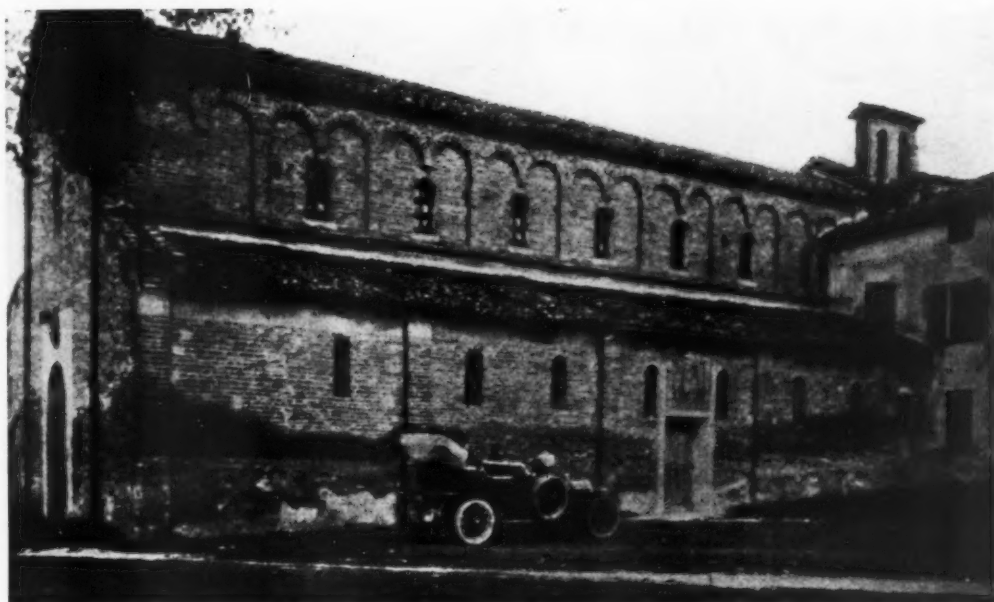


THE AMERICAN ARCHITECT

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Exterior of S. Pietro in Sylvis at Bagnacavallo (Ravenna), XI century. To illustrate the origin of the round arched corbel table as derived from blind wall arcades, with omission of the alternate pilaster strips.

Lombard Architecture*

SECOND PAPER

BY WILLIAM H. GOODYEAR, M.A.

Honorary Member of the Architectural Associations of Rome and Edinburgh; of the Royal Academies of Fine Arts of Venice and Milan; of the Society of Architects, London; of the Royal Institute of the Architects of Ireland; and Corresponding Member of the American Institute of Architects.

IN the first part of this review it has been pointed out that the main and greatest significance of Mr. Porter's book lies in its final settlement of the controversy as to the origin of Gothic architecture, in opposition to the views of the greatest living French authorities on the subject, and in its definite and conclusive proof that the Gothic style

is derived from the rib-vaulted churches of Lombardy. So far, however, my review of Mr. Porter's book consists of a personal assertion as to its results, of which the reader may reasonably expect to have some substantiation. If the definite proof has now been offered of what an entire school of architectural criticism had believed and claimed before, but without sufficient proof and without gaining general acceptance, what is that definite proof and how has that proof been reached? To this question I shall now address myself:

To a very considerable extent Mr. Porter's suc-

*By Arthur Kingsley Porter.

Volume I. 483 pages, Structure, Ornament, Accessory Arts, Iconography.

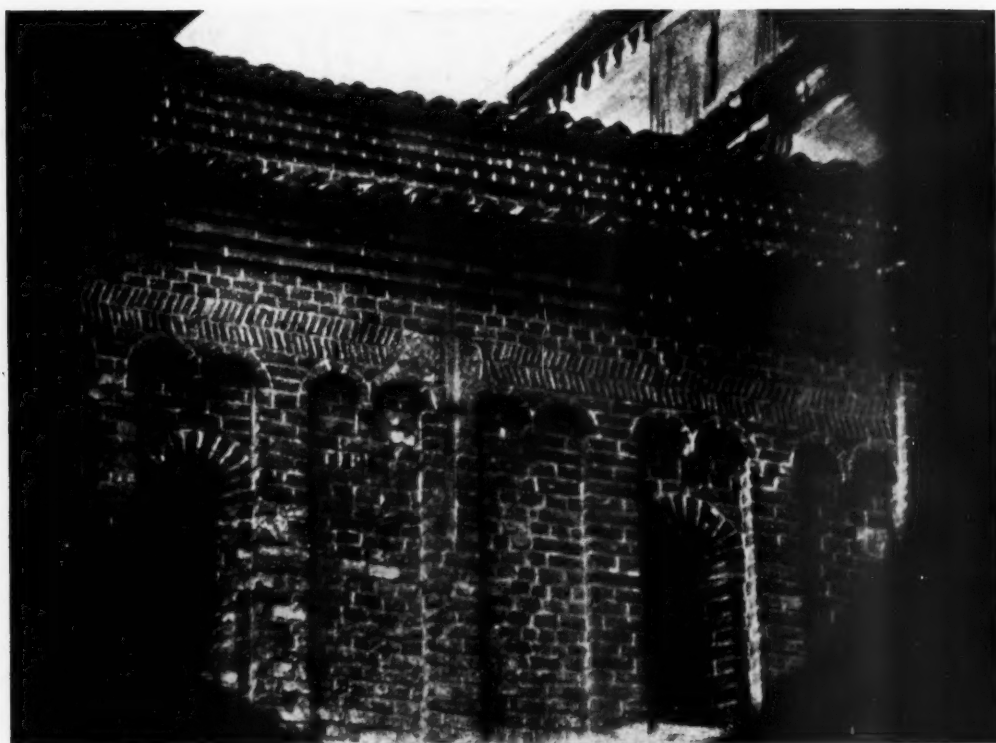
Volume II. 675 pages, Monuments, Abbazia di Albino-Milan.

Volume III. 611 pages, Monuments, Mizzole-Volterre.

Volume IV. Atlas, containing over 1,200 illustrations.

Imperial octavo. Buckram. Boxed. \$50.00 delivered. (Vol. IV may be had separately: price \$15.00.) Yale University Press.

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Cornice of S. Sepolcro, Milan, dating 1030. Showing an arched corbel table with arches arranged two by two with alternating pilaster strips, "an illustration throwing much light upon the history of the evolution of this ornament."

Telephot. by A. K. P

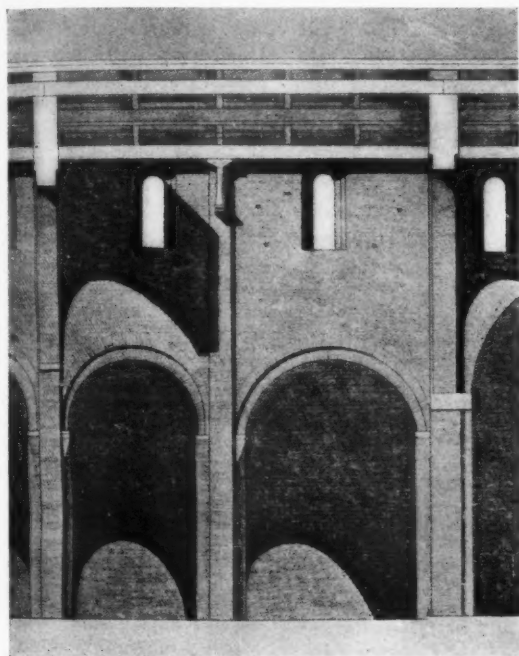
cess in dealing with his subject lies in a comprehensive control and mastery of the literature of the monuments, and in a comprehensive personal acquaintance with the monuments themselves, neither one of which had ever been previously attempted. (It may be added that before the recent days of the automobile such an attempt would have been practically almost impossible.) To a considerable extent his success lies in the discovery of hitherto unknown, or hitherto unconsidered, churches; several of the first class. To a considerable extent his success lies in a reasonable and convincing arrangement of facts, most of which have been previously unknown or unrecognized. To a considerable extent his success lies in pointing out hitherto unrecognized correspondencies between the Lombard and early French rib-vaulting methods and the Lombard and Norman systems of construction, correspondencies of such an intimate character that relationship is undeniable, and the only possible question is as to which territory can claim precedence in time. To a still greater extent his success lies in a contribution to

the chronology of the subject, and to the dating of the individual monuments, which carries conviction by its impersonal and objective character and by its marvelous display of industry and learning, in the control of literary, documentary, paleographic, structural and ornamental evidence. To the same extent his success lies in an obviously fair, impartial and wholly original method of attacking the question of chronology and of dating. To this last point I shall first give attention, as it relates to the method and not to the matter of his book.

The universal method of the authorities on Lombard architecture up to date has been to discuss the monuments that were supposed to serve their cause and their argument, and to neglect the others. Mr. Porter's method is to discuss, describe and date all the monuments which have ever been published, and without reference to the supposed special significance of any one of them, and to add to this number a considerable number of others which have never been published before. These monuments have been arranged in a sequent chronological table of three hundred and twenty-seven churches and

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three hundred and twenty-seven dates, among which the titles of the numerous churches having dates which are established by documentary evidence are printed in heavier type, and those with dates established by comparative evidence are printed in lighter type. This chronological table is the backbone of his book and begins *his first volume*; whereas the determination of the dates themselves is wholly confined to the second and third volumes, to which are also confined the bibliography, paleography, literary history, structural description, ornamental



Elevation of the nave of S. Maria Maggiore at Lomello, dating 1025. Showing an engaged shaft carrying a wooden bracket to support the beams of the roof, alternating with transverse arches.

Survey from "Lombard Architecture"

features and sculpture of practically every Romanesque Lombard church (many more, at least, than have ever been described before).

Mr. Porter's success in dealing with his subject is therefore due, in the first instance, to the wholly novel and original plan of composing the second and third volumes, as well as the volume of plates (the fourth), on the plan of a dictionary alphabetically arranged according to localities (the churches of any one locality being also arranged in alphabetical order of title). Thus, the discussion of actual and comparative chronology and of all other debatable points assumes an impersonal and im-



South transept end of S. Sepolcro at Milan, dating 1100. Showing a cornice with round arched corbel table of developed style.

Telephot. by A. K. P.

partial character, as it is wholly divorced from the argument of the first volume.

In contrast with this method it has been the universal habit of architectural authorities up to the present time to include in the body of their own argument and conclusions their views as to the dating of the architectural monuments which they are discussing. This is therefore the method which has been followed by all the writers on Lombard architecture who have preceded Mr. Porter. It may be imagined what uncertainties have existed in consequence, when it is realized that the dating of the most important Lombard monuments has been



Capital in Museo Civico at Pavia, from excavations of the original church of S. Pietro in Ciel D'Oro. The basilica was built by King Luitprando and consecrated in 743. This Carolingian capital illustrates the exact technique and careful workmanship generally or frequently characteristic of Lombard ornament in the early VIII century.

Photo by A. K. P.



Capital from the crypt of S. Zama in S. Felice at Bologna, dating 1020. Showing a Lombard form with survival of Carolingian technique.

Photo by A. K. P.

a matter of prolonged and serious controversy. As an example of the resulting confusion it may be recalled that when Cattaneo published in 1888 his critique of the epitaph of Bishop Ansperto, showing that it did not determine the dating of S. Ambrogio at Milan, there were only four authorities in Europe who had previously called in question that incredibly absurd dating of the nave and atrium to the IX century which has thrown the entire history of the Lombard monuments into disorder. (These men were Cordero, Kugler, Von Eitelberger and Viollet-le-Duc.) If the history of "the Queen and mother of the Lombard churches," as S. Ambrogio was termed by De Dartein, has thus been in debate, one may imagine the uncertainties which prevailed in other cases. Especially is it clear that these uncertainties could not be diminished by authors who rested their arguments and their opinions on datings which were essential to the standing of the given argument or given opinion, and which were, on the very showing of the argument itself, still open to debate.

II

The following twelve Italian churches (ten of them Lombard) are shown by Mr. Porter to have

used rib vaulting before the year 1100: Sannazaro Sesia, 1040; the sacristy of the Cathedral of Novara, c.1040; S. Benedetto of S. Pietro di Civate, c.1045; Lodi Vecchio, 1050; S. Nazaro, Milan, 1075-1093; S. Ambrogio, Milan, last third of the XI century; S. Anastasio, Asti, 1091; the Chiesa d'Aurona, Milan, 1095; S. Pietro, Bologna, c.1095, and Rivolta d'Adda, c.1099. In Central Italy S. Robano and S. Giacomo at Corneto are of Lombard origin, and both date to the last decade of the XI century. Only two of these churches are specified by Rivoira (S. Ambrogio and Rivolta d'Adda). Mr. Porter's list then continues with S. Annunziata at Corneto, early years of the XI century; S. Michele, Pavia, c.1100; S. Savino, Piacenza, 1107; S. Giovanni in Borgo, Pavia, 1120; S. Eustorgio, Milan, c.1120; S. Maria di Castello at Corneto, 1121, and others nearly contemporary or slightly later date. (Of the above named only S. Michele, Pavia, and S. Eustorgio, Milan, are quoted by Rivoira.)

When it is considered that St. Étienne at Beauvais, having the earliest vaulted nave in the Ile-de-



Carved slab behind the altar of S. Pietro, Villanova (Verona), dating 775, and illustrating the decadent late VIII century Lombard ornament as compared with earlier and superior work.

Photo by A. K. P.

France, is later than any of these churches (1125) and that all the primitive rib vaultings of France have the heavy rectangular form which was necessarily characteristic of the brick construction of Lombardy and which was unnecessary, inappropriate and ugly in the stone masonry used in France, farther proof is not called for.

In fact, so remarkable is the precedence in time of the Lombard rib vaulting that its use was very generally abandoned in Italian Romanesque at about the time of its adoption in France. The reasons are explained by Mr. Porter as due to the gen-

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erally defective and insufficient buttressing of the Italian vaulting, to the consequent instability of the given churches, and the frequent need of repairs. About a hundred years were needed to reveal the structural weakness of most of the vaulted churches, and after this was apparent there was a very general reversion to the use of transverse nave arches and timber ceilings. From the related chapters of Mr. Porter's book it will thus appear that he holds no special brief for the Lombard rib vaulting as a superior or ideal form of construction, that he is alive to its defects, and is prompt to state and explain them.

In view of the stress which this review has laid on the topic it may surprise the reader to learn that only one chapter of the first volume is devoted especially to rib vaulting, and that this has only thirteen pages. The facility and brevity with which the subject is disposed of are explained by the substantial basis of the datings and of the constructive descriptions of the individual monuments, as arranged in alphabetical order in the second and third volumes.

In the preceding chapters of the first volume we find, among many other topics, a convincing history of the evolution which led up to the rib vault. From the earliest dates Lombard builders had borrowed from Byzantine construction the use of domed groin vaulting (unknown in France). These vaults were of modest dimensions, and of semi-occasional use, mainly in crypts, but they were constructed *without solid centering* by the use of movable diagonal timber centers and a movable cerce.* Just before the epoch-making date of 1040 at Sannazaro Sesia domed groin vaults were erected over the side aisles of S. Maria Maggiore at Lomello (a church first published by Mr. Porter). In 1030 domed groin vaults were erected over the nave of Mazzone (and they were also planned but not carried out five years later in the nave at Stradella).

The next step was to construct the diagonal ribs of the nave as permanent and solid brick centerings, instead of using movable wooden centers for the diagonals. This step was taken at Sannazaro Sesia. The steps of evolution following Sannazaro Sesia are described in Mr. Porter's book, and the list of the given churches and their dates has been mentioned above.

III

The unvaulted churches of Normandy are known to have a hitherto unexplained peculiarity which was widely borrowed from them in other churches of northern Europe. This is an engaged shaft without

structural use and without even decorative significance, rising through the alternate piers of the nave up to the timber ceiling. The abbey church of Jumièges offers a notable instance, and the puzzling riddle of its meaning is discussed in Mr. Porter's book on Medieval Architecture (Vol. I, pp. 256-259). This riddle has been solved at Lomello in Lombardy; the most notable instance in early dating; and the first; of the use of transverse nave arches as supports of a timber roof and ceiling.* The engaged shafts of Jumièges are found at Lomello, alternating with the pilasters which support the transverse arches. They are here used as the intermediate

supports of the timber roof and ceiling by means of wooden brackets which are still preserved and still in position. "We undoubtedly have here before our eyes the origin of the unmeaning system copied throughout Europe in the second half of the XI and XII centuries, and one of the most puzzling features of the northern Romanesque."† Many instances are also quoted by Mr. Porter of Italian churches in which the alternate pilaster strips of the nave column survive as rudiments of a for-



Capital of north nave gallery, Parma Cathedral. Lombard grotesque of satiric import, dating 1130-1150. "An ass dressed as a priest is seen seated upright, holding between his forelegs the rod of pedagogic authority. Before him is a wolf dressed in a monk's habit and holding a book on which is an inscription which I interpret to mean: 'This wolf, who has become a monk, is eloquent on dogma.' Behind is another wolf, also apparently with monastic tendencies, but whose attention has begun to wander, and who looks around in the hope of spying a lamb."

Photo by A. K. P.

*See illustration in AMERICAN ARCHITECT for Feb. 21, 1912, p. 82, in my review of Mr. Porter's *Lombard and Gothic Vaults*.

*Here again the economy of timber, already invoked to explain the use of diagonal masonry centering (see AMERICAN ARCHITECT, Feb. 21, 1912), is to be understood as explaining the transverse arches; because they eliminated the use of expensive and unwieldy beams to cross the nave.

†Vol. I, p. 99.

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gotten or abandoned structural use, often not even rising to the ceiling level. The most decisive proof ever offered of the influence of Lombard architecture on Norman (aside from the use of the rib vault) is thus obtained.

Part II of Volume I, consisting of eighteen chapters, is devoted to ornament. From these chapters I single out, beside the foregoing matter on the engaged shafts of Lombard and Norman naves, the demonstration which squarely reverses the belief of every architectural authority up to date, that the earliest Lombard ornament (VII and VIII centuries) is barbaric in style and poorly executed, and that there is a gradual subsequent improvement through the VIII, IX and X centuries. This theory has been a controlling point of view in the dating of the monuments as fixed by Cattaneo and later writers. That this theory, if erroneous, must result in many chronologic errors, is obvious. It is, moreover, an extremely natural and plausible theory, until it is made plain, that the earliest Lombard ornament was derived from excellent examples of the Byzantine, and executed under the influence or tuition of Byzantine workmen of the best period. Later Lombard ornament, as Mr. Porter points out, was subject to a double influence of gradual decadence. One was the gradual decline of Byzantine art; the other was the steadily increasing decadence of Italian art during the IX and X centuries—a decadence which is abundantly explained by well-known historic events and causes. On this subject of the early excellence and later decline of Lombard ornament Mr. Porter has also recently contributed an important article to the *Burlington Magazine*.*

A most important and wholly original contribution to the history of Romanesque ornament in general, and Lombard Romanesque ornament in particular, is Mr. Porter's theory of the evolution of the arched corbel table, "which has been almost universally recognized as the most characteristic and typical ornament of the Lombard style.

. . . The mistaken conviction that it was in use continuously from the VI century onward has, more than any other single misconception, resulted in confusing and confounding the true chronology of the Lombard style. The cathedral and baptistery of Ravenna are often cited as examples of arched corbel tables dating from the Byzantine period."* Mr. Porter follows the lead of Ricci in noticing that these cornices have been much rebuilt, and adds that there is no possible room for doubt, after an examination of the ma-

sonry, that the arched corbel tables were added after the year 1000. "The arched corbel table does not appear in northern Italy, nor anywhere else to the extent of my knowledge, before the year 1000." Then follows the very convincing suggestion of an evolution from the blind wall arcades of Byzantine architecture as found, for example, in S. Apollinare in Classe at Ravenna (VI century), and as subsequently taken over by Lombard churches at the end of the X century. An economy of construction and of material led to the omission in some of these churches of every intermediate wall strip. Thus resulted an ornament of blind wall arches arranged two by two with alternating strips. The later arched corbel table was gradually reached by a diminution of the arches and an elimination of the perpendicular strips. The fact that all of the earliest arched corbel tables have arches arranged two by two leads to the unavoidable conclusion, and abundant illustra-

tions are offered and quoted in the plates for every sequent stage of evolution.

Among other original contributions to architectural history in the early chapters of the first volume I note the following: In early Christian churches the sexes were not separated by placing the women in the galleries as generally believed by antiquarians, a supposition which has led to the use of the word *matroneum* to denote the galleries. It appears probable that the sexes were separated by placing the women on the north side of the church nave.



Relief representing a prophet, by a follower of Guglielmo of Modena, dating about 1184. From the ambo in the Sagra of Carpi.

Photo by A. K. P.

*"Chronology of Carolingian Ornament in Italy," March 15, 1917.

*See also Rivoira I, page 36.

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Capital in the nave of S. Zeno, Verona, dating c. 1150-1160.

From "Lombard Architecture"

The belief that master builders were generally monks or clerics in the Italian Romanesque period is controverted by many instances of the activity of laymen in this capacity. Some architects were ecclesiastics, but this was not the general rule.

Of special importance is Mr. Porter's overthrow of Enlart's theory as to the influence of the French Cistercian order on Lombardy. It is shown that the churches built by French Cistercians in Lombardy do not differ in style from their fellows. It appears that of eight examples cited, six were unknown to Enlart. "From what has been said I think it will be clear that Cistercians were in no way responsible for introducing Gothic architecture into Lombardy." On the other hand, when French influences do appear later on, Mr. Porter is ready to quote and emphasize them.

IV

So far from being confined to architecture in the special or narrow sense, nearly one-half of Mr. Porter's first volume is devoted to sculpture, mosaic, fresco and the iconography of these arts, and his second and third volumes are equally liberal in the proportion of space devoted to these features in the descriptions. This portion of the work will be a surprise to many well-equipped art historians, for North Italian medieval sculpture has only come to its own in very recent years, even in the works of German or Italian authorship. Before Zimmerman in 1897* and Venturi in 1904,† there were actually

no books which treated of this subject. Mr. Porter's work is the first one in the English language which deals with it at all, and therefore it is the more to be emphasized that the chapters on North Italian medieval sculpture are among the most readable, original and thorough portions of his book. For the proficient art historian, as well as for the cultivated public which depends on his leadership, the history of Italian sculpture begins with Nicolò Pisano, and continues with the evolution of sculpture in Tuscany and its dependencies, and its ultimate flower in Rome. For two or perhaps three reasons has the Tuscan sculpture been thus exalted and the North Italian forgotten. The latter faded away and disappeared after the middle of the XIII century, whereas the Tuscan rose continuously (after it began) to the great culmination of the XVI century. Beyond these reasons there is an-



At left, statue of David by Benedetto, dating 1184-1196. Sculpture of West Façade, Cathedral of Borgo S. Donnino (Parma).

At right, statue of Ezekiel by Benedetto, dating 1184-1196. Sculpture of West Façade, Cathedral of Borgo S. Donnino (Parma).

Photos by A. K. P.

*Oberitalische Plastik im frühen und hohen Mittelalter. Leipzig, Liebeskind.

†Storia dell' Arte Italiana, Vol. III, l'Arte Romanica. Milan, Hoepli.

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other. To make acquaintance only with the already recognized and better known monuments of Italian art is the work of a lifetime. Thus the medieval sculpture of Modena, Parma, Piacenza, Borgo San Donnino, Ferrara, Nonantella, Sagra S. Michele, Carpi, Castell 'Arquato and Verona has shared the fate of the more inaccessible but extremely numerous medieval cathedrals and churches of Apulia and the Abruzzi. All are practically unknown to antiquarians and are wholly unknown to books in the English language.

The Italian sculpture in question belongs mainly to the XII century, beginning with its early years, and it disappears almost entirely after the middle of the XIII century. Thus it covers the century and a half before the dawn of Tuscan sculpture with the first pulpit of Nicolò Pisano (1261, in the Pisa Baptistery) with which art historians are wont to begin their review of medieval Italian sculpture. This Lombard art is represented by three great names here mentioned in their sequence of time: William of Modena, Nicolò and Benedetto. Zimmerman's well illustrated and excellent book was the first to do justice to these men. Venturi's book is more perfunctory in text, but magnificently and copiously illustrated. Mr. Porter's contribution to the subject is not only, as noted, the first in the English language, but

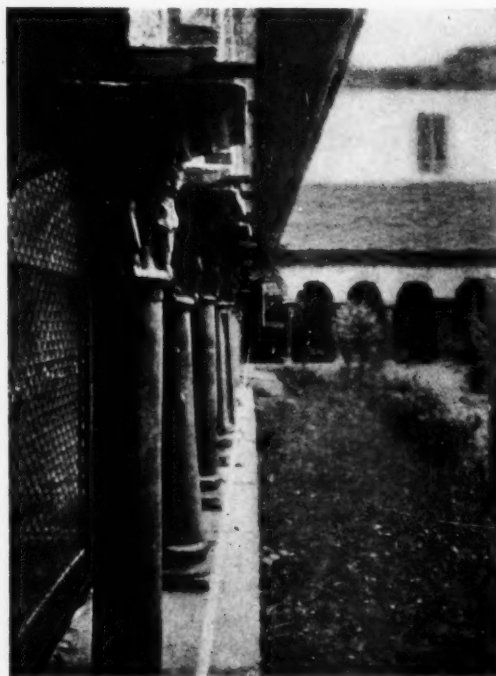
it is also an independent, original, and even eloquent critique of this Lombard art, covering six chapters, *besides twenty-two other chapters* devoted to Lombard iconography, in which the matter relates mainly to the sculpture subjects. This review will, however, only mention some of those special features of the sculpture chapters in which Mr. Porter has surpassed or corrected his two foreign predecessors. For instance, the life-size figures of prophets on the chancel rail of S. Zeno at Verona have been elaborately illustrated by Venturi, and have also been treated as genuine medieval works by Zimmerman and all other au-

thorities. Mr. Porter points out that these statues *are modern*, and scores heavily in consequence. Guglielmo of Modena has been confounded, and combined, by Venturi with another Guglielmo (of Verona) in consequence of the misreading of an inscription. Thus a mass of work has been attributed to the former which he not only did not do, but which is also foreign to his style and character, "and almost all the sculptures of northern Italy came to be assigned to one man and his assistants."

A less important, but still pertinent, illustration of Mr. Porter's original research is his correction of the error, again based on a misread inscription, by which the sculptor Benedetto has been universally miscalled Antelami, although this is only the genitive case of the name of his native locality. Doubtless the most wholly novel and thorough contributions to the given topic are found in the twenty-six chapters devoted to iconography, mainly of the sculptures—the first work of the kind ever undertaken in the treatment of Italian art.

Lack of space forbids any attempt to do justice to Mr. Porter's account of the Lombard mosaic pavements and wall frescoes, the former mostly surviving in fragments, and the latter in lamentably scanty remains — proving none the less that the Lombard churches were noble and splendid monuments of

color decoration, to a degree which moderns can scarcely even imagine. "There can be no doubt that the Lombard church, hardly less than the Greek temple or the Gothic cathedral, depended for its effect upon color. If we lose sight of this important fact we shall fail to appreciate perhaps the most essential characteristic of the entire art. Color is the æsthetic key to Lombard design. The broad surface of wall, the large smooth vaults always made as big and unbroken as possible, the absence of mouldings, even the low broad proportions of the church were all determined by the desire to give opportunity, to the utmost possible extent, for polychrome decora-



Cloister of S. Orso, Aosta. Horizontal curves in plan in the parapet and convex to the court are shown by a stretched tape. XII century.

Photo by A. K. P

Similar horizontal curves in plan have been observed by Mr. Porter in the cloisters of Piona and Valtorre and of S. Maria delle Grazie at Milan.



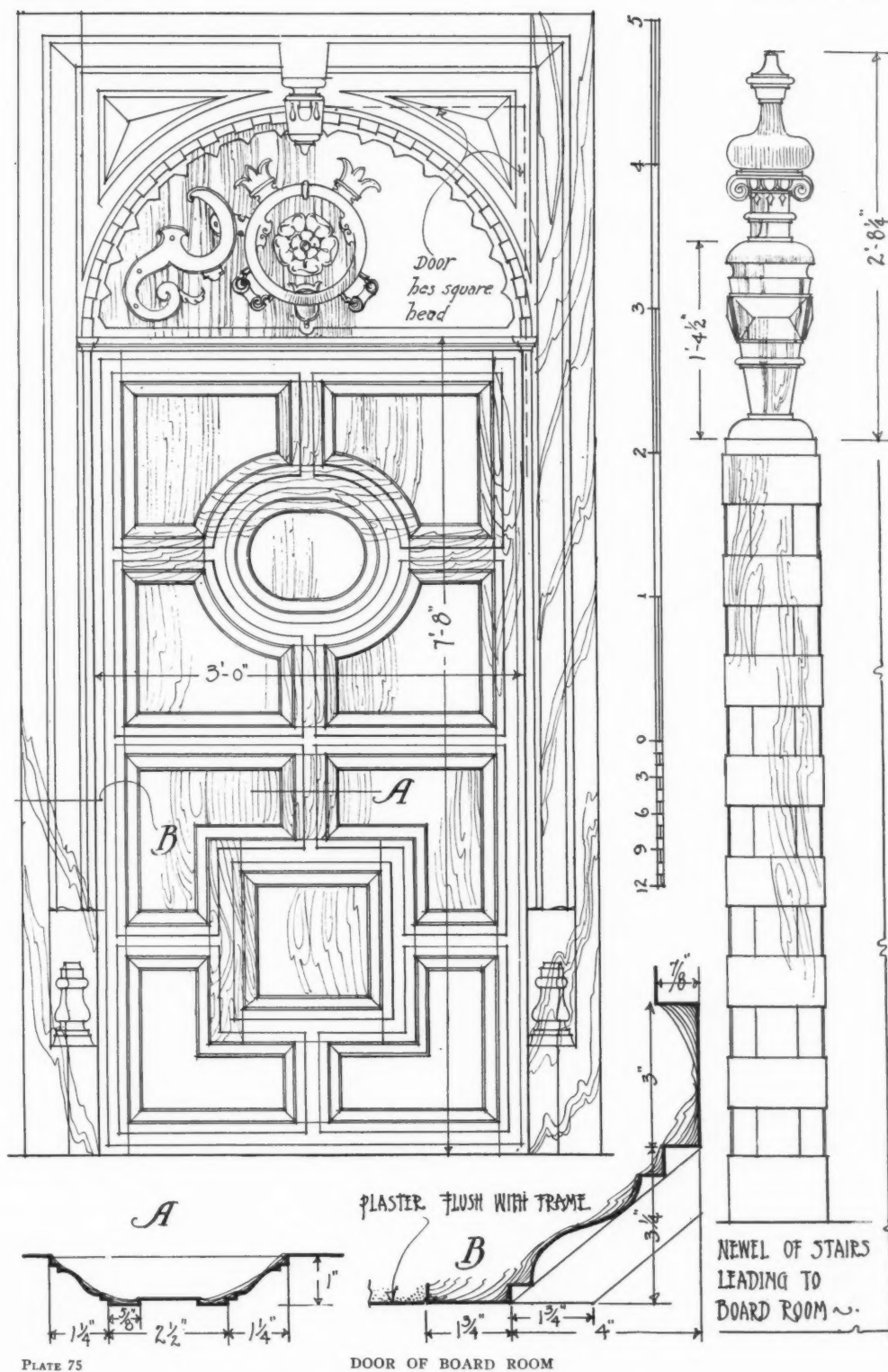
PLATE 74

PASSAGE TO BOARD ROOM, SHOWING DOOR

ABBOT'S HOSPITAL, GUILDFORD

DRAWINGS AND PHOTOGRAPHS
BY WALTER G. THOMAS

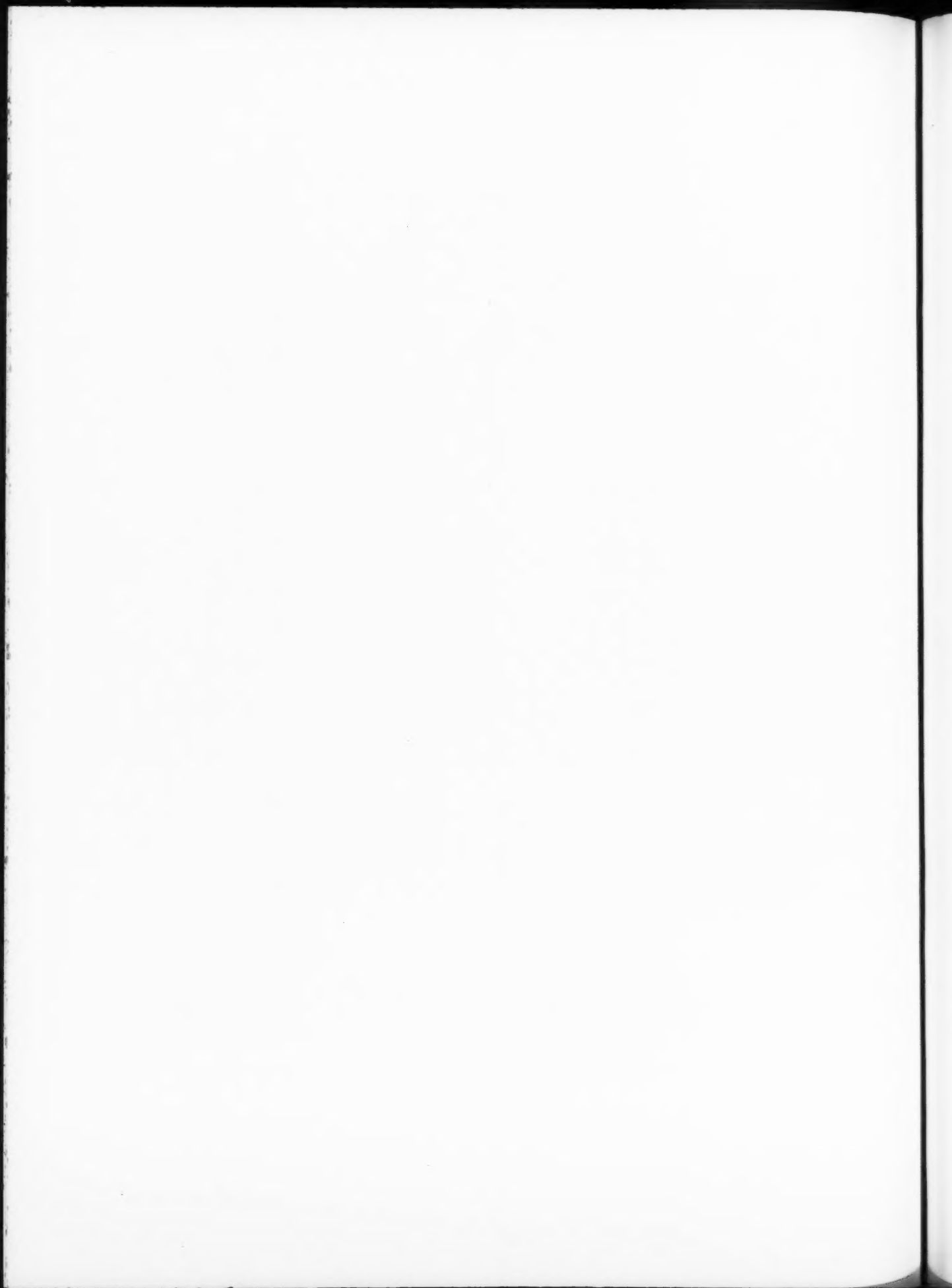
ENGLISH DETAILS
NO. 8



ABBOT'S HOSPITAL, GUILDFORD

DRAWINGS AND PHOTOGRAPHS
BY WALTER G. THOMAS

ENGLISH DETAILS
NO. 8



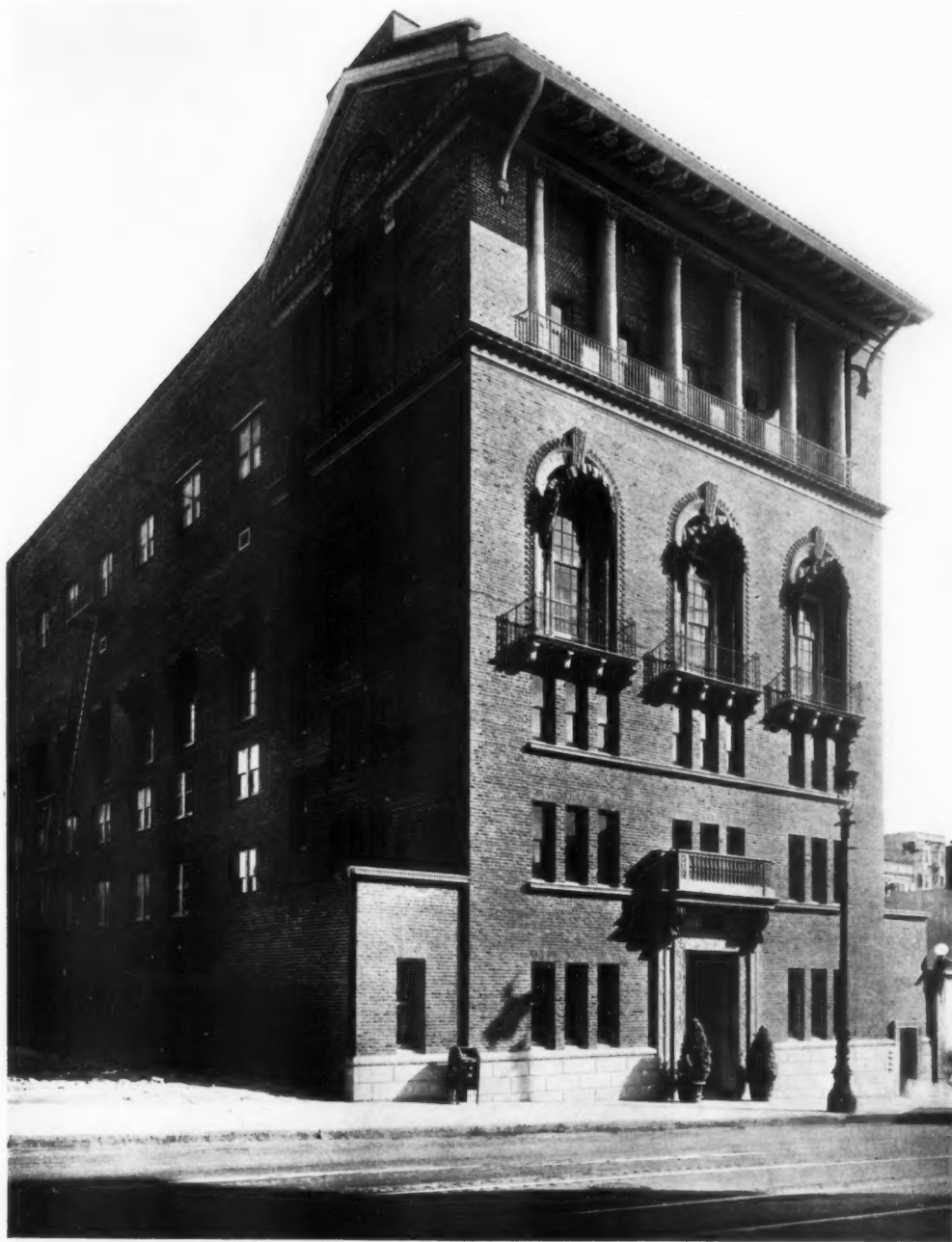


PLATE 76

WOMEN'S ATHLETIC CLUB, SAN FRANCISCO, CAL.

MESSRS. BLISS & FAVILLE, ARCHITECTS

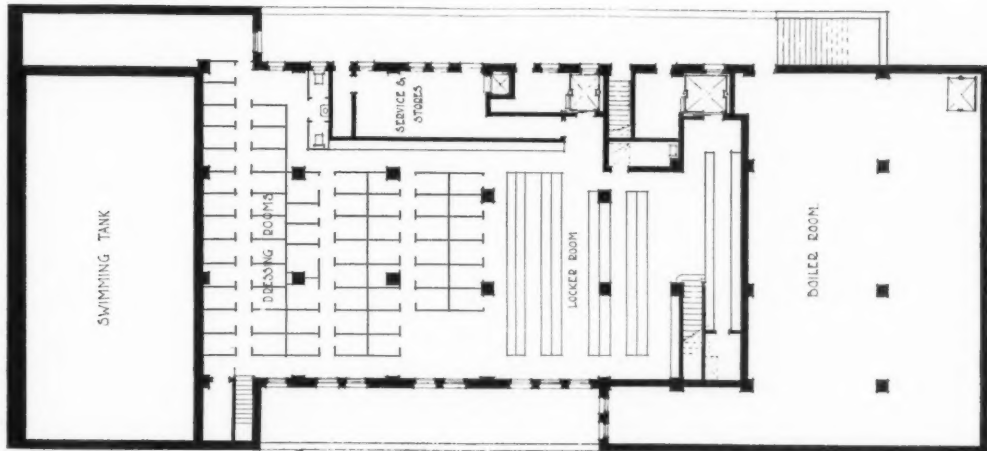


PLATE 77

DETAIL OF PRINCIPAL ENTRANCE

WOMEN'S ATHLETIC CLUB, SAN FRANCISCO, CAL.

MESSRS. BLISS & FAVILLE, ARCHITECTS

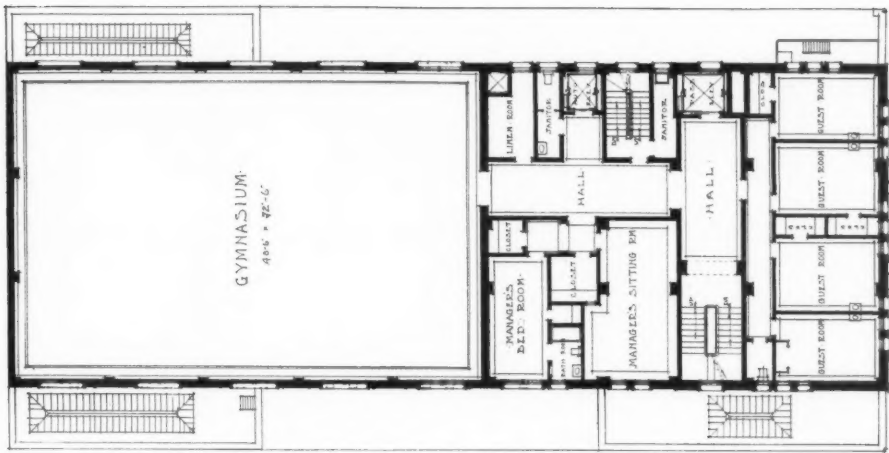


BASEMENT PLAN

PLATE 78

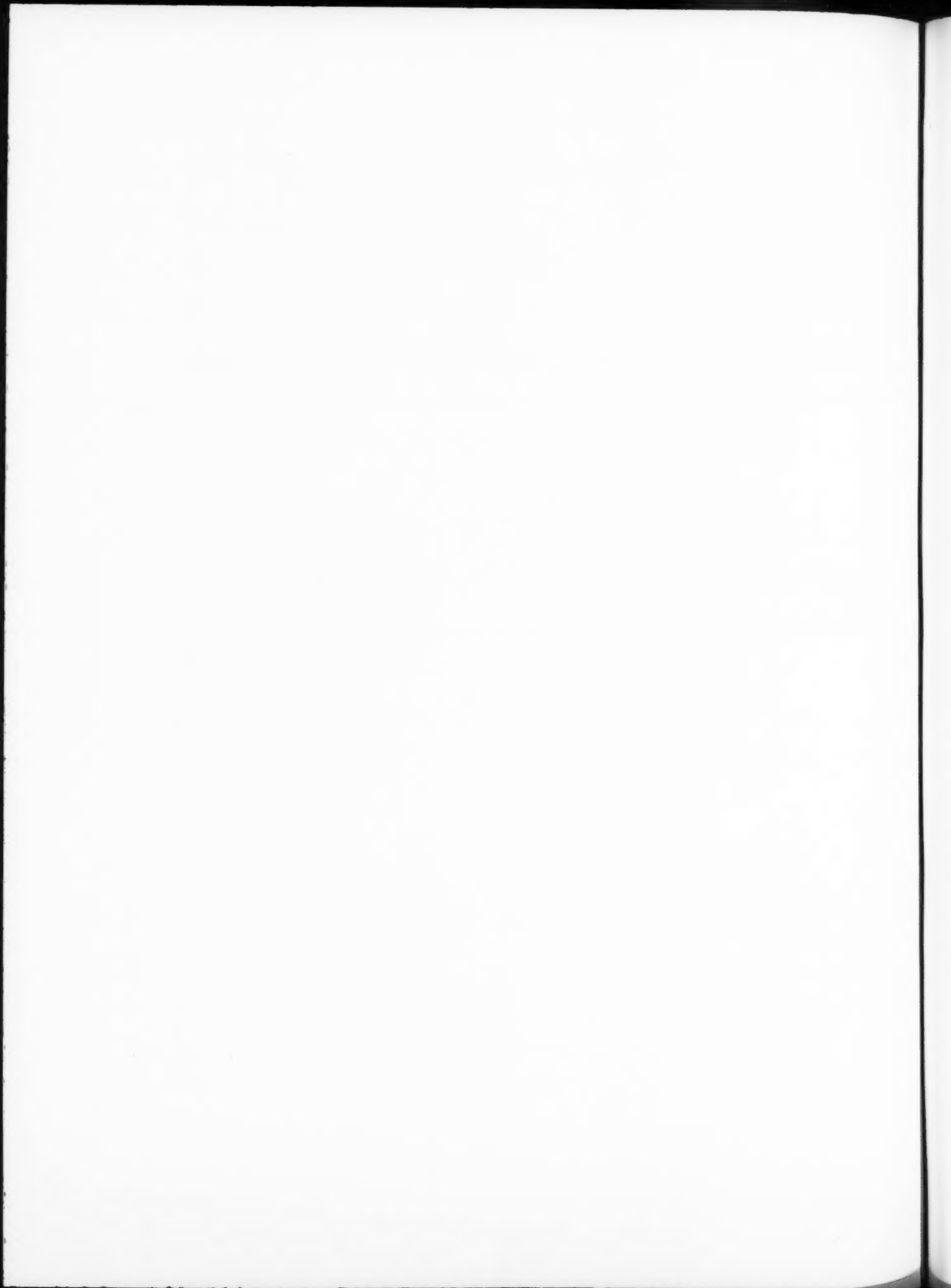


FIRST FLOOR PLAN

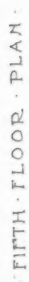
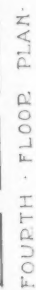
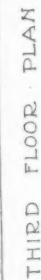


SECOND FLOOR PLAN

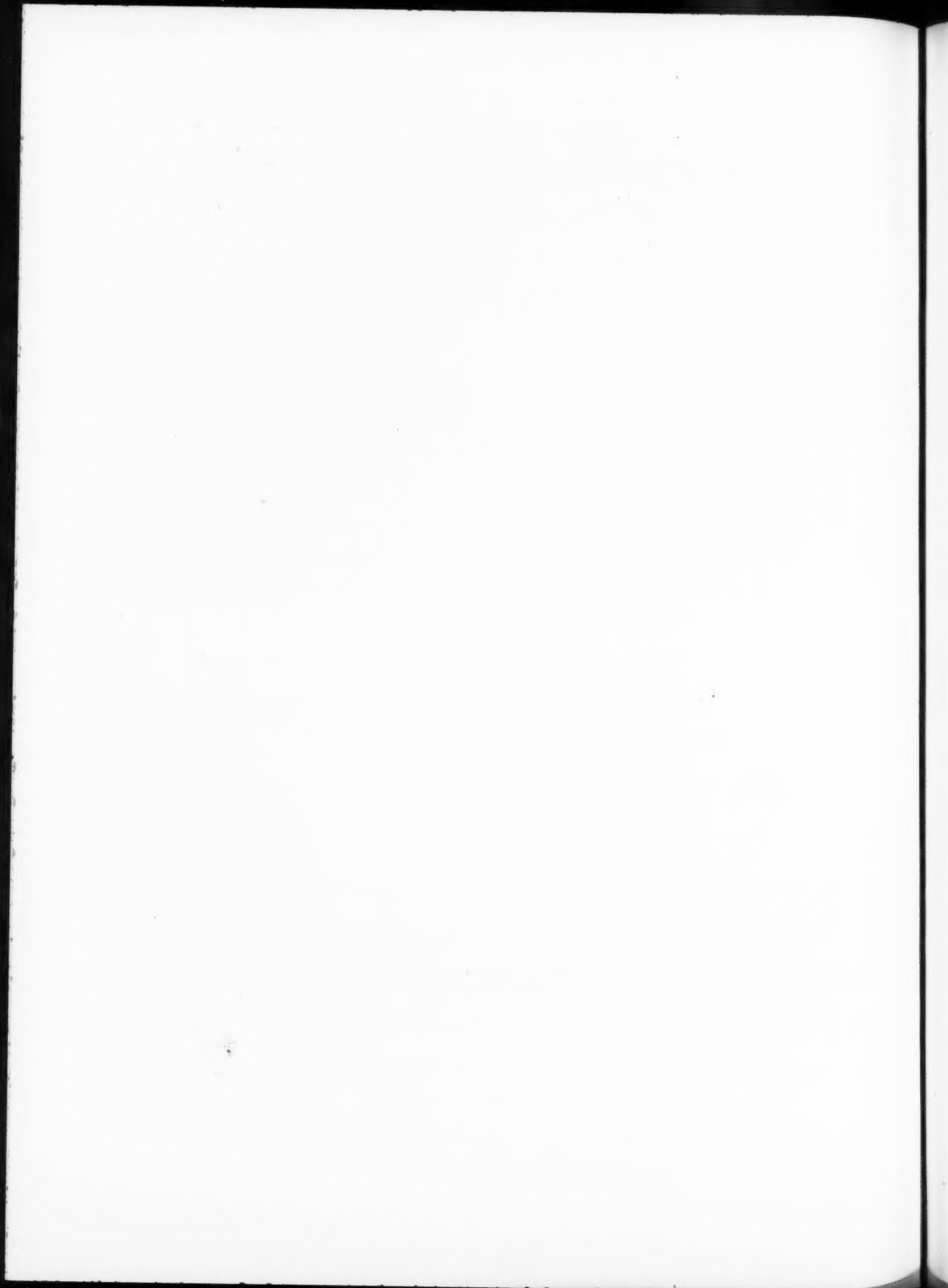
WOMEN'S ATHLETIC CLUB, SAN FRANCISCO, CAL.
MESSRS. BLISS & FAVILLE, ARCHITECTS



AUGUST 22, 1917



WOMEN'S ATHLETIC CLUB, SAN FRANCISCO, CAL.
MESSRS. BLISS & FAVILLE, ARCHITECTS





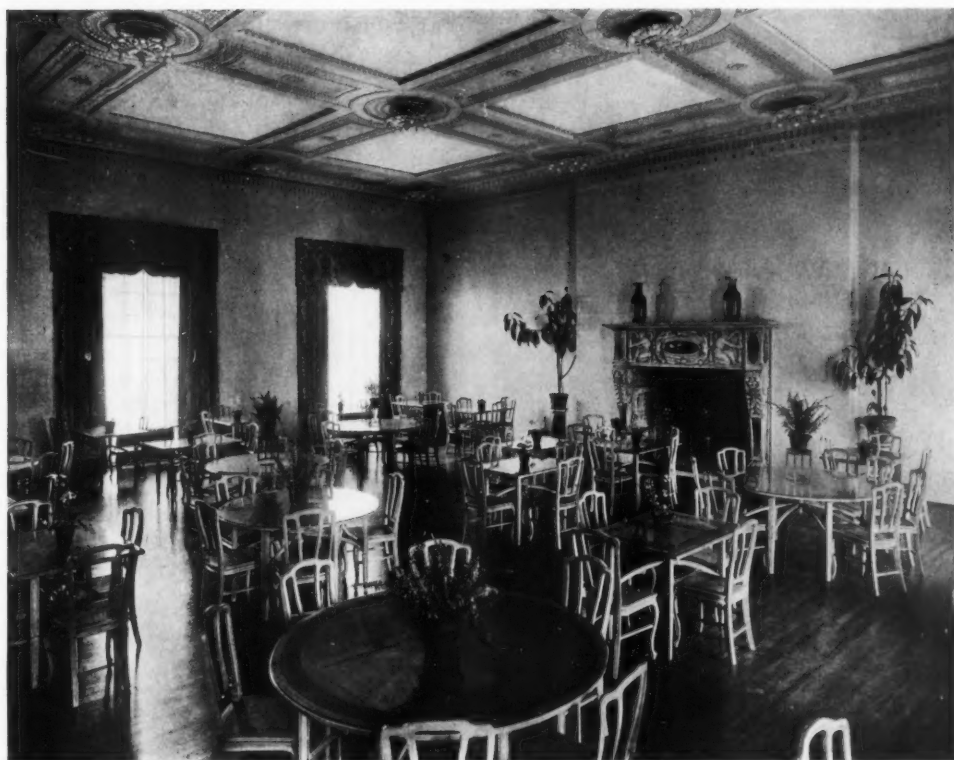
GAMES ROOM



LOUNGING ROOM

PLATE 80

WOMEN'S ATHLETIC CLUB, SAN FRANCISCO, CAL.
MESSRS. BLISS & FAVILLE, ARCHITECTS



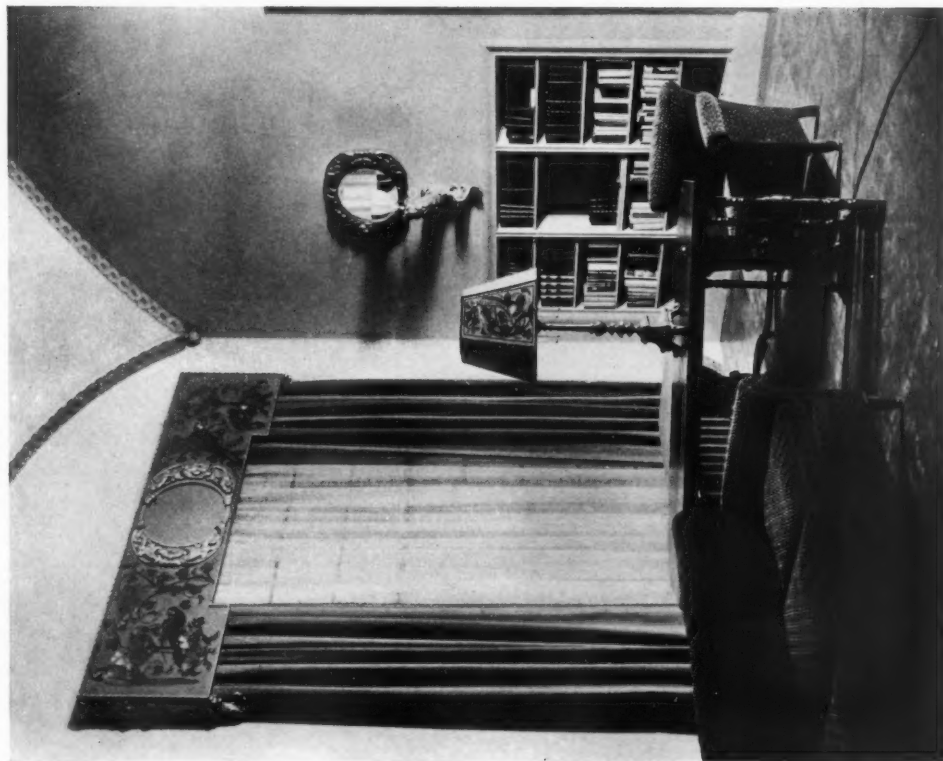
DINING ROOM



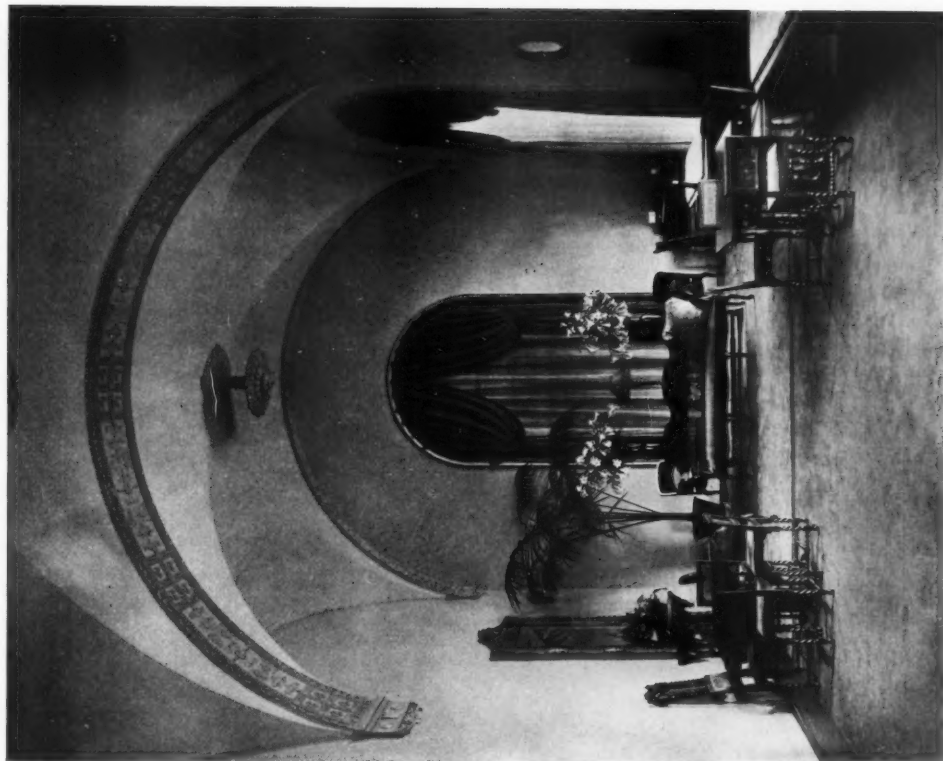
PLATE 81

STRANGERS' ROOM

WOMEN'S ATHLETIC CLUB. SAN FRANCISCO, CAL.
MESSRS. BLISS & FAVILLE, ARCHITECTS

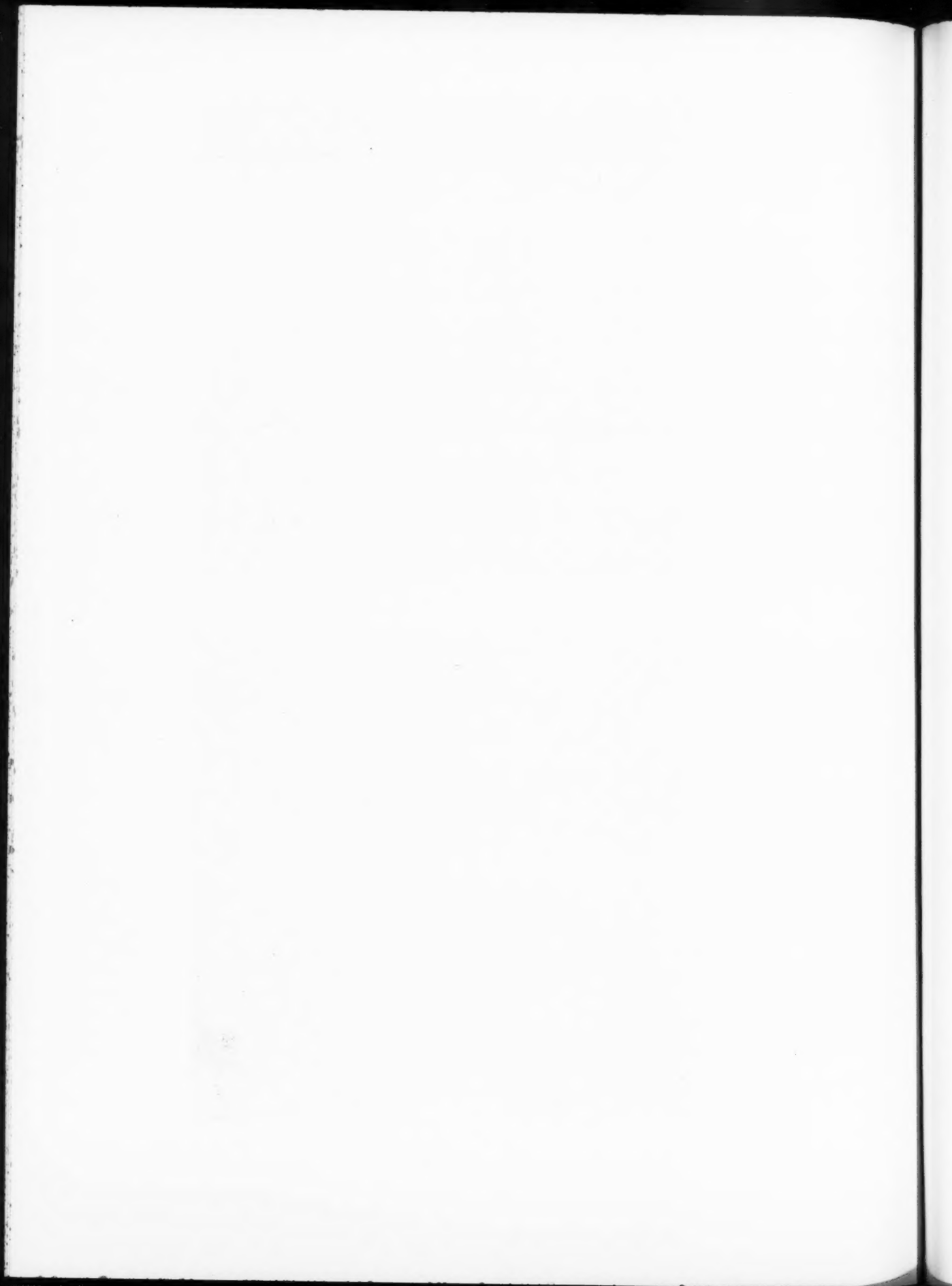


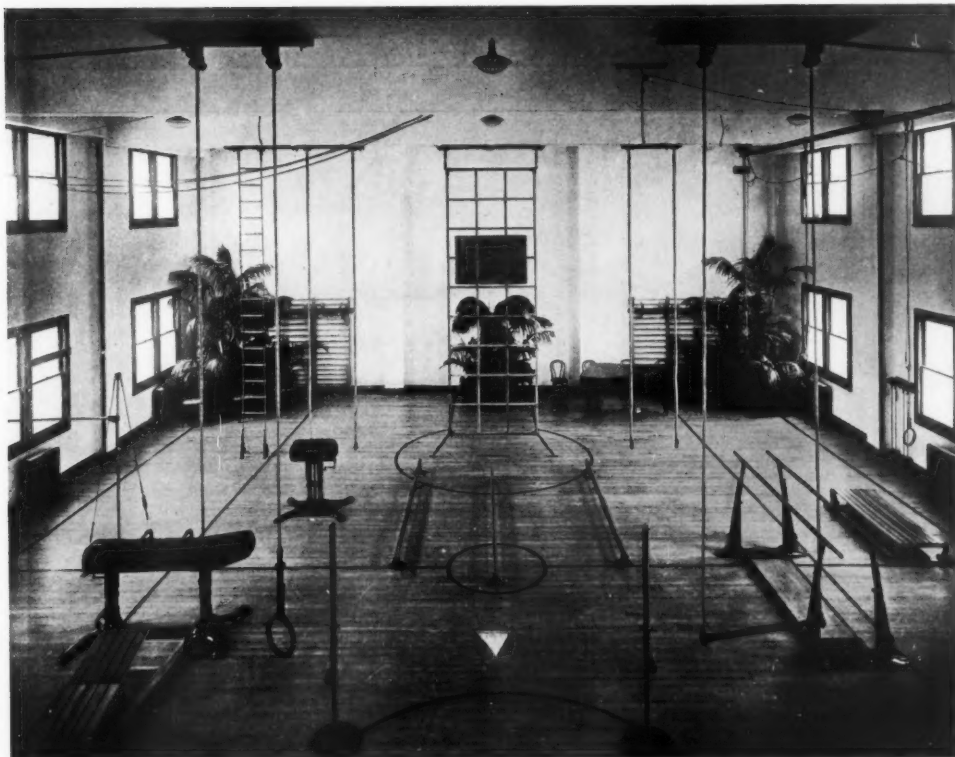
LOUNGING ROOM



GAMES ROOM

WOMEN'S ATHLETIC CLUB, SAN FRANCISCO, CAL.
MESSRS. BLISS & FAVILLE, ARCHITECTS





GYMNASIUM



PLATE 83

SWIMMING TANK

WOMEN'S ATHLETIC CLUB. SAN FRANCISCO, CAL.
MESSRS. BLISS & FAVILLE, ARCHITECTS



PLATE 84

DINING ROOM MANTEL

WOMEN'S ATHLETIC CLUB, SAN FRANCISCO, CAL.

MESSRS. BLISS & FAVILLE, ARCHITECTS

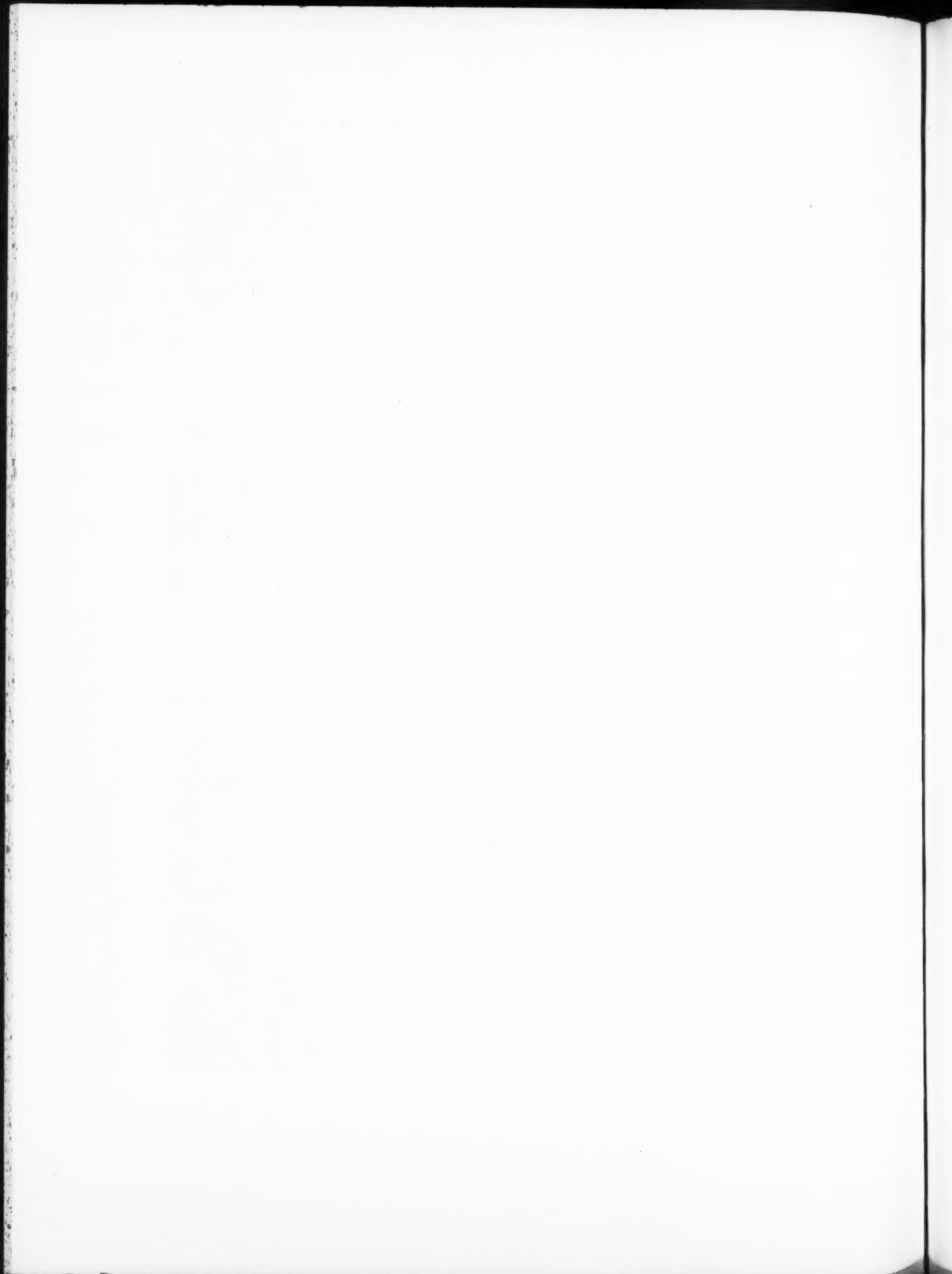


PLATE 85

GAMES ROOM MANTEL

WOMEN'S ATHLETIC CLUB, SAN FRANCISCO, CAL.

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THE AMERICAN ARCHITECT

tion." All this color has been swept away "by the curious ideas of good taste prevalent in the Barocco period," or restored "according to the still more curious conceptions of our own time."

In concluding this review one may wish that Mr. Porter might add to the gaiety of nations by giving a more extended account of the delicious forgeries which have complicated his subject and perplexed his predecessors. It appears that a church near Bologna, S. Vittor at S. Ruffilo di Bologna, is endowed with a complete outfit of false inscriptions. "The history of the church is complicated by a great number of false inscriptions in and about the building. Certain of those preserved in the nave are really not inscriptions at all, but stones coated with plaster upon which letters are painted so cleverly that at first sight they deceive the eye into believing them carved. They are all of similar style, and composed in exceedingly obscure Latin. Although recording personages, many of whom are supposed to have lived as early as the XII or XIII century, the inscriptions are of a style which cannot be earlier than the XVIII century. Other forged inscriptions in this church lead to the conclusion that none of them were perpetrated earlier than the second quarter of the XIX century. Some of us

would also like to hear more about "The Chronicle of Rodolfo the Notary," a most engaging and plausible work which deceived every antiquarian in Italy (including Cattaneo) for the space of fifty years; until the deception was laid bare about ten years ago. "The church of S. Michele (at Cremona) was one of the monuments particularly selected by Antonio Dragoni about which to weave his falsified documents. These famous forgeries are preserved in a manuscript in the Cremona library." The joy of living must indeed have been great in the country and time which produced "The Chronicle of Rodolfo the Notary."

I leave Mr. Porter's book with the regret that I cannot do it justice. When David slays Goliath most of us like to see it mentioned in print, but Mr. Porter's peculiar modesty and his kindly treatment of his predecessors place his reviewers in a difficult position. If they do not possess his learning they cannot always specify his contributions to original research, for Mr. Porter generally leaves us to guess which they are.

A reviewer is sometimes supposed, or sometimes supposes himself, to know more than his author; but in case that were true it is clear that he would have written the book himself.

Dr. Jesse Benedict Carter

IT is fitting that some further recognition be made of the valuable services rendered by Dr. Jesse Benedict Carter, in the field of art, than the brief notice of his death already made in THE AMERICAN ARCHITECT. It is deemed a privilege, therefore, to be accorded permission to publish below a copy of the resolutions presented by Dean West, chairman of the committee on the School of Classical Studies, American Academy in Rome, at a special meeting, held in New York on July 31:

"Jesse Benedict Carter was born in New York on June 16, 1872. He was of Scotch descent, the son of Peter Carter, the publisher, and of Mary Louise (Benedict) Carter, and a nephew of Robert Carter. His boyhood was happily nurtured in a home where books and studies were a natural part of the daily life. In 1889 his school days ended and he entered New York University. The next year he entered Princeton and graduated in 1893 at the head of his class. His brilliancy and range of power were evident from the start. He was first in every study he touched, whether ancient literature, physical science, philosophy or history. His assiduous reading soon carried him far beyond the bounds of classroom tasks, widening the horizon

of his regular studies and opening vistas into other regions, especially modern letters and fine arts. It is conceded that in the last generation Princeton has graduated no one more highly gifted or better trained in the studies of classical antiquity, and no one who combined with this special equipment a broader sweep of intellectual sympathy and vision. For four years after graduation he studied in classics and other fields at the Universities of Leipzig, Berlin, and Goettingen. He was still roving and ranging, and yet slowly settling to his special work. The next three years he was instructor in Latin at Princeton. The effect of his vivid teaching on the students was instantaneous, quickening and even thrilling. The next year was spent at the University of Halle, from which he received the degree of doctor of philosophy. He then returned to Princeton as assistant professor and took a leading part in organizing the Classical Seminary established by his friend, Mr. George A. Armour. In 1902 he married Miss Kate Benedict Freeman. His devoted wife survives him. The same year he became professor of Latin, holding this post until 1904, when he went to Rome as professor in the American School of Classical Studies. In 1907

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he was chosen director of the school and was retained in this position on the consolidation of the school with the American Academy in Rome in 1911. The warm admiration shown for his executive skill by the late Mr. Pierpont Morgan went far to insure the success of the consolidation.

"On the death of Mr. Frank D. Millet in 1912 he was elected as director of the academy. The five years which followed were years of incessant and at times distracting labors, until at last the academy, with its two constituent schools, was settled in residence on the Janiculum and well started on its new career. Deserved recognition quickly followed his work, as evidenced by the degree of doctor of letters conferred by Princeton, the invitation to deliver the Lowell Lectures in Boston, the lectures he gave in France on request of the Minister of Public Instruction, and the final honor of Commander of the Crown of Italy, bestowed last year by the King.

"To his regular duties he added an active cooperation of the academy in measures of Italian war relief. In June of this year he went north to Paris, returning to Bologna to help in the ambulance work and died there of sunstroke on July 20. He was buried July 25 in the Protestant Cemetery in Rome.

"His work has been of fundamental value. His gifts and training and, above all, his enthusiasm for the unity of arts and letters made him the best man to succeed Frank Millet and put the new plan into operation, for he was through and through a humanist. Substitute the greater word art for sculpture, and the saying of Pomponius Gauricus (*De Sculptura* I) would be his watchword: 'I agree with you that sculpture cannot exist without letters, nor even letters without sculpture.' It was art to quicken classical studies into brighter reality, and classical studies to illumine art with the light of history.

"For all this, Rome herself was in his eyes the main source of power. The Eternal City was to him a fountain flowing with living waters, quickening memories, self-renewing and priceless for both art and letters, ancient and modern. To blend these into one powerful impulse was his one aim. It is little wonder the students answered his call and that their daily fellowship is the sure pledge that his work, though unfinished, has been well begun.

"Such faults as he had were not unlike his virtues. His exuberant vitality and brilliancy, the source of his strength, at times appeared in mannerisms which might easily be misunderstood. They were of a sort which endeared him to the Italians and added to his influence. It is doubtful whether any one less impressionable and sympa-

thetic could have performed his difficult task so well.

"We lose him in the critical time of the great war. He was just coming into the fullness of his vigor. He was needed to guard and guide the new work. We had the best years of his life. No one can forget him—bright, alert, buoyant, friendly, flashing with life. His writings on Roman religion are secure in the esteem of scholars. His memory as an awakening teacher will last as long as his students survive. His administrative energy appears throughout our records. He lived to see the new plan well established; and for his loving labors he deserves remembrance as the chief intellectual builder of the new academy."

The Annual of the School of Architecture, Columbia University

The 1916 Annual of the School of Architecture of Columbia University, just issued, is a review of the current work of the school in design and its allied branches.

This publication is prepared under student management and is an unimpeachable witness of the high quality of the work being done at this school. This annual has been dedicated to William A. Boring, professor in charge of design. The frontispiece is an excellent reproduction of a photograph of Professor Boring.

Mr. Richard Franz Bach, the curator, in a foreword states: "Of the total number of problems submitted in the regular course of instruction in the school, 91 per cent were adjudged as of passing grade or over, and again, of the total number submitted, 26 per cent were specially commended. These results were obtained on the basis of open competition throughout, all drawings having been publicly exhibited and judged by otherwise disinterested architects in regular competition at a time when all names of draughtsmen were covered."

The result of the year's work as presented in this annual conveys in direct terms the high standard of effective production among the students at this school.

Slow Burning Construction

At a forthcoming meeting of the National Fire Protection Association, the matter of specifications for slow-burning or "mill" construction will be the main topic. Members are requested to communicate with Mr. Julius Franke, chairman of the Committee on Uses of Wood, setting forth any recommendations they may desire to present.

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Re-Education of the Adult a War Necessity

DURING the past three years the United States in its various governmental departments has been a careful observer of the experiences of the other countries engaged in war, with a view to profiting by the lessons taught.

An interesting study of conditions as at present existing in Canada, and which will undoubtedly be duplicated in this country at a later period when our military operations develop, is that of the re-education of the disabled soldier. Many men invalidated home to Canada have been found upon discharge from the hospital to have become incapacitated from the pursuit of their former line of work. For this reason they have been forced through necessity to accept work at a reduced rate of wages, and in many instances have become a charge on the Dominion.

To correct these conditions and to evolve a plan that would work to the advantage of the individual as well as to the nation, a scheme of re-education has been evolved in Canada, and will, with certain modifications or improvements, be put into operation in the United States.

The method as at present pursued in Canada places all wounded men in the general charge of the Canadian Hospital Commission. This commission is composed of one representative each from the

Army, the Medical Corps and the Department of Education.

The first care is to place the wounded man in the best physical condition that the nature of his injuries will permit. At the time of his discharge from the convalescent camp his case is referred to the educational department, where the man's civil and military history is carefully examined and a recommendation is made as to the proper re-educational course that will rehabilitate the individual and place him in the best position of self-support.

The soldier is next sent to a specially adapted vocational school, where he is given the training prescribed. On discharge, the authorities assist in the obtaining of work along the new lines of re-education.

From the time of his entry into the hospital to that of his discharge from the vocational school the soldier is under strict military discipline, serving in his army grade or rank, and is under the orders of the Army Department member of the Hospital Commission. He is paid a minimum of \$1 per day, or the pay of his army rank. Through this method his special education becomes compulsory, and it is not until he has been placed in a self-supporting position that he receives his discharge from the Army.

Experience has shown in many cases of disabled soldiers that when left to individual choice, or inclination, the opportunity for re-education is refused and the result is that the man becomes an economic loss to the nation. This feature of re-education introduces into the life of the soldier a paternal, or perhaps more properly, an elder brother attitude on the part of the nation, that is in every way so desirable as to need no argument to effect general approval of the method.

In working out the details of a proper and satisfactory system of re-education, the United States has been able to avail itself of all the experiences of organization in Canada, to which have been added features that have been shown to be practical in the vocational or trade schools for children of school age.

At the outset it was believed that the regular school equipment, or vocational schools near hospitals, could be utilized for the re-education of disabled soldiers. With the experience of Canada, as an actual working example, it has been decided by our own government that it would be inadvisable to include the adult with children of school age, and that the re-education of the adult should be regarded as an entirely distinct problem from that of the usual vocational school.

The Red Cross in New York has been presented by a generous citizen with the building at the northeast corner of Twenty-third Street and Fourth

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Avenue, long occupied as a commercial college. There has also been added a cash contribution of \$50,000. The building is now thoroughly equipped for its intended purpose, the exact course of study has been determined, and it stands ready for use when needed.

It has been suggested that these special schools be located at the various cantonments, or war hospitals. Inasmuch as these cantonments are used for mobilizing of troops, they can also be used for demobilization, and one-story temporary schools be erected for the crippled, or temporary schools built in connection with the base or convalescent hospitals, where these soldiers, even though pronounced cured, could be constantly under the eye of the medical officers while receiving their re-education.

To serve the Navy, some of the existing buildings could probably be used, or temporary buildings could be built at various naval training stations for this purpose.

It is a duty devolving on the Nation to provide for the permanently incapacitated men by pensions or insurance and also to afford men who are able to avail themselves of it the opportunity to do for themselves. A soldier is naturally, or by training, self-reliant, active and capable. We can in no better manner prove our appreciation of his sacrifice than to afford a well-considered means to help him keep his self-respect by employing his mind and body in some useful work, and thus assist him to forget his impaired efficiency and also avoid the humiliation of pauperization.

J. O. BETELLE.

The Blatant Bill-Board

A CORRESPONDENT to a New York daily paper inquires, "Will Congress, in the consideration of a revenue bill to provide funds for taxation for the prosecution of the war, include the blatant, selfish and obnoxious bill-board among the industries to be levied upon?"

It is right to expect that any taxation should be

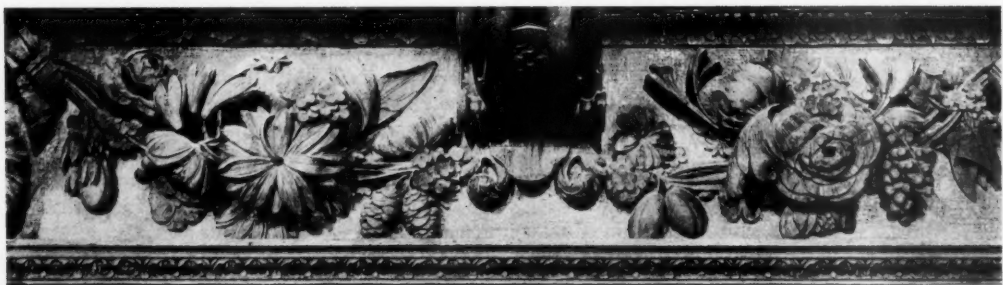
equable and justly distributed and that no class of business be allowed to escape its due proportion of the burden of war. While the bill-board industry may be legitimate, it is undoubtedly more selfish in its disregard for the rights of all the people and a greater transgressor of public decency than any other form of publicity.

The correspondent makes the point that "advertising in newspapers, periodicals and the like is not only necessary and useful, but is not harmful to the public, and to private property." The bill-board can not be classed as a legitimate advertising medium, as it directly assails the rights of the people. Its disfiguring presence along the edges of public parks and highways ruins the landscape effects that it has cost much money and time to complete. Its frequency along railroad rights of way takes from the traveler some of the comfort he has a right to expect when he travels. Every delightful vista is marred by these unsightly signs. They are invariably, and, it would seem, maliciously placed at just the points of greatest scenic interest.

If the promoters of this form of advertising are within their legal rights when they set up these signs, which to everyone of artistic impulse are unmitigated nuisances, let them share the burdens that are borne by other industries; let them bear a just proportion of taxation.

The public does not appear to realize the harmful influences of the bill-board. Through constant association it has become indifferent to a condition that, while admittedly objectionable, has not received the serious consideration it ought to have. Let the bill-board bear its share of taxation to the same proportion that it now demands a share of public notice.

If Congress should levy a tax in this proportion there would arise a protest on the part of those responsible for this reprehensible form of advertising that would direct more general attention to this nuisance and perhaps have a tendency to arouse the public from the lethargy as to bill-boards that is now so apparent.



Wall Papers, Old and New

SOME time about the middle of the eighteenth century paper was first used in Europe as a decorative covering for walls. Before that period there were many forms of wall coverings, ranging from the simply painted wall, in one solid color, often covered by tapestries or draped with textile fabrics, to that of the austerity of the paneled wall or of the more ornate form with richly carved pilasters, by Grinling Gibbons and other master woodcarvers.

It would appear that the "taste" in decoration even in that period was as changeable as it is to-day. The choice of the "dandy" in his sartorial adornment was no more ephemeral than were the whims of the rich and titled lady, who, with the same restlessness that appears to be characteristic of the sex to-day, sought new and untried features of interior decoration and personal adornment. In fact, she must needs have a setting to show off her gowns, and we know, because Evelyn has told us, that no function of moment was undertaken until the "architect" had been consulted and his plans presented. The versatile man must needs give his opinion as to the color and fashioning of my lady's gown, the decoration of the rooms and all the minor details that, when properly carried out, would produce an harmonious ensemble. It is therefore highly probable that it was in planning for one of these formal "assemblies" that the then little known "China papers" were first employed as a wall covering. Isaac Ware, in his "Classick Architecture,"

published in 1756, bewails what he regards as a decadence of taste, declaring that paper had taken the place of sculpture and wood in the decoration of walls. The plaques in low relief, so widely used, were undoubtedly the sculpture referred to.

This hand painted China paper did not, it would seem, come into any extended use until the middle of the eighteenth century, and then so popular did it become that every stately house must needs, if in the vogue, have at least one room whose walls were hung after the new fashion.

The earlier forms of paper used for wall covering were not pasted or glued to the wall as they are to-day. It was the custom to mount them on linen, stretched on frames, thus providing an air space and preventing decay due to dampness. It is stated that the painted Chinese paper in the Cadwalader room in the Metropolitan Museum of Art in New York hung on the walls of an English house for over two hundred years. Papers made and hung during our Colonial Period would seem to

have possessed most enduring qualities, for there are numerous houses where the paper affixed to the wall more than one hundred years ago is yet in a fairly good state of preservation.

We have become familiar with many of the earlier forms of paper wall coverings, for numerous boxes of paper, just as received from China, have been found stored away in the attics of country houses. These papers, like good old pictures done in oils, appear to have been decorated with the most



AN EARLY ENGLISH PAPER

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permanent of pigments. Their colors have stood the test of time and long exposure.

The manufacture of these early forms of wall papers was accomplished in much the same way that books were first printed, by movable blocks, each carved by hand to the design desired, then inked and pressed on the papers. The designs, therefore, had not the regular or repetitive patterns we know today, but were made to cover large spaces, in much



AN EXAMPLE OF THE EARLY STYLES OF WALL PAPER USED IN THIS COUNTRY AND BROUGHT OVER FROM ENGLAND

the same manner as mural paintings or the pictorial forms of tapestries. In the original painted papers there was the utmost freedom of design, which in extent was limited only by the area of the space it was intended to cover. The introduction of block printing in a measure hampered this freedom, and the present machine-printed product, with its "repeat" about every eighteen inches, still further affects the artistic merit of wall papers. This development of wall papers in the direction of a repeat



BIRD OF PARADISE DESIGN (ENGLISH)

pattern was in Europe, and the adoption of that style of paper in America logically followed. There are those who stoutly contend that with all the present development of artistic taste, the perfection of machinery, and the use of abnormally long or endless rolls of paper, the eighteenth century block-printed papers have never been surpassed.

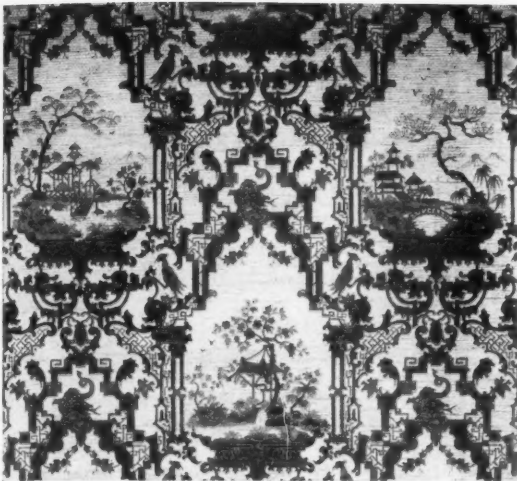
A method often pursued in the making of early forms of wall papers was to cut merely the outline on the blocks, the coloring being applied by hand when the paper had been hung on the walls.

The eighteenth century wall paper "artist" went



AN ENGLISH NURSERY PAPER

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CHINESE CHIPPENDALE (ENGLISH) PAPER

about his work in much the same way as the modern painter builds up his canvases. With the outlined paper as a basis of design, a flock powder was blown on to the freshly varnished surface. This powder when dried was tinted or painted in oils or water color, and this "building up" process was continued in various ways according to the taste or disposition of the artist. Later, fabrics were employed as a basis, and often satins or velvets introduced to



A GEORGIAN PERIOD DESIGN

give richness and color. There was a certain touch of originality in such a method which gives ground, perhaps, to the contention that these early papers, even in their commonest or cheapest forms, combined a more artistic effect than the papers of similar grades do to-day.

The development of a continuous paper process, the perfection of the printing press, and the har-



CUPID AND PSYCHE—AN EXAMPLE OF EARLY ENGLISH WALL PAPER

nessing of power early worked a revolution in the manufacture of wall papers, and made their production in large quantities at a comparatively low price a possibility.

Paper in continuous rolls was first made in 1829.



FRAGMENT OF A NURSERY FRIEZE

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Since that date the perfection of the process of production has gone steadily forward, and the present state of trade finds it one of the large industries of the country.

The artistic possibilities of modern wall papers are unlimited. Even the cheaper grades have a very well sustained artistic quality, while in the more expensive leathers and molded papers the cost may be as great as or even greater than wood paneling or other more costly forms of wall decoration.

Dense Wood Gives Nails High Values

Tests of the efficiency of various types of wooden joints were made by the Forest Products Laboratory, and about 3000 nail-pulling tests were completed on nails driven into twenty-five different species of American timber. While the data have not yet been analyzed, it appears that the holding power of nails has a definite relationship to the density of the wood, and that there is practically no difference in strength between a solid beam and a wooden beam of the same dimensions made of two planks nailed together.—*Engineering News-Record*.

The Artist in War-Time

Robert Aiken, sculptor, whose work is favorably known among architects, is a candidate for a commission, and is in training at the officers' camp at Plattsburg, New York.

Mr. Aiken has executed a plaster of paris group for the camp amphitheatre, representing Ancient and Modern Warfare. The group measures 6 by 10 feet and was modeled by Mr. Aiken in the spare moments when not engaged on duty. He is said to have used the entrenching tools supplied with his military kit. The piece carries the inscription, "Dedicated to the National Army of the United States."

The Utilization of Ash

Bulletin No. 523, issued by the United States Department of Agriculture, is a contribution from the Forest Service, and treats on the Utilization of Ash. Treating of planing-mill products, it is stated:

"For flooring, ceiling, siding, stairs, window and door frames, cabinet work, mantels, and interior fittings of all kinds, including picture frames and molding, ash is desirable because of its handsomeness of grain and figure, its polishing and wearing qualities, its comparative workability, and because

it holds its shape well, is not likely to warp, and is strong. Old growth is uniformly superior to second growth for these purposes, because it retains its shape better, and because clear lumber, often of good width, which can best be secured from large, old-growth trees, is usually required, and strength is a secondary consideration.

"Ash used in this industry is secured from all three of the important commercial species—white, green, and black. In proportion to its total cut, black ash probably contributes more than white or green. Black ash is used especially for ceiling, siding, flooring, and cabinet work; and most of the curly ash, highly prized for interior work, is from black ash."

New Fire-Retardant Shingle Paint

In a booklet recently circulated by the Educational Bureau of the Paint Manufacturers' Association announcement is made that licenses have been granted to thirty-eight concerns for the manufacture of fire-retardant shingle paints under the official trade-marks of the Paint Manufacturers' Association of the United States. The booklet says:

"These paints are designed to resist ignition, to retard the spread of fire and to prevent the shingles themselves from acting as fire-brands. For these purposes they are highly efficient, as demonstrated by repeated tests. They will prevent the formation of inflammable fuzz and the curling or cupping of shingles, which are both highly contributory to ignition, and will retard the spread of flames to a marked degree."

This product is to be manufactured after a formula by Henry A. Gardner, of the Institute of Industrial Research, Washington, D. C.

Personals

The partnership existing between James B. Urquhart and J. Carroll Johnson, architects of Columbia, S. C., has been dissolved by mutual consent. James B. Urquhart will continue to practise architecture at 1106 Palmetto Building. J. S. Tucker, of the former firm, will continue with Mr. Urquhart. Mr. Johnson has opened offices at 1006 Palmetto Building.

Announcement is made of the formation of the architectural firm of Slifer, Lundie & Abrahamson, with offices at 595 Endicott Building, St. Paul, Minn., which will succeed the late E. L. Masqueray. The new firm is the result of association of Fred A. Slifer, Edwin H. Lundie and Frank A. Abrahamson. Manufacturers please send literature and samples.



EXTERIOR DETAIL, THE CATHEDRAL, GRANADA, SPAIN

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