavian symbols carved upon the heads and lintels of doorways: sea-serpents, eagles, dogs, Scandinavian dragons, David and Goliath, Lazarus, sirens and the four beasts of the Apocalypse often mingled genially together upon one and the same building. Great liberties were taken with the orders, and classical proportion was entirely neglected. In time, however, inlaid marbles took the place of eccentric carvings, especially in private dwellings and in palaces of the fifteenth century, like the one under consideration, and a serious attempt was made toward monumentality.

inlaid with marble and color after the manner of the Orientals. Besides, decoration has always appealed more to the Italians than constructive skill (if we consider the Italians as separate from the old Romans), and hence they have assimilated Gothic forms rather than Gothic principles.

In Venetian façades this assimilation is all that is necessary, and Venice may be said to contain the only really successful Gothic buildings in the Peninsula. Of course, the *mise-en-scène* has much to do with their charm: the reflected lights which ripple from the water, the crimson drapery of the sky at sunset, the orange sails of a transient fishing-boat from the lagoon, all contribute something to enhance the green-gray stones and deep-moulded marbles. But the massing of shadow in the centre of a building and the flanking of it with solid masses of masonry are a very high order of architectural distribution.

This may be seen to advantage in the Palazzo Cavalli (Fig. 13), in one of the Palazzi Contarini (dei Scrigni)[1] (Fig. 14) and in the home of the Pisani (Fig. 15), farther down the Canal.

These palaces were very prominent during the fourteenth and fifteenth centuries. Giacomo Cavalli of Verona, who fought so bravely against the Genoese, inhabited the first, the great territorial family

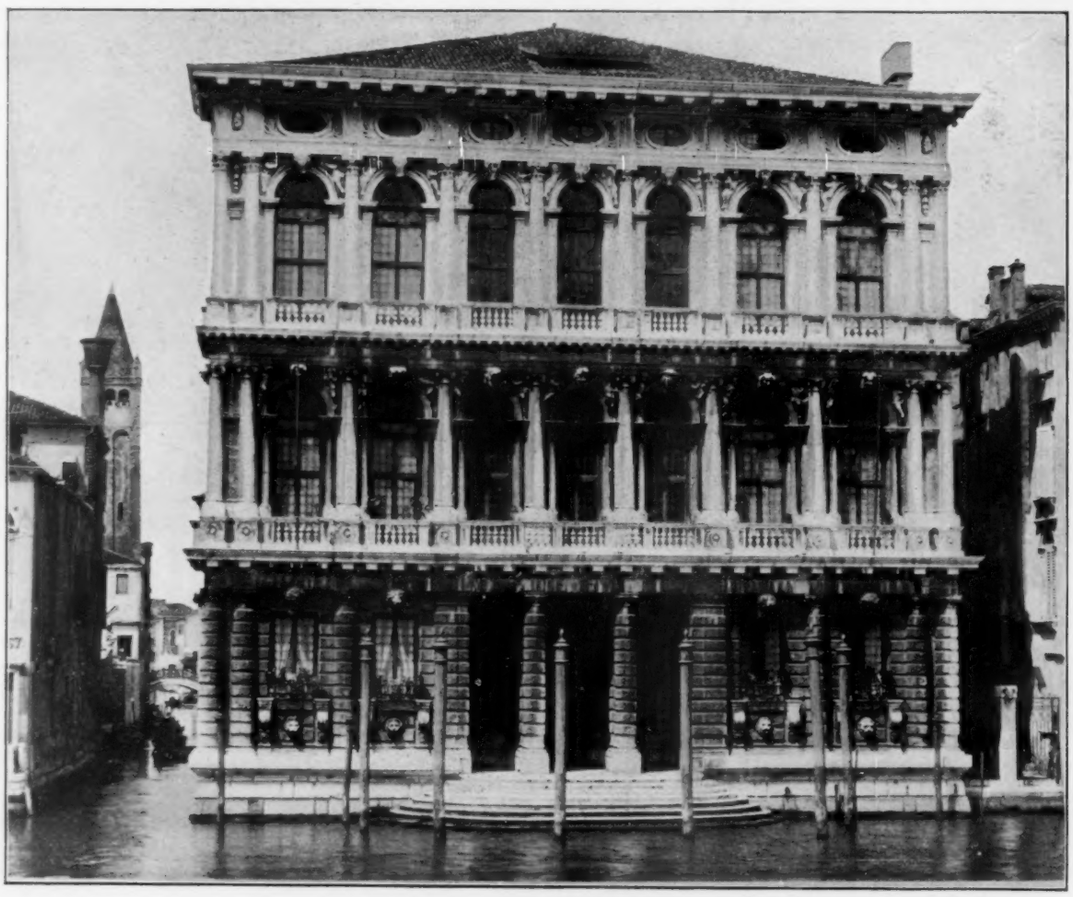


Fig. 16. Palazzo Rezzonico.

The lack of harmony in the Palazzo Dario between the lower story and the stories above is singularly inconsequent. But the wealth of color, the wavy figure-work of the marbles, and the unusual enrichment make us forget all incongruity; while the green water of the Grand Canal reflects the whole in a manner very like the charm of retrospect.

Close to the Dario, yet somewhat retired from the rest, rises the Palazzo da Mula (Fig. 12), Pointed in style, and dating from the fifteenth century. The walls are left rough to enhance the delicacy of the marble embroidery on the façade, and the composition is dignified in the extreme. In spite of the pointed arches and the delicate filigree tracery of Gothic design, the general feeling of the building is Classic. Thus the distribution of the windows is symmetrical throughout. So is that of the masses, save a wing to the right, which was added in modern times. Even the balcony is composed of a series of tiny piers supporting a level bar of stone, instead of miniature arches similar to the windows and doors. This is natural, and, perhaps, as it should be. Italians have never taken kindly to Gothic architecture, and so have seldom caught its spirit. True, Florence, Sienna and Orvieto abound with buildings arranged in Gothic form, but they are always informed with Classic feeling, and

of the Contarini occupied the second, and Vittore Pisani (the Gordon, or Skobeleff, of Venice) is said to have dwelt in the third.

The Contarini were particularly important during the great days of the republic. They alone furnished eight Doges to Venice, and even minor members of the family stood high in war, politics and literature. Domenico Contarini subdued Zara, which had revolted under the King of Hungary, Giacomo Contarini crushed the rebellion of Capo d'Istria and Trieste, as well as those in Greece, another member of the family captured the entire Genoese fleet at Chioggia, and Francis and Simon Contarini were poets of no mean order. It may not be superfluous to mention Cardinal Gaspard, who went as Ambassador to Charles V, obtained the release of Pope Clement VII, was made governor of Brescia and Papal Legate to the Diet of Ratisbonne.

The office of Doge, however, lost much of its significance in the hands of this family. But this was owing to the Secret Council of Ten. Thus under Giacopo Contarini the Doge was not permitted to receive fiefs for himself or children and was obliged to renounce those which he had already received. His sons could not marry a

[1] The Contarini (dei Scrigni, or of the Coffers) were a branch of the Contarini family, noted for their vast wealth.

foreigner without the consent of the Council; and none of his relatives were permitted to owe money over eight days. Every month the laws were read to him, and he was not permitted to side with any political party which might arise.

Hardly less prominent than the Contarini were the Pisani, who inhabited the third palace above mentioned, and one of the finest examples of Gothic on the *Canalezzo*. They, too, suffered much injustice from the Council of Ten. Indeed, this Council, created at the beginning as a check upon the nobles, rapidly became the scourge of the entire city. No one felt safe; no one knew but that his brother or son might be one of the inquisitors, and his executioner. Sometimes a man would suddenly awaken at night, feeling that something unnatural had occurred. Then he would sit up in bed, white, and listening nervously to a sound outside. Furtively peering from the casement he sees a knife flash in the air, like a snake's tongue. A splash follows; all is very still, and he creeps back into bed very quietly, for the secret tribunal is at work, and none dare inquire about that work.

This combination of terror and tyranny naturally affected the architecture, and it is interesting to note the sudden change which followed its abrogation. The Renaissance which had already cast its charm over Rome, Florence, and Vicenza passed on to the Queen

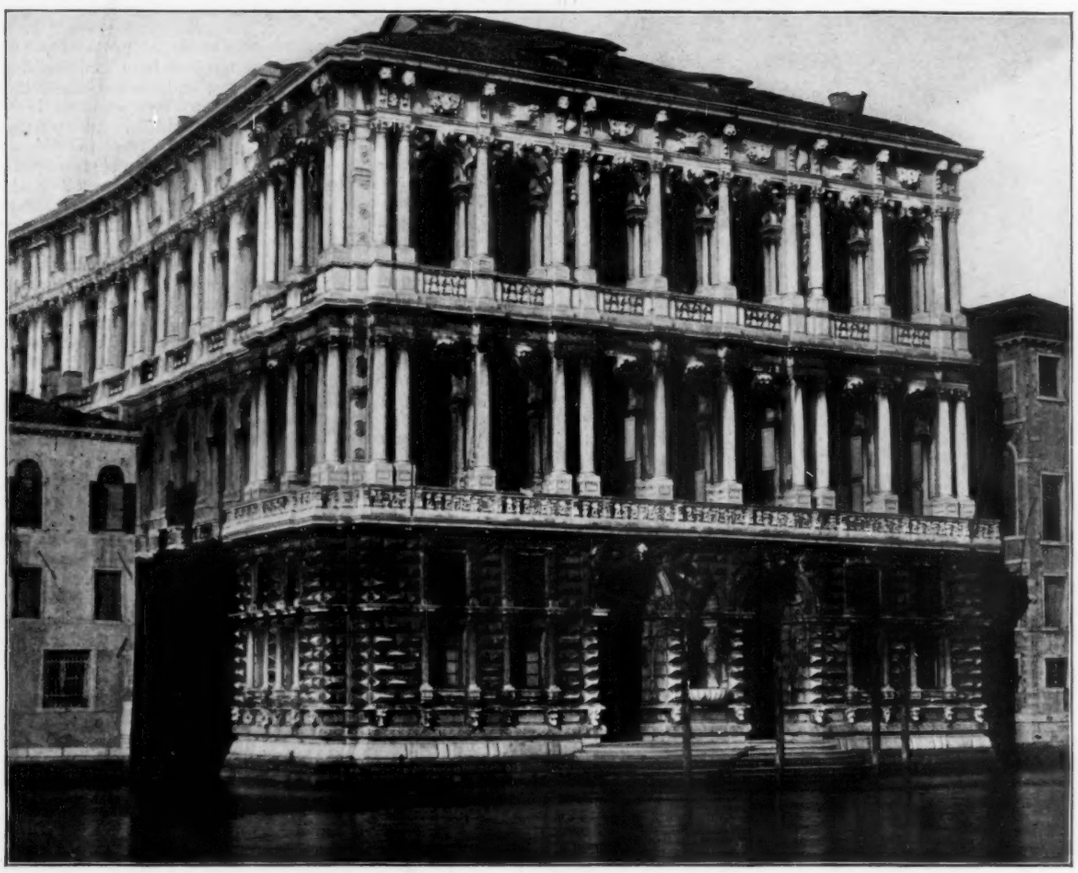


Fig. 17. Palazzo Pesaro.

of the Adriatic. A sturdiness and open self-reliance showed itself in the treatment of the façades; and in the seventeenth century a tendency toward luxury and independent ease set strongly in. We see it especially exemplified in the Palazzo Rezzonico (Fig. 16) and in Palazzo Pesaro (Fig. 17), both designed by Longhena, the architect of Santa Maria della Salute.

Critics have a habit of disparaging these palaces because they belong chronologically to the period of Decadence; but they seem to overlook the fact that these buildings are the exceptions of their time. True we cannot assert that every feature and moulding in them is either constructive or suggests construction; but rules of this kind are at best only attitudes of thought and should not always be rigidly adhered to, save by the beginner.

Massari remodelled the Rezzonico Palace in 1745, adding the third story, and the next year it was occupied by Cardinal Carlo Rezzonico, afterward Pope Clement XIII, the friend of the Jesuits. The shrine at the corner (Fig. 18) probably belongs to this period.

Internally the Rezzonico is one of the most sumptuous and palatial private residences in Europe. The walls are painted by Longhi and the principal ceilings are by Tiepolo and Luca Giordano. Here dwelt many of the exiled Spanish Bourbons. Here Robert Browning lived and died. The Rezzonico has been peculiarly fortunate in its owners, when one considers other Venetian buildings. Thus the Palazzi Grassi and Moncenigo became boarding-houses; a bootmaker occupies the home of Marino Faliero, and a French milliner inhabits the house of Bianca Capello, Grand Duchess of Tuscany; while the palace of Catherine Cornaro, Queen of Cyprus, is a pawnbroker's shop. Even the palaces of the Giustiniani (Fig. 19), designed by Giovanni and Bartolommeo Buon, are converted into a mosaic factory.

The Giustinani were the oldest Venetian family in existence, tracing their ancestry back to the Emperor Justinian. On one occasion the manner in which the line was preserved was somewhat original, for in the twelfth century every male representative of the family had been cut off in the Eastern wars save a pious monk who dwelt in the monastery of San Michele. Nothing daunted by this fact, the Venetian Senate despatched an embassy to the Pope, obtained the monk's release from his vows, and furnished him with a beautiful bride. After six years of married happiness the good monk retired once more to his monastery: one hundred years later the Giustiniani numbered forty branches and 200 members in the Senate.

As a building the Giustiniani palace is somewhat stiff and formal for a fifteenth-century Gothic design. But the proportion of the windows is extremely good, and the building throughout shows a sympathetic agreement between utility and art. The Foscari palace, next door (Fig. 20), is not so successful, on account of the upper story, which is weak. It once formed part of the three contiguous residences of the Giustiniani, but was purchased by Francesco Foscari (*circa* 1428). Here dwelt Henry III of France, Casimir of Hungary, the King and Queen of Poland and the Emperor Frederick. And here the gray hairs of Francesco Foscari were brought in sorrow to the grave.

Mr. Hare tersely tells the well-known story as follows: "Giacopo, the son of Francesco Foscari, was accused to the Council of Ten of having received presents from foreign princes, by a nobleman named Loredano, who believed that the death of two of his own relations had been due to the Doge, and who wrote in his books: 'Francesco Foscari, debtor for the deaths of my father and uncle.' Giacopo was tortured on the rack and, being found guilty, his father was forced to pronounce his sentence of banishment. For five years he languished in exile at Treviso, at the end of which time he was accused of having compassed the murder of Donato, a Venetian senator, from the mere fact of a servant of his being found near at the time. He was brought back to Venice, again tried on the rack, and banished for life, on presumptive evidence, to Candia. There Giacopo unwisely wrote to entreat the intercession of Francesco

Sforza, Duke of Milan. The letter was carried to the Council of Ten. He was brought again to Venice, flogged, and then tortured. Being asked what had induced him to write to a foreign prince, he replied that he had done it knowing the risk, but feeling that it would be worth while to undergo the torture a third time, to breathe once more the same air with his parents, his wife, and children. He was again condemned to be banished, but this time a sentence of close imprisonment was added.

"One farewell interview was allowed with the aged Doge and Dogaressa, his wife Marina and his children. 'Ah, my lord, plead for me!' he cried, stretching out his hands to his father, who replied firmly: 'O Giacopo! obey what thy country commands and seek nothing else.'

"On reaching his prison Giacopo died of a broken heart. Immediately afterwards, but too late, his innocence was completely established: Erizzo, a Venetian nobleman, confessed on his death-bed that he was the murderer.

"Yet the vengeance of Loredano was not yet complete. The sobs of the Doge on taking leave of his unhappy son were made the foundation of an accusation of imbecility and incapacity for government. He was formally deposed and ordered to quit the Ducal Palace

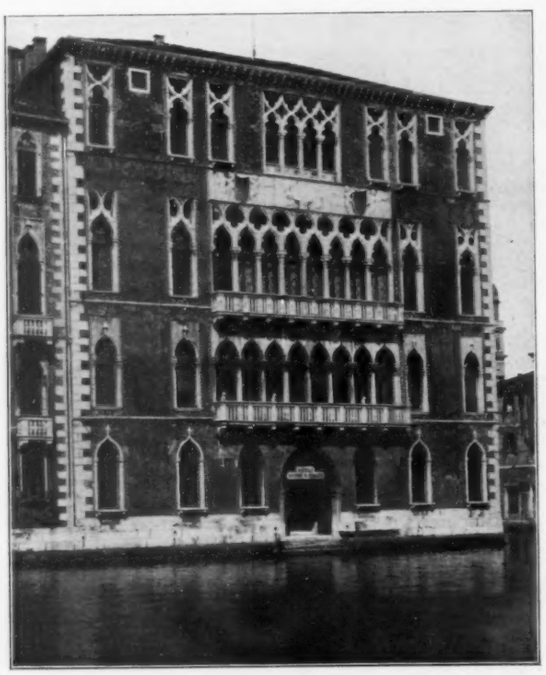


Fig. 20. Palazzo Foscari.

within eight days. Loredano had the cruel pleasure of carrying the mandate to the Doge, who listened quietly, and then answered: 'I little thought that my old age would be injurious to the State; but I yield to the decree.' Stripping himself of his robes, and accompanied by all his family, he left the palace where he had reigned for thirty-five years and returned to his own house on the Canal. But the sound of the great bell which announced the election of his successor was his death-knell: he burst a blood-vessel and died instantly. So great was the popular excitement on hearing of this event that the Senate forbade 'the affair of Francesco Foscari to be mentioned on pain of death.'"

A recent restoration has raised the Palazzo Foscari to its original magnificence, architecturally. But the rooms which once glittered with the cloth-of-gold and cramoisie velvets of kings' courtiers, cardinals and court pages now accommodate the students of a commercial college with its gray routine. C. T. Mathews.

[To be continued.]

Mosaic found near Pompeii. — The Naples correspondent of the *Times* reports further interesting discoveries at Pompeii. In Pompeii itself little that is sensational has been found this year, but a small excavation outside the walls has revealed one of the finest mosaics of antiquity, surrounded by the most exquisite garland of flowers, with a theatrical mask thrown in to break the pattern. It is a picture representing a group of seven philosophers, one of whom is seated with a papyrus in his hand, while the others are grouped around listening. In the background are ruined pillars and a representation of the Areopagus of Athens, with rocks and buildings. The mosaic, which is in perfect condition, is in polychrome, in diminutive cubes, and of very fine workmanship, equal in merit to those by Dioscorides of Samos in the Naples Museum. The Italian Government has purchased it from Signor D. Acquino, and it will soon be exhibited in the Naples Museum.

SOME PECULIARITIES OF WOOD.[1]

THE most noteworthy peculiarity of wood is that this material which has been so universally employed since the dawn of civilization is still so little understood, so imperfectly known as to its nature, characteristics and properties.

While the specifications for iron and steel materials have been developed to such *finesse* that even the chemical composition is prescribed as determinative of the quality desired, it is questionable whether the majority of engineers and architects know what points to make in the specifications for wood materials, and from the many inquiries the writer has received while in charge of the timber-physics work of the U. S. Division of Forestry, it would appear that they are not prepared to *inspect* the material which they have specified.

The reasons for this absence of knowledge and *finesse* in the use of wood are probably two: wood has been apparently plentiful and cheap, hence not calling for a more economical and effective use; and, furthermore, being a very non-homogeneous and variable material, or, rather, structure, the precise study of its properties and characteristics has been too difficult and cumbersome.

Yet it is possible to study wood in a scientific manner with the assurance of practical results, as has been shown by the extensive and fruitful series of studies which one wise administration of the U. S. Department of Agriculture authorized and another wise (?) administration discontinued just when most promising progress had become possible and the first important results had been announced. If no other fact of value for the practitioner had been obtained than the discovery that the "strength of a beam at the elastic limit is equal to the strength of the material in compression" the value of the work could not be denied, while as to the propriety of the Government undertaking the study of this difficult and complex subject there could be hardly any dissenting voice, especially when it is admitted that it is the function of the Government to secure a conservative policy in the treatment of our forest resources and presumably also of the material which this resource furnishes.

The defects in our knowledge regarding the peculiarities of wood lead naturally to a crude, improper or wasteful use of the material, which could be greatly improved, even if only the existing knowledge were more closely applied. There is a possibility of specifying, selecting and inspecting wood materials, which a knowing architect can now secure, thereby increasing the efficiency, durability and stability of the structure.

There are those who are inclined to think that there is no need of greater *finesse* in this direction, either because we have such an abundance of wood materials that their wasteful use will work no harm and need not be considered, or else that wood is destined to grow out of use and is bound to be supplanted by other materials.

The first position has been true enough for the past; but we are entering on an era when, through the wasteful exploitation of our forest resources, without attention to their reproduction, the abundance of good wood materials is bound sooner or later to cease, and the decrease in supplies will force upon us the necessity of greater economy.

The second position, namely, that wood will be displaced by substitutes, is also true only in part. Since we are using only from three to ten times as much wood now as other civilized nations, undoubtedly the necessity of economy will force us to reduce our wood consumption and to substitute stone and iron, which in many cases will prove an advantage.

But he who thinks that wood at any time will be entirely or practically supplanted by other materials shows ignorance as to the true merits and characteristics of that material which is as much an indispensable requirement of our civilization as our food materials.

What the lowest requirements of wood for high civilization in the temperate zone of the world are may perhaps be learned from the consumption of such people as the German or British, the latter relying almost entirely upon importations; the former, in spite of their methodical treatment of their forest resources, and their comparative poverty, were forced to import more than two thousand million feet B. M., above exports, in addition to their home production. The consumption of these people, being about one-quarter of our consumption, ranges between 150 and 160 feet B. M. of saw material per capita, which may be considered as expressing the absolute necessity of a modern settled civilization without expansion, such as the unsettled condition of our country induces.

There are a number of characteristics of this material which make its continued use desirable. It would lead us too far to point them out in detail. Perhaps it is not realized that a beam of long-leaf pine will bear without detrimental deflection a load from six to eight times as great as an iron bar of the same length and weight, a cubic foot of iron weighing ten to thirteen times as much as a cubic foot of that wood and costing at least twenty times as much. That means the iron structure is at least twice as expensive. In the combination of light weight, stiffness, elasticity and strength with cheapness and ease of working wood excels all other materials and renders it especially invaluable in all rapid constructions. But the most valuable and unique feature of wood, which is undoubtedly unconsciously but yet not fully appreciated, is the fact that it is a poor conductor

[1] A paper by Prof. B. E. Fernow, Dean of the New York State College of Forestry and former Chief of the Division of Forestry, United States Department of Agriculture, read at the Thirty-second Annual Convention of the American Institute of Architects.

of heat and electricity. This property, if no other, will assure to this material a continuous use in the arts, not only for utensils, furniture and finishings but for construction in general, since a metal substitute, the only material we can think of, would not only bring discomforts but dangers, which the increase of electrical appliances would constantly multiply. Hence a better knowledge of wood leading to more effective use will remain desirable.

There are three properties peculiar to wood which make its use as a material of construction appear objectionable and it is these of which I wish mainly to speak: its liability to shrink and swell, its liability to rot, its liability to inflammation and combustion. All three of these defects can be, and at least invaluable permanent structures ought to be, overcome by proper selection, inspection and treatment of material.

The first two defects are due partly to the one and the same property of wood, namely, its high hygroscopicity, — from 50 to sometimes over 150 per cent — related to dry wood — of the weight of a freshly felled log in water. This is gradually lost in seasoning, but unless artificial means are applied this seasoning progresses rather slowly and, with some species, a "yard-dry" condition is not reached in years — if by "yard-dry" any definite stage of moisture condition is meant. The moisture contained in such "yard-dry" wood, in addition, is very unevenly distributed through the stick and hence influences the behavior of the stick unfavorably as regards swelling and shrinking.

As a matter-of-fact, wood is never entirely dry, even when artificially dried: as soon as it comes from the dry-kiln thoroughly dried its high hygroscopicity asserts itself; it takes up water from the air, more or less according to the relative humidity of the latter, so that even the best-dried wood in use will contain at least 8 to 10 per cent of moisture, or even more. If left unprotected, unvarnished and unpainted, this percentage changes with the change in the atmosphere and hence shrinking and swelling, or "working," is the result.

This, of course, is known to all architects and wood-workers, but the effort to avoid this most troublesome peculiarity of wood does not appear to be always in due proportion to the knowledge.

There is, of course, a specification of "seasoned" material, but is there any attempt at defining what is the requirement of "seasoned" condition? And is there any inspection? If there were, fewer floor-joints would open and more doors would shut snugly.

A single inspection-test would be to cut a small piece from the middle of a floor-board — the end would not do, as it is always the driest part — weighing it, placing it in an oven or other heater until it does not lose any more weight, when the difference between the first and last weight gives the weight of water lost; this divided by the first weight and multiplied by 100 gives the moisture-per-cent of the wood. If it is greater than that specified, say 10 per cent for the best work, and 12 to 15 per cent for cheaper constructions, there is cause for complaint and rejection is justified.

To be sure, it is better to specify so as to avoid the complaint as much as possible. Specify for kiln-dried material, which is preferable to yard-dried because, as a rule, more evenly dried. For very valuable work immersion in water or steaming should be practised. Immersion in water, without in any way impairing the value of wood as building-material or otherwise, seems to decrease the hygroscopicity of wood, upon which property the swelling and shrinking rests. The Japanese, excellent wood-workers, whose careful use of wood should be an example to us, practise this immersion in ponds to a large extent.

Another specification which reduces the factor of shrinkage is for quarter — or rift — sawed material, for it is peculiar to wood to shrink and swell, or "work," more in tangential direction than in any other. Longitudinal working is practically *nil*, but the shrinking in tangential direction, *i. e.*, in direction of the annual ring, is at least 50 per cent more than in the radial direction. This is due to the fact that the thick-walled summer wood of the annual ring, which on account of its thick walls takes up more water and shrinks or swells more than the thin-walled spring wood, is in such position towards the latter that in expanding or contracting it carries the latter with it — the summer-wood shrinkage per cent prevails — and hence the "working" is more pronounced in such a bastard board than in a quarter — or rift — sawed board, which contains the summer wood in a position where it cannot affect the spring-wood shrinkage, and also in a more even, regular distribution of spring and summer wood, thus insuring a more even working along the whole face and hence no warping.

If immersion is advantageous in promoting thorough seasoning, reducing liability to swelling and shrinking, it is on that account also advantageous in reducing liability to rot because by the immersion soluble materials which serve as food of some of the rot-fungi are leached out.

Where, however, the question of time is important, there are other processes which are expedient and effective in keeping out fungi and, indeed, more so than mere immersion in water.

Some of these processes, as creosoting, treating with chloride of zinc or other mineral salts, are well known, and practised in special engineering works, as in canal and railroad building; they are, however, rather expensive and require a special plant, which, unless situated where the architect practises, would forbid their use.

But there is now coming to the front an effective, cheap and simple means of increasing the durability of wood; it is the application of heavy coal-tar oils, which go by the name of "Carbolineum." There are various brands trying to establish themselves, but it is still questionable how far claims of superiority can be demonstrated, and, especially when a higher price is also exacted for such claim, it will be well to inquire closely into the superior merits. This material can be applied with a brush, or, better still, by immersing the wood in the hot liquid for some hours or days. It penetrates the wood to sufficient depth so as to protect it against moisture and the accompanying rot-fungi in such places as architects are likely to have to deal with. Three pounds to the hundred square feet, enough to be effective, would not, even at the unnecessarily high price asked for some brands, increase the cost of a building so as to prevent its application even in cheap structures.

Decay usually starts not in the heart but in joints, and points of contact, mortise-holes, etc., where moisture collects and is not rapidly dried off. Hence contact-surfaces and especially all joists and timbers in contact with damp brick walls, mud-sills and posts and material placed where a proper circulation of air cannot be had and where painting after thorough seasoning is not practicable, should be protected for sanitary reasons as well as to secure stability and permanency. To be sure, there are other precautions, specifications and inspection which can be applied to reduce liability to rot.

The choice of species to be placed in such situations should be considered, to secure at least partial immunity from rot: the Cedar tribe, with the redwood and bald cypress, seem especially capable of resisting rot for a long time. Oak and chestnut come next among the more common woods. It must, however, be understood that these, too, are liable to rot, unless properly handled. If not properly seasoned before using they are as liable to decay as other species; if felled in summer, when temperature and moisture conditions are favorable and fungus-spores seek a location, incipient rot may be more readily introduced; if painted while not thoroughly seasoned the protection intended for the wood becomes a protection to its enemies; bastard cut faces are more apt to admit water readily and give lodging to fungus-spores. Circulation or air which carries off moisture is one of the most effective precautions against decay.

Perhaps the most objectionable peculiarity or property of wood is its inflammability and liability to combustion. While, no doubt, a large part of the $150,000,000 worth of property which is annually lost by fire in the United States owes its destruction to the excessive and careless use of this combustible material, it is not at all sure that not a very large per cent of this loss can be avoided without discarding the otherwise so useful material.

It is well to know in this connection that the supposedly fireproof construction of iron and stone has, after all, proved itself in cases of fire in the contents of the building often more disastrous to the property than a properly designed wood-construction would have been; the heat of the fire warping the iron girders out of shape and causing the collapse of the entire building, while in the wood-and-stone structure the walls might have been left intact and the chances of success in subduing the fire by a good fire-department would have been greater.

But aside from the fireproof mill-construction with wood, which Mr. Edward Atkinson has been most instrumental in bringing about, there are means for reducing the danger from fire in structures of a simple nature applicable to even the cheapest buildings.

The possibility of "fireproofing" wood is so well established that it is unnecessary to risk the hazards of construction with untreated material.

I do not mean to say that an "absolutely fireproof" building can be constructed with wood, or, indeed, with any material. The attempts in securing such have been and will probably remain futile. All we can expect to attain, just as with resistance to decay, is a degree of retardation, which is sufficient for most cases; "fire-retardent" rather than "fireproof" construction should be the aim. If we are satisfied to reduce the danger and merely delay the conflagration until a fire-department can arrive and prevent its spread the problem can be solved by reducing the *inflammability* of wood without securing absolute incombustibility.

There are a number of substances which have proved themselves efficient fire-retardents, some of which can be cheaply enough secured to make their application practically and universally possible.

A full account of these is given in an excellent paper on the subject by Mr. Thomas H. Norton before the American Association for the Advancement of Sciences in 1894. Those interested will do well to study also the account of a series of experiments undertaken at the instance of the Belgian Government by Boudin and Donny and reported in 1887, a copy of which may be found in the library of the Division of Forestry.

From this report we find that, while untreated wood took fire under the conditions of the experiment at the end of one and three-quarters minutes, wood treated with water-glass or lime, or with ammonium phosphate or various ammonium salts resisted inflammation for thirty to forty minutes, while other substances produce less resistance; the ammonium phosphate being the most efficient, acting by the production of a non-combustible vapor. If applied so as to fully impregnate the wood, this would prove rather expensive, as 100 pounds cost $25, and would not saturate more than 25 cubic feet. But there is no need of a thorough impregnation, especially when one of the cheaper protective coatings of asbestos in water-glass, etc. (which are efficient by being poor conductors of heat) are used in addition.

It must not be forgotten that in the absence of encouragement cheaper methods and materials are slow in being brought forward.

There are even now cheap antipyreas to be had, like calcium chloride and ammonium chloride, which, though less effective, would greatly decrease the liability to conflagration.

Finally, it may be of interest that a generous application of silicious compositions to all exposed woodwork has been so effective in reducing fire-danger in England as to cause a decrease of 50 per cent in the insurance-rates on houses thus treated.

The architect is, we believe, now in the position of bringing into the home he has built "that peaceful security and liberation from a dreaded tax which comes with the practical abolition of danger from conflagration." When due attention is given to making buildings fireproof and rotproof, not only safer, more durable and more sanitary buildings will result, but in the end they will be cheapened more satisfactorily to the investor.

As Mr. Constable has pointed out before the Boston Society of Architects, failure to secure satisfactory results comes often from the incomplete attention to all points of the problem of successful fire-retardent construction, an absence of consistency in plans and execution. Hence the progress of reform is retarded.

I am inclined to think that 20 to 50 per cent more efficiency can be secured in the use of wood-materials than is now obtained, by merely applying the knowledge now in existence.

In order to give some practical point to these few hints of reform, I would suggest that if your society is organized not only for exchange of views and facts relating to your art but also for its advancement, a committee to study and report on specifications for wood-materials so as to at least reduce as far as possible the dangers from rot and fire would be a most laudable direction of associated effort.

TRACK-ELEVATION AND ITS RESULTS. — THE FINE-ARTS BUILDING. — THE FULLARTON AUDITORIUM AT THE ART INSTITUTE. — NEW WORK. — DEATH OF W. W. BOYINGTON, ARCHITECT.

THOMAS CARLYLE somewhere makes the extravagant statement that he would rather have built one of his father's good honest stone walls than to have given the world his "*Frederick*" or "*French Revolution.*" If he really felt so, and few people will ever believe he did, how his heart would be gratified, or filled with envy, we cannot tell which, to see the "honest stone walls" which are radiating out from Chicago in all directions along the lines of the railroads. At the time of the World's Fair the Illinois Central found it necessary to elevate its tracks and place subways at grade-crossings. The result was so advantageous not only for the city in the protection against loss of life but to the road itself in the matter of damages and rapid transit that a very real entering-wedge was made for the good work. Since then an especial department for this class of work has been created by the city, and, an understanding having been reached between the municipal authorities and the railroads, it will not be long before not only all the roads entering Chicago have their tracks elevated, but their yards as well. As stipulated by agreement, a very large percentage of the work will be finished by the end of 1898. In going out of or coming into the city people see that this work is being carried on, but few appreciate what a stupendous undertaking it is, or how enormous is the amount of money spent to carry it out. Track-elevation has been reduced to such a science that it goes on without any material interruption to the traffic of the road, and, aside from the jolting and shaking which the passenger has to endure for a few months, he gives the matter but little consideration and consoles himself with the thought of more rapid transit in the near future. The tracks are raised in sections of 300 yards or more, being lifted by jack-screws, the dirt being rammed in under them while they are so held up. The elevation is so distributed as to allow a gradual incline from the surface-level to the elevation-grade.

Some of the retaining-walls are of masonry, while others are of concrete, as is the case at the 16th-Street crossing, one of the most dangerous ones in the city. Every one reads of the dreadful accidents which are continually happening at this as well as other crossings, but few of us realize until confronted with the figures the enormous chances which are constantly being taken all over the city. Chicago, the greatest railroad centre of the world, has 115 lineal miles of main tracks within the corporate limits. This is not counting the different double tracks, but each system as one track, and there are 1,500 miles of other tracks in the city, aside from the main systems, such as belt-lines, switches, etc. To June of this year from the early part of 1892, 19 miles of the 115 had been elevated and eighty-nine grade-crossings had been done away with. This work cost over $6,000,000. The work required by the ordinance to be done this year will amount to about $9,000,000 worth, and the ordinance which will push the work in 1899 has already been enacted. In this way matters will continue till all the entering tracks are from 10 to 15 feet above the surface-level. In some of the down-town districts subways are not feasible, and in this case the tracks are rather buried than raised and viaducts are built over them.

As said before, it is difficult to realize the extent of the undertaking or how much it was actually needed. At 16th Street the following statistics have been gathered by the Track-elevation Department of the city: From 6 A. M. to midnight of one day 743 trains, with 3,952 cars, passed across Clark Street at this point. During these eighteen hours 827 street-cars, carrying 16,540 passengers, passed over, also 2,232 wagons, trucks, and other vehicles, with 4,464 drivers and other persons. This amounts, in total, to over 20,000 people passing over this crossing in the eighteen hours.

At this point, as at others, the city and railroads have coöperated and a fine new viaduct has been constructed. Figures and statistics speak louder than words, and the following estimates show what an enormous undertaking the raising of the tracks is proving to be. The facts as published in one of our local papers are as follows: —

Total lineal mileage of main tracks inside the city limits		115
" miles of track elevated as per ordinances passed since 1892		51.7
" mileage to June, 1898		19
" " yet to be elevated		32.7
" miles elevated during 1898		23.5
" grade-crossing eliminated as per ordinances passed		271
" eliminated by complete elevation		86
" yet to be eliminated		185
Approximate estimated cost of elevation under ordinances	$17,380,000	
" amount expended to June 1, 1898	6,000,000	
Yet to be expended	11,380,000	
Amount expended in 1898	9,000,000	

When we realize the amount of stone needed for the masonry, the sand for filling, and the number of iron girders needed for subways at crossings — all this aside from labor — the figures of the estimates do not seem large.

It is a comfort for those interested in the development of our city to see her outgrowing her "awkward age," as it were, to see that she is no longer being treated like a big village; and it is by just such works as these that she will be enabled to be compared favorably with other cosmopolitan places. It is with pleasure that we see also a desire to put good work of an artistic nature in some small halls which have been opened this fall.

Adjoining the Auditorium, the building known as the "Studebaker Building" has been added to and transformed into what is known as the "Fine-Arts Building." The name has rather a pretentious sound, but it is meant to indicate that the place is to be the home of the fine-arts rather than that all the arts are displayed in its interior construction. Its entrance-hall is agreeable enough in general outline, but a disappointment is immediately felt, owing to the fact that it is lined entirely with imitation marble. One of our local publications remarks that, "By the use of litho-marble the architect has obtained the bold and impressive effect of the whole having been literally carved out of a solid bed of Sienna marble." The bold (and one might also add bad) effect is further heightened by having some lithographs and etchings, such as can be purchased, framed, at almost any department-store for $2.49, hung on these marble walls of the main hall! Opening off of this corridor are the halls for chamber-concerts, one a small one, and one of which the seating capacity is 2,000. The smaller one is entirely commonplace in decoration and furnishing, but it is the larger one, where an attempt is made at artistic decoration besides what is usually done by the upholsterer or ordinary house-decorator, which was before mentioned as a hopeful sign of better appreciation of, and desire for, the beautiful here in Chicago. The work around the proscenium-arch was given in charge of Mr. Oliver Grover, a man whose work has laid much in mural painting. He has here treated his subject in a pleasing manner, the whole feeling of the two compositions being classic. Neither of them seems as strong as certain others of Mr. Grover's works. Certainly the drawing in the nude, or nearly nude, figure is not up to the high grade of excellence which makes one unconscious of the drawing. The walls of the auditorium are in deep, dark red, and are rather a startling contrast to the light woodwork. Though not above criticism, such work as is found here is certainly work in the right direction, and shows that there is a growing appreciation here for things artistic.

No influence is greater and stronger in this line of education than that which emanates from the Art Institute, with its fine collections, its busy school-life and its various courses of lectures, which have grown to be a regular feature in the winter life of the place, and which are attended by large and enthusiastic audiences. The way Chicago attends lectures and listens to papers, inside the Art Institute as well as outside, makes even the true-born Chicagoan smile, and reminds one of the reply of a reputed Chicago girl to the remark of an Eastern woman that she would not care to live in Chicago because of its lack of culture: "Why, great Scott, Madam! we just hustle for cult all the time." And that seems to be just about what we are doing, and it cannot be many years before vast results will be observed. Certainly one source of education to those who listen to the lectures of the Institute this year will be that they will be delivered in the beautiful little auditorium recently given to the Art Institute by Mr. Fullarton in memory of his father, and which, by the time this letter is in press, will have been formally opened. The addition has been made in part of what was the central court, and opens off from the northern side of the main entrance-hall. The little auditorium, which has a modest foyer, is quite a steep amphitheatre, has a seating capacity of 500, and ends in a small stage,

semicircular in shape. This much for the bare facts; but not half has been told till one touches on the decoration and the treatment of the electric-lighting, which are altogether charming, and which are the work of Mr. Louis Millet. The whole scheme of the decoration and coloring is Italian in treatment, bordering on Pompeiian. A row of graceful columns separates the auditorium from the small foyer, whose ceiling is a series of small domes, decorated in light tints. In a recess, at the back of the foyer, is a portrait of the elder Mr. Fullerton — this and the small F, in the midst of the very simple designs on the backs of the seats, being the sole reminders of the memorial nature of the building. The coloring of the walls is Pompeiian red most successfully combined with a cool, almost sage, green. Above a certain point the walls take on a dome form, till they reach the fine, stained-glass skylight which admits daylight into the interior when needed. The glass is greenish in color, and harmonizes well with the rest of the coloring of the place. From the centre of the skylight a very beautiful crystal electrolier gives the chief light to the room. The electric-lights are all veiled behind the crystal, and so only shed a white light which does not dazzle. The side-lights are also hidden, being placed behind the cornice just where the springing dome of the ceiling commences, and reflect upon it. The device, though not new, is unusually successful in this place. In the same way, the lights are hidden in the foyer among the mouldings, reflecting up onto the ceiling. The semicircular stage is closed with a series of green plush curtains, hanging in straight, simple folds, being of the same cool green shade as the green used in the wall-decoration. The entire thing is charming, and it will certainly be a real pleasure for many people to sit in the place, besides filling a want, which the Institute has long felt, for a new and better-arranged lecture-hall. The old one was incommodious, being all on one level, and, besides, its space was needed for the constantly growing collection of casts.

The Art Institute, which for years has been intrusted with the care of a very valuable collection of pictures, has recently, on the death of its owner, Mr. Albert Munger, become the owner of them, much to the delight of many a frequent visitor, who would have hated to see the collection, which is a very rare one, scattered.

Though architectural activity can decidedly not be said to exist at present here, still several large buildings are either nearing completion or are in the process of construction. The addition, as large as the first original structure, to the New York Life Building is one of the former, and a large edifice destined for the use of the wholesale millinery trade, on Michigan Avenue, will count as one of the buildings of this year. Though built as one structure, it is curiously divided into three divisions, the divisions being made quite apparent on the façade. The south 40 feet will be six stories high, while the middle 62 feet and the north 62 feet will be seven stories high. Holabird & Roche are the architects for the entire building, except on the façade of the most northern 62 feet, for which Mr. Louis Sullivan is making the designs. The front of the two most northern sections will be of red pressed-brick, and metal cornice, while the street-front of the most northern portion will be of white-enamelled terra-cotta, rich in ornamentation.

Architectural circles have lost lately, by the death of Mr. William W. Boyington, one of the oldest members of the profession in this part of the country, Mr. Boyington being over eighty years of age, who, until comparatively recently, was associated with the active building interests of the city. He had for years practised in Chicago, and his name is associated with many of the older buildings of our city. Among the buildings designed by him were the Board of Trade, Lake Shore Rock Island Station, the North Western Station, the Illinois Building at the World's Fair, the old Exposition Building, the Water Works Tower, and the Columbus Memorial Building. These are only a part of his work in our city, and many neighboring places have specimens of design.

SOCIETIES

SKETCH-CLUB OF NEW YORK.

REGULAR monthly meeting of the Sketch-Club of New York was held at the Hotel Avellanet, Saturday, November 5th.

Dinner was served at 7 P. M., at the conclusion of which a short business meeting was held.

The Current-work Committee were instructed to prepare a Club exhibit for the winter exhibitions.

The Executive Committee were requested to arrange for lectures on Structural Ironwork.

In an address the President gave an outline of the present standing of the Club and explained plans for the winter's work.

During the evening, congratulations were extended to the Vice-President, Mr. H. H. Braun, whose design was awarded Second Prize in the competition instituted by the Municipal Art Society for a flagstaff standard for the City-hall plaza, New York.

The new rooms of the Club are to be at 19 West 24th Street — being centrally located, they should prove to be a popular rendezvous.

During the month a life-class will be formed, also classes in modelling and water-color, under competent instructors.

N. HAUSMAN, *Recording Secretary.*

ILLUSTRATIONS

[Contributors of drawings are requested to send also plans and a full and adequate description of the buildings, including a statement of cost.]

FACADE ON THE QUADRANGLE: LIBRARY STACK-BUILDING, PRINCETON UNIVERSITY, PRINCETON, N. J. MR. WILLIAM A. POTTER, ARCHITECT, NEW YORK, N. Y.

[Gelatine Print, issued with the International and Imperial Editions only.]

OTHER illustrations and the plan of this building may be found in our issue for Nov. 14, 1896.

A PROPOSED ALTERATION. MESSRS. KENNEDY, HAYS & KELSEY, ARCHITECTS, PHILADELPHIA, PA.

THE LOGETTA AND THE LIBRARY OF ST. MARK, VENICE, ITALY.

THIS illustration is Figure 7 of the article on "Palaces on the Grand Canal," elsewhere in this issue.

COMPETITIVE DESIGN FOR "SHATTUCK PRIZE" FOR ARTISANS' HOMES. [OPEN COMPETITION.] SUBMITTED BY MR. C. HERBERT McCLARE, ARCHITECT, CAMBRIDGE, MASS.

PROGRAMME. — Upon four acres of land in the suburbs of a large city it is required to provide for the housing of fifty artisan households in an attractive, agreeable, sanitary and independent manner, in such a way that the property shall be recognizable as a single property and shall provide, at rentals within the reach of the artisan class, a fair return upon the invested capital.

The land is square and is bordered upon one side by a street — the main thoroughfare of the suburb — and it is valued at 15 cents per square foot.

In considering rental values, competitors should remember that from the available wages of the occupant has to be deducted the cost of car-fares, an expense which does not have to be considered always in case of an urban site.

The conditions required by the above programme are met by laying-out three streets 40 feet wide through the property and properly grading them, building sidewalks, gutters, sewers, etc., this work to be done in a permanent and first-class manner. The laying-out of the streets and lots in this manner gives the largest area of land with each house possible which is desirable in suburban property. Again, the scheme of semi-detached cottages or houses is more desirable for the suburbs, where each house and yard should be independent of the others. Again, I have adopted brick as the material for the walls: a very desirable change from the usual wooden suburban houses.

The houses are secluded from the street by a neat brick-and-wood fence with gates for each, and a simple strong wire fence on cedar posts separates each house and garden from its neighbors.

At each back corner is a common playground for the children and young people, that should be planted with trees and be fitted with seats, thereby making a pleasing feature to the whole, and keeping the children from the streets.

The scheme here proposed would make an agreeable addition to any of the suburbs of Boston. It is presumed that electric-cars would run on the main street on which the property abuts, and that the land is fairly level. It would invite the best of the artisan class, and no doubt a choice of tenants could be made, excluding any that might in any way lower the moral and social standard of the whole.

A set of rules or conditions should be framed for the proper conduct of the tenants, to which each should agree before becoming a tenant. This would provide a uniform neatness to the grounds and sidewalks abutting each place.

The houses are of a variety of sizes, which would suit tenants of various earning and paying capacities, and, at the rates of rent estimated in another place, would bring a fair interest on the investment, while making it possible for a large number of self-respecting artisans and their families to live in an agreeable, sanitary and independent manner.

The foundations of the houses and walls below grade to be of good local ledge-stone, laid in mortar neatly pointed. The brick wall from grade to top of first floor shall be 12 inches thick, and above that to plate shall be 8 inches thick. These walls to the level of second-story windows to be of good hard, red, water-struck bricks (run of kiln), laid in Flemish bond in lime-and-cement mortar, with as many benches for headers as possible, placed irregularly in the walls. Above the sill-course the walls to be of very light-red or pink brick laid in lime-mortar, all joints struck flush. The window-sills to be of sawn buff limestone.

The floor-timbers to be 3″ x 8″ for longest spans, and 2″ x 8″ for others, with 4″ x 8″ trimmers. Rafters 3″ x 6″. Exposed ends finished to form cornice. Roofs covered with standing-seam tin, painted three coats. Gutters and conductors of galvanized-iron, all painted.

All brick walls to be furred for lathing and all bearing-partitions to be 2″ x 4″ with H. P. caps; others 2″ x 3″.

The entire first and second stories to be lathed and plastered two-coat work. All outside finish of wood to be of white-pine or cypress, seasoned. Stock of good quality.

The inside finish to be of whitewood and North Carolina pine. Under-floors of hemlock, upper-floors of matched North Carolina pine, kiln dried. All thoroughly nailed.

All outside wood-finish, sashes, etc., to have three coats of paint. All inside finish, doors, etc., to have three coats of paint or varnish. All labor and materials to be of the best quality.

Each house to have cast-iron enamelled bath-tub, open water-closet and wash-bowl, 25 or 30 gallon bath-boiler, and range.

Slate sink and wash-trays in kitchen. Sill-cock outside and furnace-supply in cellar. The soil-pipe of standard size. All fixtures trapped and vented and connected with drain in street by a 6″ Akron pipe.

Each house to be fitted with a Magee furnace. Cellar floor to be concreted. Door and window hardware of approved modern design. Rooms to be papered in a neat manner, and each house fitted with gas-fixtures of moderate cost. Each parlor or living-room to be fitted with neat brick fireplace and wood mantel.

All the materials are to be best of the kind, and all workmanship is to be first class.

STATEMENT OF THE COST OF HOUSING FIFTY ARTISAN HOUSEHOLDS.

4 acres of land at 15 cents per foot		$26,136
850 feet of Macadam roadway 25 feet wide	$1,700	
1,440 " " asphalt gutters 3 feet wide	864	
1,730 " " fine gravel sidewalk 5 feet 6 inches wide	432	
1,730 " " sod for edging sidewalks, 2 feet wide	86	
850 " " 8-inch "Akron" sewer laid in street	850	
		3,932
10 semi-detached houses marked A.A″ costing $3,856 each		38,560
8 " " " B.B″ " 4,922 "		39,376
6 " " " C.C″ " 5,586 "		33,516
2 detached " " D. " 3,062 "		6,124
2,000 feet brick-and-wood fence at $1.00 per foot		2,090
Architect's commission, 5 per cent on $119,666		5,983
Grading, seeding down, making walks, etc		1,250
Total cost		$156,967

SCHEDULE OF RENTS.

20 houses A.A″ rent $15 per month	$3,600	per year.
16 " B.B″ " 20 " "	3,940	" "
6 " C. " 20 " "	1,440	" "
6 " C″ " 25 " "	1,500	" "
2 " D. " 28 " "	672	" "
Total revenue	$10,852	" "

ANNUAL EXPENSES.

Taxes on $140,000 at $12 per 1,000	$1,680
Water on 20 houses at $15	300
" " 30 " " 18	540
Insurance on $75,000 for 5 years, per year	100
Other expenses, repairs, etc	500
Total annual expenses	$3,120
Estimated gross annual revenue	$10,852
" " " expenses	3,120
Estimated net annual revenue	$7,732

Thus earning 5 per cent on the total investment of $156,967.

The areas and cubes of the several houses are as follows: —

10 houses marked A.A″ (double)	1,244 square feet	32,344 cubic feet.
8 " " B.B″ "	1,588 " "	41,285 " "
6 " " C.C″ "	1,802 " "	46,852 " "
2 detached houses D. "	988 " "	25,688 " "
The estimated cost per square foot on the ground, same for all		$3.10
" " " " cubic foot, nearly		.08½

PLANS AND ELEVATION OF THE SAME.

[The following named illustrations may be found by reference to our advertising pages.]

FONTAINE ST. LAZARE, AUTUN, FRANCE.

This plate is copied from *L'Architecture.*

HOUSE OF M. BERNUS, FALKENSTEIN (TAUNUS), GER. A. VON KAUFFMANN, ARCHITECT.

This plate is copied from *Architektonische Rundschau.*

[Additional Illustrations in the International Edition.]

THE CHANCELLOR GREEN READING-ROOM, PRINCETON UNIVERSITY, PRINCETON, N. J. MR. WILLIAM A. POTTER, ARCHITECT, NEW YORK, N. Y.

[Gelatine Print.]

This view shows also the exterior of the catalogue-room, which forms the connecting-link between the new stack-building and the old reading-room. It is interesting to know that just as the stack-building is one of the author's latest buildings so this is the very first one designed by him — twenty-seven years ago.

INTERIOR VIEW IN THE SAME.

[Gelatine Print.]

THE BALL-ROOM: ROYAL PALACE, AMSTERDAM, HOLLAND.

ST. GEORGE'S CHURCH, STOCKPORT, ENG. MESSRS. AUSTIN & PALEY, ARCHITECTS.

COMMUNICATIONS

[*The editors cannot pay attention to demands of correspondents who forget to give their names and addresses as guaranty of good faith; nor do they hold themselves responsible for opinions expressed by their correspondents.*]

THE SECRETARYSHIP OF THE A. I. A.

WASHINGTON, D. C., November 14, 1898.

To the Editors of the American Architect: —

Dear Sirs, — As a member of the local committee I would like space in your valuable journal to correct a misstatement in your issue of November 12, 1898, as follows: "The serious work is laid out by the Secretary and then his scheme of operations is ruthlessly cut apart and interfered with by the plans formed independently by the local entertainment committee."

The Secretary and local committee worked together in arranging the programme, and not, as stated above, independently.

There was no "accident of balloting" for Secretary — the members of the Institute present expressed their preference, and Mr. Glenn Brown was elected.

Very truly yours, Robert Stead.

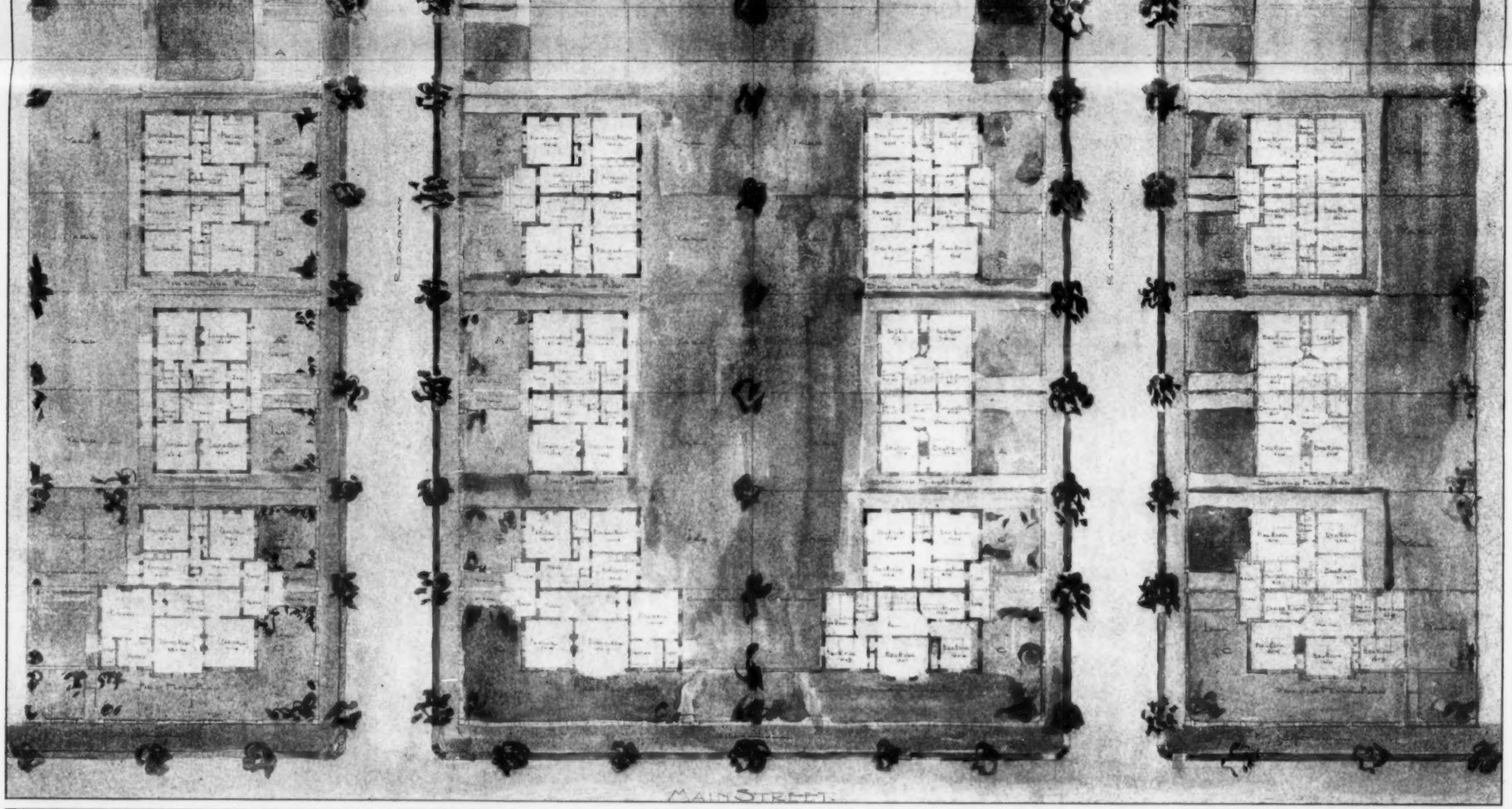
[We are glad to publish this letter because it gives opportunity to amplify one of our statements, which was made no less advisedly than the other. We still feel that an "accident of the ballot" did cause the retirement of the present Secretary, as we met after the vote was polled enough members who had actually voted for the Secretary-elect who would have voted otherwise if they had imagined there was any possibility that Mr. Stone could fail of re-election. It was the purpose of these men, and perhaps of others, to show by their vote their desire that Mr. Brown should be the resident or assistant Secretary — the one salaried official of the society — while Mr. Stone retained the honorary position. Thus through the accidental support of a few men and the too zealous efforts of the members of the local Chapter Mr. Brown has been deprived of a salary which would none too generously pay for the work he will inevitably do, no matter who assists him. It would be a much better solution of the situation if he should resign, on the understanding that he should be appointed to the salaried position, leaving to the Directors the task of filling the honorary place so vacated. As to the other question, we cannot conceive that any man uninfluenced by local advice could prepare the programme of a serious convention in such a way that routine business could only be rushed through in ill-digested fashion, while the discussion of valuable papers — most of them read by invited guests, and so demanding most courteous treatment — must be denied absolutely. — Eds. American Architect.]

NOTES AND CLIPPINGS

Trees in City Streets. — The Tree Planting Association of New York City has issued the following: The opinion seems to prevail that tree-planting in our streets means the expenditure of a considerable sum of money, whereas the fact is that the usual charge is only $10 per tree, its life being guaranteed for one year, and protected by a suitable iron guard; while for a scientifically planted tree — guaranteed for two years and well protected — the charge is only $20. The nurserymen recommended by this Association have their reputations at stake for good work, and have generally given satisfaction. If any complaint should arise from work improperly done it will be promptly investigated by this Association and the nurseryman held accountable. Numerous applications are made daily by mail to the office, No. 64 White Street, and the necessary printed forms, giving full information on the subject, are sent to all applicants by the next mail. This is the most favorable season of the year for setting out trees, and in order to obtain the best results orders should be placed now with the nurserymen. — *Exchange.*

Glass Pavements. — "When we compress fragments of glass reduced by heat to a pasty state," says *Cosmos,* "the glass is devitrified and loses its transparency, while its hardness, infusibility and resistance to shock and to pressure are increased. It thus forms a new substance, glass-stone. Réaumur studied it for a long time about 1727. The principle discovered by him has found new applications, and, owing to perfected methods, a glass-stone is now made that is used for various purposes. Among other things, interior walls to imitate marble, granite or mosaic are made of it, as well as the floors of houses, and the pavement of sidewalks, court-yards, bath-rooms, or factories that require a stout resisting substance not attacked by acids. On the other hand, the recent use, in large quantities, of 'ceramic stone' in the Rhone factory, both in the machinery-rooms and on the façade, has given the best results. The City of Geneva has experimented with glass pavement, and it gives perfect satisfaction, as well from the standpoint of looks as from that of durability and freedom from slipping. The City of Nice is also about to try this method of paving. All bits of broken glass can be utilized by this new industry, which is taking on a large development. In France at present there are two factories, one at Demi-Lune, near Lyons, the other at Bousquet-d'Orb, which is connected with the Carmaux glass-works. Besides this, two factories are being erected, one at Point St. Esprit and the other at Creil. In a few years we shall perhaps realize the dream of a glass-house, so dear to a certain philosopher — but it will not be transparent if it is made of glass-stone." — *Translated for the Library Digest.*

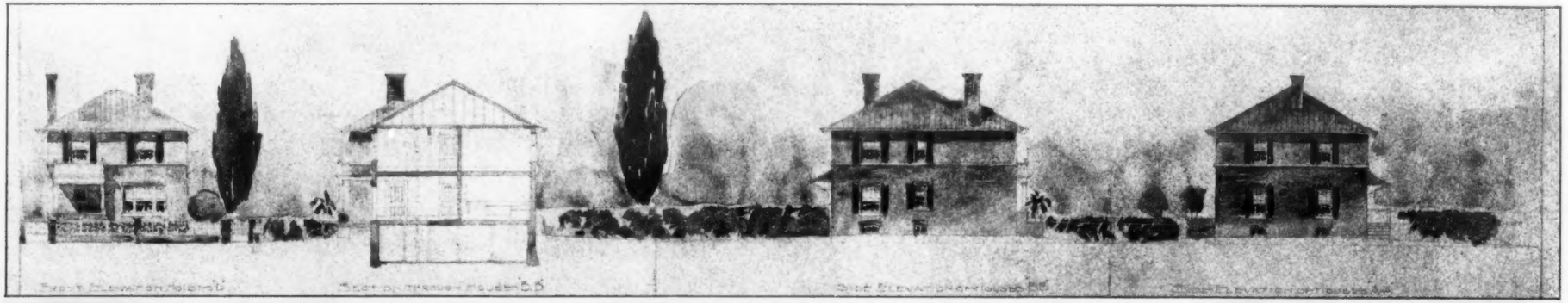
S. J. Parkhill & Co., Printers, Boston U. S. A.

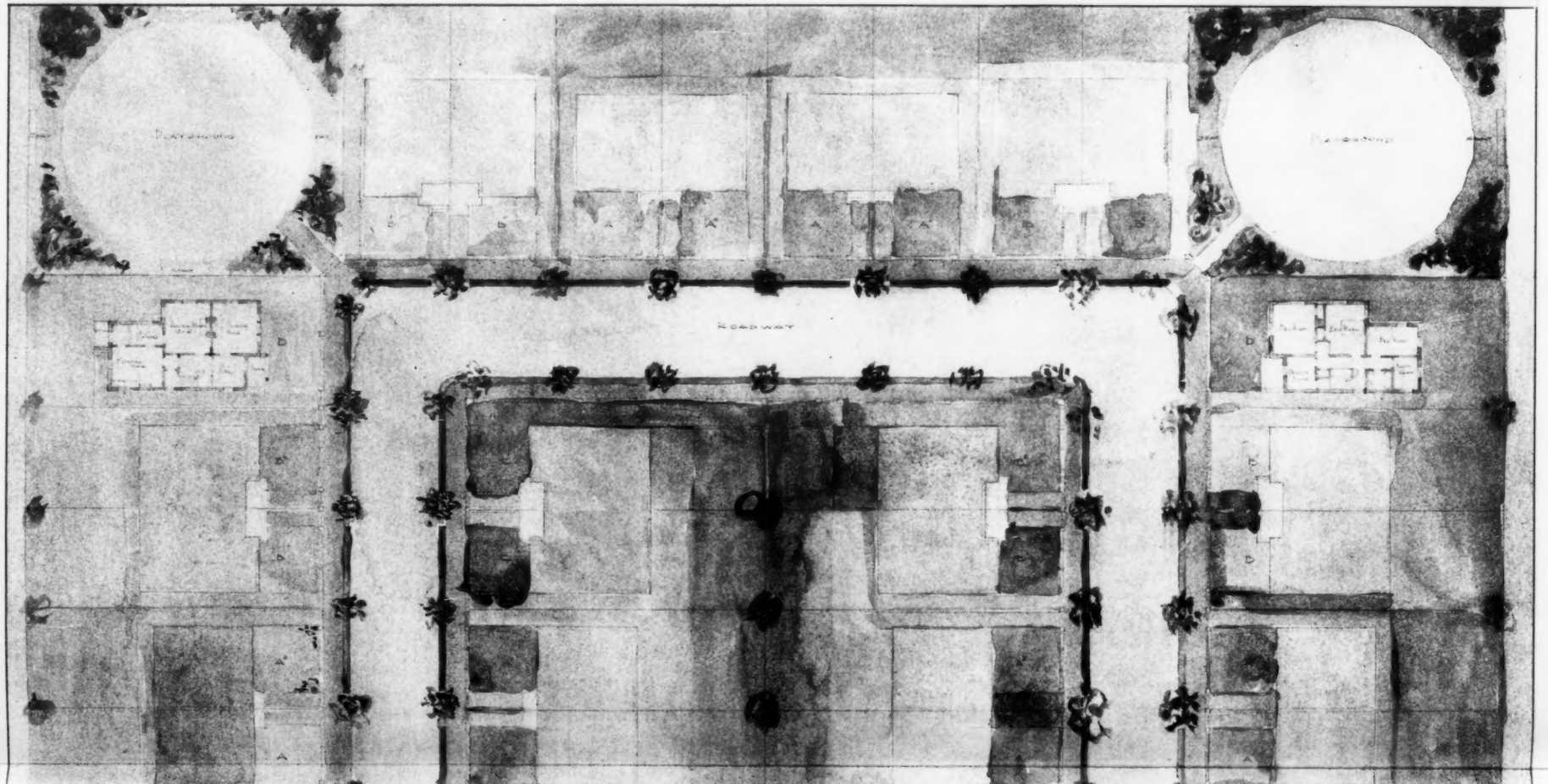


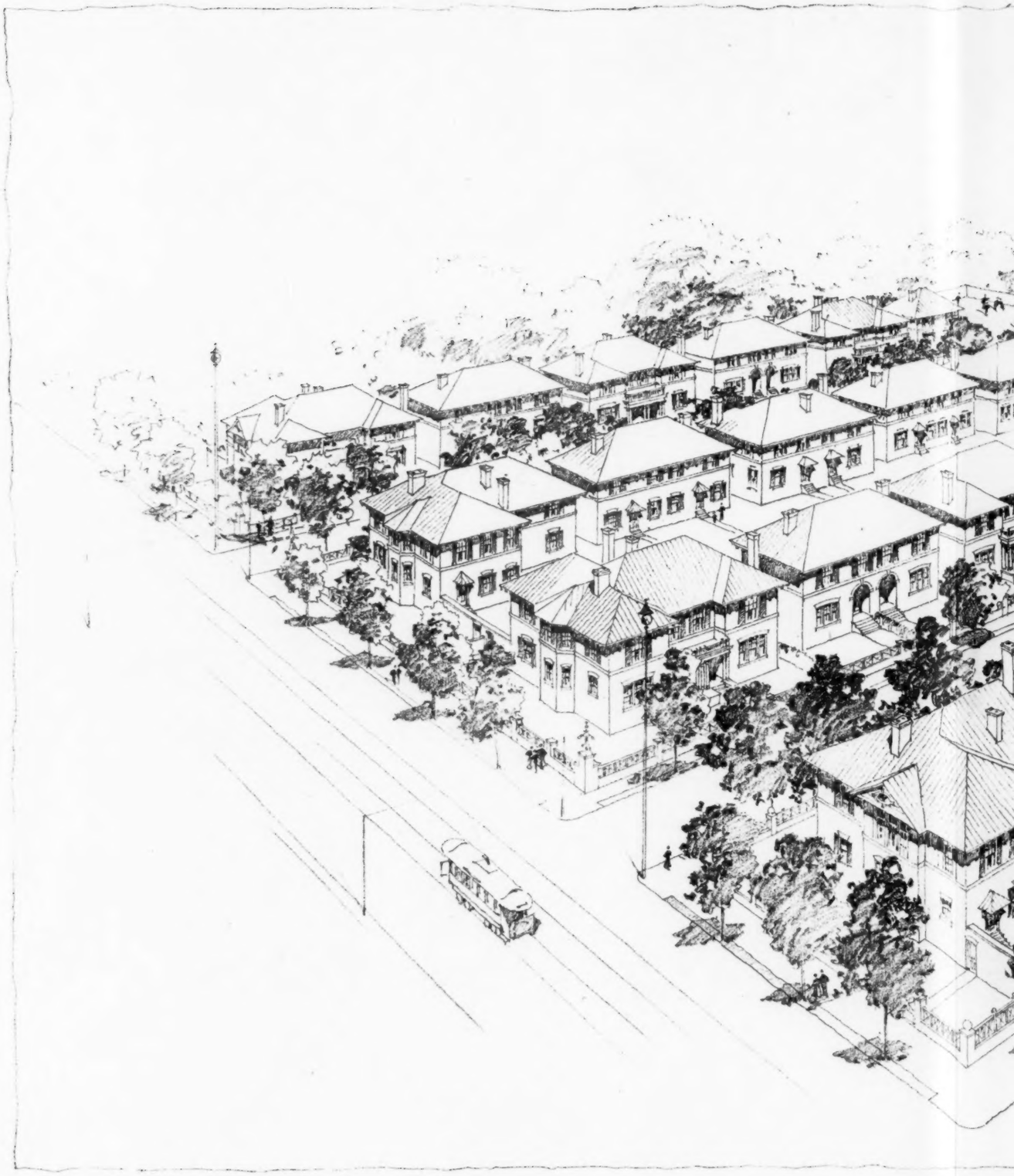
SHATTUCK PRIZE FOR COMPETITIVE DESIGNS FOR ARTISANS' HOMES (OPEN COMPETITION).

C. HERBERT McCLARE, ARCHITECT.

HELIOTYPE PRINTING CO., BOSTON

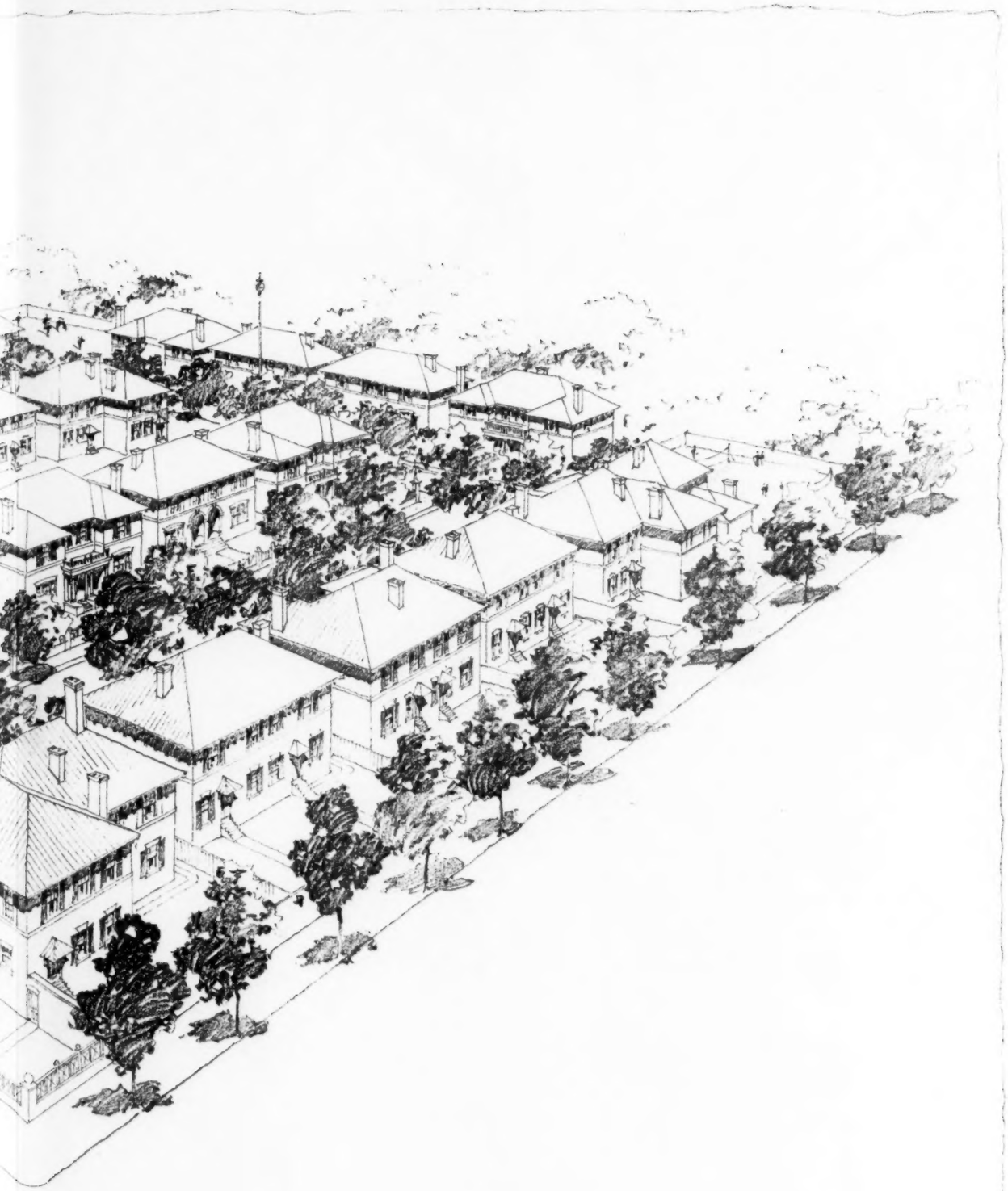






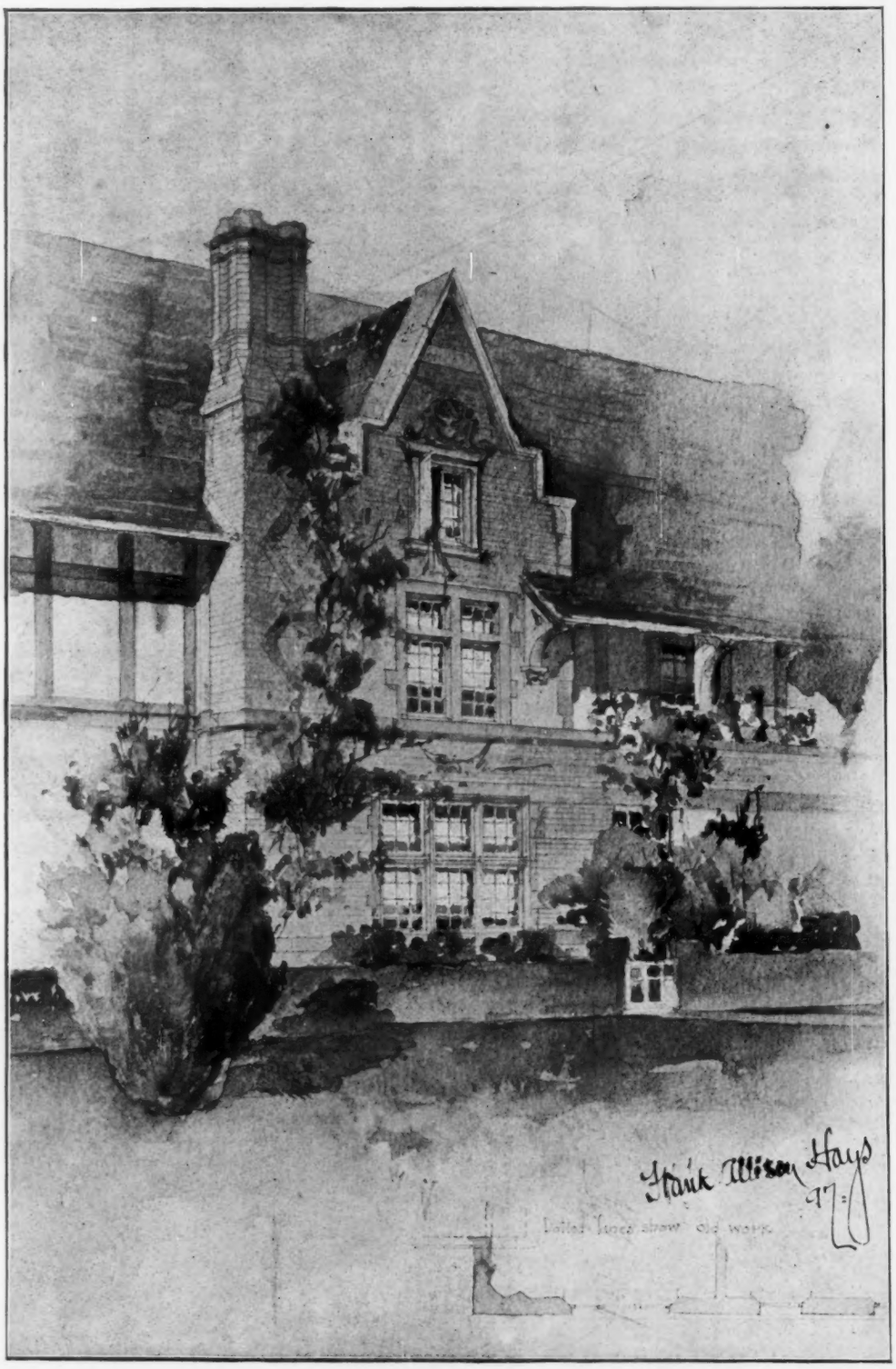
SHATTUCK PRIZE FOR COMPETITIVE DESIGNS FOR A

C. Herbert McClare, A



GNS FOR ARTISANS' HOMES (OPEN COMPETITION).

McCLARE, ARCHITECT.



PROPOSED ALTERATION.
KENNEDY, HAYS & KELSEY, ARCHITECTS.

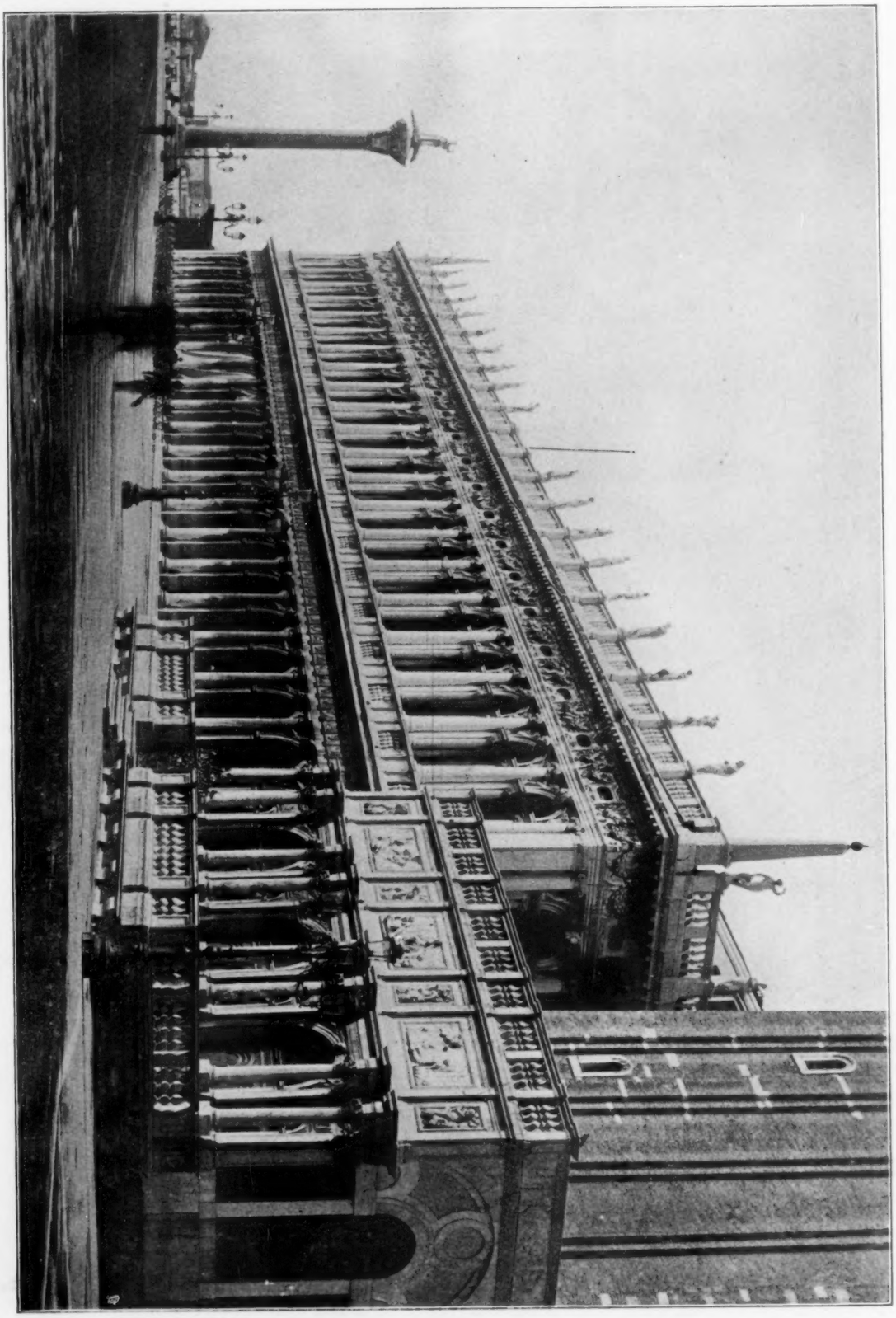


Fig. 7. The Loggetta and Library of St. Mark. Venice, Italy.