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THE ARCHITECTURAL RECORD

INDEX

Volume XLIV

July-December, 1918

ARTICLES

	PAGE
AMERICAN COUNTRY HOUSE, THE. WITH PARTICULAR REFERENCE TO TYPES DEVELOPED OR IMPROVED DURING THE WAR	A. D. F. Hamlin.....274-379
ARCHITECTURAL ETCHING	Frank Weitenkamp.....550-557
ARCHITECTURE AND DEMOCRACY. PART I. BEFORE THE WAR	Claude Bragdon 78-84
ARCHITECTURE AND DEMOCRACY. PART II. DURING THE WAR	Claude Bragdon 125-131
ARCHITECTURE AND DEMOCRACY. PART III. AFTER THE WAR	Claude Bragdon252-258
BANK OF PENNSYLVANIA, THE.....	Fiske Kimball 132-139
BARRACKS GROUP AND HOSPITAL FOR THE U. S. ARMY SCHOOL OF MILITARY AERONAUTICS AT OHIO STATE UNIVERSITY, COLUMBUS, OHIO: JOSEPH N. BRADFORD, ARCHITECT.....	Howard Dwight Smith.....387-405
CHARACTER OF RENAISSANCE ARCHITECTURE, THE.....	Charles H. Moore.....465-469
COUNTRY HOUSE OF FRANCIS L. HINE, ESQ., GLEN COVE, L. I.: WALKER AND GILLETTE, ARCHITECTS.....	Charles Over Cornelius..... 2-20
DEBT OF LANDSCAPE ART TO A MUSEUM OF TREES, THE..	Beatrix Farrand.....406-413
DUDLEY PETER ALLEN MEMORIAL ART BUILDING, OBERLIN, OHIO: CASS GILBERT, ARCHITECT.....	I. T. Frary..... 98-111
ENGLISH ARCHITECTURAL DECORATION. PART VIII. TEXT AND MEASURED DRAWINGS.....	Albert E. Bullock..... 31-48
ENGLISH ARCHITECTURAL DECORATION. PART IX-A. TEXT AND MEASURED DRAWINGS.....	Albert E. Bullock.....237-250
EXPRESSIVENESS OF LIGHT, THE.....	M. Luckiesh.....470-473
GOVERNMENT'S HOUSING ACTIVITIES, THE.....	Sylvester Baxter.....561-565
HENRY HERING'S SCULPTURE FOR THE FIELD MUSEUM OF NATURAL HISTORY IN CHICAGO.....	Charles Over Cornelius.....431-450
HENRY MILLER THEATRE, THE, NEW YORK CITY: PAUL R. ALLEN AND H. CREIGHTON INGALLS, ASSOCIATED ARCHITECTS	Charles Over Cornelius.....112-124
HOMES FOR WAR TIME WORKERS.....	Alfred C. Bossom.....214-224
HOUSING FOR WOMEN WAR WORKERS.....	Robert H. Moulton.....422-430
INDUSTRIAL HOUSING DEVELOPMENTS IN AMERICA. PART V. TRIUMPHING OVER THE GRIDIRON PLAN. A DEVELOPMENT AT ELIZABETH, N. J.	Lawrence Veiller..... 49-58
INDUSTRIAL HOUSING DEVELOPMENTS IN AMERICA. PART VI. HOUSING AFTER THE WAR.....	Lawrence Veiller140-151
MODERN INDUSTRIAL PLANTS. PART I.....	George C. Nimmons.....414-421
MODERN INDUSTRIAL PLANTS. PART II.....	George C. Nimmons.....532-549
NEW OFFICE BUILDINGS AT WASHINGTON, D. C., FOR THE NAVY AND WAR DEPARTMENTS.....	George P. Hales.....523-531
OFFICE BUILDINGS OF THE DEPARTMENT OF THE INTERIOR AT WASHINGTON, D. C.: CHARLES BUTLER, ARCHITECT	Charles Butler.....199-213
RED CROSS HEADQUARTERS, THE. AT WASHINGTON, D. C.	558-560
RESIDENCE OF ALLAN S. LEHMAN, ESQ., TARRYTOWN, N. Y.: JOHN RUSSELL POPE, ARCHITECT.....	Howard Dwight Smith.....482-501

22915!

THE ARCHITECTURAL RECORD.

	PAGE
SEMI-MILITARY BUILDINGS IN THE NATIONAL ARMY CANTONMENTS	Robert H. Moulton..... 21-30
SMALL HOUSE, THE. ILLUSTRATED WITH EXAMPLES OF THE WORK OF BOHNARD & PARSSON.....	I. T. Frary.....186-198
SPIRIT OF THE RENAISSANCE, THE.....	Beverley Robinson.....152-158
TWO NEW ENGLAND LIBRARIES.....	Charles Over Cornelius.....225-236
UNION SPECIAL MACHINE COMPANY'S PLANT, CHICAGO, ILL.: GEORGE C. NIMMONS & Co., ARCHITECTS.....	George C. Nimmons.....159-163
WORK OF OLMSTED BROTHERS. PART I.....	John Taylor Boyd, Jr.....457-464
WORK OF OLMSTED BROTHERS. PART II.....	John Taylor Boyd, Jr.....502-521

THE ARCHITECT'S LIBRARY.

BOOKS ON COLONIAL ARCHITECTURE.....	Richard F. Bach..... 85-90
BOOKS ON COLONIAL ARCHITECTURE: A REVIEW FOR 1917	Richard F. Bach.....175-180
SOME RECENT FRENCH BOOKS.....	Barr Ferree566-570
WAR BOOKS OF THE CATHEDRALS. PART IV.....	Barr Ferree.....474-476

NOTES AND COMMENTS.

<i>July:</i>		93-96
A Folding Bungalow. Robert H. Moulton.....		91-93
Henry Janeway Hardenburgh. Richard F. Bach.....		
<i>August:</i>		181-182
Architecture Nationalized by the War. John Taylor Boyd, Jr.....		183
Conservation of Architecture. I. T. Frary.....		184
National Federation of Building Industries.....		182-183
State Registration of Architects and Columbia University. Richard F. Bach.....		
<i>September:</i>		269-272
The Liberty Field Hospital Ward. Charles Over Cornelius.....		
<i>October:</i>		381
A Red Cross Village at Pisa.....		381-384
A Glass Front Building. MacDonald W. Scott.....		380-381
Small Window Panes. Frank A. Bourne.....		384
Training Schools for Employment Managers. Edward D. Jones.....		
<i>November:</i>		477-479
Architecture in Tapestry. Phyllis Ackerman.....		479-480
An Architectural Propaganda. I. T. Frary.....		
<i>December:</i>		571-574
Art Education and the Industrial Arts. Leon V. Solon.....		575-576
Old Western Reserve College. I. T. Frary.....		

COVER DESIGNS.

<i>July:</i> A Study in Faience. Water Color by Leo V. Solon	
<i>August:</i> Water Color by W. H. DeB. Nelson.	
<i>September:</i> Doorway of San Vincente, Spain. Water Color by Arthur Byne	
<i>October:</i> Water Color by Jack Manley Rosé.	
<i>November:</i> A Gothic Doorway in Caceres, Spain. Water Color by Arthur Byne	
<i>December:</i> The Bishop's Well at Palencia, Spain. Water Color by Arthur Byne	

TYPES OF BUILDINGS ILLUSTRATED.

	ARCHITECT	PAGE
ART BUILDINGS.		
The Dudley Peter Allen Memorial Art Building, Oberlin, Ohio.....	Cass Gilbert.....	98-111
BANK BUILDINGS.		78
Erie County Bank Building, Buffalo, N. Y.....		132-139
Bank of Pennsylvania.....	B. H. Latrobe.....	
BUNGALOWS.		93-96
A Folding Bungalow.....		300
Bungalow of J. E. Whitin, Uxbridge, Mass.....	Loring & Leland.....	

THE ARCHITECTURAL RECORD.

COTTAGES.

PAGE

Cottage of Miss Caroline M. Spear, Woodstock, Ulster Co., N. Y.....	Myron S. Teller.....	278-282
Cottage for American Workers, Workers' Village for Phelps Dodge Co., Tyrone, N. M.....	Bertram G. Goodhue.....	316

DOMESTIC ARCHITECTURE.

Frame and Half Timber.

Frank Bailey Residence, Locust Valley, L. I.....	H. Craig Severance.....	259-262
C. G. Newcomb Residence, Lakewood, Ohio.....	Bohnard & Parsson.....	197-198
R. L. Stevens Residence, Bernardsville, N. J.....	Lord & Hewlett.....	263-268
F. E. Payne Residence, Glencoe, Ill.....	J. A. Armstrong.....	294-296
Two-Family House at Pinehurst, N. C.....	Loring & Leland.....	301
Two-Family House at Whitinsville, Mass., for the Whitin Machine Works.....	Loring & Leland.....	321
George B. Agnew Residence, Lewisboro, N. Y.....	Wm. Adams.....	350-352
Arthur N. Peck Residence, Woodmere, L. I.....	Wm. Adams.....	353-354
Edmund S. Twining Residence, Southampton, L. I.....	Wm. Adams.....	355-357
C. A. O'Donahue Residence, Huntington, L. I.....	Severance & Van Alen.....	358-359

Brick and Stone.

Paul Lemperly Residence, Lakewood Ohio.....	Bohnard & Parsson.....	191-196
Francis L. Hine Residence, Glen Cove, L. I.....	Walker & Gillette.....	2-20
C. J. Rainey Residence, Lakewood, Ohio.....	Bohnard & Parsson.....	192
C. E. Stamp Residence, Cleveland, Ohio.....	Bohnard & Parsson.....	194-196
M. B. Villas Residence, Cleveland, Ohio.....	Bohnard & Parsson.....	189-190
W. P. Wightman Residence, Cleveland, Ohio.....	Bohnard & Parsson.....	195-196
Allan S. Lehman Residence, Tarrytown, N. Y.....	John Russell Pope.....	482-501
Paul C. Murphy Residence, Portland, Ore.....	Lawrence & Holford.....	454-455
Timothy Crowley Residence, Greenwich, Conn.....	James C. Green.....	274, 376
Caroline M. Speare's Cottage, Woodstock, Ulster Co., N. Y.....	Myron S. Teller.....	278-282
C. S. Bissell Residence, Milner Heights, Birming- ham, Alabama.....	Wm. Leslie Welton.....	299
Oakenshawe Development, Guilford Terrace, Balti- more, Md.....	Flournoy & Flournoy.....	322-325
Ambassador Thomas Nelson Page Residence, Pine- hurst, N. C.....	Loring & Leland.....	338
E. R. Mixer Residence, Hartsdale, N. Y.....	Davis, McGrath & Kiessling.....	339-341
Bryce Metcalf Residence, Ardsley, N. Y.....	H. P. Green.....	340
Arthur Kahn Residence, Hartsdale, N. Y.....	Alfred Hopkins.....	342-346
Beard Residence, Glen Cove, L. I.....	L. I. H. Major.....	362-363
J. B. Townsend Residence, Radnor, Pa.....	Wilson Eyre.....	376-379

Stucco and Concrete.

F. C. Thornton Residence, East Cleveland, Ohio.....	Bohnard & Parsson.....	193
F. Zimmerman Residence, Lakewood, Ohio.....	Bohnard & Parsson.....	186, 188, 197, 198
House on Estate Near Salem, N. C.....	Willard C. Northrup.....	284-285
C. L. Casey Residence, Cambridge, Ohio.....	F. L. Packard.....	286-287
Cottage Group at Coronado, Cal.....	Wm. Templeton Johnson.....	288-290
Herbert Fleming Residence, Glencoe, Ill.....	J. A. Armstrong.....	291-293
Three Houses for P. W. Proctor, Sea Cliff, Cal.....	Willis Polk.....	297
Bungalow of J. E. Whitin, Uxbridge, Mass.....	Loring & Leland.....	301
Cottages for American Workers. Workers' Village for Phelps Dodge & Co., Tyrone, N. M.....	Bertram G. Goodhue.....	316
Foreman's House, American Optical Co., South- bridge, Mass.....	Loring & Leland.....	321
W. J. Brainerd Residence, Scarsdale, N. Y.....	E. J. Lang.....	347-348
A. W. Young Residence, White Plains, N. Y.....	Wm. Stanwood Phillips.....	360-361
Col. J. C. Wise Residence, Westham, Henrico Co., Va.....	Wm. L. Bottomley.....	363-367
C. A. Goding Residence, Nashville, Tenn.....	E. E. Dougherty & T. W. Gardner.....	367-369
W. L. Grant Residence, Pelham, N. Y.....	H. Major.....	370-371
R. L. Patterson, Southampton, L. I.....	Grosvenor Atterbury.....	372-373

HOSPITAL BUILDINGS.

Hospital Building at Ohio State University, Colum- bus, Ohio.....	Joseph N. Bradford.....	404
--	-------------------------	-----

THE ARCHITECTURAL RECORD.

	PAGE
LIBRARIES.	
Dailey Memorial Public Library, Medfield, Mass... Wm. G. Perry.....	225-236
Swampscott Public Library, Swampscott, Mass.... Kelley & Graves.....	225-236
MANUFACTURING BUILDINGS.	
Union Special Machine Company's Plant in Chicago, Ill. George C. Nimmons.....	159-163
The Peterboro Plant of the Quaker Oats Co.....	535
MILITARY BUILDINGS.	
American Library Association Camp Library.....	28
Army Y. M. C. A. Buildings.....	24-25
Hostess House	22-23
Liberty Theatres	26-27
Navy Gymnasium.....	29
Red Cross Community Club House.....	126-129
Barracks at Ohio State University, Columbus, Ohio. Joseph N. Bradford.....	387-405
Latrine Buildings at Ohio State University Columbus, Ohio	402
Red Cross Headquarters at Washington, D. C.....	558-560
OFFICE BUILDINGS.	
The Office Building of the Department of the Interior at Washington, D. C..... Charles Butler.....	199-213
The New Office Buildings at Washington, D. C., for the War and Navy Departments.....	522-530
The Hallidie Building, San Francisco, Cal..... Willis Polk & Co.....	381-384
C. A. Brewer Building, Chicago, Ill..... Alfred S. Alschuler.....	532, 548
Peacock Real Estate Trust Building, Chicago, Ill. E. Norman Brydges.....	537
Ford Administration Building, Detroit, Mich. Albert Kahn	539
Ford Service Building, Omaha, Neb..... Albert Kahn	540
Goodrich Tire Service Building, Detroit, Mich. Albert Kahn	541
John Sexton & Co. Building, Chicago, Ill..... Alfred S. Alschuler.....	543
Albert H. Loeb Building, Chicago, Ill..... Alfred S. Alschuler.....	544
A. Stein & Co. Building, Chicago, Ill..... Alfred S. Alschuler.....	545
Rosenwald & Weil Building, Chicago, Ill..... Alfred S. Alschuler.....	546-547
THEATRES.	
The Henry Miller Theatre, New York City..... Paul R. Allen and H. Creighton Ingalls	112-124

ILLUSTRATIONS OF DETAIL.

Auditoriums	119, 120
Ball Rooms	64
Bays	122
Breakfast Rooms	63
Casings	43
Ceilings	36, 37, 41, 42, 44, 240, 241, 561, 563
Chapel	576
Chimneypieces	45, 239, 242, 243, 244, 246, 247
Corridors	206
Courts	6, 107, 490
Dining Rooms	16, 17, 40, 172, 173, 174, 261, 293, 328, 331, 332, 344, 345, 372, 375, 378, 499
Driveways	341, 468
Doorways	65, 122
Dormitory	576
Entrances.....	7, 8, 68, 98, 112, 186, 191, 196, 206, 228, 232, 234, 259, 341, 361, 373, 379, 491, 493, 495, 532
Fireplaces	17, 18, 32, 45, 248, 249, 250, 333, 335, 336, 344, 365
Fountains	107, 155
Foyer	114, 118
Galleries	63, 110, 333, 376
Gardens.....	11, 59, 60, 189, 264, 265, 267, 274, 280, 290, 339, 351, 360, 374, 502, 503, 504, 505, 506, 507, 508, 509, 510, 521
Gates	502
Greenhouses	505
Halls	14, 61, 62, 108, 165, 166, 296, 333, 341, 348, 349, 359, 360, 377
Ironwork.....	69, 70, 71, 72, 73, 74

THE ARCHITECTURAL RECORD.

	PAGE
Kitchen	281
Living Halls	500, 501
Living Rooms.....19, 23, 167, 168, 169, 170, 171, 281, 292, 327, 329, 330, 334, 335, 340,	344, 365, 366, 371, 376
Lobbies	116
Loggias	105
Lounges	116, 118
Morning Rooms	164
Offices	208
Observatory	576
Overmantels	245
Parks	416, 457
Pavilions	200
Pergolas	508, 509
Plaster Detail	119
Pond	406
Pool	504
Porches	2, 8, 9, 10, 297, 359, 361, 395
Porticos	13, 134
Press Room	202
Reading Room	230
Sculpture Halls	66, 109
Stair Tower	495
Stairways	15, 207
Stages	27, 121
Study	45
Tennis Courts	460
Terraces	482, 498, 512, 513
Walls	67
Window Panel	560

ARCHITECTS REPRESENTED

ARCHITECT	HOME OFFICE	PAGE
Adams, Wm.....	New York City.....	331-350-357
Allen, Paul R.....	New York City.....	112-124
Alschuler, Alfred S.....	Chicago, Ill.....	532, 543, 544, 545, 546, 547, 548
Armstrong, J. A.....	Chicago, Ill.....	291-296
Atterbury, Grosvenor.....	New York City.....	335, 372, 373
Bonhard & Parsson.....	Cleveland, Ohio.....	186-198
Bossom, Alfred C.....	New York City.....	214-224
Bottomley, Wm. Lawrence.....	New York City.....	363-367
Butler, Charles.....	New York City.....	199-213
Cross & Cross.....	New York City.....	69-74
Davis, McGrath & Kiessling.....	New York City.....	339-341
Dougherty, Edward E.....	Nashville, Tenn.....	367-369
Eyre, Wilson and McIlvane.....	Philadelphia, Pa.....	164-174, 332, 333, 376-379
Flournoy & Flournoy.....	Baltimore, Md.....	322-325
Gardner, T. W.....	Nashville, Tenn.....	367-369
Gilbert, Cass.....	New York City.....	98-111
Gilbert, C. P. H.....	New York City.....	61-64
Green, H. P.....	New York City.....	334-340
Green, James C.....	New York City.....	274, 374, 375
Hopkins, Alfred.....	New York City.....	342-346
Ingalls, H. Creighton.....	New York City.....	112-124
Johnston, Wm. Templeton.....	San Diego, Cal.....	288-290
Kahn, Albert.....	Detroit, Mich.....	533, 539, 540, 541
Kelley & Graves.....	Boston, Mass.....	225-236
Kilham & Hopkins.....	Boston, Mass.....	306-312
Lang, E. J.....	New York City.....	347-348
Lord & Hewlett.....	New York City.....	263-268
Loring & Leland.....	Boston, Mass.....	300-301, 338, 349
Major, H.....	New York City.....	335, 362, 363, 370, 371
McKim, Mead & White.....	New York City.....	65-68
Murphy & Dana.....	New York City.....	49-58
Nimmons, George C.....	Chicago, Ill.....	159-163
Northrup, Willard C.....	High Point, N. C.....	284-285

THE ARCHITECTURAL RECORD.

	PAGE
Packard, F. L.....	Columbus, O. 286-287
Perry, Wm. G.....	Boston, Mass. 225-236
Phillips, W. S.....	New York City 360, 361
Polk, Willis	San Francisco, Cal. 297, 329, 381-384
Schenck & Mead	New York City 303, 304
Severance, H. Craig.....	New York City 259-262
Severance & Van Allen.....	New York City 358, 359
Spahr, Albert H.....	Pittsburgh, Pa. 317-320
Sterner, Frederick J.....	New York City 333
Teller, Myron S.....	Kingston, N. Y. 278, 282
Walker & Gillette.....	New York City 2-20
Weirick, Ray Floyd.....	Des Moines, Iowa 59-60
Welton, Wm. Leslie.....	Birmingham, Ala. 298-299

THE ARCHITECTURAL RECORD

CONTENTS

J. M. E.

VOL. XLIV. No. 1

JULY, 1918

SERIAL No. 238

Editor: MICHAEL A. MIKKELSEN

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Cover—A Study in Faience, by Leon V. Solon	PAGE
THE COUNTRY HOUSE OF FRANCIS L. HINE, ESQ., GLEN COVE, L. I.: Walker & Gillette, Architects	2-20
<i>By Charles Over Cornelius</i>	
SEMI-MILITARY BUILDINGS IN THE NATIONAL ARMY CANTONMENTS.	21-30
<i>By Robert H. Moulton</i>	
ENGLISH ARCHITECTURAL DECORATION. Part VIII. Text and Measured Drawings	31-48
<i>By Albert E. Bullock</i>	
INDUSTRIAL HOUSING DEVELOPMENTS IN AMERICA. Part V. Triumphing Over the Gridiron Plan A Development at Elizabeth, N. J.	49-58
<i>By Lawrence Veiller</i>	
PORTFOLIO OF CURRENT ARCHITECTURE	59-74
ARCHITECTURE AND DEMOCRACY: Before, During and After the War. I.—Before the War	75-84
ARCHITECT'S LIBRARY	85-90
NOTES AND COMMENTS	91-96

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ENTRANCE PORCH—COUNTRY HOUSE OF
FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
WALKER & GILLETTE, ARCHITECTS.

THE ARCHITECTURAL RECORD

VOLUME XLIV



NUMBER I

JULY, 1918

The COUNTRY HOUSE *of* FRANCIS L. HINE ESQ — GLEN COVE, L.I. —

WALKER & GILLETTE, ARCHITECTS



By Charles Over Cornelius



IN the professions, honeycombed though these are with specialists, we still do find the general practitioner facing and solving new problems as they present themselves and occasionally putting to shame the specialist by incursions into his own particular field. This is true particularly of architecture; since here the specialist most frequently develops in direct response to the demands of a clientele and as a result of a definite successful accomplishment arising conspicuously out of a broad general experience. The judgment to be passed upon the work of a specialist is perforce limited in its scope. His problem is definitely set; is solved by methods made familiar by constant use, and is judged with corresponding stringency.

With regard to the general practitioner the case is somewhat different. He must

be prepared to attack each new problem from a fresh point of view, to take advantage of all special features of the location and surroundings and to render himself susceptible to the influences—dramatic and historic—which are present in the site. In accordance with the extent to which he takes advantage of these suggestions is he to be acknowledged a master of his art. This provides us with the corollary that in so far as he fails to make the most of the suggestive features inherent in the problem, just so far should blame fall roundly on his shoulders.

Among general practitioners in the profession of architecture there are few whose works have embraced in an equal number of years so many and varied subjects for study as have those of Walker & Gillette. Their work has been domestic,

commercial and ecclesiastical; it has been urban, suburban and rural. Into the last named category falls the country residence of Francis L. Hine at Glen Cove, Long Island.

Country life in America, in the main modeled upon that of our English forebears, has had a gradual and uninterrupted growth dating from pre-Revolutionary times, when the great estates of the Atlantic seaboard were the centres of a brilliant social life. These establishments provide the antecedents from which has developed the American country life of today with its cognate architectural expression. A distinctly modern phase of this development is the weekend residence, characterized primarily by easy access from the city by motor and rail. The gently rolling country of Long Island provides for New York City a wealth of building property, thoroughly adapted to the demands of this type.

In such a country the Hine residence is located; and from a general survey, the property would seem to possess many suggestive possibilities. The immediate neighborhood is made up of the large and often elaborate country estates which abound on the north shore of Long Island. In many of these, the property lies between the highway and the Sound, with the result that the water view is towards the north—a disadvantage to be overcome at the outset. There is a gentle slope leading upward from the main road to a knoll some three quarters of the distance to the water front, and on this knoll the house is set. From here the land slopes down again to a good sized pond at the north, which is separated from the open water beyond by a strip of sand bar. The place is studded with many fine trees, singly and in groups, in the midst of which lies a sink-pool of the type so characteristic of this low-lying country, forming an interesting detail in the garden scheme.

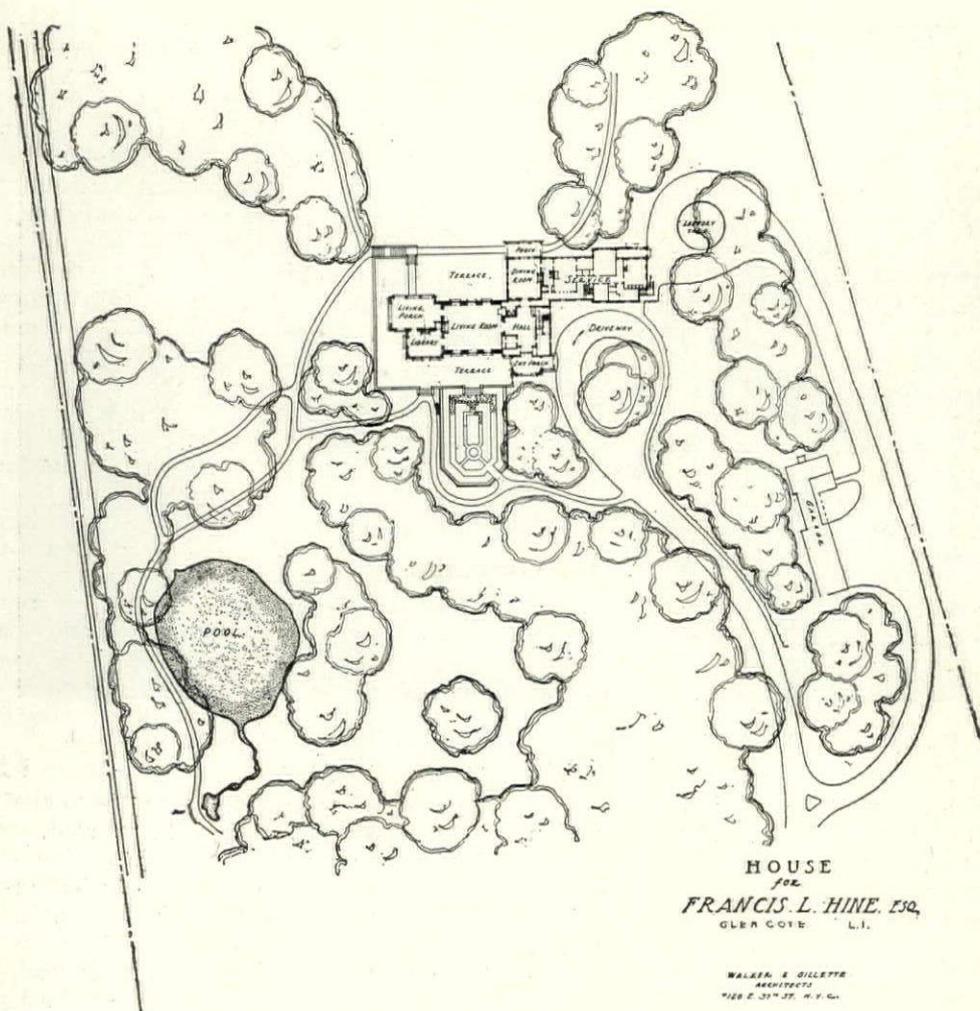
From the accompanying plot plan, the architects' solution will be readily seen. A group of farm buildings, ranged to the east of the entrance drive, is served by a special roadway; and the roomy garage, with its doors opening away from the house, is reached by a branch of the main

driveway. The long entrance road skirts the south grounds of the house on their east and swings into the entrance court from that side. The house has been placed on the summit of the knoll, as before-mentioned, and has been drawn out to considerable length on its major axis, running east and west. The south elevation of the house is the garden front, the knoll being built out here to the necessary distance and level to receive the gardens. To the north of the house well kept lawns lead down to the pond at their foot. Here is the bathing beach, for which the sand bar, forming the far side of the pond, serves as a natural breakwater from the open sweep of the Sound.

The harmony created between the house and its surroundings is a decided accomplishment, to which its architectural genealogy, deriving as it does from New England rather than from the south, is largely contributory. The usual balance between vertical and horizontal has been freely and instinctively adapted so that, while the horizontal is predominant in the line and mass of the building, for the necessary verticals dependence has been referred to the many tall trees on all sides. In general, the effect of the exterior has been gained by mass and spotting rather than through an elaboration of detail, pleasant texture and judicious planting being relied upon for close-up interest. The brick exterior has been painted white, with the result of a softened wall coloring and a neutralization of any harsh contrast of materials.

The entrance court is bounded, on the north, by the long service wing and, on the west, by the end wall of the main house. Here the task has been to keep the entrance dependencies sufficiently separated from the gardens to insure absolute privacy to the latter, heavy planting being relied upon to accomplish this purpose. The entrance court serves well its utilitarian object without suggesting too forcibly the charm and attractiveness which await the bidden guest within. The entrance porch and hall occupy the south-east corner of the main house.

The kitchen wing is happily tied into the general mass by the dark line of slate roof that breaks the end wall and



GROUND PLAN—COUNTRY HOUSE OF
 FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
 WALKER & GILLETTE, ARCHITECTS.



ENTRANCE COURT—COUNTRY HOUSE OF FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
Walker & Gillette, Architects.

which is caught up and held by the roofs of the entrance porch. The combination of the brick and wood in this entrance porch is well studied; the problem of an all-white composition presenting itself in a very different guise from that of one in contrasting tones. The idea of informality is induced by the placing of the entrance in its somewhat casual position as well as by a certain studied *gaucherie* in its composition with its suggestion of garden architecture.

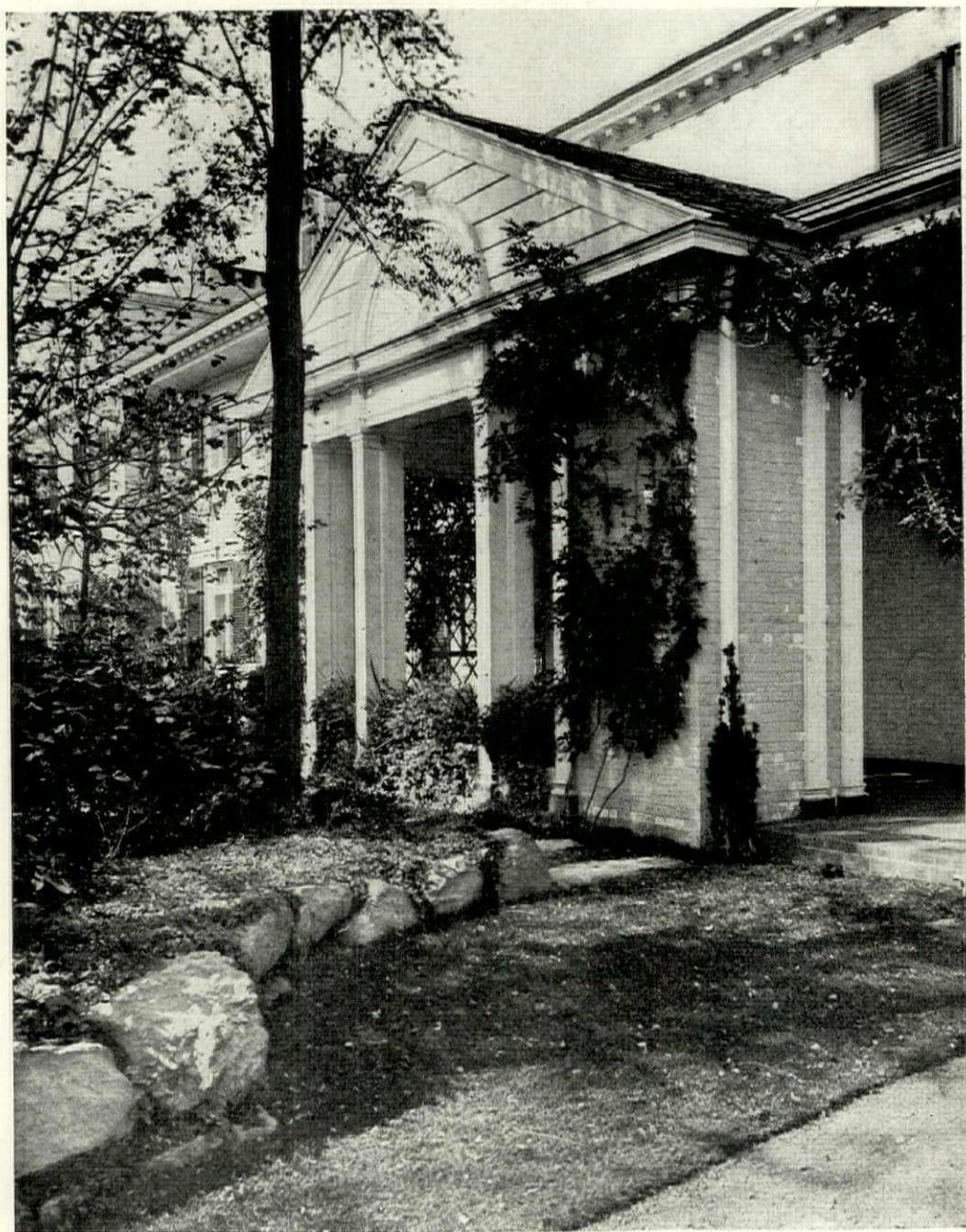
In the south, or garden, front a clever recourse has been made to the recessing of the central motif with its symmetrically spaced windows giving from the large living room. Here the deep shadow of the eave and angle binds together this portion of the façade. The three grouped windows of the library form a strong yet simple end motif which lends variety to the whole in keeping with the garden character, the arch in the centre of this group recalling the fan of the entrance porch, which it serves to balance. The dormers may be a trifle too aspiring and delicate, although they count as very

minor details in giving a sparkle to the broad expanse of graduated slate roof.

When we see this façade in conjunction with the garden we feel ourselves at once in the presence of a balanced whole. The level terrace seems an outdoor extension of the living room floor and, when the generous windows are opened, must form an enticing spot for gatherings of a social nature, the idea of the garden as merely an outdoor part of the house plan being strongly sensed. The garden proper is at a slightly lower level so that it may be glimpsed with ease. The tumbling profusion of planting contributes to the desired informality and is held in check here and there by the low clipped borders; while the tiny fountain takes its place without striving and seems made for the flickering light and shade thrown by the summer sun through the tall trees to the west. This whole side of the house has been made for the sun, with what its magic can do to create living shadows on smooth expanse of wall and sward. No porches or awnings protect from its light, no balconies project



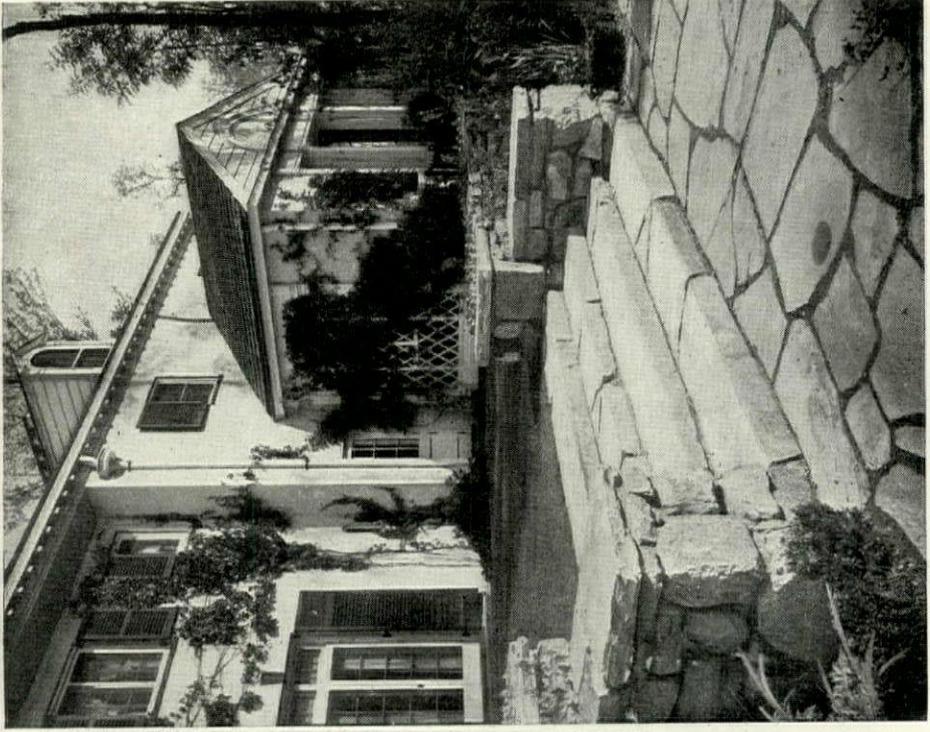
MAIN ENTRANCE—COUNTRY HOUSE OF
FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
WALKER & GILLETTE, ARCHITECTS.



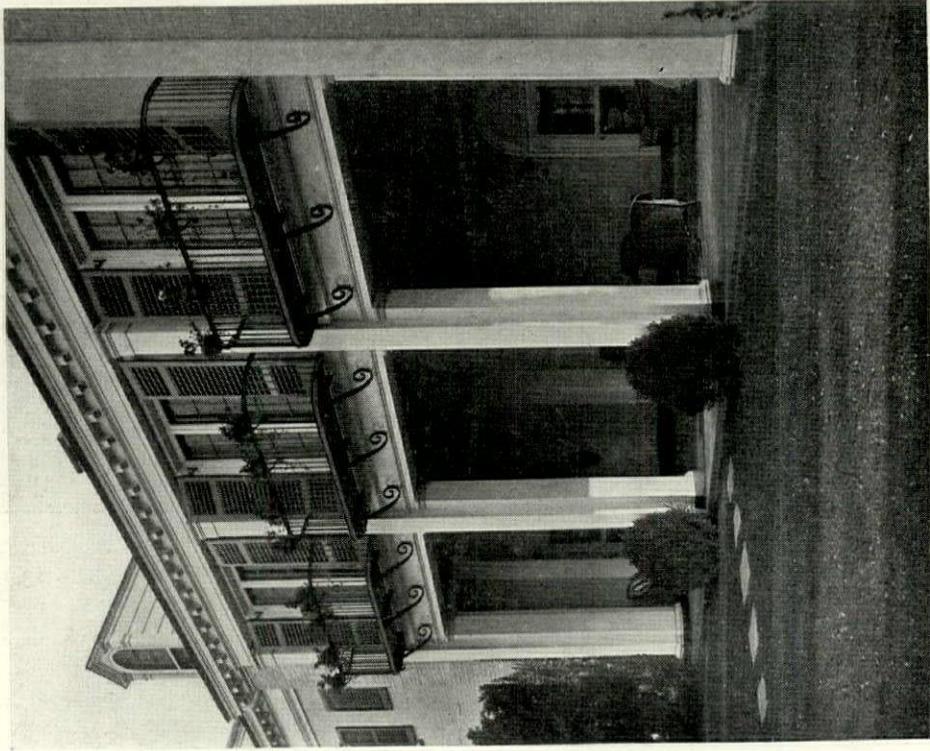
DETAIL OF ENTRANCE PORCH—COUNTRY
HOUSE OF FRANCIS L. HINE, ESQ., GLEN COVE,
L. I. WALKER & GILLETTE, ARCHITECTS.



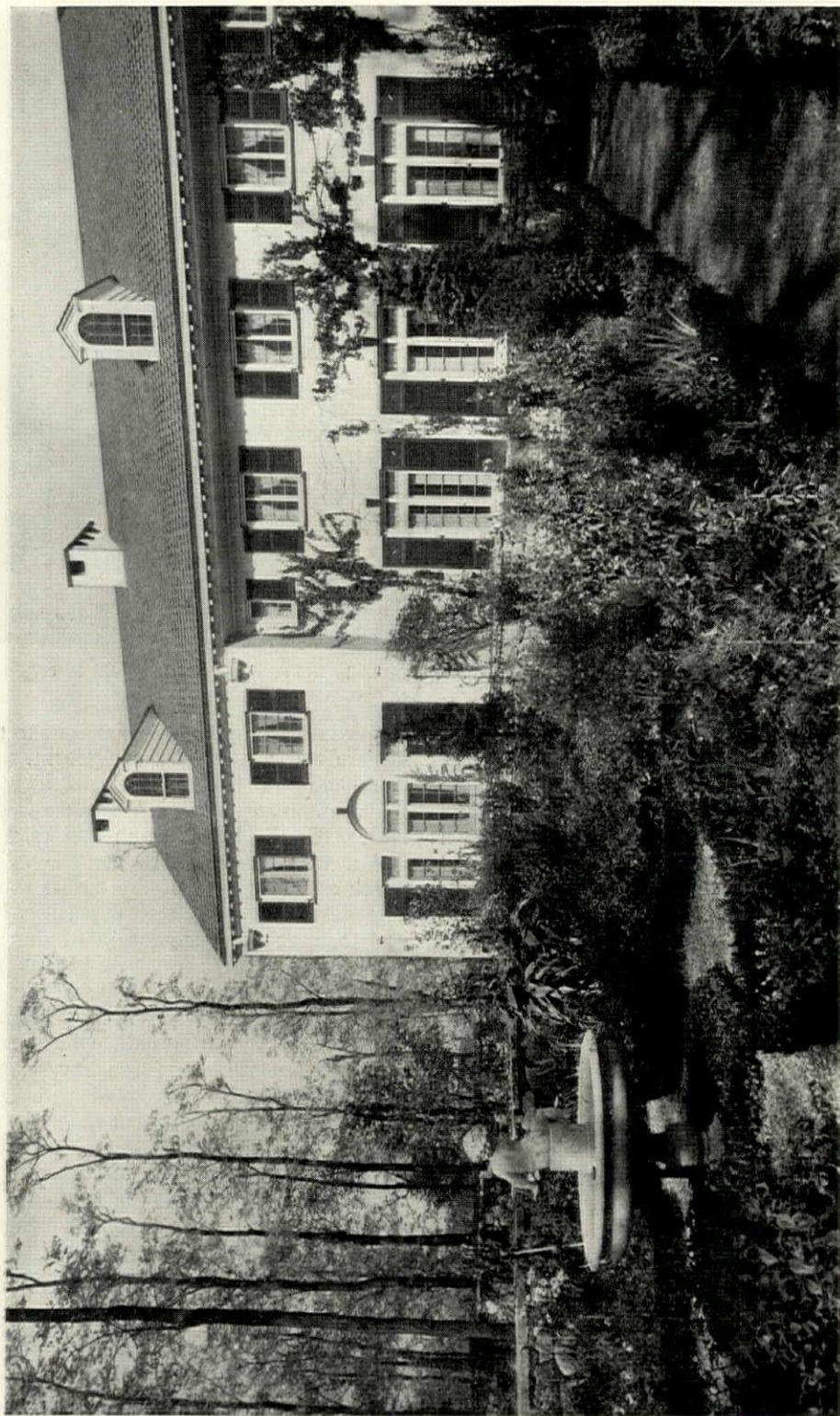
ENTRANCE PORCH FROM GARDEN—COUNTRY
HOUSE OF FRANCIS L. HINE, ESQ., GLEN COVE,
L. I. WALKER & GILLETTE, ARCHITECTS.



ENTRANCE PORCH FROM GARDEN-COUNTRY HOUSE OF FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
Walker & Gillette, Architects.



LIVING PORCH-COUNTRY HOUSE OF FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
Walker & Gillette, Architects.



GARDEN FRONT—COUNTRY HOUSE OF
FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
WALKER & GILLETTE, ARCHITECTS.



NORTH FRONT—COUNTRY HOUSE OF FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
Walker & Gillette, Architects.

to produce their steady geometrical shadows; with the exception of the great unifying shadow of the heavy eave in the center, all the shade is living, moving and elusive, thrown by vines and trees blown in the breeze.

The west end of the house is given over to the library and the roomy outdoor living porch with its views west over the country and north to the Sound.

The north front, apart from the subordinate kitchen wing, resolves itself into a series of three symmetrical compositions, of which the tall portico dominates. This elevation lacks the warmth of the garden front, but possesses a dignity in keeping with its position overlooking the open Sound. The fenestration of the central portion is similar to that of the garden elevation and echoes its three tall windows of the living room; while the dark iron balconies, so artfully designed and placed, provide the sharp contrast of black and white furnished to the south front by the sun-cast shadows which on the north are lacking.

The plan of the main house shows a

simple and straightforward answer to the demands of a bifacial arrangement. By lengthening the building towards the west a maximum of southern exposure is obtained for the living room and library, and a western exposure for the living porch and long side of the dining room. The desirability of these exposures has had to meet the competition of the sea view to the north, and we find the happy compromise of many windows in this direction. The porch from the entrance court opens into the hall, which runs north and south along the end of the main house and is equipped with coat rooms and dependencies conveniently arranged. To the north of this hallway lies the dining room with direct access to the service wing; and to the west extends the great living room, beyond which are the library and the living porch.

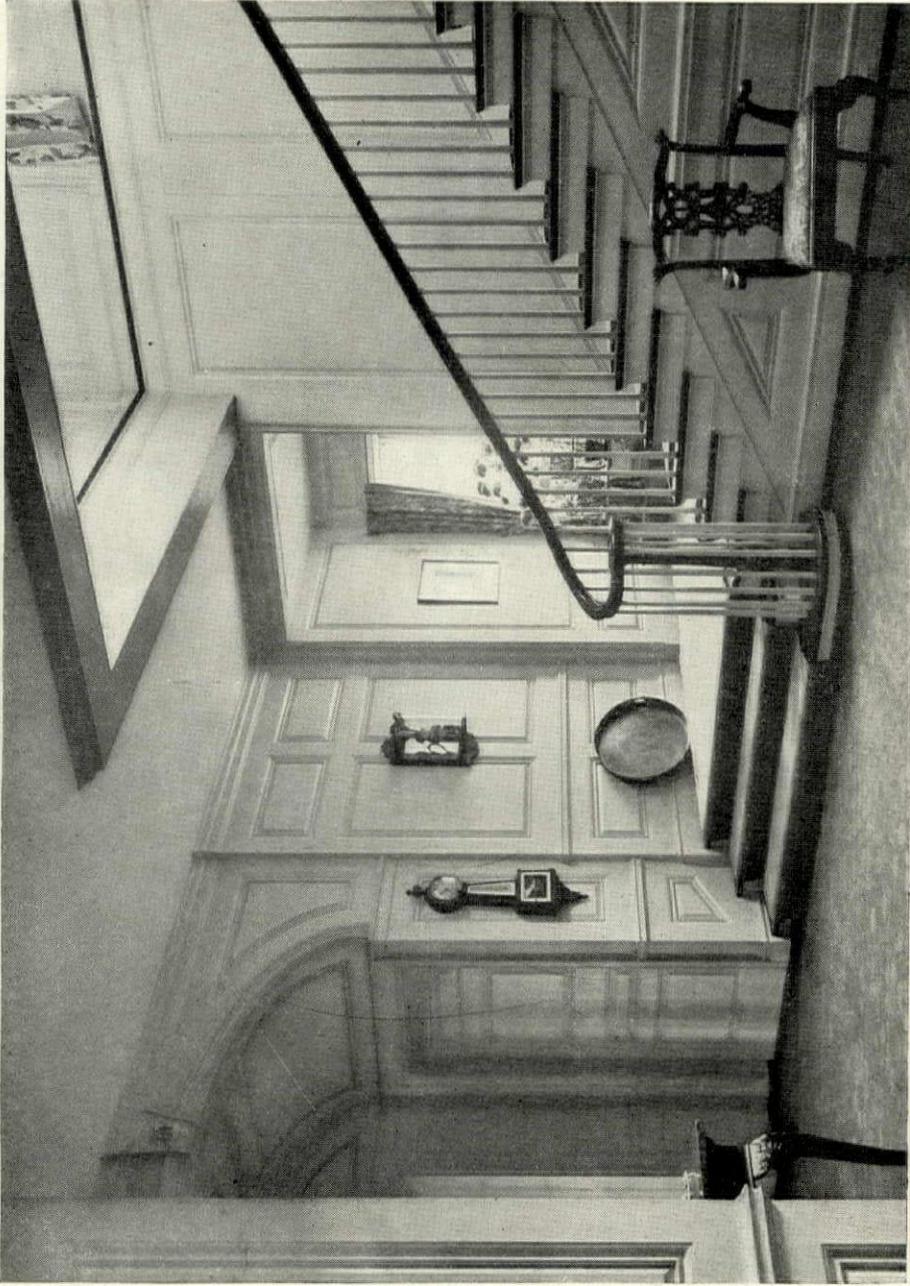
This entrance hall is particularly charming; its wood paneled walls being detailed with a naive freedom and a beautiful disregard of T-square regularity. A glance at the photograph of the departure of the stairs shows in the treatment of



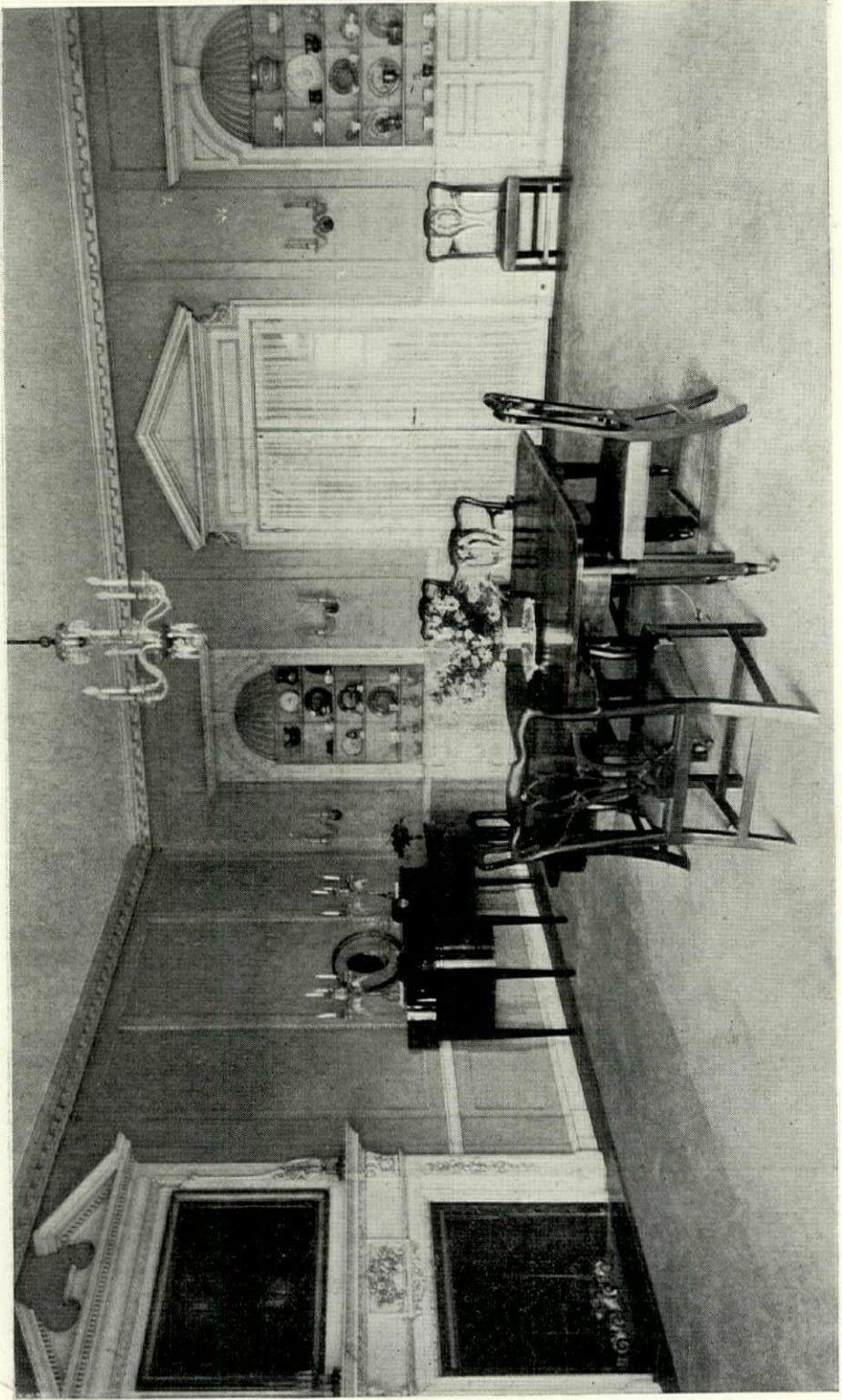
PORTICO ON NORTH FRONT—COUNTRY HOUSE
OF FRANCIS L. HINE, ESQ., GLEN COVE,
L. I. WALKER & GILLETTE, ARCHITECTS.



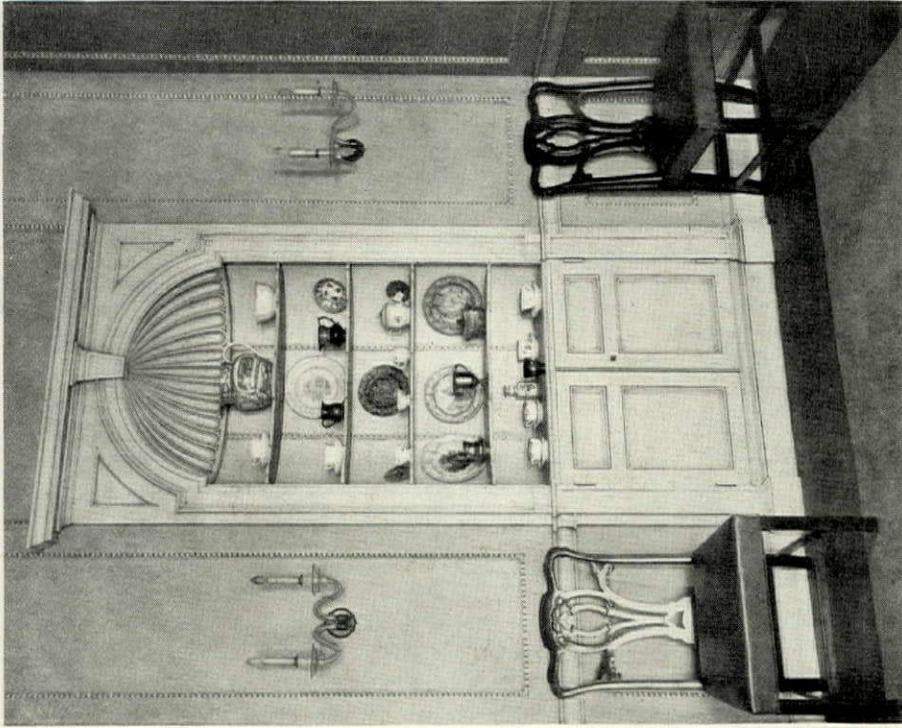
ENTRANCE HALL—COUNTRY HOUSE OF
FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
WALKER & GILLETTE, ARCHITECTS.



MAIN STAIRWAY—COUNTRY HOUSE OF
FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
WALKER & GILLETTE, ARCHITECTS.



DINING ROOM—COUNTRY HOUSE OF
FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
WALKER & GILLETTE, ARCHITECTS.



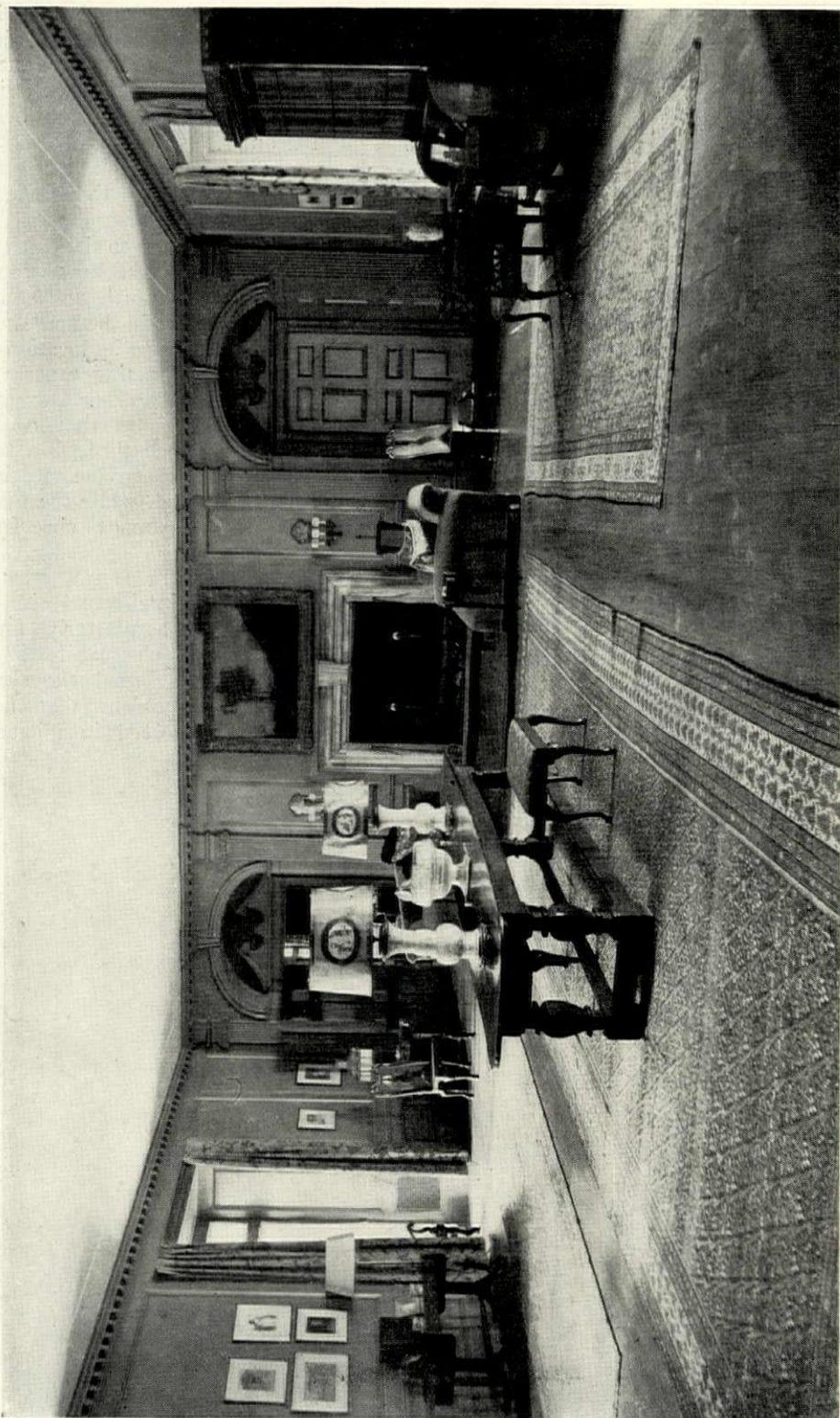
DINING ROOM DETAIL—COUNTRY HOUSE OF FRANCIS L. HINE, ESQ.,
GLEN COVE, L. I.
Walker & Gillette, Architects.



DINING ROOM MANTELPIECE—COUNTRY HOUSE OF FRANCIS L.
HINE, ESQ., GLEN COVE, L. I.
Walker & Gillette, Architects.



LIVING ROOM FIREPLACE—COUNTRY HOUSE
OF FRANCIS L. HINE, ESQ., GLEN COVE,
L. I. WALKER & GILLETTE, ARCHITECTS.



LIVING ROOM—COUNTRY HOUSE OF
FRANCIS L. HINE, ESQ., GLEN COVE, L. I.
WALKER & GILLETTE, ARCHITECTS.

the variously shaped wall spaces a remarkable freedom which is planned unstudied. This little glimpse is one of the most charming bits in the house.

The dining room possesses more conventionality, with a consistent formality and a judiciously restrained elaboration. The finish of the woodwork is very soft and is particularly successful where carving occurs. The mantel has all the decorative value of its eighteenth century English prototype, and the little niche-like china cupboards are beautifully designed with just enough savor of originality. The bits of old Lowestoft, of Staffordshire and of Derby afford for this side of the room delightful color accents, which are enhanced by the flanking pressed glass sconces.

The great living hall is a room of generous proportions, comparatively low ceiled and full of repose. Its tones are soft and low, and its three long windows on either side bring the out-of-doors very close. The details of the woodwork and paneled walls are charmingly in keeping with the general Colonial spirit and are enhanced by the very simply treated plaster ceiling. The wide fireplace focuses the attention and impresses itself by its

simple boldness. The room is so wide that ample space is left before the fireplace between the flanking doorways which lead to the library and to the living porch with its pleasant terrace and overhanging balconies.

The creation of an atmosphere of quiet ease and the elimination of that sense of newness which is the fear and dread of every architect contribute to the spirit of hospitality, focusing in the living room, which, with its views north and south, plays an important part in the successful adaptation of the house to its location on an eminence with competing aspects in opposite directions. The long low mass of the exterior simulates that of an ancient house remodeled through a century or two and binds convincingly into the contour of the land, while the many chimneys bespeak as many cheerfully lighted hearths.

The whole structure shows creative imagination on the intellectual side of its production and a masterly finish in its execution, which manifests the general practitioner's broad experience as applied to a problem that taste dictates should be solved in idiomatic terms.

SEMI-MILITARY BUILDINGS · · · IN THE · · · NATIONAL ARMY CANTONMENTS


By Robert H. Moulton

THE War and the Navy Departments Commissions on Training Camp Activities were created at the beginning of the war to supply our young men everywhere in training with the normalities of life. Mr. Raymond B. Fosdick, chairman of these twin commissions, wished to accomplish this by creating as little new machinery as possible. Therefore, the Young Men's Christian Association, the Knights of Columbus, the Jewish Welfare Board, the American Library Association, and all such already existing organizations, were called upon to lend their cooperation. The Young Women's Christian Association came into the camps later with that unique institution, the Hostess House. This house was designed primarily to take care of women visitors to the camps and furnish a place of meeting between them and the men.

The commissions were determined to cover the whole ground in furnishing recreational and educational facilities for the soldiers and sailors. Wherever there seemed to be a gap that no existing agency was particularly prepared to fill, the commissions supplied the need direct. In this way the Liberty Theatres were furnished, meeting the problem of a place to go to and be entertained in the evenings. The Post Exchange, or soldiers' cooperative stores, were similarly started in the sixteen National Army camps, and furnish a place where the men may spend their money. Everything is on sale there, from a shoestring to a pink valentine and from an ice cream soda to a song book of the kind that the men use when they gather together by the thousands for mass singing. Club life in the camps is furnished through

the Y. M. C. A., the K. of C., and, in a few camps, the Jewish Welfare buildings. Here men may read, write, loaf and smoke, listen to music and write letters home; and in the auditorium of each building entertainments of all sorts are held. Camp talent musicales, athletic stunts and imported entertainment programs all take place here, in addition to those given in the larger Y. M. C. A. auditorium in each camp and in the Liberty Theatres. The Hostess House furnishes the home life of the camp and has come to be popular with the men in the evenings during all the week. With the library to furnish him with plenty of good reading matter and a quiet place to read in, and the Post Exchange playing the role of country store or corner drug store, the men's needs are pretty thoroughly taken care of. Thirty-six library buildings have already been completed in the military camps of the country, and others are under way. These buildings are made possible through a special grant from the Carnegie Corporation of \$320,000, supplemented with other funds.

The type of building chosen is new in the library world, and will be of interest to those who are concerned with camp building designing. They are wooden structures of rather plain design, similar to the usual type found in modern camps. They were designed by Edward L. Tilton of New York City, who contributed his services. Most of the buildings in the cantonments are 120 by 40 feet, while those in smaller camps are 93 by 40 feet. Special attention has been given to adequate facilities for heating, ventilation and light, and many features are now being added to make these quiet, restful buildings more attractive and inviting

than would be expected in the usual camp equipment. Some of the buildings have spacious, open fireplaces built into inviting nooks. Others have closed porches, and all are equipped with fire extinguishers, drinking fountains and running water.

The interior is a large reading room, with two bedrooms at one end for housing the library staff. Trained librarians are in charge. All of the shelves are open for inspection and contain from 10,000 to 20,000 volumes. Each building has a comfortable seating capacity for about 200 readers. In the library building is housed the main supply of books for the camp, and from it branches are maintained in the barracks, the mess halls, hospitals, Y. M. C. A. and K. of C. buildings.

Each of the sixteen National Army cantonments has been provided by the Commissions on Training Camp Activities with a Liberty Theatre building having a seating capacity of 3,000 and a stage accommodating the scenery for "Broadway" productions. The buildings are

furnished with footlights, dressing rooms, and scenery for any ordinary production. There is also an orchestra pit, where regimental bands play at every performance.

Nine theatres of a smaller type have been completed in the National Guard camps and others are in course of construction. The approximate size of the larger cantonment theatres is 179 by 120 feet, with a seating capacity of from 2,500 to 3,000. The stages in these theatres are 60 by 32 feet and the floor of the house 132 by 120 feet. The National Guard camp theatres have a seating capacity of 1,000; the building being 60 by 120 feet and the stage 22 by 40 feet. The house floors are approximately 90 by 60 feet.

Each theatre has five entrances and fifteen exits and is so constructed as to be easily emptied in case of fire. Much of the work of constructing these theatres has been carried on by the many electricians, scene painters and other expert mechanics who were discovered in the camps. Chautauqua tents are used for shows in the smaller camps, where regu-



A STANDARD ARMY Y. W. C. A. HOSTESS HOUSE.



LIVING ROOM OF Y. W. C. A. HOSTESS HOUSE, CAMP DEVENS, AYER, MASS.

lar dramatic productions, vaudeville and movies are provided by the Government for the men.

The Knights of Columbus have erected, so far, in the camps three styles of buildings. Like the Y. M. C. A., they furnish a main or auditorium building in each of the sixteen National Army cantonments. This is of squatty construction, with a front elevation in Spanish design, and is 60 by 100 feet. There is a main entrance at one end of the building and two entrances on each side, with plenty of windows to furnish light and air. Each building has an altar and a chaplain's and secretary's room in one end, and other offices in the other end. In each cantonment there are also two smaller club buildings 40 by 100 feet, with a ten-foot porch running the length of the building on one side. The interior arrangement is the same as in the main building and only differs from the latter in that there is a monitor through the middle of the building, affording the maximum of light and air. This type of building has also

been erected in all of the National Guard camps.

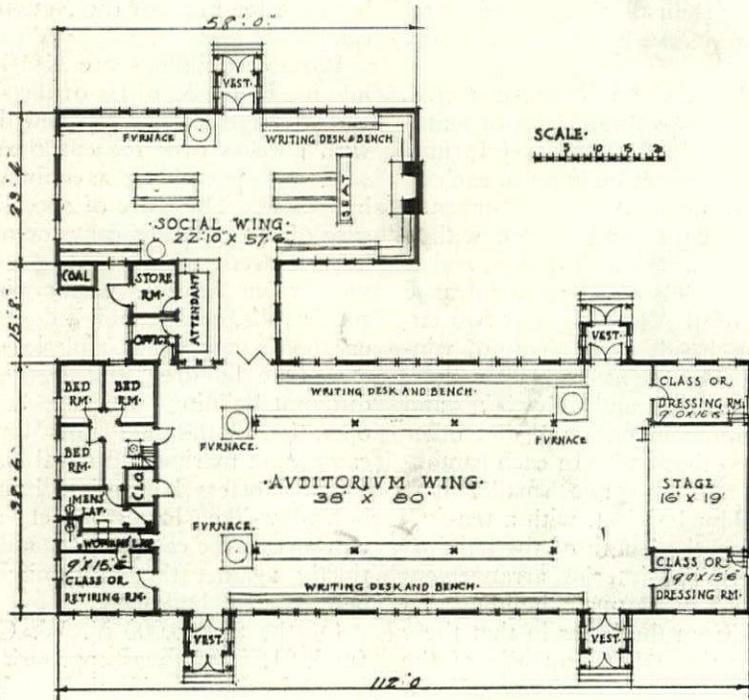
Portable buildings are also being put into use by the K. of C., of the same style and arrangement as the club buildings, with porches over the entrances on one side, and resembling a country club or bungalow. These are of special value in case of a temporary camp or of a camp being moved. Each building is equipped with room heaters, player pianos and music rolls, chairs, tables, desks, stationery, books, magazines, athletic equipment, etc. One hundred and eight of these different buildings will have been put in operation by the middle of May in army camps and marine and naval stations.

The Hostess House is a large brown, bungalow-like building set near the entrance to the camp, and stands out distinctly against the background of unpainted army buildings.

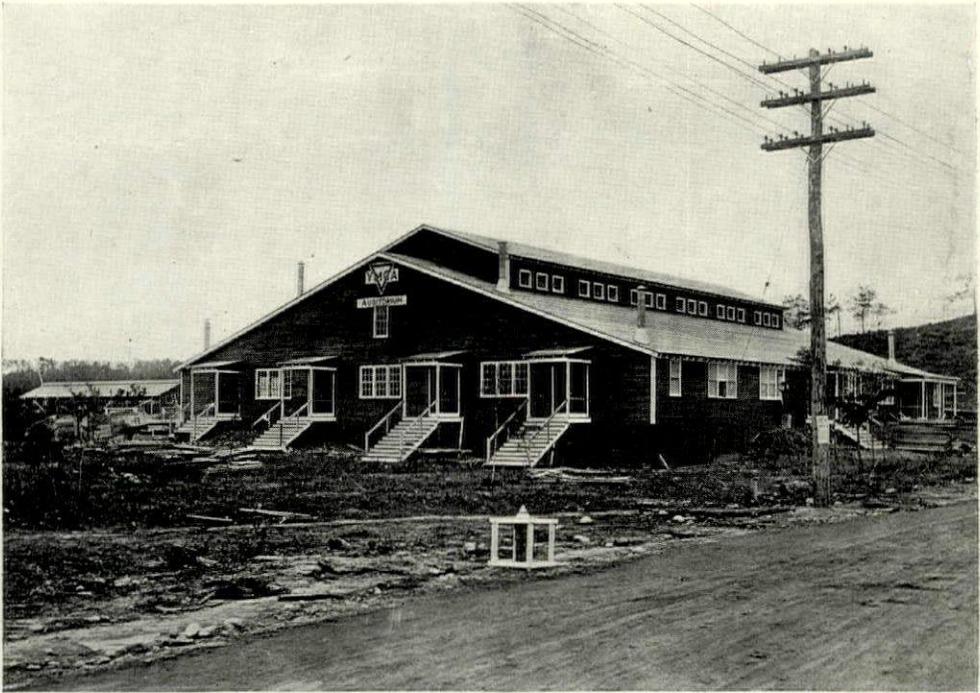
Of the \$5,000,000 Y. W. C. A. war fund, \$1,350,000 was appropriated as an initial fund in starting the Hostess House work. Seventy of these buildings are



A STANDARD ARMY Y. M. C. A. BUILDING, DESIGNED TO SERVE 6,000 MEN.



PLAN OF ARMY Y. M. C. A. BUILDING (Type E-2).



Y. M. C. A. AUDITORIUM AT CAMP DEVENS, AYER, MASS.



Y. M. C. A. HUT.

Each camp and training station has from four to fifteen of these buildings, and every camp of importance also has a large auditorium.



LIBERTY THEATRE, CAMP DODGE, IOWA.

already in operation. Some of the larger cantonments have two, or even three where the number of negro troops makes one seem advisable for colored women. Women architects have had entire charge of the plans for the Hostess Houses. While these houses vary somewhat in size and detail according to the local demands, in general structure and style they are similar. The utmost degree of attractiveness in keeping with camp life has been attained both inside and outside these buildings. Each one has a large chimney in the middle of the big living room, with great double fireplaces. There is a parcel checking room, a rest room for women, out of which opens a fully-equipped nursery; and the back of the building houses a cafeteria, where attractive meals are served. The buildings are electric-lighted and steam-heated, as are also the sun parlors, which usually extend across two sides of the house. The second floor of the larger buildings contains not only the bedrooms of the resident hostesses and staffs, but emergency sleeping quarters for women stranded in camp.

The Y. M. C. A. has been on the ground from the first. Before the camps were entirely completed, the Y. M. C. A. workers had their headquarters established in tents and were present with a welcome to the incoming recruits. They dispensed information and good cheer; in fact, one of them accompanied each of the incoming troop trains, going from car to car, addressing the men informally, telling them what the Y. M. C. A. stood for in camp. The Y. M. C. A. operates 178 army and navy stations at present. At the largest of these there are fourteen buildings, with a large force of secretaries and other officials.

The new standard service or so-called type "E" Y. M. C. A. building is an interesting architectural achievement. It is the last word in utility, compactness, economy of space, material and money, efficiency and adaptability to a multitude of dissimilar uses. The problem was to find buildings that would be "all things to all men" in the cantonments. The demand was for some sort of structure that would simultaneously be home, club, church, schoolhouse and entertainment

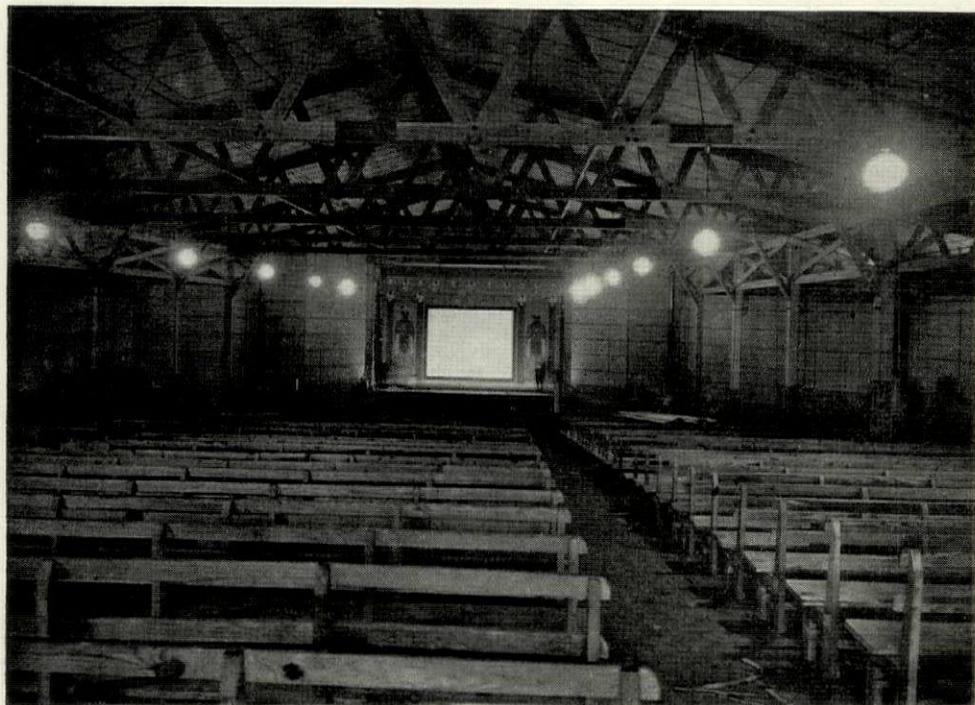
centre for the men in the ranks, a place where the whole varied army Y. M. C. A. program could be going on at one time without any phase seriously interfering with other phases of the work; where there would be facilities for the movies, the lectures, or the religious talk, and where at the same time the man who wanted to write home, buy a stamp or a money order, wrap up a package, borrow a book or a magazine, play a game of checkers or chess, enjoy a chat with his chum or a heart-to-heart talk with the secretary could do so.

The type "E" building—with its modification, the type "F" building in use in National Guard camps—is the solution of the problem. Only a visit to one of these great camp centres, however, can give an adequate idea of how admirably it fulfills its purpose. The six to eleven single-story Y. M. C. A. buildings are easily distinguishable by their dark green coat of stain from the bare and unpainted barracks that flank them. Numerous broad windows in the sides and double dormer windows in the roof flood the interior with sunshine, and doors placed

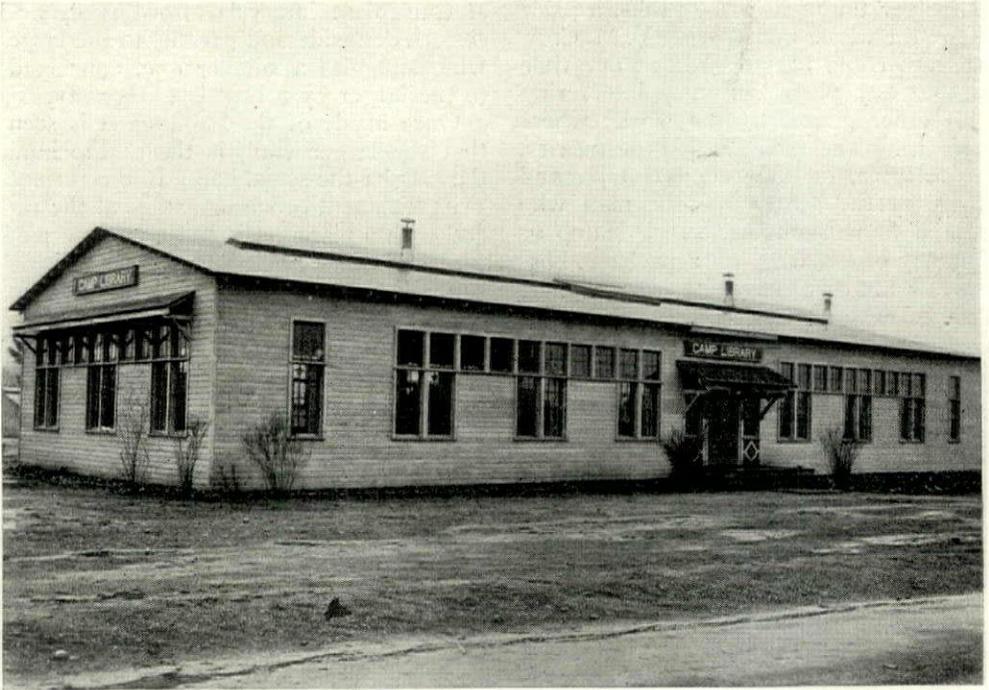
at convenient intervals afford ready access. Alongside and parallel to the large wing snuggles a smaller one, connected to the larger by a broad passageway.

Once inside of the building, it is seen that the larger wing is the auditorium, the smaller the social hall. In the former are permanent benches, a stage at the far end with a piano on it and a moving picture screen. Shelf-desks for writing run all around the walls and two long hinged shelves, one in the middle of each half of the auditorium, are ingeniously fastened to the posts that support the roof and may be raised for writing or lowered when the room is to be used for any gathering.

At the end of the smaller wing farthest from the desk (which is located in the connecting passageway) a huge stone or brick fireplace lends a cheerful, homelike atmosphere. The ubiquitous shelf-desks on the walls for writing here, too, are on all sides, but the space in the centre of the long room is frequently full of comfortable chairs donated by forethoughted friends. The rocking-chairs are often the only ones to be



INTERIOR OF A LIBERTY THEATRE, SHOWING STAGE, CAMP TAYLOR, LOUISVILLE, KY.



EXTERIOR VIEW OF AMERICAN LIBRARY ASSOCIATION CAMP LIBRARY, CAMP LEWIS,
AMERICAN LAKE, WASH.



INTERIOR OF CAMP LIBRARY AT CAMP GRANT, ROCKFORD, ILL.



A NAVY GYMNASIUM—BOTH THE WAR AND THE NAVY DEPARTMENTS COMMISSIONS TRAINING CAMP ACTIVITIES PROVIDE GYMNASIUMS.

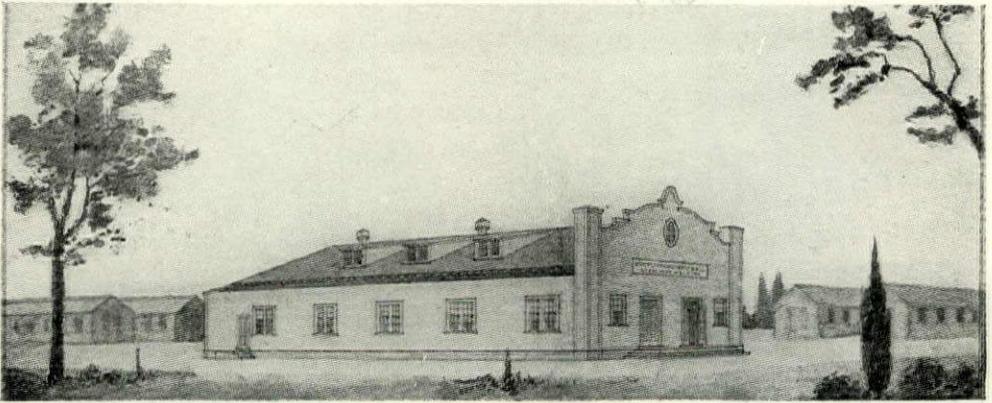
found in camp; settees, too, and great armchairs help the soldier to forget for a time how long it has been since he said good-bye to the formerly unappreciated furniture comforts of civilian life.

The daylight hours, when the men for the most part are drilling, are a good time to find the secretaries "at home." Home to them means a small, bare bedroom at one side or other of the stage or at the opposite end of the auditorium back of and to the side of the desk. At this end, too, from amidst the secretaries' quarters, a narrow stairway leads to an upper room, the most of which is usurped by a huge movie projector booth. The space that remains on either side of this booth is delegated as sleeping quarters to two assistant secretaries. Other rooms at this end of the auditorium provide classroom, storage and office facilities.

At the big cantonments a Y. M. C. A. headquarters building is necessary, and from it the activities in all the centres in any one camp are directed. There the head camp secretary, the camp athletic

director, the camp song leader, the camp religious work director, the camp educational secretary, the camp social director and the other head secretaries have their offices and rooms. Their building, too, is the acme of convenience and efficient arrangement. It is an oblong two-story structure, with the entrance slightly to the right of the middle of the longer side. This entrance leads into a diminutive lobby, where are desks, very welcome heating furnaces for the entire building, chairs, and halls leading to right and left. Numerous offices for the various camp secretaries, a larger committee room, and storerooms lined with shelves on shelves and filled with all manner of requisites for the camp work open onto the two halls. Clear across one end of the building at the extreme end of the hall is a one-story lean-to storeroom for heavier materials and supplies. This place is equipped with scales, a truck, a small block and tackle, and the like.

The second floor of the headquarters building is divided lengthwise by a hall which runs from end to end. Doors on



KNIGHTS OF COLUMBUS FIELD HEADQUARTERS, U. S. ARMY CANTONMENTS.

this open into the bedrooms of the secretaries, into a well-filled linen closet and into the bathroom. The latter is equipped with basins, shower bath and other customary fixtures. Every inch of space is skillfully made use of, and the headquarters buildings of the Y. M. C. A. in the various cantonments are interesting and convincing examples of the thoroughness with which the Association has attacked the whole problem.

In addition to the auditoriums comprising one wing of every type "E" building, a huge central auditorium is being erected in each of the large cantonments. This structure measures 131 by 106 feet and will seat 2,803 men. It will be used for staging plays, vaudeville, concerts, lectures and the large religious gatherings. On Sundays it will be open to Protestant, Catholic and Jewish chaplains in turn, and week days will find it in almost constant use. The central part is free from all supporting posts and is large enough for two basketball courts. At one end is a commodious stage. Footlight, spotlight and scenery facilities have not been overlooked. The auditorium, like the other Y. M. C. A. buildings, is heated by stoves placed on concrete foundations at frequent intervals.

The building known as type "F" is in use in some of the camps and cantonments. It is simply the "E" building with the social hall left off, and is intended for serving units of less than 2,000 men. The auditorium wing is made to serve all the many needs of the men.

In this style of building the desk is placed in the middle of the end opposite the stage. Movie booth, bedrooms and storerooms are tucked away above the desk, and offices are at either side. The space under the stage in this type of building, as in all the others, furnishes storage facilities.

The total number of Y. M. C. A. buildings either in operation or under construction in the camps and cantonments of this country is somewhat in excess of four hundred. Of these about 150 are standard service buildings and approximately 125 of the "F" type. Besides these permanent buildings 130 tents are in use at various points. Headquarters buildings for each of the thirty-two National Army cantonments and National Guard camps are included in the total, as well as eighteen auditoriums for the National Army, for one embarkation camp, and one Regular Army expansion camp. A standard service building costs usually from \$7,500 to \$9,000.

For serving the American Expeditionary Forces in France, a modified form of "F" building is in use. It costs two to three times as much to put up such a building in France as to erect the same building in the United States. The explanation, of course, is the scarcity and high cost of materials in France, the great distance some materials have to be transported and the scarcity of cargo space. Until permanent buildings can be constructed large tents must suffice for much overseas work.

English Architectural Decoration

Text and Measured Drawings
by *Albert E. Bullock*

Part VIII.

THE middle of the eighteenth century saw a distinct change in style consequent upon improved traveling facilities, and researches by Teutonic, French and British architects in Italy, Greece and further East.

Publications of designs and works on architecture were very numerous, and previous styles, especially the work of Inigo Jones and Webb, were assiduously studied, copied and analyzed by William Kent and Lord Burlington's school. Sir William Chambers published a book illustrating designs of Chinese architecture, which largely influenced the character of furniture. The issue was subsequently suppressed, and Sir William Chambers practiced a purer classical style. He was engaged among other things, upon the lay-out of Kew Gardens, where he erected the pagoda and minor temples which ornament the grounds.

Chippendale and his confreres worked on somewhat similar lines, except that their designs were influenced strongly by contemporary work in France. The wood carving of Pineau, the designs of Cauvet and the metal work of the Boulle school appealed largely to their taste, and an independent style resulted which was divorced from the fixed leading lines of previous work. They produced many ingenious examples of carved furniture, mostly in walnut, much of which was of excellent design, although a considerable proportion ceased to live after the era of its vogue.

Robert and James Adam developed a new style based largely upon their researches at Spalato, upon which they published a monograph. Placques of figures and friezes of classic subjects were embodied in most of their productions, after the manner of Josiah Wedgwood and Flaxman.

In planning, however, the Adam brothers excelled their predecessors, and

of their work Sion House, Isleworth, stands out in marked contrast to other mansions of the period. The building is square on plan, having a large circular courtyard in the centre, and the approach from the main road is through a delicately designed stone screen.

The interior decorations conform to their usual style, except that the main lines and alcoves are of a rather more solid and classical character than in the smaller edifices treated and give an air of the grand manner of architecture.

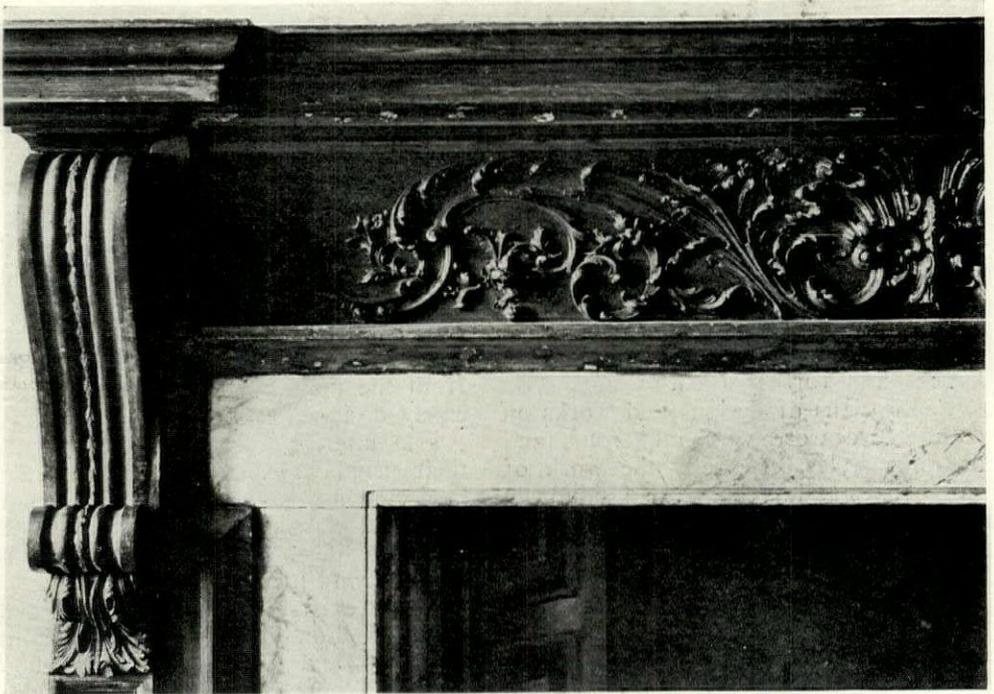
There exists in the Sir John Soane Museum, London, a series of original drawings and designs by this school, bound in over fifty volumes, including furniture, candelabra and fittings with a variety of cornices, friezes and detail work of all descriptions.

In monuments, Robert Adam carried out similar principles of design and detail, of which may be mentioned the cenotaph to Elizabeth Percy (1776), Duchess of Northumberland, in Westminster Abbey, which is a fine example with good carving by N. Read.

There were many followers in the Adam manner, of whom George Richardson is one of the most conspicuous. It is possible that Richardson was responsible for the design of the decorations illustrated in this article from No. 14 Dering street, Bond street, W., a house which was pulled down in 1912. The detail is delicate and the design conforms to the usual geometrical character associated with the Adam period ceiling.

As has been previously stated, the majority of the draftsmen employed by Adam were of Italian origin, of whom M. A. Pergolesi, Cipriani and P. Columbani were the most skilful, and published works embodying designs for ceiling and chimney-piece ornament.

There are innumerable examples ex-



DETAIL OF CHIPPENDALE PERIOD MANTELPIECE IN KING CHARLES ROOM, ASTON HALL, BIRMINGHAM, 1750.

tant, in all the chief centres of England, of Adam period chimneypieces, of which illustrations are given; one being from the drawing room at Forde Abbey, another from the billiard room of The Pynes, Devon, and a third from Exeter. Marble chimneypieces with relief carving or inlay obtained to a large degree, and the work of Peter Bossi of Dublin is of considerable refinement, of which examples are preserved in the Victoria and Albert Museum, London.

The library ceiling at Belton House has already been referred to. This is slightly barrel-vaulted and contains painted panels after the manner of Angelica Kaufmann. These concave ceilings became common during this era, following the trend of geometrical design which then obtained.

The free style of the Chippendale school was introduced rather earlier than Adam work, but developed contemporaneously with it in various towns in the provinces. One often finds a house with two adjacent rooms, of which one is treated with this free rendering of orna-

ment and the other with plaques and the lighter Adam method, an instance of which occurred in the recently demolished house in Abchurch Lane in the City of London.

Some houses in St. James's Square have good examples of Adam ceilings with painted panels in varied designs; while the clubhouses in St. James's street, Piccadilly, and many of the older houses in the Adelphi abound with rich examples of this style.

The newels and balusters of staircases were also in lighter vein than their predecessors, having in some instances as many as three balusters to a tread, the strings being cut and not continuous, as was the previous practice. At Saltram, Devon, there is a fine staircase of this character. This house is the residence of the Earl of Morley and contains some Grinling Gibbons period carving. A few of the later rooms are by the Adam brothers, with ceiling panels painted by Antonio Zucchi. Here again we see the combined effect of the free rendering ornament in ceilings and



ALCOVE IN ANTEROOM, GUEST CHAMBER, MANOR OF CHRIST CHURCH, IPSWICH.

Drawing by C. C. Cheek.

decorations in juxtaposition with the more pronounced Adam work.

Goodwood House is rather earlier than the last mentioned, being an example of the work of James Wyatt. Herein are some fine eighteenth century canopied bedsteads and Chippendale mirrors.

The most direct piracy of French Renaissance is to be seen at Castle Howard, one of the massive and palatial edifices designed by Sir John Vanburgh, the architect of Blenheim Palace and of additions to Grimsthorpe. One of the great mantelpieces at Castle Howard has a very strong resemblance to one of the chimneypieces at the Palace of Versailles. The work of this architect undoubtedly influenced much of the work of his age, judging from the reflected imitations which are frequently encountered in smaller houses.

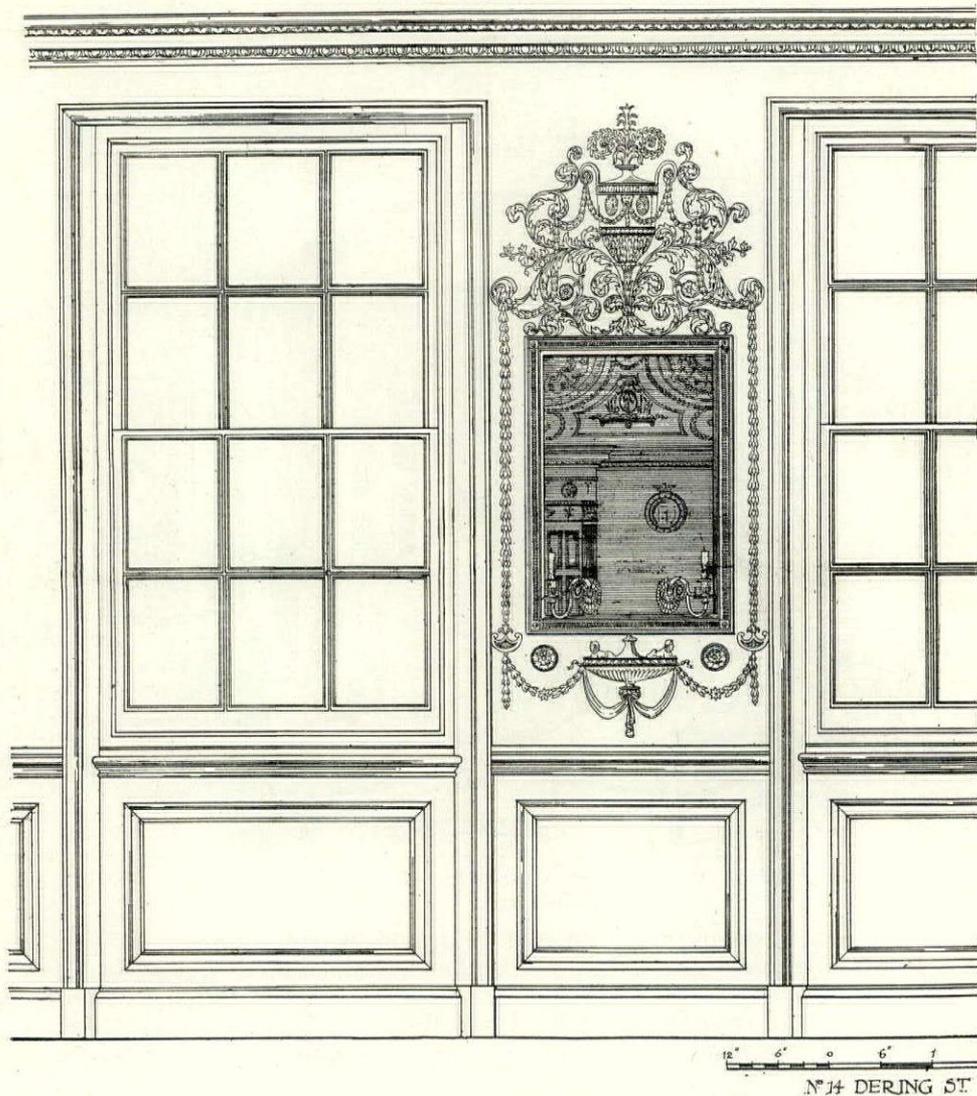
There is a more modern instance in

England, where a French architect was directly employed at Waddesdon Manor, Bucks, by the late Baron Ferdinand de Rothschild. M. D'etailleur has here developed a grand Louis XV chateau in all the splendor of form and detail, both within and externally, in a manner at once complete and imposing.

Bowood, Wiltshire, the seat of Lord Lansdowne, is another example of the work of the brothers Adam, of which the dining room decorations are in the most representative character of the period.

There are not many buildings now standing of the work of James Paine; but he was directly associated with Robert and James Adams at Kedleston Hall, Derby, the residence of Lord Scarsdale, where the rooms are of considerable interest.

The hand of James Gibbs is evi-



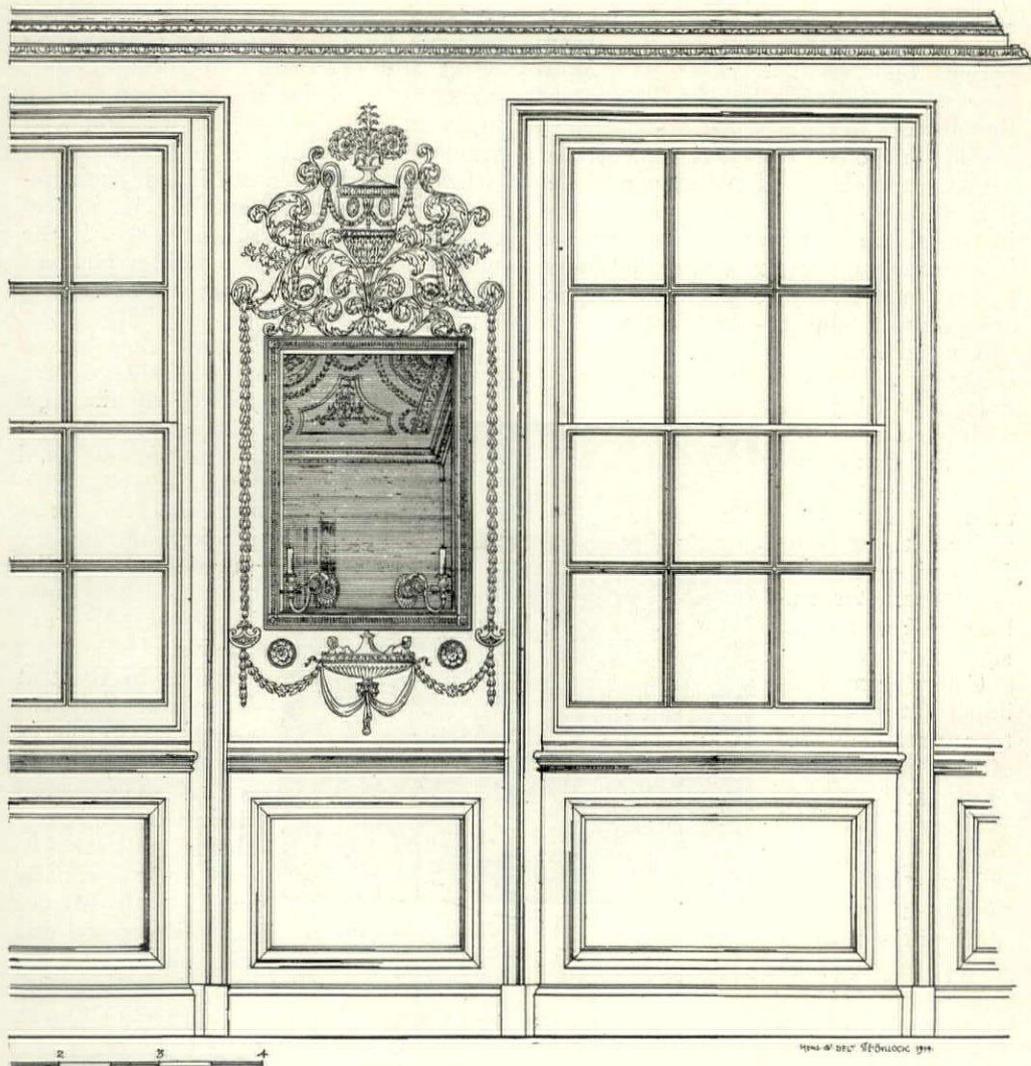
WEST SIDE

denced in the decorations at Ragley Hall. The plaster ornament is of the free rendering associated with the period. The effect of the great hall with its vaulted ceiling is similar to that obtained in the Church of St. Martin's-le-Grand at Trafalgar Square, designed and erected by James Gibbs. He was also the architect of the Radcliffe Library, Oxford, built in 1747, where he employed William Townsend and William Smith as masons, John Philipps as joiner, Artari as plasterer, and Michael Rysbrack as sculp-

tor, who carved the bust of the founder, John Radcliffe, M.D. (obit. 1714), in marble.

Artari and Rysbrack had previously been employed by William Kent at Houghton, where the Stone Hall represents the work of Artari and the figures over the pediments to the doors the work of Rysbrack. The plans of this edifice were published in 1755 by Ripley, Kent and Ware.

There are many isolated examples of Chippendale or middle sixteenth century



LONDON. W. (DEMOLISHED 1914)

OF ROOM.

chimneypieces, door architraves, etc., of which two typical instances may be cited:

At Aston Hall, Birmingham, in King Charles I room there is a fine frieze, unfortunately damaged by souvenir hunters, of which I append a sketch; while there exists in Dr. Johnson's room a unique mirror which rather savors of Grinling Gibbons' influence in the design. This will be illustrated later. In Lady Holt's room is a curiously designed door casing, probably of the early Victorian

era, of unusual detail, which gives some idea of the character of the work developed during the confusing period of the rival schools of Gothic and Classic revival.

The second example occurs in the library chimneypiece at the Friends' School at Ackworth, near Pontefract, where, it will be seen, the carving is of the same freedom of design and execution as that at Aston Hall.

The cornices at this time were usually modillioned, but varied in degree, of

which some examples are here shown, together with the side of an Adam period room from a house near Manchester in a drawing by Mr. Thomas of that town.

Clayton House, Bucks, is very rich in both Chippendale and Adam period detail. The walls of the hall are treated in the Adam manner; the balustrading is in wrought ironwork, and the stairs, treads and risers are inlaid with parquetry and mother-of-pearl insets.

The apartments of Lord Fisher at Greenwich Hospital contain a dining room of paneled oak, with a ceiling modeled in a manner rather different from those above described, there being festoons of a more floral character embodied in the design.

Color formed an important item in the treatment of Adam period decorations: black and gold caryatides; blue and green birch chairs; amboyna inlays to harpsichords and organ cases; ebony, gilt and mahogany doors; and, in special instances, varied colors to modeled friezes in imitation of ivory, with fruit and flowers forming the ornamental festoons—these are a few of the many variations adopted to obtain striking effect.

Mr. Goodison discovered traces of apple-green to the general groundwork of a certain ceiling, which appears to have been followed at Dering street, and there is little doubt that the practice of tinting plaster work became common at the time.

An excellently illustrated book on the Life and Works of the Brothers Adam was recently published by Mr. John Swarbrick, of Manchester, in which he gives many examples of the most authentic work of the Adelphi School.

Every known art and device appears to have been practised to obtain good effect and originality in their designs, including ornament in pewter and applied brass and gilt lead to the wrought iron framings of overdoors.

Door furniture was of a delicate nature and very ornamental. The joiners of the period vied with each other in the production of a variety of different types of chairs, mirrors, settees and other furniture.

Sheraton, Shearer and Heppelwhite were some of the more notable master joiners of the age, who usually worked in mahogany and birch, whereas walnut was the chief medium during the middle half of the century. Cuban mahogany was first extensively used in paneling by Kent at Houghton. Chippendale's masterpieces were frequently in walnut. The carved chair backs and armchairs with cabriole legs were usually made with lift-out seats. Rosewood was not used much at this time, becoming common during the early years of Queen Victoria.

Mr. Bennett recently discovered a fine frieze of the Adam period, of which a sketch will be given later. The original is colored in enamels of varied hues, and in design is very graceful.

Painted and stenciled decorations are occasionally found, of which an example exists at Sheen House, Richmond, near London, some portions of which appear to be handpainted. The Greek motifs were freely used in the designs of this age, including various forms of fret pattern and the honeysuckle and acanthus leaf ornaments with festoons of husking and wreaths of laurel leaves or budded almond.

The distinctive differences between the



PORTION OF GIBBS PERIOD CEILING, VICTORIA AND ALBERT MUSEUM.

two types previously described lie in the geometrical formation and straight moldings of the Adam work as compared with the free flowing floral and conventionally leafed curved moldings of the period associated with the time of Chippendale and Gibbs.

There existed until recently a ceiling, at Westminster, having crossed beams with a Greek fret ornament and modeled centres to the panels, containing ovals with the heads of political characters of the age in semi-relief. The house is said to have been occupied by Lord North as a town residence, his bust composing one of the features of the ceiling.

There was much good detail executed in the many entrance doors, of which London is the happy possessor of many fine examples, although a number have been demolished in recent years. I hope later to illustrate a few typical instances; but give here a detail showing features of an Adam period example carved in pinewood in a very skilful manner, which formerly existed in Great George street, Westminster, and is now housed in the fine collection of woodwork at South Kensington. The door-case formed part of a portico, some columns of which have also been preserved.

During the later half of the eighteenth century the demand for decorations was

very extensive both in England and France until the time of the French Revolution, when sterner events produced different methods and the character of the work of Percier and Fontaine of Paris was in strong contrast to that of the previous age.

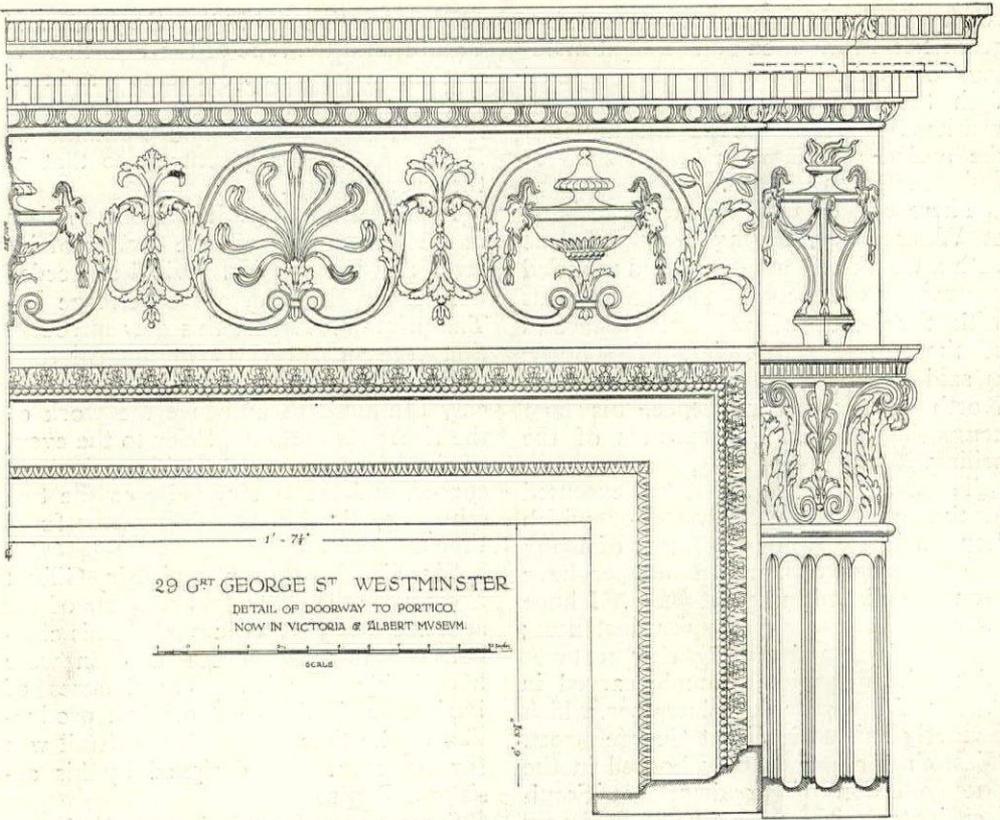
In England the death of Robert Adam in 1792 brought about the decline of his style, and the classical revival succeeded during the closing years of George IV. The prime movers of this new introduction were Sir Robert Taylor and Sir John Soane, whose lectures at the Royal Academy conducted to influence the work of the rising generation. Prior to the event of the Victorian era a Gothic revival occurred, and the rivalry between the two schools of thought and design was for a time very acute.

Sir Charles Barry and Sir Gilbert Scott were the principal architects of the age, but Barry's classic work in his club-houses was more successful than were his Gothic churches. The Houses of Parliament is the most original production of the time, in which the detail was for the most part designed by his assistant, Pugin.

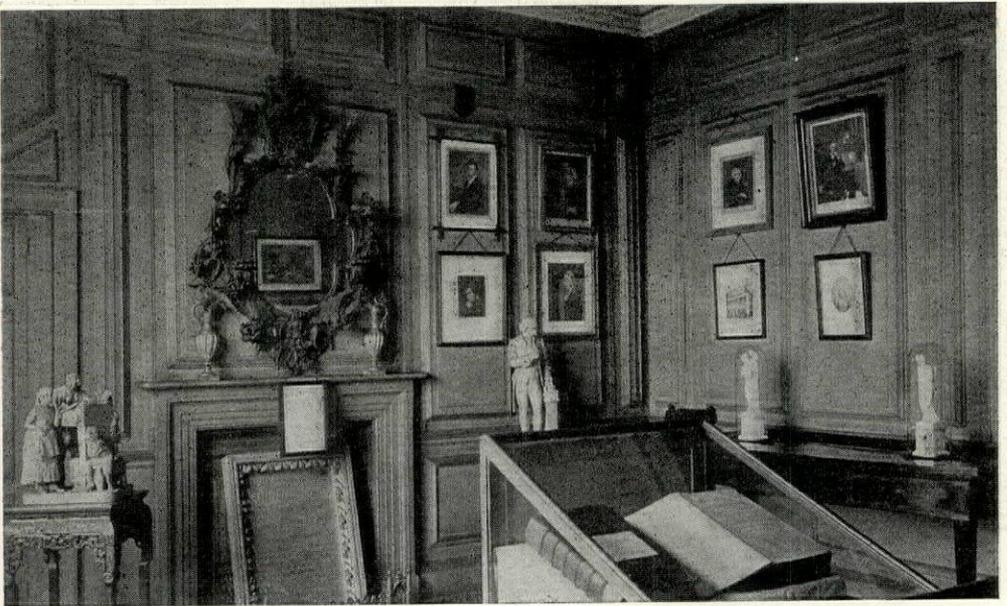
Some examples of these periods, as far as relates to interior decoration, will probably be given in a future issue, after the intermediate Georgian styles have been more fully described.



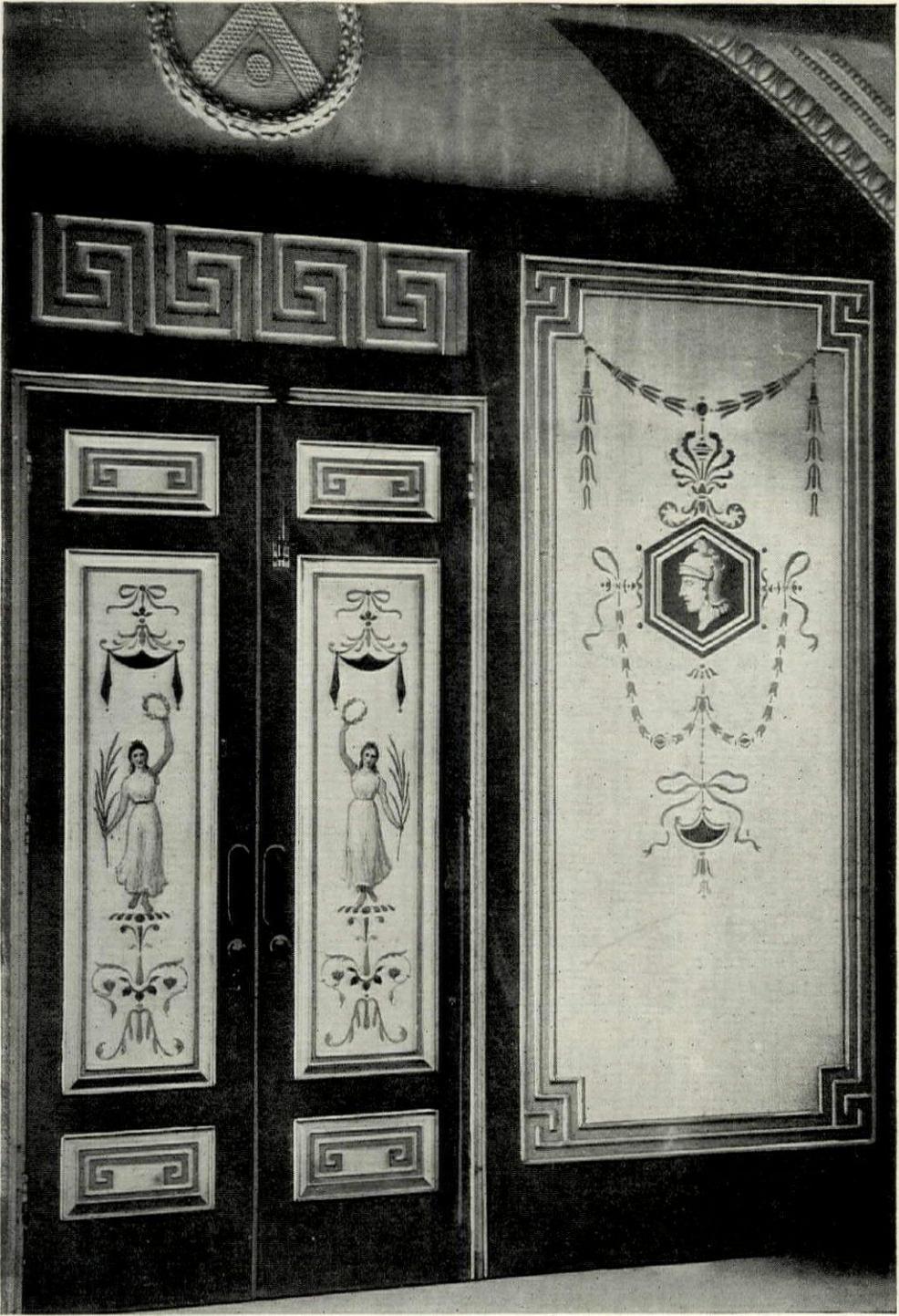
PORTION OF GIBBS CEILING IN VICTORIA AND ALBERT MUSEUM.



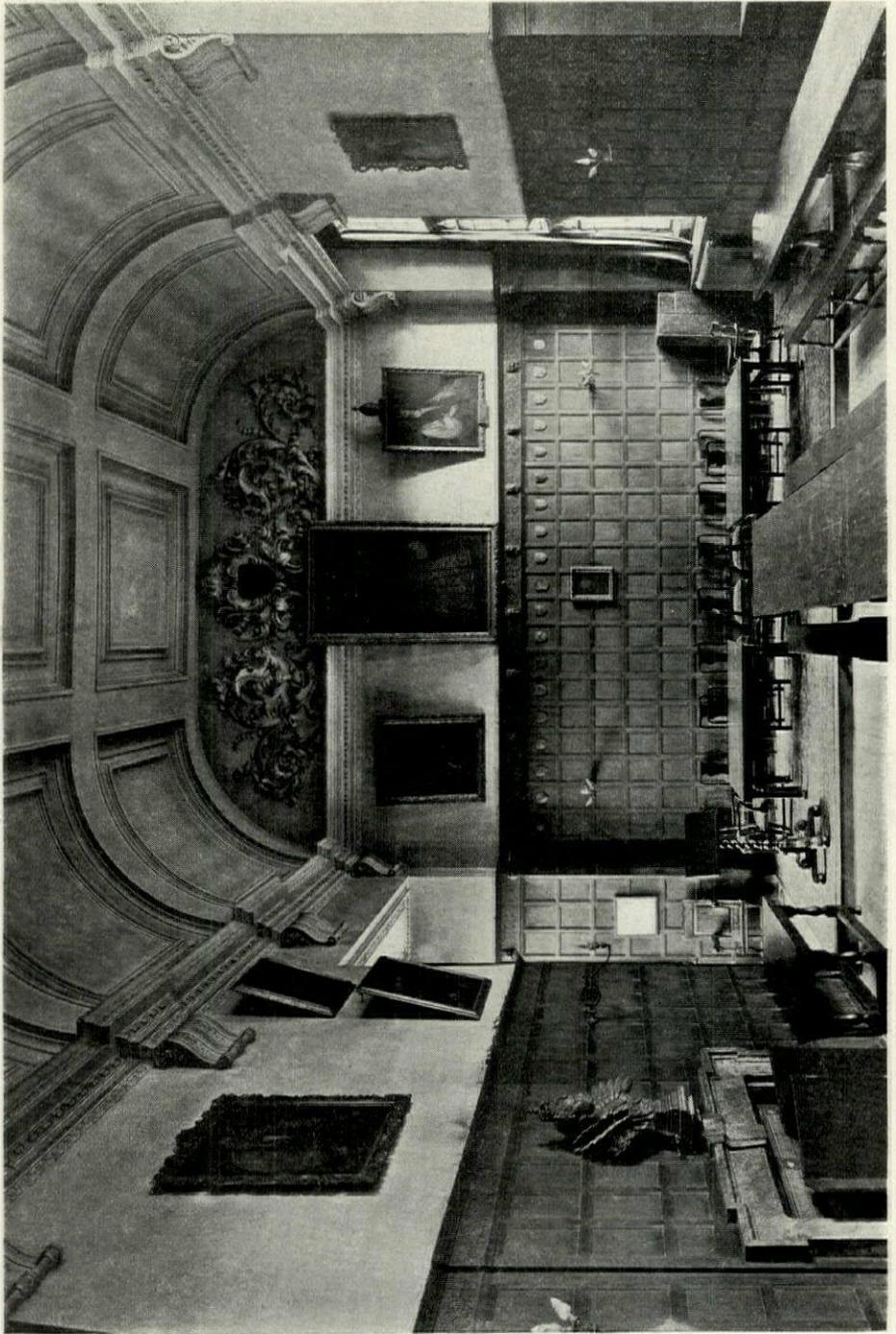
DETAIL OF ADAM PERIOD OVERDOOR, VICTORIA AND ALBERT MUSEUM.



DR. JOHNSON'S ROOM, ASTON HALL, BIRMINGHAM.



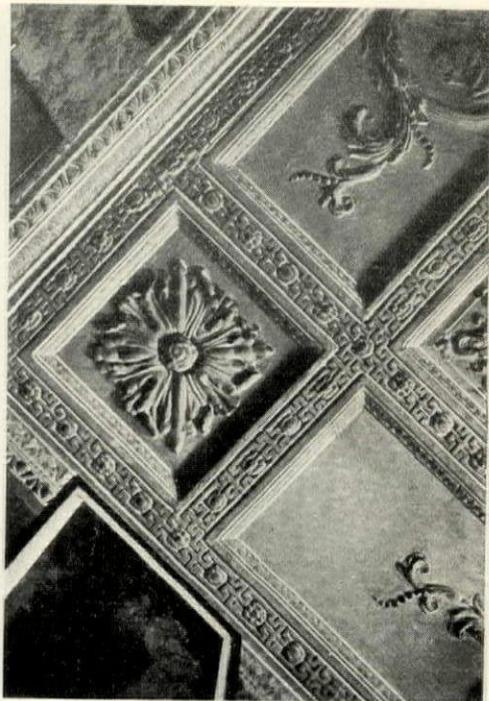
STENCIL DECORATION, SHEEN HOUSE, RICHMOND, 1785.



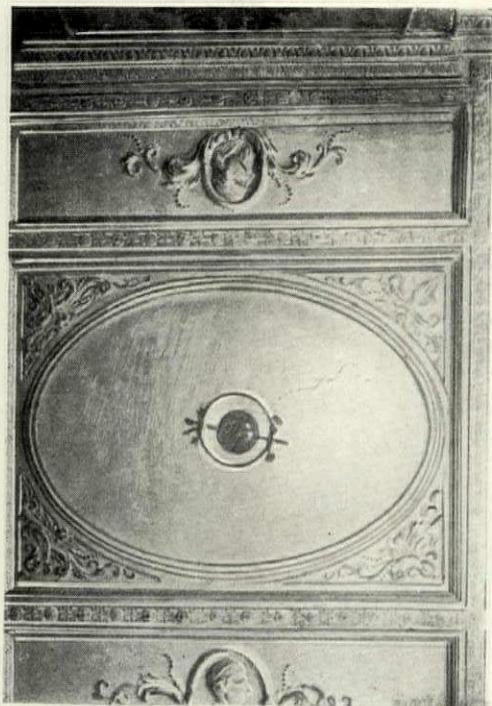
DINING HALL, JESUS COLLEGE, OXFORD.



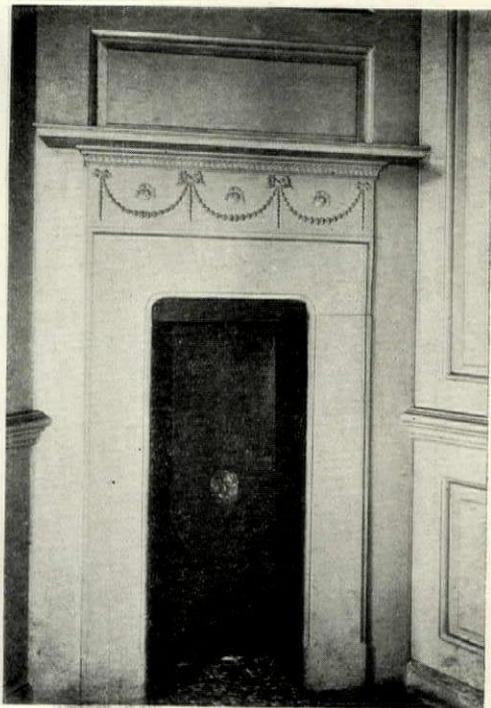
DETAIL OF SIDE CEILING AT WESTMINSTER,
1760.



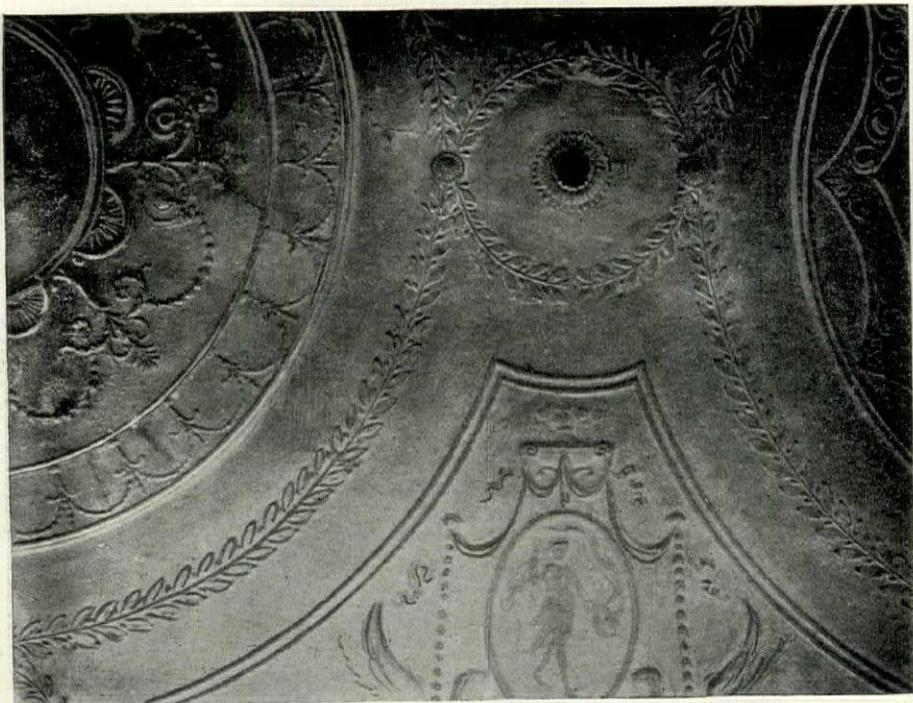
DETAIL OF ANGLE CEILING AT WEST-
MINISTER, 1760.



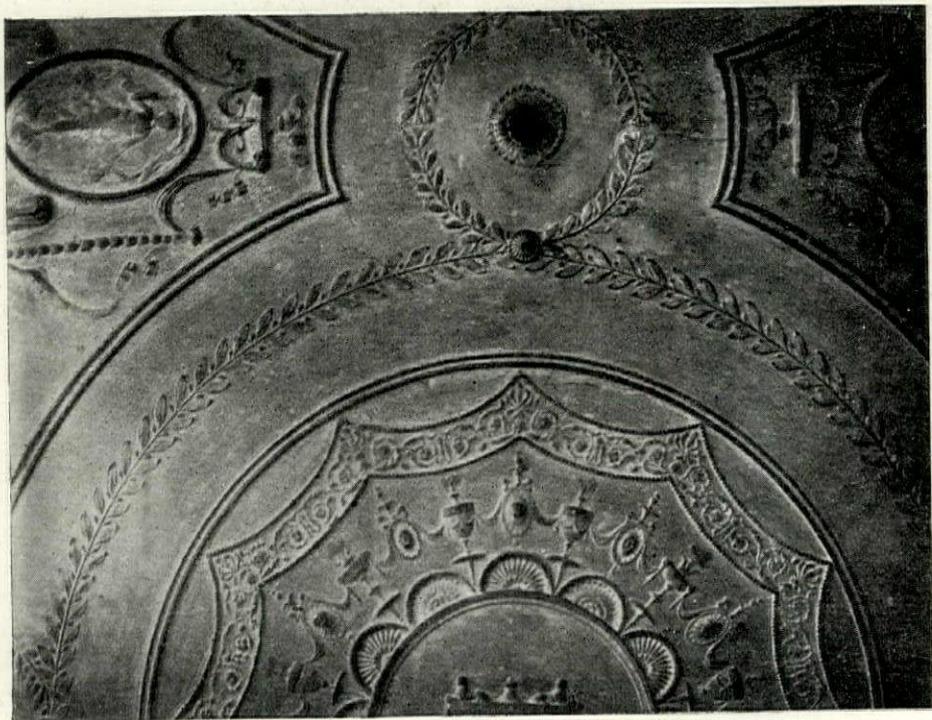
DETAIL OF CENTRE PANEL, CEILING AT
WESTMINSTER.



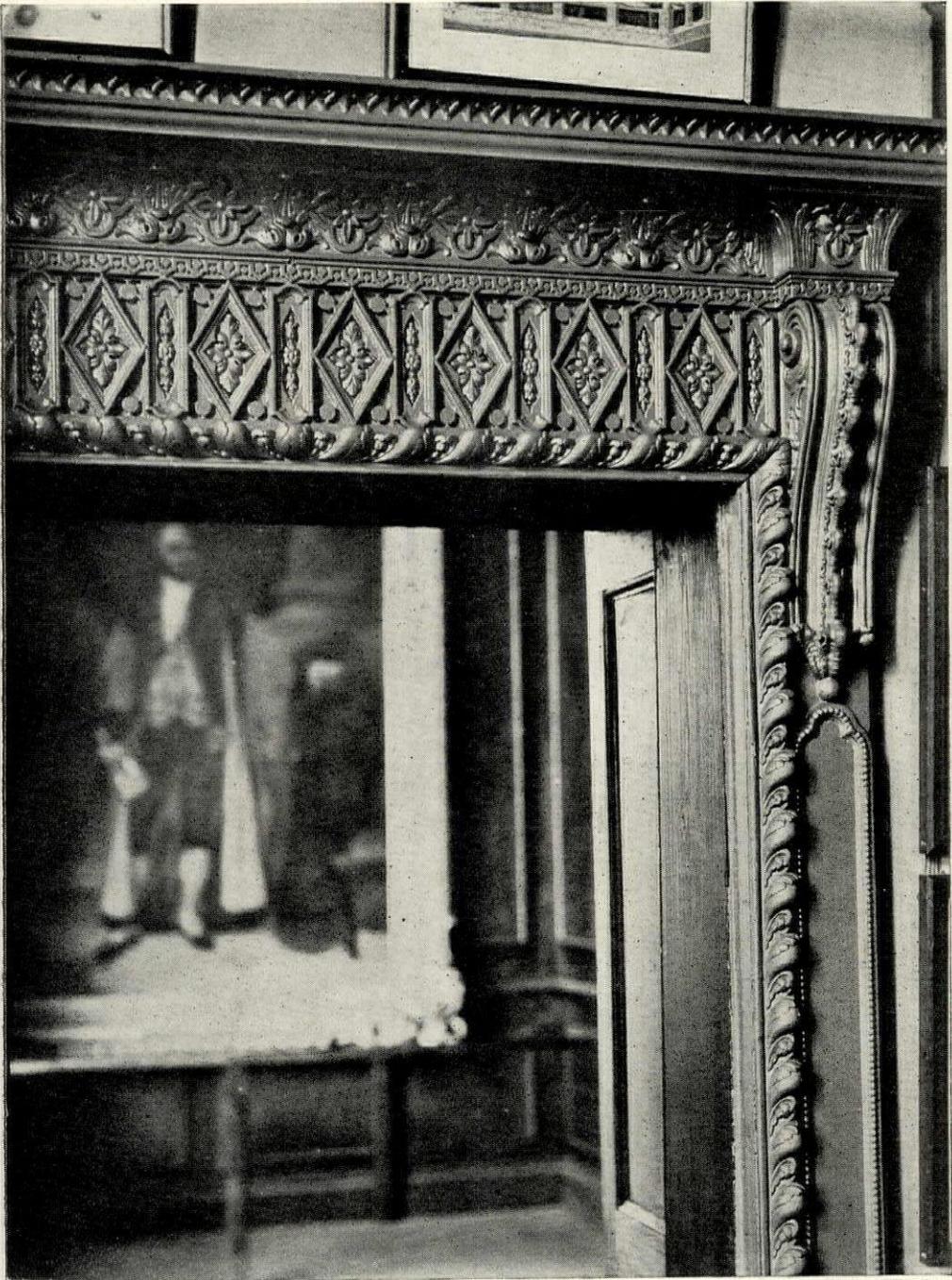
ADAM PERIOD OVERDOOR, NO. 10 CATHERINE
COURT, E. C.



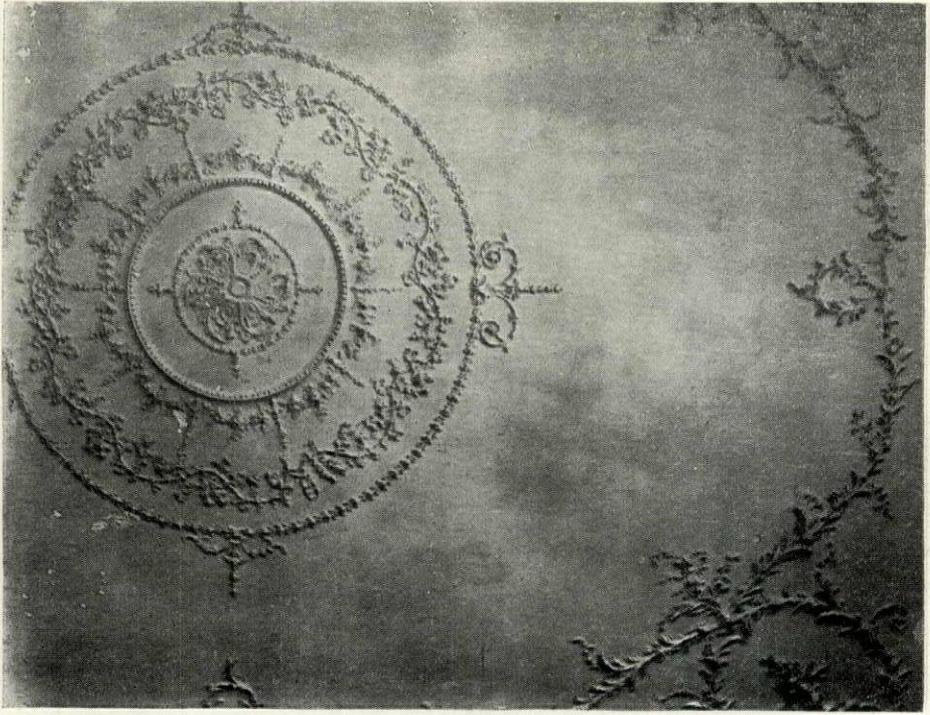
LEAF ORNAMENT, ADAM PERIOD CEILING,
14 DERING STREET, W., 1771.



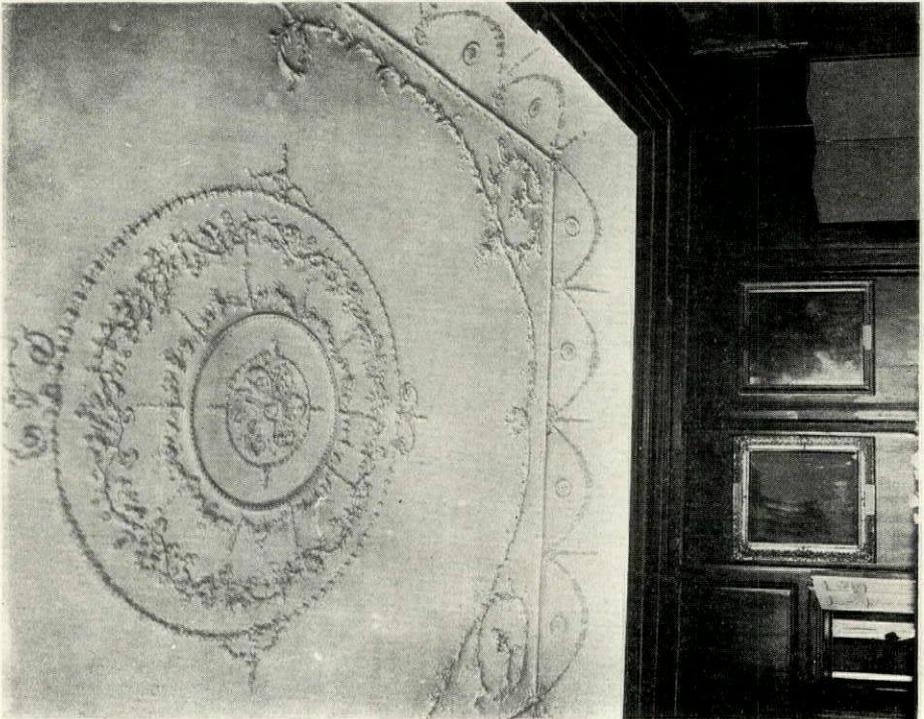
END OF SEMICIRCLE, ADAM PERIOD CEILING,
14 DERING STREET, W., 1771.



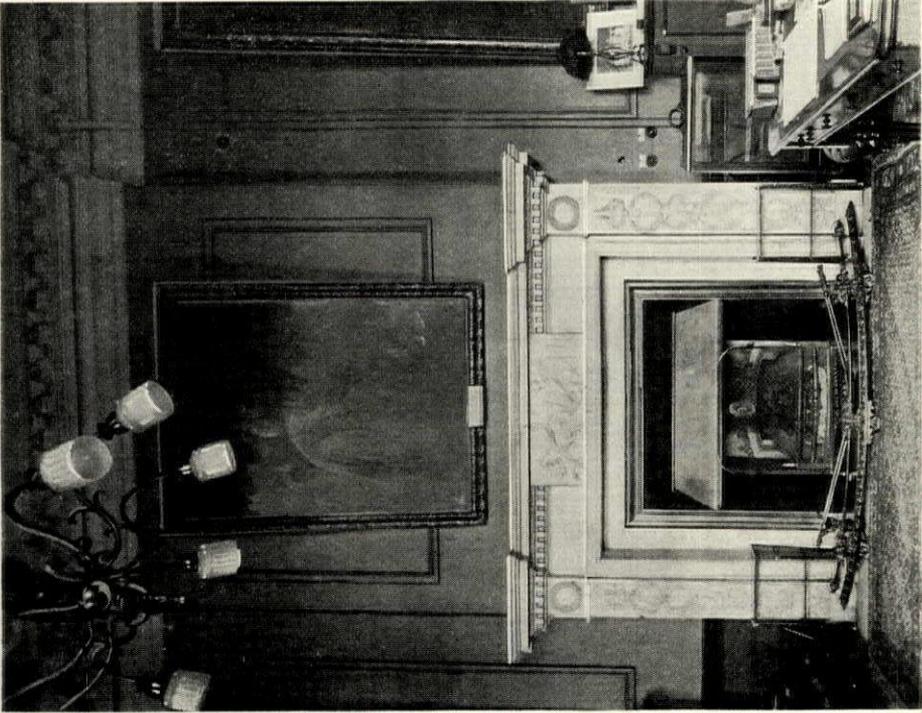
DOOR CASING IN LADY HOLT'S BED-
ROOM, ASTON HALL, BIRMINGHAM, 1820.



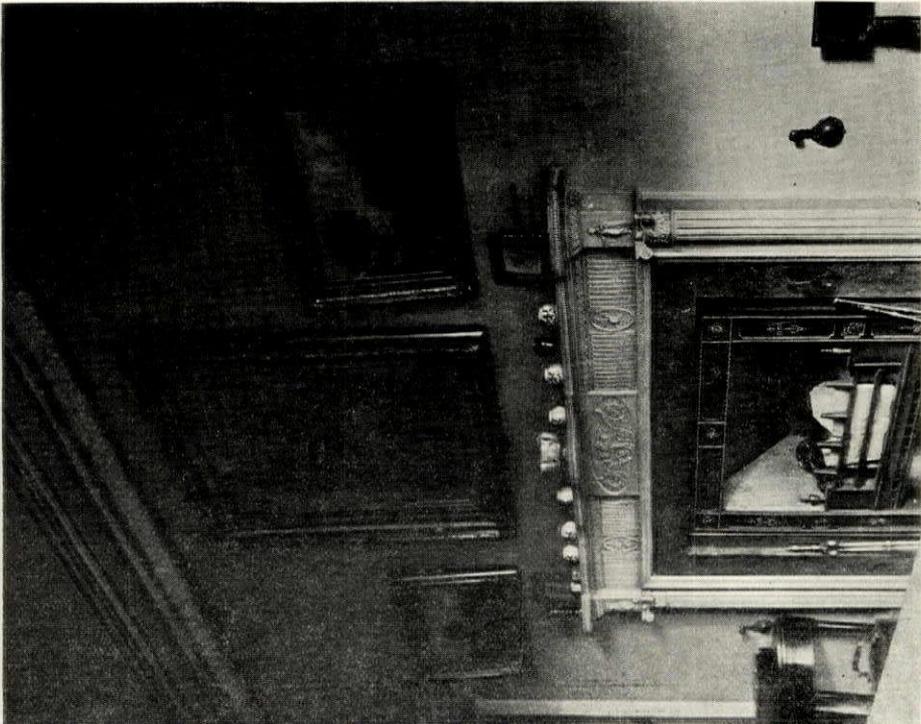
DETAIL OF DINING ROOM CEILING, LORD FISHER'S APARTMENT,
GREENWICH HOSPITAL, 1750.



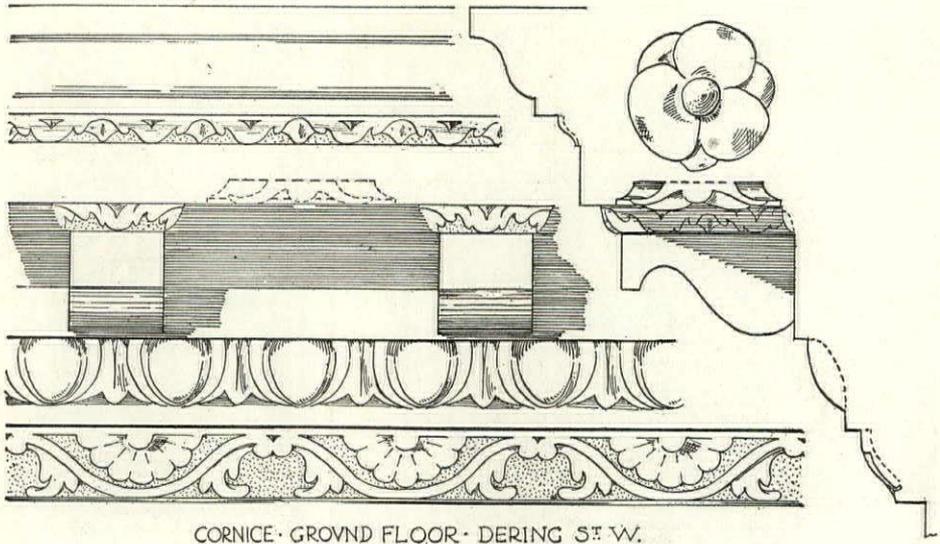
DINING ROOM CEILING, LORD FISHER'S APARTMENT,
GREENWICH HOSPITAL, 1750.



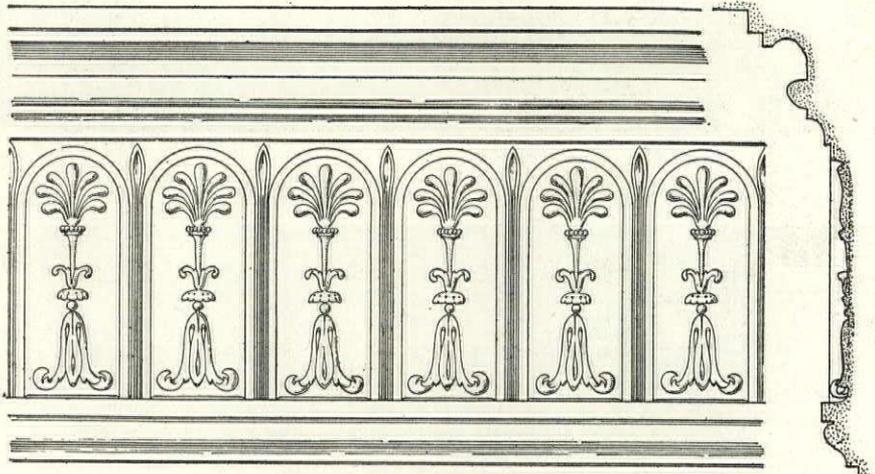
STUDY IN LORD FISHER'S APARTMENT, GREENWICH, HOSPITAL, 1750.



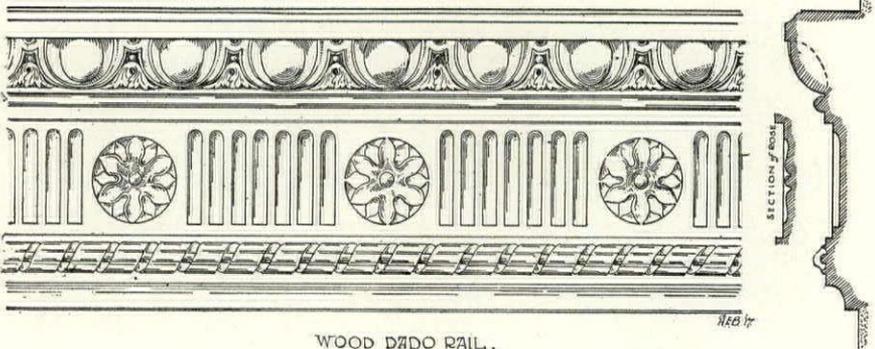
ADAM PERIOD CHIMNEYPIECE IN BILLIARD ROOM. THE PYNES, DEVON.



CORNICE · GROVND FLOOR · DERING ST. W.



CORNICE TO LOBBY : DERING ST. W.

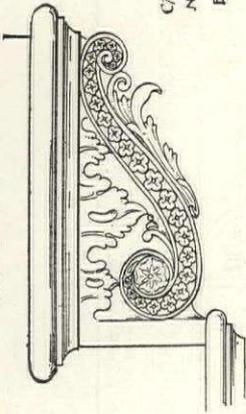


WOOD DADO RAIL.



DETAILS OF CORNICES OF ADAM PERIOD.

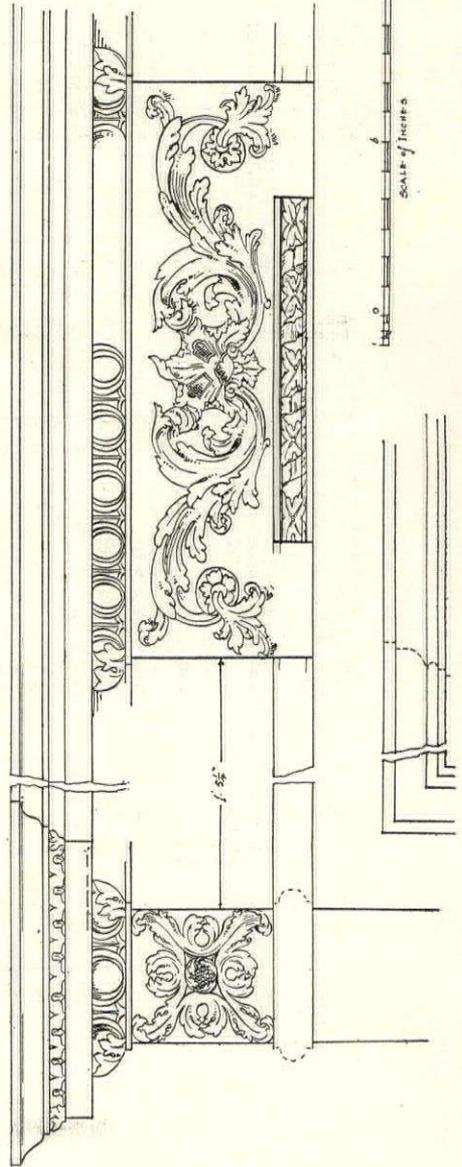
NEG 17



CARVED STAIR END
 NOS 5 JOHN STREET
 BEDFORD ROW, LONDON.



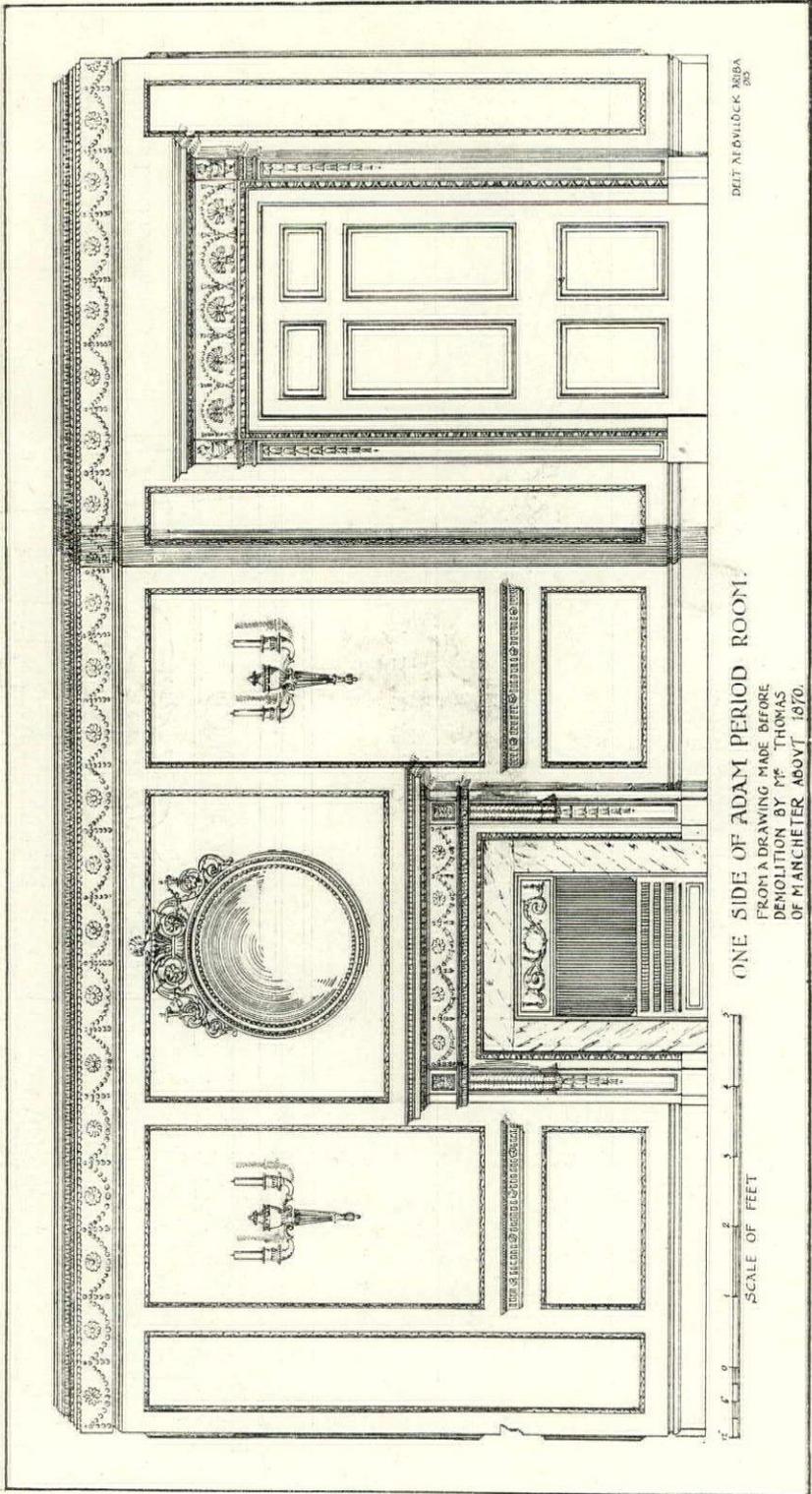
FRIEZE TO CHIMNEY PIECE ASTON HALL BIRMINGHAM.



CORNICE & FRIEZE TO CHIMNEY-PIECE.
 FRIENDS SCHOOL LIBRARY AT
 ACKWORTH N^o PONTEFRACT YORKS



As built back of



DELT. AT. WILLOCK 2358A
201

ONE SIDE OF ADAM PERIOD ROOM.

FROM A DRAWING MADE BEFORE
DEMOLITION BY MR. THOMAS
OF MANCHESTER ABOUT 1870.

SCALE OF FEET
1 2 3

INDUSTRIAL HOUSING DEVELOPMENTS IN AMERICA

By LAWRENCE VEILLER

Secretary of the National Housing Association

PART V TRIUMPHING OVER THE GRIDIRON PLAN A DEVELOPEMENT at ELIZABETH, N. J.

By Murphy & Dana, Architects

TELL the average real estate man that he can get more houses on his property and secure a more advantageous development by giving away some of his land instead of attempting to use all of it, cutting it up into lots in the usual way, and he will scoff at you as a theorist and a dreamer.

The average architect confronted with the usual gridiron plan and a deep lot, as a rule stands helpless and can suggest nothing in the way of development other than tall tenements of barrack-like appearance, or continuous rows of small houses of the Philadelphia style, occupying the entire frontage of the property, with large back yards. Lamenting, as he works out such a plan, the straight-jacket of the gridiron street system, and commenting on the unfortunate handicap of the deep lot and his inability to do anything with that kind of property, he sighs for large acreage tracts to develop, saying if he only had 50 acres it would be possible for him to make a Garden Village development of a satisfactory type.

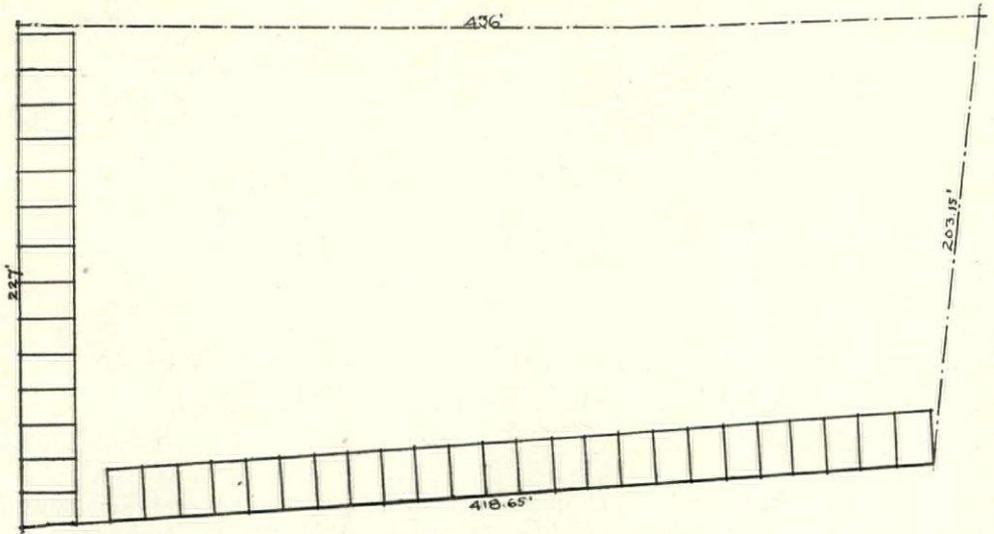
It is thus that the conventionally-minded man deals with this kind of a problem. When one comes to think of it, it is strange, is it not, that it should so seldom occur to him that he can disregard existing property divisions and lot layouts, scrap all these and treat the property as a single piece of land, laying it out anew in such manner as will give the most satisfactory results.

A striking illustration of the possibilities of an ordinary city block, even as small as 200x400 feet, in the heart of a well established city, is to be found in the housing development at Elizabeth, New Jersey, now nearing completion for Mr. Archibald H. Bull, of which the architects are the firm of Murphy & Dana, of New York.

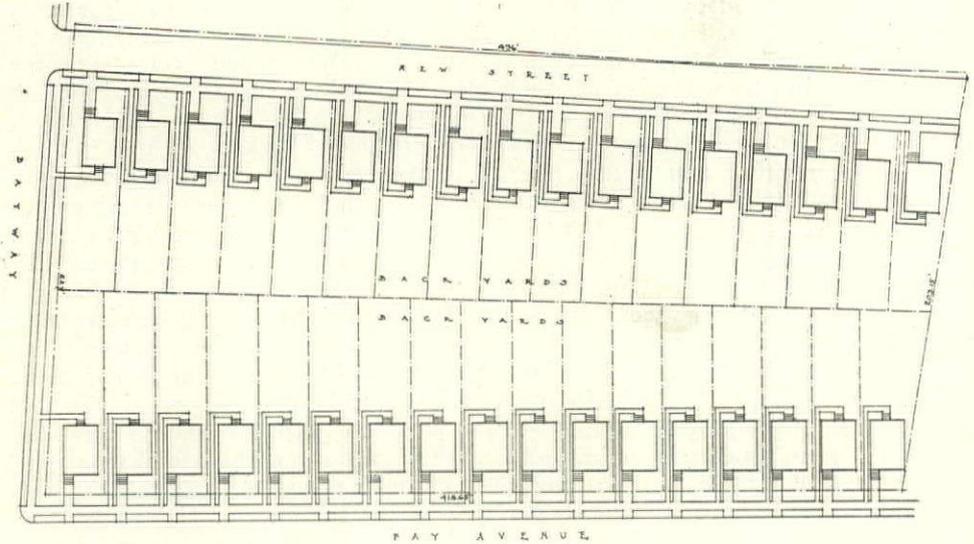
In this case the architects were confronted with the problem of utilizing a piece of property of rectangular form but irregular shape, approximately 227 feet by 418 feet on the two sides abutting on the street, the irregular sides being respectively 203 by 436 feet. The usual method of laying out this property would have been, as shown in Plan 1 on page 50, with continuous rows of small houses on the two street frontages, setting back the houses a reasonable distance from the street and leaving large back yards at the rear of each. Under such a plan, utilizing small houses of the Philadelphia type, with a 16-foot frontage and a 23-foot depth, built in continuous rows, it would have been possible to have obtained but 38 houses on this property.

If, instead of building houses in continuous rows, detached houses were desired, and only the very inadequate space of 7½ feet was left between the houses, it would be possible to obtain only 26 houses instead of 38 (see Plan 2).

When the idea, however, of giving



PLAN 1—THIRTY-EIGHT ROW HOUSES.

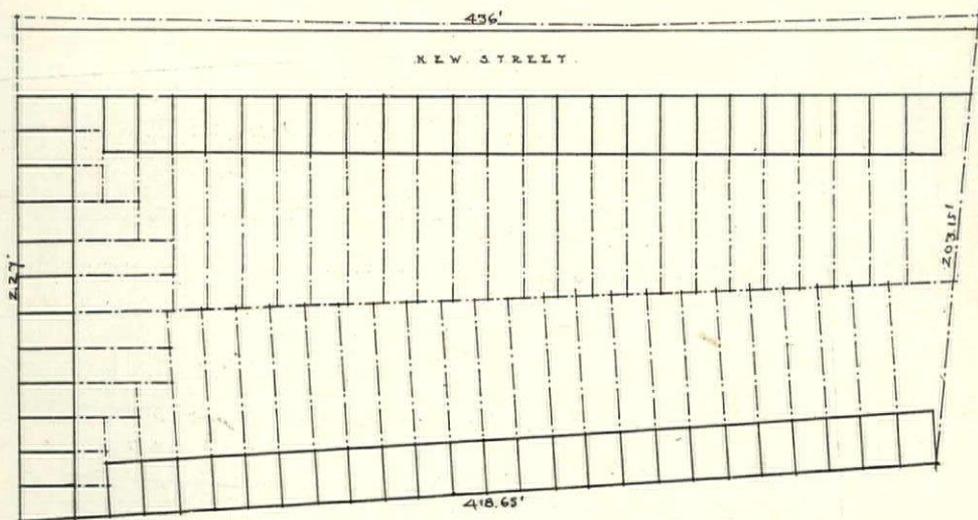


PLAN 2—TWENTY-SIX DETACHED HOUSES.

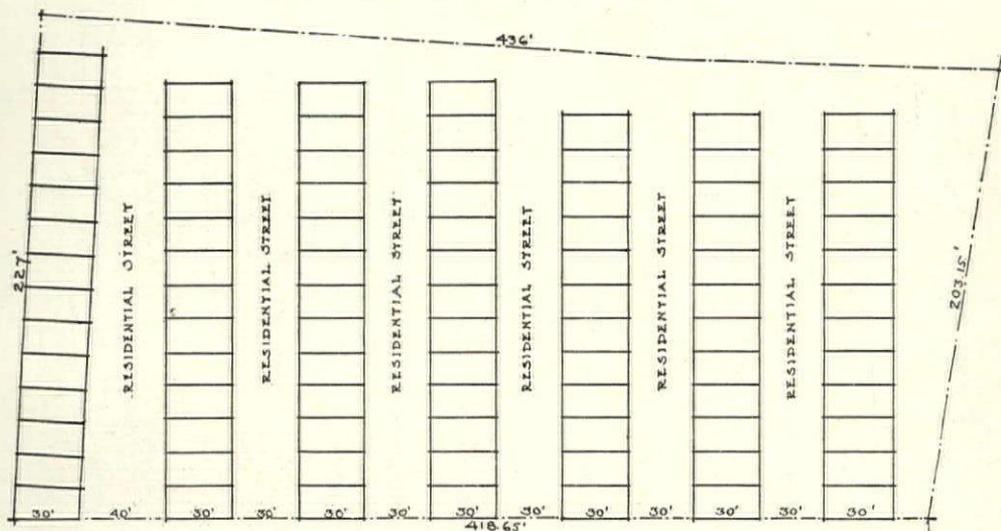
away part of the land by making new streets once dawned upon the architect, new possibilities of an extremely interesting character open up. By constructing a new street 20 feet wide along the rear of the property and thus giving away practically ten per cent. of the land, the possibilities of this method of treatment at once become apparent; for, frontage has thus been obtained for the otherwise useless rear of the plot and the number

of houses that can be placed upon it has been almost doubled. With the first kind of development—namely, continuous rows of Philadelphia houses with 16-foot frontage—it would be possible under this new arrangement to get, in place of 38 houses, 60 houses, as shown in Plan No. 3.

Were it desired to utilize to the highest degree every available inch of land and still not produce bad conditions, it



PLAN 3—SIXTY ROW HOUSES, WITH NEW STREET.

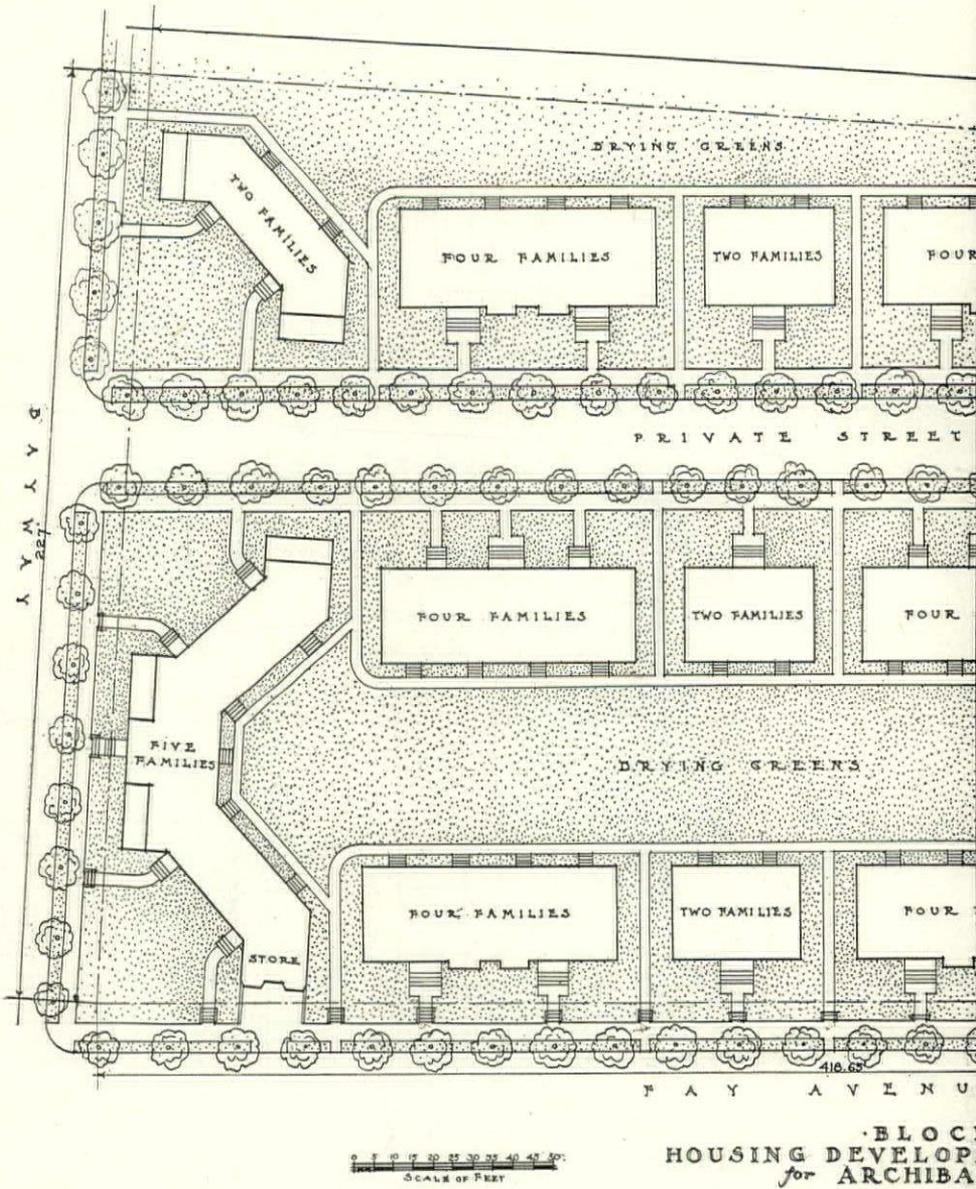


PLAN 4—EIGHTY-NINE HOUSES—SIX NEW STREETS.

would be possible under the most concentrated form of housing in small houses to get as many as 89 houses of the Philadelphia type, 16 by 30 feet, built in continuous rows, as shown in Plan No. 4. This result would be achieved by making a series of 30-foot private streets at intervals throughout the length of the plot.

Notwithstanding the high value of the land in this Elizabeth development, the architect, Mr. Dana, in this case very wisely decided not to employ the most concentrated form of housing, but,

instead, developed the property with a most charming layout, housing on it 54 families in group houses of two, four and five families in each group. The plan on pages 52 and 53 show the extraordinary skill with which this property has been laid out and the very satisfactory results achieved. It is hard to realize that so attractive a development of an ordinary city block can be obtained. Intelligent study and departure from conventional methods have brought this about. On this plot of only 2 1-5 acres, 54 families

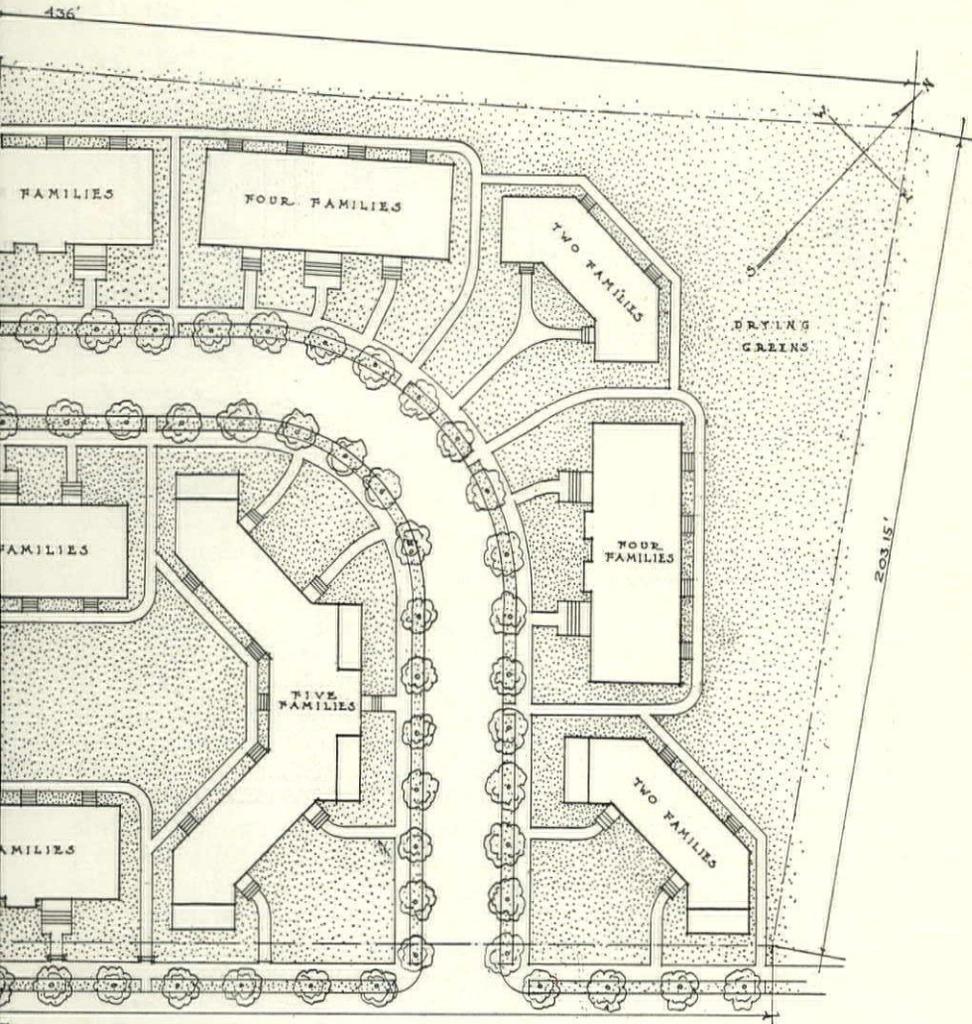


are to be housed in attractive, small houses, not great barracks of tenements, nor dreary, monotonous rows of small houses all alike.

Instead, cottages of the English type of architecture, in stucco, with sloping roofs, set back from the street on grassy terraces planted with trees and shrubs and with ample drying greens at the back, have been provided. The cornerstone of this development was the wise decision

of the architect to run a new street through the property. Instead, however, of running this street through as an engineer would have done, bisecting the lot, he has placed it where it would lend charm, and has even had the initiative and boldness to make it a curved street as it turns through the property, thus avoiding, even in this small area, a rectangular effect.

The property is thus divided into two



PLAN.
 AT ELIZABETH, N. J.
 H. BULL ESQ.

MURPHY & DANA, ARCHITECTS
 331 MADISON AVE., NEW YORK

main sections: One fronting along the greater dimensions of the plot has been developed with eight groups of houses; at either end of it are two groups of five-family houses of irregular outline which have all the charm of curved buildings without the additional expense. The irregular outline also secures not only greater attractiveness in the appearance of the whole development, but gives a much greater outlook to the individual

houses. These two five-family house groups flank this part of the development. Enclosed between them, facing on the main highway—Fay Avenue—are three groups of houses, two groups of four families each, with a two-family group separating them. Immediately behind them, and similarly placed, but fronting on the new private street, are three similar groups—two four-family ones and one two-family one. Thus has



ENTRANCE FROM FAY AVENUE, TO HOUSING DEVELOPMENT AT ELIZABETH, N. J.
Murphy & Dana, Architects.

been secured balance and harmony of design—but without monotony.

On the remaining portion of the property, on the other side of the new private street, is to be found an exactly similar grouping—namely, two groups of four-family houses, with a two-family group intervening. Distributed over the remainder of the plot are to be found four-family and two-family groups alternating, with the corners of the plot once more delightfully treated with houses of irregular outline.

There are no back yards; there are no fences; there are no property lines. Every bit of the property that is not given up to buildings or to the private street is devoted to lawns, drying greens, and, of course, the necessary footwalks.

With proper planting and maintenance, this whole development should become in a short time a Garden Village in miniature.

The provision of concrete walks practically encircling all of the groups of houses insures convenience of living and proper maintenance of the lawns and drying greens.

The private street not only gives frontage to portions of the property which

otherwise could not be utilized, but also provides a service street for the use of the persons living in this development. Such a street should be narrow, even as narrow as 20 feet; the best city planning practice adopts a standard of 18 feet for the roadway of a street of this character.

As the street will have very little traffic upon it, only being used by such delivery wagons as will enter it for the purpose of making deliveries at the houses fronting on it, the street will serve chiefly as a children's playground, where the children can play on a smooth surface in safety without destroying grass and shrubbery.

Viewing this development from the point of view of the number of families to the acre, it again illustrates in a striking manner the great possibilities of concentrated housing scientifically developed. We have been told for some time now that the best English practice considers eight houses to the acre the proper standard and that even twelve houses to the acre may be permitted. Here 24 families to the acre are provided for, doubling the number that we ordinarily consider the maximum that should be housed under Garden Village conditions.

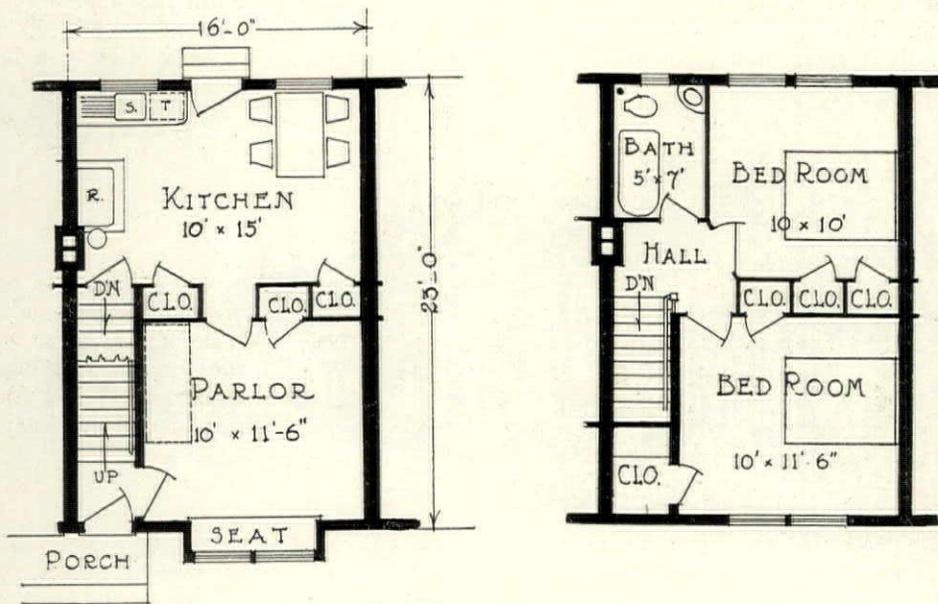
The only point of adverse comment on the whole layout is possibly the somewhat inadequate distance between the groups of buildings: namely, a little less than 14 feet. There is no question but that the houses would have been more attractive with 20 feet between the groups, but as no house is more than two rooms deep—in fact, does not exceed 23 feet in depth—it is seen that this consideration becomes of far less importance than it ordinarily would.

All of the houses have a front setback from the street sidewalk of 15 feet.

sixty per cent. unoccupied and kept open for light and air, for gardens, lawns, walks, drying greens and the private residential street.

The scheme that has been adopted here is, of course, only possible where the property involved is to be held and rented to the occupants. It could not be carried out advantageously where individual lots were to be sold; for, there would undoubtedly be great hesitation on the part of the average purchaser in purchasing property subdivided in this way.

As, however, we are learning more and



FOUR-ROOM UNIT.

Where groups of houses come opposite each other, there is a clear open space, at the back, of 50 feet between them; between the houses fronting on the two sides of the private street, a distance of 65 feet is maintained. The main group of houses practically encloses an interior park 50 feet wide and 250 feet long, with eight openings 14 feet wide leading into it at various intervals.

Notwithstanding the degree of concentration of housing that is achieved in this development, it is interesting and significant to find that only forty per cent. of the land is occupied by buildings, leaving

more that the secret of success in industrial housing lies in wise management, this consideration does not become of very great moment. There will be always two classes of people to build for: those who wish to buy, and those who wish to rent. The army of renters increases every day. More and more the working man is becoming averse to buying the home he lives in. From his point of view it interferes with mobility of labor and he feels that all employment is too uncertain to make it wise for him to "chain himself to the job," as he puts it. The employer, on the other hand, is natu-

rally anxious to sell houses to the worker because of his belief that it will stabilize his labor supply.

This development at Elizabeth was projected with a definite and clear conception on the part of the owner, Mr. Bull, from the very beginning that he could render a greater service by keeping control of the property and renting it to the occupants, than he could were he to build houses to sell. A consideration of the type of house employed will prove of interest.

THE TYPE OF HOUSE.

Practically all the houses are houses with a 16-foot frontage and 23-foot depth. Three types have been employed, viz., three-room units, four-room units

dining-room, and the location of the fixtures in the kitchen has been determined with reference to this, so that practically one portion of the room will serve as a dining-room with dining table and chairs, and the balance as a kitchen.

Privacy has been secured by means of a small entry, so that persons will not enter directly into the parlor but into this entry, from which they can immediately ascend to the bedroom story. This has been done partly so as to make possible the use of the parlor at night as a supplementary bedroom, as is so often desired. Thus the occupant who rents a four-room house for \$20 a month has a generous kitchen and dining-room combined, a good sized parlor which at night can be



GROUP OF HOUSES ON FAY AVENUE.

and five-room units. They are all only two rooms deep. The rooms are all of a good size; no room—not even the bedroom—being less than 100 square feet in area, and the rest ranging from kitchens of 150 square feet—10x15—to parlors of 10x11 feet 6 inches, or 115 square feet. The rooms are all well planned, of square shape, and designed with reference to convenience of living. No dining-rooms are provided in any of the houses, as the houses are designed for a class of workers who do not care for a separate dining-room. The kitchen is purposely made large with the knowledge that it will be used as a combined kitchen and

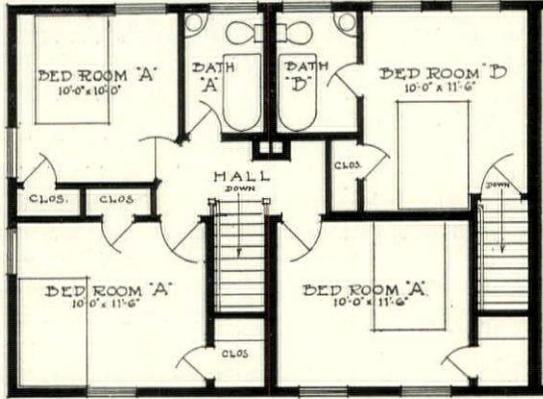
used as a bedroom, and two large bedrooms on the second floor with a bathroom immediately adjoining. Every room has two large windows, and all rooms have cross ventilation, a most important consideration. The beds have been planned in the rooms, and the windows, doors and closets located with reference to them.

Generous and ample clothes closets are provided in all of the bedrooms; in one type there are three closets for two bedrooms as well as generous closet space on the ground floor, even the parlor being provided with a closet—its possible use as a bedroom has been anticipated, a

place for a couch bed in the parlor having been definitely located. The kitchens do not have dressers, but, much better, each kitchen has two ample closets, with shelves from the floor to the ceiling; one of these—namely, that next to the range—can be used as a closet for cooking

utensils and supplies stored there. Some of the houses are provided with hot air furnaces in the cellar. The other houses have no heating apparatus, depending upon the kitchen range and upon stoves that may be provided by the occupant.

Each house has a bathroom with bath-

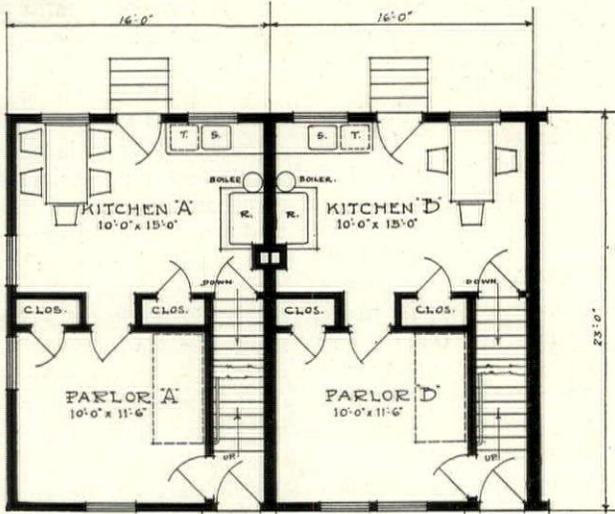


SECOND FLOOR.

tub, watercloset and washbowl, all of a modern type. The kitchens are provided with a sink and a single washtub. The ranges are combination coal and gas ranges and are provided with hot water boilers.

All of the houses are provided with tub, watercloset and washbowl, all of a modern type. The kitchens are provided with a sink and a single washtub. The ranges are combination coal and gas ranges and are provided with hot water boilers.

All of the houses are provided with



FIRST FLOOR.

Five-room Unit "A."

Three-room Unit "B."

ample cellars extending under the whole house, the stairs to the cellar leading directly out of the kitchen, making it very easy for the housewife to have ac-

While all of the houses have sloping roofs, the houses have been so designed as not to diminish the story heights on the upper floors or to make the upper

rooms unattractive. One attractive feature is the lattice work connecting the fronts of the various houses and screening the rear from observation, but at the same time affording a vista through to the passerby.

RENTALS.

The three-room houses are to be rented at \$16 a month; the four-room houses at \$20 a month, a few at \$21, and the five-room houses at \$26 a month. The store, it is expected, will rent for \$30 a month. The following schedules show the distribution of the various types of houses and the number of each kind that has been provided, with the estimated rentals:

SCALE OF RENTALS.

Type	Rooms	Families	Per Month	
B	3	6	\$16	\$96
A	4	28	20	560
C	4	11	20	220
D	4	2	21	42
B	5	6	26	156
C	Store	1	30	30
Total				\$1,104

COSTS.

The costs of this enterprise are of equal interest. The land cost \$4,100, and it has cost about \$10,000 to improve it, as usual the cost of developing the land being about twice the cost of the raw land. The 54 houses have cost \$113,813, giving an average cost per house of \$2,100, in round figures, not including the architect's commission and incidentals. As stated by the architect, the total cost of the whole development amounts to \$132,500, which would make the houses, with the land, cost on an average of \$2,454 apiece. The rents that it is proposed to charge have been estimated on a basis of a gross return of ten per cent., which, with proper management, and with the small bill for depreciation that there should be owing to the care with which the houses have been built, should yield a proper return to the investor of certainly five per cent. net, and in all probability six per cent.

SCHEDULE OF COSTS.

Cost of Land.....	\$4,100
Cost of Improvements (Grading, Streets, Sewers, etc.), approximately	10,000
Cost of Houses.....	113,813
Architect's Commission, approximately	3,000
Incidentals	1,587
<hr/>	
Total	\$132,500

10% Gross Return...\$13,250 per year
 \$13,250 = 1,104 per month

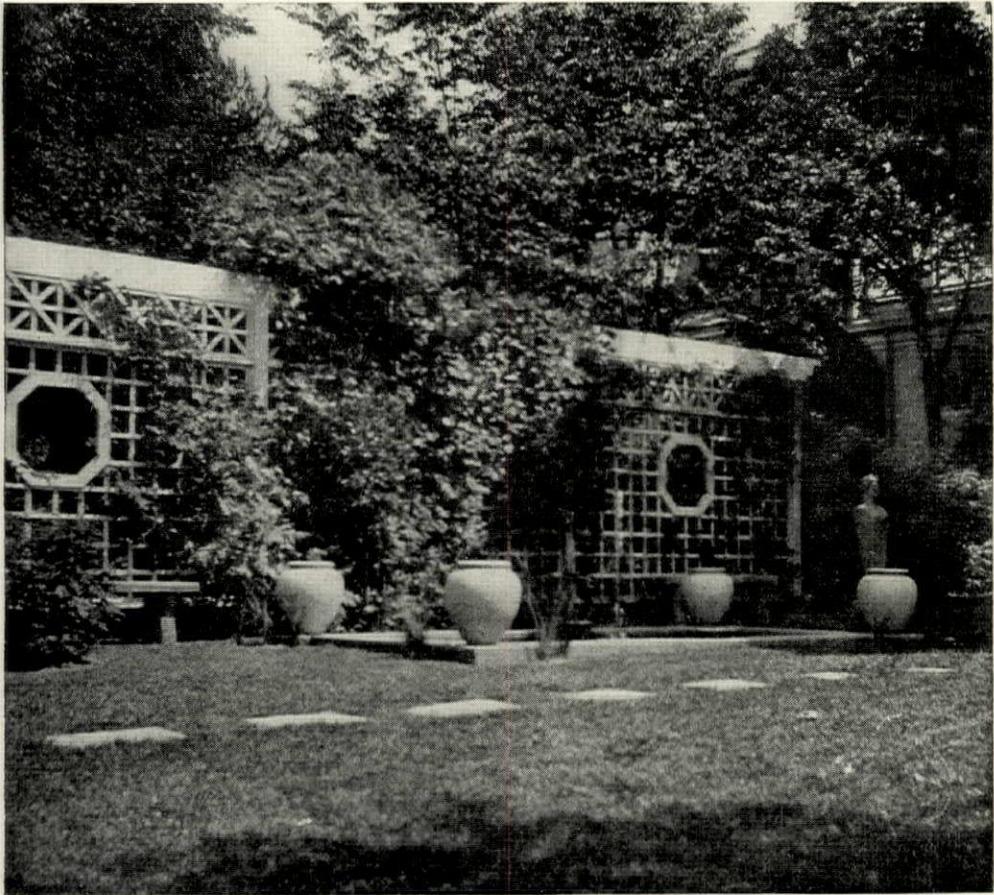
The houses are of a distinctly English type of cottage construction, built of frame, with stucco over wire lath, and set on concrete foundations. The whole development consists of sixteen group houses, providing accommodations for 54 families and one store, a grocery store located at the corner of the two main streets on which the property abuts.

This is considered essential, as the houses are about a mile from the main business centre of the town where stores are to be found, and the location of this little neighborhood store in the colony itself will make greatly for the increased comfort and convenience of the occupants.

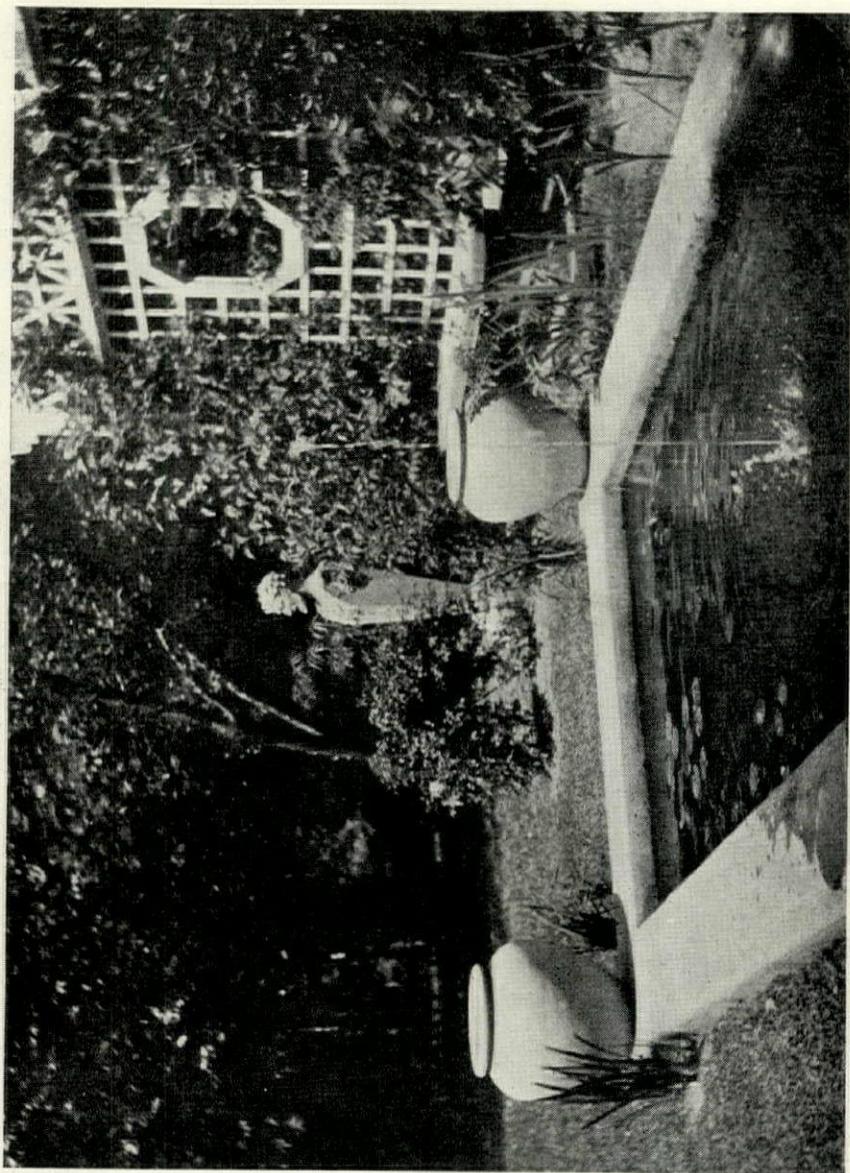
The development is located within a half mile of the United States aeroplane plant and other large factories and is conveniently accessible to the main part of Elizabeth, as it is only one block distant from the Lincoln Highway, along which run five-cent auto busses leading directly into the centre of town.

Mr. Dana has not only added to the attractive industrial housing developments of the country, but has made a distinct contribution to the art of city planning. The practical object lesson that he has afforded in this case of the possibilities of developing a comparatively small plot of ground, as small even as two acres, in the heart of a city should prove of the greatest value to the architects and city planners of this country.

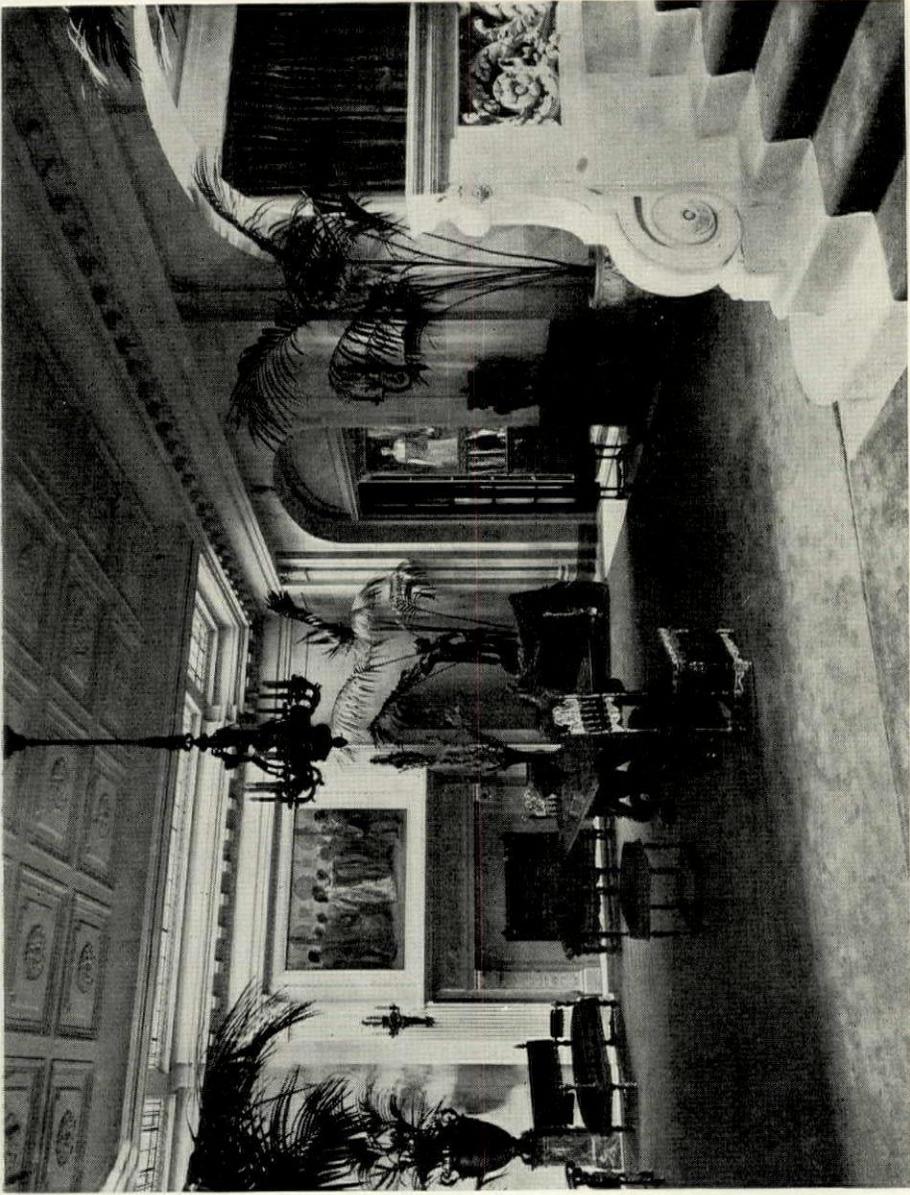
PORTFOLIO
OF
CURRENT
ARCHITECTURE



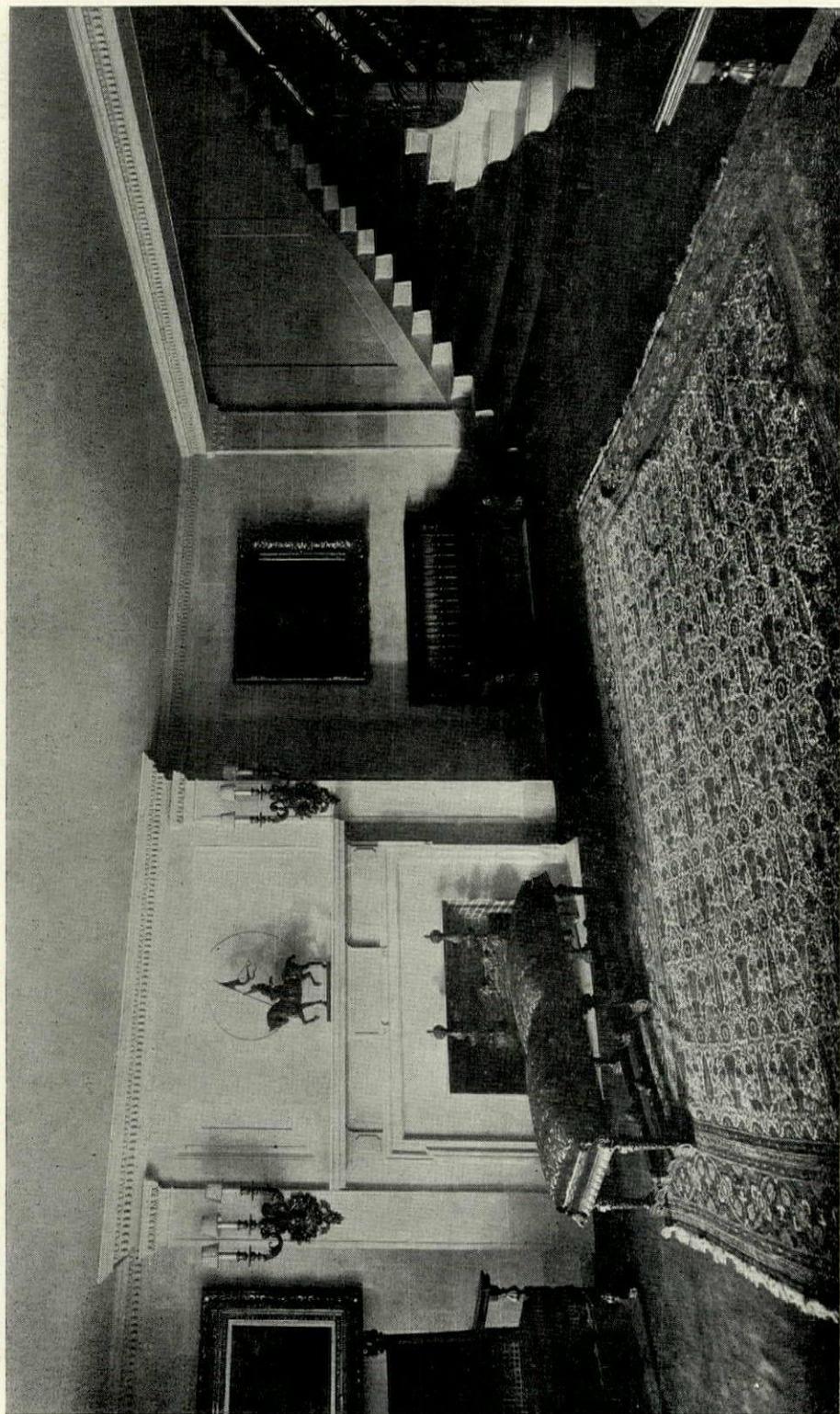
DETAIL IN GARDEN OF DR. JAMES TAGGART PRIESTLEY,
DES MOINES, IOWA. RAY FLOYD WEIRICK, LANDSCAPE
ARCHITECT. THE TRELLAGE WAS PUT UP TO HIDE
AN OBJECTIONABLE VIEW ON THE ABUTTING PROPERTY.



DETAIL IN GARDEN OF DR. JAMES TAGGART PRIESTLEY, DES MOINES, IOWA. CONCEALED LIGHTS ILLUMINATE THIS PART OF THE GARDEN AT NIGHT, ONE IN THE FOUNTAIN BASIN TO BRIGHTEN UP THE WATER AND THREE BEHIND THE TRELLIS TO CAST AN INTERESTING GLOW THROUGH THE PLANTS.



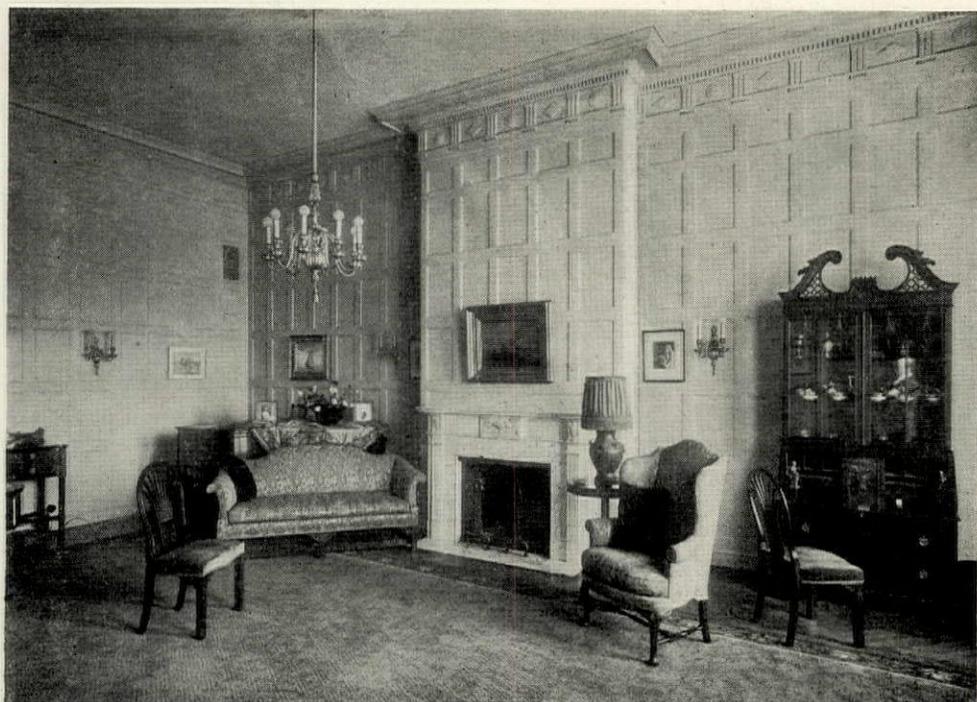
MAIN HALL—RESIDENCE OF ADOLPH LEWISOHN,
ESQ., NEW YORK. C. P. H. GILBERT, ARCHITECT.



LOWER HALL—RESIDENCE OF ADOLPH LEWISOHN,
ESQ., NEW YORK. C. P. H. GILBERT, ARCHITECT.



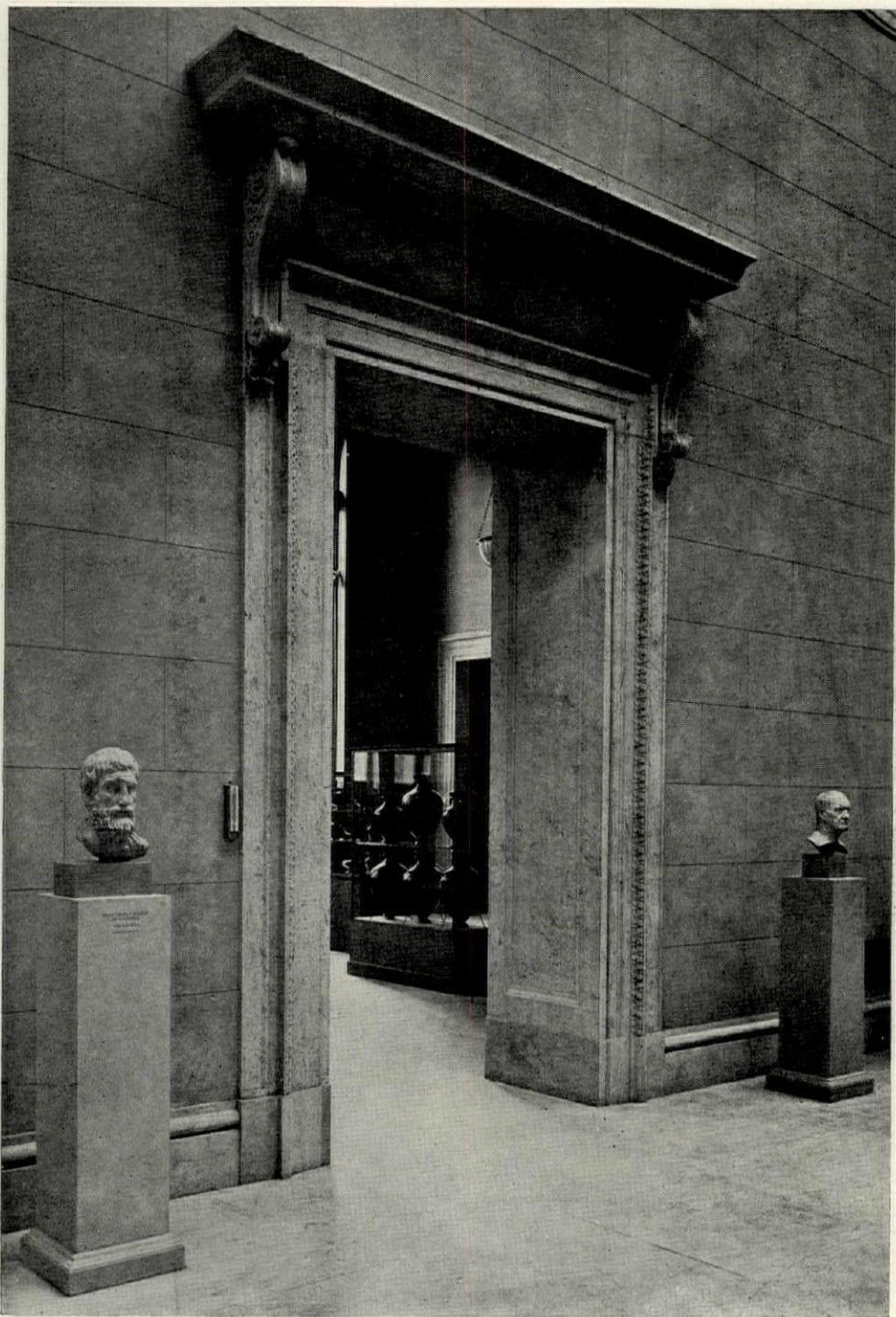
ART GALLERY—RESIDENCE OF ADOLPH LEWISOHN, ESQ., NEW YORK.
C. P. H. Gilbert, Architect.



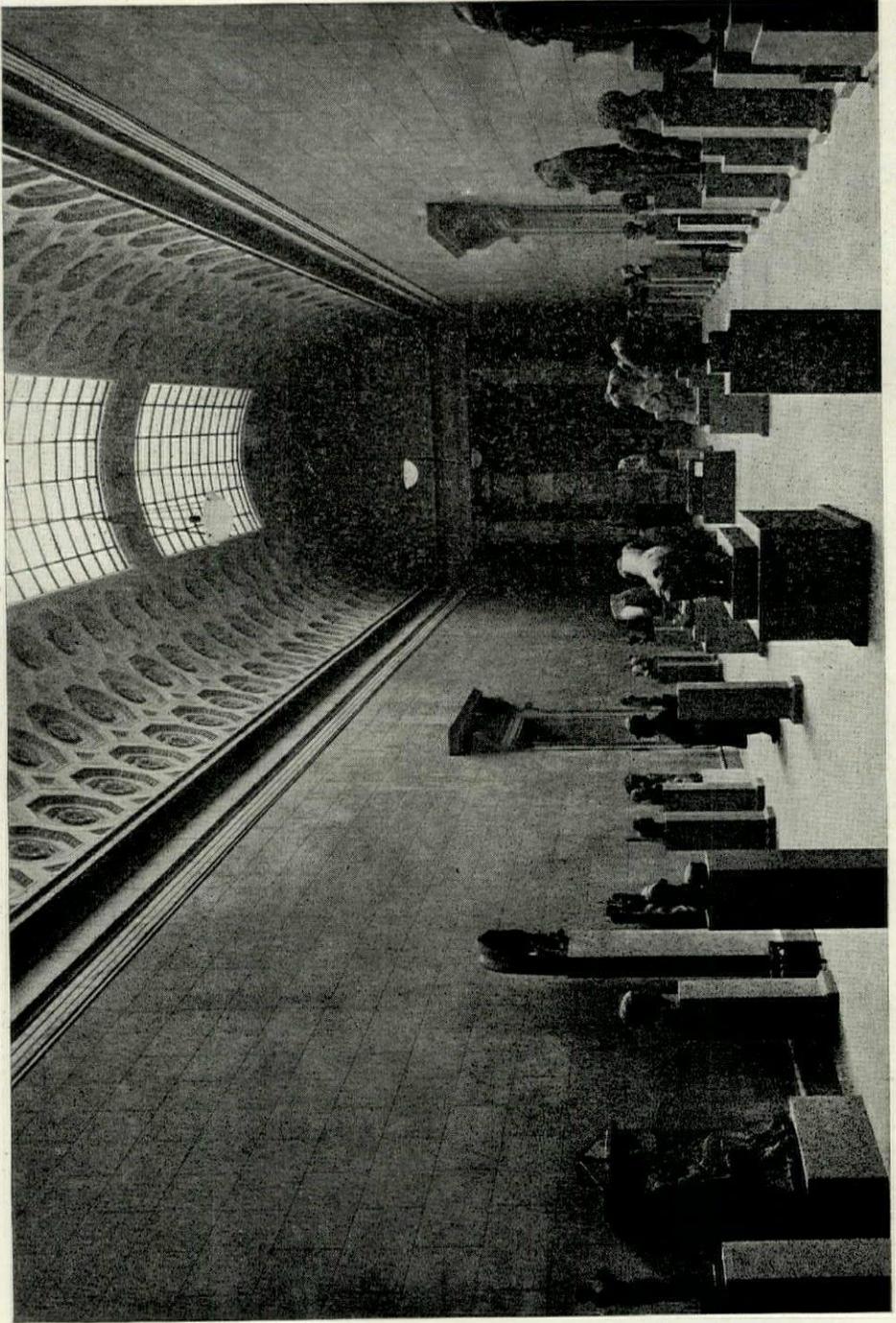
BREAKFAST ROOM—RESIDENCE OF ADOLPH LEWISOHN, ESQ., NEW YORK.
C. P. H. Gilbert, Architect.



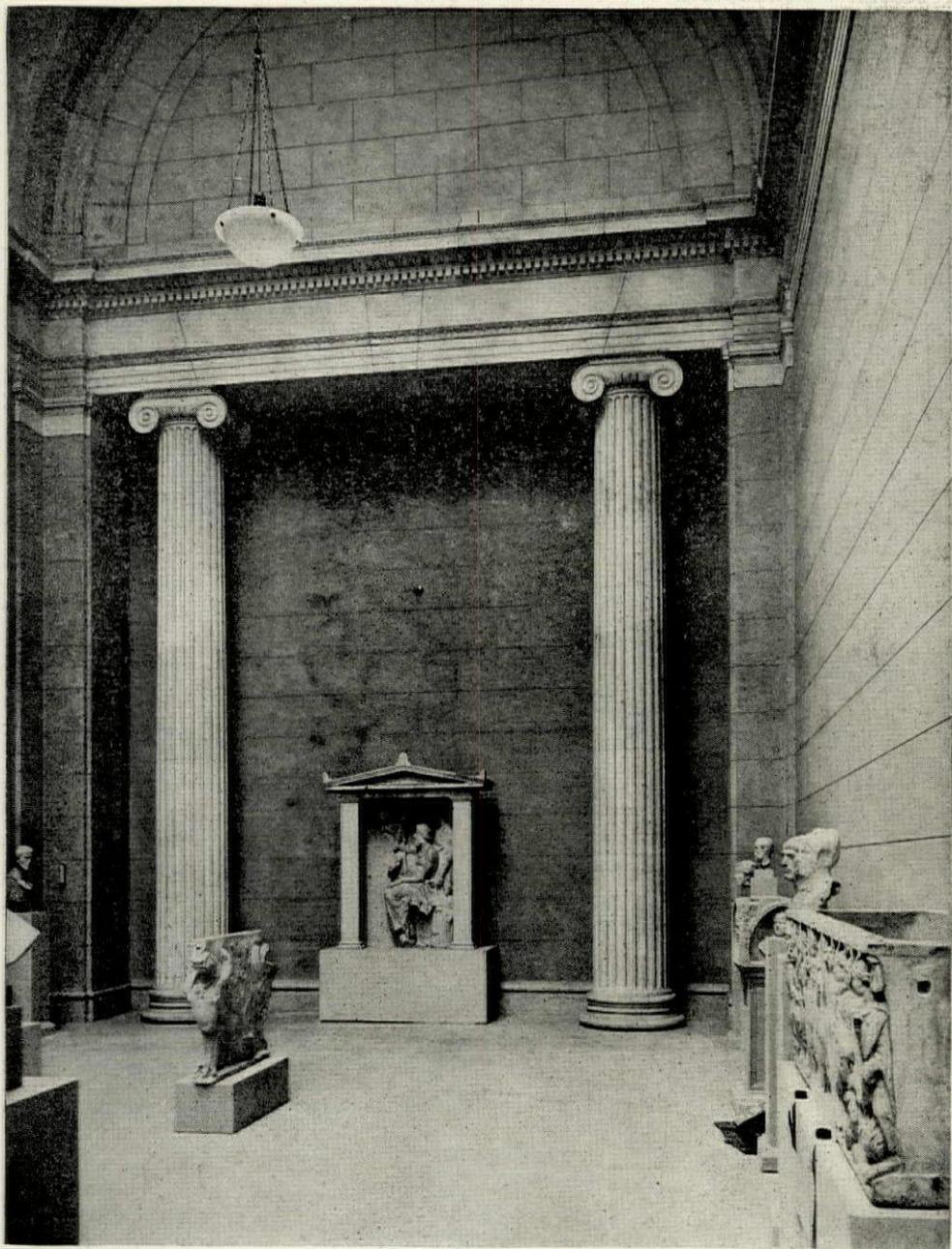
DETAIL OF BALLROOM—RESIDENCE
OF ADOLPH LEWISOHN, ESQ., NEW
YORK. C. P. H. GILBERT, ARCHITECT.



DOORWAY—HALL OF CLASSICAL SCULPTURE,
METROPOLITAN MUSEUM OF ART, NEW
YORK. MCKIM, MEAD & WHITE, ARCHITECTS.



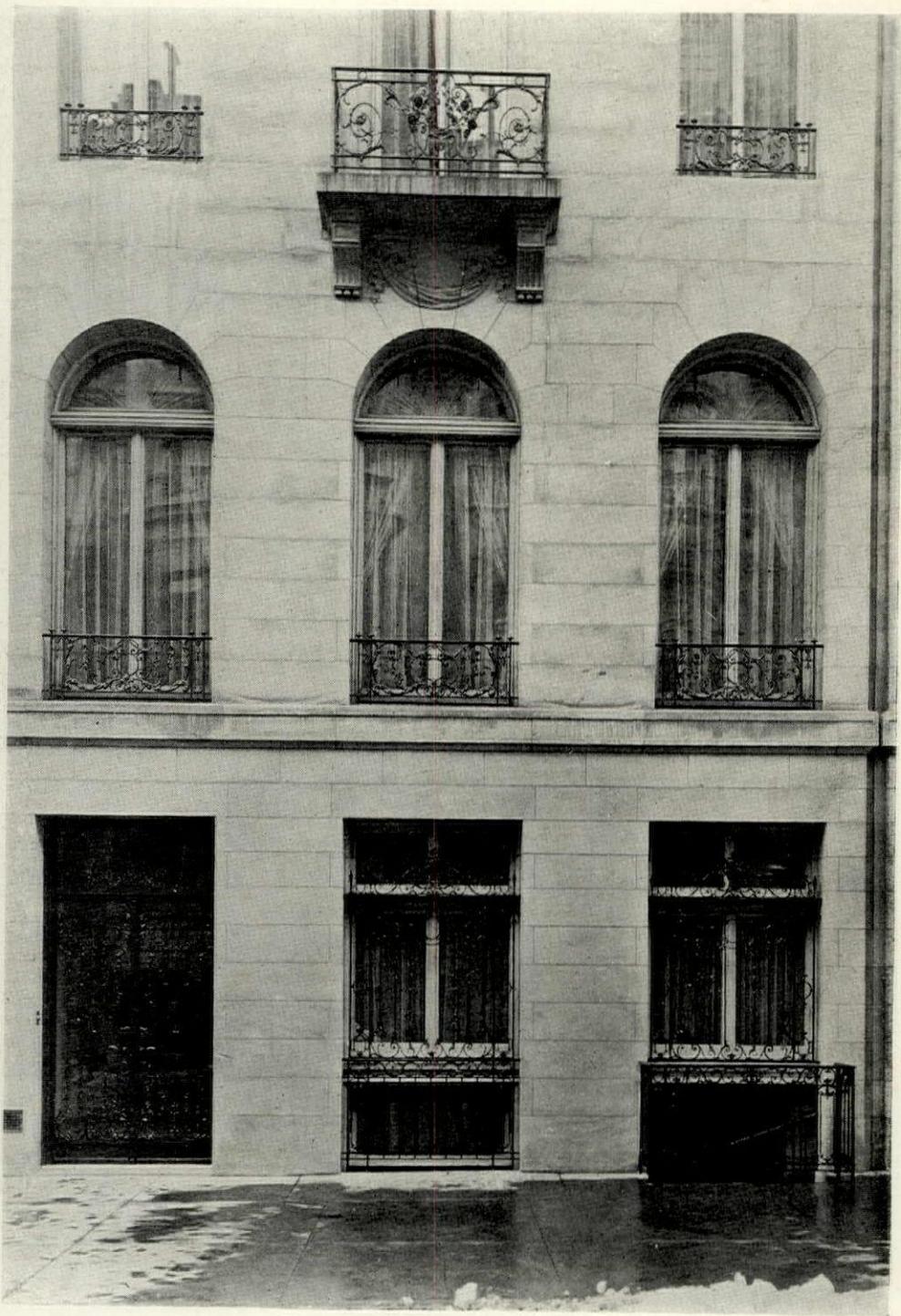
HALL OF CLASSICAL SCULPTURE, METROPOLITAN MUSEUM OF ART, NEW YORK. MCKIM, MEAD & WHITE, ARCHITECTS.



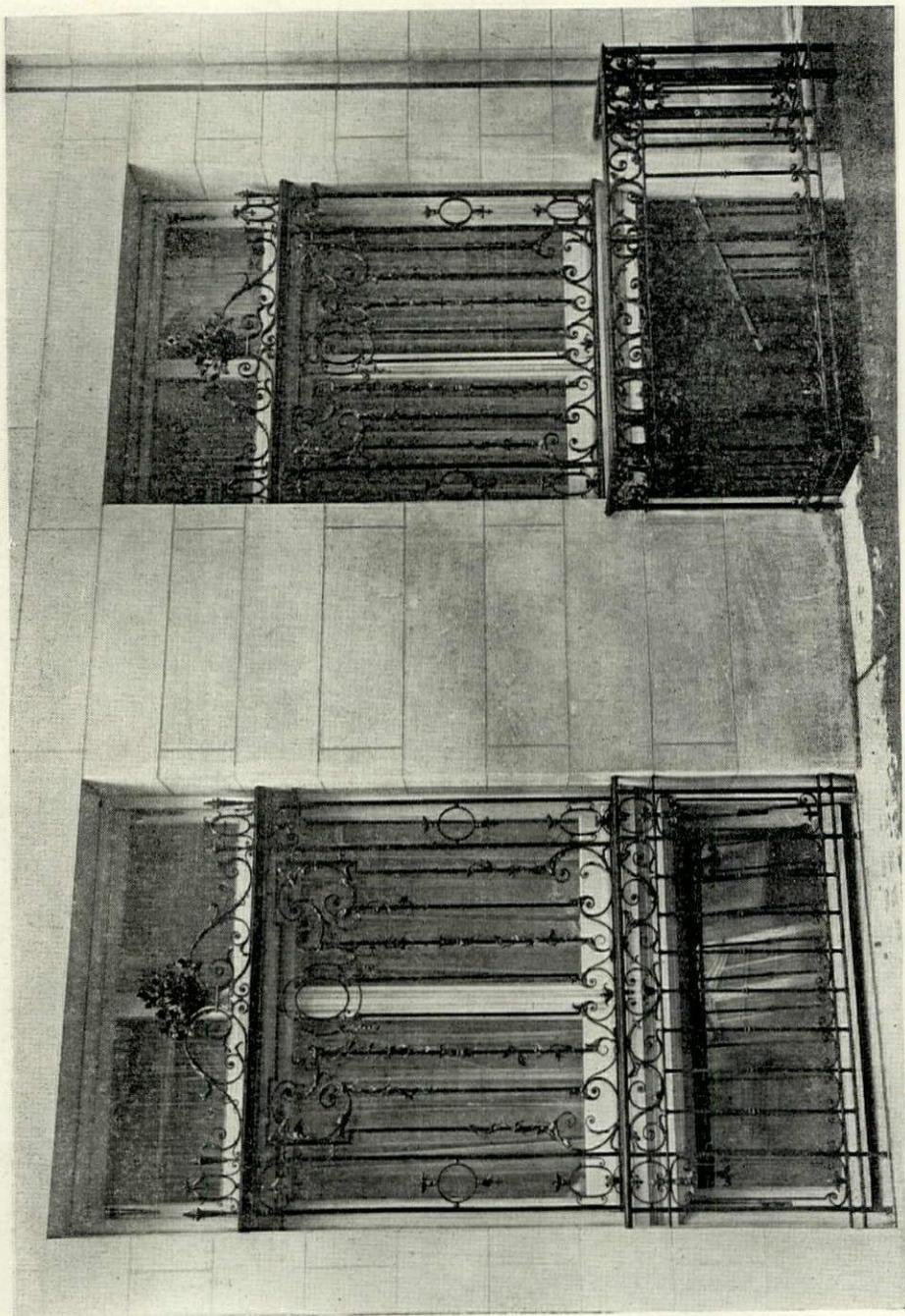
DETAIL OF END WALL—HALL OF
CLASSICAL SCULPTURE, METROPOLITAN
MUSEUM OF ART, NEW YORK.
McKIM, MEAD & WHITE, ARCHITECTS.



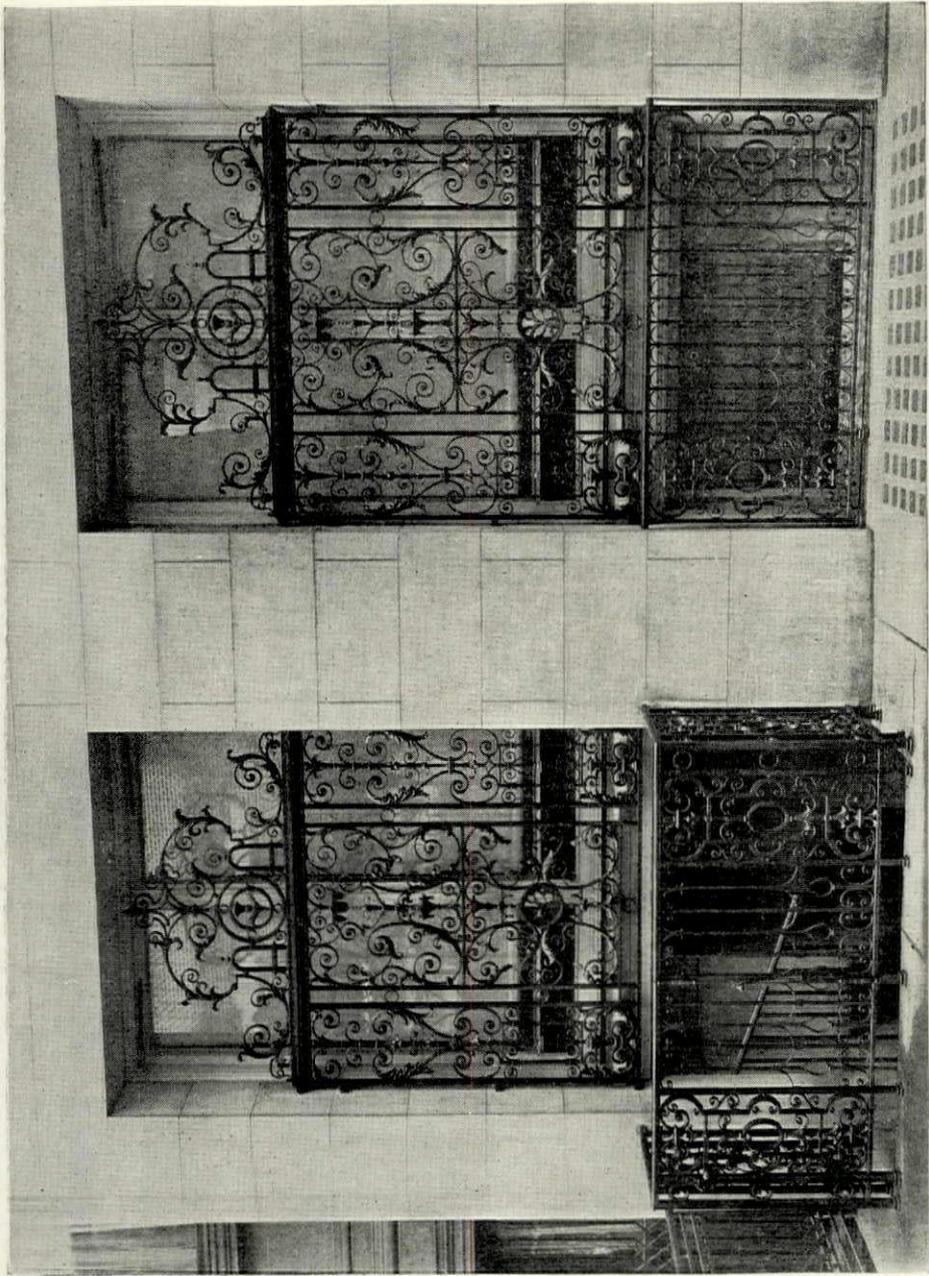
LOOKING TOWARD MAIN ENTRANCE—HALL
OF CLASSICAL SCULPTURE, METROPOLI-
TAN MUSEUM OF ART, NEW YORK.
McKIM, MEAD & WHITE, ARCHITECTS.



IRONWORK DESIGNED BY CROSS & CROSS,
ARCHITECTS, FOR THE RESIDENCE OF
CHARLES H. SABIN, ESQ., NEW YORK CITY.



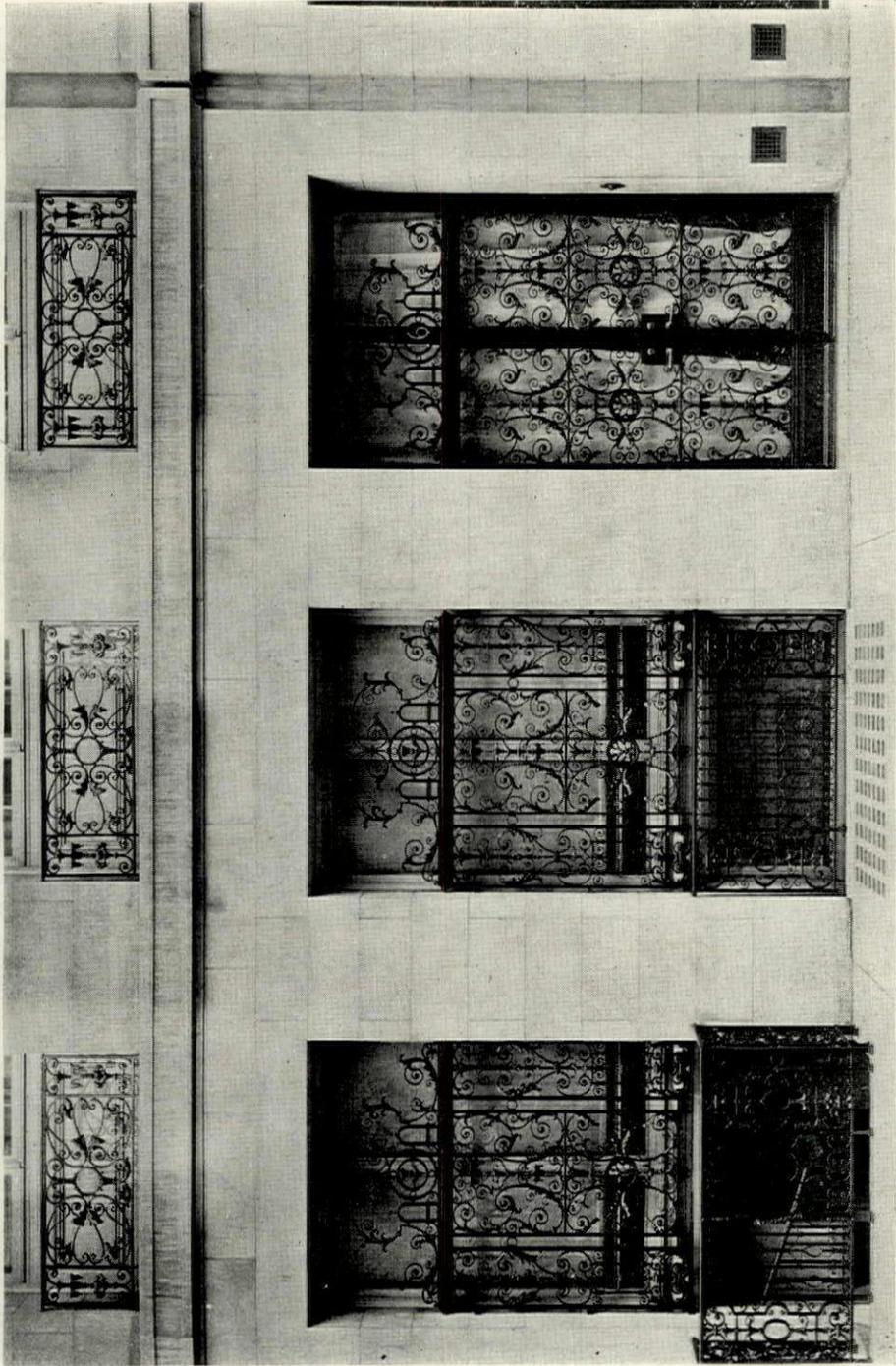
IRONWORK DESIGNED BY CROSS & CROSS, ARCHITECTS, FOR
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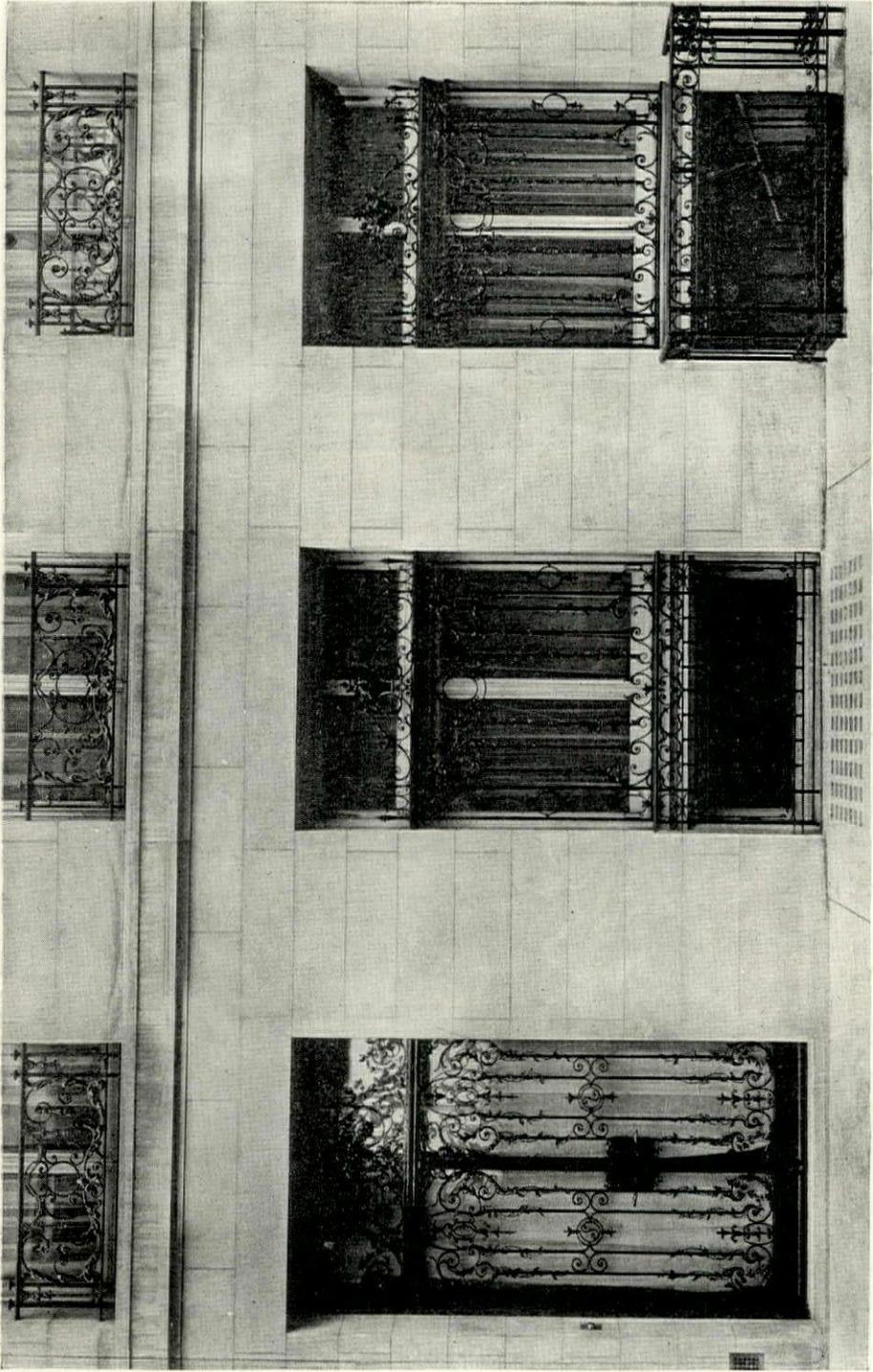
IRONWORK DESIGNED BY CROSS & CROSS, ARCHITECTS, FOR
THE RESIDENCE OF AMBROSE MONELLI, ESQ., NEW YORK CITY.



IRONWORK DESIGNED BY CROSS & CROSS,
ARCHITECTS, FOR THE RESIDENCE OF
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IRONWORK DESIGNED BY CROSS & CROSS, ARCHITECTS, FOR
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IRONWORK DESIGNED BY CROSS & CROSS, ARCHITECTS, FOR
THE RESIDENCE OF CHARLES H. SABIN, ESQ., NEW YORK CITY.



ARCHITECTURE and DEMOCRACY



*Before, During and
After the War --*

By CLAUDE BRAGDON, F.A.I.A.

I.—BEFORE THE WAR

THE world war represents not the triumph, but the birth of democracy. The true ideal of democracy—the rule of a people by its *demos*, or oversoul—is a thing unrealized. How, then, is it possible to consider or discuss an architecture of democracy—the shadow of a shade? It is not possible to do so with any degree of finality, but by an intention of consciousness upon this juxtaposition of ideas—architecture and democracy—signs of the times may yield new meanings, relations may emerge between things apparently unrelated, and the future, always existent in every present moment, may be evoked by that strange magic which resides in the human mind.

Architecture at its worst, as at its best, reflects always a true image of the thing that produced it; a building is revealing even though it is false, just as the face of a liar tells the thing his words endeavor to conceal. This being so, let us make such architecture as is ours declare to us our true estate.

The architecture of the United States, from the period of the Civil War up to the beginning of the present crisis, everywhere reflects a struggle to be free of a vicious and depraved form of feudalism,

Every form of government, every social institution, every undertaking, however great, however small, every symbol of enlightenment or degradation, each and all have sprung and are still springing from the life of the people, and have ever formed and are now as surely forming images of their thought. Slowly by centuries, generations, years, days, hours, the thought of the people has changed; so with precision have their acts responsively changed; thus thoughts and acts have flowed and are flowing ever onward, unceasingly onward, involved within the impelling power of Life. Throughout this stream of human life, and thought, and activity, men have ever felt the need to build; and from the need arose the power to build. So, as they thought, they built; for, strange as it may seem, they could build in no other way. As they built, they made, used, and left behind them records of their thinking. Then, as through the years new men came with changed thoughts, so arose new buildings in consonance with the change of thought—the building always the expression of the thinking. Whatever the character of the thinking, just so was the character of the building.—LOUIS SULLIVAN in "What is Architecture? A Study in the American People of To-day."

grown strong under the very aegis of democracy. The qualities that made feudalism endeared and enduring: qualities written in beauty on the cathedral cities of medieval Europe—faith, worship, loyalty, magnanimity—were either vanished or banished from this pseudo-democratic, aridly scientific feudalism, leaving an inheritance of strife and tyranny—a strife grown mean, a tyranny grown prudent, but full of sinister power, the weight of which we have by no means ceased to feel.

Power, strangely mingled with timidity; ingenuity, frequently misdirected; ugliness, the result of a false ideal of beauty

—these in general characterize the architecture of our immediate past; an architecture "without ancestry or hope of posterity," an architecture devoid of coherence or conviction; willing to lie, willing to steal. What impression such a city as Chicago or Pittsburgh might have made upon some denizen of those cathedral-crowned feudal cities of the past we do not know. He would certainly have been amazed at its giant energy, and probably revolted at its grimy dreariness. We are wont to pity the medieval man for the dirt he lived in, even while smoke grays our sky and dirt permeates the very air

we breathe; we think of castles as grim and cathedrals as dim, but they were beautiful and gay with color compared with the grim, dim canyons of our city streets.

Lafcadio Hearn, in *A Conservative*, has sketched for us, with a sympathy truly clairvoyant, the impression made by the cities of the West upon the consciousness of a young Japanese samurai educated under a feudalism not unlike that of the Middle Ages, wherein was worship, reverence, poetry, loyalty—however strangely compounded with the more sinister products of the feudal state.

Larger than all anticipation the West appeared to him,—a world of giants; and that which depresses even the boldest Occidental who finds himself, without means or friends, alone in a great city, must often have depressed the Oriental exile: that vague uneasiness aroused by the sense of being invisible to hurrying millions; by the ceaseless roar of traffic drowning voices; by monstrosities of architecture without a soul; by the dynamic display of wealth forcing mind and hand, as mere cheap machinery, to the uttermost limits of the possible. Perhaps he saw such cities as Doré saw London: sullen majesty of arched glooms, and granite deeps opening into granite deeps beyond range of vision, and mountains of masonry with seas of labor in turmoil at their base, and monumental spaces displaying the grimness of ordered power slow-gathering through centuries. Of beauty there was nothing to make appeal to him between those endless cliffs of stone which walled out the sunrise and the sunset, the sky and the wind.

The view of our pre-war architecture thus sketchily presented is sure to be sharply challenged in certain quarters, but, unfortunately for us all, this is no mere matter of opinion; it is a matter of fact. The buildings are there, open to observation; rooted to the spot, they cannot run away. Like criminals "caught with the goods," they stand, self-convicted, dirty with the soot of a thousand chimneys, heavy with the spoils of vanished civilizations; graft and greed stare at us out of their glazed windows—eyes behind which no soul can be discerned. There are doubtless extenuating circumstances; they want to be clean, they want to be honest, these "monsters of the mere market," but they are nevertheless the unconscious victims of evils inherent in our transitional social state.

Let us examine these strange creatures, doomed, let us hope, to extinction in favor of more intelligent and gracious forms of life. They are big, powerful, "necessitous," and have therefore an impressiveness, even an esthetic appeal not to be denied. So subtle and sensitive an old-world consciousness as that of M. Paul Bourget was set vibrating by them like a violin to the concussion of a trip-hammer, and to the following tune:

The portals of the basements, usually arched as if crushed beneath the weight of the mountains which they support, look like dens of a primitive race, continually receiving and pouring forth a stream of people. You lift your eyes, and you feel that up there behind the perpendicular wall, with its innumerable windows, is a multitude coming and going—crowding the offices that perforate these cliffs of brick and iron, dizzied with the speed of the elevators. You divine, you feel the hot breath of speculation quivering behind these windows. This it is which has fecundated these thousands of square feet of earth, in order that from them may spring up this appalling growth of business palaces, that hide the sun from you and almost shut out the light of day.

"The simple power of necessity is to a certain degree a principle of beauty," says M. Bourget, and to these structures this order of beauty cannot be denied, but even this is vitiated by a failure to press the advantage home; the ornate façades are notably less impressive than those whose grim and stark geometry is unmitigated by the grave-clothes of dead styles. Instances there are of strivings toward a beauty that is fresh and living, but they are so unsuccessful and infrequent as to be negligible. However impressive these buildings may be by reason of their ordered geometry, their weight and magnitude, and as a manifestation of irrepressible power, they have the unloveliness of things ignoble, being the product neither of praise, nor joy, nor worship, but enclosures for the transaction of sharp bargains—gold-bringing jinn of our modern Aladdins, who love them not but only use them. That is the reason they are ugly: no one has loved them for themselves alone.

For beauty is ever the very face of love. From the architecture of a true democracy, founded on love and mutual service, beauty would inevitably shine forth; its absence convicts us of a mal-

adjustment in our social and economic life. A skyscraper shouldering itself aloft at the expense of its more humble neighbors, stealing their air and their sunlight, is a symbol, written large against the sky, of the will-to-power of a man or a group of men—of that ruthless and tireless aggression on the part of the cunning and the strong so characteristic of the period which produced the skyscraper. One of our streets made up of buildings of diverse styles and shapes and sizes—like a jaw with some teeth whole, some broken, some rotten, and some gone—is a symbol of our unkept individualism, now happily becoming curbed and chastened by a common danger, a common devotion.

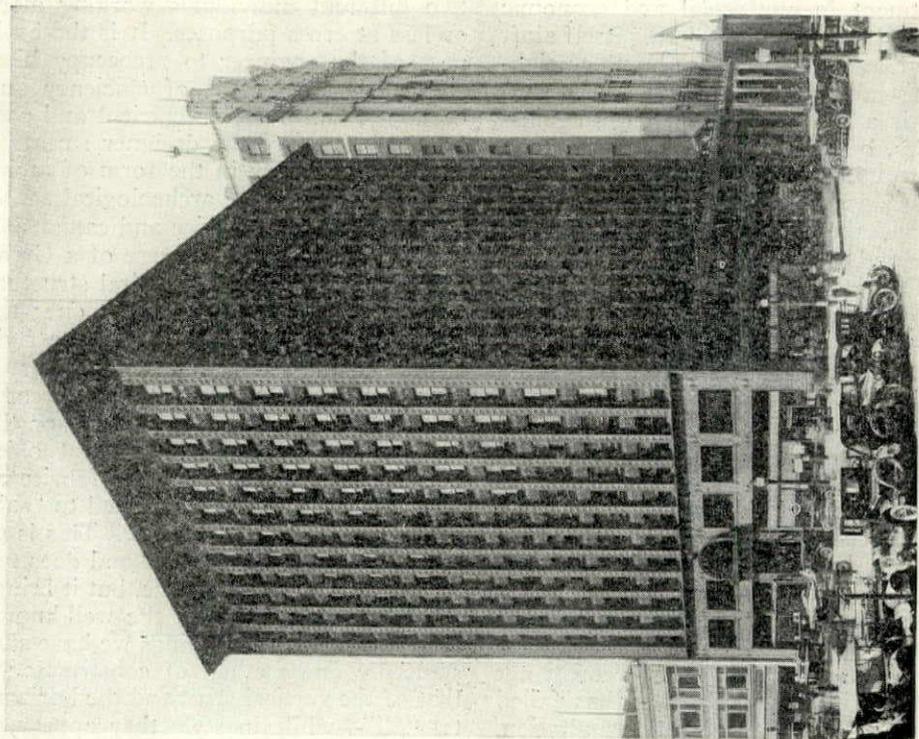
Some people hold the view that our insensitiveness to formal beauty is no disgrace. Such argue that our accomplishments and our interests are in other fields, where we more than match the accomplishments of older civilizations. They forget that every achievement not registered in terms of beauty has failed of its final and enduring transmutation. It is because the achievements of older civilizations attained to their apotheosis in art that they interest us, and unless we are able to effect a corresponding transmutation we are destined to perish unhonored on our rubbish heap. That we shall effect it, through knowledge and suffering, is certain; but before attempting the more genial and rewarding task of tracing, in our life and in our architecture, those forces and powers which make for righteousness, for beauty, let us look our failures squarely in the face, and discover, if we can, why they are failures.

Confining this examination to the particular matter under discussion, the neo-feudal architecture of our city streets, we find it to lack unity, and that the reason for this lack of unity dwells in a *divided consciousness*. The tall office building is the product of many forces, or perhaps we should say one force—that of necessity—but its concrete embodiment is the result of two different orders of talent: that of the structural engineer and of the architectural designer. These are usually incarnate in

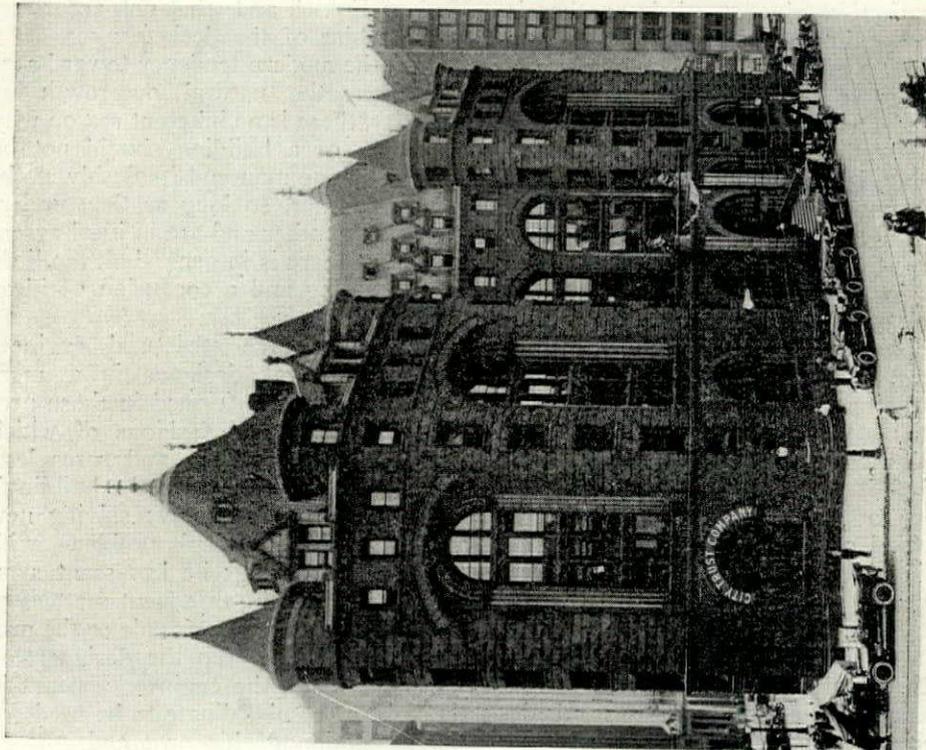
two different individuals working more or less at cross purposes. It is the business of the engineer to preoccupy himself solely with ideas of efficiency and economy, and over his efficient and economical structure the designer smears a frosting of beauty in the form of architectural style, in the archeological sense. This is a foolish practice and cannot but result in failure. In the case of a Greek temple or a medieval cathedral structure and style were not twain, but one; the structure determined the style, the style expressed the structure; but with us so divorced have the two things become that in a case known to the author the structural framework of a great office building was determined and fabricated and then architects were invited to "submit designs" for the exterior. This is of course an extreme example and does not represent the usual practice, but it brings sharply to consciousness the well-known fact that for these buildings we have substantially one method of construction—that of the vertical strut and the horizontal "fill"—while in style they appear as Grecian, Roman, Renaissance, Gothic, Modern French and what not, according to the whim of the designer.

With the modern tendency toward specialization, the natural outgrowth of necessity, there is no inherent reason why the bones of a building should not be devised by one man and its fleshly clothing by another, so long as they understand one another and are in ideal agreement; but there is in general all too little understanding and a confusion of ideas and aims.

To the average structural engineer the architectural designer is a mere milliner in stone, informed in those prevailing architectural fashions of which he himself knows little and cares less. Preoccupied as he is with the building's strength, safety, economy; solving new and staggeringly difficult problems with address and daring; he has scant sympathy with such inconsequent matters as the stylistic purity of a façade or the profile of a molding. To the designer, on the other hand, the engineer appears in the light of a subordinate to be used for the promotion of his own ends, or an



PRUDENTIAL BUILDING, BUFFALO, N. Y.



ERIE COUNTY BANK BUILDING, BUFFALO, N. Y.



DETAIL OF PRUDENTIAL BUILDING, BUFFALO, N. Y.



GENERAL VIEW OF THE DOWNTOWN SECTION OF NEW YORK SHOWING THE WEEDLIKE GROWTH OF THE CITY.

evil to be endured as an interference with those ends.

As a result of this lack of sympathy and coordination, success crowns only those efforts in which, on the one hand, the stylist has been completely subordinated to engineering necessity, as in the case of the East River bridges, where the architect was called upon only to add a final grace to the strictly structural towers; or, on the other hand, in which the structure is of the old-fashioned masonry sort and faced with a familiar problem the architect has found it easy to be frank, as in the case of the Manhattan Storage Warehouse on Forty-second street, New York, or in the Bryant Park façade on the New York Library. The Woolworth Building is a notable example of the complete coordination between the structural framework and its envelope and falls short of ideal success only in the employment of an archaic and alien ornamental language, used however, let it be said, with a fine understanding of the function of ornament.

For the most part, though, there is a difference of intention between the engineer and the designer; they look two ways, and the result of their collaboration is a flat and confused image of the thing that should be, not such as is produced by truly binocular vision. This difference of aim is largely the result of a difference of education. Engineering science of the sort which the use of steel has required is a thing unprecedented; the engineer cannot hark back to the past for help even if he would. The case is different with the architectural designer; he is taught that all of the best songs have been sung, all of the true words spoken. The Glory that was Greece, and the Grandeur that was Rome, the romantic exuberance of Gothic, and the ordered restraint of Renaissance are so drummed into him during his years of training and exercise so tyrannical a spell over his imagination that he loses the power of clear and logical thought and never becomes truly creative. Free of this incubus, the engineer has succeeded in being straightforward and sensible, to say the least; subject to it the man with a so-

called architectural education is too often tortuous and absurd.

The architect without any training in the essentials of design produces horrors as a matter of course, on the principle that sin is the result of ignorance; the architect trained in the false manner of the current schools becomes a reconstructive archeologist, handicapped with conditions with which he can deal only imperfectly and imperfectly control. Once in a blue moon a man arises who, with all the advantages inherent in education, pierces through the past to the present, and is able to use his brain as the architects of the past used theirs—to deal simply and directly with his immediate problem.

Such a man is Louis Sullivan, though it must be admitted that not always has he achieved success. That success was so marked, however, in his treatment of the problem of the tall building, and exercised subconsciously such a spell upon the minds even of his critics and detractors, that it resulted in the emancipation of this type of building from an absurd and impossible convention—the practice, common before his time—of piling order upon order, like a house of cards, or by a succession of strongly-marked string-courses emphasizing the horizontal dimension of a vertical edifice, thus vitiating the finest effect of which such a building is capable.

The problem of the tall building, with which his precursors dealt always with trepidation and equivocation, Mr. Sullivan approached with confidence and joy. "What," he asked himself, "is the chief characteristic of the tall office building? It is lofty. This loftiness is to the artist nature its thrilling aspect. It must be tall. The force of altitude must be in it. It must be every inch a proud and soaring thing, rising in sheer exultation that from bottom to top it is a unit without a dissenting line." The Prudential (Guaranty) building in Buffalo represents the finest concrete embodiment of his idea achieved by Mr. Sullivan. It marks his emancipation from what he calls his "masonry" period, during which he tried, like so many other architects before and since, to make a steel-frame structure

look as though it were nothing but a masonry wall perforated with openings—openings too many and too great not to endanger its stability. The keen blade of Mr. Sullivan's mind cut through this contradiction, and in the Prudential Building he carried out the idea of a *protective casing* so successfully that Montgomery Schuyler said of it, "I know of no steel framed building in which the metallic construction is more palpably felt through the envelope of baked clay."

The present author can speak with all humbleness of the general failure on the part of the architectural profession to appreciate the importance of this achievement, for he pleads guilty of day after day having passed the Prudential Building, then fresh in the majesty of its soaring lines, and in the wonder of its fire-wrought casing, with eyes and admiration only for the false romanticism of the Erie County Savings Bank, and the empty bombast of the gigantic Ellicott Square. He had not at that period of his life succeeded in living down his architectural training, and as a result the most ignorant layman was in a better position to appraise the relative merits of these three so different incarnations of the building impulse than was he.

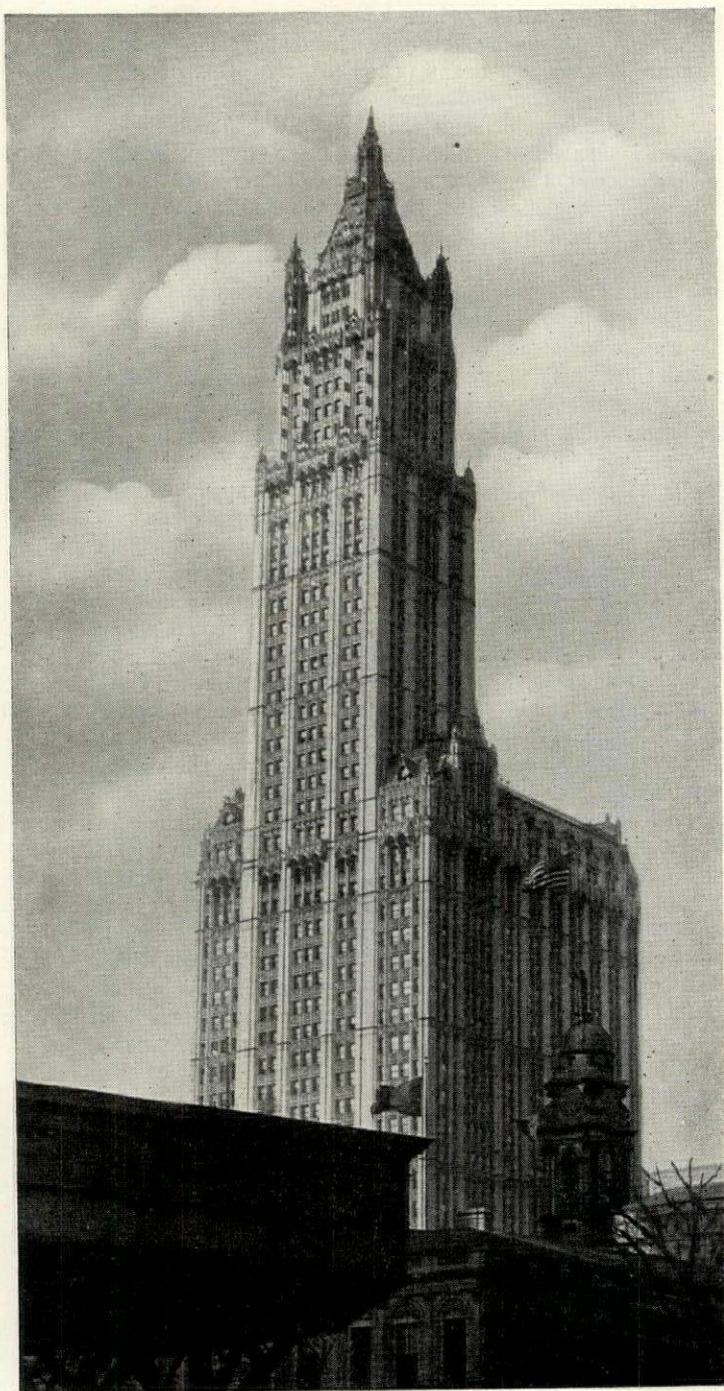
Since the Prudential Building there have been other tall office buildings by other hands, truthful in the main, less rigid, less monotonous, more superficially pleasing, yet they somehow fail to impart the feeling of utter sincerity and fresh originality inspired by this building. One feels that here democracy has at last found utterance in beauty; the American spirit speaks; the spirit of the Long Denied. This rude, rectangular bulk is uncompromisingly practical and utilitarian; these rows on rows of windows, regularly spaced and all of the same size, suggest the equality and monotony of obscure, laborious lives; the upspringing shafts of the vertical piers stand for their hopes and aspirations, and the unobtrusive, delicate ornament which covers the whole with a garment of fresh beauty is like the very texture of their dreams. The building is able to speak thus powerfully to the imagination because its creator is a poet and prophet of

democracy. In his own chosen language he declares, as Whitman did in verse, his faith in the people of "these states"—"A Nation announcing itself." Others will doubtless follow who will make a richer music, commensurate with the future's richer life, but such democracy as is ours stands here proclaimed, just as such feudalism as is still ours stands proclaimed in the Erie County Bank just across the way. The massive rough stone walls of this building, its pointed towers and many dormered chateau-like roof unconsciously symbolize the attempt to impose upon the living present a moribund and alien order. Democracy is thus afflicted, and the fact must needs find its appropriate architectural expression.

In the field of domestic architecture these dramatic contrasts are less evident, less sharply marked. Domestic life varies little from age to age; a cottage is a cottage the world over, and some manorial mansion on the James river, built in Colonial days, remains a fitting habitation for one of our Captains of Industry (assuming the addition of electric lights and sanitary plumbing) however little an ancient tobacco warehouse would serve him as a place of business. This fact is so well recognized that the finest type of modern country house follows, in general, this or some other equally admirable model, though it is amusing to note the millionaire's preference for a feudal castle, a French chateau or an Italian villa of the decadence.

The "man of moderate means," so called, provides himself with no difficulty with a comfortable home, undistinguished but unpretentious, which fits him like a glove. There is a piazza towards the street, a bay-window in the living room, a sleeping porch for the children, and a box of a garage for the flivver in the bit of a back yard.

For the wage earner the housing problem is not so easily nor so successfully solved. He is usually between the devil of the speculative builder and the deep sea of the predatory landlord, each intent upon taking from him the limit that the law allows and giving him as little as possible for his money. Going down



WOOLWORTH BUILDING FROM
MUNICIPAL BUILDING ARCH.

the scale of indigence we find an itineracy amounting almost to homelessness, or homes so abject that they are an insult to the very name of home.

It is an eloquent commentary upon our national attitude toward a most vital matter that in this feverish hustle to produce ships, aeroplanes, clothing, and munitions on a vast scale, the housing of the workers was either overlooked entirely or received eleventh-hour consideration, and only now, after a year of war, is it beginning to be adequately and officially dealt with—efficiently and intelligently remains to be seen. The housing of the soldiers was another matter; that necessity was plain and urgent, and the miracle has been accomplished, but except by indirection it has contributed nothing to the permanent housing problem.

Other aspects of our life which have found architectural expression fall neither in the commercial nor in the domestic category—the great hotels, for example, which partake of the nature of both, and our passenger railway terminals, which partake of the nature of neither. These latter deserve especial consideration in this connection by reason of their important function. The railway is of the very essence of the modern, even though (with what sublime unreason) Imperial Rome is written large over New York's most magnificent portal.

Think not that in an age of unfaith mankind gives up the building of temples. Temples inevitably arise where the tide of life flows strongest; for there God manifests, in however strange a guise. That tide is nowhere stronger than in the railroad, which is the arterial system of our civilization. All arteries lead to and from the heart, and thus the railroad terminus becomes the beating heart at the centre of modern life. It is a true instinct, therefore, which prompts to the making of the terminal building a very temple, a monument to the conquest of space through the harnessing of the giant horses of electricity and steam. This conquest must be celebrated on a scale commensurate with its importance, and in obedience to this necessity the Pennsylvania station raised its proud head amid

the push-cart architecture of that portion of New York in which it stands. It is not, therefore, open to the criticism often passed upon it, that it is too grand, but it is the wrong kind of grandeur. If there is truth in the contention that the living needs of today cannot be grafted on to the dead stump of any ancient grandeur, the futility of every attempt to accomplish this impossible will somehow, somewhere, reveal itself to the discerning eye. Let us seek out, in this building, the place of this betrayal.

It is not necessarily in the main façade, though this is not a face, but a mask, and a mask can, after its kind, always be made beautiful; it is not in the nobly vaulted corridor, lined with shops, for all we know the arcades of Imperial Rome were similarly lined; nor is it in the splendid vestibule, leading into the magnificent waiting room, in which a subject of the Caesars would have felt more perfectly at home, perhaps, than do we. But beyond this passenger concourse, where the elevators and stairways descend to the tracks, necessity demanded the construction of a great enclosure, supported only on slender columns and far-flung trusses roofed with glass. Now latticed columns, steel trusses and wire glass are inventions of the modern world too useful to be dispensed with. Rome could not help the architect here. The mode to which he was inexorably self-committed in the rest of the building demanded massive masonry, cornices, moldings; a tribute to Caesar which could be paid everywhere but in this place. The architect's problem then became to reconcile two diametrically different systems. But between the west wall of the ancient Roman baths and the modern skeleton construction of the roof of the human greenhouse there is no attempt at fusion. The slender latticed columns cut unpleasantly through the granite cornices and moldings; the first century A. D. and the twentieth are here in incongruous juxtaposition—a little thing, easily overlooked, yet how revealing! How reassuring of the fact "God is not mocked!"

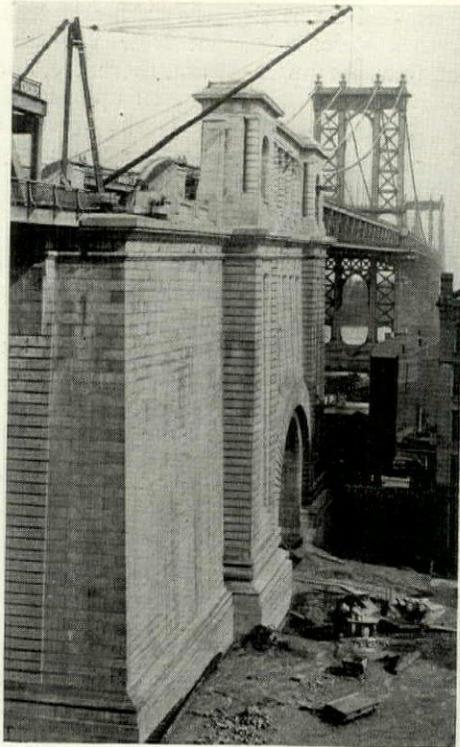
The New York Central terminal speaks to the eye in a modern tongue, with, however, French an accent. Its façade suggests a portal, reminding the beholder

that a railway station is in a very literal sense a city gate placed just as appropriately in the centre of the municipality as in ancient times it was placed in the circuit of the outer walls.

Neither edifice will stand the acid test of Mr. Sullivan's formula, that a building is an organism and should follow the law of organisms, which decrees that the form must everywhere follow and express the function, the function determining and creating its appropriate form. Here are two eminent examples of "arranged" architecture.

Before organic architecture can come into being our inchoate national life must itself become organic. Arranged architecture, of the sort we see everywhere, despite its falsity is a true expression of the conditions which gave it birth.

The grandeur of Rome, the splendor of Paris—what just and adequate expression do they give of modern American life? Then shall we find in our great hotels, say, such expression? Truly they represent, in the phrase of Henry James, "a realized ideal" and a study of them should reveal that ideal. From such a study we can only conclude that it is life without effort or responsibility, with every physical need luxuriously gratified. But these hotels nevertheless represent democracy, it may be urged, for the reason that everyone may there buy board and lodging and mercenary service if he has the price. The exceeding greatness



WILLIAMSBURGH BRIDGE, EAST RIVER, NEW YORK.

of that price, however, makes of it a badge of nobility which converts these democratic hostleries into feudal castles, more inaccessible to the Long Denied than as though entered by a drawbridge and surrounded by a moat.

We need not even glance at the churches, for the tides of our spiritual life flow no longer in full volume through their portals; neither may the colleges long detain us, for, architecturally considered, they give forth a confusion of tongues which has its analogue in the confusion of ideas in the collective academic head.

Is our search for some sign of democracy ended, and is it vain? No; democracy exists in the secret heart of the people—all the people—but it is a thing so new, so strange, so secret and sacred—the ideal of brotherhood—that it is unuttered yet in time and space. It is a thing born not with the Declaration of Independence, but only yesterday, with the call to a new Crusade. The National Army is its cradle, and it is nurtured wherever communities unite to serve the sacred cause.

Although menaced by the bloody sword of Imperialism in Europe, it perhaps stands in no less danger from the secret poison of graft and greed and treachery here at home. But it is a spiritual birth, and therefore it cannot perish, but will live to write itself on space in terms of beauty such as the world has never known.

THE ARCHITECT'S LIBRARY



BOOKS ON COLONIAL ARCHITECTURE

By RICHARD F. BACH

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A SERIES of group or classified reviews and bibliographies of the literature of Colonial architecture printed within recent months in *The Architectural Record* has called forth sufficient interest to warrant the preparation of the present paper, which will bring the subject to date as of the close of the year 1917. That year saw the addition of but seven noteworthy works to the Colonial list. Had it been a year of peace instead a year of world-consuming conflagration, we should probably be able to count up about twice this number of titles. Of the seven volumes not one is composed of measured drawings. The nearest approach to this type of plates is seen in the highly praiseworthy new edition of excerpts from hoary Asher Benjamin's fine books, edited by Aymar Embury II, who selected plates and text and produced them under the title: *Asher Benjamin*,* a reprint of "The Country Builder's Assistant," "The Rudiments of Architecture," "The American Builder's Companion," "The

Practical House Carpenter," and "Practice of Architecture" (Quarto, pp. x+169, plates numbered according to originals but following regular pagination in reprint. New York; The Architectural Book Publishing Co.; 1917. \$12.50). This is an authoritative piece of work and an excellent reproduction of one of the chief sources from which Colonial carpenters so readily and so successfully drew their inspiration. Of all the compilations of plates, called "Companion," "Treasury," "Guide," "Assistant," "Jewel," and what not in the way of inane titles, the well studied collections of drawings by Asher Benjamin became the most acceptable and, it seems to us, the most reliable.

Of the other six volumes of the year, two are devoted to Philadelphia, one to Virginia, one to Charleston, South Carolina, and one to Colonial silverware.

A thoroughly readable book, admirable as to text and illustrations and of excellent typography, is Horace Mather Lippincott's *Early Philadelphia, Its People, Life and Progress*. (Octavo; pp. 340,

*See also detailed notice in *The Architectural Record* for August, 1917, page 181.

with 120 ills. Philadelphia; The J. B. Lippincott Company; 1917. \$6.) No better versed authority could have been chosen to indite the account of William Penn's "Holy Experiment" (though there is little enough of its holiness in evidence now). The volume fittingly begins with an account of the city's founder; the historical background of growth is then followed through under chapter headings such as "the early settlers and their city" or "churches and their people," while more definite description appears under specific headings such as "the market place" or "squares and parks" or "the old taverns." Various organizations like the Library Company, The Athenaeum, The Franklin Printing Company, The Carpenters' Company, and the like are granted individual chapters, in each case with ample illustrative material from the buildings which they occupied. An excellent total effect is obtained from these careful studies, an effect in which the life and people are shown faithfully in relation to their architectural environment. The buildings do not, to be sure, receive specific attention as monuments of architecture—assuredly not all deserve such record; but a picture of the old city as an aggregate of its buildings is brought before us and thus the architectural congeries of good, bad and indifferent is impressed upon us. The author does not, fortunately, fall into the error of bootless adulation of the past that so many writers favor and which has been the marring feature of many a book of this character. For the architect a descriptive book like Mr. Lippincott's is an essential, for he can glean from its pages a wealth of interpretation and feeling and lively reality, qualities almost invariably ignored, and necessarily so, in works maintaining a strictly architectural viewpoint. To link up the buildings with their historical background and to give characters and organizations mentioned a local habitation and a name, the present volume is profusely illustrated with clear reproductions, some from photographs of structures in their present state and some from old prints.

Much the same may be said of the

author's method in *Old Roads Out of Philadelphia*, by John T. Faris (Octavo; pp. 19-327, with 117 ills., and a map. Philadelphia; The J. B. Lippincott Co.; 1917. \$4), a book with a local name but with an interest covering a circle with a radius of almost fifty miles from its centre in Philadelphia. Some one has compared the old roads out of Philadelphia to the ribs of a lady's fan; if an open fan is laid on the map of Philadelphia and its surrounding country, the end ribs may be made to conform with the Delaware and Schuylkill, while the remaining ribs will correspond after a fashion to the ten great old roads, several of which date from the later years of the seventeenth century. Along every one of these roads a deal of American history has been built—here an old tavern with traditions of distinguished guests or dark plottings; there an ancient mansion built possibly during the period that Penn visited his Province. The roads treated are the King's Highway to Wilmington, the Baltimore Turnpike, the West Chester Turnpike, the Lancaster Turnpike, the Gulph Road, the old Germantown Road to Bethlehem, the Ridge Road, the Old York Road, and the road to Bristol and Trenton. The author writes in a delightful fashion from an abundant private store of knowledge; he loves the roads whether traversing them afoot, on horseback, in motor or trolley. We rather suspect he likes to walk, as walking gives the complete satisfaction of a perfect hunt into the past.

This volume is also favored with profuse illustrations. Its character is such as to appeal not only to interest, but also to curiosity, based upon a natural desire to see what there is just a little further along each road. In addition, whether it falls into the hands of a careless believer in the present or into the hands of an unbeliever—in terms of our Colonial heritage—the book will serve a missionary purpose. We recommend it above all to architects in search of an outlet for their *wanderlust* on this side of the water and, other things being equal, we hope they will be prompted to make most of their journeyings on these roads out of Philadelphia on foot.

II.

Two other books falling distinctly within the Colonial time, providing excellent collateral reading, but laying no emphasis whatever upon the architectural aspect of their respective territories, are: *Colonial Virginia, Its People and Customs* (Octavo; pp. xvi + 376, with 93 ills. Philadelphia; The J. B. Lippincott Company; 1917. \$6), by Mary Newton Stanard, and *Memories of Old Salem* (Octavo; pp. 341, illus. New York; Moffat, Yard and Company; 1917. \$3.50), by Mary Harrod Northend. Both are valuable works for the architect, for the reason that they provide him with a parallel avenue of reading, not narrowly professional, yet amply illustrated with buildings, the majority of which he knows, and replete with references to the character and use of such structures. Much of the misunderstanding of Colonial architecture that produced the aberrations, which—gratefully we record it—are at last counted safely among the things of the past, was due to a narrow regard for forms alone, devoid of environment and circumstances, dead and without the enlivening influence of the Colonial life that made them realities. We cannot too often emphasize this need in the architect's reading, the need for collateral interest, as setting off the strictly professional interest and giving it a substance culled from the one time environment of the forms he uses for his inspiration. A cold use of Gothic detail, with no understanding of the life of the Middle Ages, must remain as unfeeling as an icicle; no more can a use of Colonial forms today be successful if the designer has not learned some interpretative appreciation by looking behind those forms for the facts of life of which they were the mere externals.

Colonial Virginia is not concerned with public events, but, as its subtitle suggests, with the private and daily lives of people, and the procession of men, women and children of every walk of life; these trod through its pages and fill it with movement and color. The great mass of facts on which the book is based are not to be found in any connected history; they have been gathered from Colonial

diaries, newspapers, letters—both social and business—wills, inventories, shop-bills, and other documents throwing light on private and personal life. Nor has tradition contributed to its pages—every statement made is a matter of record.

An introductory chapter picturing the first settlers struggling for existence at Jamestown is followed by a brief discussion of the character and classes of those haughtily termed the "Later Emigrants." Next, the reader is taken into homes—from log cabin to mansion—and shown their furniture, decoration, table-service and even their kitchen utensils. He sees the Colonists eating, drinking and merrymaking; observes their clothes and jewels and their manners in the family and toward guests. Later, he sees them traveling about the country on horseback or in coach-and-four, and with them he goes to church and to the first theatre not only in Virginia, but in America. The sentimental age is not neglected. Here is Jefferson sighing in vain for his "Belinda," and Washington for a succession of charmers; while less distinguished Virginians are caught in the act of equally picturesque love making, and the Governor and Council solemnly enact a law against flirting. The great number of books and book-owners, the taste for music and pictures in the Colony, and at that early day, will surprise many readers. The closing chapter is given to the quaint funeral customs and epitaphs of the Colonist. *Colonial Virginia* is profusely illustrated with interior and exterior views of homes, furniture, silver, book-plates and other characteristic objects.

In *Memories of Old Salem* Miss Northend ably maintains the standard of quality set by her earlier books, already reviewed in these columns; her present book, however, is not written with so close an eye to architectural treatment. In fact, its subtitle, "drawn from the letters of a great-grandmother," would seem to preclude such a point of view. The illustrations, however, are excellent for our purpose as students of Colonial art, being well selected and carefully made. The book provides an enticing history of a city that was at one time the greatest

commercial centre in the United States—namely, at the time when Samuel McIntire wrought in wood as the foremost of our early craftsmen.

III.

Charleston is fortunate in having such interpreters as the writers and illustrators of *The Dwelling Houses of Charleston, South Carolina*, by Alice R. Huger Smith and D. E. Huger Smith, illustrated from drawings by Alice R. Huger Smith, photographs and architectural drawings by Albert Simons (Octavo; pp. 387, with 128 illus. Philadelphia; the J. B. Lippincott Co.; 1917). There is a distinct feeling in some quarters that Charleston is the aristocrat of American cities. This feeling is deepened in examining the illustrations of the fine old houses and their stately interiors as presented in this volume by both camera and pencil. Though the illustrations are numerous and large there has been plenty of space for a text written in an engaging manner, describing the buildings, the people and the life of today and yesterday. There is material for the genealogist, for the artist and for the historian; and there is in addition plentiful material for the architect, for there are plans and sections and details, profile sections of moldings and woodwork, not to mention a quantity of excellent photographs.

All things considered, we are inclined to consider this volume on *The Dwelling Houses of Charleston* one of the best books that we have seen thus far in the Colonial field, chiefly for the reason that it brings together in such effective combination an excellent text, photographs and measured drawings and characteristic sketches, and in such manner as to provide an appeal both for the layman and for the architectural practitioner. But few books have yet been issued which make the effort to maintain this double appeal, and to the credit of authors and publishers be it written that the former desired and the latter saw fit to sanction the publication of such a volume with this double purpose in view. It is our hope that many more volumes in the Colonial field will be granted a similar treat-

ment. Painstaking illustration matter has never yet ruined a book and plans and measured drawings will cease to be inscrutable to the layman in the same degree in which their constant appearance in his books renders them increasingly familiar to his eye.

IV.

But one volume treating of the minor arts of the Colonies saw the light during 1917; this was Francis Hill Bigelow's *Historic Silver of the Colonies and Its Makers* (Octavo; pp. 26; and 476, ills. New York; The Macmillan Company; 1917. \$6). An exhaustive and profusely illustrated work whose value is self evident. In no less than forty-eight different classes the manifold objects of Colonial craftsmanship in silver are treated and with a thoroughness excelled only by E. Alfred Jones in *The Old Silver of American Churches*, reviewed in these pages some months ago, which has, as its title plainly shows, a much smaller territory to cover. Mr. Bigelow was associated with Mr. Jones in the preparation of the quarto on American church silver, a volume inaccessible for the average purse, and wisely planned to bring out a lower priced book for the humble consumption of aspiring lovers of old time American art in a field thus far inadequately edited. In his undertaking Mr. Bigelow has in most painstaking fashion sought to fill a need in the literature of Colonial art; Colonial silver as a general subject has long demanded just such a work as this to give it its appropriate exposition and interpretation. The book will be accepted promptly as a standard work of reference; in general get-up it has surely excelled Mr. J. H. Buck's excellent book on *Old Plate*, noticed in this place some time ago. There is provided a good bibliography of some twenty-five titles; there are 325 illustrations; and there is a detailed general index as well as a separate index to silversmiths. We would welcome similarly authoritative publications covering other branches of the minor arts of our formative time; Mr. Bigelow's book has set a high standard for such future publications.

V.

In connection with some of our earlier papers in this series we neglected to include the following items which are worthy of brief individual notice.

Specific mention should be made, for instance, of two pamphlets by David King on the Redwood Library at Newport, Rhode Island (for titles see bibliography in next month's *Architectural Record*). These brochures give the only separately published text matter in regard to this building; they were issued in 1860 and 1876.

We should also note a pamphlet on the Preservation and Restoration of City Hall, Hartford, Conn. (Octavo brochure; pp. 16, ill.), published as bulletin No. 6 of the publications of the Municipal Art Society of that city and illustrated with careful line drawings.

Unfortunately we were not apprised in due time of the existence of an excellent volume on Colonial furniture, edited by William Rotch Ware, who also edited that master work in the Colonial field, *The Georgian Period*. This special volume is entitled: *Seats of the Colonists and Other Furnishings*, illustrated largely with measured drawings by H. C. Dunham. (Folio; pp. 24+28 pl. New York; American Architect Company; 1904. \$5). It consists first of three text sections; a short glossary of terms used in furniture and furnishings by William B. Bigelow; a historical introduction by Horace C. Dunham, and an article on Chippendale by R. Davis Benn. These articles are all illustrated and are followed by twenty-eight plates, of which about half show two chairs, each in half-tone, while the remainder show measured drawings of still other examples. The plates of measured drawings are treated in excellent fashion—in one corner appears a line perspective; in another a half elevation, with horizontal sections through upright members; a third quarter of the plate shows a vertical section through a front to back median line; and the remainder is occupied by a plan—all of which in drawings of chairs implies, of course, a careful indication of contour and curvature, in showing treatment of splats and stretchers and other component

members and methods of their construction. We heartily commend plates of this sort, because, to the mind of the practitioner, they really "get somewhere"; photographs are always instructive, but when combined with measured drawings they may be said to approximate the ideal of representation in instructive plates.

At the Avery Architectural Library at Columbia University, we have come upon a group of four elevations, seven plans and six section drawings of the Capitol of Massachusetts, showing the enlargement erected in 1853 and 1854 by Gridley J. F. Bryant, architect; these are all bound in a small octavo volume, without text, and their origin is unknown, although they could probably be traced with some difficulty in the archives of the Boston State House. These drawings do not themselves fall within the Colonial time, but they so intimately concern the modifications and fate of the first great Colonial building that it was found feasible to include mention of them here.

A book of considerable interest, but of little direct application from the architectural point of view, is that edited by Swepson Earle and Percy G. Skirven, entitled: *Maryland's Colonial Eastern Shore, Historical Sketches of Counties and of Some Notable Structures*. (Crown Octavo; pp. 19; and 204, ills. Baltimore; Munder Thomsen Press; 1916. \$3.50.) The text is subdivided into eight accounts covering as many counties in the general region embraced in the title, with a separate section for Washington College. In each county nine or ten places of interest are discussed. All are illustrated in very clear but very small cuts, of which many are, no doubt, the only published photographs of the buildings shown. Nine authors collaborated in the production; the text is good, but, as usual in books of this character, plans are not in evidence.

VI.

The periodicals have shown a decided improvement as to the character of the Colonial material they have published in 1917. The first fervor which led many popular papers to publish "chatty" articles in the usual anemic style of

writing has largely worn itself out by sheer predominance of supply over demand. On the other hand, the professional architectural papers, especially *The Architectural Record*, *Architecture*, *The Architectural Forum* and occasionally *The American Architect*, have continued to publish excellent articles accompanied by measured drawings; and it should be noted that the character of these drawings improves as time goes on. Among other things we note with pleasure the introduction of small photographs as part of the sheet on which measured details appear, a practice the value of which we have emphasized and encouraged again and again in earlier articles in this series. It is safe to say that, so far as Colonial material is concerned, the periodicals have found their pace, and that their future contributions to the literature of Colonial art, and

architecture in particular, will be of high quality.

There is one periodical publication which deserves especial mention; this is the *Bulletin of the Society of the Preservation of New England Antiquities*. So far as we know this is the only organization which has set itself such a specific purpose of preserving monuments in a prescribed region. This body has to date restored eight old time residences and has been instrumental in casting much light upon the architecture of Colonial times still extant in the New England district. The *Bulletin* of this society contains many references to Colonial buildings and other types of art; all of these are too brief to warrant individual inclusion in these notices, but, as an aggregate, they are of great importance and not to be overlooked in any account of the literature of Colonial art.



A Study of the Heat Transmission of Building Materials. By A. C. Willard and L. C. Lichty. Ills. 60 p., 6 by 9 inches. Bulletin No. 102, Engineering Experiment Station. Published by the University of Illinois. Urbana.

The Meaning of Architecture. An Essay in Constructive Criticism. By Irving K. Pond, C.E., A.M. (Hon.), Architect Member of the National Institute of Arts and Letters, Fellow and Past President of the American Institute of Architects. Many ill., 226 p., 5½ by 8 inches. Boston: Marshall Jones Company. \$2.00 net.

War Housing Problems in America. A Symposium on War Housing Held Under the Auspices of the National Housing Association, February 15, 1918, Philadelphia. 141 p., 9¼ by 6 inches. New York City: National Housing Association.

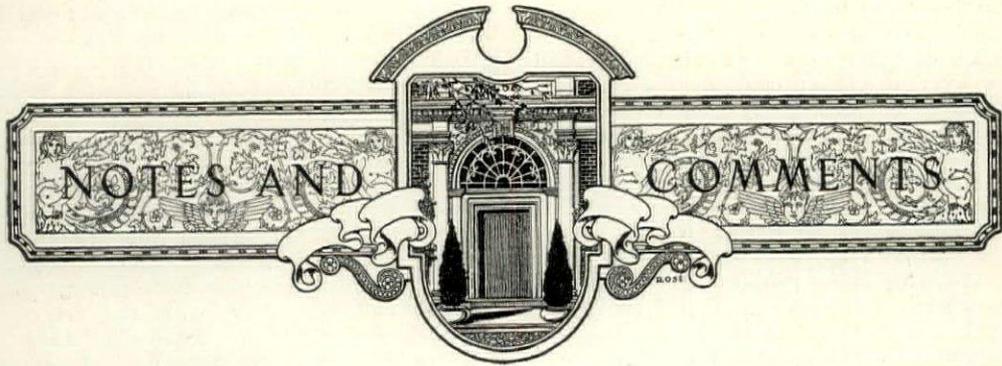
Annual Report of the Department of City Transit of the City of Philadelphia for the year ending December 31, 1916. Many ill. and maps, 350 p., 9½ by 6 inches. Issued by the City of Philadelphia.

Mechanics of the Household. A Course of Study Devoted to Domestic Machinery and Household Mechanical Appliances. By E. S. Keene, Dean of Mechanic Arts, North Dakota Agricultural College. 391 p., many ill., 8½ by 6 inches. New York: The McGraw-Hill Book Company, Inc. London: Hill Publishing Co., Ltd. \$2.50 net.

Fairmount Park Art Association—Forty-sixth Annual Report of the Board of Trustees. Proceedings of the Forty-sixth Annual Meeting, and List of the Members. Ills., 55 p., 9 by 6 inches. Philadelphia: The John C. Winston Co.

American Academy in Rome—Annual Report, 1916-1917. 100 p., 7 by 10 inches. Offices of the Academy: The Octagon, Washington, D. C.

The Storage of Bituminous Coal. By H. H. Stoock, Professor of Mining Engineering. Ills., 192 p., 6 by 9 inches. Circular No. 6, Engineering Experiment Station. Published by the University of Illinois, Urbana.



**Henry
Janeway
Hardenbergh.**

The span of life of Henry Janeway Hardenbergh covers the full period from the Greek Revival style of the ugly forties through the still uglier Gothic fifties and the gradually improving

succeeding decades to the time of the most up to the minute skyscraper innovation. He erected structures in practically every accepted building manner in accordance with the precepts of the time, but always without losing that individuality which made him one of our foremost practitioners in his field. He at no time surrendered this original quality of personal interpretation, regardless of the character of either function or design in his buildings.

Hardenbergh was born at the old Dutch town of New Brunswick, N. J., in 1847. His antecedents were Dutch, his first American ancestor having emigrated from Amsterdam at about 1644. Jacob Rutzen Hardenbergh, his great-grandfather, was one of the founders of Rutgers College, first established as Queen's College, in 1785, and in that year became its first president.

The architectural training of Hardenbergh began in the office of Detlef Lienau, an architect of some slight reputation, at about 1865, and a person of thoroughly German training and disposition, pleasingly modified by his professional tutelage under Henri Labrousse. Lienau never subscribed entirely to Labrousse's favoritism for the neo-grec, and, despite the French master's evident apostasy of this classic purism, succeeded nevertheless in developing a strong personal style, unfortunately not sufficiently well represented by actual work extant in New York. While the German's stylistic tendencies may have had no great influence on young Hardenbergh's growth, the latter profited in no small degree by the methods of

his teacher, learning a careful modulation of an inherited thoroughness—a quality easily overdone in design—and a certain well defined structural sense of design—a quality conducive to organic and reasonable interpretation of exterior motives. The inexorable relationship between the mechanical interior constructive problem and the inspirational exterior design problems appears in all of Hardenbergh's subsequent work as a leading quality. In all cases he has construed his drafting board work as the necessary method of making intelligible his intentions as to the building, rather than the building as a verbatim execution of so many carefully indicated drawings.

It was difficult, of course, for young Hardenbergh, when his apprenticeship at Lienau's was over, to escape the dry vogue of the Gothic Revival. So in so-called Victorian Gothic we find him erecting his first buildings at New Brunswick, a grammar school in 1870 and a chapel in 1873. The latter seems to suggest something of the German Gothic, as is seen in the articulation of its triple porch, and in its buttress treatment. The meagre indications of Hardenbergh's predominant features of restful and direct or straightforward design make themselves felt, and these qualities in 1873 were distinctly at variance with the restlessness of current practice.

The decade of 1883 was variously employed in work not of remarkable character and chiefly of value as the necessary phase which the young designer invariably needs in order to "find himself." In 1884, however, the Dakota apartment house at Central Park West and Seventy-second street at once placed him in the forefront of American designers. Although a building of French transition design, as some few details seem to indicate, its general conception is quite free and no doubt other decidedly alien

motives could be discovered. The Dakota apartment house was the first structure of such height along the Park on that side, and the average citizen may be imagined as commenting unfavorably upon its value to that now so poorly treated municipal "lung"; the success of the design is not to be gainsaid and its value to the Park is obvious. The architect's problem was one that appeals to all designers so long as they deal with a *projet* only, but which assumes dangerous proportions when the conditions of the real problem have to be faced. The real estate venture was at the bottom of the tall apartment building, as it was at the bottom of the office building, and the skill of architects, notably of Hardenbergh, made these ventures sightly and in no small number of instances really assured their success. The introduction of the elevator and of fireproof construction methods rendered the high building a mechanical possibility and contributed both convenience and safety. Many other apartment structures followed, all hoping for a similar architectural effect, and many hoping for a good design as a means of drawing them out of a financial slough of despond from the investment point of view.

Hardenbergh's first commercial building, the Western Union Telegraph Company's building in Broad street, was also erected in 1883. Various other office buildings and warehouses serve to continue the story for another decade, when an emphatic success is seen in the Netherlands Renaissance design of the John Wolfe Building at Maiden Lane and William street. The solution of this problem of an irregular site by a series of truncated angles until the upper stories of the narrowest face of the many pointed plan ascend to a dominant motive on a flat façade is worthy of study, for it demonstrates the working out of a feasible harmony between irregularities of plan and regularities of design. This is the first building of the skyscraper class within Hardenbergh's practice, a steel frame building with the customary masking of visibly or apparently structural materials of design.

Numerous country houses, small and large, and many city dwellings, chiefly of the "stoop" type, fell to the lot of Hardenbergh, as part of the grist that came to the mill; but not as the chief object of his architectural ambitions, for in such minor motives he could not write the burden of his message, which—as later history shows—was to be expressed in terms of tall

buildings of the apartment house and hotel type, to which the Dakota, the Van Corlear, and the Adelaide in the eighties gave the initial impetus.

Hardenbergh's greatest accomplishments were undoubtedly the fine hostelrys with which his name will be associated closely when the story of American architecture is finally written. In the old Waldorf Hotel, dated 1891, he favored the German Renaissance, working out a picturesque composition in which even minor motives disregard all symmetry, with the result that each motive demands a separate study if its value is to be taken at par. A certain eclecticism even prompted the admixture of an amount of Italian detail in the design. The Waldorf, for the first time in hotel design, demonstrated that interior decoration is the architect's field as thoroughly as exterior design.

In 1896, both the Manhattan Hotel and the Astor addition to the old Waldorf were undertaken. The former is a more conventional tall building type, but again served to carry out the architect's feeling in interior decoration. The latter is in a sense a revision of the old Waldorf design, with the great improvement that it was regularized. It would seem that the breathless growth of New York was not sensed well enough in the Waldorf and there was room for picturesqueness which devoured space. In the Astor the need for interior accommodations had made itself felt strongly enough in five years' time to demand a regularization of design which would make the interior a more definite quantity to reckon with in the future. The same German Renaissance style was, of course, adhered to, but most of the detail keeps close to simple classic forms. Cupolas and dormers naturally had to retain the Teutonic character, likewise the three-story order on the Thirty-fourth street façade. It is interesting to conjecture what might have been the trend of such a picturesque design in the hands of a designer less imbued with the fundamental verities of restraint and good judgment.

The great success of these hotels was completely overshadowed by Hardenbergh's achievement in the New Willard at Washington, the Raleigh at the same place, the New Windsor at Montreal, and especially by the Copley Plaza at Boston and the Plaza Hotel in New York. In these he demonstrated the same reserve and sensible interpretation which seemed to be one of his endowed faculties, for his

most immature work indicates them as well as his finest hotel. To us, for whom buildings like the Biltmore, the Commodore and Pennsylvania are the order of the day, the intrinsic value of the fine buildings which Hardenbergh gave New York and other cities is too easily passed over; as a matter of fact, Hardenbergh was the pioneer hotel builder, the first to develop the esthetic problem of hotel design and the mechanical problem of hotel planning for safety and convenience. His findings in many avenues of study bearing upon this general problem are now the accepted factors of any hotel conception. It is well for American architecture that a mind as well managed and far-seeing and a pencil as sure and restrained as Hardenbergh's guided this phase of its growth. His work is a definite contribution to our national style development, and his efforts served in no small degree in the establishment of the great hegemony of the most distinctive American building type.

Henry Janeway Hardenbergh was a founder of the American Fine Arts Society, a past president of the Architectural League of New York, a distinguished member of the American Institute of Architects and of its New York Chapter. His death on March 13, at the age of nearly seventy-two years, removed one of the most august and inspiring figures that American architecture has produced.

RICHARD F. BACH.



Mr. Adam Int-Hout, of Chicago, is a chemist, but his chief claim to fame, to hear him tell it, rests upon a small "folding bungalow" designed and built by himself,

and in which he and his family live with as much comfort as the average dweller in a three-bathroom apartment.

Mr. Int-Hout touches a button or a lever, and, presto! the partitions of his cabinets, bookcases, dining room table and other articles of furniture appear or disappear; in this folding bungalow probably more of the essentials of fine living are compressed into a smaller space than in any similar structure ever built.

The bungalow is twenty-six feet square; has a living porch eight by ten feet in front, and a wide entrance porch and porch seat. It stands in the middle of a fifty-foot lot and is shaded by two immense arching elm trees. The house is

divided into living room, kitchen, bathroom, downstairs bedroom and a furnace closet. There is no sign of a dining room; nevertheless such a room exists and you are likely to find yourself in it when you least expect it.

The easiest way to understand it is to imagine that you have been invited to dinner at the Int-Houts. After you have been welcomed, the hostess, leaving you in the living room, excuses herself to go into the kitchen—for no maids upset the scheme of harmonious living that this family is working out.

Perhaps the first thing that catches your attention is the stairway next to the entrance door, and you notice the clever way in which the balustrade forms a set of book shelves running clear down to the floor. Next to this is the closet for outdoor wraps, then the opening of the small hall leading to the bedroom where you took your things off, and next there is a grille which extends from floor to ceiling just in the middle of the long wall space that forms the back part of the living room.

This grille seems to serve no particular purpose, and while you are wondering what it is for, your eye travels along to some water-colors hanging on the next six feet of wall space. This partition and a swinging door, which leads to the kitchen, seem to complete all that there is to be seen along the back wall. But just then Mrs. Int-Hout appears and hooks the kitchen door back and you immediately begin to rub your eyes. Heavens! is the wall really moving? Your hostess stands there calmly with her hand on the door casement, seeming barely to touch it, and yet the whole piece of wall is turning round into the kitchen. You know this because the pictures are going into the kitchen as fast as they can, while with equal celerity a small hanging china cabinet comes into view on what was the kitchen side of the partition. Nor is this all, for along with the china cabinet comes a dining room table, in all the splendor of china and glass and snowy napery and tempting viands. The table appears to be fast to the wall until Mrs. Int-Hout gives it a touch with her hand, whereupon it takes its position exactly in the centre of that half of the living room.

A half-mile at least of needless walking has been avoided by setting the table in the kitchen where everything is close at hand, and then moving it by a touch right



THE FOLDING BUNGALOW.

into the presence of the hungry and expectant guest. When the meal is near its end and dessert is mentioned, you naturally expect the hostess to go into the kitchen after it. Instead she simply reaches out toward the china cabinet, and there on an open shelf beneath it reposes the last course of the meal. This shelf also serves to receive the plates and other dishes when they are removed.

But perhaps the best part of it all is that one can sit at the table and talk as long as one likes without worrying about getting the table cleared off quickly for fear it will look untidy. Or if the door bell rings and other visitors appear, the table can be sent off simply by pushing it over to the partition and starting it. The wall does the rest, and the table is cleared with all the dishes right beside the sink, ready to be washed.

The most important part of the home from the man's point of view is the furnace. It is in a closet in the centre of the room, and the front wall of this is formed by the grille spoken of.

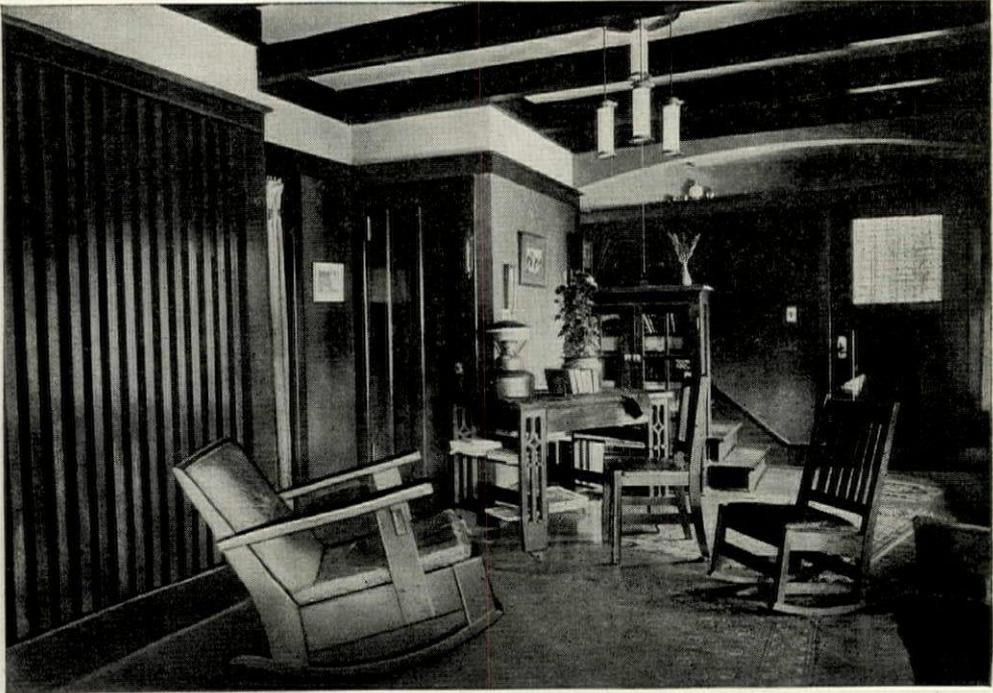
A school furnace, protected by a drum, stands in the closet, which is directly in the centre of the house. Cold air holes have been drilled along the bottom of the drum to the height of fourteen inches. As the furnace must send heat in every

direction, the side partitions of the closet have been cut off above and below, fourteen inches from the floor and the same distance from the ceiling; the front partition is an open grille clear to the floor.

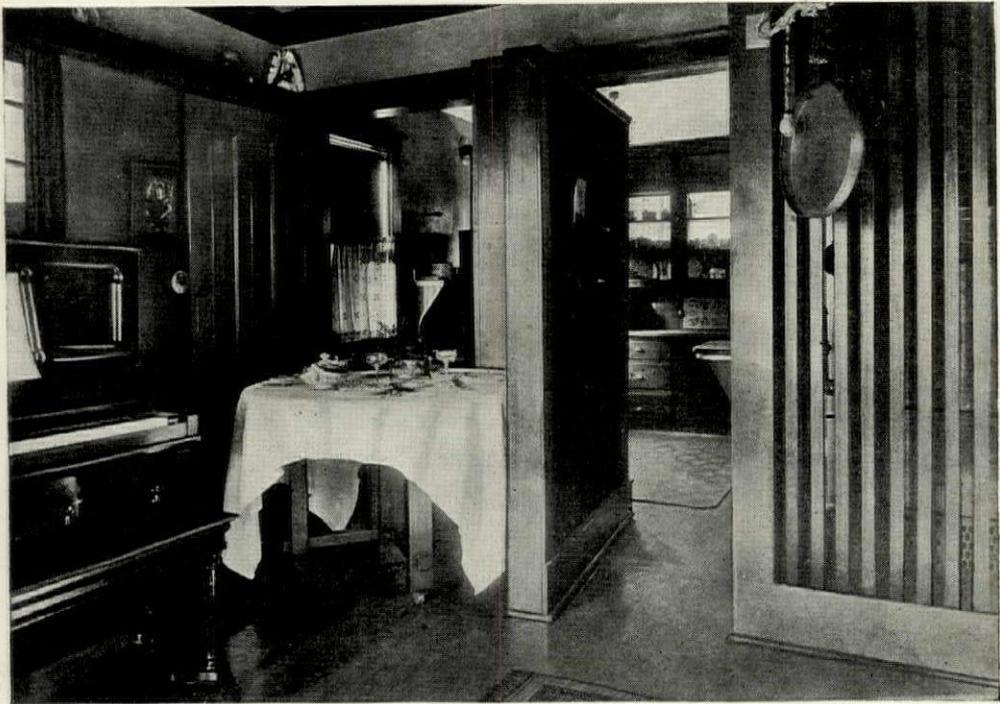
By this ingenious arrangement an absolute suction for drawing cold air in is effected. Its success as the basis of a heating and ventilating scheme is shown by the fact that the entire house was kept warm all winter on less than five tons of coal.

One of the worst features of caring for the furnace, the carrying of coal, has been eliminated by another clever arrangement. There is back of the furnace a two-foot space which runs between the kitchen and the bathroom. Here are the gas meter, the water meter, a medicine chest for the bathroom, and a chute which is built to answer the purpose of a stationary coal closet. It holds two tons, and has the outside window just high enough so that the coal may be thrown into it directly from the delivery wagon. The slope adjusts the gravity so exactly that the coal always falls to the door of the chute, which is directly opposite the door of the furnace. All you have to do is to turn around and take out a shovelful as you would from a coal-box.

The kitchen has a stationary laundry



THE GRILLE ON THE LEFT HIDES THE FURNACE.



THE DINING ROOM TABLE COMING IN FROM THE KITCHEN.

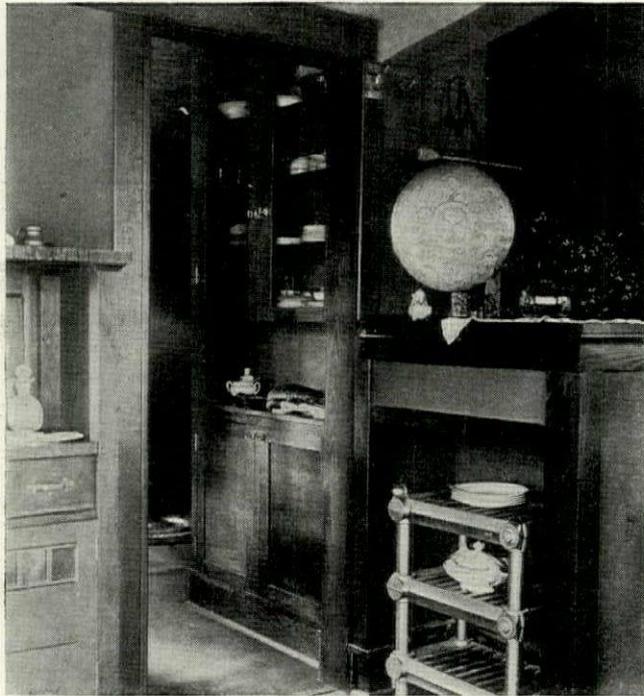
tub of porcelain, the top of which forms the drip-board of the sink. In the back wall is a kitchen cabinet, with drawers and swinging doors in the lower part and shelves with glass doors in the upper part. As this cabinet is built into the back wall, it would curtail the light ordinarily. This is avoided by glassing both the front and the back, an arrangement which not only lets the light through, but also cuts down the heat, as it is only necessary to open

one of the small outside panes to make the cabinet into a cooler.

There is an upper room, fifteen and a half feet square, with north and south glass doors opening on sleeping porches, thus making it cool and totally unlike the ordinary attic room.

This folding bungalow cost about \$2,000 to build, and it was completed in six weeks, the outside wall being of stucco set on a foundation of concrete.

ROBERT H. MOULTON.



A RADIATOR IN A NICHE SERVES ALSO AS A PLATE WARMER.