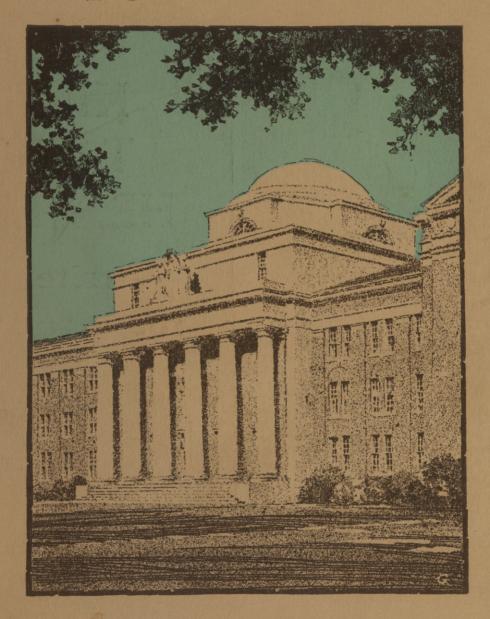
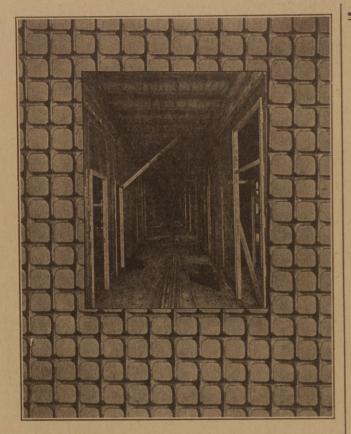
# SOUTHERN ARCHITECT

and BUILDING NEWS



JANUARY 1930

THE SOUTH'S ONLY JOURNAL OF ARCHITECTURE AND BUILDING
.... SINCE 1882 ....



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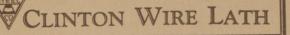
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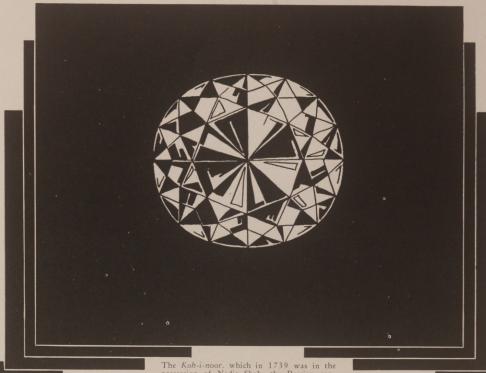
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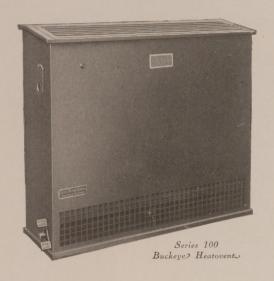


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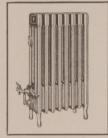
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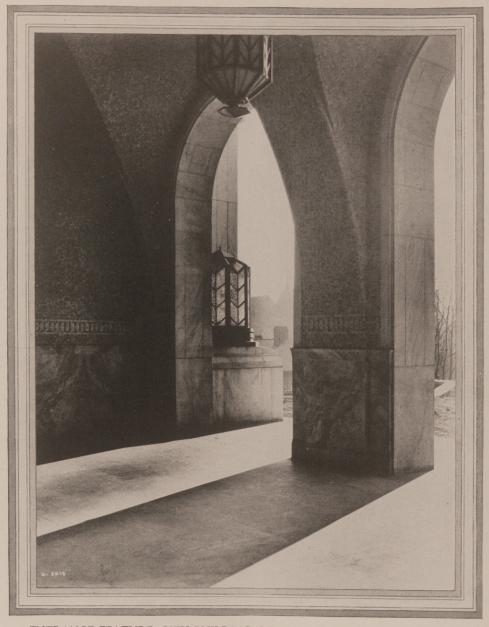
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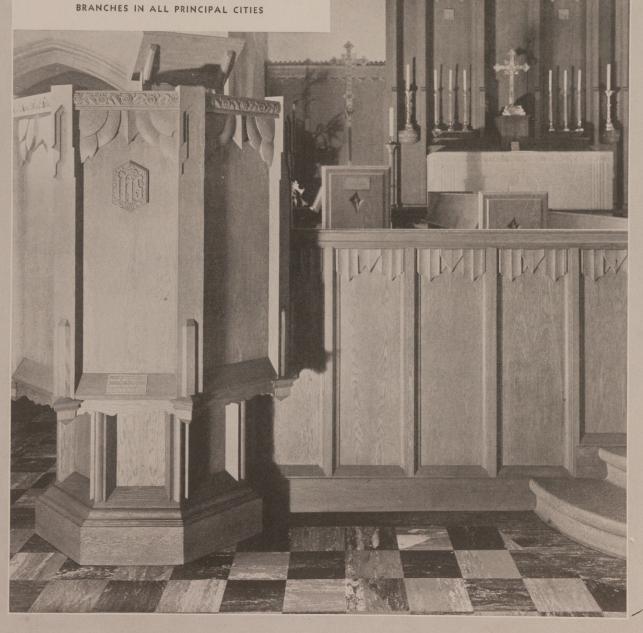
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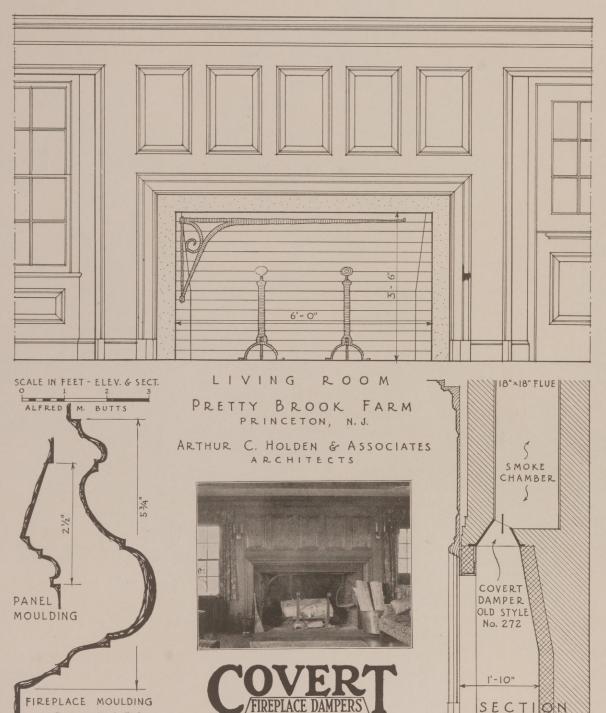




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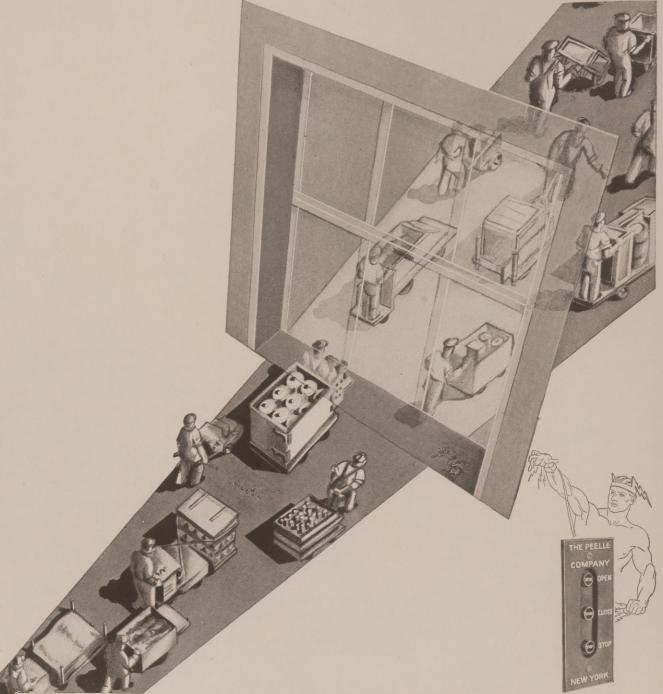
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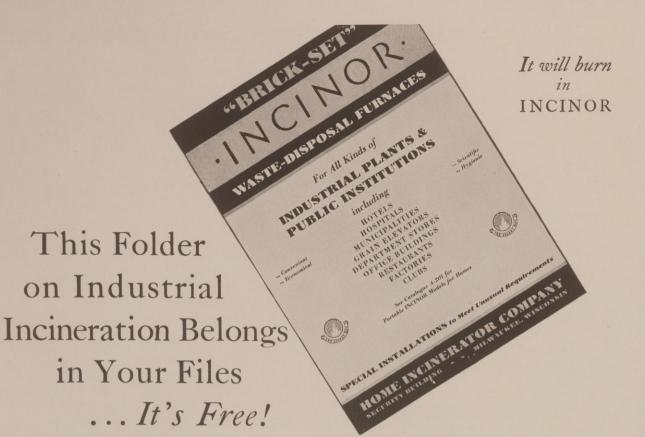


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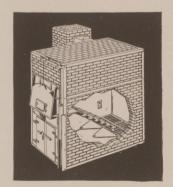
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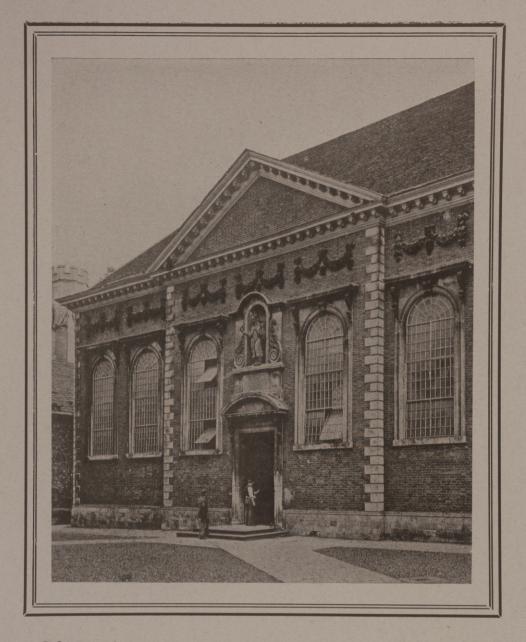
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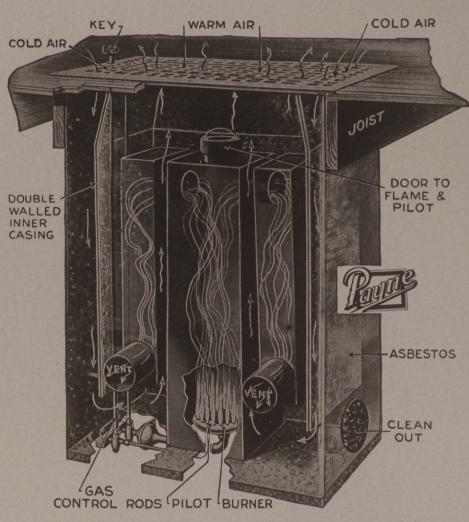


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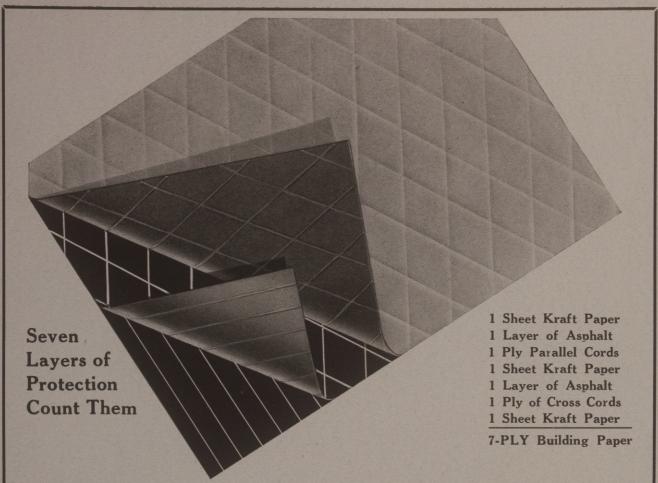
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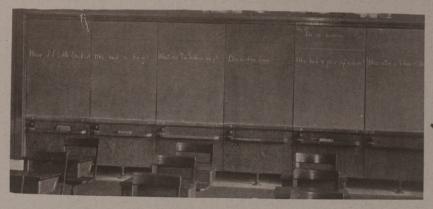
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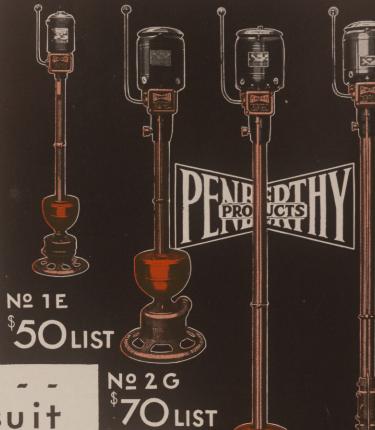
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NUMBER 1

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### -in the South

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### THIS MATTER OF MOULDING PUBLIC TASTE IS A REAL PROBLEM

Let us attack it in a business like way

FOR years there have been conflicting opinions among the architects about the factors that would improve and stimulate a better appreciation of architecture. Some seem to think that only when better buildings are produced can we expect to see a keener appreciation by the public, while others argue that an enlightened public will surely result in a new renaissance in architecture. Both sides are right. However, there is one thing certain, no matter how capable an architect might be he will not go very far in his efforts if he is not given an appreciative, though small following. And, another thing, the architect who is not producing buildings of real merit cannot expect the public to fall for so much hodge-podge.

We think there is no doubt about the improvement in contemporary public taste. The architect's audience of today is far different than it was ten, fifteen or twenty years ago. Even so, the lay taste has not kept pace with the advancement which architecture has made in this country in recent years. There are today many architects, not alone in our larger cities, but in the small communities who are not receiving nearly as much work as their ability deserves, simply because their work is not understood by the people they are trying to serve. If architecture is to become a real factor in the æsthetic development of the nation then the average man must be educated to good taste and not simply a chosen few.

For a long while the various magazines devoted to architecture and building reaching the public were doing a splendid work in this direction, but of late they all seem to have gotten away from the most essential part of their service. They were at one time showing a complete house, inside and out, with well presented floor plans, but now, what are they doing? We find in any one of the current monthlies simply a galaxy of architectural details, such as "Period Rooms," "Textured Walls," "Modernistic Furniture," "Bay Windows," "Alcove Nooks" and the like . . all purely decorative features. Architecture is above everything else not a decorative art. As Chester Aldrich, that noted Country House Architect, once remarked, "there are enough ill designed decorative details on the average house in this country to supply a dozen houses of sober design." These numerous architectural details are being presented through the general read publications with no thought given to instructing the reader that they must not be copied, and that they must not be brought together, or the result will be a a hodge-podge. A lady client with a large batch of illustrated clippings from these various magazines is a dangerous thing in the hands of an architect who is over anxious to agree with his client, and a mighty troublesome problem to the architect who insists on giving his client the kind of house she really needs instead of the one she thinks she wants.

This matter of moulding public taste is a real problem. One that deserves extreme care and caution, otherwise the effort has a reverse effect and is damaging. The architects in the South have an extremely difficult problem to solve along this line. The recent Southern Architectural and Industrial Arts Exposition was the greatest step ever taken by the profession in this direction, but there is much work yet to be done, for the good that this exposition might have done will soon be lost if a further plan of co-operative activity among the architects of the South is not immediately launched to bring architecture to the public in the most pleasing and effective way. There is no better way to stimulate public interest than by the holding of an architectural exhibition such as the one held at Memphis in November. This exposition has created a desire on the part of architects in at least three or four of the larger southern cities to put on a local exhibition. Atlanta is now planning an affair of this kind for February. Knoxville and Birmingham and perhaps others are already showing photographs and drawings at their local civic centers. We hope that throughout the South similar exhibitions are now being planned and will be shown at an early date.

While the public mind is imbued with the spirit of these exhibitions of architecture we think it of paramount importance that the architects begin immediately to think about a really more important feature of this problem of getting over architecture to the public . . . Business men, and they are the ones who have to foot the bills for the architect's service, are still and always will be cold blooded about this matter of investing in architecture. They want to know something about this "Business of Architecture" and that is to our way of thinking the most important matter confronting the architectural profession today in the South.

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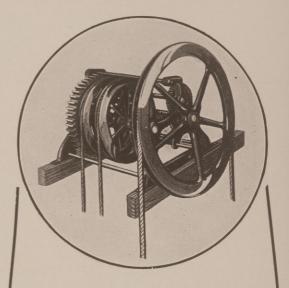
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### Build Now! Make This Your Slogan.

"Costs are lower today than for several years and those contemplating construction should be advised by the architect not to delay."

BUILD NOW!" is the slogan of the architectural profession, according to C. Herrick Hammond of Chicago, president of the American Institute of Architects, who in a statement issued through the Institute's Committee on Public Information declares there is every eason to believe that 1930 will be a good year.

"Costs are lower today than for several years, and those contemplating construction should be advised by the architect not to delay."

"The outlook for 1930 in the construction industry is difficult to forecast. However, in all probability, the first quarter of the new year will show an amount of building construction somewhat less than the corresponding quarter of 1929. This loss will, with reasonable certainty, be overcome and the total volume of construction for 1930 should be equal to, if not in excess of, 1929."

Reports from leaders of industry to the Advisory Council of Business established at the suggestion of President Hoover show that most of the large corporations in the country have extensive programs calling for expansion in excess of that for 1929. These enlarged programs will contribute largely toward an increase in the volume of new construction for 1930.

"The Federal Government," Mr. Hammond adds, "will do its share in maintaining the stability of business by advancing its construction activities beyond the point originally planned both in the National Capital and throughout the country.

"Money formerly diverted through speculation from construction loans should be available for permanent improvements. There should be a stabilized market for both labor and materials—with labor doing more work per day than has recently been the case."

The position of the architect and the exercise of his function with respect to building operations under modern conditions are of fundamental importance in the development of any program which is concerned with the construction industry.

The architect is the co-ordinator in the building operation, be it large or small, and his advice on when to build, and when not to build, is of great weight with the investor, the home builder, and the banker

The architect is in a key position and should be encouraged, at this time, to say to private individuals or interests who may have projects in mind that the immediate future is a good time in which to build, because it can be demonstrated that building is now cheaper than it has been in past years.

The American Institute of Architects, in co-operation with the Producers' Council, is in a position to make the most authoritative and complete survey of the building situation that can be made of present and prospective building by any group or groups in the construction industry.

If such a survey is desirable the architectural profession, and the producers of building materials, must be consulted, and, therefore, more reliable results can be obtained quicker and more directly if such survey is undertaken by the architects and the producers acting under a direct request.

The American Institute of Architects, through its sponsorship of The Architects' Small House Service Bureau, which Bureau was fully endorsed by President Hoover when he was Secretary of Commerce, is in a position to enlist the active and vigorous support of the Small House Service Bureau in any program which may be determined upon in the future.

The Structural Service Department of the Institute provides a contact between the architect and manufacturers and technicians. It is actively cooperating with many divisions and activities of the Department of Commerce, and especially with the Division of Simplified Practice, and the National Committee on Wood Utilization.

The Institute, through its Structural Service Department and other committees, is actively co-operating with building and loan associations, banks, and investment companies in matters relating to the financing of buildings and especially to the financing of small homes to the end that losses running into millions of dollars annually may be prevented by assuring design and construction of such a character that the resale value of the property will be at least sufficient to meet the mortgages.

The Producers' Council is the only national organization of manufacturers of building materials and appliances. It has a membership of sixty-one firms and associations. Its membership represents \$25,500,000,000 of combined capital. Its member companies employ over two million persons in over nine thousand plants. Practically all important building material industries are represented, and the member companies are located in all sections of the country.



Photo: Courtesy Marshall Field & Co.

Here we return to the simplicity of the true Colonial—panelled walls in natural finish, beamed ceiling and the simplest possible treatment of the fireplace are entirely in accord with the trestle table, the Windsor chairs and the hand-loomed carpet.

### SOUTHERN ARCHITECT

### and BUILDING NEWS

VOLUME 56

JANUARY, 1930

NUMBER 1

#### The South's Domestic Architecture

"American Art Will Gain Greatly if the Sentiment of Local Individuality Is Not Permitted to be Submerged in a Dead National Monotony" Chas. D. Maginnis

**T**OW shall one arrive at a true understanding of sound Domestic Architectural Design, with specific thought given to this phase of architecture as it exists today in the South? To get to the heart of the subject means that we should gain as clear a conception as possible of what is the one quality to be found above all others that make it good architecture. Upon arriving at this elusive goal, perhaps the first necessity is to perceive how well our houses fit into their natural surroundings, for without that harmony of setting which is so vital to any work of architecture our homes immediately lose something of their charm, irrespective of how well they might comply with those basic qualities, form, proportion and scale which are recognized as essentials to good architecture.

One cannot exaggerate the importance of this fact. And, this brings us to the point of inquiring, what is it that makes these fine old houses of a hundred years ago so harmonious, so satisfying to our æsthetic taste? Is it their decorative effects? No, many of them are so simple that there is nothing really striking about them. We do marvel at their absolute trimness and solidity . . the perfect harmony of their geometrical shapes, both as regards the mass of the exterior and the rooms of the interior. But, these qualities alone are not enough to wholly satisfy our sense of beauty and appropriateness. If we are to find out the truth we must go further . . we must look deep into the heart of the thing as it is . . drawing upon the life blood of these old houses and analyzing it, we find a deeper meaning of this architecture than mere beauty, external symmetry and internal room arrangement. What is it then that makes them so beautiful and so much admired?

Is it too far fetched to compare a beautiful woman with a beautiful work of architecture . . in this instance with a house? I think not. You and I have seen many women whose bodies were so perfectly proportioned, in such perfect scale and with such facial beauty as to excite our admiration and truly satisfy our sense of all that is beautiful. And yet, when we have known them better, when we have thought more deeply we have been dreadfully disappointed . . there was no soul, no feeling. With all their external beauty they ceased to excite our admiration. Can't we then say that the reason those old houses of a hundred years ago, which we have just been talking about, appeal so strongly to us today is that they really do have a soul? The truth is clearly seen in all the great buildings of the past.

We of the South are instinctively different from the people of every other section of the world. Our civilization is marked by a close adherence to ideals that are peculiar unto ourselves. We have no more right to discard our traditions in architecture than we have a right to force upon ourselves the ideals of another people. It is this realization that needs to permeate the heart of the architectural profession in the South. That we are admired for what we have so far accomplished in this direction needs not be questioned. As Charles D. Maginnis of Boston so aptly remarked upon visiting the recent Southern Architectural and Industrial Arts Exposition at Memphis, "I share heartily the satisfaction of those who remarked upon the evidence so marked in the Exposition, of the consciousness of a proud local tradition, and the disposition to make the best of it. American art will gain greatly if the sentiment of local individuality is not permitted to be submerged in a dead national monotony."



Photo: Courtesy Marshall Field & Co.

Although the panelling of the walls and the absence of a mantel shelf place this bedroom within the early Georgian period, the admirable scale of the furniture combined with the delicacy of the bed coverings makes a most harmonious and livable arrangement.



Photo: Courtesy Marshall Field & Co.

The splendid Chippendale furnishings of this dining room lend themselves admirably to the architectural features—the broken pediments over door and cupboard and the unusually fine carving of the over-mantel treatment make a room of great richness and dignity.



Southern Architect and Building News January, 1930



Living Room, W. R. Comfort House, Willis Irvin, Architect

.... and the commission was given a

# SOUTHERN ARCHITECT

An appreciation of the work of Willis Irvin for a group of distinctive country houses done in the traditional southern manner

By

#### RAY HOLCOMBE

HEN a person from the North or West decides to build in the South they generally import their own architect from back home to do the job. Not an unnatural thing to do, at that, rather like bringing down the old family physician in case of illness. So, when we find a southern architect doing, not one but, several houses for clients from widely separated sections of the country then there must be a good reason. There must be something about that architect's work which should interest us. This is what Willis Irvin at Augusta has been doing for several years. Messrs. William Dominick and William Zeigler of New York have sought out his services for their houses

at Yemassee and Aiken, South Carolina, respectively, and for Col. R. R. McCormack of Chicago, he has done a most interesting Colonial house, also at Aiken.

The fact that a jury composed mostly of men from widely separated sections of the country were so intrigued with the beauty and thoroughgoing consistency of the whole design of the Col. R. R. McCormack house, published in the December issue of *The Southern Architect*, and which was exhibited at the recent Southern Architectural and Industrial Arts Exposition, that they placed upon this design the gold medal award for domestic work costing over twenty thousand dollars, is indicative



STAIR HALL, HOUSE OF WILLIAM ZEIGLER, AIKEN, S. C.

of the excellent quality of Mr. Irvin's work. Mr. Louis LaBeaume, in reporting for the jury of awards says, "before passing from our consideration of purely domestic work, the name of Willis Irvin should again be mentioned for the Bayard Dominick Shooting Lodge, published in the July issue, *The Southern Architect*, and the William Zeigler house."

William Lawrence Bottomley was recently asked, "Do you notice a decided change in popular taste regarding our domestic architecture?" "I most certainly do," replied Mr. Bottomley, "For one thing, the pretentious houses, with ornate, over-elaborate decoration and furniture, of a score or more years ago, are no longer wanted. "There is a marked tendency to return to a simpler, more Anglo-Saxon tradition, combined with a strong American tendency." It is this tendency which Mr. Bottomley speaks of, we find holding our interest in this group of houses done by Mr. Irvin. There is a marked and inspiring native southern flavor about all this work.

It bespeaks a language native to the soil which is so essential in domestic architecture.

There are certain fundamental ideas, all-too-often neglected, which determine the real success of a design. Any building, whether a house or any other type of building, should be planned to fit its uses. As Mr. Charles A. Platt, the honored dean of the best country house designers in America, says, "The interest of the house should derive from sound planning and handsome facades, rather than from curious texture of surfaces, or tricks in its interior arrangements." A study of the plans for the William Zeigler house show, first of all, a thorough understanding of the necessary requirements of the client for a home which is to serve him during the winter months, at which time it is necessary to provide for the housing of various servants under the same roof. Ample provision has been made and excellent forethought shown in planning the service features of the house. You will note that the kitchen, laundry, servants' hall and store rooms on the first floor are



LIVING ROOM, HOUSE OF WILLIAM ZEIGLER, AIKEN, S. C.

planned as a distinct unit. Likewise the living room and study in the opposite wing are divided from the other portion of the house by a passage hall which is an exceptionally attractive arrangement. The same consistent planning has been carried out on the second floor.

Speaking of country house architecture, Mr. Chester Holmes Aldrich reminds us that there are today too many would-be clever designers who are willfully seeking after the purely picturesque. He says, "This quality of picturesqueness when deliberately sought seems somehow to lead to vagaries, to restlessness, and above all, to a neglect of essentially architectural values. Frequently too many varied motives are introduced, so that often one small house contains architectural themes enough for three or four soberly designed houses. In place of the sound knowledge of the use of good standard materials, tricks of all kinds are resorted to, such as the artificial waving of ridge lines and roof surfaces, and fantastic effects in the finish of stucco. For this

vogue, many conditions are responsible, among them a pre-occupation with purely decorative details, above all a deplorable lack of the sense that proportion and form, the spacing and disposition of voids and solids are the underlying fundamental qualities of architecture."

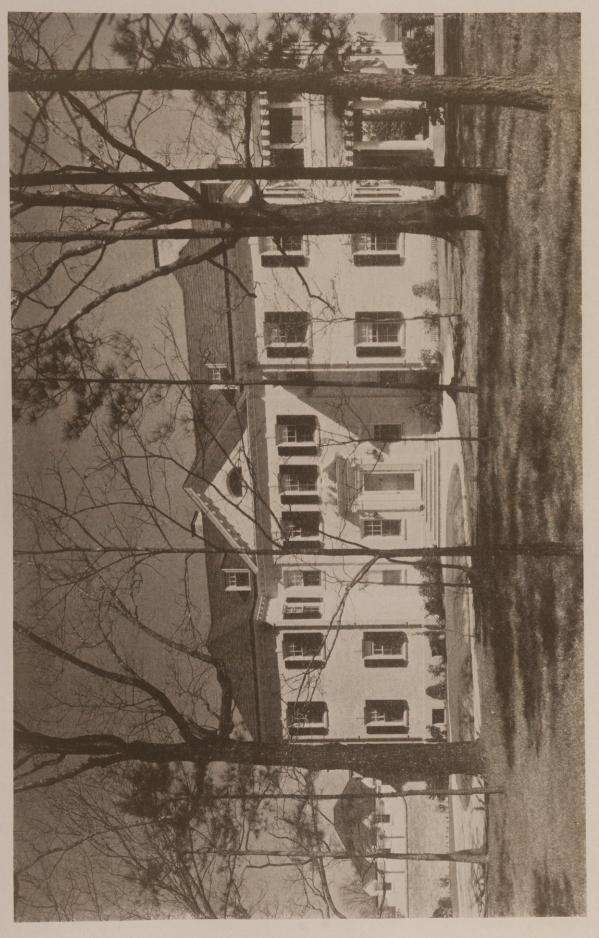
In this group of houses which Mr. Irvin has designed at Aiken and at Yemassee no attempt has been made to go beyond the bounds of sound architectural planning. For interest he has depended wholly upon that disposition of voids and solids, proportion and form which Mr. Aldrich sets out as the fundamental principle to be followed in good design. The McCormack and Dominick houses are derived from the best Southern Colonial precedent, with a nicety of detail which gives renewed charm to traditional form. In the William Zeigler house the architect has reverted to the use of the more formal order of the Georgian Period, adapting well the tradition of the early Virginia manor houses. The way of using this tradition is markedly free, giving



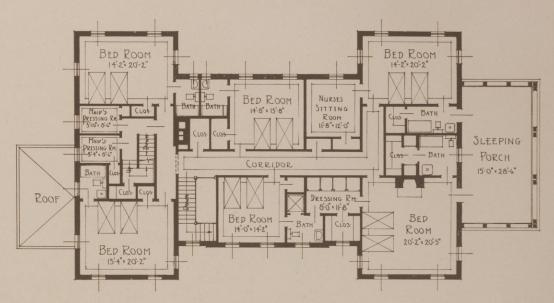
THE STUDY. HOUSE OF WILLIAM ZEIGLER. AIKEN, S. C.

life and vitality, renewed beauty and harmony, which is in perfect keeping with its setting. This house of Mr. Zeigler has great innate dignity both outside and in, the well scaled entrance detail and nicely balanced end wings with the central motif provide an interesting facade which indicates the general plan of the house. The interior has been worked out with no less facility, exhibiting a careful study of interior decorative details. The colorful scenic wall paper, the restrained Colonial stair of the entrance hall gives a pleasing first sight of the interior. From the entrance hall we go directly into the dining room, and here again the use of wall paper in floral design gives life and color to an otherwise simple room. The period furnishings, a few tastefully selected pictures and the white woodwork all go to make this an exceptionally attractive room. Mr. Zeigler's study in the right wing with the knotty pine panelled walls, well balanced recessed nooks at either side of the fireplace and an unusually interesting mantel, has been well studied and is indicative of its use. The living room just off the study with its delicate woodwork and well appointed furniture is wholly a delightful and livable room.

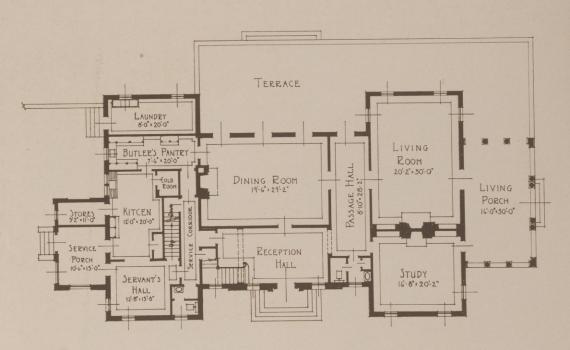
In no field has America's present day civilization expressed itself more fundamentally and adequately than in its country houses. In adaptation to site, in convenience and proportion of plan, and in the character of both exterior and interior elevations, a standard has certainly been set which reflects the best taste of our time. In the South, during the past ten or fifteen years our domestic architecture has become perhaps the greatest single asset in the development of a sectional conciousness. Our architects have revived to a marked degree the traditional architecture of our forefathers, which after all is indigenous with the soil. It is such houses as these which Willis Irvin has contributed, to a long line of distinctive southern houses, that will bring to our domestic architecture the recognition which it merits.



Southern Architect and Building News January, 1930



SECOND FLOOR PLAN



FIRST FLOOR PLAN

HOUSE OF WILLIAM ZEIGLER, ESQ., AIKEN, S. C. WILLIS IRVIN, ARCHITECT



DINING ROOM, HOUSE OF WILLIAM ZEIGLER, ESQ., AIKEN, S. C. WILLIS IRVIN, ARCHITECT

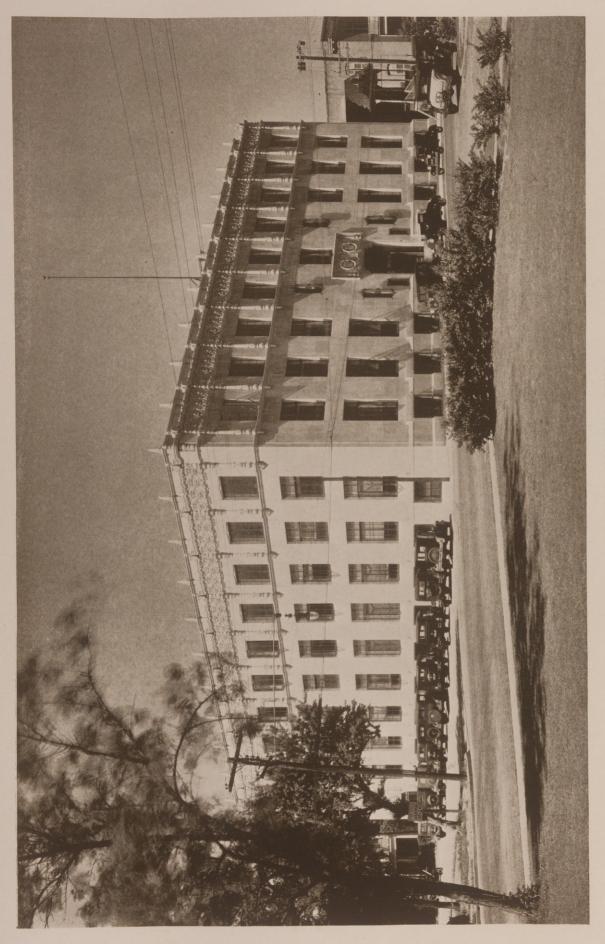




ENTRANCE FACADE

FEDERAL LAND BANK, HOUSTON, TEXAS
HEDRICK & GOTTLIEB, ARCHITECTS





Southern Architect and Building News January, 1930

#### IF I WERE AN ARCHITECT

To me, those buildings which are the best handiwork of the architect are inspiring. They bring out the finer qualities which so often lie dormant in the human soul. They will in time go far towards the development of a civilization that can appreciate the æsthetic as well as the utilitarian. A refined piece of architecture, though it be large or small, when seen in its right light adds to the joy of living. I wish more people could see architecture in this way.

To me, buildings which have been planned and constructed to function in such a way as to make possible a better working day for those who inhabit them and provide all the necessary facilities for carrying on business with the least amount of friction and with the least amount of expended effort, though it be an office building, a public edifice or a home, is just as beautiful as the one whose exterior satisfies the most highly developed sense of good taste. Though your building be beautiful and not comply with the practical needs of its occupants then there is no architecture. Though your building be of the utmost practicability and lack the elements of beauty there is still no architecture.

So, if I were an archiect, I would first of all look about me for those buildings designed by my confreres which do satisfy both the elements of beauty and utility, and from them I would try to learn the lesson that is there for me. I would do more than this. I would try hard to meet personally as many of the older men, who by long years of experience and years of study, have been able to gain for themselves recognition as leaders in my profession. I would study their personalities for therein lies the secret of their success, the reason why their work is above the average. I would not hesitate to make it a personal matter of finding out from them what their earlier problems were and how they managed to solve them. I would listen well.

If I were an architect, I would endeavor to do my work so thoroughly that I would merit an invitation to join the American Institute of Architects. When I became a member I would not miss a single meeting of my chapter nor let an opportunity pass by to attend the national meeting of that body. When at a meeting I would "listen well" and in my practice I would apply faithfully all the knowledge obtained by association with the leaders at these meetings.

If I were an architect, I would apply the Golden Rule in dealing with my clients and before I attempted to draw a single line I would study thoroughly and as long as possible every detail leading up to my client's reason for building and in this way I would be better able to determine the exact needs in that building. When I had satisfied every one of the practical requirements of the structure I would then re-study it, putting as much beauty and harmony of detail in it as humanly possible to do.

See page 64-"If I were an Architect's Client"

# are we going

# MODERN?

We should look at this movement with open minds to see first if it can be adapted in the South to our best interest.

#### By Ernest Ray Denmark

HEN Gothic architecture was born, classical minds in Italy deplored the departure from set standards. Indeed, the very word Gothic depicts the attitude of the critics. It means rude, barbarous, fierce. In time, Gothic architecture became appreciated as a fine and independent expression of the vigorous life and attitude that bore it.

Architecture can and should be a living thing, expressive of the thought and time and taste and rhythm of the period. The same is true of the other fine arts, music, literature and sculpture. Modern things at least can express a love of life here and now. And the fact that new expressions are not yet classified and accepted by academies is a point in favor of new expressions. Because the very classification means congealing. And progress is fluid.

"There is no need to tell anyone that art has gone modern," says Raymond M. Hood, "but very few people know what 'going modern' really means. The common conception is that it means a radical change in the looks of things, that the time has arrived when precedent and the accepted standards of beauty are all to be thrown overboard, and that with a new philosophy as a base, new standards and wholly new conceptions of beauty are to be manufactured. Nothing could be further from the truth." Mr. Hood, seems to think that the modern movement going on today transcends in importance those epoch periods, such as the development of Greek and Gothic art, great as they were. He may be right. That is for future generations to say. At least, it seems to me to find its rightful place and most fitting adaptation in commercial architecture. Certainly this new art as expressed in the skyscrapers of the country is inspiring.

The old idea of heavy masonry walls and overhanging cornices, ornamental frieze and the like,



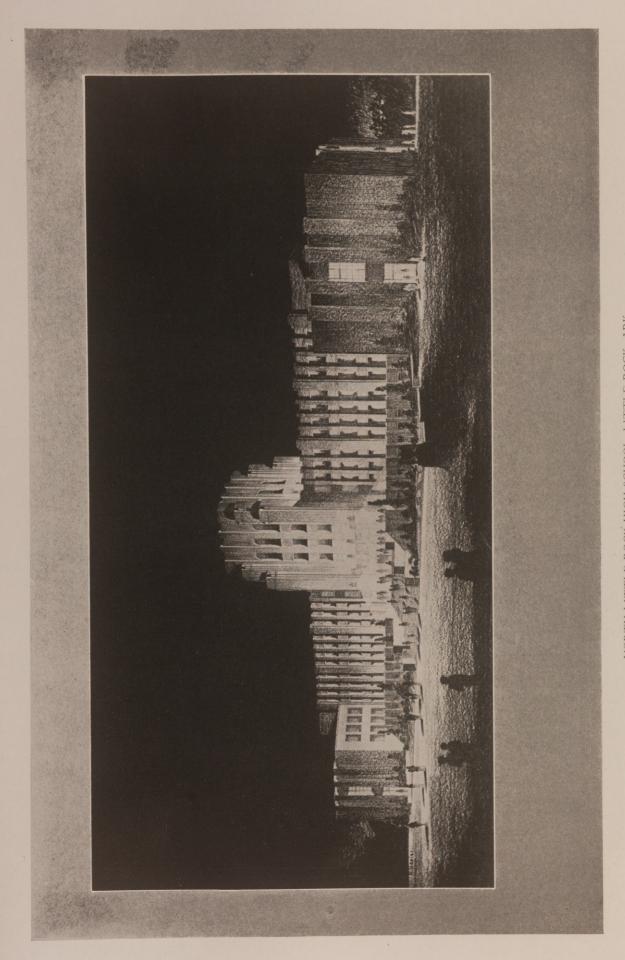
PROPOSED CITY NATIONAL BANK, RICHMOND, VA. JOHN EBERSON AND CARNEAL & JOHNSTON, ASSO. ARCHTS.

so much used in the past, does seem absurd, as D. Everett Waid expressed it to me. After all, is not architecture a selective art? Then, if we no longer need the old themes, why not discard them? So long as we adhere to the underlying principles of good design our buildings may still have form, proportion, scale, and yet be expressive of the best tradition of the centuries with a new and refreshing vigor predominating.

Here in the South I think we should study this modern movement, especially in our office building design, with careful and serious thought before embarking on an uncharted sea. Above all, I hope we will not over emphasize, as is being done in most every other section of the country, the value of every square inch of real estate. As Mr. J. Monroe Hewlett expresses it, "Is it too much to hope that in the development of the South it may be possible to retain such dignity and spaciousness of horizontal dimensions in architectural form as to maintain something of the amplitude and broad hospitality of the southern tradition?"



Southern Architect and Building News January, 1930





MODEL, AMERICAN BANK BUILDING, NEW ORLEANS, LA. MOISE H. GOLDSTEIN, ARCHITECT

### "The Yard"

HOUSE OF MR. AND MRS FAY INGALLS
HOT SPRINGS. VA.

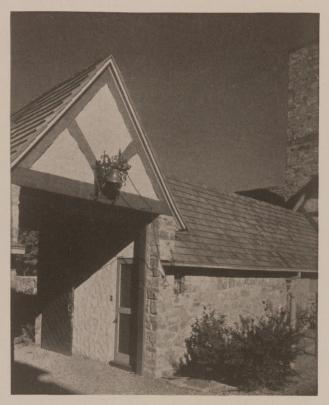
MATTHEWS & SHORT
ARCHITECTS

THE house is built on top of a wooded hill that rises about a hundred feet in the middle of the Warm Springs Valley at Hot Springs, Va. It commands views of mountain ranges on two sides and of the glorious valley on the other two. Owing to the uneven, rocky and rural site, an adapted English Farmhouse style was chosen as the most suitable, the ground being too informal for Southern Colonial. The approach is by a long driveway that winds up the hill outside of the high stone wall to a square terraced entrance turn.

The house is built around a courtyard into which one may drive or ride, in the manner of an ancient inn. The name "Yard" is given to all such farmhouses in Norway when built around a court. Hence "The Yard" was chosen as the name for the house.

The architect has adapted the plan of the house to the levels and views of the site. The visitors' entrance is on the north, away from the main living quarters. At the rear, the west, is the kitchen entrance behind a high wall, a run-in garage for day use, and the driveway entrance to the courtyard under a gable with solid wood gates. In the courtyard are hitching posts striped in green and yellow, a mounting block, a covered porch from the living room, a second floor porch where the owners have breakfast, to which an outside stairway leads for use by muddy riding boots. From both porches one may see the mountain rising above the one-story roof of the west side. The courtyard is paved with gravel.

The exterior walls are of lovely local field stone, rough cast stucco and hand hewn oak timbers. The stone is of warm harmonious colors in various weather shades of grays, browns, greens and even purples. The stones are laid on a level bed with joints in a general horizontal line. The wall construction is a special one used by the architect with 2" x 4" studs on the inside, enabling the house to be built without waiting for the stonemasons to finish. It gives a dry, insulated wall at a less cost than a regular stone wall.



The roof is of 1" thick wood shingles weathered a natural silver grey by chemicals. The stucco is white in wavy surfaces; the hewn timbers a dark reddish brown. The trim is in bright green. The whole color effect is fascinating.

The visitors' front door on the north leads into a stone paved hall with a gentlemen's cloak room to the left and a ladies' to the right, and it opens beyond onto a round stairhall, porch with stone cut in hexagons with an old round mill-stone in the center. In the hole of this is set a bronze placque showing the points of the compass.

A lovely carved, curving stairway rises from here, of Continental inspiration. Double doors open from the hall on one side to the dining room which is panelled at two ends in Scandinavian design on chestnut, left raw and untreated. The ceiling and its beams are of the same material. On one side, the windows face up the valley and the other opens through French doors into the Court. Beyond are the pantry, flower and picnic basket room, kitchen, servants' hall, cold and warm storage rooms, service court and porch, laundry and visitors' manservants' bath. Beneath the kitchen is the boiler room and another unusual feature is a subterranean passage leading from it for about two hundred feet out to the hillside for removing and dumping the ashes.

From the other side of the stairhall opens the courtyard porch and the living room,  $21' \times 50'$ , with its large 7' stone inglenook fireplace with two



LIBRARY, HOUSE OF FAY INGALLS, ESQ., HOT SPRINGS, VA.

MATTHEWS & SHORT, ARCHITECTS



STAIR HALL, HOUSE OF FAY INGALLS, ESQ., HOT SPRINGS, VA. MATTHEWS 8 SHORT, ARCHITECTS



DETAIL FROM THE HOUSE OF FAY INGALLS, ESQ., HOT SPRINGS, VA.

benches and tiny fixed peep windows for reading. At the south end of the room is a stall picture window giving a glorious view down the valley showing the 4,000 foot high mountain range culminating in "Bald Knob," the highest mountain in Virginia. One side of the room opens onto the courtyard porch and the east side onto a charming flagstone paved terrace.

From the north end one enters the book room, at a lower level, which is of most unusual and intriguing nature. A natural looking door on the living room side turns out to be a moving bookcase on the other. The room has no visible doors, all being hidden sections of bookcases. The room is one and a half floors high. At the South end is a dividing stairway with wrought iron railing leading to two galleries running the full length of the room. At this end the wall is covered with cases for trophy cups, gun and rod racks. All the walls are lined with books below and above the galleries. Great tall windows are to each side of the fireplace and on the

terrace side. The wood and hewn beams are of chestnut, lime burned and stained a dark brown, giving the tone and texture of centuries.

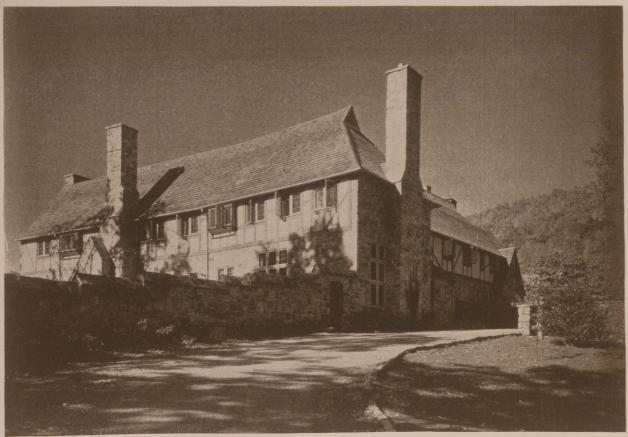
The south wing of the house contains a billiard room, children's cloak room and toilet, flower room, two double visitors' rooms and bath, visitors' manservant's room, and tool room.

On the second floor are seven more masters' bedrooms, owner's dressing room, six masters' bath rooms, two servants' baths, sewing room and seven servants' bed rooms. The attic is very large, divided into three sections, two for the family storage and one for the servants. There are four stairways from the ground floor to the second.

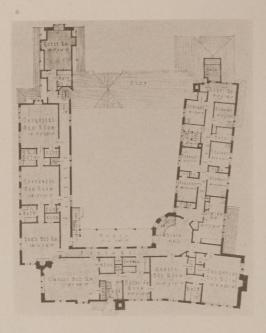
All the bathroom floors and those of the service portion are of rubber tile. The master's portion on the ground floor has random width antique oak flooring with pegs and dovetails.

The plan of the house has been carefully worked out to give the easiest accessibility to all parts and especially for the convenience of service.

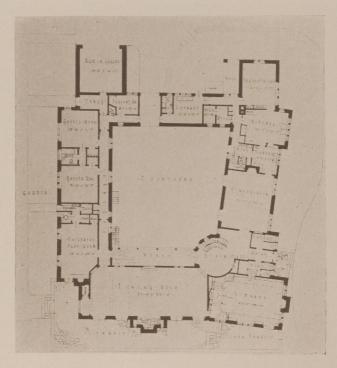




HOUSE OF FAY INGALLS, ESQ., HOT SPRINGS, VA.
MATTHEWS & SHORT, ARCHITECTS

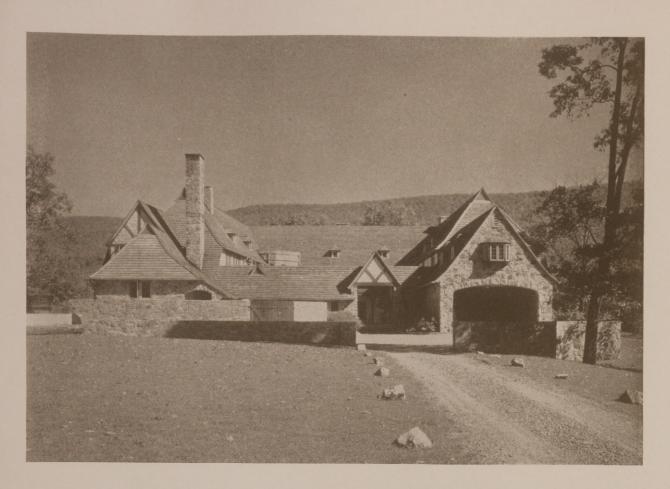


SECOND FLOOR PLAN



FIRST FLOOR PLAN

HOUSE OF FAY INGALLS, ESQ., HOT SPRINGS, VA. MATTHEWS & SHORT, ARCHITECTS





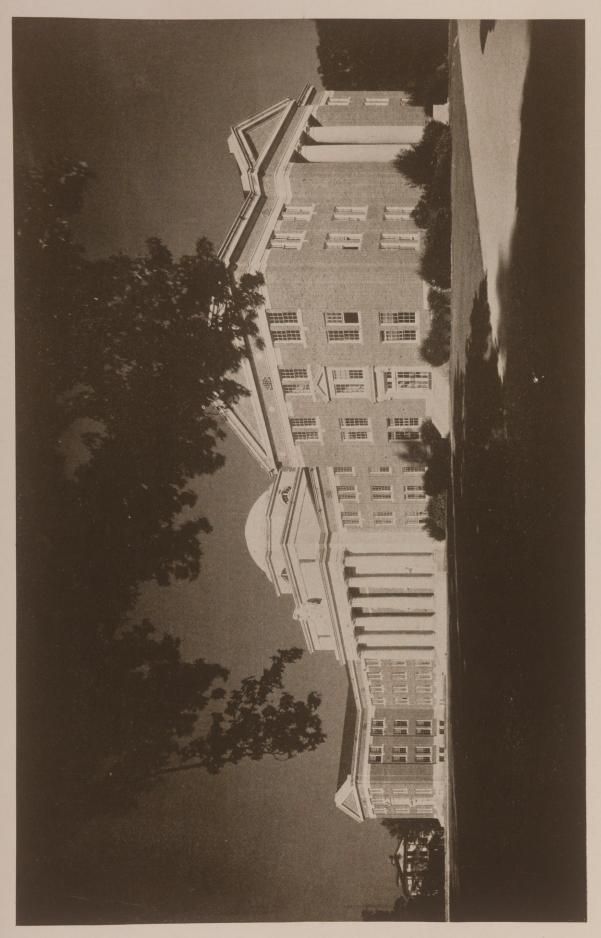
HOUSE OF FAY INGALLS, ESQ., HOT SPRINGS, VA. MATTHEWS & SHORT, ARCHITECTS





Southern Architect and Building News January, 1930





#### IF I WERE AN ARCHITECT'S CLIENT

If I were an architect's client, and I certainly will be, if I ever decide to build even the smallest kind of a house or any other kind of building . . . I would have one thing definitely set in my mind . . . that by training, by experience and by every right consideration, my architect knows better than I just what kind of a building will best serve my needs and I would trust his judgment like I do my family physician. If I could not feel this way about my architect then I would find an architect I could feel this way about.

I would give my architect the exact amount I could afford to spend for my building and I would insist that he make a definite budget upon which to work and when this budget was completed and I was told I could only have so much house for so much money I would be willing to accept his judgment, asking no more than the kind of house my money would buy.

If I were an architect's client, I would meet all my appointments with him promptly, realizing that his time is just as valuable as mine. I would stay as late or leave as early as he suggested. I would consider him my councilor, my friend . . . and I would express to him my thoughts precisely on any question when asked and keep quiet until my ideas were wanted.

If I were an architect's client, I would not tolerate the intrusion of manufacturer's representatives taking up my time . . . to do so would be belittling the intelligence of my architect as to the best materials and equipment to be had and which could be used in my building according to the original budget.

If I were an architect's client, I would not think as most people, that architecture is chiefly one of decoration. Above all I would not clutter up his desk with a raft of detail pictures from various magazines, for I believe I realize that good architecture is essentially one of form, proportion, scale, and the right disposition of voids and solids, rather than decorative elements.

If I were an architect's client, I would realize that my architect's knowledge and time are his most valuable assets and as such he deserves a good return on his invested capital in securing special training in order to serve me best. I would not expect him to work for me for a fee any Jess than I would expect to pay for a similar service rendered by a surgeon.

If I were an architect's client, I would lend my whole hearted co-operation in an effort to make our relations as pleasant and as profitable as humanly possible to do. I would realize that his duties involve a multiplicity of detail and I would keep my patience at all times in an effort to help rather than hinder the carrying on of this work with the least amount of friction.



House of
JAKE LEVY
NEW ORLEANS, LA.

MOISE H. GOLDSTEIN

Architect

# sell the Public ARCHITECTURE

Says MILTON S. BINSWANGER. Memphis Manufacturer

The Board of Directors of the A. I. A., at its November meeting, ordered the inclusion of this subject on the Convention program—at Washington in May, 1930.

F there is any service that I could render to the architects at this time it might be to emphasize what I have reason to believe is the opinion of nany, that architects have, at least for the last one or two generations, and likely for a longer time, underestimated their position and service; and they have quietly suffered from such influences, for it has led the public, who is the beneficiary of their excellent work, to be indifferent.

In this course of modesty they have not done the thing that would be creative of the most good for all. Like many virtues we individually possess, unless they are emphasized by understanding and appreciation of others, we do not fully develop them. By demanding, not in an arbitrary way, but in a reasonable way, the proper appreciation of the work you are doing, you not alone serve yourself but open a way toward the creation of finer buildings for whatever purpose intended, and the public at large is the greater beneficiary.

There is a means to the end suggested and I probably do not advance you a thought that has not been present with you for a very long time, but I do urge you to put into practice a campaign of education, which can be done only through well presented expressions of your purpose to serve and the economic value of your service. These expressions should appear in every good publication in the country, not for a period of two or three months but discreetly over a period of several years in order that you may emphasize to those who should avail themselves of your services, the great economy in doing so, and that all who can see and have reasonable human sensibilities can benefit from your skill which has been developed by education and experi-

ence. You cannot, as architects, alone provide the necessary funds. You have a right, an unquestioned right, to request others to help you, more particularly those who are producing and distributing building materials. They are really anxious to help you, for in doing so they likewise help themselves. You have possibly, in not pursuing this course, paid the price in being over-sensitive as to the ethics of your profession and have felt that the seeking of opportunities to serve have been undignified. As I see it, this has been an unnecessary attitude.

Owners have had a wrong impression regarding the cost of architectural services. Many have felt the cost of this service high or unnecessary. While it may be difficult to evaluate, it can be said that one slight mistake in construction can far outweigh in expenditure the cost of the architect's fee.

# THE ARCHITECTURAL PROFESSION



Left to right: J. Monroe Hewlett, First Vice-President A. I. A. C. Herrick Hammond, President, A. I. A. and Wm. J. Sayward, Second Vice-President, A. I. A.

Architects it is my firm belief that now is the time for such vital elements of the construction industry, as the Contractors, Material Men, Engineers, and Architects, to come together for the good of the Building Industry, and discuss their problems and difficulties, real or imaginary, following the splendid example set by the Industrial Leaders of the country, so that we may carry out, with efficiency and dispatch, and with the least possible waste and friction, the construction program for

# Must Justify Its Leadership In The Construction Industry

BY C. HERRICK HAMMOND, President A. I. A.

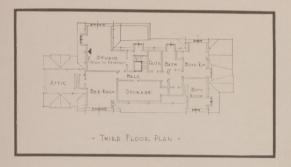
1930 and the greater years to follow, for in the words of Dr. Julius Klein, Assistant Secretary of Commerce,—

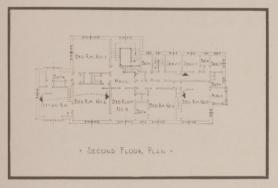
"The eventual, inevitable brass-tacks stage of the present business problem has arrived. As the President has so clearly indicated, one branch of business after another has presented gratifying impressive statistics as an indication of the determination to go forward, as an evidence that the situation is sound. But we all agree that the time has come now when the only sound which really counts is the clang of shovels and of cash register bells. That is what the millions of workers and consumers want to hear from business.

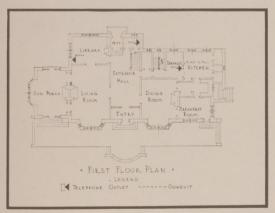
"The nation is now looking to you business men to get out of the huddle of 'conferences'—if I may use a more or less seasonal phrase—and play ball."

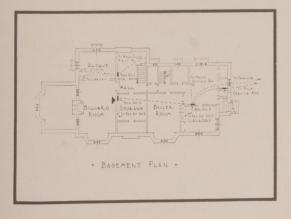
The Architectural Profession must justify its leadership in the Construction Industry and assure a speedy and complete return of public confidence, keeping in mind that such construction work should proceed as is warranted after a careful study of the situation, that sound business conditions may be maintained, and that the Architectural Profession, through its contact with the consuming public, may thereby assist President Hoover in carrying out his constructive program of stabilization.

# New Beauty and Smartness—with Modern Telephone Convenience











In the residence of Mr. Philip N. Lawes, 56 Highland Avenue, Montclair, N. J., there are ten telephone outlets, including one in the garage and one in the basement. Conduit built into the walls and floors conceals the telephone wiring.

W. LESLIE WALKER, Architect, New York City.

A FEATURE of modern telephone convenience which is of particular interest to architects is that it adds to the *appearance* of a house, as well as providing greater convenience and comfort for the occupants. Telephones today are not only an indispensable means of communication, they have become a part of home decoration. Planning for the telephone arrangements in advance of construction makes it possible to utilize modern facilities to full advantage.

Conduits are placed within the walls to all points where telephone service may be desired immediately or in the future, avoiding the necessity of exposed wiring at any time. Underground service entrances conceal the wires coming from the outside. Attractive wall niches or cabinets for instruments and directories are constructed in some instances, especially where space is limited. Many other things contribute to utility and smartness.

It is desirable that architects consult freely with representatives of the telephone company in planning for telephone convenience in new or remodeled houses. No charge is made for this service. Just call the Business Office.



# OUR RESPONSIBILITY

By J. Monroe Hewlett, First Vice-President, A. I. A.

A Radio address delivered on the night of January 8th, as a tribute to the architects, builders and engineers of the world by the Westinghouse Electric & Manufacturing Company in a coast to coast hook-up through the stations of the National Broadcasting Co., New York.

BY designation of Mr. C. Herrick Hammond of Chicago, President of the American Institute of Architects, who found it impossible to be present, I have the honor tonight of responding, in behalf of the building industries of the country, to the tribute offered by the Westinghouse Electric and Manufacuring Company, to the architects, builders and engineers of the world.

When we speak of modern architecture we visualize a great company through whose agency modern architecture has come into being—architects, engineers, builders, manufacturers of all the materials and appliances which enter into modern construction and, in addition to this, a great army of craftsmen and artisans through whose united efforts the expenditure of six billions of dollars has been made possible in the building industries of our country throughout the past year.

Each of the elements in this great industry has its appropriate and essential function but the responsibility that rests on the shoulders of the architect is the most comprehensive responsibility of all. He is essentially the guardian of a tradition which has existed in unbroken sequence for five thousand years.

Our estimate of the civilizations which have preceded us is based largely upon the quality of the architecture which they produced and on the same basis we shall be judged by the generations which follow.

During the past century more new methods, materials and agencies have been brought into the practice of building construction than during all the preceding centuries of the world's history and the greatest task entrusted to the modern architect is to utilize adequately and progressively these methods, materials and agencies without abandoning the great traditions which have placed architecture among the most ennobling of the arts.

The American architect of today has fallen heir to a great heritage. To the student of our history the names of Richardson, Hunt, McKim, Burnham, Bacon, Goodhue, Medary and many others who are no longer with us, will stand as symbols of an enduring influence in our civilization. All over this country today worthy successors of these men are carrying on the principles for which they stood.

Today, more than ever before in our history, the influence of the architectural profession is helping to mould policies and undertakings of government itself as well as all the widespread activities and enterprises which make our country great.

Today, more than ever before, our leading architects must be not merely great practitioners of their craft, but leaders of men capable of co-ordinating and controlling all of the agencies and organizations which have a part in the building industries of the country.

Today, more than ever before, the American Institute of Architects, which I have the honor to represent here, is collaborating with such organizations as

The American Construction Council, The American Engineering Standards Committee, The National Fire Protection Association, The Producers Council, The American Society for Testing Materials, and The Architects Small House Service Bureau, to the end that no difference of aim or method on the part of our great constructive enterprises shall be allowed to obstruct our triumphant progress towards a civilization in which material values and spiritual values shall receive the recognition which is their due.



Albany Atlanta Baltimore Boston Buffalo Chicago Cincinnati Cleveland Dallas Denver Des Moines Detroit Greensboro, N.C. Indianapolis Kansas City Los Angeles Minneapolis New York Philadelphia Pittsburgh Portland St. Louis Salt Lake City San Francisco Seattle Calgary Alta. Montreal Que. Winnepeg Man. Toronto, Ont. Vancouver, B. C JOHNSON HEAT & HUMIDITY CONTROL

# Latest Development in STEAM HEATING Systems

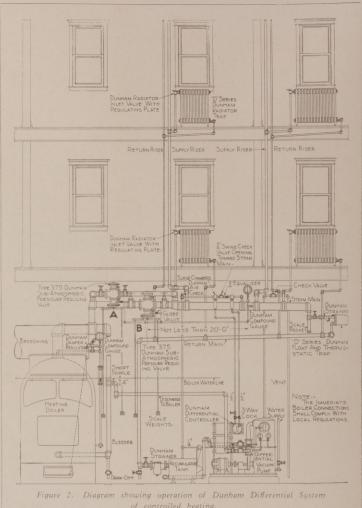
BY R. E. ATKINSON Engineer

TEAM has been used as a heating agent for the last half century. The first steam system was the one-pipe system with its many annoving faults such as noisy radiators and piping, spurting air valves and frequently many radiators on the system not heating up.

The two-pipe heating system was the next forward step in steam heating. This provided an additional pipe whose function was to carry off the condensate, but the air valve still remained as the only means provided for the escape of air. An objection in this system was that steam

would enter adjoining radiators through the return pipes and pocket the air there between two heads of steam, so that conditions were about as bad as with the one-pipe system.

These difficulties were overcome by the introduction of the thermostatic trap; the first successful one was placed on the market about twenty-five years ago. This trap is a thermostatic valve that is opened and closed by steam and condensate, allowing free passage of air and water, and closing against steam. As steam enters a cold radiator, it forces the cool air, which is in the radiator, out through the trap into the return piping. In warming the radiator, the steam gives off the heat and in doing so condenses to water. The water being heavier than the steam falls to the bottom of the radiator and flows to the trap through which it passes into the return piping. After forcing out the air, the steam fills the radiator and follows the water to the trap which, in the presence of the steam, automatically closes because the steam is of higher temperature than either the air or water. With ample supply the radiator soon fills with steam, which gives off its heat and condenses, forming water. This water be-



ing at a lower temperature than the steam flows to the trap and causes it to open and is allowed to pass out. There is not a continuous fluctuation of the valve, but it adjusts itself to the volume and temperature of the water and a continuous flow passes from the radiator.

The next development was an improvement on the two-pipe system known as the Vacuum Return Line System. Instead of the steam being pushed through by pressure from the boiler, it was pulled through by means of a vacuum pump connected to the return mains that brought the condensate back to the boiler. This system is so well known after its use for more than two decades that detailed description is hardly necessary.

The latest development in the heating industry —and indeed by some claimed to be the only real advanced step in the application of steam heating for a quarter of a century—is the control of the vacuum return line system by means of the difference in pressures or the differential existing between the radiators and supply piping and the return piping.

This system is known as the Differential System and was announced about three years ago.





Flames sweeping from the windows of the tenth floor of the Amica ble building last nith at 9:45 o'clock sent firemen shooting up in elevators ble building last night at 9:35 o ciock sent firemen, shooting up in elevators to break down the door of the Harper Method Beauty shop, 1019, and where there of unknown origin destroyed. Method Beauty shop, 1019, and where flames of unknown origin destroyed equipment and furniture valued until fire cooked the plaster from the walls, cracked the window panes, and blistered the fireproof doors, but did not break through into adjoining offices.

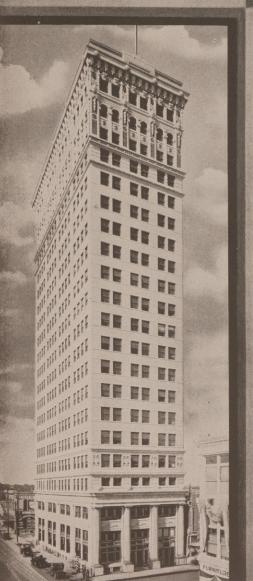
joining offices.

The street, high school student, high school student, high school student, amicable elevator of the street, high school student, and off honors for which

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first |

"No building is more fireproof than its doors and trim" -DAHLSTROM



## Metal Doors and Trim DAHLSTROM lower another fire loss

AGAIN Dahlstrom Equipment has confined a potentially serious fire to its place of origin ... prevented its spread from office to office . . . . and reduced damages to a minimum.

The final economy of Dahlstrom installations entirely compensates the slightly greater original cost. Dahlstrom Metallic Doors and Trim not only lower maintenance costs but their prevention of irreparable loss of records and serious damage to office equipment, inspires and keeps the confidence of tenants.

To specify "Dahlstrom" is a guarantee of satisfaction and excellence .... a guarantee made positive by the experience of more than a quarter of a century.

Plates of recent Dahlstrom installations are available to those interested.

## DAHLSTROM METALLIC DOOR CO.

461 BUFFALO STREET (Established) JAMESTOWN, NEW YORK DETROIT CHICAGO NEW YORK CLEVELAND PHILADELPHIA

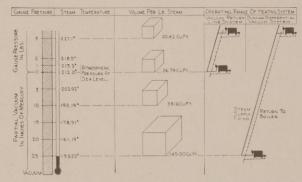


Figure 1. The Steam Table Applied. Comparison of steam pressure, volumes and corresponding boiling points. Steam is produced at lower temperatures and circulated just as easily at 20 inches of vacuum as at 2 to 3 pounds gauge pressure.

The design of this system is based on the requirements that are necessary to give satisfactory heating, i. e., that the best conditions result when heat is supplied to a building at the same rate as heat is lost from the building. This heat loss from a building may be calculated by the use of an old fundamental law of Newton's that "the quantity of heat flowing is directly proportional to the area of cross section at right angles to the direction of flow. to the time, to the difference in temperature between the two faces of the section, and inversely proportional to the thickness," the proportionality constant being indicated by K.

One factor that makes the use of differential control desirable is the great variation in outside weather from time to time. Keeping this in mind, it is evident that most systems are uneconomical because of over-heating. The steam pressure may be reduced in the system, but this does not reduce the heat emission of the radiator to any great extent. With the reduction of the pressure, the circulation decreases, and this causes an insufficient amount of heat in the radiators at the far ends of the mains.

The design of this latest system is based on the principles embodied in Charle's and Boyle's laws that deal with the relation of the volume of a gas to the pressure and to the temperature. The steam table is a more familiar exponent of these laws.

Figure 1 shows a chart that gives the relation of the temperature to the pressure within the range of this system. Under atmospheric pressure at sea level, the temperature of steam is at 212 degrees, but if the pressure decreases below atmospheric, the temperature of steam decreases. That is, the higher the existing vacuum, the lower the temperature of the steam. It is this property of steam that is utilized in this system, so that in mild weather, the steam will be circulated by a higher vacuum which gives the steam at a low temperature.

In the old pressure systems, the building was being over-heated the greater portion of the time since the system was designed for its maximum load and the heat output could not be controlled which necessitated the opening of windows which was the source of great heat waste.

This new system is designed to take care of maximum demand which is required but a very few days of the heating season. As the outside temperature becomes warmer, a higher vacuum can be carried on the system resulting in lower temperature steam, and still maintain the required room temperature because as the weather becomes more mild, the heat loss from the room is also less in proportion. By controlling the heat output of the system, a great saving is effected.

The following account, going through the steps from a cold system to one that is functioning properly will make the operation of the system more clear. See Figure 2.

When the system is cold, the thermostatic traps will be open and there is a common pressure throughout, so the differential controller will start the pump. This controller consists principally of two chambers separated by a large diaphragm. The diaphragm is connected so that it operates a switch in the electric circuit to the motor of the pump. The pump operates until the set differential is reached when the controller stops the pump, and then starts it again when the pressure difference becomes lower than the set differential. This gives a complete circulation that is reliable and automatic. As the pump operates, a vacuum will be built up in the return pipes, and since the traps are open, this condition will exist in the steam mains and thus the radiator will be quickly filled with low temperature steam. The pump exhausts the air and returns the condensate to the boiler as soon as it is formed in the radiators and is allowed to pass into the returns by the traps.

In cold weather, when more heat is needed, the pressure in the supply mains will be increased so as to furnish enough heat to the radiators. The subatmospheric pressure reducing valves as seen in Figure 2 are used for regulating the pressure on the system, making a heat storage of the boiler from it can be drawn as required. These valves maintain (in the steam mains) the pressure (vacuum) that they are set for.

This system thoroughly fulfills its requirements of giving satisfactory heat. It is economical because there is no overheating, and it is reliable because theer is a constant and complete circulation. The differential controlled system is a decisive step forward in the heating field.

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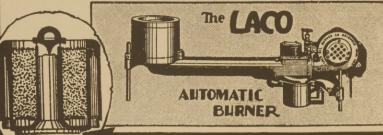
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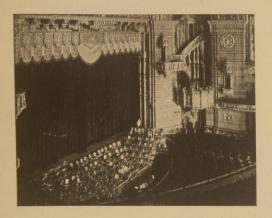
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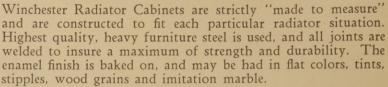
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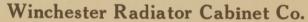


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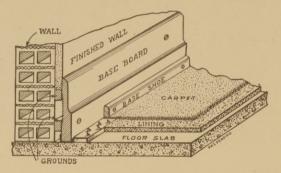
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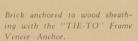
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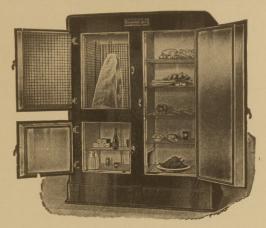
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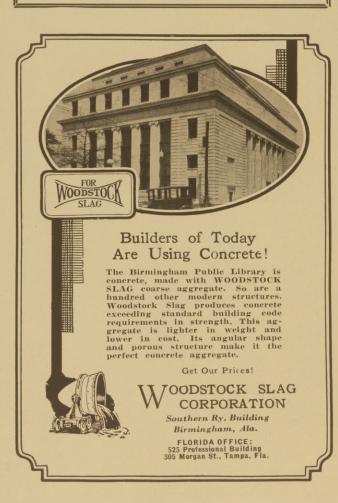
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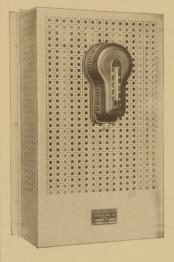
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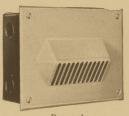
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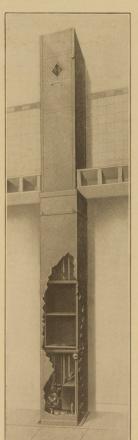


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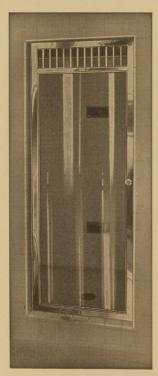
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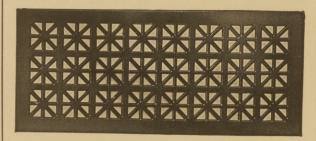
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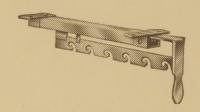
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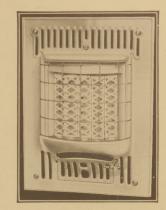
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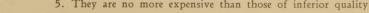
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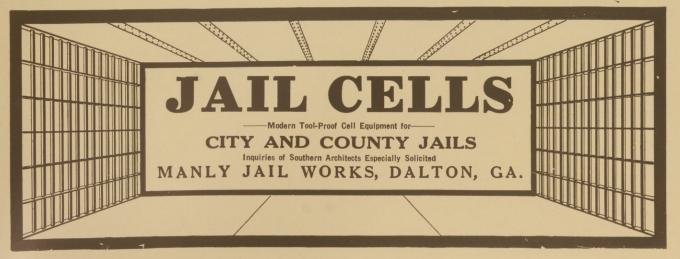
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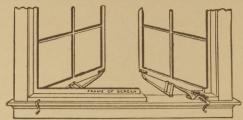


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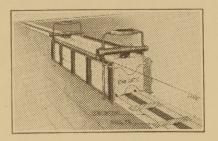
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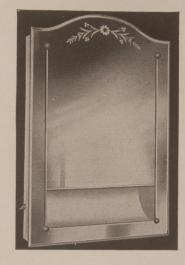
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Calc Calc Cap Carc *CE	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.         Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V Vento Steel Sash Co95
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Calc Cap Car *CE Cha Clov Colc	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.         Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co., 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2
Calc Cap Care *CF Cha Clo Cole	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.         Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V Vento Steel Sash Co95
Calc Cap Care *CF Cha Clo Cole Cov Cris	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.         Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V Vento Steel Sash Co95 Victor Oolitic Stone Co2
Calc Cap Care *CF Cha Clo Cole Cov Cris	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2
Calc Cap Care *CF Cha Clo Cole Cov Cris	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel Co
Calc Cap Care *CF Cha Clo Cole Cov Cris	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co., 78  V Vento Steel Sash Co95 Victor Oolitic Stone Co2  W Wickwire Spencer Steel Co
Calc Cap Care *CF Cha Clo Cole Cov Cris	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov. Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel Co
Calc Calc Cap Care *CF Cha Clov Colc Cot Cov Cris Cut	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel Co
Calc Cap Car *CF Cha Clo Colc Colc Cov Cris Cut	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co., 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel Co
Calc Cap Car *CE Cha Cloo Colo Cov Cris Cut	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov. Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel CoIns. Fr. Cov. Williams, F. Graham, Brick Co 85 Winchester Radiator Cabinet Co 76 Winkle Terra Cotta Co96
Calc Cap Care *CE Cha Clor Cole Cole Core Cut	dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           P           Pauley, W. C	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel Co
Calc Cap Care *CE Cha Clor Cole Cole Core Cut	dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel Co
Calc Cap Care *CE Cha Clor Cole Cole Core Cut	dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           P           Pauley, W. C	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel Co
Calc Cap Care *CE Cha Clor Cole Cole Core Cut	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel Co
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Calc Cap Care *CE Cha Cloo Cole Cole Cov Cris Cut	C  dwell Mfg. Co	Ideal Pump Co	Oakland Fdry. CoFr. Ins. Cov.           Otis Elevator Co	United Specialties Mfg. Co83 U. S. Quarry Tile Co80 United States Waterproofing Co 78  V  Vento Steel Sash Co95 Victor Oolitic Stone Co2  W  Wickwire Spencer Steel CoIns. Fr. Cov. Williams, F. Graham, Brick Co 86 Williamsham-Tift Lumber Co25 Winchester Radiator Cabinet Co76 Winkle Terra Cotta Co96 Woodstock Slag Corp79 Wurlitzer Co., Rudolph16 Wyandot C'ay Products Co94 Wyle, J. J. & Bros., Inc90

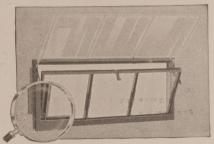
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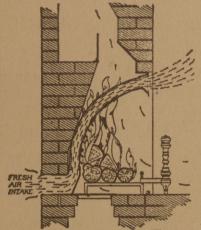
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