

THE

ARCHITECTURAL RECORD

1935

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EFFICIENT . DURABLE . ATTRACTIVE



EAST RIVER SAVINGS BANK, N. Y. C. . WALKER & GILLETTE ARCHITECTS

STOP DRAFTS AND COLD AIR



OF HEATING

OFFICE BUILDING • PUBLIC BUILDING HOTEL • BANK • STORE

GENERAL BRONZE REVOLVING DOORS...in bronze, aluminum, nickel silver, stainless steel or wood.

MECHANISM . . . automatically collapsible and panic-proof.

Speed Regulator... permits free rotation of the revolving wings up to any predetermined rate of speed desired.

QUALITY . . . built by craftsmen well able to meet the most rigid specifications. A few of our typical installations include the First National Bank of New York City, 39 doors in Rockefeller Center, Department of Justice Building in Washington, The Chicago Post Office.

GENERAL BRONZE DOORS . . . eliminate drafts, cold air, noise and dirt . . . save fuel . . . provide more comfortable working conditions . . . reduce initial cost of air conditioning installation and save on cost of operating air conditioning plant.

SEND FOR CATALOG

Send for catalog giving complete specifications on the metal tubular revolving door. One of our representatives will be glad to assist in the designing of an entrance or give you detailed information.

GENERAL · BRONZE · CORPORATION

Distinctive Metal Work

LONG ISLAND CITY, NEW YORK

REVOLVING DOORS

WINDOWS

TABLETS

THE

ARCHITECTURAL RECORD

VOLUME 78 NUMBER 6 DECEMBER, 1935

ARCHITECTS OF THE WILLIAMSBURG RESTORATION	356, 357
KITCHEN OF ST. GEORGE TUCKER HOUSE. Photograph by F. S. Lincoln	Frontispiece
THE RESTORATION OF COLONIAL WILLIAMSBURG IN VIRGINIA. By Fiske Kimball	359
THE HISTORICAL BACKGROUND	360–362
NOTES ON THE ARCHITECTURE. By William Graves Perry	363–377
INTERIORS OF THE GOVERNOR'S PALACE: MEASURED DRAW-INGS	378–381
THE CITY PLAN AND LANDSCAPING. By Arthur A. Shurcliff,	

PORTFOLIO OF BUILDINGS AT COLONIAL WILLIAMSBURG: PERRY, SHAW & HEPBURN, ARCHITECTS OF THE RESTORATION. ALL PHOTOGRAPHS BY F. S. LINCOLN

The Capitol: Council Chamber, House of Burgesses, Original Speaker's Chair, Burgesses' Committee Rooms • The Governor's Palace: Palace Green and Garden, Revolutionary Burying Ground, Ball Room Wing, Kitchen and Scullery, Steps to Canal and Terraces, Kitchen Garden with Outbuilding, Fireplace Detail • College of William and Mary: Botetourt Statue, The Wren Building, Chapel, Great Hall, Blue Room • Brafferton Building • Original James City County Court House (Restored) • Williamsburg - James City County Court House (Restored) • Williamsburg - James City County Court House of 1770: Building on East Flank of Original Court House • Raleigh Tavern: Apollo Room, Dining Room, Daphne Room • Market Square Tavern: Kitchen and Stable Yard, Great Room • The Travis House: Dining Room • The Semple House • The Ludwell-Paradise House: Kitchen • Purdie's Dwelling • Kitchen of the Kerr House • Captain Orr's Dwelling • The St. George Tucker House: Entrance • The Coke-Garrett House • Ayscough's Shop on York Road • The Blair House • The Sign of the Golden Ball • Post Office in Group of New Shops • Davidson Shop • Teterel Shop.

387-446

382-386

PAINTS, FURNITURE AND FURNISHINGS. By Mrs. Susan Higginson Nash

447-458

GAINS IN PUBLIC AND INSTITUTIONAL BUILDINGS. By L. Seth Schnitman, Chief Statistician, F. W. Dodge Corporation

25, 26 (adv.)

THE ARCHITECT'S LIBRARY

Landscape Architect

13 (adv.)

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MONEL METAL

helps pep up appearance
of NEW Lunch-Room
in OLD hotel



MANAGER

of the Oliver Hotel in South Bend, Ind., and
the Harrison Hotel in Chicago. He specifies
Monel Metal.



Monel Metal back bar installed in the new Oliver Hotel, South Bend, Ind., by Duparquet Range Company, Chicago, Ill.



General view of the new lunch-room in the Oliver Hotel, South Bend, Ind., installed by Duparquet Range Company, Chicago, Ill., under the supervision of Mr. A. C. Weisburg.

THE well-known Oliver Hotel in South Bend, Indiana, may be considered by some an old hotel, but when it comes to the renovated lunch-room, it is as new as tomorrow.

One of the outstanding features of this recently redesigned eating-place is the back bar . . . made of glistening, gleaming Monel Metal.

A. C. Weisburg, Manager, has had plenty of experience in sensing public preference. He is former president of the famous Merchandise Mart Restaurant in Chicago, and now is manager of both the Harrison Hotel in Chicago and the Oliver in South Bend

So when he specifies Monel Metal, he is considering all three phases of the problem confronting all who select food-service equipment:

(1) Appearance that appeals to the public

(2) Cleanliness

(3) Low maintenance

You get all three of these pleasing results when you specify Monel

And what is even more important, food service equipment made of Monel Metal will *retain* its shining, old silvery appearance. This is proved by the fact that many installations have been in constant use for 20-25 years.

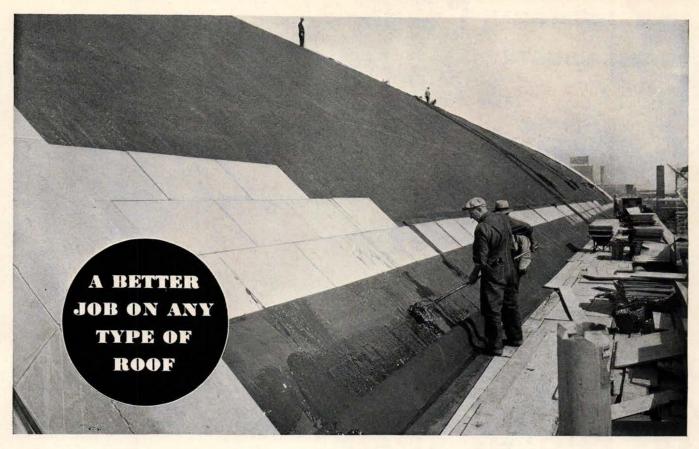
Send for a copy of "The Selection of Food Service Equipment" addressing

THE INTERNATIONAL NICKEL COMPANY, INC.
67 WALL STREET NEW YORK, N. Y.



Monel Metal is a registered trade-mark applied to an alloy containing approximately two-thirds Nickel and one-third copper. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.

Asphalted Roof Insulation



AN EXCLUSIVE INSULITE DEVELOPMENT

The patented integral asphalt treatment of Insulite Asphalted Roof Insulation reaches every fiber during the manufacturing process.

- 1. Provides Much Greater Strength;
- 2. Increases Resistance to Moisture:
- 3. Assures Less Breakage on the Job;
- 4. Makes Mopping Easier;
- 5. Reduces Application Costs;
- 6. Solves Condensation Problems;
- 7. Costs No More.

These reasons are back of the specification and use of 100,000 square feet of one-inch Insulite

Asphalted Roof Insulation on the new National Guard Armory in Minneapolis (illustrated above). Architect, P. C. Bettenburg, Minneapolis; general contractors; C. H. Peterson & Co., Inc., Minneapolis, Paul Steenberg Construction Co., Saint Paul; roofing contractor, Ettel and Franz Company, Saint Paul.

Technical Data Available

Our Engineering Department will be glad to give you specific information on your roof insulation problems. Write for complete data. The Insulite Company, Dept. AR6, Builders Exchange, Minneapolis, Minnesota.

[INSULATE WITH INSULITE]

INSULITE

The Griginal Wood-Fiber Insulating Board



ADE CHOSEN ACAINI

ARE CHOSEN AGAIN!

WE are proud of the fact that Speakman Showers, Fixtures and Flush Valves were chosen for installation in the Pierre S. Du Pont High School, Wilmington, Delaware. Recently completed at a cost of \$1,500,000, this is one of the really fine schools in the country, and all the equipment was chosen on a basis of quality.

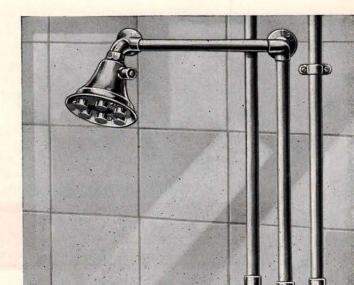
Speakman Showers and Fixtures fit perfectly into this picture. They have been known for years for their high quality and complete dependability, and in this new school they will operate efficiently and economically for many years.

SPEAKMAN COMPANY
Wilmington Delaware

Refer to Sweet's Catalogs Section 25—Catalog 9

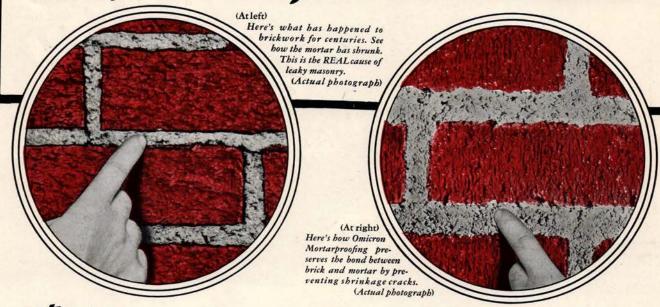
SPEAKMAN

K-3110 — Speakman Mixometer Shower — Exposed Type



EXPLODED!

The age-old theory that brick walls MUST LEAK



Today, Omicron Mortarproofing Prevents Leaky Masonry by Eliminating the Cause...

 As every architect knows, the troublesome shrinkage in mortar occurs during the first 24 hours. It happens before any substantial bond has been effected with the brick.

During this critical period, Omicron Mortarproofing, an exclusive development of Master Builders, reduces shrinkage by more than half—thus it preserves and strengthens the bond—either with an ordinary mix or with patented masonry mortars.

This is not merely a claim, but a definite statement of fact based on broad experience in building important structures for the U. S. Military Academy at West Point, Universities of Georgia and Tennessee, Baltimore City Hospital, Hiram Walker Distilleries Company, E. I. DuPont de Nemours, Carborundum Company and innumerable other cases.

The marked value of Mortarproofing has also been definitely and positively confirmed by impartial, independent tests made at the laboratories of Columbia University. The results of these tests with complete data on this revolutionary product will be sent to any architect upon request. Or, if preferred, Master Builders will gladly arrange for a convincing practical demonstration under your own local conditions.



The Palatial New Hershey Inn at Hershey, Pa.

Three years ago, the first building in which Omicron Mortarproofing was specified for the Hershey Products Company was built in Hershey, Pa. So successful were the results that the great Hershey Company now standardizes on Mortar-

proofing. To date, over 3,500,000 bricks have been laid for Hershey in Mortorproofed mortar. It was Mr. Paul Witmer of the Hershey Company who suggested the name "Brickwork Insurance," so generally used for this amazing product.

THE MASTER BUILDERS COMPANY

Cleveland, Ohio



• Decreased breakage hazard and increased speed and safety in globe handling have been made possible by the new Macbeth "Chip-Proof" Globes. Rough, unsealed edges have many minute defects which may expand under the slightest strain and eventually cause breakage. The edges of Macbeth "Chip-Proof" Globes, instead of being ground, are seared by a flame which seals and rounds the fitter rim to a velvet smoothness. This process also reinforces the edge with a strong shoulder of extra glass which gives added strength to the

entire globe. A former weak point of all globes has been made a strong point in Macbeth "Chip-Proof" Globes. • Macbeth "Chip-Proof" Globes are also more convenient and safe for both installation and cleaning. Their smooth edges cannot possibly injure hands or arms. These advantages of "Chip-Proof" Globes are available without extra cost in Macbeth Globes exclusively. A Macbeth representative will be glad to demonstrate this new globe efficiency at your convenience. Descriptive printed matter will be mailed on request.

MACBETH-EVANS GLASS CO., Charleroi, Pa.





VISUAL

PROOF

a house is AS YOUNG AS ITS ARTERIES!!

THE arteries of any building are its plumbing or heating conducting system. Upon their perfect operation depends the maintenance of comfort and convenience in living conditions that any home owner or tenant has the right to expect. The handsome and ultra modern bathroom and kitchen fixtures so much in vogue today can only reach their maximum efficiency if the service they render is in keeping with their design. Their smooth, trouble-free operation must not be impaired by rust-stained, slow running water and clogged pipes.

A BUILDING MAY BE YOUNG IN APPEARANCE, BOTH INSIDE AND OUT — BUT WOEFULLY ANCIENT IN ACTUAL CONVENIENCE. IT IS, AFTER ALL, AS YOUNG AS ITS ARTERIES.

A radiator may be the last word in design but if installed with a piping system that in a few short years will rust, leak and clog will gradually fail in its function as an efficient heating unit.

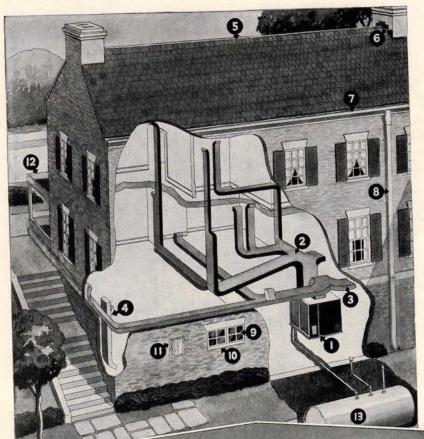
An installation of STREAMLINE Copper Pipe and Fittings will maintain these modern fixtures in perfect working capacity year in and year out. It will put new life in old buildings and add the latest improvement to new structures. This threadless, rust-proof, clog-proof and leak-proof copper system for plumbing or heating is revolutionary and will actually outlast the building itself. It costs very little more than corrodible materials which sooner or later must be replaced.

The STREAMLINE Fitting is the original solder type fitting and the only one that possesses the valuable proof ring feature constituting VISUAL evidence of a leak-proof, perfectly bonded joint, without an actual pressure test.

A catalog of STREAMLINE products is already on file in your office. You will find it in Sweet's or write for our A.I.A. File 29 B4.

STREAMLINE PIPE AND FITTINGS PORT HURON, CO. MICHIGAN DIVISION OF MUELLER BRASS CO.

MODERN STEEL SHEETS ALL THROUGH THE HOUSE



The additional cost of Superior Galvannealed over ordinary galvanized sheets is a negligible factor in building costs. When you consider the marked advantage of this material in its adaptability to modern building trends, there should be no question about its selection. This highly rust-resisting sheet is particularly easy to work with because of its ductility and it is prepared with a matte surface, which is ideal for paint, lacquer or enamel finishing.

Our metallurgists will gladly supply you with information on steel sheets that will assist you in specifying the best available material for the many places where sheet steel is used in modern construction.

THE SUPERIOR SHEET STEEL CO.

Division of Continental Steel Corporation, U.S. A.

OPEN-HEARTH STEEL SHEETS

Black, Single-Pickled, Galvanized, Long Ternes, Super-Metal, Galvannealed and "Copperior" Steel Sheets. SUPERIOR
GALVANNEALED
SHEET'S are made from a special analysis, basic open-hearth steel, with a highly rust-resistant, hot-dipped zinc coating bonded to the steel by a special heat-treating process. Will not flake or peel even under difficult formation. The matte surface takes—and bolds—paint, lacquer and enamel finishes.



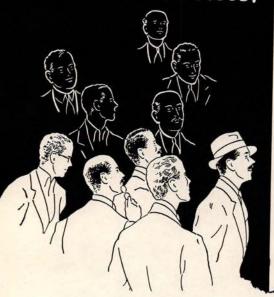
SUPERIOR

COATED SHEETS for more permanent construction

Now Complete data and samples are waiting for your request.
Write today.

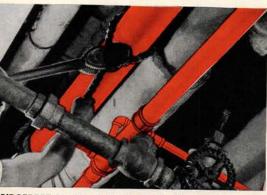
BRASS PIPE... COPPER WATER TUBE...

Look at the Prices!

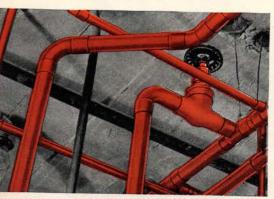


TREND OF BRASS PIPE PRICES 1929 to 1935							
PRICE	1929	1930	1931	1932	1933	1934	1935
100%							
90	N						
80							
70							
60							
50							
40					V		





BRIDGEPORT BRASS OR COPPER PIPE—for installations requiring the utmost in strength and permanence.



RIDGEPORT COPPER WATER TUBE—highly economical and serviceable—rustproof, easy to install.

Today's Outstanding Bargains in Building Materials

COMPARED with the prices of six years ago, some building materials, such as cement and lumber, are about the same now as then.

But owing to the abnormally low price of ingot copper, brass pipe and copper water tubing are now selling at much lower figures than 1929 levels.

Today, architects and builders can figure on doing the job right—without being open to "high-cost" criticism. They can logically choose the long life and corrosion-proof service of brass and copper. Brass, industry's No. 1 material, should be specified where utmost strength and durability are essential, especially for larger buildings . . . and copper tubing when economy dictates.

Bridgeport Plumrite Brass Pipe and Copper Water Tube are builders of good will and satisfaction on jobs of every type. Write for complete data and these two booklets: "Water Pipe Sizes," and "Bridgeport Copper Water Tube."



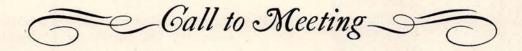
Plumrite 85%, and Copper Pipe —for corrosive and artesian well waters, and under-ground service.



United States Steel 👺 Corporation Subsidiary



Drawn for Revere Copper and Brass Incorporated by Edward P. Couse



One of Paul Revere's first copper and brass assignments was to recast the bell for the Old North Church, the church where the warning lanterns in the belfry started Revere on his memorable ride to Lexington. When the bell was finished, its tone was so wonderfully clear and true that similar orders came thick and fast. In all, 396 bells were cast for various New England churches; seventy-five of these are known to be still in use. But Revere bells, brass cannon, copper spikes and rivets were soon supplemented by a still greater achievement.

In 1801, Revere mastered the secret for rolling copper, a process never before accomplished in America. Copper sheets from his new mill soon protected the hull of the famous frigate "Old Ironsides," the roof of the Boston

State House, and many other public and private buildings up and down the coast.

Paul Revere's ability as a copper and brass manufacturer, inventor, and industrialist is still serving America. Through succeeding generations, the original firm of Paul Revere & Son has grown and consolidated to the present nation-wide organization of Revere Copper and Brass Incorporated.

The Revere heritage of leadership in discovering new applications for copper and brass has also been continued. For example, to meet today's building needs, Revere fabricates Copper Water Tube, Brass Pipe, Sheet Copper and Leadtex, Flashings, Architectural Bronze Panel Sheets, Herculoy for storage tanks, and others. Copper, the oldest known metal, will help rebuild America.



We are happy to take this opportunity to wish you a very Merry Christmas and a Bright and Prosperous New Year.

Revere Copper and Brass



INCORPORATED

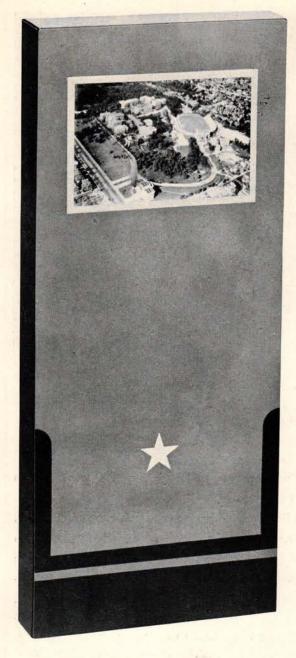


Photo Inlays and Murals with Formica!



Formica now makes available to architects and designers the possibility of building photo inlays into Formica sheets specified for veneers on doors, table tops, counter panels and wainscot.

The photographs become an integral part of the Formica sheet, as resistant to wear and chemical injury as any Formica, and stable in color. They may be sepia and white or black and white.

Where it is desired to use photographs as murals they may be thrown up to such sizes as 3 by 4 feet.

The background may be any one of the many Formica colors, and the photo inlay may be combined with inlays in various colors.

Formica is a material with many possibilities. May we send you further information about it.

THE
FORMICA INSULATION
COMPANY

4620 Spring Grove Avenue Cincinnati, Ohio



FOR BUILDING PURPOSES

THE ARCHITECT'S LIBRARY

ART OF THE LANDSCAPE GARDEN IN JAPAN. By Tsuyoshi Tamura. Kokusai Bunka Shinkokai (The Society for International Cultural Relations). Agents in the United States: Swan House, Oriental Books, Hinsdale, Illinois. 245 pages. 11 plates and 193 photographs. De luxe edition. \$6. Paper-bound edition, \$5

This handsomely printed book is dedicated to the members of the Garden Club of America in commemoration of their visit to Japan in 1935. The material is presented in four sections: (1) General characteristics of the Japanese Garden; (2) History of the Japanese Garden; (3) Designing the Japanese Garden; (4) Materials used for the Japanese Garden. All garden views are accompanied with descriptions and histories, and arranged chronologically.

THE NEW ARCHITECTURAL SCULPTURE. By Walter R. Agard. Oxford University Press, 114 Fifth Avenue, New York City. 90 pages. 42 plates. \$3

Professor Agard of the University of Wisconsin describes and appraises the developments and changes in architectural sculpture made during the past twenty years to conform with present-day architecture. The work of modern sculptors in Europe and America is discussed in its relationship and suitability for public buildings, sky-scrapers, churches, homes and memorials.

MECHANICAL AND ELECTRICAL EQUIP-MENT FOR BUILDINGS. By Charles Merrick Gay and Charles De Van Fawcett. John Wiley & Sons, Inc., 440 Fourth Avenue, New York City. 429 pages. Illustrated. \$5

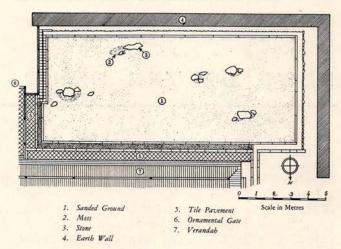
The authors have attempted to give in one volume the essentials of mechanical and electrical building equipment in their relationship to architectural design, so that the basic principles may be understood alike by both architect and engineer. The book contains sections on water supply, plumbing and drainage, heating and air conditioning, electrical equipment, and acoustics. Many tables, charts and diagrams are included.

SUSPENSION BRIDGES OF SHORT SPAN. By F. H. Frankland. American Institute of Steel Construction, 200 Madison Avenue, New York City. 128 pages. Illustrated. \$2.50

The author, who is technical director of the American Institute of Steel Construction, sets forth in the early part of the book his ideas on the fundamentals of aesthetic design as applied to bridges. He says: "The proper design of bridges does not lend itself, except for exceptional cases and for comparatively unimportant structures, to the use of standard designs, and it is therefore necessary to bring into use the results of training, experience and continuous study in order to produce a satisfactory design and to realize properly the many considerations of economy, suitability and good appearance."



From ART OF THE LANDSCAPE GARDEN IN JAPAN



RYOAN-JI STONE GARDEN, KYOTO, JAPAN

THE CHEMISTRY OF CEMENT AND CON-CRETE. By F. M. Lea and C. H. Desch. Longmans, Green & Co., 114 Fifth Avenue, New York City. 429 pages. Illustrated. \$9.50

F. M. Lea, one of the authors of this book, is connected with the Building Research Station in England, has conducted some of the most important recent research on cement and is familiar with the work of other laboratories as well as the present state and requirements of the industry. Cecil H. Desch, is known for his earlier book, "The Chemistry and Testing of Cement."

The present book has been written to give a general survey of the chemistry of cement and concrete, and is intended for the chemist, the engineer or architect who has to deal with cement and concrete.

The subjects covered include the chemistry of the changes which the raw materials undergo in the course of cement production; the effect of change in composition and other factors on the properties of the finished product; the constitution, nature and properties of cements and their compounds; minor properties of cements; the nature of various concrete aggregates; and the behavior of concrete in use.

THE HOME WORKSHOP; THINGS TO MAKE FOR THE CAMP AND GAME-ROOM; THINGS TO MAKE FOR THE LAWN AND GARDEN; THINGS TO MAKE FOR THE HOME. By William W. Klenke. The Manual Arts Press, Peoria, Ill. Illustrated. Book 1, 75 cents; others 50 cents

A series of manuals on the use of the home workshop.

CALENDAR OF EXHIBITIONS AND EVENTS

December 4, 5 Twelfth semi-annual meeting of The Producers' Council, Inc., in Detroit.

Closing date of contest for poster to stimulate December 31

European travel sponsored by Institute of Foreign Travel, 80 Broad Street, New York City.

1936

Fourth International Heating and Ventilating January 27-31

Exposition, Chicago.

February I Closing date for entries for annual competition for the Prizes of Rome. Information obtainable

from Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue,

New York City.

Architectural League Exhibition, Grand Central February 10-19

Palace, New York City.

Closing date of 12th Annual Competition for May I Small Sculptures in White Soap. For informa-

tion, apply to National Soap Sculpture Committee, 80 East 11th Street, New York City

Opening of the Texas Centennial Central Ex-June 6

position in Dallas, Texas.

NEWS THE FIELD OF

Frank H. Schwarz, fellow, the American Academy in Rome, and associate, National Academy of Design, occupies new office quarters at 480 Lexington Avenue, New York City.

Edward W. Helms, architect, announces the removal of his office from 317 Franklin Avenue to 29 North Broad Street, Ridgewood, New Jersey.

John J. Trich has moved from 329 Ridge Road, Rutherford, N. J., to 248 Forest Avenue, Lyndhurst, New Jersey.

Henry Titus Aspinwall, architect, announces the association with him of Paul F. Simpson, in the firm of Aspinwall and Simpson, South Station Plaza, Great Neck, Long Island, New York.

Solomon Kaplan, architect, has moved from 10 South 18th Street to 2120 Spruce Street, Philadelphia, Pa.

Clifford H. James, architect, formerly of the office of James and Zorns, architects, which was dissolved in 1932, has moved his office from 2422 Fifteenth Street, Lubbock, Texas, to 1710 Guadalupe Street, Austin, Texas.

James H. Bruffee, architect, will carry on the work of the late William E. Hunt, who died October 13 in Torrington, Connecticut, after a long illness. Mr. Hunt was a leader of his profession in Connecticut and was responsible for many important buildings there.

GREAT LAKES EXPOSITION

A committee of Cleveland architects has been appointed by Alexander G. Robinson III, President of the Cleveland Chapter of the American Institute of Architects, to cooperate with the officials of the Great Lakes Exposition in planning the architecture of the huge industrial show to be held next summer on Cleveland's downtown lakefront.

The committee, headed by Abram Garfield, will have final authority on all questions involving architecture, the general theme of which is now under consideration. Serving with Mr. Garfield on the committee are J. Byers Hays, Frank B. Meade, F. R. Walker, and Antonio Dinardo.

COMPETITIONS FOR THE PRIZES OF ROME

The American Academy in Rome announces its annual competitions for fellowships in architecture, landscape architecture, painting, sculpture and musical composition.

The competitions are open to unmarried men not over 30 years of age who are citizens of the United States. The stipend of each fellowship is \$1,250 a year with an allowance of \$300 for transportation to and from Rome. Residence and studio are provided without charge at the Academy, and the total estimated value of each fellowship is about \$2,000 a year, for a term of two years. The Academy reserves the right to withhold an award in any subject in which no candidate is considered to have reached the required standard.

Entries for competitions will be received until February 1. Circulars of information and application blanks may be obtained by addressing Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York City.

TERRA COTTA WALL BLOCK COMPETITION AWARDS

The Chicago Architectural Club announces the winners of the Terra Cotta Wall Block Competition under the joint sponsorship of the American Terra Cotta Company and the Northwestern Terra Cotta Corporation.

The awards for the one-story shop building were as follows: first prize, Evald Young; second prize, George Recher; third prize, Roy Anderson; honorable mention, A. A. Zakharoff; mentions, A. A. Zakharoff, C. Koncevic, and G. W. Murison, Jr.

The awards for the two-story shop and office building were as follows: first prize, A. A. Zakharoff; second prize, Herbert Rodde; third prize, Charles Koncevic.

The jury of awards was composed of Alfred Shaw, Andrew Rebori, Hugh Garden, Oscar Gross, and F. O. Turper-White.

DEBIT	CREDIT	
Cost of change-over from old type from sitch elevators car-switch elevators to OTIS signal CONTROL	Better service Better class of tenant Higher rentals Less tenant turnover Lower upkeep cost	\$ \$ \$ \$

Submit this graphic picture to modernization prospects

BUILDING managers who have made the above entry in their ledgers are finding that the credit side soon wipes out the debit.

There are some very definite reasons why the change-over from old type car-switch elevators to Otis Signal Control is a profitable investment. The change brings faster elevator speeds, less waiting time, a saving in stopping time at the various floors, greater comfort to passengers. These obvious elevator improvements put the building on more favorable footing to compete

with the newer structures, help attract more tenants, and keep present tenants satisfied with their quarters. The change-over to Signal Control also reduces elevator operating expenses and prolongs elevator life.

We shall be glad to co-operate with you in any way on an elevator modernization project of this character, or, for that matter, any type of elevator modernization problem.

OTIS ELEVATOR COMPANY

1,000 square yards of Sloane-Blabon Linoleum in new \$250,000 market



Loft Market, New Rochelle, N. Y.—Wm. Higginson & Son, Architects— Architectural Flooring Products Co., Inc., Flooring Contractors

The firm of Wm. Higginson & Son have designed many markets similar to the Loft Market in New Rochelle, N. Y., but this is the first job of this kind in which they have specified linoleum for the floor.

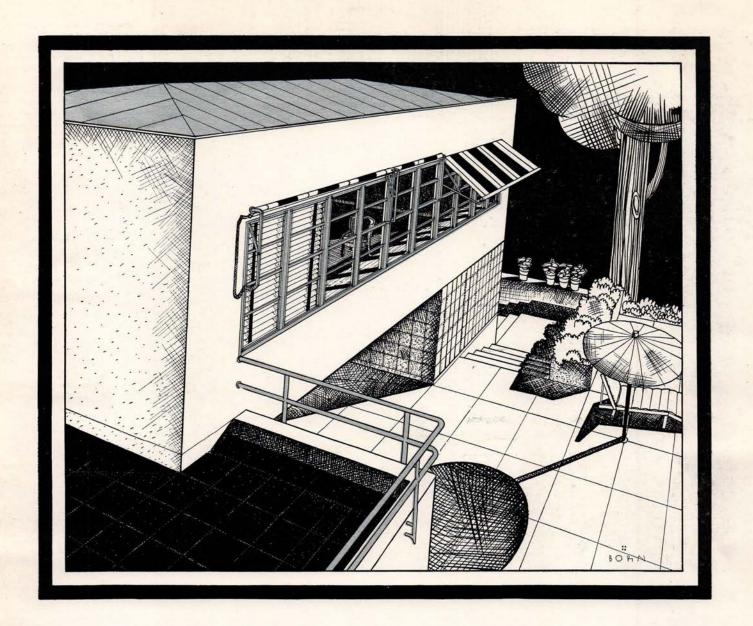
Inasmuch as approximately 60,000 people a month have gone through the building in the eleven months it has been open, the following statement is significant.

"I intend to specify linoleum for jobs like the Loft Market," Mr. Higginson writes, "as it is easy to keep clean and stands up under the heavy wear to which it is subjected six days a week. This par-

ticular installation is Sloane-Blabon Battleship Linoleum — brown with black borders, and is waxed. I am very enthusiastic about it."

The Loft market is but one of many recent outstanding Sloane-Blabon installations. We shall be glad to send you a list of others, together with linoleum samples (we have just added some striking pastel shades in our Plain and Battleship qualities), also any information you may require to help you solve your linoleum problems. Write W. & J. Sloane Selling Agents, Inc., 577 Fifth Ave., New York.

SLOANE-BLABON LINOLEUM



LOOK CLOSELY...THEY ARE DOUBLE-HUNG

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Fine terrazzo floor, photographed in full natural color, in St. Francis De Sales Church, Paducah, Kentucky. Made with Atlas White portland cement. Keno Rosa Company, terrazzo contractor. Thomas J. Nolan, architect. Both of Louisville. The actual-size, true-color terrazzo samples below illustrate marble and pigment combinations similar to those used in this floor.



Botticino marble with white portland cement.



Yellow Verona marble with white portland cement and yellow pigment.



Verdolite marble with white portland cement and green pigment.



Red Verona marble with white portland cement and red pigment.

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ARCHITECTURAL RECORD

JULY-DEC.
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THE ARCHITECTURAL RECORD

INDEX TO VOLUME 78, JULY-DECEMBER, 1935

Abraham Drug Store, Burlington, Vt.
Louis S. Newton, Architect. July 54
Activity Rooms, California Military
Academy, Baldwin Hills, Calif.
Richard Neutra, Architect.

September 193
Ain, Gregory, Associate; Richard J.
Neutra, Architect. Cellular CopperBearing Steel House of William
Beard, Altadena, Calif.

August 120-123
Alexander, Robert Evans; Lewis Eugene Wilson; Edwin Ellison Merrill.
Honorable Mention, Apparel Shop,
"Modernize-Main-Street" Competition.
October 235
Allen's Jewelry Store, Syracuse, N. Y.
Illumination. July 71
Alteration and Addition to House of
E. S. Blagden, Lloyd Harbor, Long
Island. Philip L. Goodwin, Architect.
July 32-34
Amalgamated Trust and Savings Bank
Building, Chicago, Ill. Holabird and
Root, Architects. July 7-11
American Houses, Inc., New York,
"Motohome," Garden City, Long
Island, N. Y., Developed by.
August 117
American Institute of Architects, Elections of The. July 3
Analysis of Real Property Inventory
Data for 65 Cities and Communities
in New Jersey. Article by A. B.
Randall, Technical Adviser.
July 35, 36,
July 34 (adv.)
Apartment Enilding, and Real Fester Server.

Data for 55 Cities and Communities in New Jersey. Article by A. B. Randall, Technical Adviser.

July 35, 36, July 34 (adv.)

Apartment Building and Real Estate Office for Dr. J. J. Kocher, Palm Springs, Calif. By A. Lawrence Kocher and Albert Frey.

October 267-275

Apparel Shop, "Modernize-Main-Street" Competition. October 224-239
Apparel Shops in Milwaukee, Wis. Elmer A. Johnson, Architect. July 49
Apparel Store, The. Article by Kenneth C. Welch, Grand Rapids Store Equipment Company. July 62, 63
Apparel Store, Barnetts, Hammond, Ill. Gordon Gundling, Designer. Interior. July 61
Apollo Room in The Raleigh Tavern. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 420, 453, 454
Appraising The A. I. A. Convention. Article by William Stanley Parker, F. A. I. A.
Architect, The Federal Housing Administration. Article by Frederick M. Babcock, Chief, Underwriting Section, Federal Housing Administration. November 285-288
Architects. (See under surnames listed alphabetically.)
Architects of the Williamsburg Restoration. Developed by Concrete Housing. Corporation of America November 265-277
Armostone System of Wall Construction. Developed by Concrete Housing Corporation of America November 265-288

Armostone System of Wall Construction. Developed by Concrete Housing Corporation of America, New York.

Armstrong, Carter & Kenyon, Interior Decorators; William Wilson Wurster, Architect; Thomas D. Church, Landscape Architect. House of W. N. Cumming, Nr. Watsonville, Calif. August 94, 95 August 94, 95

Art Center School, Los Angeles, Calif. Alterations by Kem Weber, Designer. September 156

Art Room, Patterson Park Junior High School, Baltimore, Md. Wyatt and Nolting, Architects. September 200 Aspinwall, Henry T.; Paul F. Simpson. Honorable Mention, Automotive Sales and Service Station, "Modernize-Main-Street" Competition.

Atlantic Big Bear Market, Hollis, N. Y. B. Sumner Gruzen, Architect. September 170

Auditorium, Field House for A Park. Maynard Lyndon, Architect.

Auditorium, Patterson Park Junior High School, Baltimore, Md. Wyatt and Nolting, Architects.

Auditorium, Storm King Theater,
Cornwall-on-Hudson, N. Y. Erard A.
Matthiessen, Architect. October 281
Auditorium, Theater, Oslo, Norway,
Gudolf Blakstad and Jens Dunker,
Architects. September 177
Auer, Michael. Honorable Mention,
Drug Store, "Modernize-Main-Street"
Competition. October 216
Automotive Sales and Service Station,
"Modernize-Main-Street" Competition. October 255-266
Ayscough's Shop on York Road. Restoration of Williamsburg. Perry,
Shaw & Hepburn, Architects.

December 442

В

Babcock, Frederick M., Chief, Underwriting Section, Federal Housing Administration. Article, The Federal Housing Administration Architect.

November 285-288
Baermann, Walter, Designer; Howe and Lescaze, Architects. Desk Lamp.
July 43

July 43

Ball Room Wing of Palace. Restora-tion of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 401-403

Bank Building, Amalgamated Trust and Savings, Chicago, Ill. Holabird and Root, Architects. July 7-11 Banking Room, Amalgamated Trust and Savings Bank Building, Chicago, Ill. Holabird and Root, Architects. July 10 Barlow, Fred, Landscape Architect; H. Roy Kelley, Architect. House of Major Harry L. Toplitt, West Los Angeles, Calif. November 316, 317 Barnett's Apparel Store, Hammond, Ill. Gordon Gundling, Designer. Interior. July 61 Barney, W. Pope. Architect, Executed Under the Direction of. Carl Mackley Houses, Juniata Park Housing Development, Philadelphia, Pa.

November Frontispiece, 290-298

Houses, Juniata Park Housing Development, Philadelphia, Pa.
November Frontispiece, 290-298
"Barnstable, The"—Harbour Green, Massapequa, Long Island, N. Y. Randolph Evans, Architect.
November 322, 323
Bar Z Gunite Wall System; Developed by Soulé Steel Company, Los Angeles, Calif.
August 129
Barragan, Luis, Architect; Juan Luis Barragan, Civil Engineer. Parque de La Revolucion, Guadalajara, Jalisco, Mexico.
September 165-169
Barraghi, Arthur J., Engineer. Designer of Concrete Foundation.
August 109
Stadium.
September 179, 180
Bathing Pavilion and Diving Tower, Wiesbaden, Germany. Franz Schuster and Edmund Fabry, Architects; Wilhelm Hirsch, Landscape Architect.
September 171-175
Baum, Dwight James, Architect, House Design, Low-Cost House Competition, New York Chapter, A. I. A.
August 83
Beard, William, Cellular Copper-Bearing Steel House, Altadena, Calif. Richard J. Neutra, Architect; Gregory Ain, Associate. August 120-123
Beatty, Hamilton and George W. Trayer, U. S. Forest Products Laboratory, Madison, Wis. Article, Prefabrication with Wood.
Beauty Clinic for Cosmetic Demonstrations by Good Housekeening Maga-

August 102-106

Beauty Clinic for Cosmetic Demonstrations by Good Housekeeping Magazine, New York. Eleanor Lemaire, Designer. September 152-155

Bedroom Arrangements: The House Plan. November 301

Bedroom, Contempora House, Rockland County, N. Y. Paul Lester Wiener, Designer. July 28

Bedroom, Modernized, in a Chicago Hotel. J. R. Davidson, Designer. October 276

Bel Geddes, Norman and George Howe: A New and Significant Type of Partnership. July 47

September 204

of Partnership.

September 204
Berger Manufacturing Company, Canton, Ohio, Berloy Steel-Frame House
Developed by Kastner and Stonorov,
Architects.
Berland's Shoe Shop, Chicago, Ill.
Architectural Department, Univer-

Berloy Steel-Frame House, Developed by Berger Manufacturing Company, Canton, Ohio. Kastner and Stonorov. Architects. August 118, 119 Berz, L.; G. McLaughlin; S. C. Reese. Honorable Mention, Automotive Sales and Service Station, "Modernize-Main-Street" Competition.

October 266
Bieg, H. K. Honorable Mention, Food Store, "Modernize-Main-Street" Competition.

Dirnbaum, Phil; Verner Walter Johnson. Honorable Mention, Drug Store, "Modernize-Main-Street" Competition.

October 219
Bissantz, Edgar, Architect. Alterations to Study and Dressing Alcove for Mr. Oscar Moss, Los Angeles, Calif.

September 157-160
Blagden, E. S., Alteration and Addition to House, Lloyd Harbor, Long Island. Philip L. Goodwin, Architect.

July 32-34
Blair, Archibald, Dairy, Smokehouse and Outbuildings. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 362
Blair, House, The. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 443
Blakstad, Gudolf and Jens Dunker, Architects. Theater, Oslo, Norway.

September 176-178
Blue Room in The Wren Building. College of William and Mary. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. Theater, Oslo, Norway.

September 176-178
Blue Room in The Wren Building. College of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 414
Board of Advisory Architects and Others. Restoration of Williamsburg. Perry, Shaw & Hepburn, Photograph, December 356
"Bodleian Plate," The, Representing Williamsburg. Virginia, Between 1723 and 1746.

Book Reviews

A Housing Program for the United States.

November 13 (adv.)

burg. Photograph, December 356
"Bodleian Plate," The, Representing
Williamsburg. Virginia, Between
1723 and 1746. December 365
Book Reviews
A Housing Program for the United
States. November 13 (adv.)
Antonin Raymond, His Work in
Japan, 1920-1935. October 25 (adv.)
Architect's Specifications—How to
Write Them. July 12 (adv.)
Art of The Landscape Garden in
Japan. December 13 (adv.)
As.H.V.E. Guide, 1935. July 12 (adv.)
Beginning Problems in Mechanical
Drawing. July 12 (adv.)
1934 Building and Loan Annals.
August 11 (adv.)
Building to the Skies.
August 12 (adv.)
Das Einfamilienhaus.
August 12 (adv.)
Der Konstruktive Holzhausbau.
July 12 (adv.)
Drawings and Drafting Room Practice.
August 12 (adv.)
Drawings and Drafting Room Practice.
August 12 (adv.)
Housing Problems and Possibilities in the United States.
August 11 (adv.)
Jones' Estimating Tables.
July 12 (adv.)

Jones' Estimating Tables.

July 12 (adv.)

Jones' Estimating Tables.

Kindergarten Chats.

July 12 (adv.)

Manual of Accounting for Architects.
August 12 (adv.)

Mechanical and Electrical Equipment for Buildings.

December 13 (adv.)

Memoirs of The American Academy in Rome. Volume XII.

Modernizing Buildings for Profit.
August 12 (adv.)

Modernizing the Kansas Home.
August 12 (adv.)

Parish Churches of England.
September 13 (adv.)

Proceedings of the Conference on Low-Cost Housing.

Rational Mechanical Drawing, First Year.
October 25 (adv.)

Real Property Inventory of the Cleveland Metropolitan District.
August 12 (adv.)

Six Ways to Figure Radiation.
July 12 (adv.)

Suspension Bridges of Short Span.
December 13 (adv.)

Suspension Bridges of Short Span.

December 13 (adv.)

Swedish Cooperative Wholesale Society's Architects' Office.

September 13 (adv.)

Symbols for Designers

Tests and Design of Steel Wind Bent Irregularities. October 25 (adv.) The Chemistry of Cement and Con-crete. December 13 (adv.)

Irregularities. October 25 (adv.)
The Chemistry of Cement and Concrete.
December 13 (adv.)
The Home Workshop.
December 13 (adv.)
The Hospital Yearbook, 1934.
July 12 (adv.)
The House of Health: How to Build it.
September 13 (adv.)
The New Architectural Sculpture.
December 13 (adv.)
The New Architectural Sculpture.
December 13 (adv.)
The Use of Brick in French Architecture—The Midi. August 11 (adv.)
Three Monographs on Color: (1)
Color Chemistry; (2) Color as Light; (3) Color in Use. November 13 (adv.)
Tools of Tomorrow.
November 13 (adv.)
What Slum Dwellers Want in Housing.
November 13 (adv.)
Year Book, 1935, New York Society of Architects. September 13 (adv.)
Book Shop, Satyr, Los Angeles, Calif.
J. R. Davidson, Designer. July 56
Botetourt Statue, College of William and Mary. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.
December 41
Boys' School, California Military Academy, Baldwin Hills, Calif. Richard Neutra, Architect.
September 192-195
Brafferton Building. College of Williamsburg. Perry, Shaw & Hepburn, Architects.
September 192-195
Brafferton Building. College of Williamsburg. Perry, Shaw & Hepburn, Architects.
September 192-195
Brafferton Building. College of Williamsburg. Perry, Shaw & Hepburn, Architects.
September 192-195
Brafferton Building. College of Williamsburg. Perry, Shaw & Hepburn, Architects.
September 192-195
Brafferton Building. College of Williamsburg. Perry, Shaw & Hepburn, Architects.
September 192-195

liam and Mary. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 415

Brauning, Leu and Durig, Architects. Store in Basel, Switzerland. July 64

Brickwork, Restored in the James City County Court House. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 373

Brickwork, Shrinkage of Mortar Principal Cause of Leaky. Article by Dr. E. W. Scripture, Jr., Director, Master Builders Research Laboratories. November 347-351

Bridge, George Washington, New York City. August Frontispiece Bridge, Liberty, N. Y. Robinson and Steinman, Engineers. Perspective Drawing.

Briggs, Cecil Clair, Architect. Experimental House, New Jersey.

August 115

Brill Brothers Store, New York City. Shreve, Lamb and Harmon, Architects.

Brounn, Morrison. Honorable Mention, Drug Store, "Modernize-Main-Street" Competition.

Drug Store, "Modernize-Main-Street" Competition.

Bryggman, Erik, Architect. Chapel in Pargas, Finland. September 185, 186

Building Trends and Outlook. Article by L. Seth Schnitman, Chief Statistician, F. W. Dodge Corporation.

July 15, 16 (adv.) August 21, 22 (adv.)

Built-in Furniture. Concrete House at Nast Hyde, Hatfield, Herts., England. Designed by F. R. S. Yorke.

November 334

Burchard, John Ely. Article, The Rôle of Materials in Modern Housing.

November 341-346

Burgesses' Committee Room in the Capitol. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 391, 392

Bus Terminal, Greyhound Lines, New York City. Thomas W. Lamb, Architect.

September 149-151

Business Pick-Up Brings Revival in Store Building. Article by L. Seth Schnitman, Chief Statistician, F. W. Dodge Corporation.

October 33, 34 (adv.)

Café of All Nations, Mayfair Restaurant, Washington, D. C. Joseph Urban Associates; Irvin L. Scott and Otto Teegen, Architects. July 12-15 Cafeteria, Patterson Park Junior High School, Baltimore, Md. Wyatt and Nolting. Architects. September 200 California Military Academy, Boys' School, Baldwin Hills, Calif. Richard Neutra, Architect.

September 192-195 Capitol, The. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 387-394, 457 Car Shelter, Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. By A. Lawrence Kocher and Albert Frey.

October 274 Carl Mackley Houses. Juniata Park

Pa. Executed Under the Direction of
W. Pope Barney, Architect.
November Frontispiece, 290-298
Carr, J. Gordon. "Modernize-MainStreet" Competition. Honorable
Mention, Apparel Shop. October 232
Honorable Mention, Food Store.
October 250
Carr, William G., Director. Research
Division, National Education Association. Article, Opportunities in
School Modernization.
September 201-204

Carr, William G., Director, Research Division, National Education Association. Article, Opportunities in School Modernization.

September 201-204
Carter-Saunders House, Garden. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 383
Carter's Dress Shop, Palmer House, Chicago, Ill. Sobel and Drielsma, Architects.

Cellular Copper-Bearing Steel House of William Beard, Altadena, Calif. Richard J. Neutra, Architect; Gregory Ain, Associate. August 120-123
Cellular Steel Walls, Palmer; Robertson Keystone Beam Steel Units.

August 127-129
Chair, Original Speaker's, in the Capitol. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 393
Chapel, Pargas, Finland. Erik Bryggman, Architect. September 185, 186
Chapel in The Wren Building. College of Williamsburg. Perry, Shaw & Hepburn, Architects.

Cornell and Nason, Landscape Architects. House at Interlachen Park, Nr. Minneapolis, Minn.

November 325
Church, Thomas D., Landscape Architects. House at Interlachen Park, Nr. Minneapolis, Minn.

November 325
Church, Thomas D., Landscape Architect; Armstrong, Carter & Kenyon, Interior Decorators; William Wilson Wurster, Architect. House of W. N. Cumming, Nr. Watsonville, Calif.

August 94, 95
Church of Montgiscard, France.

August 11 (adv.)
Ciresi, Anthony S. Honorable Mention, Apparel Shop, "Modernize-Main-Street" Competition.

October 236
Classroom Wing, California Military Academy, Baldwin Hills, Calif. Richard Neutra, Architect. September 192
Clauss, Alfred. First Prize, Automotive Sales and Service Station, "Modernize-Main-Street" Competition.

October 256
Closets and Room Arrangements: The House Plan.

November 392
Coates, Wells, Architect. Shop in London.

July 51
Cohn, Lester. Second Prize, Apparel Shop, "Modernize-Main-Street" Competition.

October 26
Coates, Wells, Architect. Shop in London.

Goles-Garrett House. The. Restoration

Coates, Wells, Architect. Snop in London.

Cohn, Lester. Second Prize, Apparel Shop, "Modernize-Main-Street" Competition.

Coke-Garrett House, The. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

College of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 440, 441

College of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 364, 368, 410-415

Colonial Houses, Types of. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 374, 375

Colonial Williamsburg, Restoration of.

December 374, 376
Colonial Williamsburg, Restoration of.
Perry, Shaw & Hepburn, Architects.
December Frontispiece, 359-458
Comfort Stations, Parque de La Revolucion, Guadalajara, Jalisco, Mexico. Luis Barragan, Architect; Juan Luis Barragan, Civil Engineer.
September 169

Commercial Building Prospects, Improved Factory and. Article by L. Seth Schnitman, Chief Statistician, F.

W. Dodge Corporation.
August 21, 22 (adv.) August 21, 22 (adv.)

Committee Room, Burgesses, in the
Capitol. Restoration of Williamsburg. Perry, Shaw & Hepburn,
Architects. December 394

Community Hall, Carl Mackley Houses,
Juniata Park Housing Development,
Philadelphia, Pa. Executed Under
the Direction of W. Pope Barney.
Architect.
Concrete House Construction.

August 110

Concrete House at Nast Hyde, Hatfield

Concrete House at Nast Hyde, Hatfield, Herts., England. Designed by F. R. S. Yorke. November 333-340 Concrete Houses, Genesta Road, Plum-stead, England. Pilichowski and Lubekkin Architects.

America, New York. Armostone System of Wall Construction.

Construction Details, Concrete House at Nast Hyde, Hatfield, Herts., England. Designed by F. R. S. Yorke.

November 339, 340

Construction Details, Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. By A. Lawrence Kocher and Albert Frey.

Construction Features, Carl Mackley Houses, Juniata Park Housing Development, Philadelphia, Pa. Executed Under the Direction of W. Pope Barney, Architect.

November 290, 292

Contempora House, Rockland County, N. Y. Paul Lester Wiener, Designer. July 22-29

Cooling, A. Albert. Honorable Mention, Automotive Sales and Service Station, "Modernize-Main-Street" Competition.

Cotober 263

Corridor, Dormitory, California Military Academy, Baldwin Hills, Calif. Richard Neutra, Architect.

September 195

Cosmetic Demonstrations by Good Housekeeping Magazine, New York, Beauty Clinic for. Eleanor Lemaire, Designer.

Cottages, Professional's and Superintendent's, at Forsgate Country Club, Jamesburg, N. J. Clifford Charles Wendehack, Architect.

November 326, 327

Council Chamber in The Capitol. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 390

Country Club, Jamesburg, N. J., Professional's and Superintendent's Cottages at Forsgate. Clifford Charles Wendehack, Architect.

November 326, 327

Country House at Poppenbuttel, Germany. Albert Hauschildt, Architects.

Wendehack, Architect.

November 330-332

Country House at Poppenbuttel, Germany. Albert Hauschildt, Architect.

Vounty. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 373, 416-418

Court Room in The Capitol, General. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 371, 416-418

Court Room in The Capitol, General. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architect. House of Frederic H. Ryder, Rockville Center, N. Y.

December 457

Crane, William P., Architect. House of Frederic H. Ryder, Rockville Center, N. Y.

December 371

Crett, Paul P., Architect.

Viny 30, 31

Creighton, Frank R., Architect. House of Fr

D

Daphne Room in The Raleigh Tavern.
Restoration of Williamsburg. Perry,
Shaw & Hepburn, Architects.
December 422, 423
Davidson, J. R., Designer. Flower
Shop in Los Angeles, Calif. July 53
Modernized Rooms in a Chicago
Hotel. October 276, 277
Satyr Book Shop, Los Angeles, Calif.
July 56
Davidson Shop. Restoration of Williamsburg. Perry, Shaw & Hepburn,
Architects. December 446
De Forest, H. Lockwood, House, Cold
Spring Harbor, Long Island, N. Y.
W. Stuart Thompson, Architect.
August 96-100
Dehart, A., Architect. House of H. O.
Voorhis, Plainfield, N. J.
Demonstration Room, Beauty Clinic
for Cosmetic Demonstrations by
Good Housekeeping Magazine, New
York. Eleanor Lemaire, Designer.
September 154, 155
Design for Beauty Shop. Joseph
Ringel, Architect. July 53

Design for Beauty Shop. Joseph Ringel, Architect. July 53 Design for Flower Shop in Los Ange-les, Calif. By J. R. Davidson. July 53

Desk, Study for Mr. Oscar Moss, Los Angeles, Calif. Alterations by Ed-

Details from Virginia, Comparative.
Restoration of Williamsburg. Perry,
Shaw & Hepburn, Architects.

December 367

Dining Hall in The Raleigh Tavern.
Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 450

Dining Room December 421, 451

Dining Room, Contempora House,
Rockland County, N. Y. Paul
Lester Wiener, Designer. July 27

Dining Room, House of H. Lockwood
De Forest, Cold Spring Harbor, Long
Island, N. Y. W. Stuart Thompson,
Architect.
Dining Room, Mayfair Restaurant, Café
of All Nations, Washington, D. C.
Joseph Urban Associates; Irvin L.
Scott and Otto Teegen, Architects.

July 14, 15

Dining Room in The Travis House

Dining Room in The Travis House.
Restoration of Williamsburg. Perry,
Shaw & Hepburn, Architects.

Dining Space, House of Prof. Malcolm Willey, Minneapolis, Minn. Frank Lloyd Wright, Architect.

Lloyd Wright, Architect.

November 315

Diving Tower and Bathing Pavilion, Wiesbaden, Germany. Franz Schuster and Edmund Fabry, Architects; Wilhelm Hirsch, Landscape Architect. September 171-175

Douglass, Donald M. Honorable Mention, Apparel Shop, "Modernize-Main-Street" Competition.

October 239

Dress Shop, Carter's, Palmer House, Chicago, Ill. Sobel and Drielsma, Architects. July 52

Dress Shop, Sally, Detroit, Mich. Sobel and Drielsma, Architects. July 52

Dressing Alcove and Study for Mr. Oscar Moss, Los Angeles, Calif. Alterations by Edgar Bissantz, Architect. September 157-160

Dressing Rooms, Bathing Pavilion, Weisbaden, Germany. Franz Schuster and Edmund Fabry, Architects; Wilhelm Hirsch, Landscape Architect.

September 175

Drug Store, The. Article by C. W. A. Woodburne, Grand Rapids Store Equipment Company. July 64, 65

Drug Store, Abraham, Burlington, Vt. Louis S. Newton, Architect, July 54

Drug Store in Hotel Astor, New York City. Allmon Fordyce, Designer.

July 65

Drug Store, "Modernize-Main-Street"

City. Allmon Fordyce, Designer.

July 65
Drug Store, "Modernize-Main-Street"
Competition. October 211-223
Du Bose, Charles. "Modernize-Main-Street"
Competition. Honorable Mention, Automotive Sales and Service Station. October 260
Honorable Mention, Food Store.
October 246
Du Brul, Raoul L.; Harry J. Trivisonno. Third Prize, Apparel Shop, "Modernize-Main-Street" Competition. October 227
Dunker, Jens and Gudolf Blakstad, Architects. Theater, Oslo, Norway.
September 176-178

Earley Process Precast Mosaic Concrete
Panels. Developed by Earley Process Corp., Washington, D. C.

August 111
November 346
Editorial Publications, Inc., New York,
Offices. William Lescaze, Architect.
September 189-191
Eight Months' Continuous Rise in
Private House Construction.

August 76, 77

Private House Continuous Rise in Private House Construction.

August 76, 77

Elections of The American Institute of Architects.

Electricity For The House. A Check List of Optimum Electrical Facilities for A Six-Room Dwelling. By Henry L. Logan, Engineering Consultant.

August 137-144

Ellison, Martha, House, Hempstead, Long Island, N. Y. M. R. Johnke, Architect.

November 318

Euclid Housing Corporation. House at Euclid, Ohio.

Evans, Randolph, Architect. "The Barnstable"—Harbour Green, Massapequa, Long Island, N. Y.

"The Willshire"—Orchard Hill, Westchester N. Y.

November 321

FHA Modernization Credit Plan Offers Opportunities to Architects. Article by Stewart McDonald, Acting Federal Housing Administrator. October 207, 208 Fabry, Edmund and Franz Schuster

scape Architect. Diving Tower and Bathing Pavilion, Wiesbaden, Germany. September 171-175 Factory and Commercial Building Prospects, Improved. Article by L. Seth Schnitman, Chief Statistician, F. W. Dodge Corporation.
August 21, 22 (adv.) Factory, Otis Elevator Co., Tokyo, Japan. Antonin Raymond, Architect. October 25 (adv.) Federal Housing Administration Architect, The. Article by Frederick M. Babcock, Chief, Underwriting Section, Federal Housing Administration. November 285-288 Federal Housing Administration. November 285-288 Federal Reserve Board Building, Washington, D. C. Winning Design by Paul P. Cret, Architect. July 48 Feldman, Max; Ralph E. Leff; Harry Gottesman. Honorable Mention, Apparel Shop, "Modernize-Main-Street" Competition. October 228 Feltman and Curme Shoe Store, Chicago, Ill. Koenigsberg and Weisfelt, Architects. July 59 Ferar, Montgomery. Honorable Mention, Drug Store. "Modernize-Main-Street"

cago, Ill. Koenigsberg and Weisfelt,
Architects. July 59
Ferar, Montgomery. Honorable Mention, Drug Store, "Modernize-MainStreet" Competition. October 218
Field House for A Park. Maynard
Lyndon, Architect. September 161-164
Fireplace Detail in Hall of Palace.
Restoration of Williamsburg. Perry,
Shaw & Hepburn, Architects.
December 408
Fireplace Details in The Raleigh

Fireplace Details in The Raleigh of Williamsburg. Perry, Shaw Architects.

Daphne Room December 423
Dining Room December 426
Great Room December 426
Fireplace Detail, House of Prof. Malcolm Willey, Minneapolis, Minn. Frank Lloyd Wright, Architect.

November 314
Fisher, Howard T., Architect. Furniture Store Façade. July 56
Floors and Roofs, Gypsteel Plank for.

August 115 Fireplace Details The Raleigh of Williams-& Hepburn,

Floors and Roots, Gypsteel Plank for.

August 115
Food Store, "Modernize-Main-Street"
Competition. Cotober 240-254
Footing Design, Small House. Article
by Sheldon D. Werner.
November 311, 312
Fordyce, Allmon, Designer. Drug Store
in Hotel Astor, New York City.
July 65
Forster, Frank J., Architect. House

Fordyce, Allmon, Designer. Drug Store in Hotel Astor, New York City.

Forster, Frank J., Architect. House Design, Low-Cost House Competition, New York Chapter, A. I. A.

Foulihoux, J. André, Architect. House Designs, Low-Cost House Competition, New York Chapter, A. I. A.

August 79-81, 85

November 300, 301

Foundations.

Fox Store, Hartford, Conn. Taussig and Flesch, Architects. July 71

Foyers and Stairways, Theater, Oslo, Norway. Gudolf Blakstad and Jens Dunker, Architects. September 178

"Frenchman's Map" of Williamsburg, Virginia, 1782. December 372

Frey, Albert and A. Lawrence Kocher. Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. October 267-275

Frost, Frederick G., Architect. House Design, Low-Cost House Competition, New York Chapter, A. I. A.

Fuels and Utility Room, Heating the Small House. A Check List Covering Insulation, Heating Methods. By Theodore F. Rockwell, Instructor in Heating and Ventilation, Carnegie Institute of Technology.

August 131-136

Furnishings, Paints, Furniture and Article by Mrs. Susan Higginson Nash.

Furniture and Furnishings, Paints, Article by Mrs. Susan Higginson Nash

Poecember 447-458

Furniture and Furnishings, Paints, Article by Mrs. Susan Higginson Nash

Furniture and Furnishings, Paints.
Article by Mrs. Susan Higginson
Nash.
December 447-458
Furniture Store, Curtis, New York
City. Ben Schlanger, Architect.
July 51

Furniture Store Façade. July 51 Fisher, Architect. July 56

Gable Detail, Ball Room Wing of Palace. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 403

man, Chief Statistician, F. W. Dodge Corporation. December 25, 26 (adv.) Galt, James, House. Restoration of Williamsburg. Perry, Shaw & Hep-burn, Architects. December 385 Garage Doors and Studio Entrance, Contempora House, Rockland County, N. Y. Paul Lester Wiener, Designer, July 26

Garden of The Carter-Saunders House.
Restoration of Williamsburg. Perry,
Shaw & Hepburn, Architects
December 383
Garden of The John Custis Tenement.
Restoration of Williamsburg. Perry,
Shaw & Hepburn, Architects.
December 384
Garden of The Ludwell-Paradise House.
Restoration of Williamsburg. Perry,
Shaw & Hepburn, Architects.
December 386

Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 386
Garden of Captain Orr's Dwelling. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.
December 386
Garden, The Ryoan-Ji Stone, Kyoto, Japan.

Gardens of The Governor's Palace. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.
December 383, 396-401, 404-407
General Electric "New American Home." Electrical Layout. Royal Barry Wills, Architect.

August 138, 139
George Washington Bridge, New York City.
August Frontispiece
Good Housekeeping Magazine, New York, Beauty Clinic for Cosmetic Demonstrations by. Eleanor Lemaire, Designer.
September 152-155
Goodwin, Philip L, Architect. Alteration and Addition to House of E, S. Blagden, Lloyd Harbor, Long Island, July 32-34
House Design, Low-Cost House Competition, New York Chapter, A. I. A. August 82
Goodwin, Dr. W. A. R., Rector, Bruton Parish, Williamsburg, Va.

House Design, Low-Cost House Competition, New York Chapter, A. I. A. August 82
Goodwin, Dr. W. A. R., Rector, Bruton Parish, Williamsburg, Va.
Portrait, December 357
Gottesman, Harry: Max Feldman: Ralph E. Leff. Honorable Mention, Apparel Shop, "Modernize-Main-Street" Competition.
October 228
Governor's Palace, The. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.
December 366, 368, 378-381, 383, 395-409, 454, 455
Great Hall in the Wren Building. College of William and Mary. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 413
Great Room in The Market Square Tavern. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 426, 427
Greenhouse, Insulated, Boyce Thompson Institute, Yonkers, N. Y.
Greyhound Lines, New York Bus Terminal. Thomas W. Lamb, Architect.
September 149-151
Grocery Stores. Plans. July 54, 55
Gruzen, B. Sumner, Architect. Atlantic Big Bear Market, Hollis, N. Y.
September 170
Guide-Map of Buildings in the City of Williamsburg. Perry, Shaw & Hepburn, Architects of the Restoration.
December 360, 361
Gundling, Gordon, Designer. Barnett's Apparel Store, Hammond, Ill. Interior.
July 61
Guntlie Wall System, Bar Z; Developed by Soulé Steel Company, Los Angeles, Calif.
Gypsteel Plank for Floors and Roofs.
August 115

Haefeli, Max Ernst, Architect. House in Zurich, Switzerland. September Frontispiece

September Frontispiece
Hafermeister Store Building, Watertown, Wis. George Fred Keck, Architect. July 60
Hagopian, Vahan. Designer of Shop
Front and Lettering. July 66
Haneman, John Theodore, Architect.
House Design, Low-Cost House Competition, New York Chapter, A. I. A.
August 79, 80, 86
Harvey Maitland C. Honorshle Men-

Harper, Maitland C. Honorable Mention, Food Store, "Modernize-Main-Street" Competition. October 254
Harrell, G. Foster, Jr. "Modernize-Main-Street" Competition. First Prize, Food Store. October 241
Second Prize, Drug Store.

Hartman, Horace; George Wright. Honorable Mention, Automotive Sales and Service Station, "Modernize-

Hauschildt, Albert, Architect. Country
House at Poppenbuttel, Germany.
November 330-332
Hays and Simpson, Architects. House
Plans, General Electric House Competition, First Prize. November 299
Heating The Small House. A Check
List Covering Insulation, Heating
Methods, Fuels and Utility Room. By
Theodore F. Rockwell, Instructor in
Heating and Ventilation, Carnegie
Institute of Technology.

Heaton, Maurice, Designer. Ceiling
Lighting Fixtures. July 38, 39
Hedberg, Edward. Honorable Mention,
Food Store, "Modernize-Main-Street"
Competition. October 253
Heller, Orlo. Honorable Mention, Apparel Shop, "Modernize-Main-Street"
Competition. October 237
Hepburn, Andrew H., Portait.
December 366
Hironimus, John. Honorable Mention,
Apparel Shop, "Modernize-MainStreet" Competition. October 231
Hirsch, Wilhelm, Landscape Architect;
Franz Schuster and Edmund Fabry,
Architects. Diving Tower and Bathing Pavilion, Welsbaden, Germany.
September 171-175
Hirschman, Joseph M. Honorable Mention, Apparel Shop, "Modernize-MainStreet" Competition. October 231
Hirsch Wilhelm, Landscape Architect;
Franz Schuster and Edmund Fabry,
Architects. Diving Tower and Bathing Pavilion, Welsbaden, Germany.
September 171-175
Hirschman, Joseph M. Honorable Mention, Apparel Shop, "Modernize-MainStreet" Competition. October 233
Historical Background, The.
December 360-362
Holabird and Root, Architects. Amalgamated Trust and Savings Bank
Building, Chicago, Ill. July 7-11
Hollow Walls, Monolith. Monolith
Hollow Walls, Monolith. Monolith
Hollow Walls, Monolith. Scalif.
August 112
Home Building Rises to Higher Levels.
Article by L. Seth Schnittman, Chief
Statistician, F. W. Dodge Corporation. November 21, 22 (adv.)
Hood, Mrs., House, Hempstead, Long
Island, N. Y. M. R. Johnke, Architect.
November 220
Hotel Astor, New York City. Drug
Store. Allmon Fordyce, Designer.
July 65
Hotel, Modernized Rooms in a Chicago.
J. R. Davidson, Designer.

Store. Allmon Fordyce, Designer.

July 65

Hotel, Modernized Rooms in a Chicago.
J. R. Davidson, Designer.

October 276, 277

House. William Lescaze, Architect.

November 302, 303

House of Burgesses in The Capitol.
Restoration of Williamsburg. Perry,
Shaw & Hepburn, Architects.

December 391, 392

House Competition, Low-Cost, New
York Chapter, A. I. A. August 79-87

November 300, 301

House, Concrete, at Nast Hyde, Hatfield, Herts., England. Designed by
F. R. S. Yorke. November 333-340

House Construction, Concrete.

August 110

House Construction, Concrete.

House Construction and Equipment,
Moderate-Cost. August 10-144
House, Electricity For The. A Check
List of Optimum Electrical Facilities
for a Six-Room Dwelling. By Henry
L. Logan, Engineering Consultant.
August 137-144
House at Euclid, Ohio. Built by Euclid
Housing Corporation. August 102
House, Experimental, New Jersey. Cecil
Clair Briggs, Architect. August 115
House Footing Design, Small. Article
by Sheldon D. Werner.
November 311, 312
House, Heating the Small. A Check
List Covering Insulation, Heating
Methods, Fuels and Utility Room.
By Theodore F. Rockwell, Instructor
in Heating and Ventilation, Carnegie
Institute of Technology.
House at Hempstead, Long Island, Experimental.

House at Hempstead, Long Island, Experimental.

House at Interlachen Park, Nr. Minneapolis, Minn. Rollin C. Chapin, Architect; Nichols, Cornell and Nason, Landscape Architects.

chitect; Nichols, Cornell and Nason, Landscape Architects.

House Plan, The: Room Arrangements and Closets. November 299-310

House Plans, Hays and Simpson, Architects. First Prize, General Electric House Competition.

November 299

House, Prefabricated All-Wood, at U. S. Forest Products Laboratory, Madison, Wis. August 102-106

House in Rockville Centre, Long Island, N. Y. M. R. Johnke, Architect.

November 319

House in Zurich, Switzerland, Max Ernst Haefeli, Architect.

September Frontispiece

Houses, Concrete, Genesta Road, Plumstead, England. Pilichowski and Lubetkin, Architects. August 101

Houses, Types of Colonial. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

Housing Development, Juniata Park,
Carl Mackley Houses, Philadelphia,
Pa. Executed under the Direction
of W. Pope Barney, Architect.
November Frontispiece, 290-298
Housing, The Rôle of Materials in
Modern. Article by John Ely Burchard. November 341-346
Howe, George and Norman Bel Geddes:
A New and Significant Type of Partnership. July 47
September 204
Howe and Lescaze, Architects; Walter
Baermann, Designer. Desk Lamps.
July 43

Illumination in Allen's Jewelry Store,
Syracuse, N. Y. July 71
Illustrated News. July 48
Improved Factory and Commercial
Building Prospects. Article by L.
Seth Schnitman, Chief Statistician,
F. W. Dodge Corporation.
August 21, 22 (adv.)
Institutional Buildings, Gains in Public and. Article by L. Seth Schnitman, Chief Statistician, F. W. Dodge
Corporation. December 25, 26 (adv.)
Insulated Greenhouse, Boyce Thompson
Institute, Yonkers, N. Y. July 48
Insulated Steel Construction Company,
Middletown, Ohio; Steelox Company,
Chicago, Ill. Steelox House Developed by.
November 344
Insulation, Heating Methods, Fuels and
Utility Room, Heating the Small
House. A Check List Covering. By
Theodore F. Rockwell, Instructor in
Heating and Ventilation, Carnegie
Institue of Technology.
Interiors of Governor's Palace. Measured Drawings. Restoration of Williamsburg. Perry, Shaw & Hepburn,
Architects.

Jefferson, Thomas. Measured Drawings of Governor's Palace and the Wren Building, Williamsburg, Virginia. December 368
Jewelry Store, Allen's, Syracuse, N. Y. Illumination. July 71
Johnke, M. R., Architect. House of Martha Ellison, Hempstead, Long Island, N. Y. November 318
House of Mrs. Hood, Hempstead, Long Island, N. Y. November 320
House in Rockville Centre, Long Island, N. Y. November 319
Johns-Manville Transite Walls.

Johns-Manville Transite Walls.

August 130

Johnson, Elmer A., Architect. Apparel
Shops in Milwaukee, Wis. July 49

Johnson, Verner Walter; Phil Birnbaum. Honorable Mention, Drug
Store, "Modernize-Main-Street" Competition.

Jones, Victor N., Robert F. McClelland.
Honorable Mention, Drug Store,
"Modernize-Main-Street" Competition.

October 221

October 221

"Modernize-Main-Street" Competition.

Juniata Park Housing Development,
Carl Mackley Houses, Philadelphia,
Pa. Executed Under the Direction of
W. Pope Barney, Architect.
November Frontispiece, 290-298
Jury: "Modernize-Main-Street" Competition.
October 205, 209

Kastner and Stonorov, Architects. Berloy Steel-Frame House, Developed by Berger Manufacturing Company, Canton, Ohio. August 118, 119
Katz, S. L.; A. Waldorf. Second Prize, Food Store, "Modernize-Main-Street".
Competition. October 242
Kearney, Mrs. A. E., House, Rockville Centre, Long Island, N. Y. Walter D. Spelman, Architect. November 324
Keck, George Fred, Architect. Hafermeister Store Building, Watertown, Wis. July 60
Kelley, H. Roy, Architect: Fred Barlow, Landscape Architect. House of Major Harry L. Toplitt, West Los Angeles, Calif. November 316, 317
Kent School, Kent, Conn. Sports Building, Willis N. Mills, Architect. September 181-184
Kerr House, Kitchen of The, Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 436
Kiesler, Frederick J., Designer, Floor Lamps.
Kimball, Fiske. Article, The Restoration of Colonial Williamsburg in Virginia. December 359
Kitchen, Electrical. General Electric

Kitchen Garden of Palace. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 406, 407
Kitchen of The Kerr House. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 436
Kitchen of The Ludwell-Paradise House. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 434
Kitchen of Market Square Tavern. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 424
Kitchen and Scullery of Palace. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 404, 409
Kitchen of St. George Tucker House. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December Frontispiece
Kitchen, House of Prof. Malcolm Willey, Minneapolis, Minn. Frank Lloyd Wright, Architect. November 315
Kitchen, Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. By A. Lawrence Kocher and Albert Frey. October 273
Klotz, B. J., Designer. Shop Front in Paris.

Kocher, A. Lawrence and Albert Frey. Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. October 267-275
Kocher, Dr. J. J., Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. October 267-275
Kocher, Dr. J. J., Real Estate Office and Apartment Building, Palm Springs, Calif. By A. Lawrence Kocher and Albert Frey.

Koenigsberg and Weisfelt, Architects. Feltman and Curme Shoe Store, Chicago, Ill.

Kohler Village, Wisconsin. July 5

Lamb, Thomas W., Architect. New York Bus Terminal, Greyhound Lines. September 149-151
Lamps. July 42-46
Landscaping, The City Plan and. Article by Arthur A. Shurcliff, Landscape Architect. December 382-386
Latisteel System of Construction. Developed by F. A. Ruppel, Architect, Pasadena, Calif. August 126, 127
Laundry, Electrical. General Electric Company. August 141
Laundry, Roof, Carl Mackley Houses, Juniata Park Housing Development, Philadelphia, Pa. Executed Under the Direction of W. Pope Barney, Architect. Article, New Towns for High-Speed Roads. November 298
Lay, Charles Downing. Landscape Architect. Article, New Towns for High-Speed Roads. November 352-354
Leff, Ralph E.; Harry Gottesman; Max Feldman. Honorable Mention. Apparel Shop, "Modernize-Main-Street" Competition. October 228
Lemaire, Eleanor, Designer. Beauty Clinic for Cosmetic Demonstrations by Good Housekeeping Magazine, New York. September 152-155
Lescaze, William, Architect. House. November 302, 302
Offices, Editorial Publications, Inc., New York. September 159-191

Offices, Editorial Publications, Inc., New York. September 189-191 Lettering, Store. July 66-69 Liberty Bridge, N. Y. Robinson and Steinman, Engineers. Perspective Drawing. Library, Patterson Park Junior High School, Baltimore, Md. Wyatt and Nolting, Architects. September 199 Lighting Fixtures, Ceiling.

July 38, 39, 41

Lighting Fixtures Designed by Kurt
Versen.

Lighting, Store. Article by Henry L.
Logan, Consulting Electrical Engineer.

July 70, 71
Lincoln, F. S., Photographer. Portrait.
December 355

Living Room Arrangements: The House Plan. November 299, 300 Living Room. Concrete House at Nast Hyde, Hatfield, Herts., England. De-signed by F. R. S. Yorke. November 335, 336

Living Room, Contempora House, Rockland County, N. Y. Paul Lester Wiener, Designer. July 26, 29 Living Room, Country House at Poppenbuttel, Germany. Albert Hauschildt, Architect. November 335, 336

Living Room, Prefabricated All-Wood House at U. S. Forest Products Laboratory, Madison, Wis.

House at U. S. Forest Products
Laboratory, Madison, Wis.

August 106
Living-Bedroom, Modernized, in a Chicago Hotel. J. R. Davidson, Designer.

October 277
Lobby, Field House for a Park. Maynard Lyndon, Architect.

September 164
Lobby, Main, Storm King Theater, Cornwall-on-Hudson, N. Y. Erard A. Matthiessen, Architect.

Lockwood, Ernest H., Pasadena, Calif. Lockstone System of Wall Construction.

Lockstone System of Wall Construction. Ernest H. Lockwood, Pasadena, Calif.

Logan, Henry L., Engineering Consultant. Article, Store Lighting.

List of Optimum Electrical Facilities for a Six-Room Dwelling.

Lounge, Storm King Theater, Cornwall-on-Hudson, N. Y. Erard A. Matthiessen, Architect.

Lounge, Storm King Theater, Cornwall-on-Hudson, N. Y. Erard A. Matthiessen, Architect.

October 282
Low-Cost House Competition. New York Chapter, A. I. A. August 137-144
Lounge, Storm King Theater, Cornwall-on-Hudson, N. Y. Erard A. Matthiessen, Architect.

November 300, 301
Lubin, Maurice; Suren Pilafian. "Modernize - Main - Street" Competition.

First Prize, Apparel Shop.

October 225
Honorable Mention, Food Store.

October 244

Honorable Mention, Food Store.

October 244
Second Prize, Automotive Sales and
Service Station.

Ludwell-Paradise House, The, Restoration of Williamsburg. Perry, Shaw
& Hepburn, Architects.

December 386, 432-434
Lumiline Bracket by John R. Weber.
July 40
Lunch Room, "Pewter Mug," Kent,
Conn. Remodeled by Allan McDowell,
Designer.

September 187, 188
Lyndon, Maynard, Architect. Field
House for a Park, September 161-164

McClelland, Robert F.; Victor N. Jones.
Honorable Mention, Drug Store,
"Modernize-Main-Street" Competition. October 221
McDonald, Stewart, Acting Federal
Housing Administrator. Article, FHA
Modernization Credit Plan Offers
Opportunities to Architects.
October 207, 208
McDowell, Allan, Designer. "Pewter
Mug" Lunch Room, Kent, Conn.
September 187, 188
McLaughlin, G.; S. C. Reese; L. Berz.
Honorable Mention, Automotive Sales
and Service Station, "ModernizeMain-Street" Competition.

October 266

Maas, Carl. Honorable Mention, Food Store, "Modernize-Main-Street" Competition.

Mandeville and Sforzina, Designers of Interiors; Starrett and Van Vleck, Architects. Wallach's Store, New York City.

Market, Atlantic Big Bear, Hollis, N.Y.
B. Sumner Gruzen, Architect.

September 170

Market Square Tavern. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 424-427

Marston and Maybury, Architects. House of Arnold R. White, Altadena, Calif.

August 92, 93

Materials in Modern Housing. The October 266

Marston and Maybury, Architects,
House of Arnold R. White, Altadena,
Calif.

Materials in Modern Housing, The
Rôle of. Article by John Ely Burchard.

November 341-346
Matthiessen, Erard A., Architect.
Storm King Theater and Shops,
Cornwall-on-Hudson, N. Y.

October 278-282
Mayfair Restaurant, Café of All Nations, Washington, D. C. Joseph
Urban Associates; Irvin L. Scott and
Otto Teegen, Architects. July 12-15
Measured Drawings of Interiors of
Governor's Palace. Restoration of
Williamsburg, Perry, Shaw & Hepburn, Architects. December 378-381
Merrill, Edwin Ellison; Robert Evans
Alexander; Lewis Eugene Wilson.
Honorable Mention, Apparel Shop,
"Modernize - Main - Street" Competition.

October 235
"Microporite House." Developed by
Pierce Foundation, New York

tion.

"Microporite House." Developed by Pierce Foundation, New York.

Mill, Oatmeal, Kuarnholmen, Sweden.

Kooperativa Office. September 13 (adv.)

Mills. Willis N., Architect. Sports

Building, Kent School, Kent, Conn.

September 181-184

Mirrors: The House Plan.

Models, Study, of Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. By A. Lawrence Kocher and Albert Frey.

Moderate-Cost House Construction and Equipment. August 101-144
Moderate-Cost Private Houses.

Moderate-Cost Private Houses.

August 75

Modernization Credit Plan Offers Opportunities to Architects, FHA. Article by Stewart McDonald, Acting Federal Housing Administrator.

October 207, 208

Modernization, Opportunities in School. Article by William G. Carr, Director, Research Division, National Education Association. September 201-204

"Modernize-Main-Street." July 72

Competition Awards. October 209-266

Modernized Rooms in a Chicago Hotel.

J. R. Davidson, Designer.

October 276, 277

Moldings, Snap-on Stainless Steel.

J. R. Davidson, Designer.
October 276, 277
Moldings, Snap-on Stainless Steel.
August 107
Monolith Hollow Walls. Monolith Hollow Walls. Monolith Hollow Wall Company, Los Angeles, Calif.
August 112
Montgiscard, France, Church of.
Marinosuke Kawasaki, House, Tokyo, Japan. Antonin Raymond, Architect.
October 25 (adv.)
Mortar Principal Cause of Leaky Brickwork, Shrinkage of. Article by Dr. E. W. Scripture, Jr., Director, Master Builders Research Laboratories.
November 347-351
Mortgage Insurance. Standards for.
Mosaic Concrete Panels, Earley Pro-

Mortgage Insurance. Standards for.

August 78
Mosaic Concrete Panels, Earley Process Precast. Developed by Earley
Process Corp., Washington, D. C.

August 111
November 346
Moss, Mr. Oscar, Study and Dressing
Alcove, Los Angeles, Calif. Alterations by Edgar Bissantz, Architect.
September 157-160
"Motohome," Garden City, Long Island,
N. Y. Developed by American
Houses, Inc., New York. August 117
Murals in Mayfair Restaurant, Café
of All Nations, Washington, D.C., by
Joseph Urban Studios. July 12, 14, 15

Nash, Mrs. Susan Higginson. Article, Paints, Furniture and Furnishings. December 447-458 School, California Military Academy, Baldwin Hills, Calif. September 192-195

Neutra, Richard J., Architect; Gregory
Ain, Associate. Cellular CopperBearing Steel House of William
Beard, Altadena, Calif.

Bearing Steel House of William Beard, Altadena, Calif.

New Jersey State Highway Commission. Builders of Clover-Leaf Intersection near Woodbridge, N. J.

November 352

Newton, Louis S., Architect. Abraham Drug Store, Burlington, Vt. July 54

New Towns for High-Speed Roads. Article by Charles Downing Lay, Landscape Architect.

November 352-354

Nichols, Cornell and Nason, Landscape Architects; Rollin C. Chapin, Architect. House at Interlachen Park, Nr. Minneapolis, Minn. November 352-354

Notes on The Architecture. Article by William Graves Perry.

December 363-377

Nursery Arrangements: The House Plan.

November 303

Nursery, Prefabricated All-Wood House at U. S. Forest Products Laboratory, Madison, Wis.

Oatmeal Mill, Kuarnholmen, Sweden.
Kooperativa Forbundet Architects'
Office. September 13 (adv.)
Office and Apartment Building, Real
Estate, for Dr. J. J. Kocher, Palm
Springs, Calif. By A. Lawrence
Kocher and Albert Frey.
October 267-275

Kocher and Albert Frey.
October 267-275
Office, Director's, Beauty Clinic for Cosmetic Demonstrations by Good Housekeeping Magazine, New York.
Eleanor Lemaire, Designer.
September 153
Offices, Editorial Publications, Inc., New York. William Lescaze, Architect. September 189-191
Opportunities in School Modernization. Article by William G. Carr, Director, Research Division, National Education Association. September 201-204
Orr, Captain, Dwelling. Restoration of Williamsburg, Perry Shaw & Hanger 1997
Williamsburg, Perry Shaw & Hanger 1998
Offices of the State o

Otis Elevator Co. Factory, Tokyo, Japan. Antonin Raymond, Architect. October 25 (adv.) Outbuilding in Vegetable Garden of Palace. Restoration of Williams-burg. Perry, Shaw & Hepburn, Architects. December 407

Paint Colors Used in Restoration of Room Interiors in Colonial Williams-burg, Samples of. Perry, Shaw & Hepburn, Architects.

Paint Colors Used in Restoration of Room Interiors in Colonial Williamsburg, Samples of. Perry, Shaw & Hepburn, Architects, December 454, 455 Paints, Furniture and Furnishings. Article by Mrs. Susan Higginson Nash. December 366, 368, 378-381, 383, 395-409, 454, 455 Palace, The Governor's. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 366, 368, 378-381, 383, 395-409, 454, 455 Palace Green. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 397 Palmer Cellular Steel Walls; Robertson Keystone Beam Steel Units. August 127-129 Pankuch, J. J., Theo. B. Voyvodick. Honorable Mention, Food Store, "Modernize-Main-Street" Competition. October 245 Park, Field House for a. Maynard Lyndon, Architect. September 161-164 Parker, William Stanley, F. A. I. A. Article, Appraising The A. I. A. Convention. Parque de La Revolucion, Guadalajara, Jalisco, Mexico. Luis Barragan, Architect; Juan Luis Barragan, Civil Engineer. September 196-200 Pawley, Frederic Arden. Compiler of Check List, The Retail Store. Park Junior High School, Baltimore, Md. Wyatt and Nolting, Architects. September 196-200 Pawley, Frederic Arden. Compiler of Check List, The Retail Store. Pergola, Parque de La Revolucion, Guadalajara, Jalisco, Mexico. Luis Barragan, Architect. Juan Luis Barragan, Architect. Pergola, Parque de La Revolucion, Guadalajara, Jalisco, Mexico. Luis Barragan, Civil Engineer. September 186-206 Party, Shaw & Hepburn, Architects. Restoration of Colonial Williamsburg. December Frontispiece 359-458 Perry, Shaw & Hepburn, Architects. Restoration of Colonial Williamsburg. December Frontispiece 359-458 Perry, Shaw & Hepburn, Architects. Restoration of Colonial Williamsburg. December Mentioct. House Design, Low-Cost House Competition, New York Chapter, A.I.A. August 38 Pierce Foundation, New York, "Microporite House," December 322-386 Playnach Architect. December 382-386 Playnach Architect. December 382-386 Playground, Parque de La Revolucion, Guadalajara, Jalisco, Mexico Luis Barragan, Civil Engineer

Barragan, Architect; Juan Luis Barragan, Civil Engineer.

September 165-169

Play Space, Roof, Carl Mackley Houses, Juniata Park Housing Development, Philadelphia, Pa. Executed Under the Direction of W. Pope Barney, Architect.

Plym, Lawrence J., House, Niles, Mich. William P. Crane, Architect.

July 30, 31

Pool, Parque de La Revolucion, Guadalajara, Jalisco, Mexico. Luis Barragan, Civil Engineer. September 165

Pools, Carl Mackley Houses, Juniata Park Housing Development, Philadelphia, Pa. Executed Under the Direction of W. Pope Barney, Architect.

November 292, 294, 295

Porcelain Steel House, Developed by Porcelain Steel House, Developed by Porcelain Steel Buildings Company, Columbus, Ohio.

Porch Terrace, Country House at Poppenbuttel, Germany, Albert Hauschildt, Architect.

November 331

Post Office in Group of New Shops. Restoration of Williamsburg.

Precast Concrete Stud Wall Construction. Frank S Swan, Chicago, Ill.
August 113
Precast Slab Wall Construction, Lockstone System of. Ernest H. Lockwood, Pasadena, Calif. August 113
Precast Unit Wall Construction, Armostone System of. Developed by Concrete Housing Corporation of America, New York.
Prefabrication with Wood. Article by George W. Trayer and Hamilton Beatty, U. S. Forest Products Laboratory, Madison, Wis. August 102-106 Illustration.
Present State of Virginia." Reproduction of Original Text (1722) of Hugh Jones, First Professor of Mathematics, College of William and Mary.
Private House Construction, Eight Months' Continuous Rise in.
August 76, 77
Private Houses, Moderate-Cost.
August 75
Prize Winners, "Modernize - Main -Private Houses, Moderate-Cost.

August 75
Prize Winners, "Modernize-MainStreet" Competition. October 210-266
Professional's Cottage at Forsgate
Country Club, Jamesburg, N. J.
Clifford Charles Wendehack, Architect.
November 326
Public and Institutional Buildings,
Gains in. Article by L. Seth Schnitman, Chief Statistician, F. W. Dodge
Corporation. December 25, 26 (adv.)
Purdie's Dwelling. Restoration of
Williamsburg. Perry, Shaw & Hepburn, Architects.
December 435 Raleigh Tavern. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 376, 419-423, 450, 451, 453, 454
Randall, A. B., Technical Adviser. Article, Analysis of Real Property Inventory Data for 65 Cities and Communities in New Jersey.

Raymond, Antonin, Architect. Otis Elevator Co. Factory, Tokyo, Japan. October 25 (adv.) Residence of Marinosuke Kawasaki, Tokyo, Japan. October 25 (adv.) Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. By A. Lawrence Kocher and Albert Frey.

Real Property Inventory Data for 65 Cities and Communities in New Jersey, Analysis of. Article by A. B. Randall, Technical Adviser.

July 35, 36 34 (adv.)
Reception Room, Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. By A. Lawrence Kocher and Albert Frey. October 272 Recher, George D. Honorable Mention, Apparel Shop, "Modernize Main"

Recher, George D. Honorable Mention,
Apparel Shop, "Modernize - MainStreet" Competition. October 229
Reese, S. C.; L. Berz; G. McLaughlin.
Honorable Mention, Automotive Sales
and Service Station, "ModernizeMain-Street" Competition.
October 266
Residential Building Forges Aleged

Residential Building Forges Ahead.
Article by L. Seth Schnitman, Chief Statistician, F. W. Dodge Corporation.
Quly 15, 16 (adv.)
Residential Construction a New Factor in the 1935 Recovery Trend.
Sentember 147

in the 1935 Recovery Trend.

September 147

Restaurant, Mayfair, Café of All
Nations, Washington, D. C. Joseph
Urban Associates; Irvin L. Scott and
Otto Teegen, Architects. July 12-15

Restaurant, New York City. Designed
by Ross-Frankel, Inc. July 51

Restoration of Colonial Williamsburg.
Perry, Shaw & Hepburn, Architects.
December Frontispiece, 359-458

Restoration of Colonial Williamsburg
in Virginia, The. Article by Fiske
Kimball. December 359

Retail Store, The. Check List Compiled by Frederic Arden Pawley.

July 50-58

Revolutionary Burying Ground
Palace Gardens. Restoration of Wil-

Revolutionary Burying Ground in Palace Gardens. Restoration of Williamsburg. Perry, Shaw & Hepburn. Architects. December 396 Ringel, Joseph, Architect. Design for Beauty Shop.

Road, High-Speed Automobile, Between Frankfurt and Darmstadt. Germany. November 352

Roads, New Towns for High-Speed. Article by Charles Downing Lay, Landscape Architect.

Robertson Keystone Beam Steel Units; Palmer Cellular Steel Walls.

Robinson and Steinman, Engineers.
Liberty Bridge, N. Y. Perspective
Drawing.

Rockefeller, John D., Jr., Portrait.
December 357

Rockwell, Theodore F., Instructor in
Heating and Ventilation, Carnegie
Institute of Technology. Heating
The Small House. A Check List
Covering Insulation, Heating Methods, Fuels and Utility Room.

August 131-126

Rodde, Herbert L. Honorable Mention,
Apparel Shop, "Modernize-MainStreet" Competition. October 234
Rôle of Materials in Modern Housing,
The. Article by John Ely Burchard.
November 341-346
Roofs and Floors, Gypsteel Plank for.
August 115
Room Arrangements and Closets: The
House Plan. November 299-310
Ross-Frankel, Inc., Designers. Restaurant, New York City. July 51
Ross, Harry Lon. Honorable Mention,
Drug Store, "Modernize-Main-Street"
Competition. October 222
Ruppel, F. A., Architect, Pasadena,
Calif. Latisteel System of Construction, Developed by. August 126, 127
Ryder, Frederic H., House, Rockville
Center, N. Y. Frank R. Creighton,
Architect.
Ryoan-Ji Stone Garden, Kyoto, Japan.
December 13 (adv.)

Sally Dress Shop, Detroit, Mich. Sobel and Drielsma, Architects. July 52 Salvisberg, O. R., Architect. Perfume Shop in Berlin.
Satyr Book Shop, Los Angeles, Calif. J. R. Davidson, Designer. July 56 Schlanger, Ben, Architect. Curtis Furniture Store, New York City. July 51

Satyr Book Shop, Los Angeles, Calif.
J. R. Davidson, Designer. July 56
Schlanger, Ben, Architect. Curtis
Furniture Store, New York City.
July 51
Schnitman, L. Seth, Chief Statistician,
F. W. Dodge Corporation. Article,
Business Pick-Up Brings Revival in
Store Building. October 33, 34 (adv.)
Article, Gains in Public and Institutional Buildings.
December 25, 26 (adv.)
Article, Home Building Rises to
Higher Levels.
November 21, 22 (adv.)
Article, Improved Factory and Commercial Building Prospects.
August 21, 22 (adv.)
Article, Residential Building Forges
Ahead.
July 15, 16 (adv.)
Article, The Works-Relief Program.
September 21, 22 (adv.)
School Boys', California Military Academy, Baldwin Hills, Calif. Richard
Neutra, Architect. September 192-195
School, Kent, Kent, Conn. Sports
Building. Willis N. Mills, Architect.
School Modernization, Opportunities in.
Article by William G. Carr, Director,
Research Division, National Education Association. September 201-204
School, Patterson Park Junior High,
Baltimore, Md. Wyatt and Nolting,
Architects. September 196-200
Schuster, Franz and Edmund Fabry,
Architects; Wilhelm Hirsch, Landscape Architect. Diving Tower and
Bathing Pavilion, Wiesbaden. Germany.
September 171-175
Scott, Irvin L. and Otto Teegen; Joseph
Urban, Associates, Architects. Mayfair Restaurant, Café of All Nations,
Washington, D. C.
July 12-15
Scripture, Dr. E. W., Jr., Director,
Master Builders Research Laboratories. Article, Shrinkage of Mortar
Principal Cause of Leaky Brickwork.
November 347-351
Service Station, Automotive Sales and,
"Modernize-Main-Street" Competition.
Service Station, Automotive Sales and,
"Modernize-Main-Street" Competition.
October 255-266
Shank, Isadore, "Modernize-MainStreet" Competition. Honorable
Mention, Drug Store, October 217
Third Prize, Automotive Sales and
Service Station. Honorable
Mention, Drug Store, October 217
Third Prize, Automotive Sales and
Service Station. October 258
Shaw, Thomas Mott. Portrait.
December 356

Shaw, Thomas Mott. Portrait.

December 356
Shoe Shop, Berland's, Chicago, Ill.
Architectural Department, University
of Chicago.
Shoe Store, Feltman and Curme, Chicago, Ill. Koenigsberg and Weisfelt.
Architects.

Shop, Berland's Shoe, Chicago, Ill.
Architectural Department, University
of Chicago.

July 59

Architectural Department, University of Chicago.
Shop. Carter's Dress, Palmer House, Chicago, Ill. Sobel and Drielsma. Architects.
Shop. Davidson. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

Shop Front and Lettering. Designed by Vahan Hagopian. July 66 Shop Front in Paris. Designed by B. J. Klotz. July 52 J. Klotz.
Shop in London. Wells Coates, ArchiJuly 51

Shop in London. Wells Coates, Architect.

Shop, Perfume, in Berlin. O. R. Salvisberg, Architect.

Shop, Sally Dress, Detroit, Mich. Sobel and Drielsma, Architects.

July 52
Shop, Satyr Book, Los Angeles, Callf.

J. R. Davidson, Designer.

July 56
Shop, Teterel. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 446
Shop on York Road, Ayscough's. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 442
Shops in Amalgamated Trust and Savings Bank Building, Chicago, Ill.
Holabird and Root, Architects.

July 8, 9

July 8, 9 Vis. El-Shops, Apparel, Milwaukee, Wis. Elmer A. Johnson, Architect. July 49
Shops and Theater, Storm King, Cornwall-on-Hudson, N. Y. Erard A.
Matthiessen, Architect.
Shreve, Lamb and Harmon, Architects.
Brill Brothers Store, New York City.
July 63

Brill Brothers Store, New York City.
July 63
Shrinkage of Mortar Principal Cause
of Leaky Brickwork. Article by Dr.
E. W. Scripture, Jr., Director, Master
Builders Research Laboratories.
November 347-351
Sign of the Golden Ball, The. Restoration of Williamsburg. Perry, Shaw
& Henburn Architects

tion of Williamsburg. Perry, Shaw & Hepburn, Architects.

December 376, 444

Simpson, Paul F.; Henry T. Aspinwall.

Honorable Mention, Automotive Sales and Service Station, "Modernize-Main-Street" Competition.

October 265

Small House Footing Design. Article by Sheldon D. Werner.

November 311, 312

Snap-on Stainless Steel Moldings.

August 107

November 311, 312
Snap-on Stainless Steel Moldings.

August 107
August 107
ter's Dress Shop, Palmer House.
Chicago, Ill.
Sally Dress Shop, Detroit, Mich.
July 52
Sally Dress Shop, Detroit, Mich.
July 52
Soulé Steel Company, Los Angeles,
Calif. Bar Z Gunite Wall System.
Developed by.
August 129
Spector, Victor. Honorable Mention,
Automotive Sales and Service Station, "Modernize-Main-Street" Competition.
October 261
Speedway Below Lincoln Memorial,
Washington, D. C.
October Frontispiece
Spelman, Walter D., Architect. House of Mrs. A. E. Kearney, Rockville
Centre, Long Island, N. Y.
Spiral Stair, Bathing Pavilion. Wiesbaden, Germany.
Franz Schuster

Centre, Long Island, N. Y.

November 324

Spiral Stair, Bathing Pavilion, Wiesbaden, Germany. Franz Schuster and Edmund Fabry. Architects; Wilhelm Hirsch, Landscape Architect.

Sports Building, Kent School, Kent, Conn. Willis N. Mills, Architect.

Sports Field, Bathing Pavilion, Wiesbaden, Germany. Franz Schuster and Edmund Fabry, Architects; Wilhelm Hirsch, Landscape Architect.

Sproule, J. R. "Modernize-Main-Street" Competition. Honorable Mention, Apparel Shop. October 238

Honorable Mention, Automotive Sales and Service Station. October 259

Third Prize, Food Store. October 243

Stable Yard of The Market Square Tavern. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 425

Stadium. Arthur J. Barzaghi, Engineer. September 179, 186

Standardized Prefabricated Wall Unit. August 107

Standards for Mortgage Insurance. August 78

Standards for Mortgage Insurance.

Standards for Mortgage Insurance.

August 78

August 78

Starrett and Van Vleck, Architects;
Mandeville and Sforzina, Designers
of Interiors. Wallach's Store, New
York City.

State and District Offices of the Federal Housing Administration.

August 88

Steel-Frame House, Berloy, Developed
by Berger Manufacturing Company,
Canton, Ohio. Kastner and Stonorov,
Architects.

August 118, 119

Steel House, Cellular Copper-Bearing,
of William Beard, Altadena, Calif,
Richard J. Neutra, Architect; Gregory Ain, Associate, August 120-123

Steel House, Porcelain, Developed by
Porcelain Steel Buildings Company,
Columbus, Ohio.

August 124

Steelox House, Developed by Insulated
Steel Construction Company, Middle-

town, Ohio; Steelox Company, Chicago, Ill.

August 125
November 344
Steps to Canal and Terraces in Palace
Gardens. Restoration of Williamsburg. Perry, Shaw & Hepburn,
Architects. December 405
Store, Abraham Drug, Burlington, Vt.
Louis S. Newton, Architect. July 54
Store, Allen's Jewelry, Syracuse. N. Y.
Illumination. July 71
Store, The Apparel. Article by Kenneth C. Welch, Grand Rapids Store
Equipment Company. July 62, 63
Store, Barnett's Apparel, Hammond, Ill.
Gordon Gundling, Designer. Interior.
July 61
Store in Basel, Switzerland. Brauning, terior.

Store in Basel, Switzerland.

Leu and Durig, Architects.

Leu and Durig, Architects.

Store, Brill Brothers, New York City.

Shreve, Lamb and Harmon, Archi
July 63 tects. core in Budapest. Ludwig Kozma, July 65 Store in Budapest. Ludwig Kozma, Architect. July 65 Store Building, Business Pick-Up Brings Revival in. Article by L. Seth Schnitman, Chief Statistician, F. W. Schnitman, Chief Statistician, F. W. Dodge Corporation.
October 33, 34 (adv.)
Store Building, Hafermeister, Watertown, Wis. George Fred Keck, Architect.
Store, Curtis Furniture, New York City. Ben Schlanger, Architect.
July 51 Architect.

Store, Curtis Furniture, New York City. Ben Schlanger, Architect.

July 51

Store Designs, "Modernize-Main-Street" Competition.
October 211-254
Store, Drug, in Hotel Astor, New York City. Allmon Fordyce, Designer.

July 65

Store, The Drug. Article by C. W. A. Woodburne, Grand Rapids Store Equipment Company.
July 64, 65
Store in Dusseldorf, Germany. Bernard Pfau, Architect.
July 64

Store, Feltman and Curme Shoe, Chicago, Ill. Koenigsberg and Weisfelt. Architects.
July 59
Store, Fox, Hartford, Conn. Taussig and Flesch, Architects.
July 71
Store in Frankfort. H. Zweigenthal, Architect.
July 66-69
Store Lighting. Article by Henry L. Logan, Consulting Electrical Engineer.

July 70, 71
Store, The Retail. Check List Compiled by Frederic Arden Pawley.

Store, Taylor, Cleveland, Ohio. Walker and Weeks, Architects.
July 16, 17
Store, Wallach's, New York City. Starrett and Van Vleck, Architects; Mandeville and Storzina, Designers of Interiors.
July 18, 17
Stores, Grocery. Plans.
July 18, 25
Storm King Theater and Shops, Cornwall-on-Hudson, N. Y. Erard A. Matthlessen, Architect.

Stubbins, Hugh A., Jr.; Royal Barry Wills. Honorable Mention. Food Store, "Modernize-Main-Street" Competition.
October 278-282
Stubbins, Hugh A., Jr.; Royal Barry Wills. Honorable Mention. Food Store, "Modernize-Main-Street" Competition.
October 278-282
Stubbins, Los Angeles, Calif. Alterations by Edgar Bissantz, Architect.
September 157-160
Sugarman, Irwin A. Honorable Mention, Apparel Shop, "Modernize-Main-Street" Competition.
October 230
Sullivan, Louis H. Portrait.

July 11 (adv.)

Sullivan, Louis H. Portrait.
July 11 (adv.)
Superintendent's Cottage at Forsgate
Country Club, Jamesburg, N. J. Clifford Charles Wendehack, Architect.
November 327
Swan System of Wall Construction.
Developed by Frank S. Swan, Chicago, Ill.
August 113
Swicegood, M. Righton. First Prize,
Drug Store, "Modernize-Main-Street"
Competition.

T

Tabb House. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 370, 371
Taro, Thomas D. Honorable Mention, Automotive Sales and Service Station, "Modernize-Main-Street" Competition. October 262
Taussig and Flesch, Architects. Fox Store, Hartford, Conn. July 71
Taylor Store, Cleveland, Ohio. Walker and Weeks, Architects. July 16, 17
Teague, Walter Dorwin. Designer of Store Lettering. July 67
Technical News and Research. Shrinkage of Mortar Principal Cause of Leaky Brickwork. Article by Dr. E. W. Scripture, Jr., Director, Master Builders Research Laboratories.

November 347-351
Teegen, Otto and Irvin L. Scott; Joseph Urban, Associates, Architects. Mayfair Restaurant, Café of All Nations, Washington, D. C. July 12-15

Terrace, Bathing Pavilion, Weisbaden, Germany. Franz Schuster and Ed-mund Fabry, Architects; Wilhelm Hirsch, Landscape Architect. September 175

Terrace, Covered, Real Estate Office and Apartment Building for Dr. J. J. Kocher, Palm Springs, Calif. By A. Lawrence Kocher and Albert Frey. October 270

Teterel Shop. Restoration of Williams-burg. Perry, Shaw & Hepburn, Architects. December 446 Theater, Oslo, Norway. Gudolf Blak-stad and Jens Dunker, Architects. September 176-178

September 176-178

Theater and Shops, Storm King, Cornwall-on-Hudson, N. Y. Erard A. Matthiessen, Architect.

October 278-282

Thompson, George Roger, Architect.
House of Edward Townsend, Jr., Douglaston, Long Island, N. Y.

November 328, 329

Thompson, W. Stuart, Architect. House Design, Low-Cost House Competition, New York Chapter, A. I. A. August 84

House of H. Lockwood De Forest,

House of H. Lockwood De Forest, Cold Spring Harbor, Long Island, N. Y.

Toplitt, Major Harry L., House, West Los Angeles, Calif. H. Roy Kelley, Architect; Fred Barlow, Landscape Architect. November 316, 317

Town Plan. Charles Downing Lay, Landscape Architect. November 354

Townsend, Edward, Jr., House, Douglaston, Long Island, N. Y. George Roger Thompson, Architect.

November 328, 329

Transite Walls, Johns Manville.

Travis House, The. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 428-430 Trayer, George W. and Hamilton Beatty, U. S. Forest Products Laboratory, Madison, Wis. Article, Prefabrication with Wood.

Prefabrication with Wood.
August 102-106
August 102-106
Trivisonno, Harry J.; Raoul L. Du
Brul. Third Prize, Apparel Shop,
"Modernize-Main-Street" Competition. October 227
Tucker, St. George, House. Restoration of Williamsburg. Perry, Shaw
& Hepburn, Architects.
December Frontispiece,
438, 439, 455

Tuntke, William. Honorable Mention,
Drug Store, "Modernize-Main-Street"
Competition. October 220

University of Chicago, Architectural
Department. Berland's Shoe Shop,
Chicago, Ill.
Urban, Joseph, Associates; Irwin L.
Scott and Otto Teegen, Architects.
Mayfair Restaurant, Café of All Nations, Washington, D. C.
Urban, Joseph, Studios.
Mayfair Restaurant, Café of All Nations, Washington, D. C.
July 12, 14, 15

Van Powell, Nowland. Honorable Mention, Food Store, "Modernize-Main-Street" Competition. October 252
Vassilieve, Nicholas B. Third Prize,
Drug Store, "Modernize-Main-Street"
Competition. October 214
Versen, Kurt, Designer. Lighting Fixtures on Rosen, Sigismund, J. V. Honorable Mention, Food Store, "Modernize-Main-Street" Competition.

ize-Main-Street" Competition.
October 247
Voorhis, H. O., House, Plainfield, N. J.
A. Dehart, Architect. August 89, 90
Voorhees, Stephen F., New President of
American Institute of Architects.
Portrait.
Voyvodick, Theo. B.; J. J. Pankuch.
Honorable Mention, Food Store,
"Modernize-Main-Street" Competition.

W

Waldorf, A.; S. L. Katz. Second Prize,
Food Store, "Modernize-Main-Street"
Competition. October 242
Walker and Weeks, Architects. Taylor
Store, Cleveland, Ohio. July 16, 17
Wall Constructions, Comparison of
Various. August 108
November 290
Wall Unit, Standardized Prefabricated.
August 107 Wallach's Store, New York City. Star-rett and Van Vleck, Architects; Mandeville and Sforzina, Designers of Interiors.

Warburton House. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 371
Weber, John R., Designer. Built-in Ceiling Lighting Fixtures. July 41
Desk Lamp. July 43
Floor Lamp. July 44
Floor and Desk Lamp. July 46
Floor and Desk Lamp. July 40
Lumiline Bracket. July 40
Weber, Kem Designer, Alterations to

Weber, Kem, Designer.
Art Center School,
Calif.

Alterations to
Los Angeles,
September 156

Calif. September 156
Welch, Kenneth C., Grand Rapids
Store Equipment Company. Article,
The Apparel Store. July 62, 63
Welsh, Lewis E., Architect. House
Design, Low-Cost House Competition,
New York Chapter, A.I.A. August 84
Wendehack, Clifford Charles, Architect. Professional's and Superintendent's Cottages at Forsgate Country
Club, Jamesburg N. J.
November 326, 327

Werner, Sheldon D. Article, Small House Footing Design.

House Footing Design.
November 311, 312
White, Arnold R., House, Altadena,
Calif. Marston and Maybury, Architects.
August 92, 93

Wiener, Paul Lester, Designer. Con-tempora House, Rockland County, N. Y. July 22-29

Wiener, Paul Lester, Designer. Contempora House, Rockland County, N. Y. July 22-29
Willey, Prof. Malcolm, House, Minneapolis, Minn. Frank Lloyd Wright, Architect. November 313-315
William and Mary College. Restoration of Williamsburg. Perry. Shaw & Hepburn, Architects.
December 364, 368, 410-415
Williamsburg-James City County Court House. Restoration of Williamsburg. Perry, Shaw & Hepburn, Architects. December 373, 416-418
Williamsburg, Restoration of Colonial. Perry, Shaw & Hepburn, Architects.
December Frontispiece, 359-468
Wills, Royal Barry, Architect. General Electric "New American Home" August 138, 139
Wills, Royal Barry; Hugh A. Stubbins, Jr. Honorable Mention, Food Store, "Modernize-Main-Street" Competition.
"Willshire, The"—Orchard Hill, Westchester, N. Y. Randolph Evans, Architect.
November 321
Wilson, Lewis Eugene; Edwin Ellison Merrill; Robert Evans Alexander, Honorable Mention, Apparel Shop, "Modernize-Main-Street" Competition.

October 235
Wilson, Maud, Home Economist, Agricultural Experiment Station, Oregon State Agricultural College, Corvallis, Oregon. Information on Closets.
November 304-310
Wolfson, Melvin L. Honorable Mention, Drug. Store, "Modernize-Main-Street" Competition.

Wolfson, Melvin L. Honorable Mention, Drug. Store, "Modernize-Main-Street" Competition.

Wolfson, Melvin L. Honorable Mention, Drug. Store, "Modernize-Main-Street" Competition.

Wolfson, Melvin L. Honorable Mention, Drug. Store, "Modernize-Main-Street" Competition.

November 304-310
Wolfson, Melvin L. Honorable Mention, Drug. Store, "Modernize-Main-Street" Competition.

Voctober 225
Woodburne, C. W. A., Grand Rapids Store Equipment Company. Article, The Drug Store.

July 64, 65
Wood, Prefabrication with. Article by George W. Trayer and Hamilton Beatty, U. S. Forest Products Laboratory, Madison, Wis.

August 102-106
Illustration.

November 343
Works-Relief Program, The. Article by L. Seth. Schnitman, Chief Statis-

Illustration.

Works-Relief Program, The. Article
by L Seth Schnitman, Chief Statistician, F. W. Dodge Corporation.
September 21-24 (adv.)
Wren Building, The. College of William and Mary. Restoration of Williamsburg. Perry, Shaw & Hepburn,
Architects.

liamsburg. Perry, Shaw
Architects.

December 364, 368, 410-414
Wright, Frank Lloyd, Architect. House
of Prof. Malcolm Willey, Minneapolis, Minn. November 313-315
Wright, George; Horace Hartman.
Honorable Mention, Automotive Sales
and Service Station, "ModernizeMain-Street" Competition.

October 264
William Wilson, Architect;

Wurster, William Wilson, Architect; Thomas D. Church, Landscape Architect; Armstrong, Carter & Kenyon, Interior Decorators. House of W. N. Cumming, Nr. Watsonville, Calif.

Wyatt and Nolting Architects. Patterson Park Junior High School, Baltimore, Md.

September 196-200

Yorke, F. R. S., Designer. Concrete House at Nast Hyde, Hatfield, Herts., England. November 333-340

Zweigenthal, H., Architect. Store in



DR. W. A. R. GOODWIN RECTOR, BRUTON PARISH



Frank Ehrenford

JOHN D. ROCKEFELLER, JR.

In 1927, upon suggestion from Dr. W. A. R. Goodwin, rector of Bruton Parish, John D. Rocke-feller, Jr., undertook the restoration of the Colonial area of Williamsburg. Dr. Goodwin was commissioned to purchase the necessary properties.

"The area thus secured was turned over to two corporations which were now formed to carry the undertaking forward. The Williamsburg Holding Corporation (now Williamsburg Restoration, Incorporated) became the executive and business organization in charge of the project. Colonial Williamsburg, Incorporated, was formed to hold title to properties presented to the restoration by the city of Williamsburg, the Association for the Preservation of Virginia Antiquities, and by individual donors; and it has since held and managed properties and buildings which are confined strictly to historical and educational purposes.

"Meanwhile, the firm of Perry, Shaw and Hepburn, architects, was retained to have charge of the architectural development of the plan; Arthur A. Shurcliff to have charge of the landscape restoration and work of city planning; and the firm of Todd and Brown, Incorporated, engineer-contractors, to govern the working organization which carried out the plans developed by the architects and landscape architect and approved by the executive corporation." (From A Brief and True Report for the Traveller Concerning Williamsburg in Virginia, published by Colonial Williamsburg, Inc., 1935).

By 1935 the restoration was complete as to form, although it will continue with respect to detail. Some 440 buildings of late construction have been torn down and 18 moved outside the Colonial area; 66 Colonial buildings have been repaired or restored; 84 have been reproduced upon Colonial foundations. Federal Highway 60 has been diverted to a by-pass road, and streets, open spaces and gardens have resumed their Colonial appearance, with lamp-posts, fences, brick walks, street surfaces and plantings derived from authentic records.



THE ARCHITECTURAL RECORD

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THE RESTORATION OF COLONIAL WILLIAMSBURG IN VIRGINIA

THE CITY of Williamsburg as it existed in 1927 gave little suggestion of its ancient importance in American history and architecture. The Capitol, the Palace, had long been razed to the ground, the original College building had been completely denatured by successive fires and rebuildings. Many of the oldest houses had been transformed out of recognition. Small wonder there were voices raised to doubt the value of attempting its restoration, and to question why some more grateful choice had not been made for such an undertaking.

This stage of memories of Spotswood and Botetourt, of George Wythe and Patrick Henry, of Washington and Jefferson, of Lafayette and Rochambeau—had its physical setting been of a corresponding architectural interest? If indeed it had been so in their day, did enough evidence remain to rebuild it except in an imaginary and theatrical way, without valid relation to the original reality?

Today we know that Williamsburg, at the Revolution, was a town of beauty and of architectural significance; that its major buildings were milestones in the history of American style, its Palace Garden perhaps the most beautiful in America; that the Capitol, the Palace with its garden, the College, the historic Raleigh Tavern, could be evoked in sub-

stantial accuracy and perfection, so that the actors in their halls, could they return, would scarcely guess the intervening destruction and neglect.

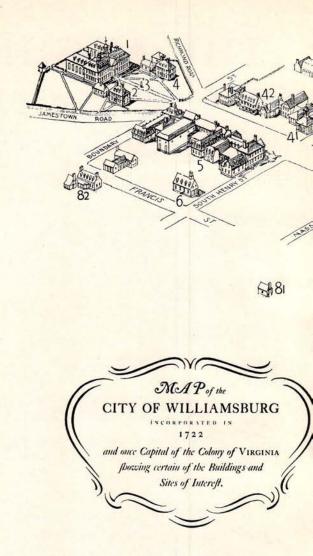
For an undertaking of such magnitude and importance it was vital that the architects should be not only men willing to dedicate themselves to the task with sympathy and understanding, but also men of experience in directing large enterprises. The choice made has proved a happy one. Approaching the work in a belief that perhaps it might require buildings and gardens freely designed in the old manner, the architects, as the soil and the old records commenced to give up their secrets, became passionate historical students, happy to subordinate their creative abilities to a loyal interpretation of the ample evidence discovered. They have shown their capacity to enlist every desirable advice, to develop the necessary historical, archaeological, artistic and executive staff, and to carry the whole work through with the most conspicuous success.

All honor to the vision and energy of Dr. Goodwin, the "onlie begetter" of the enterprise, to the generosity and devotion of the donor, to the taste and skill of the artists and technicians, who have recreated for us this incomparable monument of our early history and art.

—FISKE KIMBALL.

LEGEND OF BUILDINGS ON THE GUIDE-MAP OF WILLIAMSBURG

(1) The Wren Building. (2) Brafferton Building. (3) The Botetourt Statue. (4) The President's House. (5) New Shop Buildings. (6) The New Fire House. (7) Taliaferro-Cole House. (8) The Pulaski Club. (9) The Rectory. (10) Maupin Shop. (11) The James Galt House. (12) John Custis Tenement. (13) The Travis House. (14) Colonial Prison. (15) The Powder Magazine. (16) The Market Square Tavern. (17) Lightfoot House. (18) Captain Orr's Dwelling. (19) Bland-Wetherburn House. (20) Charlton's Inn. (21) Purdie's Dwelling. (22) The Kerr House. (23) The Capitol. (24) Public Record Office. (25) Colonial House. (26) Colonial House. (27) The Raleigh Tavern. (28) The Sign of the Golden Ball. (29) Davidson Shop. (30) Teterel Shop. (31) Virginia Gazette Printing Office Site. (32) Dr. Blair's Apothecary Shop. (33) The Ludwell-Paradise House. (34) The Old Court House. (35) The Norton House. (36) The James Geddy House. (37) Bruton Parish Church. (38) The Armistead House. (39) The Blair House. (40, 41, 42) New Shop Buildings. (43) The Timson House. (44) The Minor House. (45) The Wythe House. (46) The Carter-Saunders House. (47) The Governor's Palace. (48) The Brush House. (49) The Site of the First Theatre in America. (50) The Levingston House. (51) The St. George Tucker House. (52) The Archibald Blair House. (53) The Randolph-Peachy House. (54) Colonial House. (55) Colonial House. (56) The Public Gaol. (57) The Coke-Garrett House. (58) Dr. Robert Waller House. (59) Site of the Second Williamsburg Theatre. (60) Benjamin Waller House. (61) Bassett Hall. (62) Colonial House. (63) Ayscough's Shop. (64) The Semple House. (65) Colonial House. (66) Chiswell-Bucktrout House. (67) The Wig-Maker's House. (68) The Moody House. (69) The Roper House. (70) Colonial Dwelling. (71) Powell-Hallam House. (72) Braxton House. (73) Colonial House. (74) The Orrell House. (75) The Quarter. (76) The Masonic Lodge. (77) The Bracken House. (78) The Allen-Byrd House. (79) Site of the First Colonial Court House. (80) Tazewell Hall. (81) The Custis Kitchen. (82) The Griffin House.



THE HISTORICAL BACKGROUND

WILLIAMSBURG was the seat of government and the economic, educational, religious and social center of the Virginia colony from 1699 to 1779. In the former year land was laid out and surveyed by Theodorick Bland in accordance with an act of the General Assembly "directing the building the Capitoll and the City of Williamsburg" at Middle Plantation.

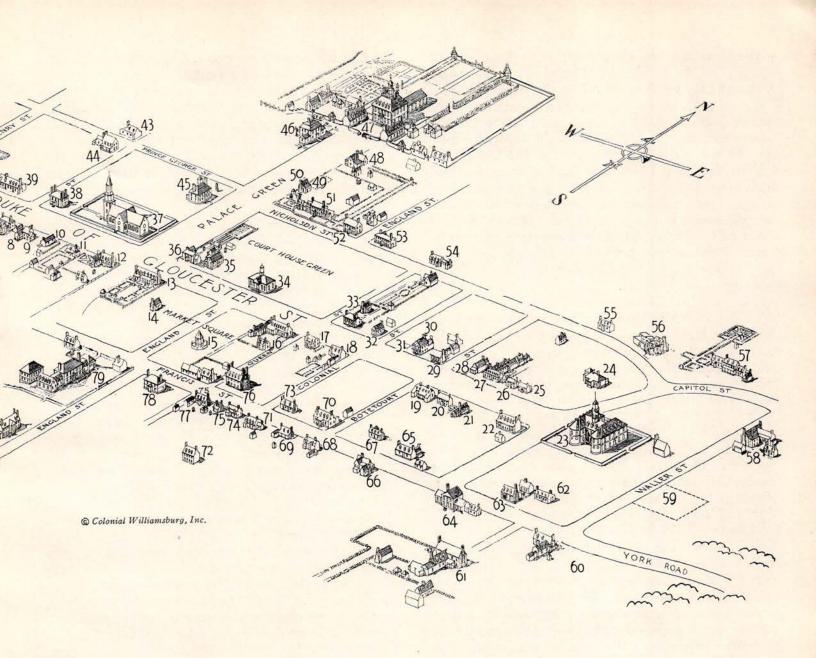
Middle Plantation had been settled in 1633 on high ground midway between the York and James Rivers and had been protected from the Indians by a palisade. It contained two institutions which still survive, Bruton Parish Church and the College of William and Mary. Bruton Parish was organized in 1674 by uniting two older parishes and the removal of the capital to this location created a need for a larger building, which was built between 1710 and 1715 and is still in use.

In 1693 the College of William and Mary (next to Harvard in seniority) was granted a royal charter and the General Assembly ordered its erection "as neare the Church now standing in Middle Plantation old ffields as Convenience will permit." The plan for the main academic building was made by Sir Christopher Wren, surveyor general to their majesties King William and Queen Mary, patrons of the College. Foundation bricks were laid in 1695 under the direction of Thomas Hadley, master builder, and although damaged by three fires (1705, 1859 and 1862) the outside walls are largely original today.

When the city was laid out in 1699 a "noble great street" six poles (99 feet) wide and seven-eighths of a mile long was projected which was later named Duke of Gloucester Street. Its western terminus was the College, and its eastern the Capitol. Parallel to the main street were two streets of lesser width and intersecting it were numerous cross streets.

To the north of the main street and about midway on its length was a broad tree-lined avenue terminated by the royal Governor's Palace, built 1705-1718.

The city plan—Williamsburg was designated as a city in the act of 1699 and was incorporated as such in 1722—included restrictions governing the type of



building which could be erected on the half-acre lots, and provided for public greens and squares. It was an effective placing of open spaces and avenues to emphasize public buildings, and has remained substantially unchanged for more than two centuries.

Colonial Williamsburg, while it served as the capital, occupied an area about a mile square, with perhaps 300 houses and a resident population of approximately 3,000. During "public times," when the assemblies were held and the courts sat, as many as 4,000 more thronged into the city and taxed the capacity of the numerous public houses, taverns, inns and ordinaries. At this time there were fairs, horse races, cock fights, slave auctions, lotteries, theatrical performances, gaming, balls, fireworks and other diversions. Merchants and planters met to transact their business, craftsmen displayed their wares, and numerous shops supplied the latest fashions out of London. Of such times, Colonel Spotswood wrote that he entertained four hundred guests at supper at the Palace, and one of his successors in office, Governor William Gooch said, "the Gentm. and Ladies

here are perfectly well bred not an ill Dancer in my Govt."

In the years prior to the Revolution Williamsburg was one of the most important political centers in the Colonies. An act was passed in 1779 for removing the seat of government to Richmond, and the transfer took place the following year. During the campaign which ended with the surrender of Cornwallis at Yorktown in October, 1781, the British spent ten days in Williamsburg, followed shortly by a concentration there of General Washington's army, the French forces, and the Virginia militia. The French army, after the surrender of Cornwallis, wintered in Williamsburg.

Except for intervals during the Civil and World Wars, Williamsburg has remained a quiet college town and county seat. The battle of Williamsburg was fought in 1862 and Federal troops occupied the place until 1865. In 1917 Williamsburg became the base of supplies for Penniman, a nearby town of 15,000 which manufactured munitions and which has since disappeared.

The population in 1930 was 3,778. Some of the historic Colonial buildings had been destroyed, mostly by fire during the Yorktown Campaign and the Civil War. The Governor's Palace was burned while in use as a hospital in 1781; the Capitol (of which the eastern half had been demolished in 1794 to repair the western half) was burned in 1832, and the Raleigh Tavern in 1859. Buildings of lesser note had been torn down for firewood and for building officers' quarters during the Civil War or had otherwise disappeared in the course of nearly a century and a half. Nevertheless, Williamsburg had maintained both the essentials of its Colonial city plan and a noteworthy proportion of its Colonial buildings.

THE INITIATIVE in the restoration came from Dr. W. A. R. Goodwin and the means from John D. Rockefeller, Jr., both of whom were without doubt influenced by the historic associations of Bruton Parish church, and William and Mary. As rector, Dr. Goodwin brought about the restoration of the church in 1905. In 1928, at his instance, the home of George Wythe (the first professor of the first law course in an American college, teacher of John Marshall, Thomas Jefferson, James Monroe and Henry Clay, and a signer of the Declaration of Independence), was restored.

In 1925 Mr. Rockefeller attended a lecture by Dr. Goodwin in New York before the Phi Beta Kappa Society, founded in 1776 by students of William and Mary. Invited by Dr. Goodwin, Mr. Rockefeller visited Williamsburg later in the year and Dr. Goodwin presented the outline of a plan for restoring the city to its Colonial appearance. In 1927 Dr. Goodwin was commissioned by Mr. Rockefeller to buy the necessary properties. Practically the entire area which had comprised the Colonial city was acquired.

The plan contemplated cooperation from the State legislature, the city of Williamsburg, patriotic

societies, utility corporations and private owners; this was given in generous measure. By the beginning of 1935 the restoration was complete as to form, although it will continue with respect to detail; and the event was signalized by the publication of a handbook of 200 pages, illustrated with ancient maps and prints, entitled A Brief and True Report for the Traveller Concerning Williamsburg in Virginia, from which the facts contained in the present introductory summary are taken.

Four hundred and forty-two buildings of modern construction have been torn down and eighteen moved outside the Colonial area. Sixty-six Colonial buildings have been repaired or restored, while eighty-four have been reproduced upon Colonial foundations. The part of the Colonial area which has been restored includes the Duke of Gloucester Street, the original College yards, the Palace Green, the Court House Green, the Market Square, the Capitol Square and the bordering properties. Federal Highway 60 has been diverted to a by-pass road. The Duke of Gloucester Street and its vicinage have resumed their Colonial appearance, with lamp-posts, fences, brick walks, street surfaces, plantings and the like derived from authentic records.

Among the historic buildings restored or reconstructed are the Governor's Palace with its gardens and outbuildings, the Capitol, the Raleigh Tavern, the Ludwell-Paradise House and the Old Court House of 1770. These are exhibition buildings. Capitol is completely furnished according to evidence of official records; the Raleigh Tavern furnished from data secured in original inventories of its keepers; the Court House contains an exhibit of materials and objects recovered by archaeologists in excavating more than one hundred and fifty Colonial foundations. For history, for architecture, for interior decoration and for landscape architecture in Colonial America, restored Williamsburg is a unique repository of information.

The Archibald Blair dairy, smokehouse and outbuildings before and after restoration.





NOTES ON THE ARCHITECTURE

By WILLIAM GRAVES PERRY

RESTORATION based upon research, and faithful to fact, opens many alluring avenues, but it closes ruthlessly many others just as alluring. Usually the more difficult parts of the journey toward the goal of authenticity offer tempting by-paths and detours. The progress offers also its reward to the persistent pilgrim who finds the road widening and the gradients less difficult to overcome in direct proportion to the number of problems solved. The temptation to philander with exceptions and with concessions to convenience is overcome by the increasing opportunity to apply workable principles to cope with the insistent demand for such concessions.

The Board of Advisory Architects of the Restoration (of which fortunately the managing editor of this magazine is one), faithful and devoted to their trust, laid down ground rules in the early days of 1928 before the architects could go far astray. This decalogue (see page 370) is figuratively engraved in each building, roadway, garden, furnishing or decoration, however slight its relative importance.

There have been breaches in the doctrine which are apparent enough, for since the purpose of the Restoration is to recall and, if possible, to recapture the spirit of the original, it is evident and not reasonably debatable that interesting and essential buildings should now be permitted to coexist although by accident of fire they may not have so coexisted in the Colonial period.

Again it seems reasonable that if part of the spirit of the city is derived from the activity resulting from the life in it, such life should be encouraged and that such encouragement should take the form of dry cellars (as far as may be), bathrooms, heating, lighting, resistant pavements, more lamp-posts than can be justified by record, barriers to curb motor cars from doing things that motor cars do, benches for the exhausted visitor to sink upon, screened porches and camouflaged garages. The art of camouflage indeed receives a real impetus and faces a real test under such conditions.

The fortunate thing is that American history (the revolutionary part of it) was enacted in the Georgian scene. It is reasonably certain that Mr. Rockefeller would not have felt the interest which led him to in-

clude the Restoration of Williamsburg among his many educational philanthropies, had not the important events of our history taken place in Williamsburg during the premierships of Pitt, Fox and North rather than during those of Disraeli and Gladstone.

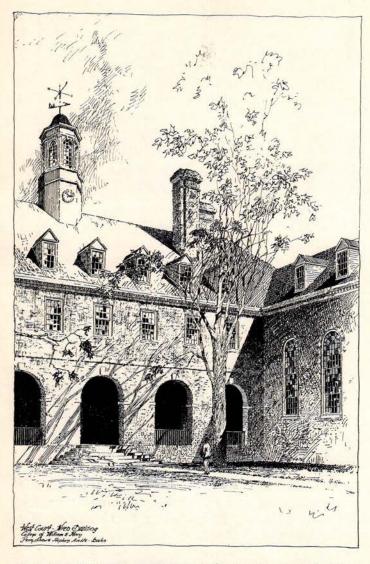
Nowhere in the English Colonies did the transplanted cutting from the mother tree of the later Renaissance flourish more vigorously than in Virginia. It developed in a manner wholly suited to its new environment, slowly and without sacrifice of character. It produced a variety of the species peculiar to its locality and recognizable as such.

This architecture in its simplicity and breadth possesses strength that is robust and articulate, scale that is imposing and generous, and dignity that is calm and eloquent. As such it speaks to us plainly as the expression of the life of a people.

THE VISITOR often approaches the restored city of Williamsburg with a picture in his mind of long avenues heavily shaded against a hot sun, avenues leading to broad classical porticos and high pediments, flanked by lesser orders, balustrades and other familiar accessories.

He arrives to find many of the things that he has expected to find but in different form. Here are avenues, fine ones, the buildings are spacious and large in scale, they are placed upon important axes and there is an orderliness that one associates with monumentality. Apparently the plan of the City was expected to provide full latitude for a special purpose but with a definite limit of size.

The visitor's preconception of the appearance of the buildings is as natural as it is usually erroneous. He has expected a charm and beauty in the old architecture, and is surprised to see how really old this architecture is. He is more familiar with the later styles with which Thomas Jefferson's name is associated in Virginia. He wonders where the columns are—this Southern architecture is not that of his understanding—nor is his surprise diminished when he reads, if he has not already done so, the comments of Jefferson himself on the architecture of Williams-burg. How can the College of William and Mary be



AN EARLY (1928) SKETCH of the west court of the Wren Building. At this time the Bodleian Plate showing three stories of brick and hipped gables had not been discovered.

really attractive if it had been stigmatized by such an authority in 1804 as "a rude misshapen pile, which but it has a roof would be taken for a common brick kiln." He is unaware that by 1804 the conception of beauty and fitness of 1704 had undergone a great change and that he is reading the comments of a man whose education as an amateur in architecture was powerfully influenced by Palladio.

The visitor seeks the Capitol and finding no one of the orders of columns which had been described there by Jefferson in 1781, he stands incredulous. Nor is his confusion lessened by the apparent omission of the columns in the only place in Williamsburg where they had previously been intended, under the pediment of the old Court House.

He asks himself if something is radically wrong and if so, what or who. "Was Jefferson wrong, he spoke of columns; there are none, where are they?"

This visitor and many like him is having his first glimpse through the intricacies of architectural authenticity. He has come to see a restoration, he stays to see one.

NOT THE PUBLIC alone, but the majority of learned architects as well, had but a meager knowledge of the qualities or characteristics of the great family of Tidewater Virginia buildings before the advent of the new highway system in the 1920's. Previously the public had nursed its Jeffersonian version and this version had been fostered in fiction and fanciful illustration. The architects had relied quite properly upon the few though good books which had previously appeared and which naturally laid emphasis upon the more important examples, the new book often repeating the examples cited by its predecessors. The draftsmen who contributed to the "Georgian Period," also Messrs. Coffin, Holden, R. A. Lancaster, Jr., Fiske Kimball, and others, had accomplished what seems today a prodigious labor.

Their journeys must have been tedious and time-consuming. The Tidewater could be examined effectively only by traveling by water. Those traveling by water were faced, however, with a 6-mile trek to Williamsburg. The steamers ignored the shallow bays upon which stood and stand some of the more interesting architectural examples. Today the steamers have ceased.

The new highway system leads one past alluring side roads, past cornfields over which paths appear to lead to something of interest. The 5 to 8 miles of exploration thus opened to the river might or might not reveal its hidden treasure. Five years ago "wattled" or "cobbed" chimneys could be found on wayside cabins, today scarcely one remains. A cabin or a group of outbuildings adjacent to the foundations upon which the main building once stood would usually reward the excursion.

But often the prize would be found; an early example, undisturbed save by neglect and the ravages of termites but still with more than a hint of its ancient arrangement of fences, quarters, barn, paneling and original color. The garden would still contain much of its boxwood. The falls or terraces would still be traceable and the axial principle would again be confirmed by the apparent effort at symmetry carried so far at times that the entrance drive would lie determinedly upon the main axis and across depressions; a severe strain on convenience. Almost invariably, where houses near the highroad are placed obliquely to it, this drive will selfconsciously traverse a long hypotenuse to remain true to its tradition, although a drive placed on the short side of the right triangle would lead to the road in half the distance.

THE FIRST quality that was disclosed to the architects and their ardent associates, who spent during the first three years of the Restoration every available hour in exploration, measurement and photography, and since then many of their weekends, was this one of formality and symmetry.

This symmetry has been recognized as an essential quality of the great houses and monumental buildings of the Tidewater, but the rule had not been established until then that the same quality was shared also by the most humble dwelling of the white population. It was important to know. The general problem of restoration was at once greatly simplified.

Simultaneously, the landscape architect and his assistants had gone far afield and had collected data on garden design and relationship to house through the Southern Colonies; all his data tended to bear out the evidence of nearby examples of geometrical

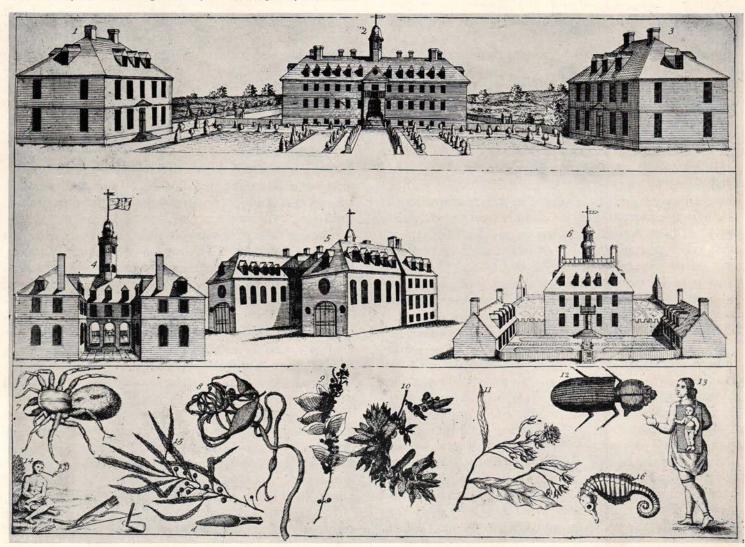
arrangement based upon a balanced plan.

Study of distant architectural examples was revealing as a means to localize and to identify idiomatic employment of detail. It also assisted in closer appraisement of dates of buildings and the length of life of certain usages.

Williamsburg people built in the Piedmont and the Shenandoah Valley. Their houses stand today clearly as derivatives in form and detail from the Williamsburg pattern. Williamsburg, being a city and planned as one, imposed restrictions upon its buildings and dwellings that were unnecessary in the wide freedom of the rural countryside. A building line was established 6 feet back from the line of the Duke of Gloucester Street on both sides in 1705. While a desirable uniformity was thus achieved, the attractive approach on the axis was lost and it is only on the garden side that the familiar arrangement is to be seen.

IN RESTORATION one finds simple problems solvable in the light of a measured and excavated foundation, the successive dates of the parts of which have been identified. The research worker has found, in connection with the same building, land grants, deeds, inventories, newspaper advertisements, records of loss by fire, the early insurance policy with a graph of the building on the lot and with a brief description of each building, perhaps also a photograph or a

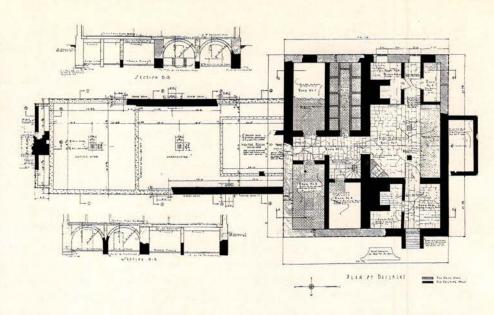
THE "BODLEIAN PLATE"—a copper plate engraving found in the archives of the Bodleian Library at Oxford, England—represents: (1) Brafferton Hall. (2) The Wren Building, College of William and Mary. (3) The President's House. (4) The Capitol. (5) The Wren Building from the southwest with unusual 3-story brick design in the court and hipped gables. (6) The Palace with its flanking buildings and garden. . . . This plate is later than 1723, the date of the erection of the chimneys on the Capitol and probably earlier than 1746, the date of the destruction of the Capitol; it may have been intended as an illustration for an edition of the "Dividing Line" of William Byrd of Westover.







Layton's Studio



PLAN OF PALACE prepared by the Architects' Division of Research and Record. The parts indicated in solid black show the original existing walls. The two photographs show these brick walls as found in the excavations, as well as the Purbeck stone pavement of the Palace basement. In the upper view can be seen the fireplace walls. The lower view shows a brick bulkhead entrance; with the nosings of the steps rotted away.

report from an aged resident who remembers its appearance. The period of the house is further checked by a meticulous examination of the brick in the foundations, the mortar and, of course, the bond. A measured archaeological drawing is made and the foundation backfilled for protection while drawings of the restored building are prepared. The interesting fragments of household utensils of many kinds having been sifted from the fill by screening are plotted, cleaned, marked, catalogued and placed on exhibition.

Study of the resultant mass of excavated material establishes, by comparison of quantities and weights, the relative popularity of types of ware, utensils and the like at different periods. Such study also establishes a clear visual conception of the manner or scale of living enjoyed by the community, the degree of its dependence upon England and the Continent for its merchandise—so far at least, as metal, pottery, china and glass and even shoes are concerned. The contemporary records, advertisements, letters and manifests are thereby corroborated and defined.

In restoration one also finds problems less easily solved; for example, evidence in quantity will be available concerning both the foundations and the history of a building, and much will be known of its detail and character, but the year of its construction will antedate that of any surviving example of its type in the Tidewater.

Such was the case of the Governor's house, the first domestic building of importance in Virginia to incorporate in its parts and dependencies the characteristics of the new architectural renaissance of the era of William and Mary and Queen Anne. When completed about 1718 its design must have exerted a profound influence upon the minds of the planters who were later to become the great landowners and who came here to meet their governor. This structure, appearing to them as an example of the new fashion in England bodily transplanted, would have been studied and admired and the spirit of the design and detail would have been emulated in the construction of the great country houses of the next decade or more.

Each great house of this subsequent period in Virginia is a distinct personality in the wide relationship of a homogeneous family. No one is readily mistaken for another yet no one can be mistaken as unrelated to the others.

The Governor's House is the town residence of a person of quality. The others are country houses, each conceived in a manner best suited, as it appeared to the owner, to his needs and desires. Symmetry of plan extends in most of them to the flanking buildings and further to an exact balance of many important features. Balance of plan extends to the minor elements and is responsible for the interest which results from the balance of non-identical elements arranged for convenience and for functional purpose.

From somewhere, other than from sporadic sources such as the architectural vocabulary of different "overseers" (the 18th century architects) imported from England for the purpose, must have sprung or developed the characteristics which in their total stamp each house as a member of the Virginia family.

It has been assumed in the Restoration that some of these characteristics sprang from the Governor's

House. For example, it became fashionable to break interior cornices over pilasters, window architraves, key stones and even over brackets only. It is reasonable to suppose that this system, familiar to the builders of Bristol and other places in England, and used at other scales elsewhere in the Colonies, may have been generally admired in some frequently visited room in the first house of the Colony. The paneling of the Entrance Hall will therefore be found to be so treated.

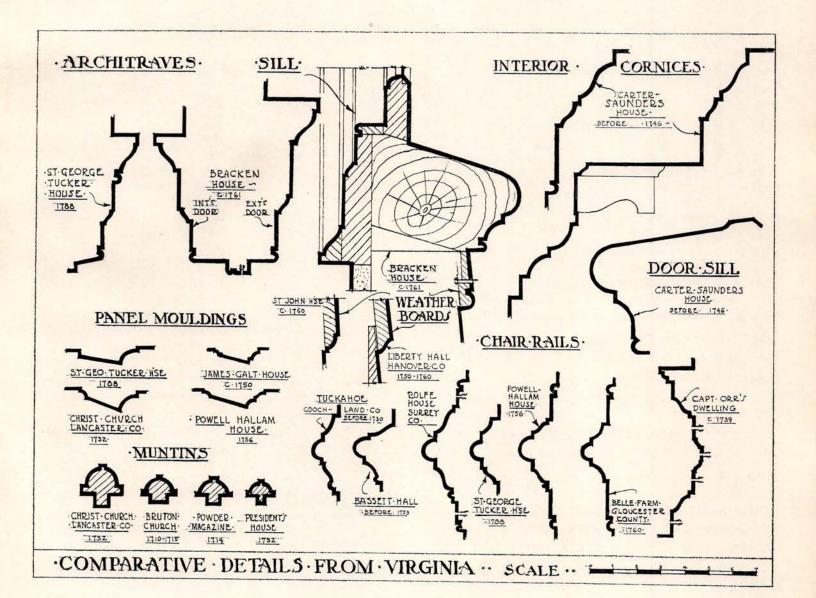
If Rosewell, the lofty mansion of Mann Page built in 1720, achieved high quality of workmanship, it is probably because of the standard set by its elder relative across the York River. Conversely, it has been assumed that the country houses had, in return, their influence upon the design of the Ball Room and Supper Room which were added in 1751 to the Governor's House and which, in popular fancy, may have swung the conception of the building from the quality of "House" to that of "Palace." It is reasonable to suppose that the overseer of 1751, when faced with the treatment of the wide exterior wall surfaces that are indicated on Jefferson's later measured drawing of the Ball and Supper Rooms may

have adapted the double gauging of the rubbed brick window jambs and the brick-moulded and gauged panels below the sash so effective at Rosewell.

From such indications the inquiring visitor to Williamsburg is shown that, in the absence of direct evidence of the former detail, replacements have been made by conjecture which is based upon such grounds as the above.

Supposition must have support. A part of the wall of the original portion of the Palace is extant showing a single system of gauging. Documents are extant which appraise the value of the interior work. Fragments of stone and marble mouldings, carvings and flagging have been excavated from the site in sufficient quantity to indicate clearly its general character.

Among the mass of documents relating to the Palace, there are also the inventories of the effects of successive governors, the description of the leather-hung wall of the governor's Upper Middle Room, the lusters or chandeliers, benches, tables and walnut chairs in the Ball and Supper Rooms, the looking glasses engraved with the arms of Queen Anne and of her Colony.



26 The STATE of

Publick Buildings here of Note, are the College, the Capitol, the Governor's House, and the Church. The Latitude of the College at Williamsburgh, to the best of my Observation, is

37°. 21'. North.

The Front which looks due East is double, and is 136 Foot long. It is a lofty Pile of Brick Building adorn'd with a Cupola. At the North End runs back a large Wing, which is a handfome Hall, answerable to which the Chapel is to be built; and there is a spacious Piazza on the West Side, from one Wing to the other. It is approached by a good Walk, and a grand Entrance by Steps, with good Courts and Gardens about it, with a good House and Apartments for the Indian Master and his Scholars, and Out-Houses; and a large Pasture enclosed like a Park with about 150 Acres of Land adjoining, for occasional Uses.

The Building is beautiful and commodious, being first modelled by Sir Christopher II ren, adapted to the Nature of the Country by the Gentlemen there; and since it was burnt down, it has been rebuilt, and nicely contrived, altered and adorned by the ingenious Direction of Governor Spotswood; and is not altogether unlike Chessel Hospital.

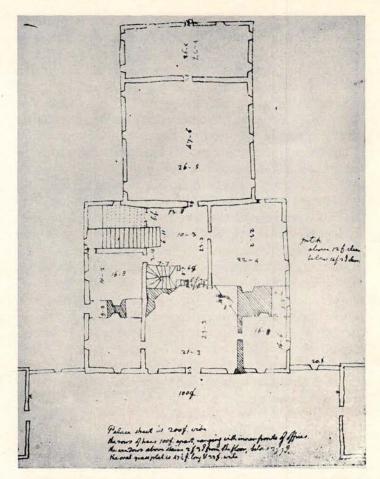
This Royal Foundation was granted and establish'd by Charter, by King II illiam and Queen Marry, and endowed by them, with some thousand Acres of Land, with Duties upon Furs and Skins, and a Penny a Pound for all Tobacco transported from Virginia and Maryland, to the other Plantations; to which have been made several additional Benefactions, as that handsom Establishment of Mr. Boyle, for the Education of Indians, with the many Contributions of the Country, especially a late one of 1000 l. to buy Negroes for the College Use and Service.

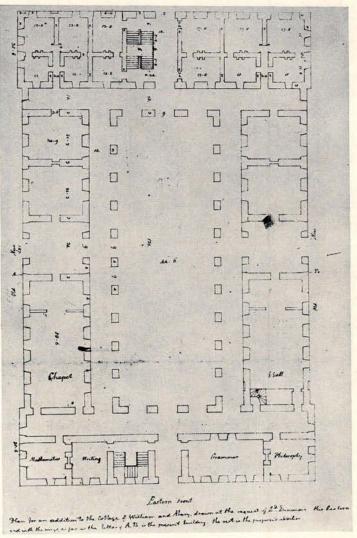
The

(Above) REPRODUCTION of the original text of Hugh Jones' "Present State of Virginia," written in 1722 and published in 1724, which describes the Wren Building of the College of William and Mary.

(Upper Right) THOMAS JEFFERSON'S measured drawing of the plan of the Palace, used as a basis of studies for remodeling.

(Lower Right) ANOTHER MEASURED DRAWING by Thomas Jefferson showing the plan of the Wren Building of the College of William and Mary as it existed in 1772; it indicates his proposal for its extension as prepared at the request of Governor Dunmore.





¶ A CITY with such historic and social associations as Williamsburg cannot be fully explained or described by a recitation of the events which may have occurred there, even if such a recitation is made before a background of colorful early buildings, gar-

dens and a city plan.

It is necessary to understand the origin of customs and of institutions which have made this particular architecture *inevitable* and to trace the steps of developments as closely as one can. One must visualize the palisaded Middle Plantation with its 17th Century buildings in the time of the ascendancy of Jamestown; the growing extension of the settled river sides with the gradual release of architectural style from early to late Renaissance and one must feel as well as understand the architectural and cultural influences which came to bear upon the creation of the new capital city.

There had been before the year 1700 no need for buildings of more than modest size. There were literally no means for education. The church, the Capitol and perhaps a warehouse were the dominant buildings in Jamestown. But the Burgesses were few, the Councillors fewer and though all were expected

to go to church, not all could do so at once.

The choice of a site for the new College of William and Mary in 1693 was a matter of great moment—so also was the erection of a building of 136 feet in

length.

¶ HUGH JONES, first professor of mathematics at the College of William and Mary makes a significant statement interesting to all architects concerning the oldest of college buildings in America, in his "Present State of Virginia," written in 1722—

"The Building is beautiful and commodious, being first modelled by Sir Christopher Wren, adapted to the Nature of the Country by the Gentlemen there; and since it was burned down, it has been rebuilt and nicely contrived, altered and adorned by the ingenious Direction of Governor Spotswood and is not

altogether unlike Chelsea Hospital."

This statement, made by a contemporary of Wren within a year of the latter's death, carries the presumption of accuracy. The absence of the original drawings or of the special commission from Queen Mary to Wren does not affect the nature of the The plan is so reminiscent of Wren's handiwork that it seems fair that this fine old structure should bear its present name of "Wren Build-Jones' statement is interesting for another reason. In telling us that the building has been "adapted to the nature of the country by the gentlemen there" he is clearly indicating the continuance of that process of change and adaptation in the buildings of Virginia of the later Renaissance which has produced what is known to us as Virginia "character." From these changes has sprung that family resemblance which is difficult to describe but which is evident and appreciable none the less and which

differentiates this family from its kin in Maryland and other Colonies.

The stamp of Wren's interpretation of the later Renaissance is clear throughout the city. As in England, the mannerisms of the Netherlands which appealed so much to the exiles of the Commonwealth, domiciled there until the restoration of Charles II, are to be seen in plan, composition of elements, scale, details of brickwork and especially in the accessory utensils and furnishings of the buildings.

Out of all these elements stands free the fine individuality of each building. No one of them needs a label nor an interpreter. The College is a college, the Capitol is a perfect example of the functional solution of a given problem and in its duo-partite plan with conference room connection is unique among surviving buildings of its character. It is most evidently the Capitol. The Palace is a residence, a composition of buildings subtly combined to conform to its unusual purpose, namely the housing of the chief of a great agricultural colony in a semi-rural city and in a dignified manner.

¶ THE PROBLEM confronting the fortunate architects in 1927 was made up of all these things and many more. The trouble was that at the time neither they nor any one else had a full realization of them.

There was little known precedent; there was no precedent in this country for a reconstruction or restoration of such scope and magnitude; there was no precedent for the reconstruction of a large group of buildings which were to represent the appearance of a complete town at a given period—and thereby hangs the tale of years of effort, conference and adjustment so to balance all considerations that the result, with its inevitable inconsistencies of coexistence and the like, would present a convincing and attractive appearance.

There were no architects, draftsmen, craftsmen and mechanics trained to put their unerring hands to the delicate task of so constructing each mass and detail at the first attempt that there would be no

necessity to demolish and to try again.

It was evident that investigation and training must precede restoration and that careful choice of associates and assistants must precede both. Young men from Virginia and elsewhere, already accomplished draftsmen, joined others already associated with the architects and an office was opened in old Bruton Church Parish House in 1927. In a fertile soil of enthusiasm a beanstalk of data grew, so endowed with vigor that it seemed in its growth to refertilize itself. No house in Virginia was safe from invasion on Saturday afternoons, no owner or tenant secure from determined intrusion.

It is a great pleasure to record the many factors that made this peaceful invasion possible. The people of Virginia turned eagerly toward the newcomers, welcomed them with interest and pleasant tolerance, opened to them doors and attics, quarters

and gardens; suggested that details be recorded and houses measured, assisted in the recording of lost evidences; looked forward to further opportunities to take part in the great restoration of the ancient capital of their Commonwealth that was about to be undertaken.

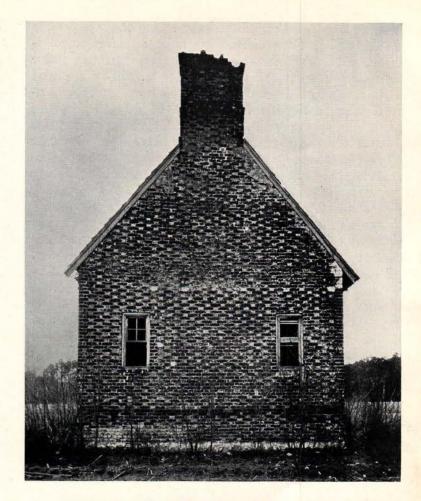
George Preston Coleman personally conducted Dr. Goodwin and the architects on a tour of the great houses of the northern Tidewater during the first few months of the enterprise.

To state that the degree of accuracy to which the Restoration has attained is due to the hospitable readiness and eagerness shown and offered by these staunch friends of historic truth is to imply but a mild implication of the fact. These kind people have placed everything at the disposal of the architects at whose door consequently must be placed the responsibility for faults and omissions which may subsequently be revealed.

The Board of Advisory Architects has been on or near the scene from the beginning. Quotations from the decalogue will indicate that principles have been laid down, that this Board has taken its duties seriously and that much that an inquiring visitor may be curious about is explainable.

For example—

- 1. That all buildings or parts of buildings in which the Colonial tradition persists should be retained irrespective of their actual date.
- 2. That where the Classical Tradition persists in buildings or parts of buildings great discretion should be exercised before destroying them.
- That within the "Restoration Area" all work which no longer represents Colonial or Classical tradition should be demolished or removed.
- 4. That old buildings in Williamsburg outside the "Restoration Area" wherever possible should be left and if possible preserved on their original sites and restored there rather than moved within the "Area."
- 5. That no surviving old work should be rebuilt for structural reasons if any reasonable additional trouble and expense would suffice to preserve it.
- 6. That there should be held in the mind of the architects and in the marking of buildings the distinction between *preservation* where the object is scrupulous retention of the surviving work by ordinary repair, and *restoration* where the object is the recovery of the old form by new work; and that the largest practicable number of buildings should be preserved rather than restored.
- 7. That such preservation and restoration work requires a slower pace than ordinary modern

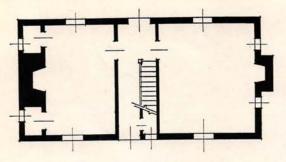


TABB HOUSE, YORK COUNTY, VIRGINIA

construction work and that in our opinion a superior result should be preferred to more rapid progress.

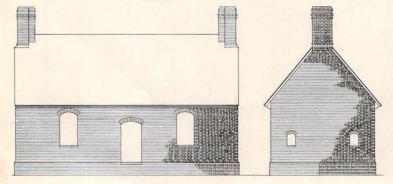
- 8. That in restoration the use of old materials and details of the period and character, properly marked, is commendable when they can be secured.
- That in the securing of old materials there should be no demolition or removal of buildings where there seems a reasonable prospect that they will persist intact on their original sites.
- 10. That where new materials must be used, they should be of a character approximating the old as closely as possible, but that no attempt should be made to "antique" them by theatrical means.

The Board has met annually and also when a particular occasion demanded. Its Executive Committee has visited Williamsburg more frequently than the full Board and especially throughout the first two years while the restoration of the Wren Building, a difficult problem in itself, was in progress. No detail, however trivial in the restoration of this building, was permitted to pass without examination and approval.



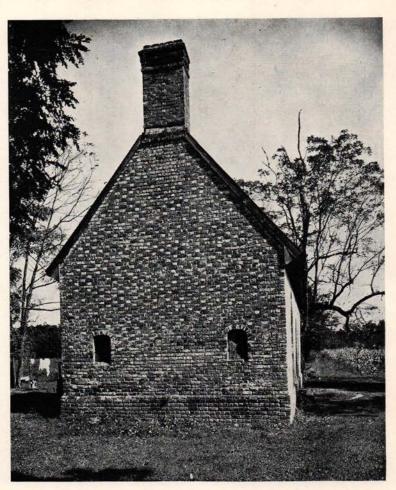
Plan of the Tabb House, built just after 1700. Note the closets at the sides of the large interior chimney and the flat lintels over the windows of the period subsequent to 1700.

Measured drawings of the Warburton House elevations, built around 1680. The plan is similar to that of the Tabb House but has closets at both ends; note the segmental arches of the perioa prior to 1700.



Grout Elevation

Mark Williams



WARBURTON HOUSE, JAMES CITY COUNTY, VIRGINIA

The Ladies' Advisory Board has rendered great assistance in the problems of decoration and furnishing.

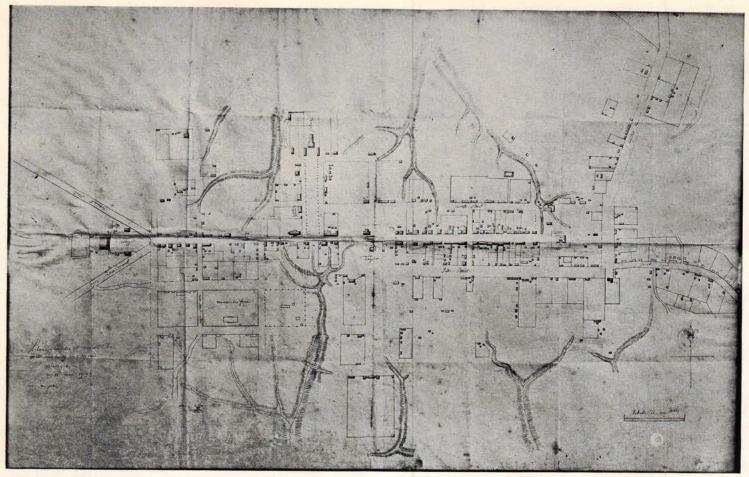
As the problems of the Restoration accumulated, the necessity for specific information grew more apparent as each bit was disclosed. Dr. Swem, Librarian of the College of William and Mary; Dr. Stanard, Secretary of the Virginia Historical Society; Dr. Eckenrode, Historian of the State Conservation and Development Commission; Dr. H. L. McIlwaine, late Librarian, and Dr. Wilmer Hall, present Librarian, of the Virginia State Library, and many others placed their knowledge and their files at the disposal of the research workers who were increased in number as their fields widened.

The Clements Library at Ann Arbor, Michigan, historical and other libraries in Boston, New York, Philadelphia, and repositories at every town to which a clue would lead, were visited and with the invaluable assistance of the librarians facts were gathered and catalogued. At Williamsburg these were correlated and put into accessible form. It was at the Henry E. Huntington Library in California, that an unpublished original drawing by Jefferson showing the plan of the Wren Building and proposed addition was found, a document of definite architectural importance and assistance.

From small beginnings the architects' office grew to

include not only its drafting room and the usual divisions of management and superintendence but also a division of photography and a division of research and record which assumed proportions commensurate with the scale of the Restoration and probably unprecedented in its scope in this country. Workers in England, France and the Continent brought to light documents and curiosities that have been priceless as guiding and corroborative evidence. The timely discovery of a copper plate at the Bodleian Library at Oxford, made between 1723 and 1747 and recognized by Miss Mary Goodwin at once as representing in the accurate measured manner of the 18th Century engravers the three principal buildings at Williamsburg, prevented an erroneous reconstruction of the west side of the Wren Building. One contemplates the effect upon the mind of the amazed engraver (still unknown), had he dreamed that within an hour or so of the first strikeoff of his plate a photo-radioed reproduction would have been in a drafting room in Boston across the seas.

The town plan, which had been measured by plane table (no survey existing) by Dr. Goodwin and Mr. Perry long before the most sanguine prophet would have ventured the prediction that the Restoration would be carried out, was now made the subject of a survey careful in every detail not only to plot original lot and street lines, but to reestablish those that were



THE "FRENCHMAN'S MAP," so called for lack of identity of its author. It is dated 1782 and was "Levée au pas." Probably it was the occupation of an engineer officer of the army of the Comte de Rochambeau during the period of demobilization. It is remarkably accurate and complete.

lost. The invaluable "Frenchman's Map" and those of other officers of the Army of de Rochambeau, the voluminous deeds and records at York County Courthouse, early ownership plats, insurance maps and the like added their weight of evidence to an historic survey of permanent record.

The problem of modern ownerships which is beyond the scope of an article limited to a consideration of the architectural field, served as a blessing in disguise, since it complicated the orderly procedure of excavation and reconstruction so inextricably that it provided the necessary time for the training of specialists in the art of architectural detective work.

These "detectives" became a proficient group of analysts to whom superimposed foundations, fragmentary corners, heterogeneous brick sizes and bonds, varying mortars and manners of workmanship, areas of complete destruction of previous work, became only more puzzles to be measured, weighed, compared and carefully established with instruments and finally plotted. They sifted each spadeful of excavated material, plotting also the location of each discovered fragment however small, training their laborer assistants to search and recognize, to preserve and to respect. Archaeological methods of field work tested and proven in Egypt were applied and adopted to the work in hand.

Finally the "research plans" at quarter scale have been consolidated upon a town map at a smaller scale. Today, one can refer to each lot and whether the building has been reconstructed or whether the site has been temporarily backfilled for future construction, one can note at a glance the extent, character and comparative dates of each part of the existing original and subsequent foundations.

In all of this work photography has played an important part. Hundreds of views taken progressively show the appearance of the buildings before their restoration, removal or destruction and record the status of the work through its entire progress to the

time of final completion.

Since all buildings of whatever date or appearance are serious attempts of an owner to provide accommodations for his needs and therefore in most cases represent real value, each building in the "Area" was evaluated before its final disposition was determined. In addition to the existing Colonial buildings, many have been salvaged but of the remainder those which were found to be valueless from an historical point of view have been destroyed.

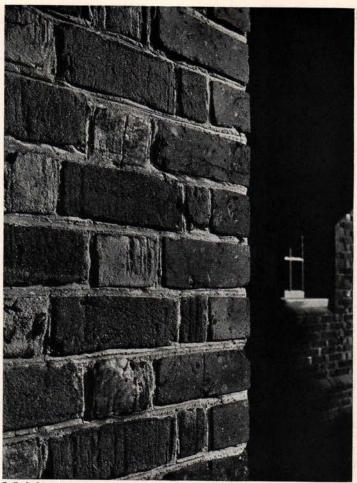
¶ THE MANAGEMENT GROUP has developed from modest beginnings and now comprises two distinct corporations. The field of duties of one of these, "Williamsburg Restoration, Incorporated," includes the management of all properties not specifically designated and classified as educational, all land purchases, tenures, publicity and relations with City, County, State and Federal Government. The second corporation, "Colonial Williamsburg, Incorporated," manages the exhibition buildings and deals directly with the problem of guiding the public to and acquainting the public with what there is to see and learn.

The spirit of the Restoration has been one of constant cooperative intercourse between these corporations, the builders, the landscape architect and the architects. Municipal services like sewers, water and pavements have been readjusted with the carefully considered consent and assistance of the City Council. The State Legislature has passed enabling acts, adjusting previous interpretation of law to the new concept of the public welfare. Visible transmission lines have been laid underground, important rearrangement of railway facilities have been made involving relocations of stations. By-pass and encircling roads have been built to facilitate travel. In each case the utility companies, the Chesapeake and Ohio Railroad and other agencies have rendered ready and patient cooperative assistance.

THE SCOPE of the Restoration is strictly limited to the area included in the perimeter described by the blocks on the north and south of the Duke of Gloucester Street and the blocks abutting the Palace Green, the Market Square, Court Green and the area surrounding the Capitol. The two blocks at the west and near the College are, however, an exception and are now occupied by shops, post office, theatre, bank and offices. These buildings are new, carried out by the Restoration and the architects, and represent a group of detached buildings of an early 18th Century type joined together in some cases by low connections of a later type. It has been assumed that had the people of Williamsburg been faced with a similar problem in the 18th Century, they might have solved it in this manner and with buildings similar in appearance to these.

That such a problem did not exist in these two blocks in the Colonial period is only too apparent from an examination of the "Frenchman's Map." Logically the concentration of houses, taverns and shops was at the east end near the Capitol. The College at that time was of slight importance as a center of business activity. Today, the legislative functions of the Capitol having ceased and the College having enormously increased in size and activity, the center of gravity has made a radical change of scene.

¶ THE "LOCAL IDIOM," referred to inferentially above, is seen in the photographs which appear in the Portfolio (pages 387-446). While design and scale control the matter, as they must in all architectural composition, it is nevertheless true to a very great



O F. S. Lincoln

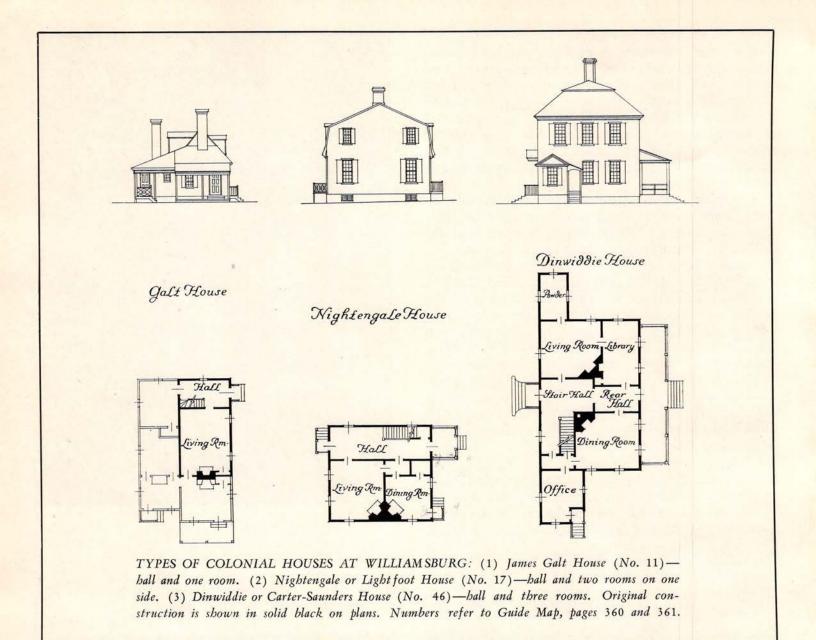
RESTORED BRICKWORK in the James City County Court House, consisting of new brick made and laid in the old manner with glazed headers.

degree that the Williamsburg types of buildings are to be so recognized by their details.

Perhaps the most important of all groups of details are those involving brickwork. This locally made brick is large, durable, with a high but balanced ratio of absorption and of a significant and attractive salmon yellow-red color. The clay burns with success in the kiln and produces a variety of texture, glazed surface and color and hardness which opens a wide opportunity for decorative effect. All of the brick that have been used in the "exhibition buildings" and in other buildings in the "Area" where old similar brick were not available have been made in Williamsburg under the supervision of the builders and architects. The foundation of the original kiln was excavated at the Wren Building and found to conform exactly with the one set up to furnish the necessary additional brick for this building.

A year elapsed however, and many kilns were fired before it was found that the blue-green glazed header of the old work, and upon which all similar brickwork depended, could be reproduced by the simple expedient of using mostly hard wood for fuel.

The large size of the brick confers a quality upon every building, for in every structure, frame or otherwise, brick is used in the basement walls and the heavy generous chimneys.



The study of the use of this brick is revealing as an indication of the wide variety that it offers.

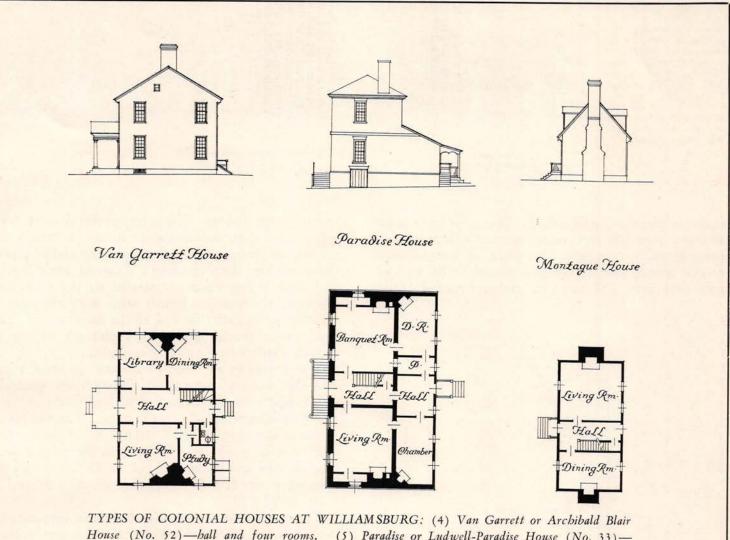
The face bonds most used in Virginia in the 18th Century were the English and Flemish. There is no indication that one preceded the other. Common or "promiscuous" bond is to be found in the backing. There seems no way of ascribing the use of a particular size of brick to any definite period. The accompanying list of sizes and bonds, however, is of interest.

The mortars found in Tidewater brickwork of the 17th and 18th Centuries are similar in composition. It is a curious fact that the quality of this "oyster shell" mortar seems to have been higher and harder

in the fourth quarter of the 17th Century than in the latter part of the 18th Century. It was a good mortar as its present condition amply attests and was only superseded by other kinds very gradually as the 19th Century advanced.

The age of the several parts of a foundation can be ascertained with some exactness from an examination of the brickwork, but such evidence must relate itself to the results obtained from other methods of investigation before conclusions are drawn. On a given site differences in mortar can be established in date sequence but such conclusions are applicable only to this particular site.

Period Building	Cou	Coursing			Bond Below Water Table	Bond Above Water Table	Size of Brick
1699-1702 Wren	12	courses	in	353/4"	English	English on three courses of Flemish	9" x 4" x 2½"
1732 Wren	11	**	**	331/2"	English	Flemish-glazed headers	87/8" x 41/4" x 21/2"
1702-1706 Capitol	12	**	**	36"	English-random glazing	Flemish-glazed headers	87/8" x 41/4" x 21/2"
1704-1715 Palace (main building)	11	**	**	343/8"	Flemish-random glazing	Flemish—glazed headers	93/8" x 43/8" x 23/4"
1717 Paradise House	12	et	ee	35"	Flemish—glazed headers	Flemish-glazed headers	81/2" x 41/8" x 21/2"
1755 Wythe House	11	et	**	333/4"	English-random glazing	Flemish-random glazing	87/8" x 4" x 25/8"
1770 Court House	11	**	**	36"	English-random glazing	Flemish-random glazing	83/4" x 4" x 27/8"



House (No. 52)—hall and four rooms. (5) Paradise or Ludwell-Paradise House (No. 33)—hall and four rooms with two storeys in front part only. (6) Montague or Bracken House (No. 77)—hall and two rooms, one on each side.

Indeed, the theory that the larger the particles of oyster in the mortar the more crude or older the mortar, is quickly exploded by the simple knowledge that the larger pieces settle to the bottom of the mortar boat and are those that appear at the end of each batch of mortar.

The mortars used in restoration to simulate this ancient oyster shell mortar and which seem to have the requisite qualities for longevity are composed as follows:

Face Brick:
Oyster Lime
Sand
White Cement 8 shovels
Superfine Lime 1 shovel
Gauged Brick:
Lime Putty
Common Brick Backing:
Portland Cement 1 part
Lime 1 part
- Sand 5 parts
Hydrated Lime1/10 part

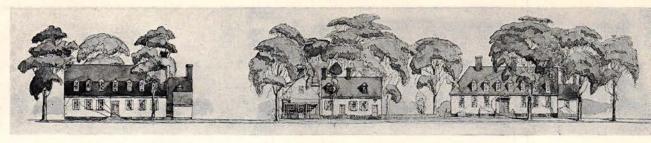
The joints of the work of the 17th and 18th Centuries were similar and were generally "struck," that is, the surface of the joint inclined inward at the lower edge, the reverse of the "weathered" joint. The joint was "rodded" or ruled with an iron jointer to produce a concave joint line.

The use of gauged or ground bricks and the flat brick arch seems to have been adopted generally in the Tidewater during the first years of the 18th Century. During the 17th Century the masons generally laid their corners with untreated bricks but at times with a full knowledge of the decorative quality of the glazed header.

The Warburton House of about 1680 as well as the Public Gaol at Williamsburg of later date show glazed headers and even glazed closers at the corners and jambs.

THE PHOTOGRAPHS reveal many characteristics of Williamsburg buildings which may be classified broadly as "local." The illustrations show com-

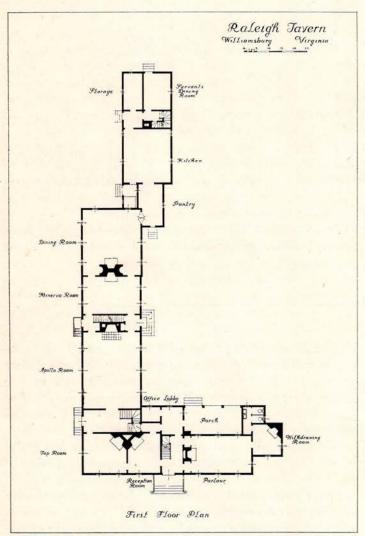
SKET'CHES of the Colonial buildings on the lot between Botetourt Street and Capitol Street on the north side of the Duke of Gloucester Street. Of these, the "Sign of the Golden Ball" (28), the Raleigh Tavern (27), the Lee House (25) and the Public Record Office (24) are the only ones now standing or restored.



Anderson from insurance policy No 669 Kinnamon Craigi Sign of the ColomBall · Raleigh Tavern from a pholograph

Duke of

parative plans and gable ends. The plans seem often to have been laid out on a commonly accepted dimension of rectangle. The plans of simple gable roofed houses were 16 by 24 feet and 20 by 40 feet, plus or minus, and those of gambrel roofed houses



RALEIGH TAVERN: The Parlour shown in this plan was the original building, the chimney being on the exterior. The first enlargement consisted of the Reception and Tap Rooms and placed the door on axis. The Apollo and Daphne (or Minerva) Rooms were added successively from 1750-1770. The Dining Room was added during the Revolution. It is four inches wider than the building it adjoins; probably it was an old building moved in and the roof made to conform. Its interior is treated therefore as much earlier than the Daphne Room.

about 30 by 30 feet. There are several dormer types and varied but significant manners in which the mouldings framing the sash are jointed and disposed; there are the dormer cheeks sheathed with beaded and flush siding running parallel to the roof line; there are the weather-boards with wide exposure to weather and usually beaded at the lower edge. This bead varies greatly and adds a pleasant variety of minute shadow in the strong sunlight.

The windows are high in relation to their width and the muntins substantial, the sash are generally of 18 lights on the first and second floors of two-story buildings and the glass, often "Crown glass," varies in size from 9" x 11" to 10" x 12" on the first and from 8" x 10" to 9" x 11" on the second floor. The dormer sash have 8 or 12 or 15 lights and the glass sizes vary from 7" x 9" through 8" x 9" and 8" x 10" to 9" x 11".

The outside trim is simple and of generous scale; the corner board of frame buildings which rarely turns the frame is also beaded. In brick buildings the window frame is again beaded and the architrave either single or double moulded. Here one finds the attractive moulded window sills returning against the brick and in fine scale; this feature supplanted the beveled brick course under the sill that will be noted in the segmental arched window openings of the Warburton House. In such early examples as the latter, the sill was plain and straight of the "slip" type.

The window frames were pegged with tenons which project at the side of the stiles and which are let into the adjoining studs. Inside the windows were often framed with double moulded architraves which surround the sash like a frame, the chair rail returning against itself over the paneled dado. Chair rail and cornice mouldings are bold, although in simple buildings or rooms where neither dado nor cornice occur the chair rail will consist of a 3" or 4" board beaded above and below. This board like the window architrave is nearly flush with the face of the plaster, leading one to suppose that the interior trim of these buildings was set in place in advance of the plaster work. The panel mouldings are usually raised and of good large scale, the width from panel face to rail reaching the width of 23/4-inch or more.

Flooring was universally of the local short-leaf pine "Pinus Echinata" and laid in 4- and 6-inch from a photograph
Gloucoster

from a skeley and insurance policy from york records

Street

Walthoe

Clerk's House

widths in edge grain. These floors are very hardy and take on a good color with careful treatment of wax.

The chimneys, particularly those on the outside of the end gables, are a notable feature of Williamsburg and are in much variety. Perhaps the most important outside chimneys are those on the Montague house, although those on the Blair, Orr and St. George Tucker houses are very interesting. Their characteristics are many. Among these is a device which may have been first adopted here, so far as Virginia is concerned, to prevent fire from entering the attic from fissures in the brickwork. The chimney in a 1½-story frame house clings closely to the house until it reaches the top of the second floor fireplace and then stands free and sturdily upon its base. The only place where the common bond can be found in exterior brickwork is above the upper shelf or shoulder of such chimneys.

The gable angles vary but little, the general pitch

being 521/2° from the horizontal.

Decorative ironwork is mentioned in early descriptions of the Governor's Palace and the front gate is shown on the Bodleian Plate. Although the gates and grilles have long since disappeared, a fragment or two were excavated and give a key to the style.

Somewhat contemporary work stands at Westover on the James and an effort has been made to emulate the quality of this work. The motives excavated on the lot have been incorporated in the designs.

The stone and lead work mentioned in the 18th Century refer in their design to contemporary examples. Fragments of stone vases found at the Palace show floral ornaments, ram's heads, and so on.

Inside the Palace, Delft tiles, marble ornaments over fireplace openings and the like found in the excavations have been utilized again. Each marble mantel and piece of stonework is designed to incorporate only mouldings actually found on the site.

¶ FROM THE RICHES of the past there is always to be found a precedent of a kind for something that is good looking. We do not have to search here for examples. Most Colonial buildings in America are good looking. The appreciation of the artisan which is based upon respect for the great resource and skill of his predecessor through the ages is responsible for this in large measure.

The visitor leaves Williamsburg with a clearer conception of the life of the people of the 18th Century City. He has found that restoration based upon archaeology and historic fact is more the result of an effort to be truthful than to be plausible. He has been graciously conducted through many of the buildings, which had been the scene of notable events in the past, by ladies of Williamsburg attired in the dress of the period. He has perceived that in such surroundings contemporary dress does not imply costume and he appreciates that the architecture with the furnishings that he has seen were built and fabricated originally with the dress of the time in mind and that the two are definitely interrelated.

He has become aware of the significance of the motto chosen for the new seal of "Colonial Williams-burg" and in noting the dignity, comfort and composure of these surroundings he concurs "that the

Future may learn from the Past."

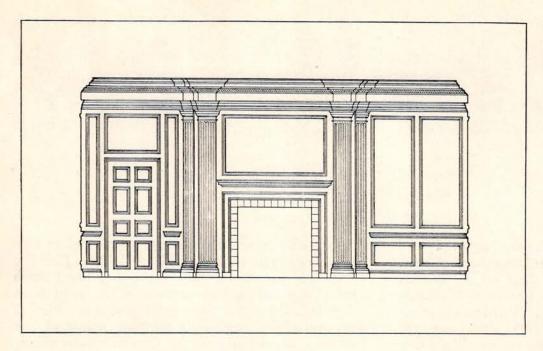
If by good fortune he has remained in town long enough to feel as well as to see, he will have gained other impressions as lasting as these. He will appreciate that the character of antiquity that has been produced in some of the reconstructed buildings by the use of old materials has not been attained by the despoliation of other Virginia buildings, which in their turn might have been preserved elsewhere.

He will be aware of the patience of the donor and of his administrative assistants who have recognized the necessity for exhaustive investigation; and will be thankful for the inspiration that underlies the enterprise to which Dr. Goodwin gave first expression and to which Mr. Rockefeller, in the guidance of the expenditure of his great gift, has added impetus and force.

He will, it is hoped, also be impressed by the quality of fine craftsmanship of the builders in all the trades and will be confirmed in his belief that architecture cannot stand by itself alone but must, if it is to achieve harmony with nature, lean heavily upon the resource and appreciative skill of the landscape

architect and the experienced gardener.

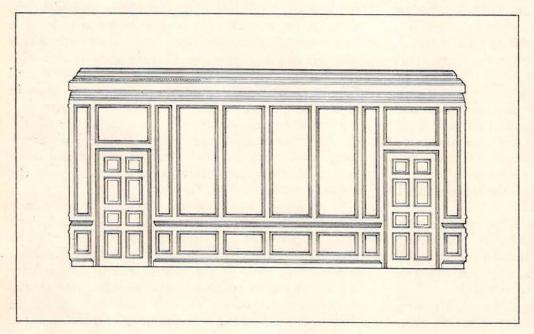
May he also tell others of his thoughts and as years go by, visit Williamsburg with the double purpose in mind of refreshing his memory and of encouraging an enterprise which has been undertaken for his benefit alone.



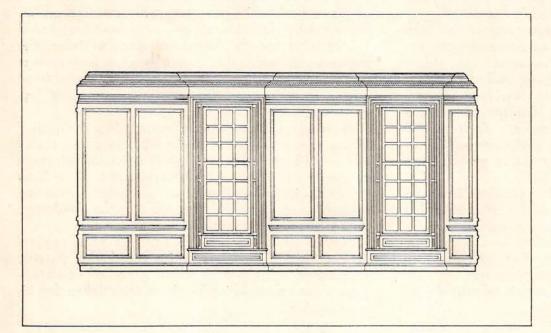
MEASURED DRAWINGS

ROOM 206

South Elevation



West Elevation

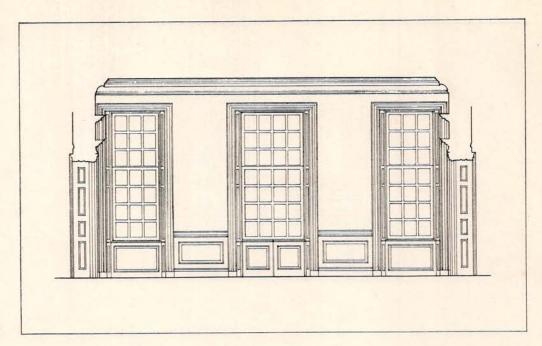


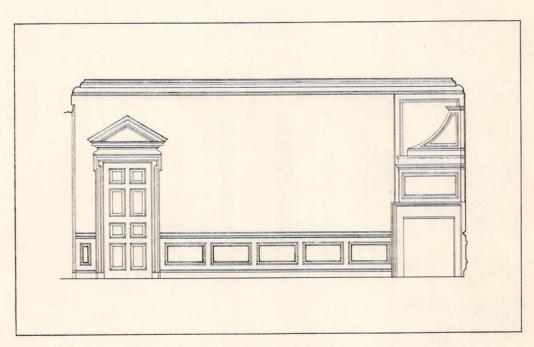
East Elevation

GOVERNOR'S PALACE

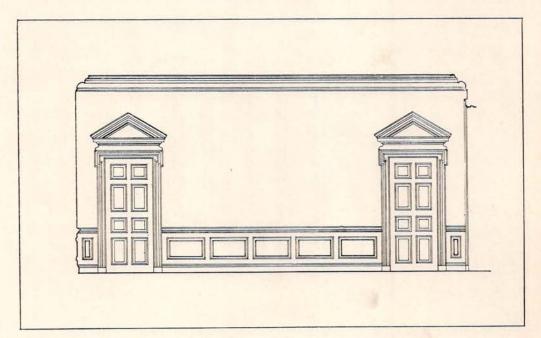
UPPER MIDDLE ROOM

South Elevation

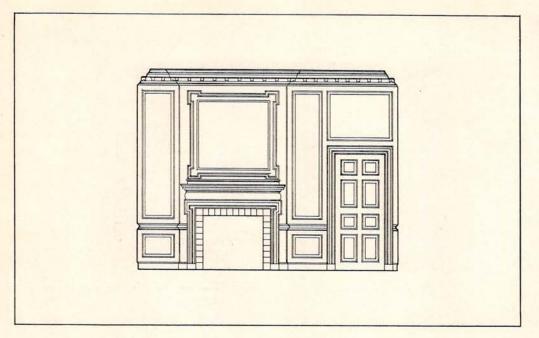




West Elevation



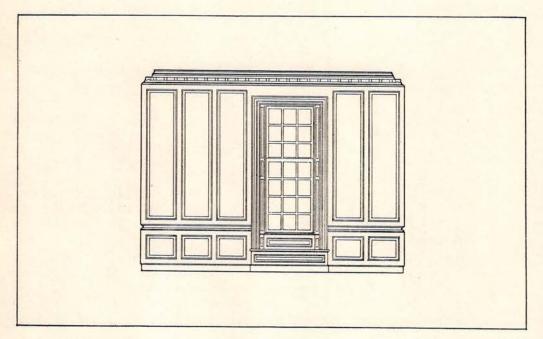
East Elevation



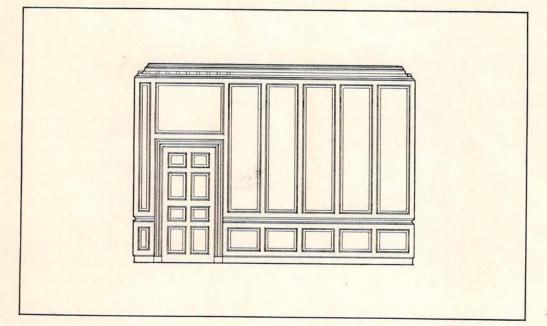
MEASURED DRAWINGS

CHAMBER 200

North Elevation



South Elevation

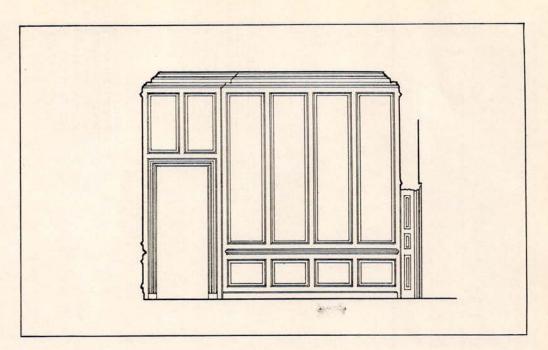


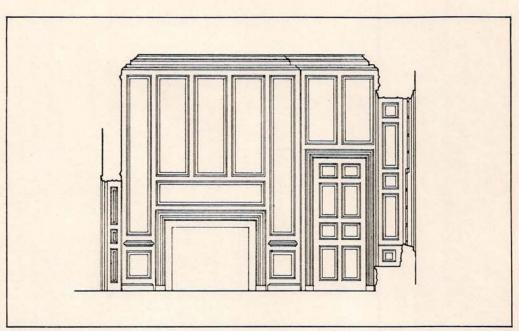
West Elevation

GOVERNOR'S PALACE

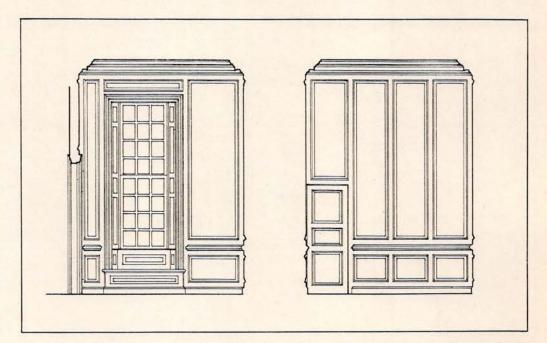
LITTLE MIDDLE ROOM

North Elevation

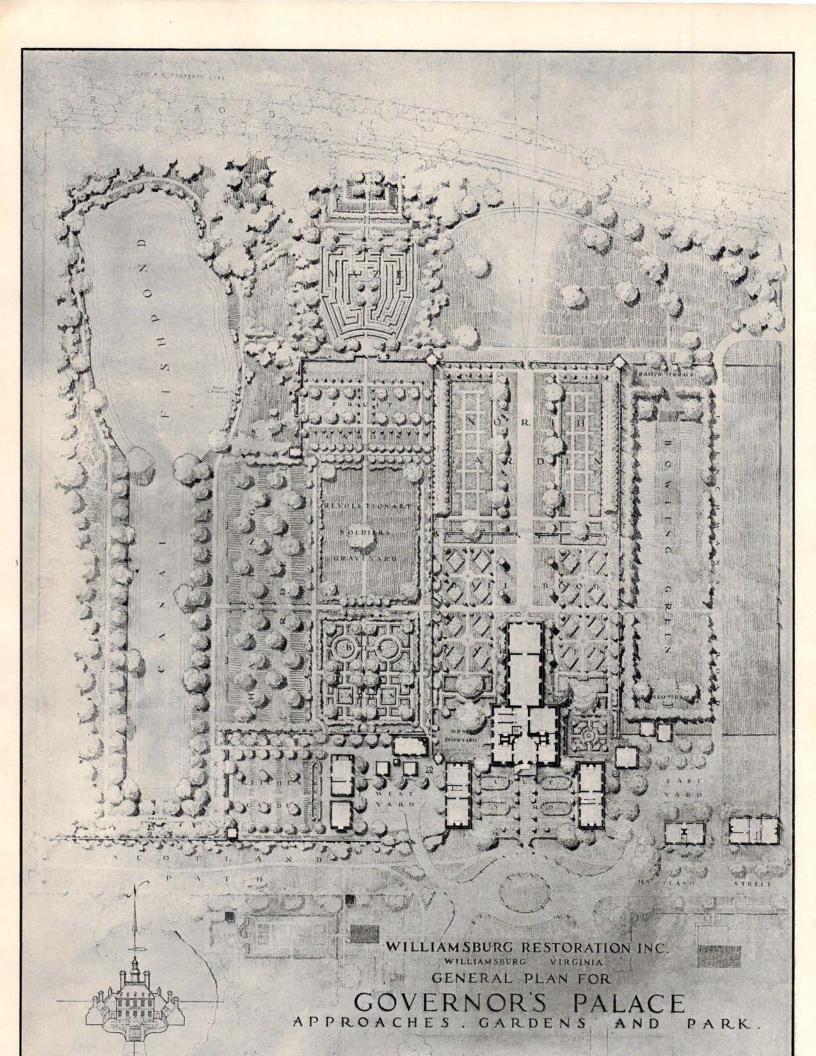




South Elevation



West and East Elevations





OF. S. Lincoln

GARDEN OF THE CARTER-SAUNDERS HOUSE

CITY PLAN AND LANDSCAPING PROBLEMS

By ARTHUR A. SHURCLIFF, Landscape Architect

FOR THE CITY PLAN we were fortunate in having some reliable old plans and maps and written descriptions. We soon discovered that the old plan was not a mere gridiron of streets like that of New York, Philadelphia, or most of our cities, but a modified gridiron in which every block bore a relationship to its use and to its appearance in the whole length and breadth of the city.

A modulus of about 250 feet runs through the whole scheme and determines the blocks, the ratios of the vista lengths, the size of the two large parks or "greens," and many other elements. Longitudinal and transverse street vistas are stopped by buildings and do not run through interminably as in most of our modern cities. The long central vista of the main street is terminated at one end by William and Mary

College and at the other end by the Capitol. To prevent the vistas of the other longitudinal streets from competing in importance with that of the main street, these lateral streets are offset about midway in their length.

We soon found that the design of the individual lots included in this modulated gridiron depended on the gridiron itself. The orientation of buildings, the setbacks, the position of outbuildings, and dependencies were determined by the street plan. We learned the details of place layouts in part by excavations which showed the position of old paths and wells, but the ravages of time were severe and therefore we looked wide and far for old family letters, insurance maps, and the few descriptions which were available in books.



Finding this data to be insufficient, however, we then went through the countryside and measured more than a hundred places of all sizes. Many of these, although well known, had never been measured accurately and these measurements astonished us by the existence of ratios of proportion. It became clear that not only were the early designers exceedingly good choosers of sites but no site was accepted which did not lend itself to development on generous stately lines controlled by ratios, considered more or less invaluable in those days.

We were fortunate in finding some accurate ancient maps of Edenton and other Southern cities. These were made by French engineers in the latter part of the 18th Century and showed details of the individual lot designs. The relation of the plan of the grounds to the plan of the houses was always intimate; in some instances the grounds were laid out with a lack of relation to the house, but with a close relation to the boundary lines of the lots. Some of the garden patterns were indicated by old paths discovered during the course of excavation, some from contemporary maps of the period, and others from the gardens of contemporary plantations.

TWO CHARACTERISTIC town place plans are shown in the plots of Captain Orr's place and the Paradise place (page 386). Both designs were determined by actual findings on the ground or by documentary evidence and show an effort toward symmetry governed by the needs of daily use and the nearness of property lines. These layouts indicate the climatic conditions which precluded the use of long ells or other compact groupings of dependencies. Ample space for circulation of air was important in these towns where, except for a few days in winter, the thermometer rarely fell below freezing.

In the outskirts of Williamsburg there are three larger places which were not limited in extent by the layout of the city. These places, though hardly large enough to be called plantations, were laid out with a generous gesture characteristic of the hospitality and gracious life of the South, and the scheme of approaches and the arrangement of outbuildings recalled the Virginia grand manner.

¶ AT FIRST it seemed a simple matter to find the names of trees, shrubbery and flowers which were used in Colonial times. We thought we could depend on English gardening books. We soon discovered, however, that many plants unknown in England were used in Virginia, and many well-known English plants did not reach the Colonies. Researches carried on in the libraries of the South, also at the Library of Congress and the Boston Athenaeum, and the several branches of the Department of Agriculture throughout the country gave us much valuable data. This was supplemented by old Williamsburg letters and the catalogues of nurserymen who are known to have dealt with the



THE JAMES GALT HOUSE (Building No. 11) adjoining the garden of the John Custis Tenement (a house to rent) shown on the opposite page.

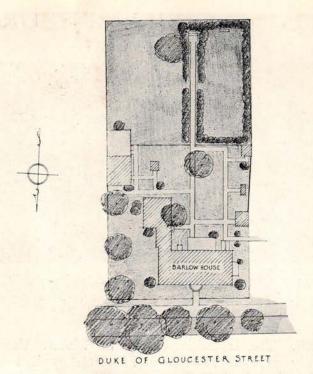
South. The ladies in charge of Mount Vernon kindly gave us valuable aid. Little by little we gathered a check list of plants which we could depend on as "authentic."

We searched the records on both sides of the Atlantic for the date of introduction of the Crapemyrtle. It may have come from England soon after the middle of the 18th Century, but actual dates are wanting except of its arrival in England about that time from the East. We also believe this tree may have come to America direct from the East in trading ships via the South Seas and around Cape Horn.

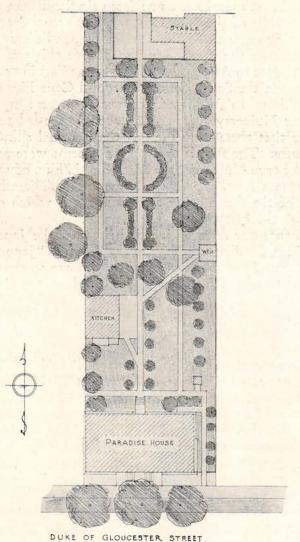
Visitors to Williamsburg are impressed by the Paper Mulberry trees and frequently are led to believe that these were used in the Colonial silkworm culture. The fact is that the silkworms were reared in the true Mulberry, the Black and White, of which there are relatively few specimens in Williamsburg, one of the finest being the ancient one which overhangs the east wall of the Capitol.

Before our research we thought that the Japanese Quince, familiarly known in the South as "Japonica" and found extensively today, was known to the Colonists through England. We now believe the Colonists did not know this attractive shrub and we are removing it from "authentic" places. We have unearthed the interesting fact that the beautiful Mountain Laurel, known to the Colonists, was not fully appreciated, although specimens taken to England attracted much attention there. We have found native Azaleas which were unknown in England and these are being used in the Palace grounds in the belief that they were used in Williamsburg gardens.

Hedges were widely used in Colonial Virginia, just as they were in England. Box was popular because clipping did not become necessary for many years owing to the small annual growth. Hedges of more rapidly growing material required clipping very early to prevent the plants from clogging the paths and overshadowing the adjacent beds. Records show that English Yew was brought over to Virginia in the



GARDEN OF CAPTAIN ORR'S DWELLING



GARDEN OF THE LUDWELL-PARADISE HOUSE

hope that it would make satisfactory hedges. The Colonists recorded their disappointment in discovering that the climate in this country is too dry for Yew. In fact there is no country in the world in which it thrives so well as in England.

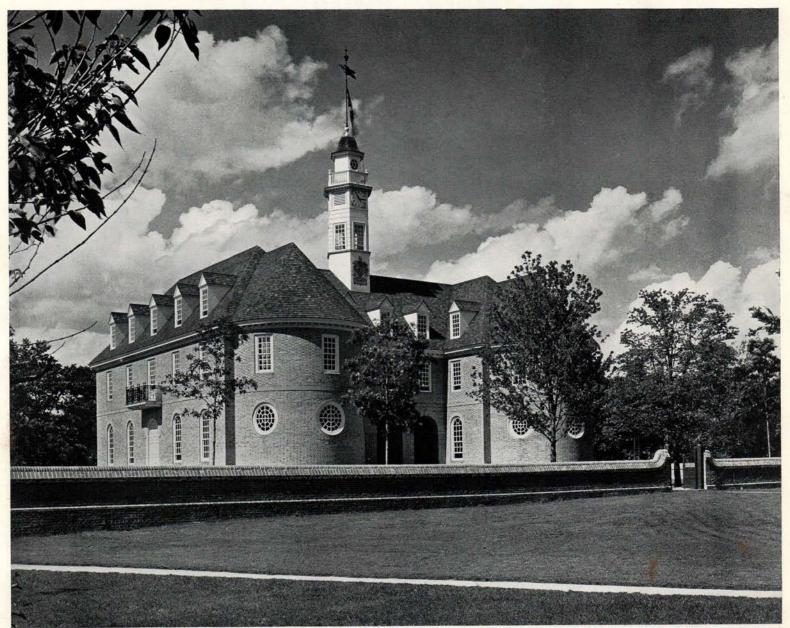
We know that English Holly was brought over to this country early, but with difficulty, as it is not easy to transplant. Most of the old specimens of Holly which we have found in Virginia, and the oldest Holly hedges are native. This Holly thrives in the hottest sun and when established will resist drought, but nowadays requires much spraying to keep insect pests away. To transplant native Holly successfully, very large balls of earth must be taken with the roots, and for hedges the plants must be cut back very severely, otherwise the leafage at the base of the hedges will be thin. Holly is shade-enduring.

English Privet came to this country very early and was known later to George Washington. Today it is found widely distributed through the South and through New England, and grows in the fields as a "native" shrub. This is the Ligustrum Vulgare. It makes excellent hedges, but not as brilliant in leafage or as luxuriant as the Privets which have come from southern Asia and from Japan. We eliminated these modern Privets from the restored places in Williamsburg and are using the ancient kind.

THE CULMINATING PLACE design in Williamsburg is the Governor's Palace. The clues to all parts of the design were found either by documentary evidence or excavations or by ground forms. For example, the canal and its terraces stand essentially as we found them and it was only necessary to build a dam at the lower end to take the place of the ancient dam. Foundations revealed the position of all important walls, the vinery garden, the position of the steps leading to the canal, the chief transverse axis, the outbuildings, the steps of the main axis, the exact form of the courtyard walls, the forming of the ground making separate levels, and other features. All these findings tallied with English work of a slightly earlier period. (We learned that the place designs in America lagged behind those in England by about twenty years.)

IN CLOSING, I wish to say that the work of cooperation with the architects was exceedingly pleasant and in every phase of the work we were inspired by the enthusiasm and patience of Mr. Rockefeller and his staff. The aid we had from friends in the South was sympathetic and constant. The help we received from researches which had been made by the Government, the State, the County, the City, and the private and public organizations interested in historical and technical matters was of inestimable value. I also wish to add that the aid which came through the American Institute of Architects and the American Society of Landscape Architects was most sustaining.

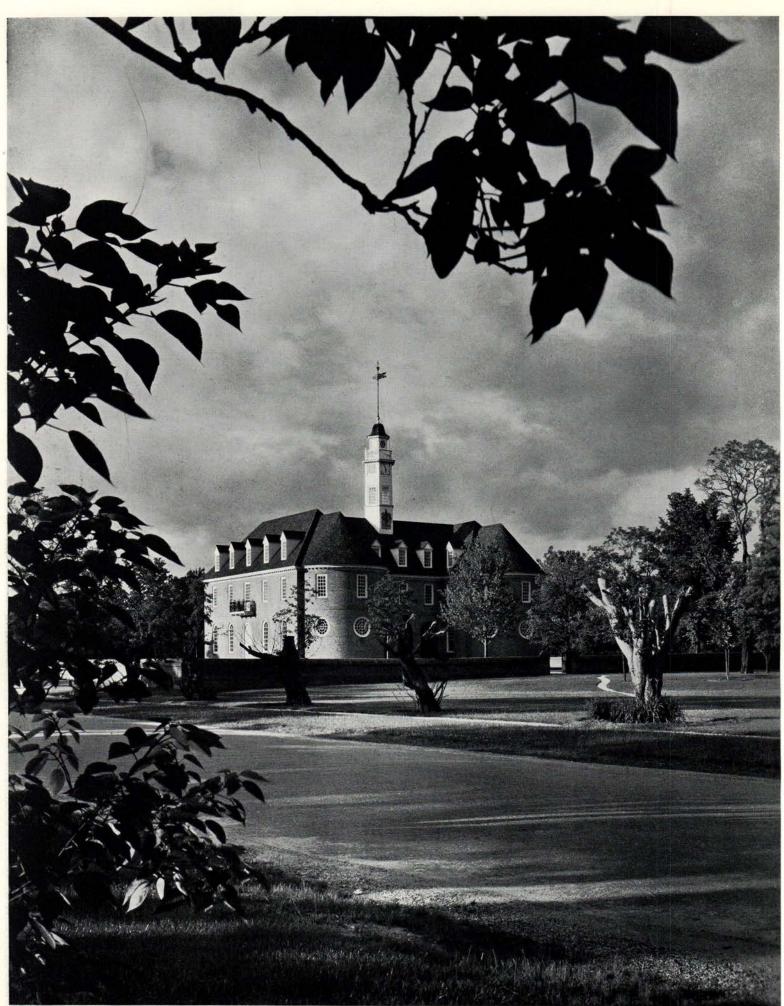
PORTFOLIO OF BUILDINGS AT COLONIAL WILLIAMSBURG



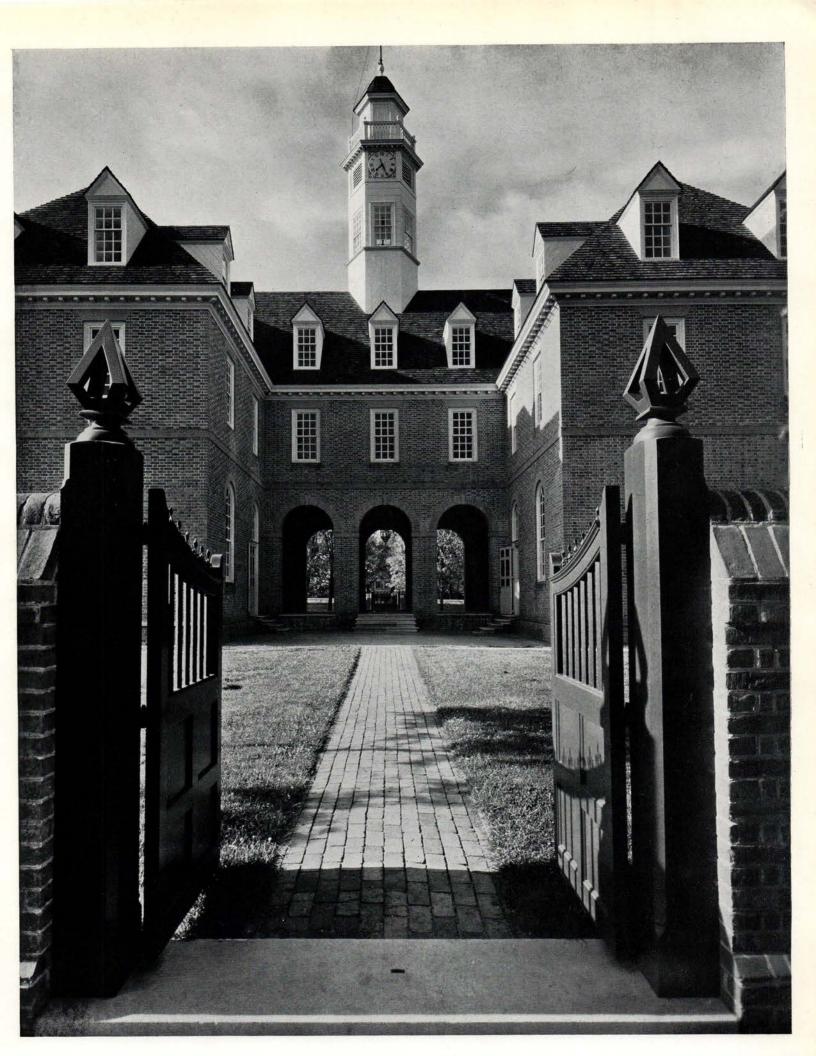
F. S. Lincoln

The Capitol (Building No. 23 on the Guide Map, Pages 360, 361) Seen from the Southwest

In 1705, after the seat of government had been moved from Jamestown to Williamsburg, the original Capitol was completed on this site. It burned in 1747 and a second building was erected on the foundations in 1751. Here the General Assembly of Virginia met until the seat of government was removed to Richmond in 1779. This second building was destroyed by fire in 1832. . . . The Capitol of 1705 has been reconstructed on the old site and foundations, which were preserved and presented to Colonial Williamsburg, Incorporated, for that purpose by the Association for the Preservation of Virginia Antiquities. The building has been completely refurnished in accordance with original records. . . . The east wing was occupied by the House of Burgesses, with an assembly room on the first floor and committee rooms on the second. The west wing housed the General Court on the first floor and the Governor's Council on the second. A piazza on the first floor, between the two wings, served as a meeting place before and after assembly; over it, on the second floor, was a common room for prayers and conferences.

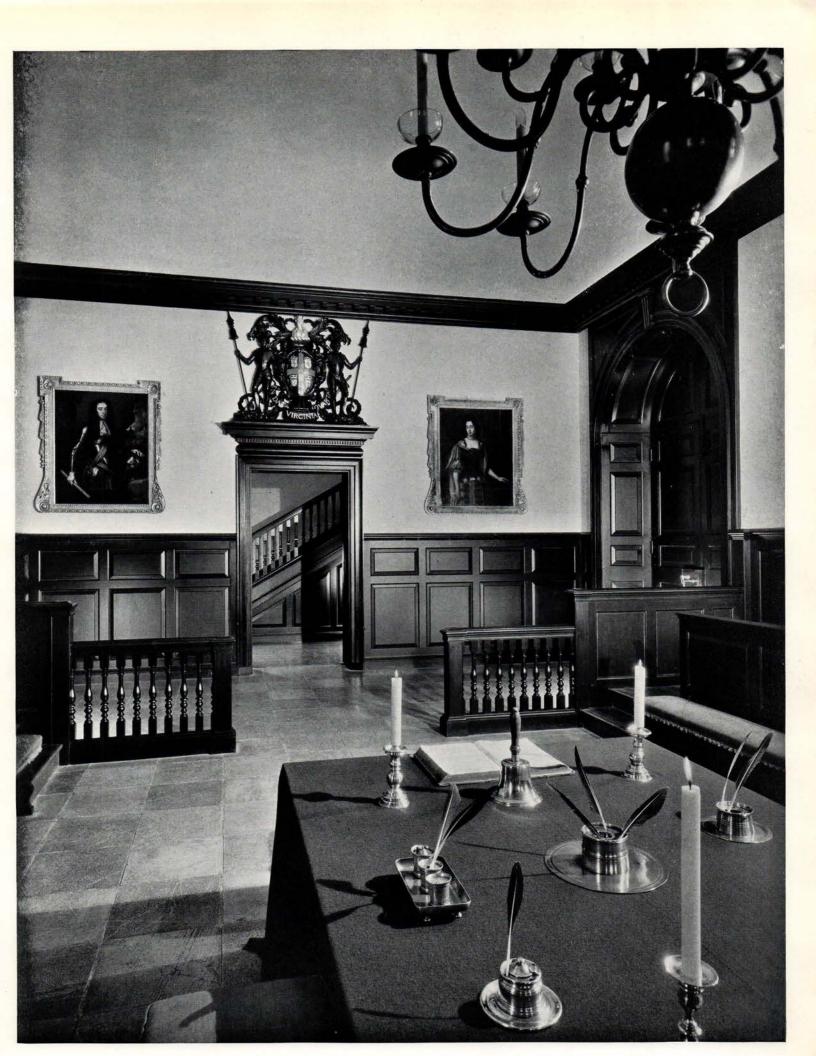


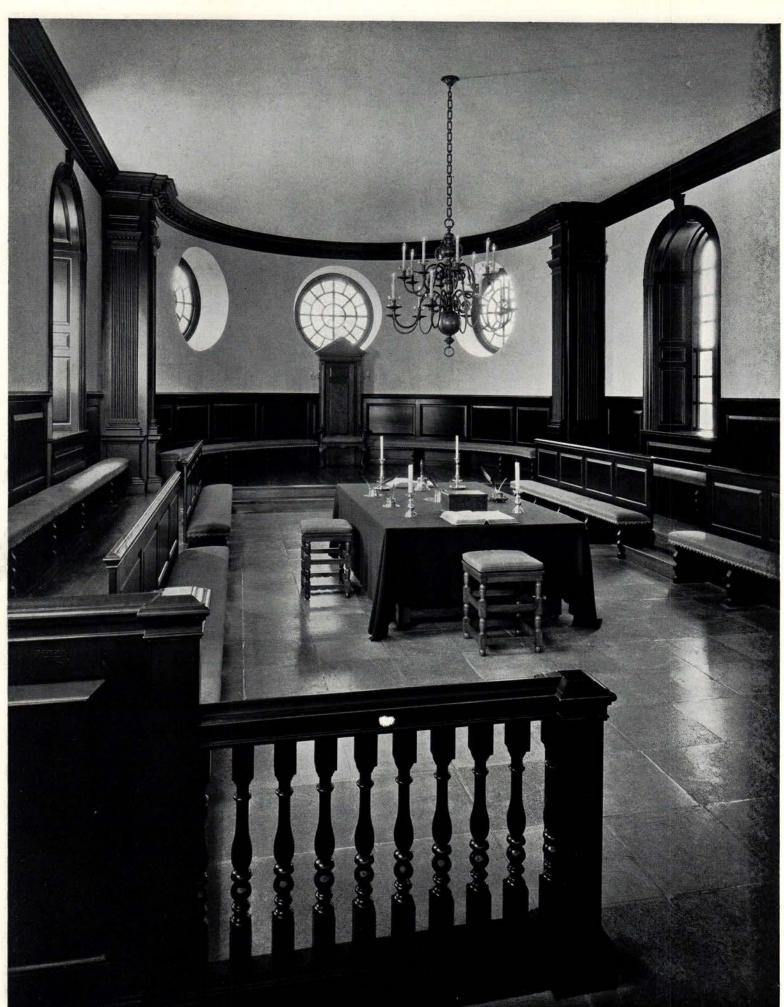
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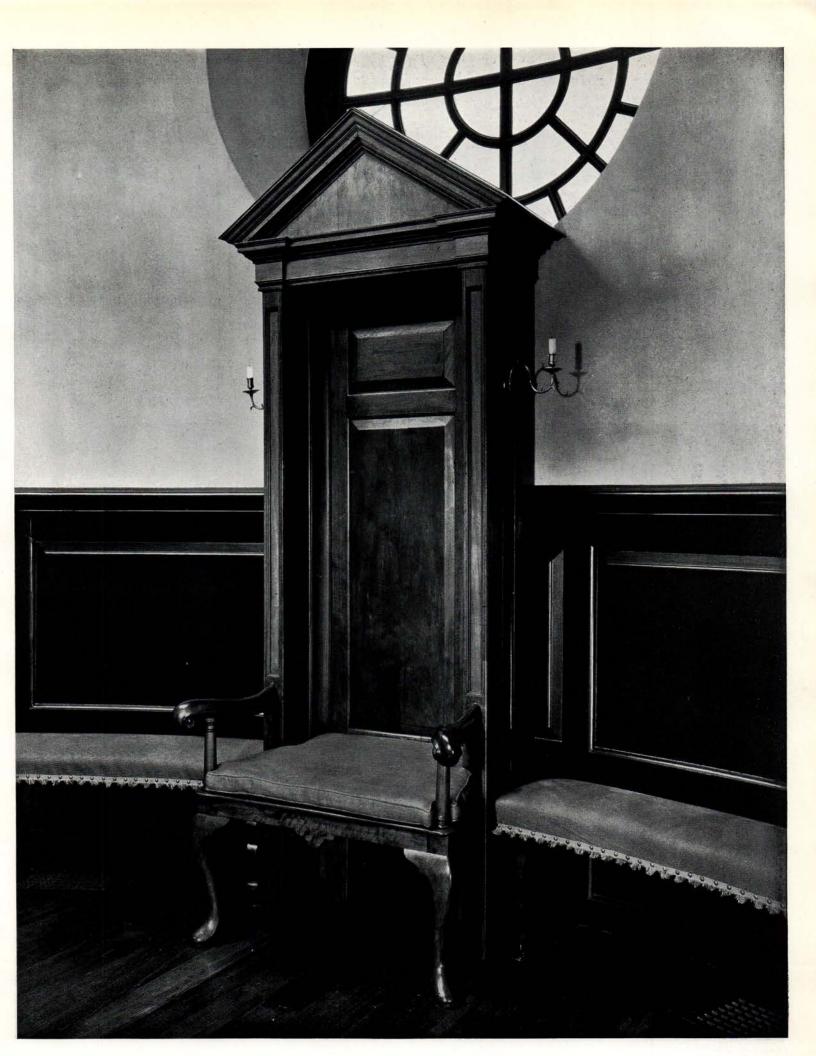


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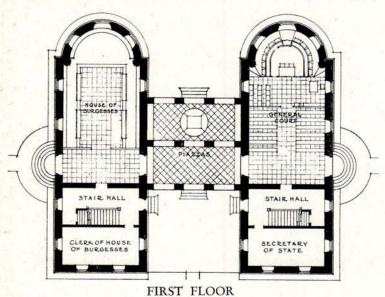


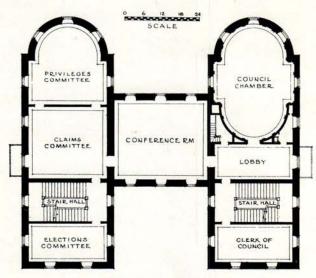


Photographs C. F. S. Lincoln



No means of heating are indicated on these plans of the Capitol of 1705. Candlelight and fireplaces were forbidden by law as hazardous. In 1723 the records were found to be deteriorating from dampness, and fireplaces and chimneys shown on the Bodleian plate (page 365) were then added. Later the building burned.

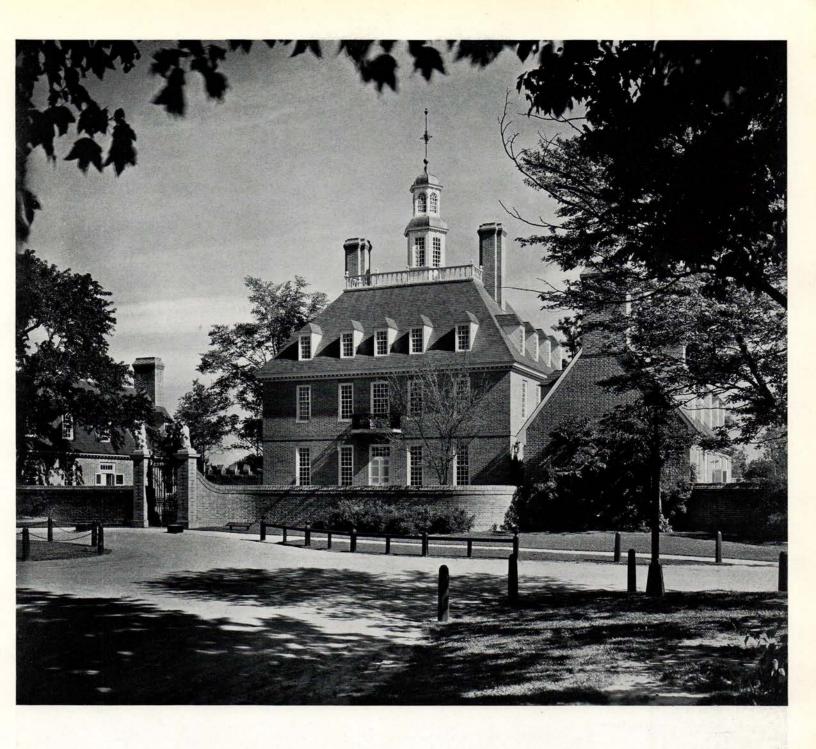




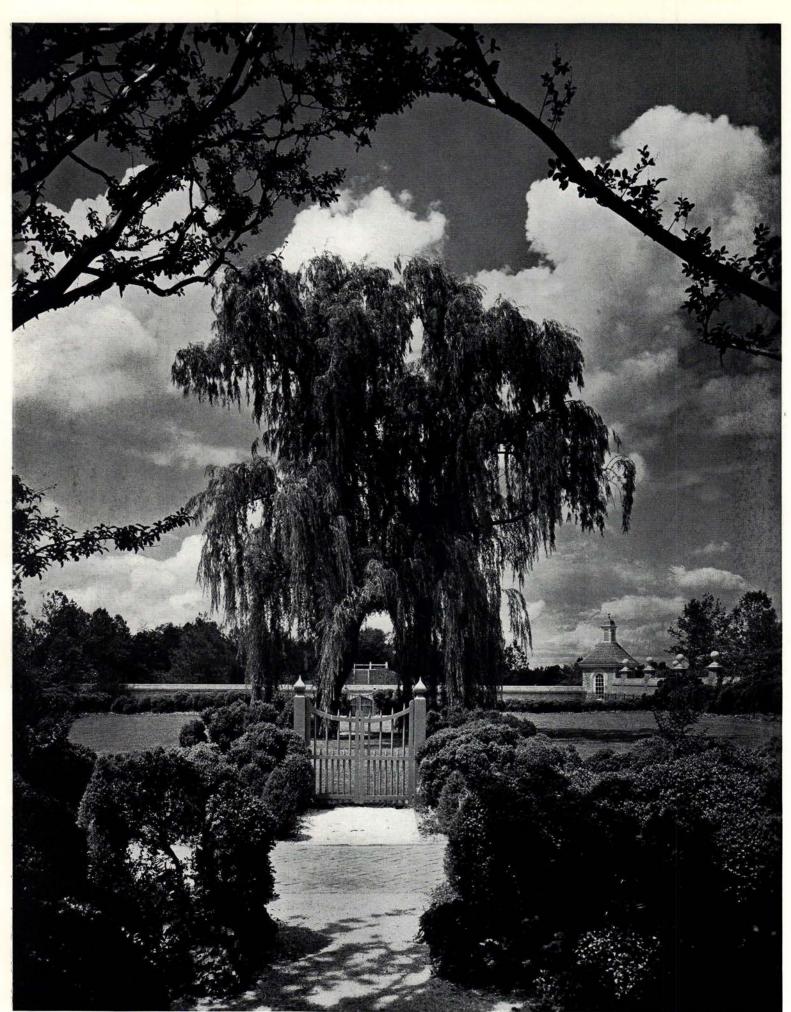
SECOND FLOOR



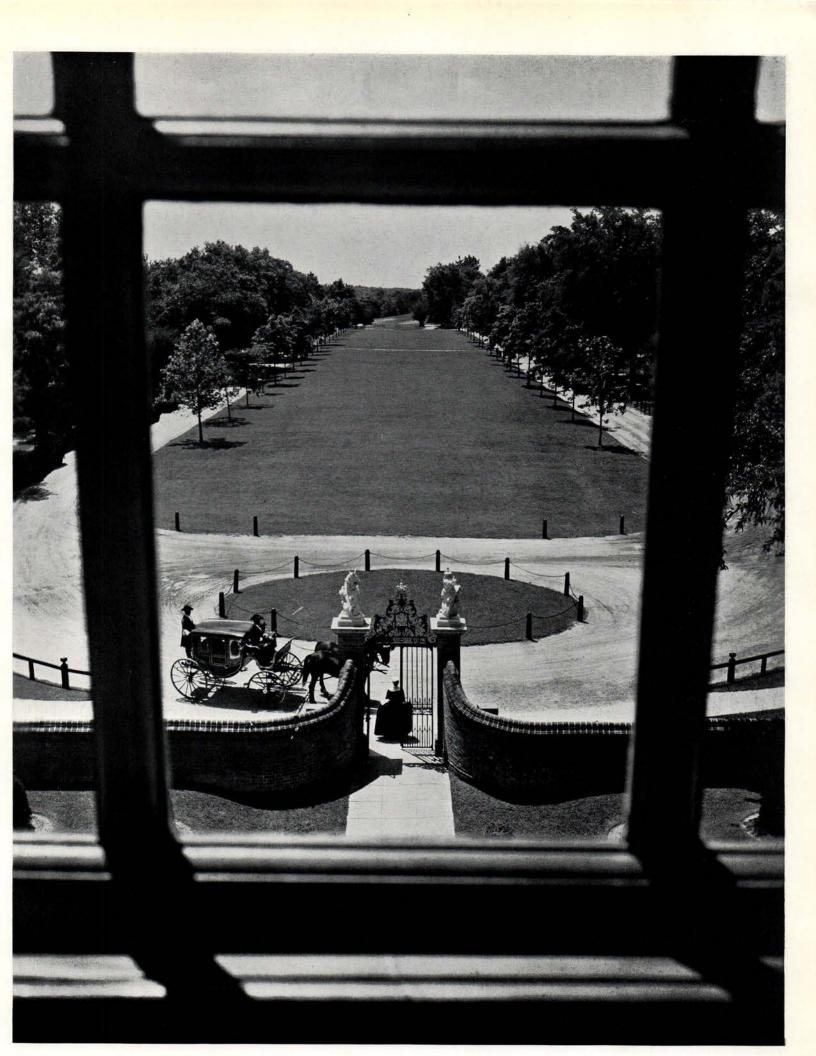
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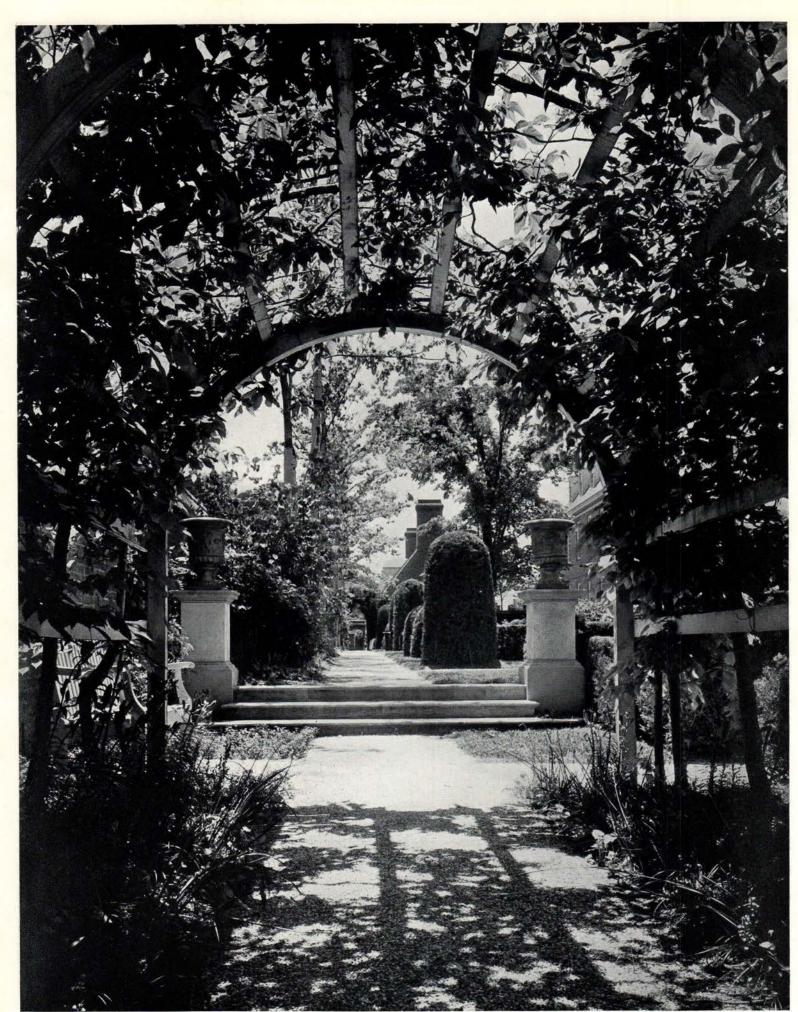


A house for the Royal Governors of Virginia was ordered built in 1705. During its erection the building came to be known as the Palace. It was completed on this site between 1713 and 1720. The Palace was the center of the social life of the Colony until the outbreak of the Revolution in Williamsburg in 1775 when it became a fortress for Lord Dunmore until his departure from the Colony. It was later used as a hospital for American soldiers during the Yorktown Siege; while serving this purpose, it burned in December, 1781. More than 150 Revolutionary soldiers were buried in the Palace grounds. The Palace has been reconstructed upon its original foundations. As an example of residential architecture, it shows the influence of the Low Countries on the early American Colonists. (For general plan of the Governor's Palace, approaches gardens and park, see page 382.)

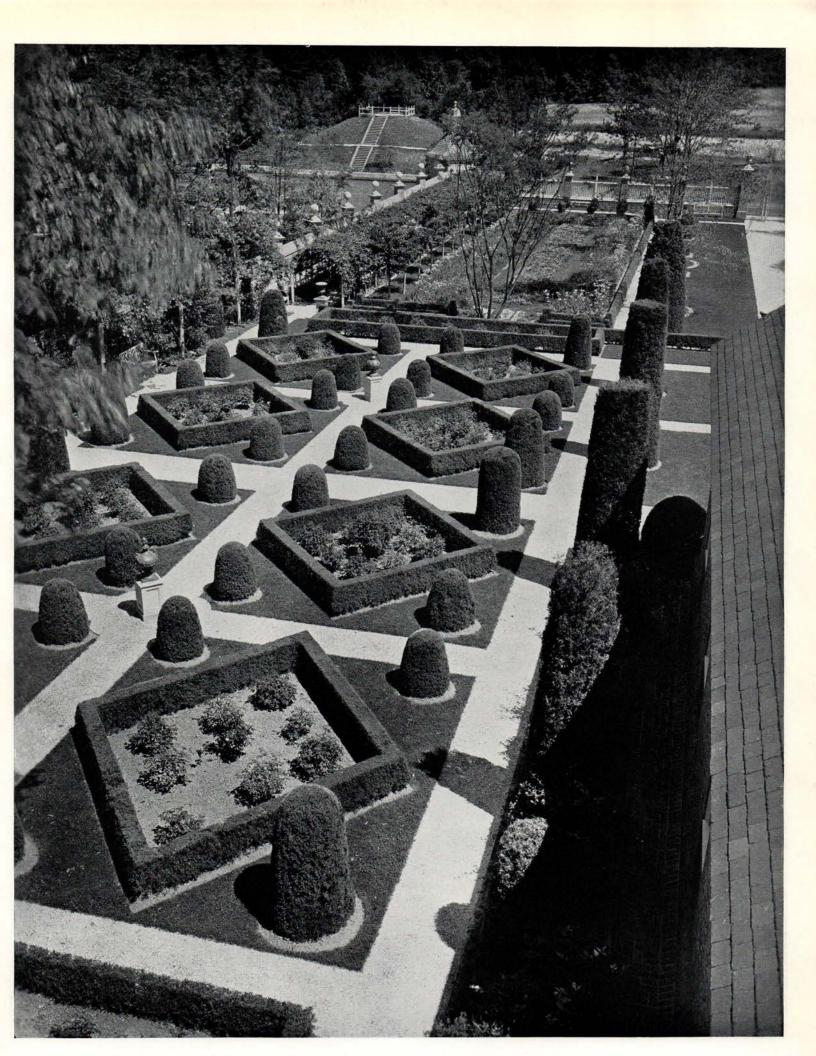


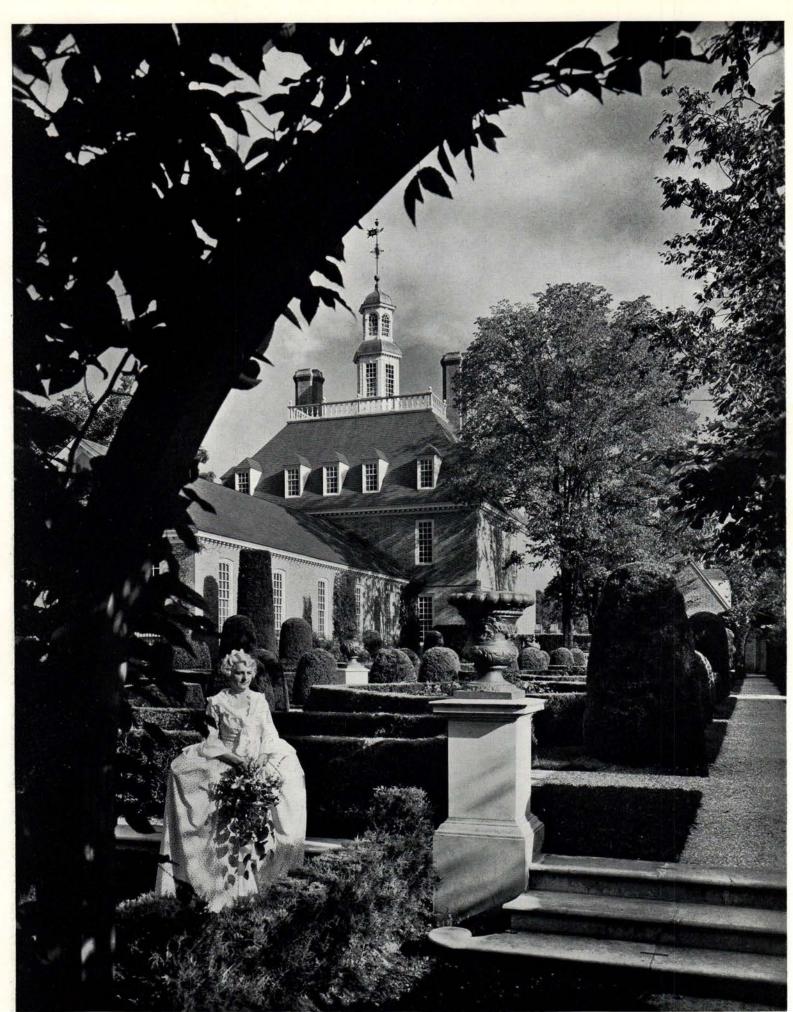
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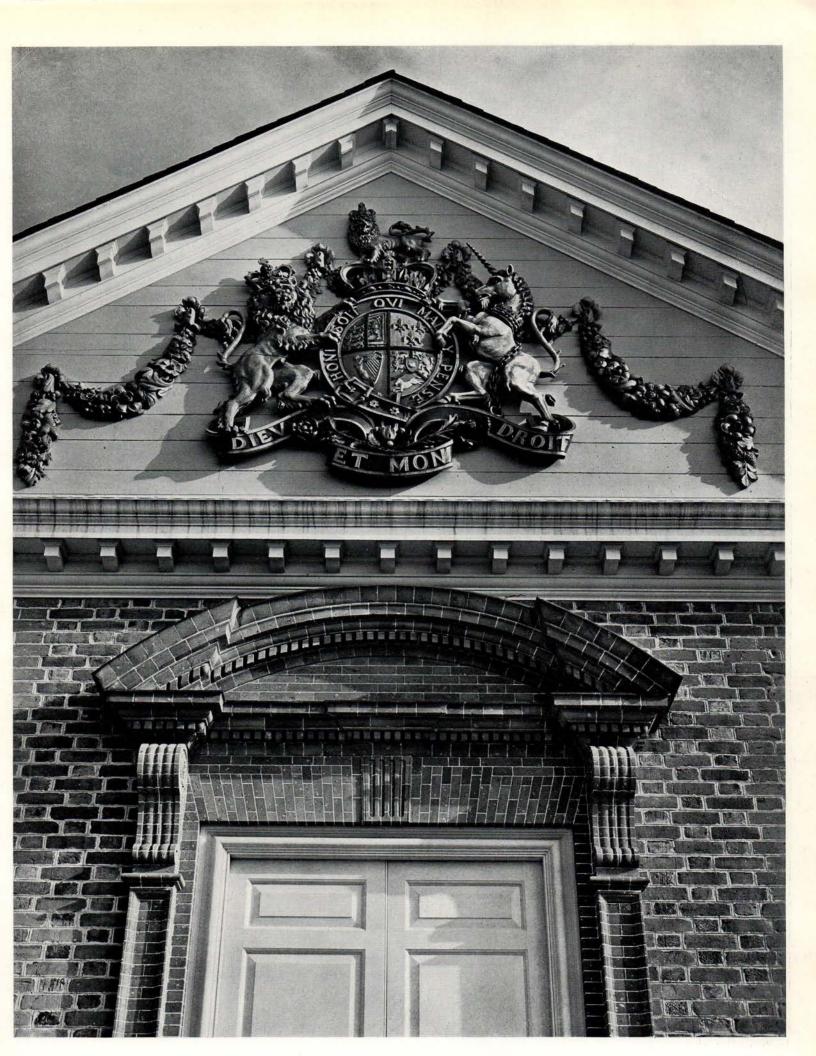


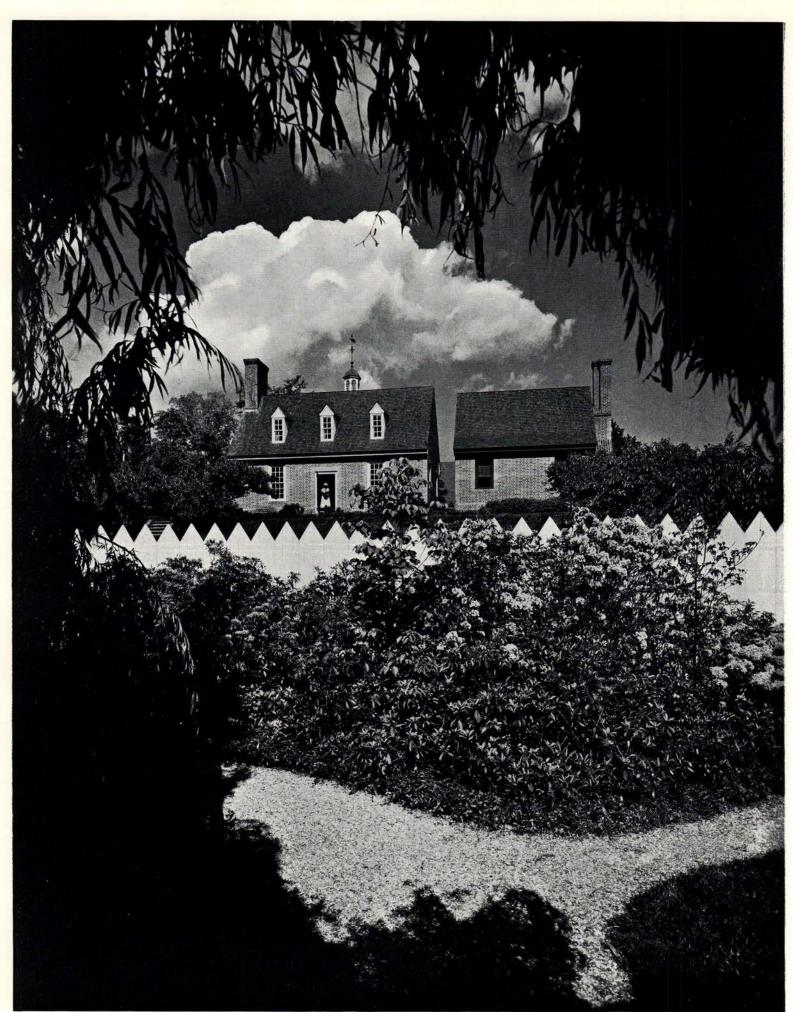
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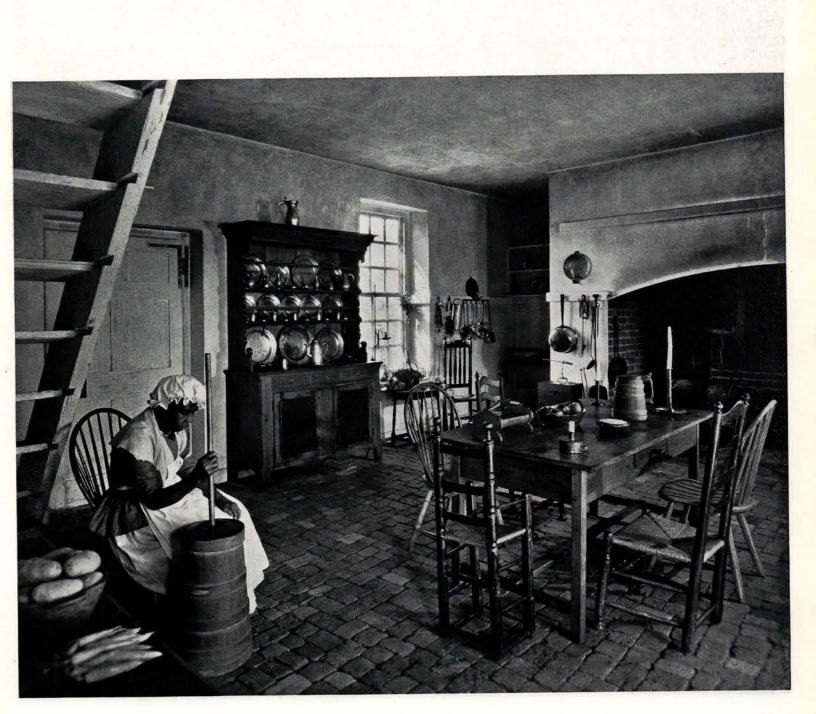


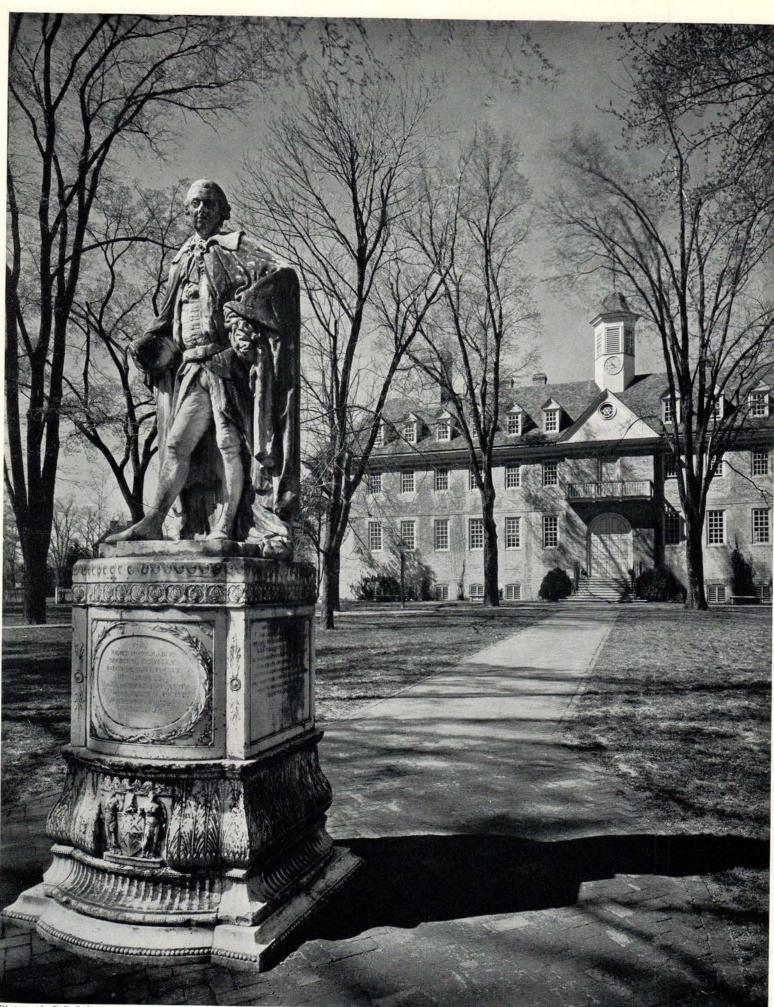




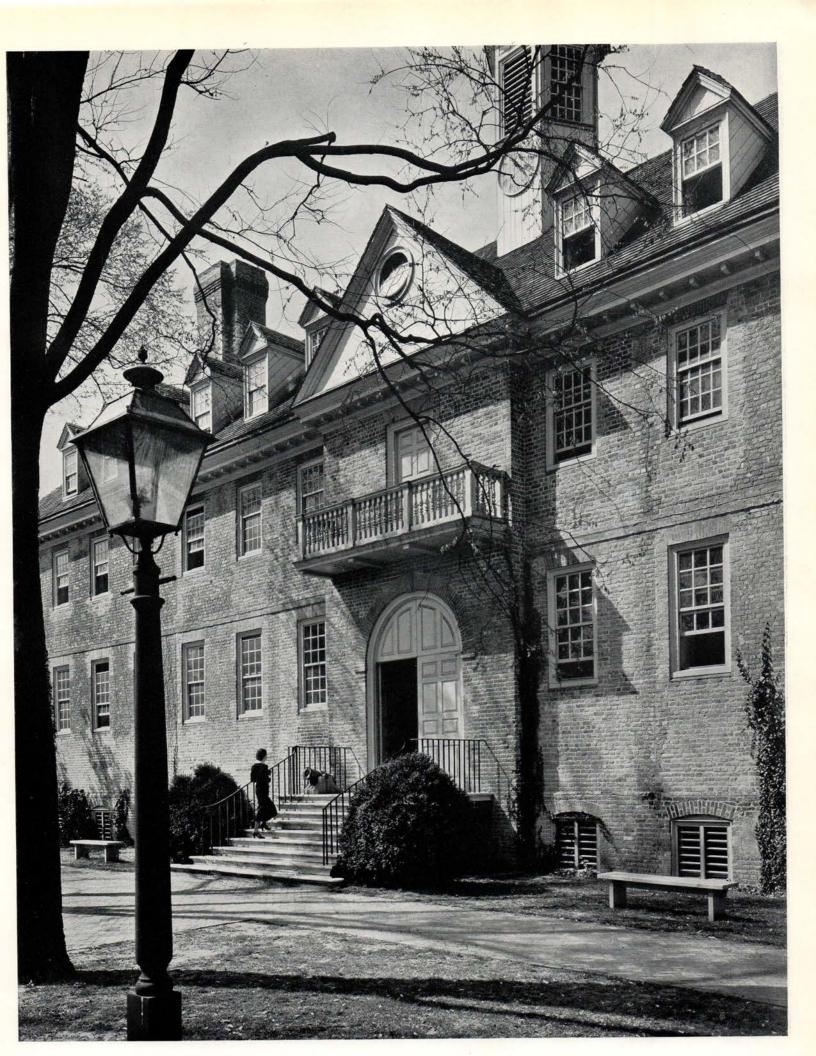


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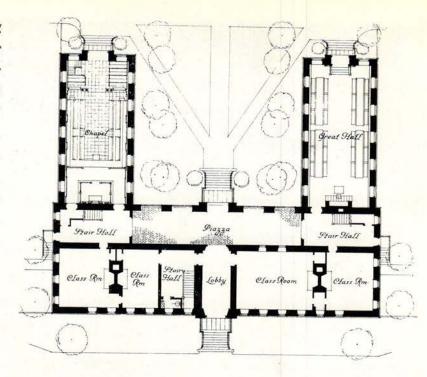




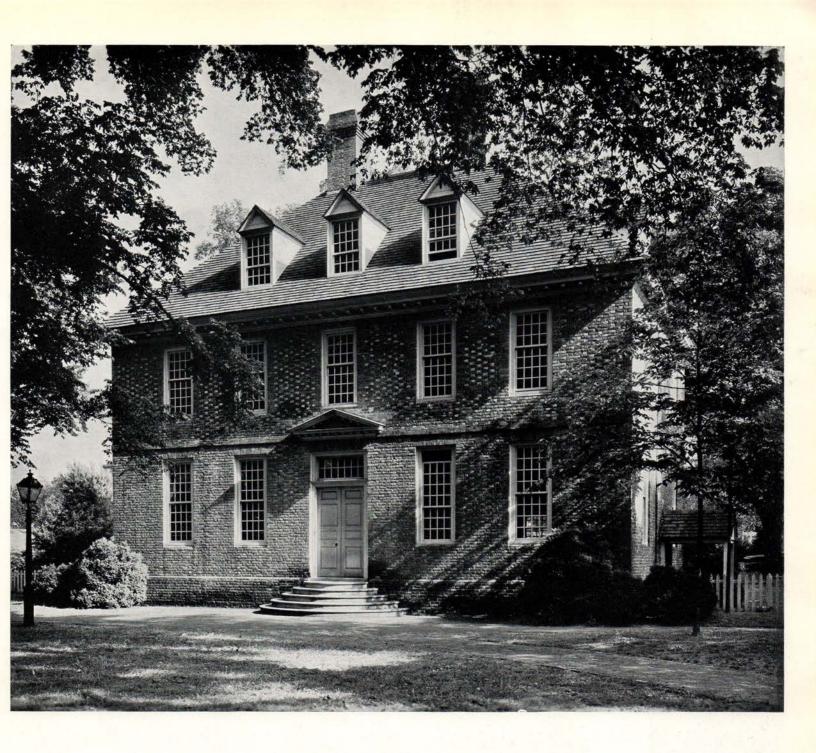
Photographs @ F. S. Lincoln



The Wren Building is the oldest academic building in America and the principal building of the College of William and Mary. In the course of its extensive bistory it has been called "The College," "The Great Building of the College," "The Main Building," and "The Sir Christopher Wren Building." The foundations were laid in 1695. The building was damaged by fires in 1705, 1859 and 1862, but the outside walls are largely original. . . . The present building is an adaptation of the original design by Christopher Wren. The plan shows the central stair ball in its original position; the two end stairways, which conform to the law governing fire exits, were not in the original building.





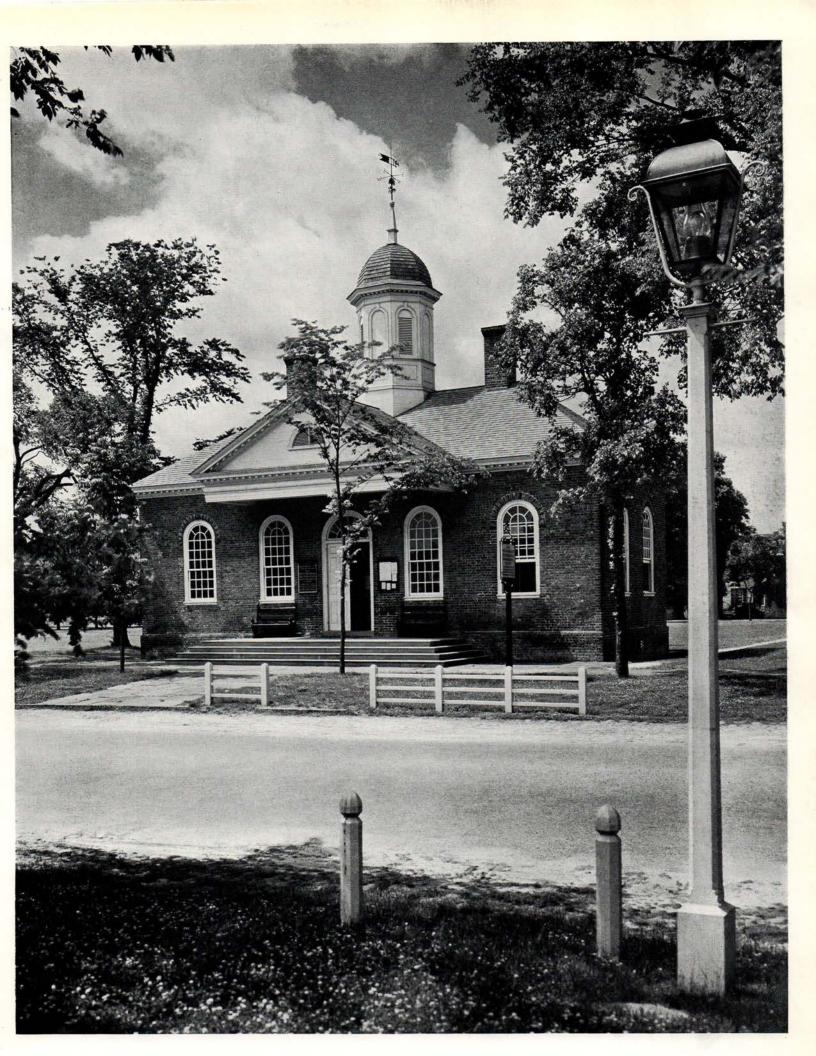


Early known as "The Brafferton" and later as "Brafferton Hall," this building was erected in 1723 with funds contributed by the executors of the estate of the Honorable Robert Boyle of England. The endowment, consisting of the income from Brafferton Manor in England, was used not only for the construction of the building but also for the support of an Indian school to be conducted in it. This school, though not particularly successful, continued up to the period of the Revolution. After the Revolution the building was used for other purposes by the College of William and Mary. The Brafferton Building has never been damaged by fire, but from time to time it was altered and repaired. It has been restored.



Photographs @ F S Lincoln

The first Colonial court bouse was built on this site (No. 79 on Guide Map) in 1715. It was superseded by the Court House of 1770 which still stands on the Duke of Gloucester Street (No. 34 on Guide Map). A new building of Colonial design has been erected on the original site; it serves as a Court House for James City County and as a City Hall for Williamsburg. The old foundations and a chimney, which were all that was left of the original structure, have been incorporated in the new group. . . . The Court House of 1770, though damaged by fire in 1911, continued in use up to the time of the Williamsburg Restoration. It now contains the Restoration Archaeological Exhibit. Columns were originally intended for this building but were never installed; for the sake of authenticity they have been omitted in restoration.





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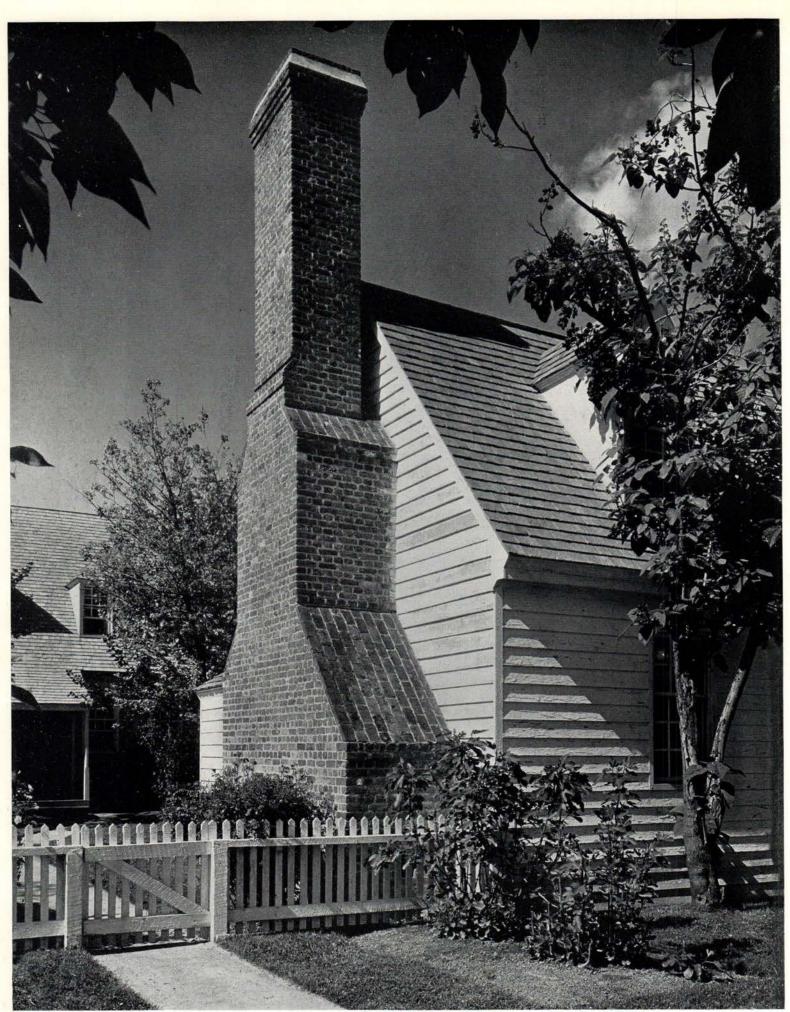
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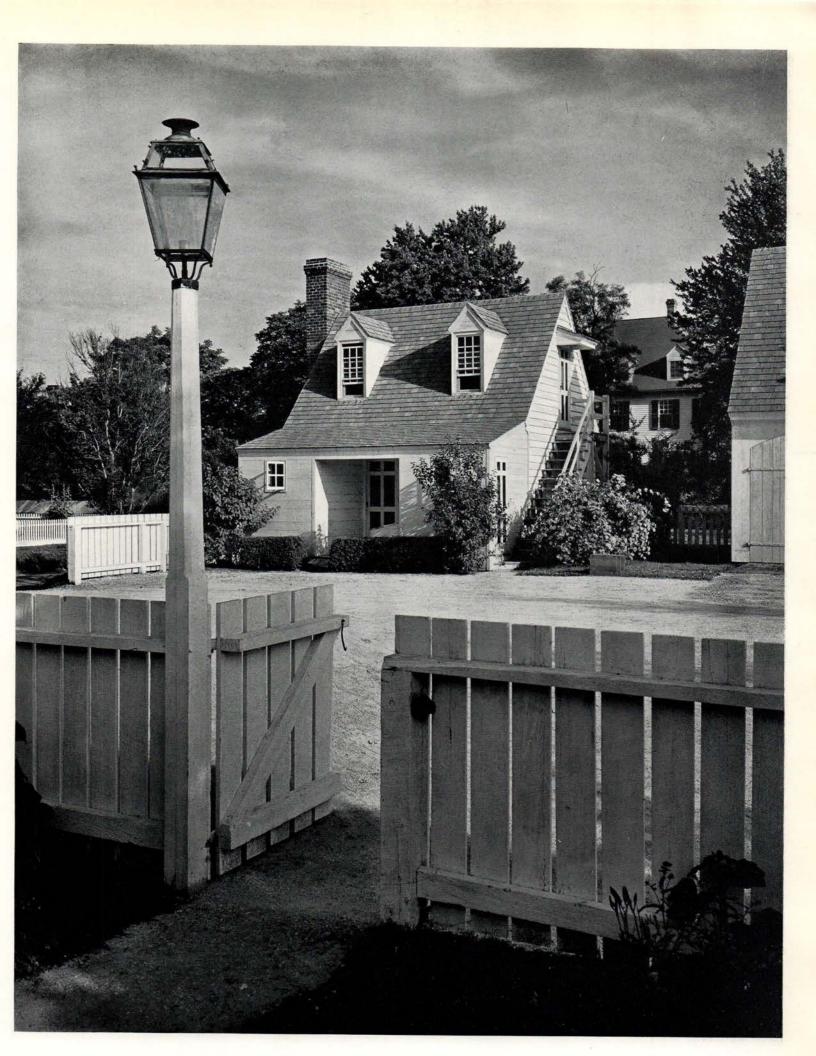


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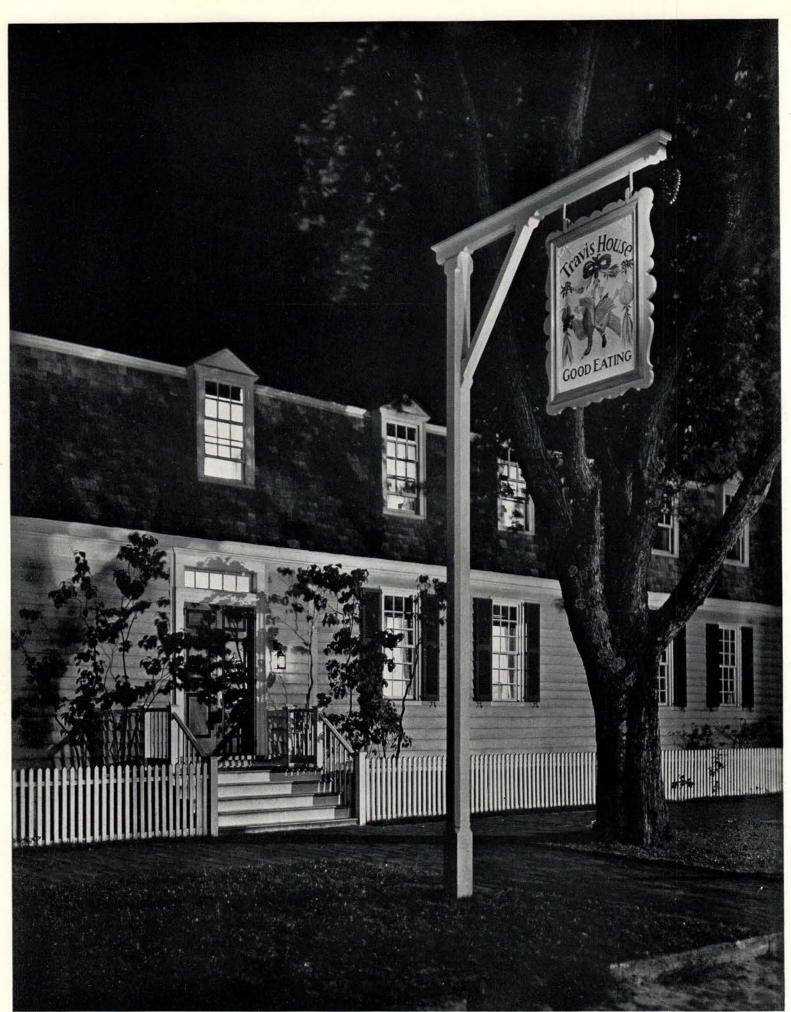




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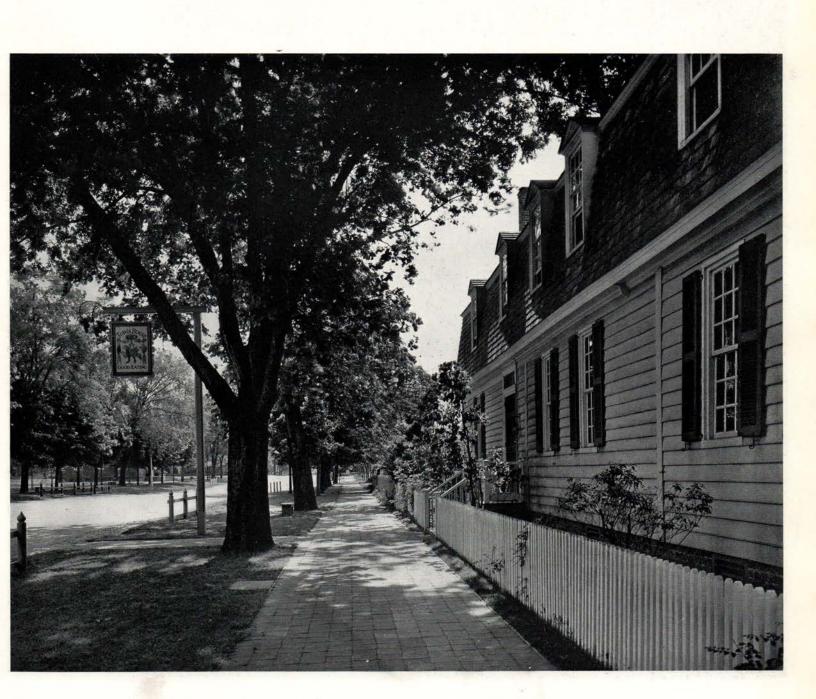
Taverns and inns were numerous in Colonial Williamsburg, being necessary to accommodate the many visitors who flocked into the city when the assemblies were held and the courts sat. . . . The Raleigh Tavern, erected prior to 1742, was the outstanding hostelry of its day. It was destroyed by fire in 1859. It has been restored upon its original foundations as originally designed. . . . The Market Square Tavern was built by John Dixon about 1749. At first it served as a residence and shop, but was later enlarged and became a tavern. It has been used continuously as a tavern and still serves this purpose.





Photographs @ F. S. Lincoln

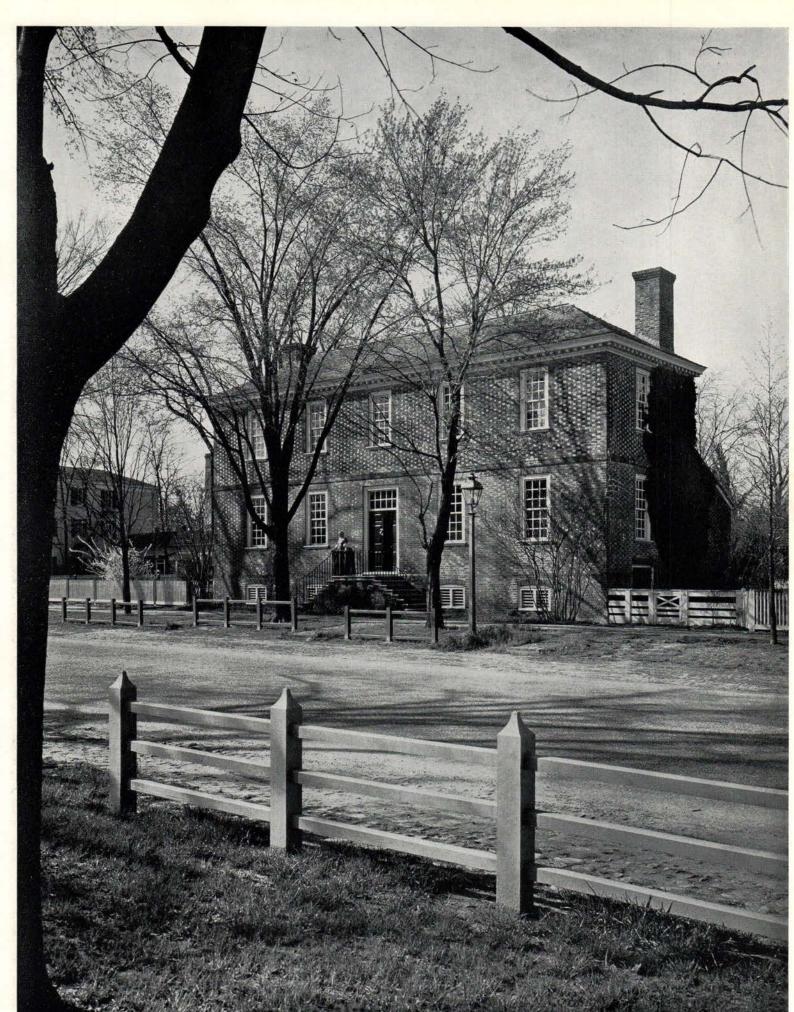
The Travis House was moved bodily to its present location and restored upon the foundations of a Colonial house which had disappeared. The building, which originally stood on the northeast corner of Francis and Henry Streets, was presented to the Williamsburg Restoration by the Eastern State Hospital. It was erected on its original site in 1765 by Colonel Edward Champion Travis, who was a member of the House of Burgesses for 25 years. The foundations on which the Travis House now stands (fitting remarkably accurately) are those of a house owned by John Greenhow, a wealthy merchant of Williamsburg in the last half of the 18th Century.



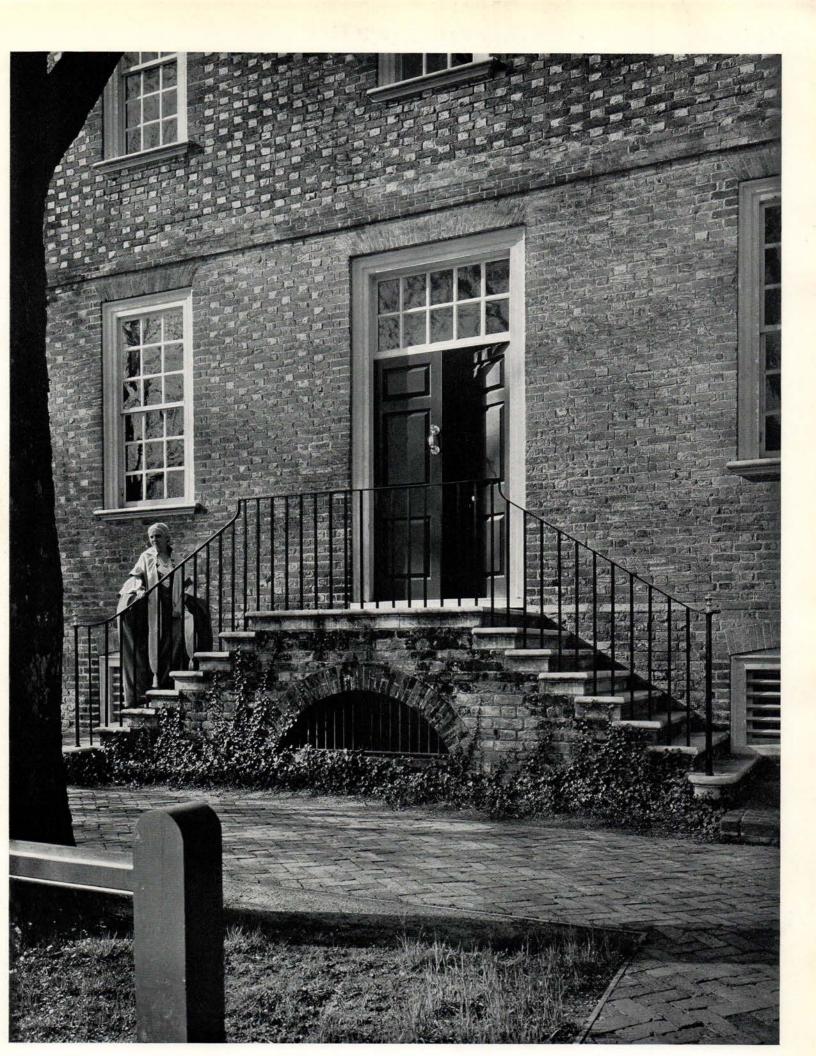
The Semple House (opposite page) was owned in 1799 by Judge James Semple, who represented Williamsburg in the House of Delegates of Virginia. He was a judge of the General Court and a professor of law at the College of William and Mary. The property continued in his ownership and that of his heirs until 1850. The house has been restored.





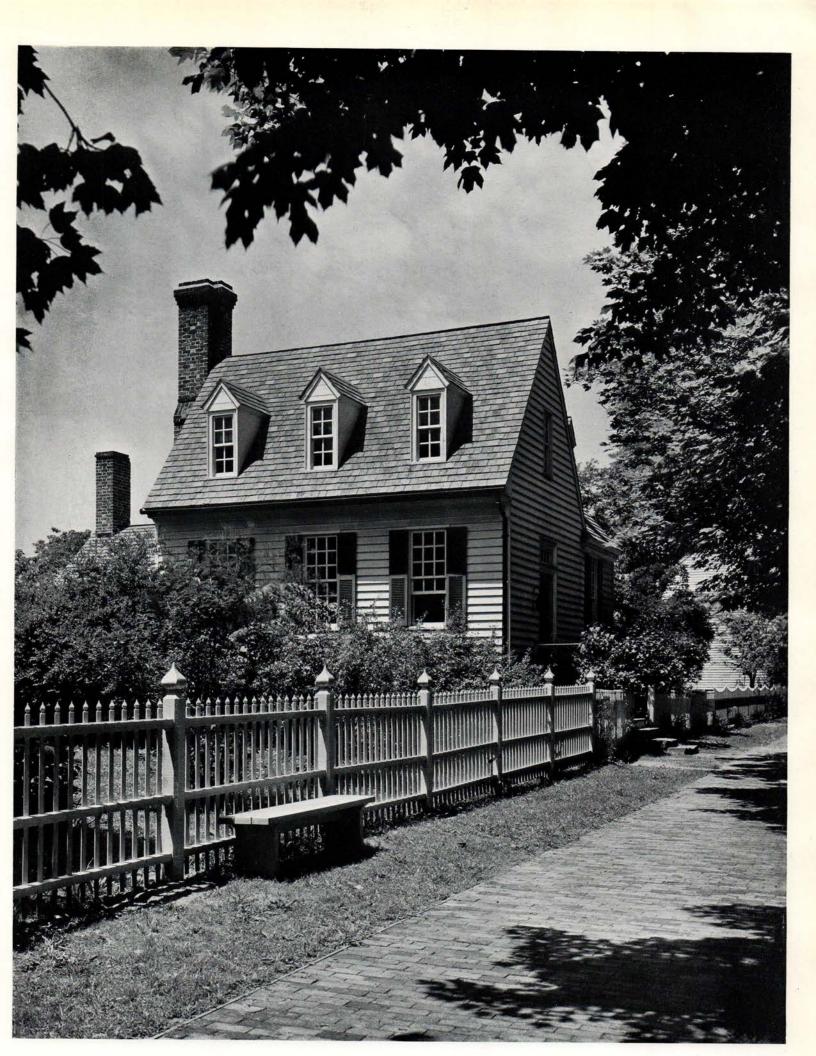


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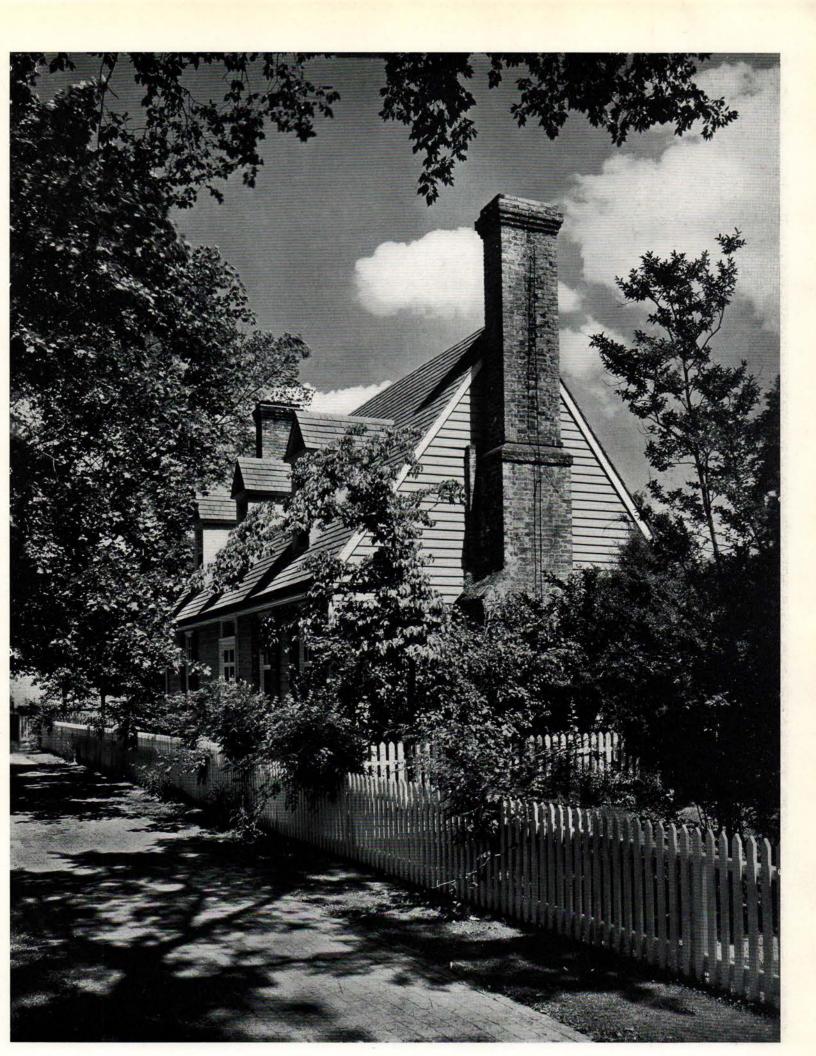


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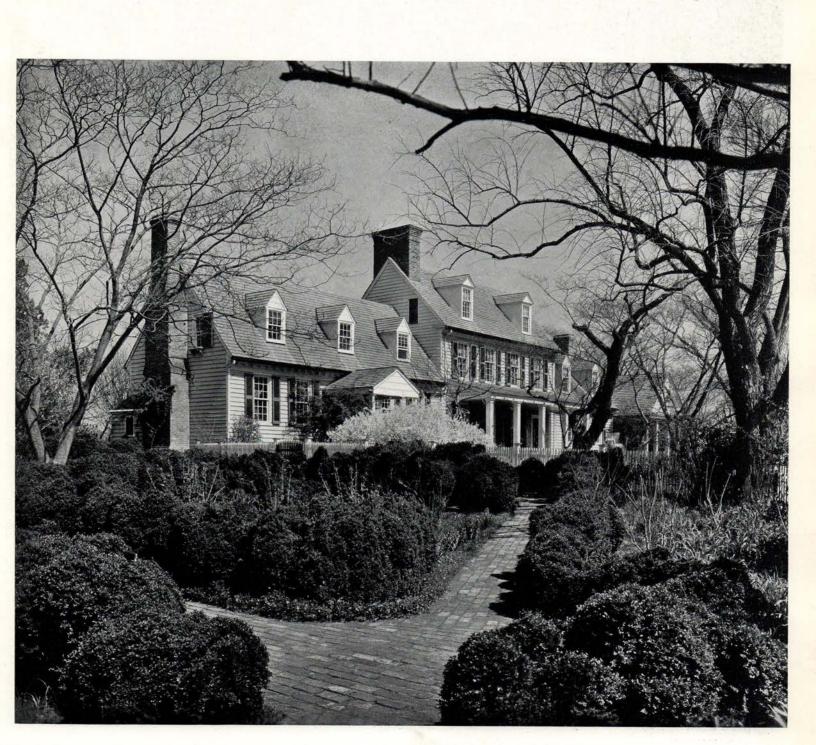
This house was built about 1788 by St. George Tucker, who succeeded George Wythe as professor of law at the College of William and Mary. He was an accomplished author in the fields of law and letters, and for his legal works was called "the American Blackstone." His descendants continue to live here. The house has been restored.

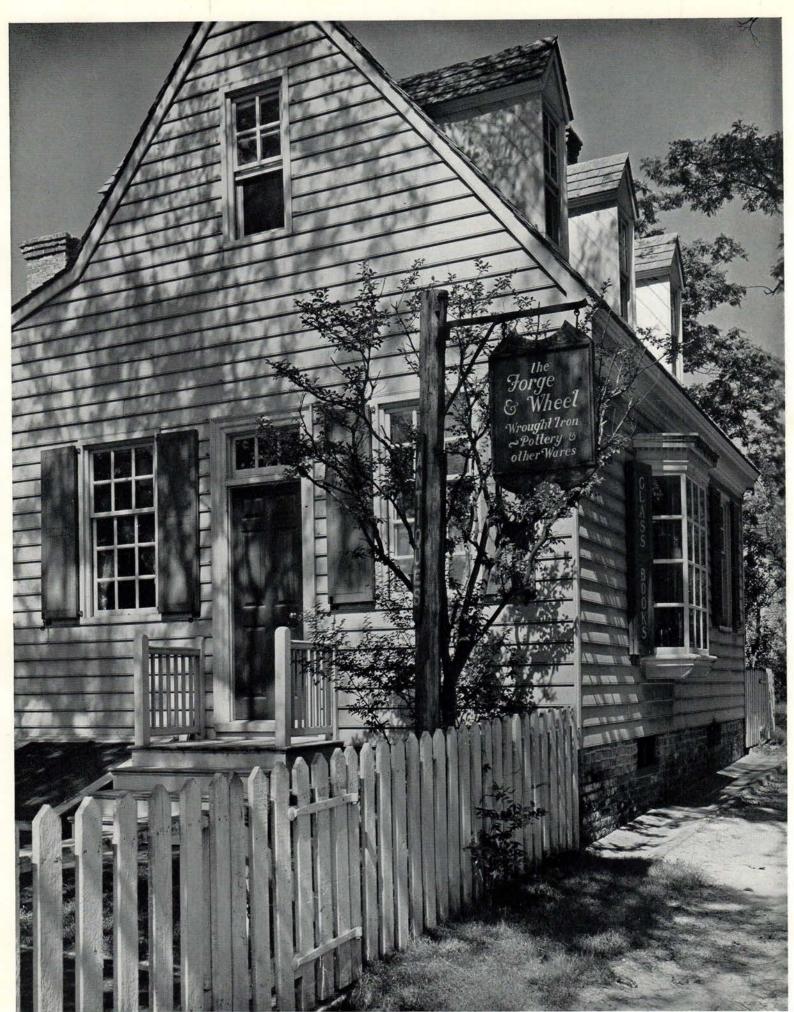




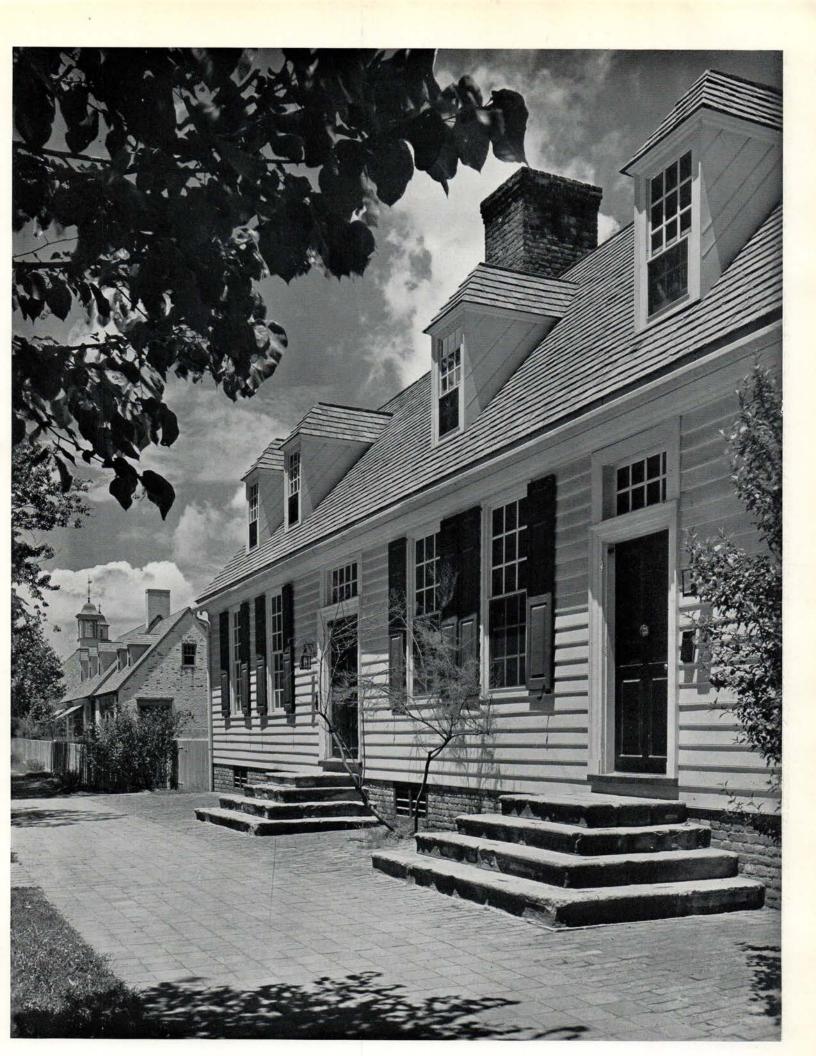
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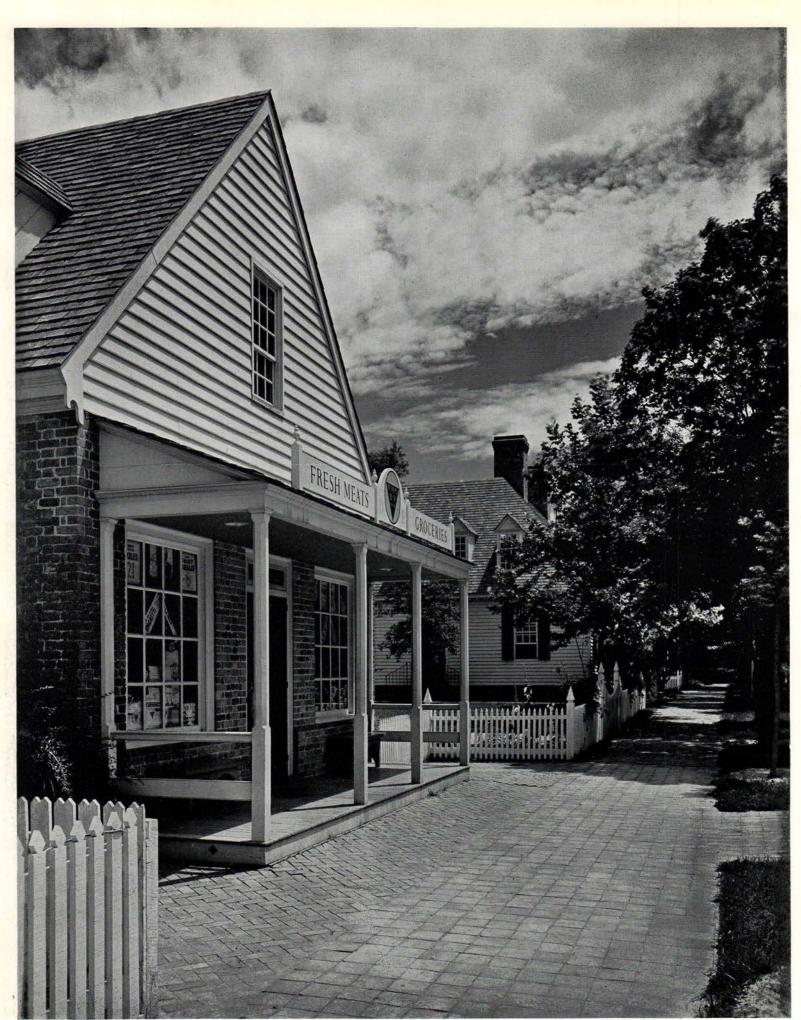
This house was owned about the middle of the 18th Century by John Coke, a silversmith, goldsmith and jeweler. Its garden served as a landmark in the court records for York County. Soon after the Revolution, the house came into the possession of the Garrett family, and continued in their ownership until recent years. It has been restored.



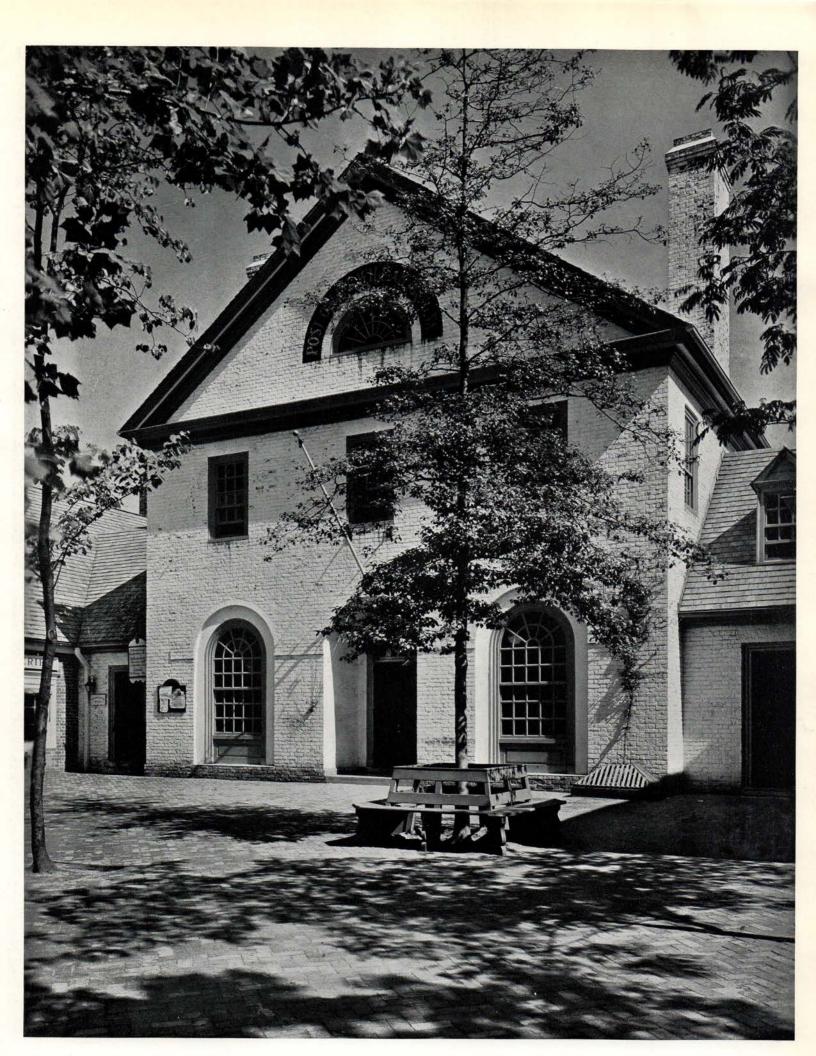


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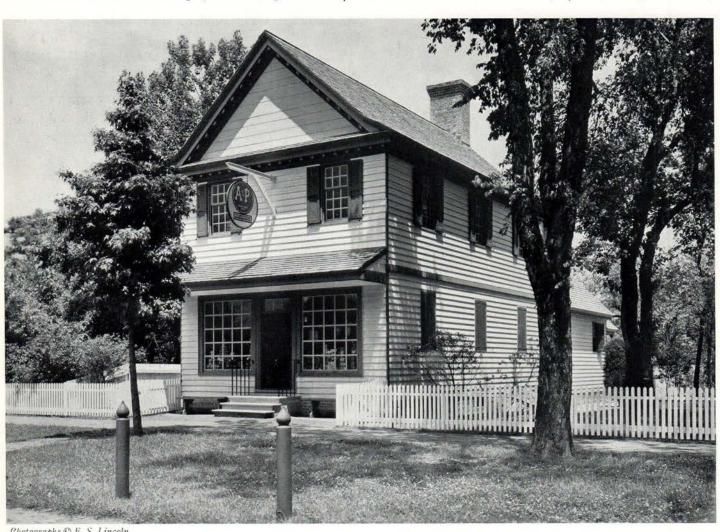


Photographs @ F. S. Lincoln





Above: Davidson Shop (Building No. 29) - Below: Teterel Shop (Building No. 30)



PAINTS, FURNITURE AND FURNISHINGS

By MRS. SUSAN HIGGINSON NASH

THE ACTORS in the Colonial scene have gone. But this does not mean that the restoration of their surroundings must therefore be devoid of life. The problem of re-creation of the interior of the buildings is solved in direct proportion to the success achieved in producing an effect of continued life, and of settled repose.

On the care with which furniture and furnishings are chosen, with which they are related to one another, and with which their character and scale are studied to produce the effect of momentarily interrupted use, depends the success of the effort

of interpretation.

The background of this interior scene is made up of the wall treatments, hangings, window treatments and the vistas from one room or hall to another. The wall treatments in Williamsburg include full paneled walls, plastered walls with and without dados, and in some cases walls covered above the chair rail with paper, leather or fabric.

The color and texture of this background give it meaning, life and variety. Thus, the study of this color and texture must precede execution and be so considered that it shall include the scheme of the foreground, and the scheme of sequence from room

It is impossible to place too great emphasis on the importance of the proper handling of this color and texture in the effort to produce effects that are essential to authenticity. The successful application of modern paint to simulate old paint depends upon many factors. Of these, the first is the matter of

the pigments themselves.

In Colonial Virginia, the painter's range in choice of colors was restricted. In comparison with the wide range at his disposal today, the painter could depend only upon such pigments as those mentioned in the informative papers of William Allason, a wholesale merchant of Falmouth, Virginia, 1760-1790. Allason's numerous orders to his London and Glasgow merchants are definite proof of the pigments available then. For example, he lists as sold to one of the various people:

> Linseed Oil Fig Blue I Bble. Lampblack 1 Cask Spanish Brown Paint 1 Cask of White Lead Prussian.

In his "invoice book" are listed from time to time such inventories as the following:

On hand—Copperas, 16 pounds

Indigo Light Blue Chalk

10 Casks White Lead 1 Cask Red Lead 1 Cask Spanish Brown Red Paint from Maryland

Linseed Oil 10 gall."

As well as many repetitions of these same paint ingredients, and a few others.

The use of these paints as staple commodities is established by the facts-first, they were ordered and re-ordered; second, they were advertised for sale; and third, by their actual sale as attested by their existence upon the buildings that have survived to this day.

The recent generous loan to the Restoration of the papers of John Norton and Sons of London and Virginia, by their owners, Dr. and Mrs. Hatley Norton Mason, brings to light a letter from John Page, Ir., of Rosewell, in 1771:

"As my house is very much out of repair . . . I shall . . . be much obliged to you if you will send me the following articles . . .

100 lbs. White lead 20 lbs. yellow ochre

A Barl of Oyl

20 lbs. of Venetian Red

2 gallons of Spts of Turpentine

5 lbs. of Red Lead 3 lbs. Lamp Black

2 lbs. of White Coperass"

There is also an invoice to Littleton Savage, merchant, Northampton County, Virginia, September 4th, 1772:

"20 lb. Fig Blue

6 lb. Indigo

400 lb. white lead in Ovl

3 Ct. Red Lead

2 Ct. Spruce Yellow

2 lb. Lamp Black

100 gals. Linseed Oyl 2 lb. Spanish Whiting

2 lb. Prussian Blue (dry)

28 lb. Allom

28 lb. Copperas"

William Beverley sent to England for the following*:

"July 24, 1739—

10 gals. Linseed Oyl in a jarr

1/2 Qt. Wte Lead 1/4 Qt. Red Lead 1/2 Qt. Spa Blue

"As much paint of a deep olive colr ready ground with linseed oyl as will paint 200 yds. wainscott."

On May 22, 1752, the Virginia Gazette carried this advertisement:

"Just imported . . . by the subscriber in Williamsburg, a fresh assortment of drugs and medicines, oil of turpentine, copperas, Prussian Blue, Red and White Lead, Verdigrease, Yellow oaker, Spanish Brown and Umber Paint, Vermillion, Linseed oil, gold leaf, Dutch Metal. . . ."

And on October 17th, 1776, the following: "To be sold . . . two dwelling houses, kitchen, storehouse, dairy and meat house, all painted with ochre. . . . "

¶ JUST AS the architects have attempted to place themselves in the position of the original builders and to act as proxies for them, I have tried to adapt my experience with colors to the usages of Colonial times and to learn from documents and actual examples as much as may be gleaned from them. The judgment and taste of the Colonial painters are as apparent as the same qualities in the craftsmen builders. They achieved harmony and contrast and used their colors meaningly with a full comprehension of fitness. The colors themselves had fine body and lasting quality, as evidenced by the existing examples "Ampthill," "Wilton-on-the-James," "Sarah's Creek" or "Little England" on the York, and many other places in Virginia. They possessed vivacity and vitality. The salient characteristic of the earlier colors is the intensity of tone. They were often used in their pure form (especially the ochres and reds), but a great variety of colors resulted from the mixing of the pigments and the use of lampblack.

Often only one coat of paint was used on woodwork and, as at the Ball Room at Ampthill where care would naturally be exercised, it has been thought to be sufficient even until today. This coat could not be considered, therefore, as a primer. It was used with a decorative intent in mind. Few of us have patience today to wait for the years to pass that are required to age both the paint and the woodwork to the mellow tones which we admire so much today. The appearance of one coat on the wood that is procurable today is not that of the one coat on the fine old woodwork of these houses.

At Williamsburg, it has seemed wise not to attempt to produce an aged effect of painted surface by

artificial means. Time only will mellow and soften the color of painting that is done with well selected, well mixed paint, well applied upon a prepared

Time for deliberate application of paint is most essential. Haste has spoiled more paint jobs than any number of poor painters or poor ingredients. Nor should interior paint be applied until the work of the other trades is completed. Dust clinging to fresh wet paint produces in the very beginning that quality which is least excusable—a dirty or "muddy" appearance.

Certain of the early paints have the quality of stains and are only recognized as paints by analysis despite their appearance and deeply penetrating effect on woodwork. Again, the texture of many old paints presents a baffling problem until it is understood that the early colors were ground and mixed by hand and that, whether applied with water or oil, they dry out with an interesting surface that is more crude than that procurable otherwise.

The best way, therefore, to simulate the old effect has been found to repeat the methods of Colonial painters and to reproduce their materials as closely as possible. These methods include overlays of successive colors, sometimes, of course, as dictated by fashion from time to time. The result of these overlays is often startlingly beautiful—a result that seems procurable by no other method. The sequence of successive over-painting has naturally followed usage and one finds generally a first coat of gray green or of red ochre or Spanish brown, and superimposed coats of blues, yellows, greens, grays and, finally, pastel shades and white. It is unsafe to generalize-if one did so one would classify white as a treatment appropriate only to later work; no such error should be made. The balustrade of the original Slave Gallery of Bruton Church is white today. Originally it was red. During its life it has been painted alternately white and red eight separate

Allowance for change is perhaps as important a consideration as any other and one which demands a tax upon one's judgment.

Firstly, in examining existing color it has been found that the color must have greatly changed since its application. Soil, cleaning, oxidization and overpainting can alter a tone very greatly. Secondly, reproduction of the color must be done with an estimate in mind of the change that will take place in it as the years go by.

No paint surface in the exhibition buildings at Williamsburg has resisted this inevitable process. In the four or five years since the application of the first of them, the change in tone and texture has been noticeable. It is hoped that visitors may find that the mellowing process is under way.

No amount of modern effort or of chemical skill has yet been able to give the superb effect of the paint surface that has been exposed to years of liv-

^{*}New York Public Library, Manuscript Division.

ing, to strong light and deep shadow, to soiling, cleaning, handling, which one finds in the rooms at

Marmion and Ampthill.

The last coat, being the one which the observer believes that he sees, is the coat which must be considered most for texture and durable quality. This coat may be the last of successive coats of the same color. It may contain more varnish than the others or not. It may, on the other hand, overlay colors that are not its exact counterpart. The observer will then wonder, perhaps, how the effect is produced, whether the coat is a thin one and transparent.

All in all, a fascinating problem is there to be solved in every opportunity to simulate the effects produced by the early painters in Colonial Virginia. Whether they were conscious of their craft tradition and attempted special effects for special purposes is debatable. They must have realized, however, that they were producing a background for the furnishings and the life of the owners—for they followed fashion as strictly as did the dressmaker, tailor and

wigmaker.

They have proven their conception of fitness and may have yearned to use paint more lavishly than its value and price permitted. They knew that contemporary London was following the French fashion in building up many coats, each one carefully rubbed and prepared for its successor. Their conception of fitness precluded the use of certain colors in certain places and suggested those that would be appropriate. The wing of the Capitol which was to be used by the Burgesses was to be trimmed out with wainscot color. The wing to be occupied by the Council and General Court was to be "painted like marble."

Today one attempts to apply this sense of fitness to the re-creation of the Colonial background. A green suitable in the Raleigh Tavern might not be suitable in any of the rooms of the Governor's Palace. A color or tone of color suitable for moulded woodwork, where intensity of light and shade varies in each part of the room, is seldom suitable on flat unbroken surfaces. Here the reflection of light from objects or surfaces outside the building brings its influence to bear upon the selection of color and its application. The reflections from buildings, brick walls, trees, are all absorbed by responsive paint colors carefully chosen.

It seems wise always to choose and to mix a color in the room in which it is to be used. Colors seem to grow, and only gradually, as a combination of reflections of light and of reflected light. They rebel at abuse and at unskillful blending.

¶ IN THE RESTORATION of the furnishings of a building it is important to keep certain thoughts in mind to assist one to overcome the temptations which one feels at times, either to acquire an object for its own sake or to attempt some decorative scheme of interest simply because the means seem ready to hand. One of these thoughts is that furniture and furnishings which are rare and valuable today were more commonplace and only comparatively valuable then. Another is that in the course of their lives all houses and buildings become repositories for objects of many periods and styles, and of varying intrinsic and artistic merit. Another is that pieces which are most rare today are so not only because of their comparative antiquity, but because of the inevitable discount at which they were held as fashions changed, a discount which resulted in the destruction of most of them.

One would be interested today to appraise the present value of the pieces that had been relegated to the Cook's Chamber at the Governor's Palace in the time of Lord Botetourt, 1768-1770.

Cook's Bed Chamber:

Field bedst. 2 Matrasses, 3 blankets, 1 Quilt, 1 Bolster & pillow Red check Curtains

1 Round mahogy table with leaves

1 d°. d°. Tea d°.

- 1 Green easy chair with green cover & cushion
- 1 Arm Chair—leather bottoms
- 6 Mahogy chairs Hair bottoms

1 Walnut Desk

- 3 Pr. red check'd window curtains
- 2 pokers, 1 Fender, Tongs, Shovel & hearth brush
- 1 dust pan hang trivet

1 Copp^r. tea kettle

- 15 Prints, 2 Teapots, 3 Cups & Saucers
- 1 Sug^r. Dish & 2 bottles of Staffordshire ware

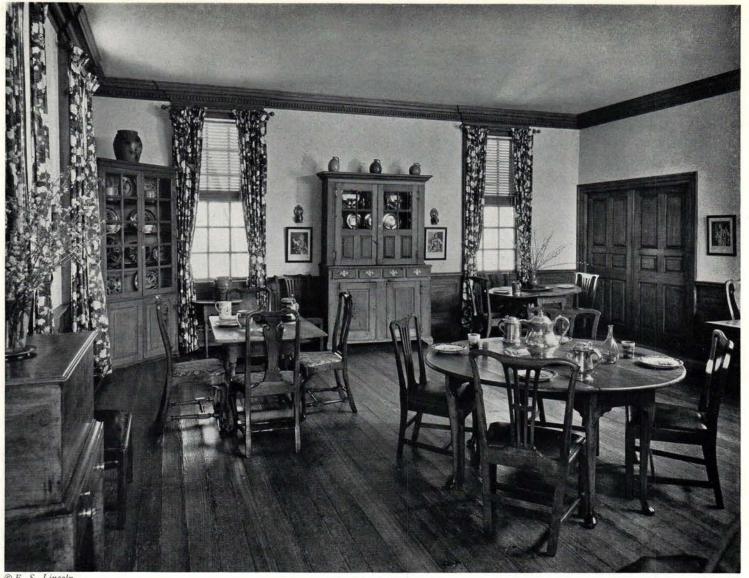
2 Black japann'd Canns

- 7 Canisters, 1 Sieve, 1 Basket
- 6 Artificial flowers
- 1 glass tumbler

Obviously an inventory must be considered in the light of the date that it was taken. Hence, if 1770 be the date at which the last inventory of the possessions of the landlord of the Raleigh Tavern was made, one must eliminate from one's mind all idea of replacing the pieces that are mentioned with pieces of later date than 1770. If the Tavern, however, persisted beyond that time, other later presumptive pieces may be added. If the Palace burned in 1781, obviously no pieces should be introduced into the building that postdate 1781, under any circumstances. Obvious as these matters seem, it is not wholly simple to observe them.

Vessels of large burthen plied the Virginia waterways, picking up bulky cargoes of tobacco in hogsheads at the landings and public warehouses. These vessels on their return to Virginia had ample space for articles of English manufacture, from coaches to White Chapel needles. The shipping rates were so favorable to the Virginia tobacco planter that his natural incentive was to purchase articles made in England rather than to engage in domestic manu-

facture.



INTERIOR VIEW OF DINING HALL IN THE RALEIGH TAVERN

Interchange of goods between the colonies, however, included furniture among many other things, as is attested by the following:

Virginia Gazette, September 5, 1766-"July 15, Polly, William Douglass, from Rhode Island with . . . 4 desks, 6 tables, 24 sugar boxes, 24 wooden bowls, 4 doz. house chairs, &c."

Moreover, the existence of fine pieces made of Southern woods and of an engaging character all their own bears witness to the patronage given to many cabinet makers of Williamsburg and elsewhere by their fellow townsmen. These artisans found a prosperous trade in making and repairing fine furniture.

Virginia Gazette, July 25, 1776—

"B. Bucktrout, cabinet maker, from London, on the Main Street near the Capitol in Williamsburg, makes all sorts of cabinet work, either plain or ornamental, in the neatest and newest fashions. . . . "

Virginia Gazette, January 8, 1767-

"Mr. Anthony Hay having lately removed to the Rawleigh Tavern, the subscriber has taken his shop, where the business will be carried on in all its branches. He hopes that those gentlemen who were Mr. Hay's customers will favour him with their orders. . . . He likewise makes all sorts of Chinese and Gothick paling for gardens and summer houses.

N.B. Spinets and Harpsichords made and repaired.

Benjamin Bucktrout"

Thus, English furniture, and Colonial pieces from both the North and South, may be seen in the restored buildings. Also, it will be noted that while each antique piece is selected for its authenticity, form, condition and color, it is not necessarily chosen as the best obtainable or rarest of its kind, and certainly not as the most elaborate. It is chosen because it has seemed to be the most appropriate piece available for a particular place and because it con-



DETAIL OF DINING ROOM FIREPLACE IN THE RALEIGH TAVERN

forms to an inventory or requirement. The same observations apply also to all forms of furnishings, from carpets, curtains, fabrics through lighting fixtures, candlesticks and Venetian blinds to utensils and accessories of every sort.

INTERIOR PAINTING forms most of the background. The furnishings form a part of this background and most of the foreground. The people in their daily life complete the picture. The picture is the setting for events whether important or unimportant. But the setting is always important.

Interior painting and furnishing should therefore always be considered together as interrelated and both as related to the costume or dress and habits of the

persons who will use the rooms.

The ladies of Williamsburg in their Colonial dress seem accustomed to the buildings and the buildings to them. They seem to be pursuing, and are pursuing, the natural manner of their lives. The colors of the rooms and the furnishings of the rooms once harmonized, spring into being as they are so used, just as a music score becomes audible when played.

The invaluable information collected during the early visit to the Northern Tidewater with Mr. Coleman and the architects, as elsewhere referred to, laid a basis for further intensive study. The owners of the great houses in the neighborhood of Williamsburg have been among the Restoration's greatest friends. I do not know how to thank them for the generosity, friendliness and interest that they have shown in helping us to solve the problems which they in turn have adopted as their own. As members of the Ladies' Advisory Committee they have joined others from Williamsburg, Richmond and elsewhere, also members of this Committee in practical and enthusiastic cooperation. Copies of the paint evidences have been procured at "Shirley" with Mrs. James Oliver's kind assistance, from "Ampthill" by the kindness of Mr. and Mrs. Hunsden Cary, from "Argyle" and "Sarah's Creek" on the York River by the kindness of Mr. and Mrs. Irving Campbell in the one case and Mr. and Mrs. Cutchins in the other. The owners of all the houses in Williamsburg placed everything at our disposal with the same eagerness that they still continue to feel and show. Scores of small outlying neglected houses (one must acknowledge the debt that one owes to the colored people for preserving so much in them) were visited and "depositions" taken in the form of samples. The architects' division of research and record, whose work is now carried on by Williamsburg Restoration, Incorporated, became the repository for source material.

On the many excursions, the frequent use of the ochres, greens and blues was established. Plaster walls were to be found as often whitewashed* as painted.

*Journal of the House of Burgesses—December 12, 1720: "Whitewashing the passage and private stairs and mending the plaistering in the Billiard Room. 1:5:0 Palace)."

Ledger of Humphrey Harwood—August 19, 1779: "To whitewashing 2 rooms at the Palace @ 36/3:12:0."

Wall paper, owing to the dampness at certain seasons, was seldom to be found.

In a word, the architects and I have tried to study and reproduce a balance of color, of furnishing, of texture and of lighting—with recognition of the pitfall that lies between awkwardness and ease, and we have endeavored to introduce that element of surprise which brings life to a room and to its occupants the contentment of understanding.

THE PROBLEMS which presented themselves in the interior finish of the three principal restored buildings at Williamsburg are typical of the many problems encountered elsewhere in the city.

The College of William and Mary had been burned on three occasions. The Capitol had wholly disappeared, as had also the Palace after the fire of 1781.

College of William and Mary

At the College the "Blue Room" had become a tradition. The old Faculty Room had contained the portraits of James Blair, the first Commissary, of Thomas Boyle and others of merit and interest. The new "Blue Room" contains these same portraits fortunately-and is painted with a color that was found still to exist in early houses in Williamsburg.

The general character of the rooms is indicated by the letter from William to Edward Hawtrey, March 26, 1765:

"You have two rooms, by no means elegant tho' equal in goodness to any in the College unfurnished and will salute your eyes on your entrance with bare plaister walls. However, Mr. Small assures me they are what the rest of the Professors have and are well satisfied with the homeliness of their appearance, tho' at first sight rather disgusting. . . .

"You may buy Furniture there, all except bedding and blankets, which you must carry over; chairs and tables rather cheaper than in England. He says his Furniture consists of 6 chairs, a Table, grate, Bed and Bedstead, and that is as much as you'll want."

The furnishings of this building are reproductions taken from Virginia examples in some cases and from examples in contemporary colleges and schools in The Great Hall and Chapel are paneled in Edge Grain Pine and finished natural.

Governor's Palace

Fortunately there are records of two of the paint colors at the Palace during its early years:

Virginia Council Journals, May 2, 1727:

"And it is further ordered that the great Dining Room and Parlour thereto adjoining be new painted, the one of pearl colour the other of cream colour ..."

Later, Robert Beverley wrote to Samuel Aphawes on April 15, 1771: "I observed that Ld B. (Lord



© F. S. Lincoln

INTERIOR OF APOLLO ROOM IN THE RALEIGH TAVERN

Botetourt) had hung a room with plain blue paper & border'd it with a narrow stripe of Gilt leather wth I thought had a pretty effect." He refers here (as other records affirm) to the Ball Room. Provision was also made for hanging a paper in the Supper Room over "Osanabrigs."

These keys open certain of the closed doors. Many other locks have to be "picked" where the key is lost, by instruments made up from the wealth of corroborative material at hand.

Leather was hung upon the walls of the Upper Middle Room at the Palace.*

If we may judge from the curious half timber framing of one of the rooms in the Carter-Saunders house next to the Palace, and by the evidence of a piece of linen fabric found tacked to this framing, leather paper or fabric was hung upon the walls of this room as well.

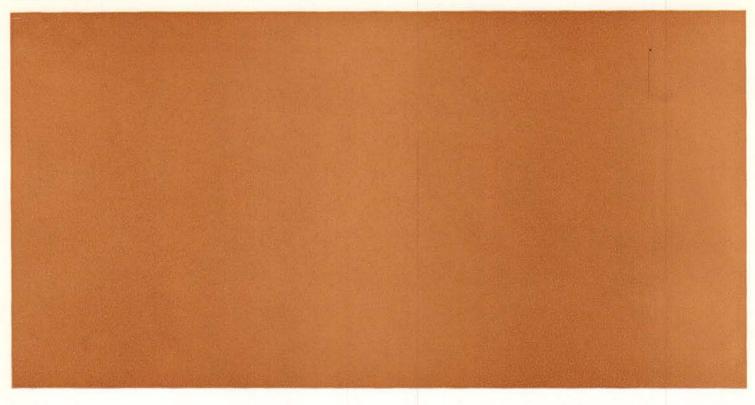
*Journal of the Council of Virginia—A Proposal of 1710: "That the great Room in the second story be furnished with gilt Leather hangings. 16 chairs of the same."

The furnishing of the Palace (at the present time incomplete) has followed the voluminous inventories of the various successive Governors, whose many household articles are enumerated at great length and in some detail. As early as 1710 are listed "3 dozen chairs, strong and fashionable," "3 tables, large," "2 large looking glasses with the arms of the colony on them according to the new Mode," "4 chimney glasses," "1 Buffette, marble or sideboard with cistern and fountain to be provided in this country or sent for from Great Britain."

Later, in 1760 and 1770 are listed:

"7 mahogany chairs, 2 Venetian Blinds, 11 China Figures, Green Damask, 2 Card Tables Mahogany, 160 Musquetts, 2 Mahogany Chairs, red Damask, Elbow Chairs covered with checks, 4 mahogany chairs, leather bottom, 1 bird cage with balance weight, 7 card counters in 3 Damask Silk Bags, 1 Chest of Drawers oak, 1 wine press oak, 1 Dining Table, Mahogany large, 1 Table marble slab, 1 writ-

SAMPLES OF PAINT COLORS USED IN RESTORATION

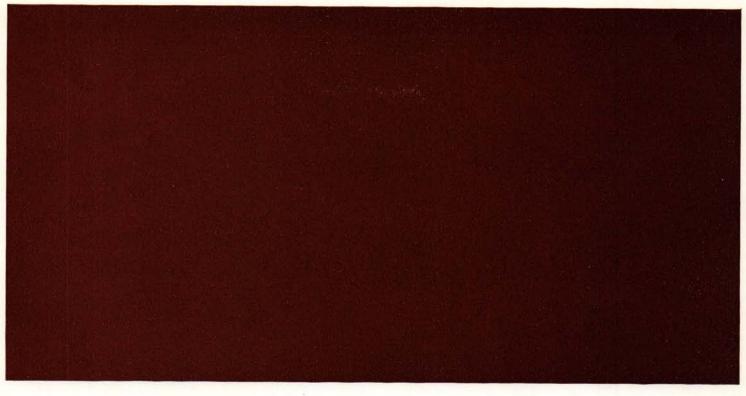


Panels in North Room, First Floor GOVERNOR'S PALACE, EAST BUILDING Yellow Ochre, Black, White Lead

RALEIGH TAVERN
Woodwork in Apollo Room

Flat Lead, Prussian and Ultramarine Blue, Ivory Drop Black, Van Dyke Brown, Raw Umber

OF ROOM INTERIORS IN COLONIAL WILLIAMSBURG

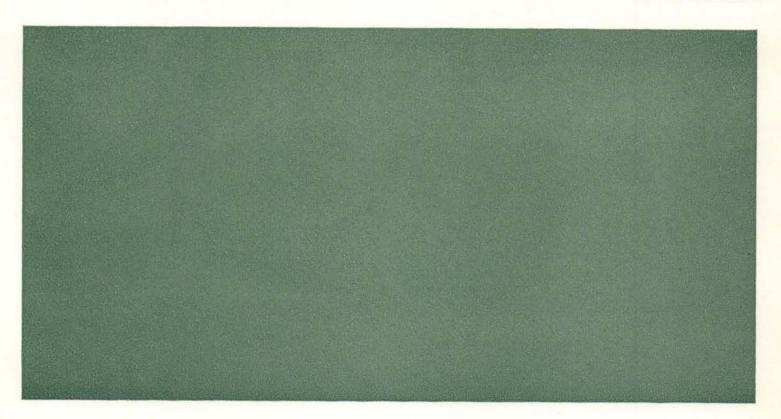


Indian Red, Raw Umber, Black, White Lead

Woodwork in Room No. 302 GOVERNOR'S PALACE

Flat Lead, Prussian and Ultramarine Blue, Raw Umber

ST. GEORGE TUCKER HOUSE Woodwork in Parlor



ing table walnut, 12 chairs mahogany with hair bottoms, 1 lustre glass with twelve branches, 3 lustres, glass with 6 branches each, 1 bedstead oak with white calico curtains, 1 carpet for bed, 4 chairs green bamboo, 1 clothes press mahogany, suits of curtains, bedstead mahogany, 2 mattresses, 1 bolster, 2 pillows, 2 blankets white, 8 chairs yellow bottomed, 1 chest of drawers walnut large, 1 stand of shelves, 1 Wilton carpet, 6 Globe Lamps."

The choice of pieces has been guided by the voluminous inventories of the possessions of Governor Fauquier and Lord Botetourt and by the frequent mention of pieces purchased to add to the Stateowned "Standing Furniture." These inventories list hundreds of items, even such inconsequential ones as the unconsumed food in the kitchen and larders.

The present "lustres" in the Ball and Supper Rooms and in the Upper Middle Room correspond almost exactly to the description of the originals and conform to the periods of notes. A burl olive wood secretary of the time of William and Mary has four brass escutcheon plates embossed with the lion and unicorn that are such exact counterparts of one excavated at the Palace that they are believed to have been made in the same mould.

Damask curtains are hung from antique carved crestings and from valance mouldings covered with curtain material, in accordance with the fashion of the middle of the century as indicated on prints and paintings. They correspond to the declaration of "Suits of curtains."

Raleigh Tavern

The Raleigh Tavern (begun c. 1735), one of the many inns and hostelries in Williamsburg, is brilliantly painted, and furnished in accordance with the probable taste of the innkeepers and the acknowledged records of their possessions as evidenced by the the wills of two of them-Henry Wetherburn and Anthony Hay. Contemporary evidence as to colors used in the Tayern is lacking except in regard to the colors of the Apollo Room, the woodwork of which was variously described as "lead" or "blue" and the walls "whitewashed."*

Henry Wetherburn and Anthony Hay, both wellto-do men** and keepers of the Raleigh during most of the years 1736 to 1771, offered excellent accommodations to the Burgesses and to their ladies, as well as to all other travelers who desired to pass a night in the City, and we find Wetherburn's Tavern in Williamsburg used as a standard of high merit by which comparison was made in 1751 by one George [Daniel] Fisher, a traveler, who upon his arrival at a tavern in Leedstown wrote:

*The Pictorial Field Book of the Revolution, by "Benson J. Lossing."
**"The ordinary keepers were at this time (1770) important men, and James Barret Southall had succeeded Anthony Hay in control of the Raleigh Tavern."
(Williamsburg—by Lyon Gardiner Tyler, LL.D., page 57.)
"Anthony Hay was the father of the famous lawyer, George Hay, who married Eliza, daughter of President Monroe, who prosecuted Aaron Burr."
(Williamsburg—By Lyon Gardiner Tyler, LL.D., page 234.)

"I put up at one Mr. T—s, esteemed the best ordinary in town, and indeed the house and furniture has as excellent an appearance as any I have seen in the Country, Mr. Finnay's or Wetherburn's in Williamsburg not excepted. The Chairs, tables, etc., of the room I was conducted into was all of mahogany, and so stuft with fine large glaized copper plate prints that I almost fancied myself in Jeffriess' or some other elegant print shop."

The inventory of the possessions of Anthony Hay, 1771, is worthy of careful examination. Mr. Hay had been a cabinet maker by trade and had acquired a considerable fortune. The furnishings of the tavern as enumerated in this inventory, supported by the reference from Fisher quoted above, indicate the high quality and extent of the furnishings of the best taverns at that time.

Consequently, the Raleigh Tavern has been furnished in such a manner as to afford a proper setting for such entertainment as is noted in the Virginia Gazette of February 26, 1779:

"On Monday the 22nd instant a very elegant entertainment was given at the Raleigh Tavern by the inhabitants of this City to celebrate the anniversary of that day which gave birth to General Washington."

And again, in 1780, on a similar birthday there was an "elegant Ball at the Raleigh . . . the enter-

tainment was grand."

The windows have been hung with damask, chintz and printed linen. Mahogany and walnut pieces have been used to represent those listed in the inventories.* Prints of the twelve Caesars are to be found in the dining room and many other prints and maps have been hung upon the walls. As faithfully as possible, the Raleigh of 1935 is furnished according to the dictates and fashions and inventories of 1740-1800.

The Capitol

The definite instructions concerning the painting of the Capitol make this restoration the most inter-

*Wills and Inventories, Bk. 21, 24, 1760. Extract from the inventory of Henry Wetherburn, Tavernkeeper:
"1 dozen mahogany chairs
1 mahogany tea table
1 round table oval table large table Desk and bookcase with glass doors
8 Day Clock
Pierglass
Chimney Glass
8 prints
1 dozen walnut chairs
9 leather bottom chairs leather bottom chairs beds 10 maps
19 brass candlesticks, etc."
Wills and Inventories, Bk. 22:9, dated 1771. Extract from the inventory
of Anthony Hay, Tavernkeeper:
"4 bedsteads 1 pine table looking glass 1 chest 11 old prints (the Caesars) white window curtains beds and blue check curtains 2 beds and blue check curtains 2 silver punch strainers glass lamp 6 silver punch ladles 2 pairs snuffers 2 four-foot square walnut tables mahogany card tables 10 chairs, etc."



esting of the buildings to Williamsburg from the point of view of color and the effect that it produces.

The House of Burgesses on May 10, 1705 "Resolved that the wanscote and other Wooden Work on the first and Second ffloor of that part of the Building where the General Court is to be painted Like Marble and the wanscote and other wooden work on the two first floors in the other part of the Building shall be painted Like Wanscote. . . . "

Evidences of marbleized woodwork are fortunately still to be found in Virginia. The most notable survival is the decoration of the well-known room that once stood in "Marmion" on the Rappahannock and now is to be seen at the Metropolitan Museum in New York. The paint samples which we made in this room with the kind assistance of Mr. Herbert Winlock, the Director, have served as guides for the decoration of the Council Chamber.

Other examples of marbleizing existed in Williamsburg-one of the most valuable, a baseboard in the Coke-Garrett house. "Argyle" on the York has also evidences that have served for the stair halls and the General Court.

These latter evidences are of later date than that of the building of the Capitol, but that such marbleized treatment exists there at all is indicative of the continuance of this early Scandinavian craft tradition.

It was probably through Holland that the fashion found its way to England and thence to Virginia. Contemporary examples of marbleizing are of interest. There are:

"The Grange"-Farnham Survey, 1710, wherein "The architectural features (of the Staircase) are treated in grisaille with enrichments in gold, but the fluted 'marble' pilasters are carefully colored and veined."

-Country Life, London, July 28, 1934, p. 90.

"Blenheim Palace" Oxfordshire, 1709, wherein "These great figure subjects with their framing columns, are represented as resting on a base painted in imitation marble. . . . "

Sir James Thornbill's house, 45 Deane Street, London, and Belton Park, Lincolnshire (c. 1685).

The McPhaedris-Warner house (before 1728) in Portsmouth, N. H., contains a dining room, the original painting of which simulated marble.

Weddillsborg Castle, in Denmark.

The Maryland Gazette of June 26, 1760, carries the following advertisement:

"House Painter . . . can imitate marble or mahogany very exactly. . . . "

The furnishing of the Capitol in reproduction has been done in strict accordance with the careful specifications of 1702-1722 as ordered by the Legislature. Large oval tables of specified size have been copied from examples in St. Paul's Cathedral Chapter House, London; in Herriot Hospital, Edinburgh, by the kind permission of the Dean of St. Paul's and the Governors of the hospital. Other chairs and tables have followed exactly examples loaned for copy through the generosity of their owners, Mr. Luke Vincent Lockwood, Trinity College, and the Wadsworth Athenaeum at Hartford, Connecticut.

The strict account taken by the representatives of the people in the expenditure of monies for the furnishing of this new important building is indicated by the many resolutions pertaining thereto, of which the following are two examples:

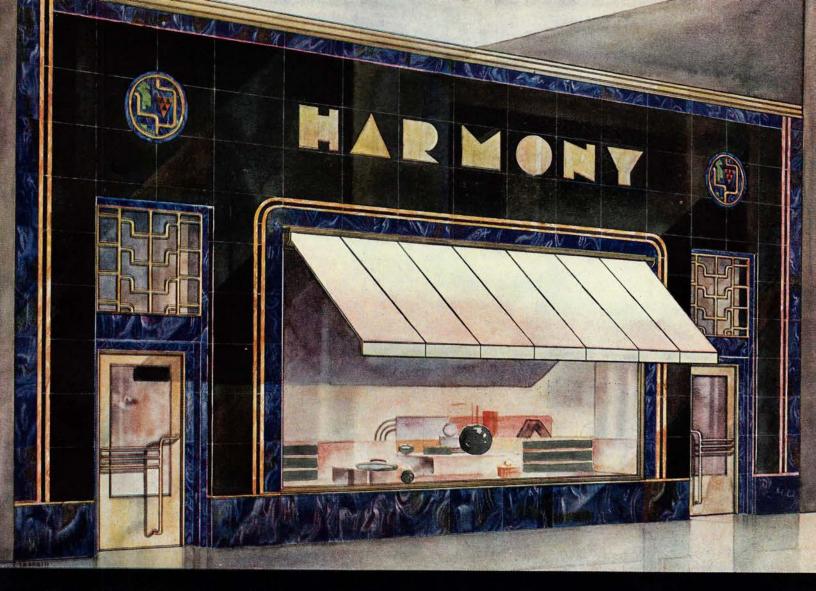
Journal of the House of Burgesses-Wednesday, June the 6th, 1722:

"That the Sum of thirty pounds . . . be laid out in providing the following particulars for the use of the Council and the General Court viz a Gown for the Clerk of the General Assembly, a Lustre for the Council Chamber, a Lustre of less Size, a large Glass Lanthern and four glass branches for the General Court and thirteen Cushions of Green Cloth and that the said Sum be accounted for to the next Assembly."

Journal of the House of Burgesses of Virginia,

Friday, 9th April, 1703:

"Agreed-That the room be furnished with a large Armed Chair for the Speaker to sit in, and a cushion stuft with hair Suitable to it, and a table eight foot long and five foot broad. . . ."



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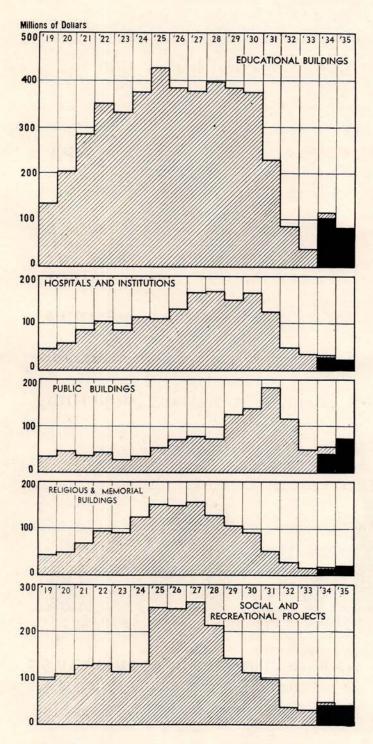
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GAINS IN PUBLIC AND INSTITUTIONAL BUILDINGS

By L. SETH SCHNITMAN, Chief Statistician, F. W. Dodge Corporation



CONTRACT AWARDS FOR PUBLIC AND INSTITUTIONAL BUILDINGS IN THE 37 EASTERN STATES: 1919 - 1935 (Classified by major types)

Heights of annual shaded columns indicate totals for full years; black portions for 1934 and 1935 indicate totals for first ten months only. Data for the years 1919 through 1924 have been prorated to the basis of the 37 States' figures from information covering a fewer number of States, i.e., 27 States for the years 1919-1922 and 36 States for 1923 and 1924.

With the October record included, contracts for public and institutional buildings of all descriptions were somewhat heavier for the elapsed portion of 1935 than for the corresponding ten months of 1934. This improvement was due entirely to an increase in public buildings of all descriptions and to gains in religious and memorial projects. For the year 1935 through October, educational buildings, hospitals and institutions, and social and recreational facilities were undertaken in smaller volume than during the corresponding period of 1934.

Newly contemplated public and institutional buildings reported as in various planning stages during October involve an estimated expenditure for such facilities considerably in excess of the total for contemplated work reported a year ago.

For educational buildings alone, October plans involved an estimated expenditure about five times the size of the planning volume reported during October, 1934.

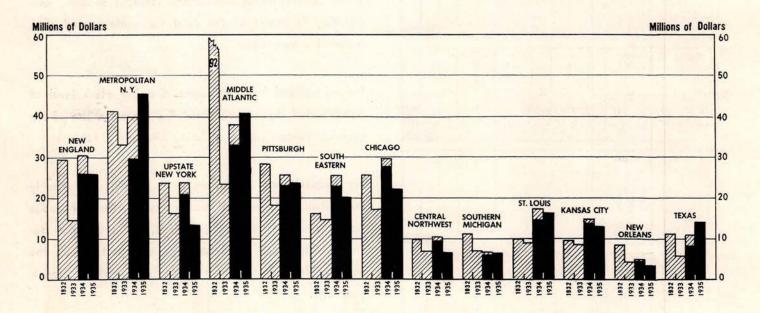
For hospitals and institutions, new planning is currently more than twice what it was a year earlier; for public buildings such as city halls, capitols, fire and police stations, military and naval buildings, and post offices, the current planning volume is three times what it was a year ago.

Social and recreational buildings, too, are being planned on a much broader scale; for religious and memorial buildings, a more modest improvement has occurred in planning.

On the basis of this betterment in contemplated new public and institutional buildings, it appears probable that a further improvement in contracts will occur over the nearby months.

PUBLIC AND INSTITUTIONAL BUILDINGS: CONTRACTS AWARDED, 37 EASTERN STATES

Year 1931	Year 1932	Year 1933	Year 1934	1st 10 Mos. 1935	1st 10 Mos. 1934
EDUCATIONAL BUILDINGS					
Gymnasiums, etc \$ 5,345,300	\$ 1,576,100	\$ 1,062,600	\$ 5,183,700	\$ 1,974,700	\$ 4,762,100
Libraries, Laboratories 19,584,600	18,487,000	4,376,500	11,079,700	14,667,500	10,033,200
Schools and Colleges 203,847,100	62,244,400	34,511,300	101,239,800	69,596,700	89,060,700
TOTAL 228,777,000 HOSPITALS AND INSTITUTIONS	82,307,500	39,950,400	117,503,200	86,238,900	103,856,000
Hospitals 95,980,900	40,528,300	33,954,600	28,275,500	21,436,400	25.081.300
Institutions	7,824,700	3,297,500	9,033,300	6,775,100	7,187,600
TOTAL	48,353,000	37,252,100	37,308,800	28,211,500	32,268,900
PUBLIC BUILDINGS					
City Halls, Capitols 68,259,900	43,660,500	18,983,400	23,892,500	28,379,300	15.850.000
Fire and Police Stations 29,365,400	7,652,600	6,985,200	7,666,300	4,948,200	6.687.200
Military and Naval 16,119,200	2,927,200	8,296,100	12,643,100	9,534,100	12,214,300
Post Offices 67,522,100	63,742,200	16,643,600	11,470,100	32,382,700	7,292,900
TOTAL	117,982,500	50,908,300	55,672,000	75,244,300	42,044,400
RELIGIOUS AND MEMORIAL	00000 All 2004000000				7.000 CO. 10. 40. 40. 40.
Churches 40,342,100	23,379,100	12,976,500	15,282,000	14,706,800	13,769,500
Convents	1,531,100	1,289,900	714,300	4,449,900	709.700
Memorial Buildings 8,929,000	2,344,800	3,402,200	2,302,600	1,940,400	1,841,400
TOTAL53,099,600	27,255,000	17,668,600	18,298,900	21,097,100	16,320,600
SOCIAL AND RECREATIONAL					
Auditoriums and Halls 8,644,200	5,655,500	1,020,600	6,062,600	1,099,200	5,805,100
Clubs and Lodges 30,554,700	10,455,100	5,773,200	7,161,300	5,318,800	6,094,900
Parks 5,438,100	6,389,500	4,940,700	6,524,000	6,242,900	5,453,800
Park Buildings 22,202,100	11,293,500	14,791,500	19,582,200	17,472,700	18,512,900
Theaters 31,907,400	4,888,900	4,530,000	8,244,400	12,431,700	7,314,600
TOTAL\$ 98,746,500	\$ 38,682,500	\$ 31,056,000	\$ 47,574,500	\$ 42,565,300	\$ 43,181,300
GRAND TOTAL \$683,083,000	\$314,580,500	\$176,835,400	\$276,357,400	\$253,357,100	\$237,671,200



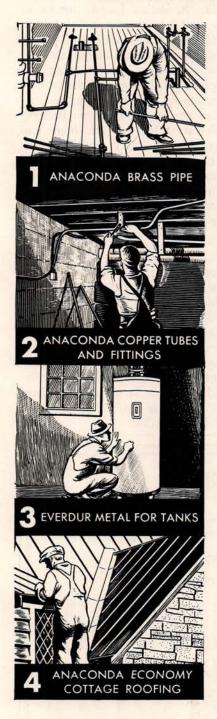
CONTRACT AWARDS FOR PUBLIC AND INSTITUTIONAL BUILDINGS IN THE 37 EASTERN STATES, BY MAJOR GEOGRAPHIC AREAS

Heights of annual shaded columns indicate totals for full years; black portions for 1934 and 1935 indicate totals for first ten months only.

As can be noted on the chart, public and institutional buildings of all types undertaken during the initial ten months of 1935 showed improvement over the like period of 1934 in the Metropolitan New York area, the Middle Atlantic States, the Pittsburgh District, Southern Michigan, the St. Louis Territory and Texas. For Metropolitan New York and Texas the ten-month totals exceeded their respective annual volumes for each year since 1931. For 1935 as a whole the totals in the New England, Pittsburgh, Southern Michigan, St. Louis and Kansas City districts should exceed their respective 1934 totals, this in addition to the Metropolitan New York and Texas areas which already have exceeded their 1934 totals.

For Residential Construction consider these

8 Anaconda Products



Not long ago, rust-proof metals in small house construction were largely confined to water pipe, sheet metal work, hardware and screens. Today these products, on the basis of their proved economy, are being used to a greater extent than ever before.

Further, these products have steadily been supplemented by additional developments which have contributed much to the availability of "quality" construction at a cost within the reach of all, and so low as to effect definite and sizeable savings in the long run.

On this page we illustrate eight Anaconda products ideally suited to residential construction. Each fills a definite need—economically. Complete information on any or all is available on request.



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Offices and Agencies in Principal Cities
In Canada: Anaconda American Brass Ltd., New Toronto, Ont.



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NEW MATERIALS AND EQUIPMENT

NEW CATALOGS RESEARCH REPORTS MANUFACTURERS' LITERATURE

WARREN WEBSTER BOILER PROTECTOR Warren Webster & Company, manufacturers of heating equipment, have issued a new catalog on their boiler protector, an hydraulically operated (pressure- actuated) valve which prevents damage to a boiler due to low water. Boiler breakage, frequently caused by sudden introduction of cool water in exposed boiler sections, is minimized by the boiler protector. Other catalog available on request.

M52

JENKINS CATALOGUE SUPPLEMENT

Jenkins Bros., valve manufacturers and makers of the well-known colored valve wheels, have issued supplement "B" to Catalogue No. 23, available on request.

functions of this device and complete description are given in the INSULITE COMPLETES FOURTH HOMES FOLDER

Architects are invited to use the coupon on

this page as a convenient means of obtain-

ing manufacturers' publications describing in

detail the products and materials mentioned

The Insulite Company of Minneapolis, Minn., manufacturers of Insulite insulation board, announces the fourth in their series of folders dealing with the subject of proper residential construction and the fuel economies possible following the application of proper thicknesses of insulation. The company has analyzed the coal, oil or gas fuel requirements for a typical home and has charted the comparisons between insulated and uninsulated construction for each of the four climatic zones in the United States. Manufacturer will furnish copies of the folder on request.

AN OFFER TO ARCHITECTS PRACTICING IN UNITED STATES

TO OBTAIN FURTHER INFORMATION

about any products mentioned, write the index numbers in space below. For literature about products advertised in this issue, give name of the product and manufacturer. Return coupon to The Architectural Record, 119 West 40th Street, New York, N. Y.

INDEX NUMBERS
NAME
POSITION
STREET ADDRESS
CITY AND STATE

M54

THE TRANE AIR-O-LIZER

The Trane Company introduces the 1936 model of the Trane Air-O-Lizer, a compact unit for schoolroom air conditioning. Among advantages claimed, the most important is the Directional Flow grilles with which it is possible to direct the heated air into the room in any desired direction.

A FACT NOW PROVED

Repairs that had to be made during "hard times" were doubly hard to pay for. That's just one good business reason for using replacement-proof

THE DURIRON COMPANY, Inc.

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See Our Catalog in Sweet's



Charming garden façade of the residence of Maurice Fatio, Via Vizcaya, Palm Beach, Florida. Built-in conduit, connecting six outlets, provides for telephone convenience. . . . Architects, Treanor and Fatio, Palm Beach.

Free Sample

OF OUR SERVICE

GUEST ROOM

BATH

HALL

MAID

BATH

MASTER BED ROOM

BATH

SECOND FLOOR

KITCHEN

KITCHEN

LIVING

LOGG1A

LEGEND K TELEPHONE OUTLET ----- CONDUIT

ROOM

FIRST FLOOR

DINING ROOM

SOCIAL and business life today depends so largely upon the telephone that no home is quite modern without adequate telephone facilities. Many architects provide for them as carefully as for electric lights or heating systems. And to assist in this pre-planning, telephone companies offer the service of trained technical staffs, without charge.

Co-operation between architect and telephone engineer is highly desirable for a number of reasons. Telephone conduit costs much less to install during construction than later. Extra outlets can be located in anticipation of future needs. Then, as families grow up, telephone service can be easily extended without the necessity of piercing finished walls and floors and without exposing the wiring.

Feel free to make full use of your telephone company's specialized knowledge. It will save money for the owners of the homes you design or remodel — will make those homes more comfortable, more efficient. Just call the Business Office and ask for "Architects' and Builders' Service."

FOR FURTHER INFORMATION ON BELL SYSTEM TELEPHONE SERVICES



AND EQUIPMENT, SEE SWEET'S CATALOGUE

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Anchored and Locked to Stay Put!



• Steel, tongued and grooved, forms I-Beam.



 Corner view of steel tongued and grooved binding.

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Other U. S. and Foreign Patents Pending

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M55

DECORATING WITH J-M INSULATING BOARD

Architects will find suggestions for modern, inexpensive interiors both for modernization and new construction in a new brochure on insulating board published by Johns-Manville. The booklet is illustrated with photographs of rooms in homes and of offices, showing the variety of decorative treatments made possible through the use of

insulating board. Close-up pictures show in detail many designs and finishes of insulating board for use on walls and ceilings. Other J-M insulating board products which are described include insulating board sheathing for structures, insulating lath and rigid roofinsul. Two pages are also devoted to J-M hard board Copies of the brochure, "How to Modernize and Build with Johns-Manville Insulating Board," will be furnished on request.



M56

NEW KINNEAR STEEL ROLLING GRILLE The Kinnear Manufacturing Company, Columbus, Ohio, announces a new steel rolling grille, recently added to their line of rolling doors. Without the sacrifice of air, light or vision, the Kinnear Rolling Grille provides a safeguard against trespassing, burglary, and kidnapping. Permanently installed and accurately counterbalanced, it can be quickly raised or lowered. When closed it can be locked. The grille can be built in various metals. It is composed of round steel bars connected by ornamental pressed steel links. It coils on a heavy barrel above the lintel, is locked in, and travels in guides mounted on the sides of the opening. It can be operated manually, mechanically by means of crank or operating chain, or electrically. Primary applications include entrances and display windows of retail stores, entrances to vaults and other storage compartments, sky-lights, gates, windows and other openings where reliable protection is required. Further details on request.

M57

THE TRIANGULAR PROTRACTOR SCALE The Triangular Protractor Scale is a pocket-size time and labor-saving scale marked with degrees, minutes and seconds, without a vernier. As explained in a booklet, "The Triangular Protractor" by Lew Koen, R.A., the protractor may be used for simple mathematics by means of lines in place of figure computation. The method is said to be simpler than that of the slide rule. The Triangular Protractor Scale eliminates the ordinary protractor and combines the following: a decimal and ordinary scale (half full size), a bevel or slope scale with the angles of same. In addition to degrees, minutes and seconds the protractor provides a trigonometric computer and metric equivalents. Copy of "The Triangular Protractor" sent on request.



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PORFRISON

Co., Grant Building, Pittsburgh, Pa.

ROBERTSON STEEL FLOOR SYSTEM

HIGGINS' INK ATELIER

CONDUCTED BY ARTHUR L. GUPTILL A.I.A

· the ORDERS OF ARCHITECTURE

ESPITE the decreased use of the classical orders in our architecture of today, the designer still requires thorough grounding in themo He should therefore make careful drawings of them, referring to documents by such authorities as Vignola, Guadet, D'Espouy, Gromort, Letarouilly, Daly, Blondel, etc. Theaccompanying detail is typical of the thing we means



This is from G.Gromort's "Parallele d'ordres Grecs et Romains," a most useful reference.

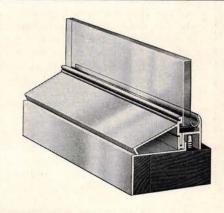
INK is the only medium suited to crisp delineation in outline of such intricate and exact types of subject matter. HIGGINS' BIACK DRAWING INKS have just the right qualifications. The WATERPROOF is ideal for all black lines; for diluted lines, or wash, use the GENERAL (soluble).





M58 KAWNEER ANNOUNCES NEW STORE FRONT CONSTRUCTION

Extreme simplicity and a continuous spring grip are important features of a new store front construction in extruded aluminum or bronze, introduced by The Kawneer Company, of Niles, Michigan. New sash consists of only 3 parts: a selfsupporting gutter, an interlocking face member, and a resilient, continuous spring which, when inserted in the gutter, pushes the glass outwardly against the face member. This change is said to bring important advantages: (1) perfect miters and sight lines; (2) the use of glass of varying thicknesses without difficulty on the same job; (3) elimination of caps; (4) continuous spring grip, absolutely even pressureavoiding concentration which is one of the most common causes of glass breakage; (5) greater ease, precision and economy of installation. Descriptive literature and fullsize architects' details on request. desired direction.



M59

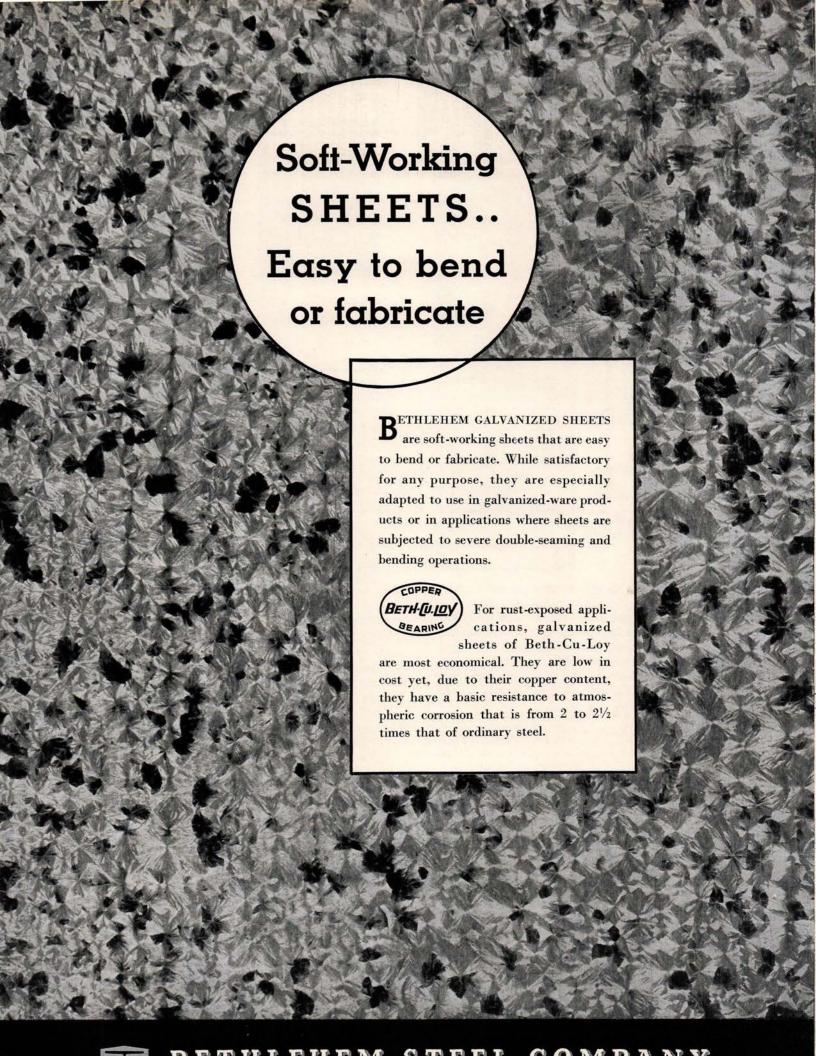
THE LURIE STEEL HOUSE

The Metal Lath Manufacturers Association has released an interesting booklet describing the "Lurie House." It is not a prefabricated or factory designed house. It is a new construction said to bring the finer quality of fireproof building within the cost range of wood frame. It combines skeleton steel construction with the well-known channel iron and metal lath light steel base for all surfaces. The flexibility of this light steel con-

struction makes possible variety of form and depth over any given structural frame. The clear floor space permits unlimited floor layouts. Aside from the construction economy feature "Lurie House" gives evidence of several other advantages including (1) opportunity for variation to insure attractiveness and livability, (2) low fuel bills, (3) reduced housekeeping and maintenance charges, (4) absolute fire protection. A copy of the "Lurie House" booklet will be forwarded on request.

M510

NON-SCALD PRESSURE MIXING VALVE Julian D'Este Sales Corporation announces a mixing valve with positive non-scald operation. It is not affected by back pressure on the shower head or by changes in source pressures. Equipped with device which completely shuts off hot water in case the cold water supply fails.



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M511
REVOLVING DOORS



Automatically collapsible and panic proof revolving doors are shown in the catalog of General Bronze Corporation. Doors are available in bronze, aluminum, nickel silver, stainless steel or wood. Free rotation of the revolving wings up to any predetermined rate of speed is made possible by a speed regulator. Elimination of drafts, noise and

dirt means economies in heating and air conditioning. Copy of catalog sent on request.

TRADE ANNOUNCEMENTS

GENERAL ELECTRIC COMPANY

Charles E. Wilson of Bridgeport, vice president in charge of the merchandise department of the General Electric Company, has been assigned responsibility for the direction of all appliance activities of the company, it was announced by President Gerard Swope. In taking on these duties he assumes the additional responsibilities heretofore directed by T. K. Quinn, who as vice president has been in charge of specialty appliances at Cleveland and chairman of the appliance sales committee. Mr. Quinn has resigned and on January 1 will become president of Maxon, Inc., advertising organization of Detroit, Cleveland and New York.

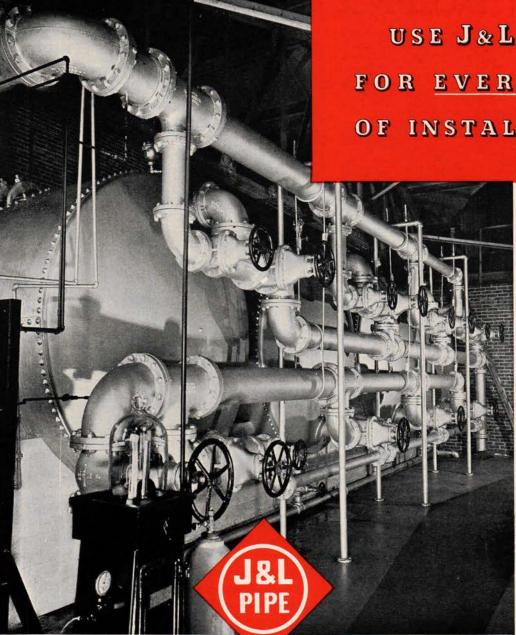
PITTSBURGH PLATE GLASS COMPANY

In the belief that the next few years will see glass more strongly emphasized in building and decoration than ever before, the Pittsburgh Plate Glass Company has retained the services of Walter Dorwin Teague, noted designer and decorator, and his staff, according to an announcement of the company. Mr. Teague's work will consist chiefly of research and design in developing new uses for glass and new designs in glass.

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HIS ARCHITECTURAL WORK

172 pages, 11 by 12 inches. Cloth. 294 illustrations, including exterior and interior views, details, plans, models. \$6, postpaid, in United States.



This book is the pictorial presentation of the work of an American architect-born in Europe-who has practiced chiefly in Japan and who has more than 400 buildings to his credit there. It contains many residences, including a number of summer cottages, as well as schools, factories, office buildings, public buildings, etc. Among the buildings shown are the Tokyo Golf Club, the Architect's own residence, the French Embassy at Tokyo, the Russian Embassy and Consular Buildings, and the factory of the Toyo Otis Elevator Company.

Raymond is notable for the freedom of his approach to all the problems involved-engineering, design and construction. He says, "I use new, modern materials, without disguise, because they are more economical and efficient than old materials. The finding of the very simplest form for everything is the only true solution."

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THE ARCHITECTURAL RECORD

ADDRESS CITY and STATE

A.R. 12-35



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- Please send me, without obligation, your book entitled "Personality Bathrooms and Character Kitchens."

.....State.....

"This book should be a wonderful over preliminary plans with his client and in

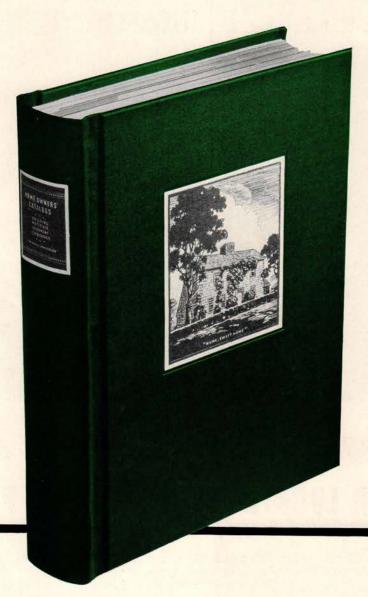
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help to an architect when going saving of time on the selection of things that are built into the house"

John W. Keyes, Architect
Philadelphia

COMPRISING the profusely illustrated individual catalogs of leading manufacturers of building materials, equipment and furnishings, Home Owners' Catalogs is distributed free to prospective home builders. A large, handsomely bound book, the size of a Sweet's volume, it encourages those who are seriously planning to build to seek the best in materials and installations—and protects them from false economies. It contains no stock plans. It points out the advantages and true economies of architectural services.

Home Owners' Catalogs helps home builders to crystallize their thinking and make appropriate and timely decisions. This facilitates the speedy completion of plans and specifications, and eliminates many delays in actual building operations. We will be glad to send Home Owners' Catalogs to any of your clients who are planning to build or substantially modernize their homes.

More information on Home Owners' Catalogs will be found in our catalog in Sweet's.



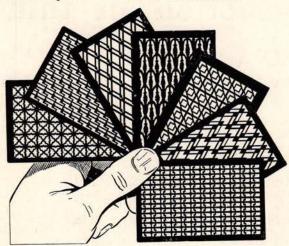
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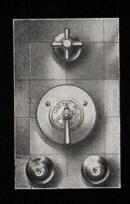
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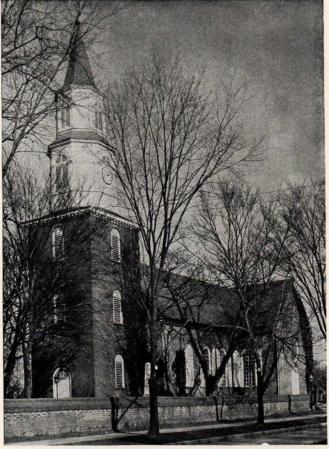
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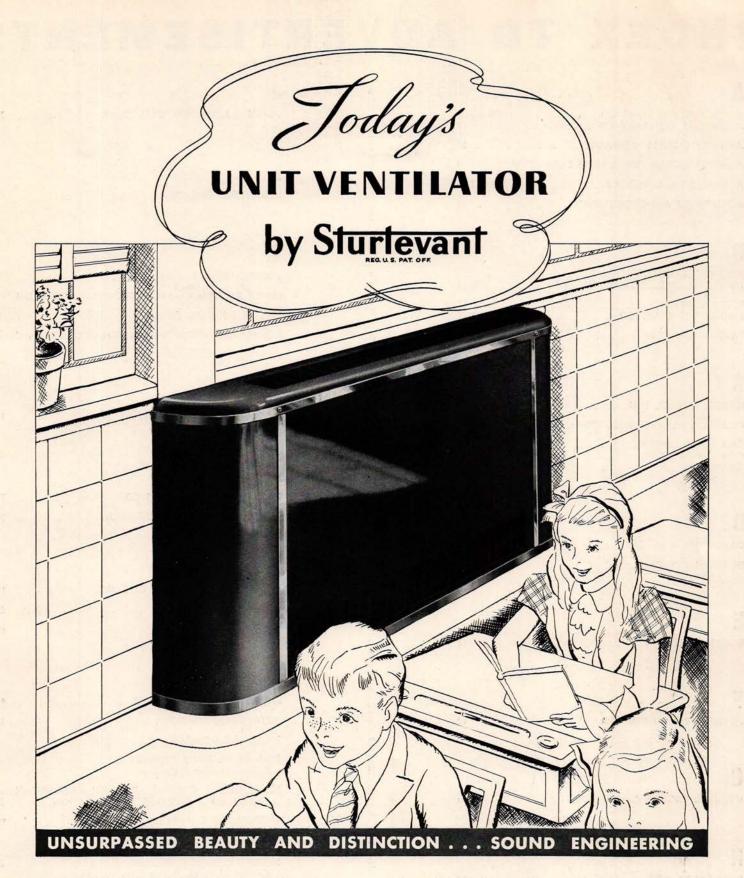
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INDEX TO ADVERTISEMENTS

A
AIR REDUCTION SALES CO
AMERICAN BRASS COMPANY 27
AMERICAN TELEPHONE & TELEGRAPH CORP 29
ARCHITECTURAL RECORD34-36-42-46
ARCHITECTS' ANNOUNCEMENTS
B
BELLEYUE-STRATFORD 36 BETHLEHM STEEL COMPANY 20-33
BOOK REVIEWS
BRIDGEPORT BRASS CO. 9
BRIGGS MFG. CO
C
CABOT, SAMUEL, INC
CARNEGIE-ILLINOIS STEEL CORP
CHRISTMAS SEALS
CRANE CO. 24
25-20
D
DAHLQUIST MFG. CO 36
DURIRON COMPANY, INC
24
EVANS, W. L
21
Fire of the second second second
FORMICA INSULATION CO
15
G
GENERAL BRONZE CORPORATION
7 Server
H .
HEATILATOR CO
HENDRICK MFG. CO
HIGGINS, CHAS. M. & CO., INC. 32 HOLTZER-CABOT ELECTRIC CO. 40
HOME OWNERS' CATALOGS

9	JONES & LAUGHLIN STEEL CORP.	35
ē	3-5-6-24	
(arcellectural)	L	
	LEONARD-ROOKE CO.	41
3	25	
	M	
	ALL CRETILL FIVELIS CLASS CO.	6
	MAPLE FLOORING MANUFACTURERS ASSOCIATION	
5	MASTER BUILDERS COMPANY	
0	MINNEAPOLIS-HONEYWELL REGULATOR CO. 4th Co. 26	rer
	N. W. A. Sp.	
0	0	
0	OTIS ELEVATOR COMPANY	15
	P	
	The second secon	37
	17	23
	R	
	REVERE COPPER & BRASS CO., INC.	11
	ROBERTSON, H. H., CO.	31
	ROOSEVELT HOTEL	40
N N	S	
	SAMSON CORDAGE WORKS	40 16
0	SPEAKMAN COMPANY	4
2 2	STREAMLINE PIPE & FITTINGS CO. Division Mueller Brass Co.	7
Σ Σ	STRUCTURAL GYPSUM DIVISION, AMERICAN	
Z Z	CYANAMID & CHEMICAL CORPORATION 3-14 STURTEVANT, B. F., COMPANY	30 43
2	SUPERIOR SHEET STEEL CO	8
4	Division of Continental Steel Corp. SWEET'S CATALOG SERVICE	22
	Division of F. W. Dodge Corp.	
ž		
ž	U	
r r	U. S. STEEL CORPORATION SUBSIDIARIES10	-18
	UNIVERSAL ATLAS CEMENT CO	18
N.		- 3

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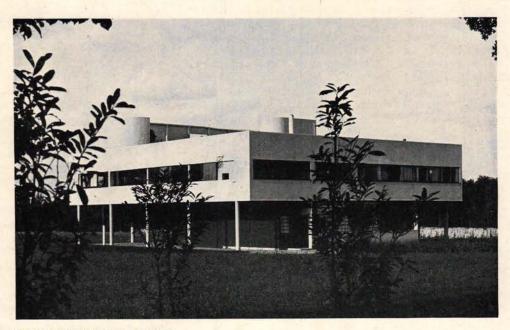
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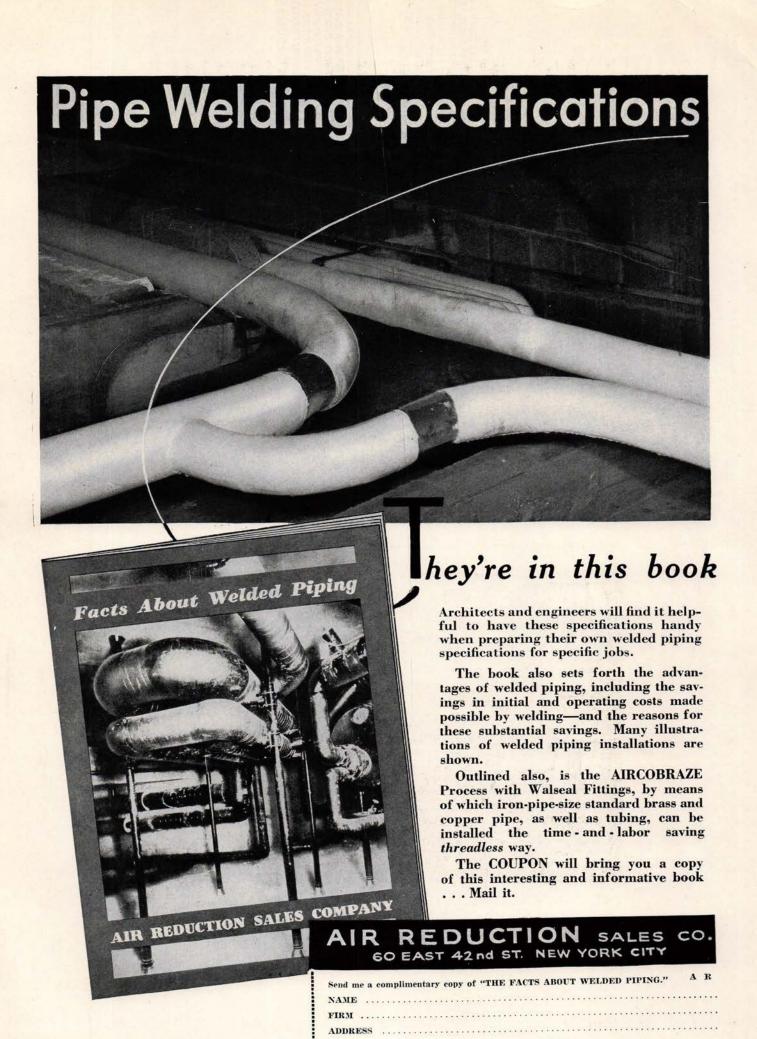
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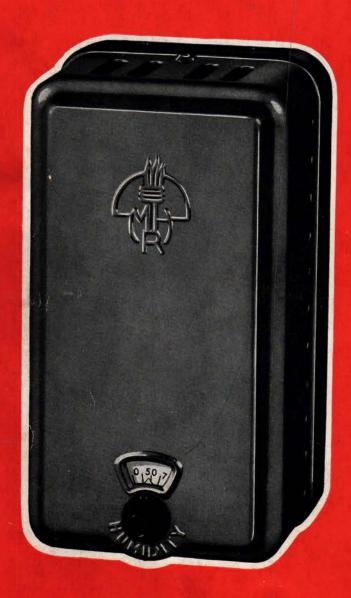


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