

ARCHITECTURE

ENGINEERING

The
Southern Architect
And
Building News

VOL. XLIX.

No. 3

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Price \$2.00 Per YEAR.

Published Monthly by

Industrial Press Publishing Co.

This paper is issued and mailed from our printing house at Dalton, Ga. Business Office, Atlanta, Ga. All letters should be addressed to the Atlanta office, 402 Trust Co. of Ga. Bldg. Southern Architect and Contractor, Atlanta, Ga., and Southern Building News, Memphis, Tenn., and Southern Building Record, Nashville, Tenn., Consolidated.

H. E. HARMAN, President.

E. R. DENMARK, Editor.

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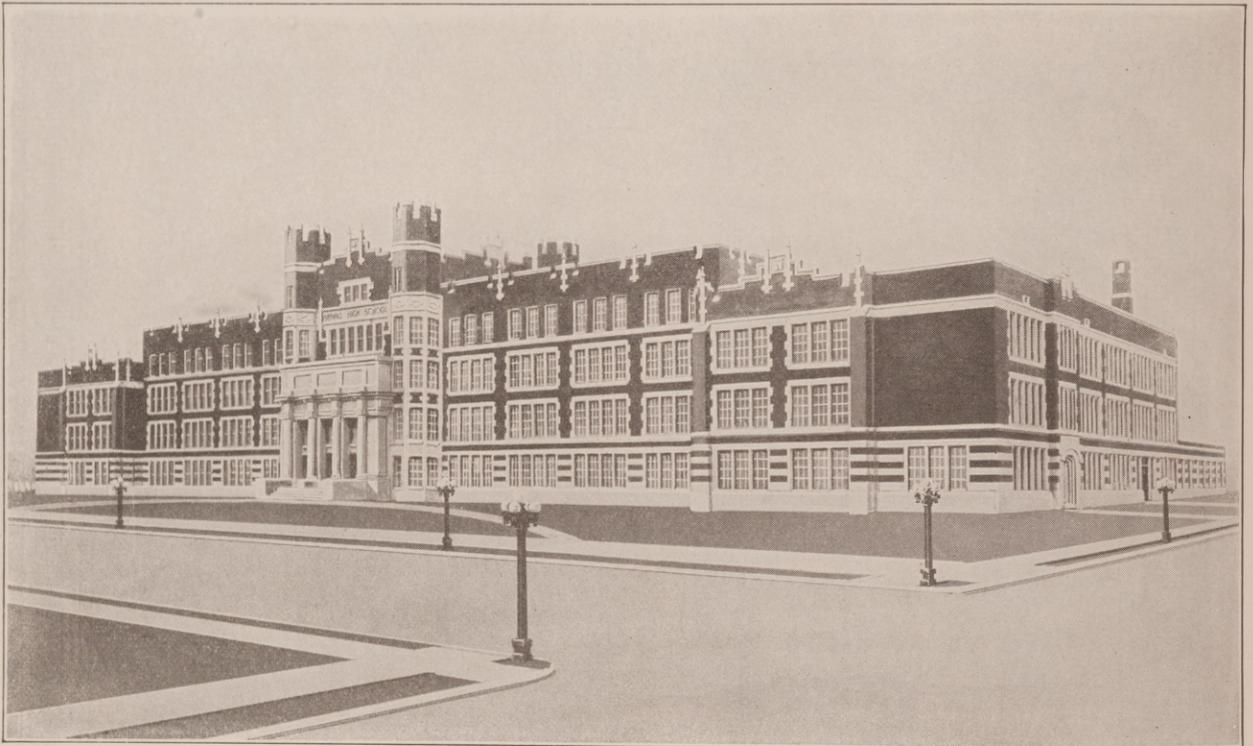
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THE EDITOR'S PAGE

THE REAL AIM AND REASON FOR HIRING AN ARCHITECT.

When you have fully decided to build, no matter what type of building you desire to erect, your interest demands that you secure the most valuable service possible, the most suitable design and the very best construction possible, at the most economical cost.

In order to obtain real service, best design, best construction and at the most economical cost, it is imperative that you call upon an expert, a man who is skilled, through training and experience, and who is recognized as an expert in the design and construction of buildings, to handle your problem.

The architect is the only person that you can call upon to render the service that your interest demands. The architect knows how to consider, sift and harmonize all ideas, into a composite unit, and to secure attractive, refined, common-sense, economical buildings, with a substantial and valid reason for every element, and unit in his plan and specification; to settle all questions before the actual construction is begun, and to protect your every interest throughout the construction of the building.

You will be most benefited by choosing or consulting an architect before deciding upon anything in connection with the building proper, even before you determine the location of the building upon the site or even the expenditure, if possible, for by doing this in the beginning you gain the service of an expert's technical experience and knowledge in every phase of the problem.

That which is done well is beautiful—It has been said, "That to say it is architectural is the greatest compliment."

You desire that your building contain every element in a fine structure—that is Stability, Utility and Beauty. The architect knows when he specifies the material and equipment for a building that that material and equipment is of quality products, and through his supervision of the construction of the building he sees that every unit of construction is correctly done, thus giving stability to the structure. The service which the

architect renders in the design of a building and placing of equipment assures you of its utility. If your building is to be beautiful it must be architectural.

The architect has but one thing to sell, that is his service. When you secure the service of an architect he gives you in this service, his knowledge of building that cannot be bought or gained elsewhere, he gives you his ideas that have been developed through study and training, and that come from a mind that knows how to analyze your problem, he gives you his experience that has been gained through years of actual contact with the problems of design and construction, in other words his service is similar to that rendered by your doctor or lawyer.

If you are sick you go at once to your family physician whom you recognize as competent to relieve you of your trouble, if you are in need of legal advice the first man you call upon is a reliable lawyer. Each of these parties you recognize as being trained to handle the problems of the profession they represent, then is it not advisable when you are preparing to build to consult an architect?

THE FRONT COVER DESIGN.

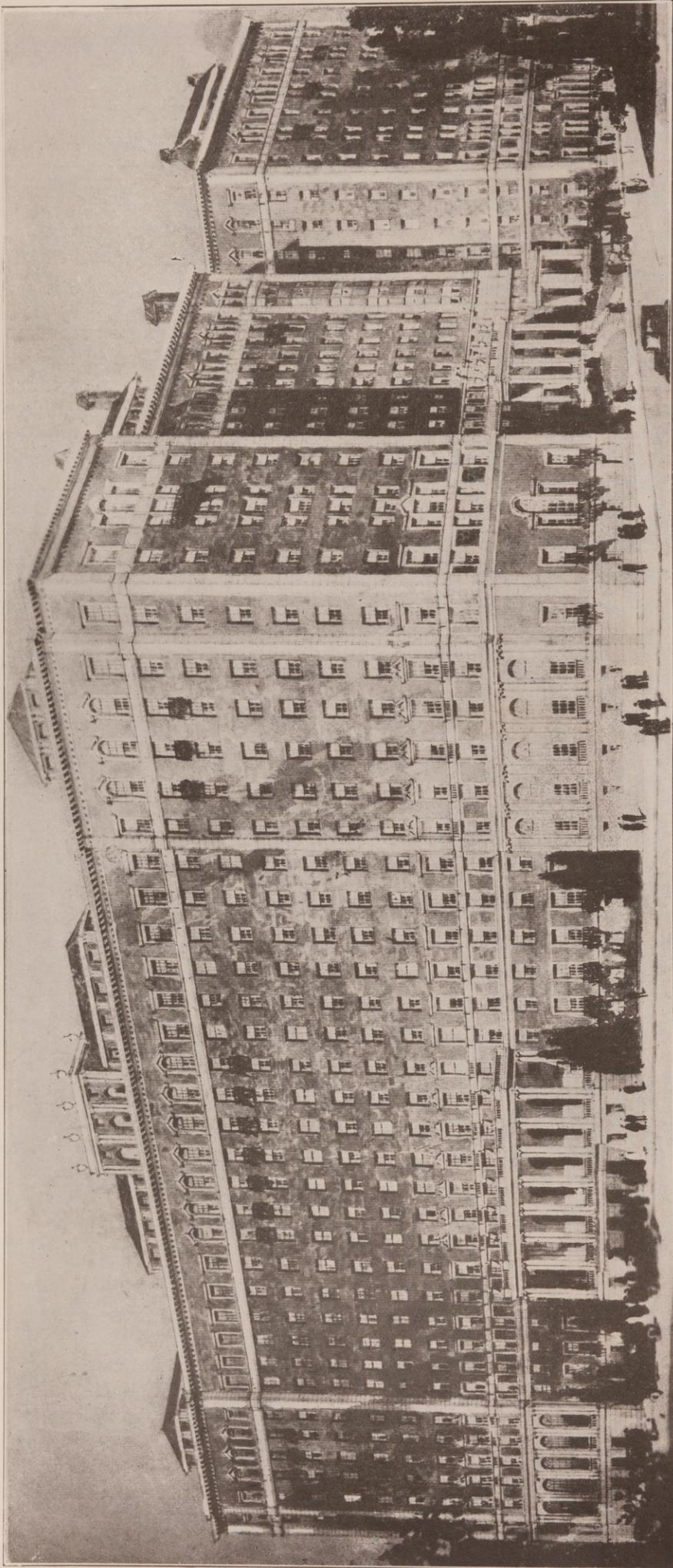
THE insert on the front page of this number is a reproduction in pen and ink of the Lantern Tower, Town House, Petersborough, N. H. Little and Russell, Architects.

THE M. LEO ELLIOTT GOLD MEDAL AWARD.

It is with pleasure that we publish elsewhere in this issue an announcement of the offer of Mr. M. Leo Elliott, architect, of Tampa, Florida, to donate annually a solid gold medal of unique design, with suitable engravings, to be awarded by the Florida Association of Architects, to the architect or architectural firm designing the best piece of architectural work executed in Florida during the year.

The spirit of loyalty shown by Mr. Elliott to the profession in his own state and his interest in stimulating better design in Florida architecture is worthy of the greatest appreciation.

It is seldom that we see an individual in any profession offering such an award to his fellow colleagues, and it is unfortunate that we do not find more such men as Mr. Elliott with the same inspiration and enthusiasm in the work of the profession, as prompted him to offer this award.



BILTMORE HOTEL, ATLANTA, GA.
SCHULTZE, ZEAN & WEAVER, ARCHITECTS.

March
1923

Vol. XLIX.
No. 3



The "Biltmore" Hotel, Atlanta, Ga.

Schultze, Zean & Weaver, Architects

THE hotel will have a twelve-story front of imposing Georgian architecture on West Peachtree. The building is to be of rough, dark red brick, cemented with marble white mortar. The corners of the hotel, from the first to the twelfth floors, are to be finished with white and gray terra cotta, as are the cornices that will ornament the building.

The entrance is to be on the street level, convenient to cars and automobiles. The three doors will open into a vast, marble-tiled lobby from which, to right and left, will run a long corridor through the entire building. Dozens of small shops will open on the corridor—lingerie shops, shops for flowers, candies, drugs, clothes—anything and everything necessary to the comfort and convenience of the hotel guests, the occupants of the apartments or the neighborhood. Few hotels have this feature of shops within the hotel itself.

From this lobby, two wide marble stairs will circle gracefully up to the lobby proper of the hotel. Here, in a spacious, marble-walled hall, will be the registration desk and the offices, here, too, deep chairs will invite repose. The effect will be of width and space and graciousness.

At one end of this floor will be the dining room, Georgian in architecture and in furnishings. Rich tapestries will soften the long windows; the high-vaulted ceilings, frescoed and gilded, will lend dignity and luxury to the room. Many smaller dining rooms, serving rooms and service pantries will cluster about the large room and to improve the dining room service, a large corps of Swiss and French waiters and chefs will be brought to Atlanta from the north.

At the other end of this floor will be the ball room, wide, lavishly decorated and comfortable. The Biltmore may look forward to many brilliant receptions in this ball room.

The mezzanine floor will be softly lighted, softly carpeted, a quiet place with all writing facilities and conveniences. On this floor will be located also, small private dining rooms, and tiny rooms for the display of samples from various stores in Atlanta or from other towns.

Beautiful Furnishings.

W. A. Starret, of the Starret Bros., Inc., who has charge of the construction of the Biltmore, is enthusiastic over the way the hotel is to be furnished.

"Mr. Bowman, who will have charge of the furnishings, has had great experience in this kind of work; in fact, is one of the foremost hotel men in the world," said Mr. Starrett. "He operates over twelve of the largest hotels in the United States, and all are furnished in the finest taste.

"The upper floors of the Atlanta Biltmore will be divided into suites of rooms varying in number from three to six. Every room will have a bath and every floor a service pantry, an oven and a small refrigerating plant to facilitate the serving of meals in rooms. Everything that can possibly be done for the comfort of the guests in the hotel will be provided."

"Of the five apartments, one will be connected with the hotel by a service pantry so that the occupants of the apartment can take their meals at the hotel if they are occupying the non-house-keeping apartments—that is, the apartments that have no kitchen facilities.

"All five apartments will be composed of suites ranging from three rooms and a kitchenette to six-room suites with all the living conveniences. Those desiring privacy in their apartments and wishing to be cut off from the hotel can very easily imagine that there is no huge hotel near them, for each apartment will have a beautiful entrance on the street on which it faces. In fact, the apartments are to be totally self-sufficient. When the entire block is built up, the effect will be of an independent little city, for the Biltmore will have its own refrigerating system, heating

plant, laundry rooms, storage cellars and everything necessary to the operation of such a stupendous scheme."

Sunken Garden.

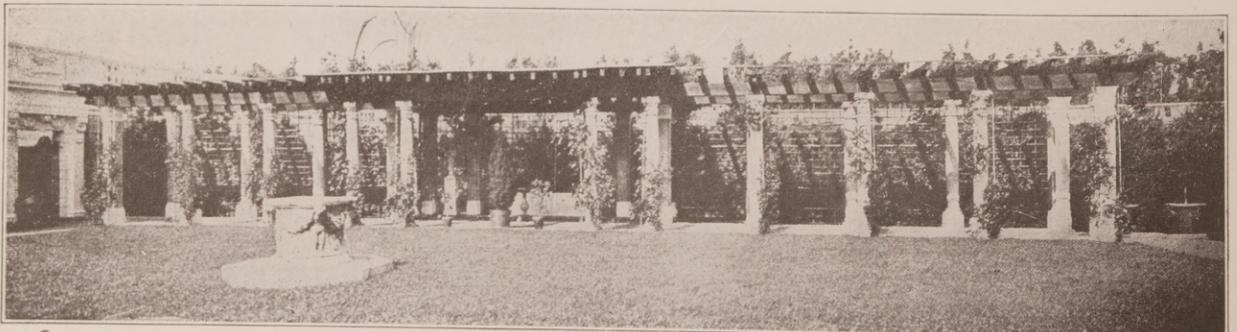
"But the truly novel feature of Biltmore will be the sunken garden in the center of the circle of apartments. This garden will cover nearly an acre and a half and will be laid out beautifully in green shrubs and winding walks. The hotel and one of the five apartments are to be built immediately, and the other four apartments are part of our future plans. Until these apartments are finished, we will have a wall around the end of the garden, and over this wall vines will be trained. Lawns will be laid out, trees will be planted, and the effect will be that of an old Georgian garden.

"We are hoping," continued Mr. Starrett, "that the people of Atlanta as well as those living in the Biltmore, will use this garden for their entertainments, teas, and lawn parties. When Mr. Schultze has finally completed the garden, the lawn will be covered with brightly upholstered wicker furniture and large shade umbrellas. The portico of the hotel will open out on this garden and it will be a pleasant meeting place for everyone.

"The main objection to apartments and hotels is that there is no place for the children to exercise. But at the Biltmore, the sunken garden with its wide walks and benches and settees will be a safe and convenient place.

"This Biltmore hotel will, of course, be operated by the same management that operates the Los Angeles Biltmore, the one in Providence, and the one in New York. The firm of Starrett Bros., Inc., have been associated with Mr. Bowman in the construction of these four Biltmore hotels, as well as the Commodore hotel, in New York, and I will venture to say that the Atlanta Biltmore will eclipse them all."

Schultze, Zean & Weaver, of New York City, are the architects.



Extracts from Competition Program

Woman's Dormitory Group, University of South Carolina, Columbia, S. C.



Detail Requirements of the Group

Dormitories—The living accommodations shall be provided in the following units of not more than three stories high and for not more than one hundred students each.

1. Living room or lobby with fireplace for general use of the unit, adjacent to or connected with two small reception rooms.

2. An office of the Dean or Matron shall be two small rooms, one to be a public office with telephone booths and mail boxes.

3. Bed rooms for each student shall be planned with not less than seven-hundred and twenty cubic feet and eighty square feet of floor area with at least one window of not less than twelve square feet. Two bed rooms and all studies to be as near the same size and finish as possible.

4. Bath and toilets: the minimum shall be one W. C. per eight women, one lavatory for five, one body shower per eight, one tub per twenty on each floor, provided with dwarf partitions six feet high, around all fixtures except lavatories. Consider basin with running water for each bed room. One bath room connection with one or two rooms and private bath must be provided for the matron or housekeeper.

5. Two rooms and private bath must be provided for the Matron and Housekeeper.

6. Student's pressing room fitted with five electric irons, current connected by slot machine, and five ironing boards well lighted; a small sink but no laundry tubs.

7. Provide for one housemaid's closet on each floor to be ventilated by window or flue, having a slop sink and space for brooms, mops, etc., and a shelf for extra supplies.

8. Dining room with adequate seating capacity may be in the same building or only connected to the rest of the dormitory by covered passage.

9. Provide for a kitchen with ovens, gas and coal ranges, gas baker, steam tables, "Bain Marie" with dish warmer under it, pot sink, vegetable parer and cutter and mixing machine. A pantry counter with coffee urn, sink, etc., for the preparing and serving of cold dishes; dish washer of the mechanical type cabinet, steam operated with shelving for china to be adjacent. If extra size and direct connection without sacrifice can be arranged one kitchen to two dining rooms is preferred.

10. Directly connected with the kitchen shall be a storeroom fitted with a refrigerator for daily supply of meats, vegetables, etc., fish box, meat block, sink, shelves, etc.

11. A linen room to be fitted with shelves, a long continuous table, and well lighted sewing machine.

12. Servant's room convenient to the kitchen with space for eight lockers and connected with a toilet with three lavatories and two closets.

13. A housekeeper's office to be near the kitchen and servants' room for ease of supervision, and directly connected with the store room and linen room for issuing supplies.

14. Fuel room easily accessible to kitchen.

15. Stairs, halls; if over two stories in height and any section more than forty feet from main fireproof stair must have adequate means of egress to an enclosed stair, fire tower or fire escape. All firestairs to be enclosed by brick walls or terra cotta partitions and fire doors that shall not block the passage of the stairs and shall open outward. No stair or passage shall be less than three feet wide.

RECREATION AND ADMINISTRATION: The gymnasium building should be about twelve thousand square feet, providing:

1. On first floor, a gymnasium room, vestibule, hall and stair.

2. Mezzanine floor or gallery, running track, hand ball court and special exercise room; three rooms for instructors with toilets and showers.

3. Basement to contain a pool seventy-five by thirty feet, sixty feet of bottom six feet deep and flat for water polo, and locker rooms, toilets, showers, towel service, stairs, etc.

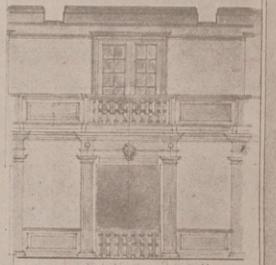
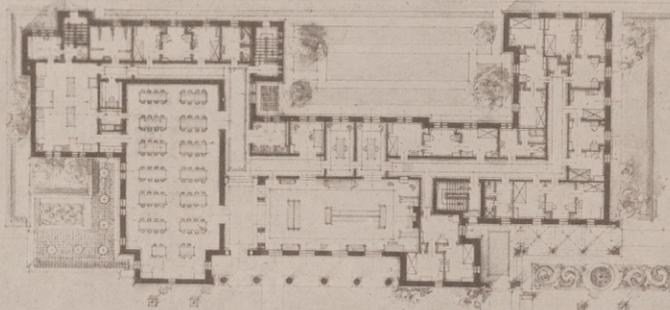
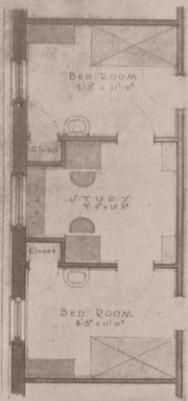
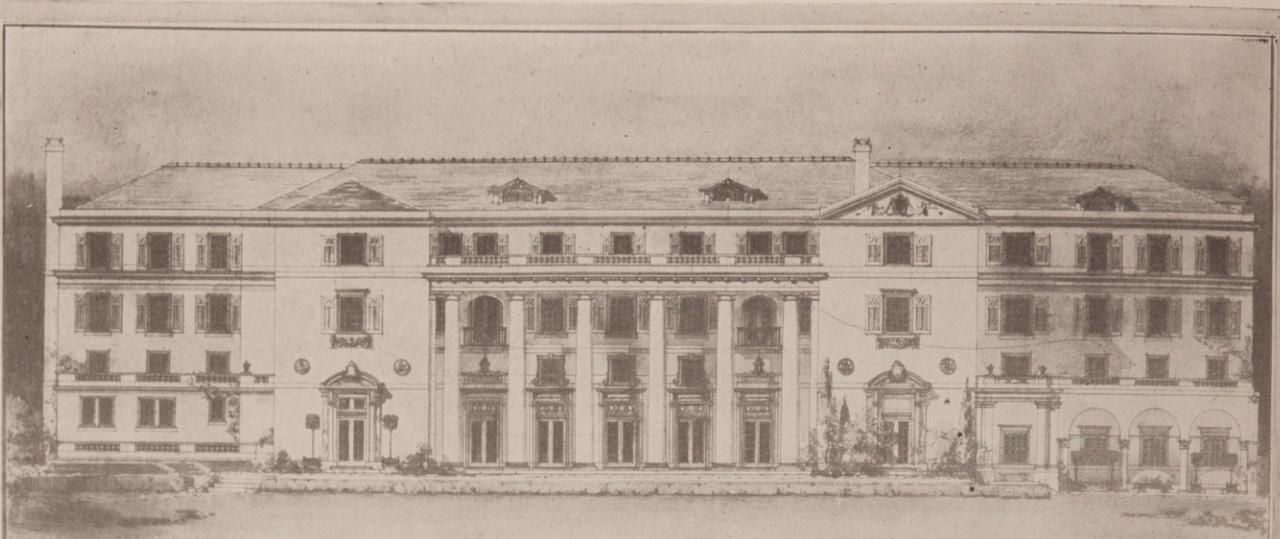
II. The Assembly Building should be approximately ten thousand square feet providing:

1. On the first floor the assembly room for large gatherings, musicals, theatricals, chapel, etc., vestibule stairs, coat room, stage and dressing room.

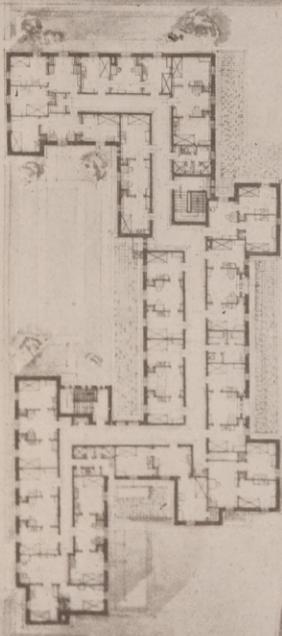
2. On second story three welfare association rooms, gallery, halls, stairs, etc.

3. In the basement, toilet, pantry for the serving of refreshments, storage, shops, stairs, etc.

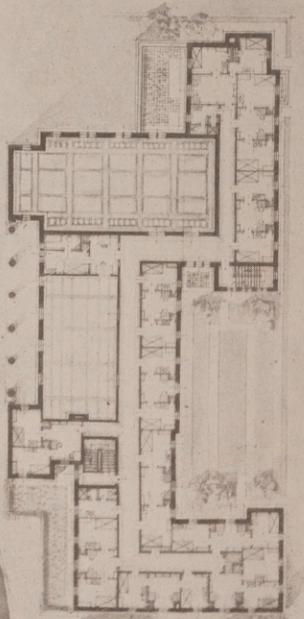
III. The administration building should be on the first floor about twelve-hundred square feet for two small offices for the Dean and clerical force with proper toilets. In the basement shall be large store room for supplies, shops, etc. The administration building may be combined with the above buildings or separate, giving it the central and accessible position necessary for the direction and administration of the whole group.



FIRST AND GROUND FLOOR PLAN



SECTION THROUGH LIVING ROOM & RECEPTION ROOM



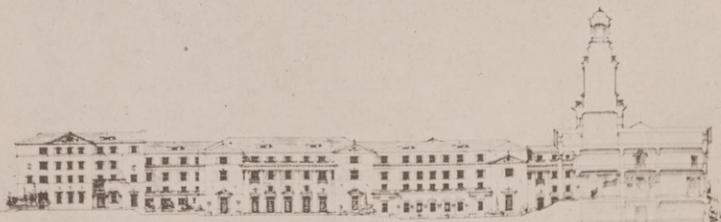
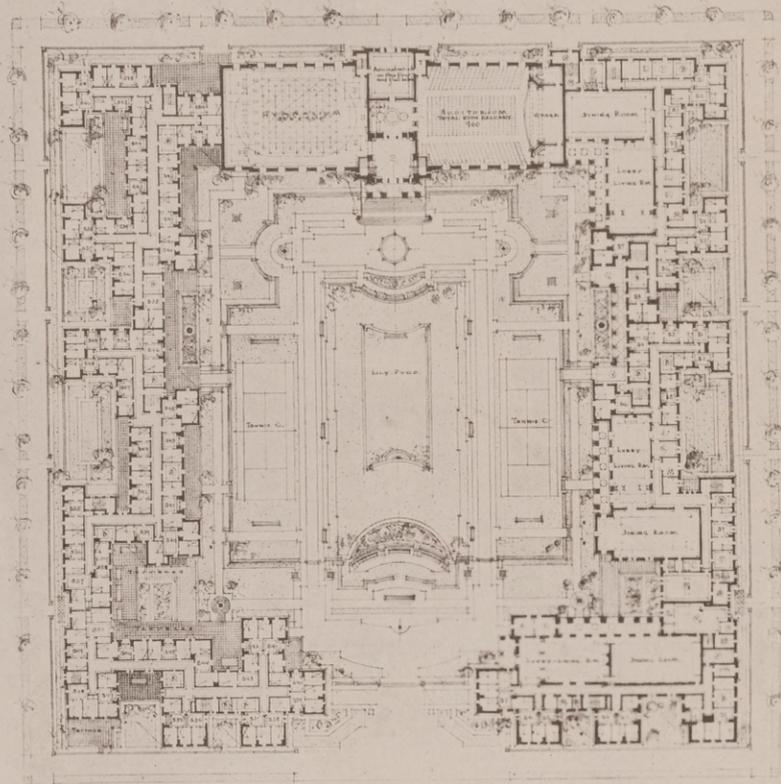
DATA

| | | |
|---|-------|-------|
| Bed Rooms with proportional Central Space for Study, Hall and W.C. | 19100 | |
| Additional Walls | 10000 | |
| Total | 29100 | cu ft |
| Toilets & Baths (additional) | 8250 | |
| Living Room, Vestibule, Reception Rooms & Bath | 11100 | |
| Dining Room | 24700 | |
| Kitchen, Pantry, Store Rooms, Messengers Office, Linen and Dressing Rooms | 23300 | |
| Reception Rooms and Messengers Offices | 13000 | |
| Staircase | 9100 | |
| Roof | 11000 | |
| Garage, Storage, Trunks | 24000 | |
| Fuel etc in basement | | |
| Total Cubical Contents | 53600 | |

UNIVERSITY OF SO. CAROLINA WOMAN'S BUILDING COMPETITION

FIRST PRIZE.

DETAIL OF WOMAN'S BUILDING.
UNIVERSITY OF SOUTH CAROLINA, COLUMBIA, S. C.
RUDOLPH E. LEE, ARCHITECT, CHARLOTTE, N. C.



UNIVERSITY OF SO. CAROLINA
WOMAN'S BUILDING COMPETITION

FIRST PRIZE.

DETAIL FOR WOMAN'S BUILDING,
UNIVERSITY OF SOUTH CAROLINA, COLUMBIA, S. C.
RUDOLPH E. LEE, ARCHITECT, CHARLOTTE, N. C.

Bon Air-Vanderbilt Hotel



ACQUIRING a pleasing informality, just short of formality, in a fireproof building without excessive cost is a problem which every architect is confronted within designing the modern hotel.

The Architects of the new three-hundred room Bon Air-Vanderbilt tourist hotel completed on the Sand Hills of Augusta, Ga., sought to accomplish just this, and without a moment to spare and cost limitations staring them in the face at every turn, they have succeeded remarkably well.

Instead of making the Bon Air-Vanderbilt a "fireproof box," they have so utilized fireproof materials with their limitations for picturesque effects, to accomplish their aim, both inside and outside.

The bedroom sections are arranged in such a way that door groupings come at pleasing intervals and none opposite each other and the long corridors are broken with an angle just at the right point. Stairs and elevators seem to come just where one would expect them. Walking from the South end of bedroom corridors, all of which if put end to end would reach nearly three-quarters of a mile, one finds the larger rooms, smaller rooms and baths coming just in the correct proportion and orientation. The larger and more expensive rooms naturally look upon the best to east and southeast, while the smaller rooms are confined to less desirable sections. There is, however, no room which is disagreeable to look out from. Bedrooms facing west or northwest look out upon large open courts around which delightful landscape plantings have been developed.

In connection with the subject of orientation of the building, it may be added that the architects sought the most economical use of the old Bon Air hotel site. In doing this, they were able to save the investors ten or fifteen thousand dollars on grading walkways, etc. Most of the old driveways and winding paths were saved and are now correctly related to the building. The boiler house and fuel room of the older building were remodeled and re-used at considerable saving. The part known as the south wing was set at an obtuse angle to prevent any bedrooms facing directly north. This wing nicely relates itself to the beautiful entrance driveway from upper Walton Way.

The pleasing exterior stucco effect, which has been so universally admired, was arrived at after much experiment on the part of the architects

and the builders. The general body of the building has a wavy rough texture finish in light buff color and set off by quoins, band courses and window sills which are of finer texture and a shade darker. A touch of green-blue in the wood trim and a fringe of mottled red Spanish tile along the roof cornices contrasts splendidly with the lighted body color of the building. Somewhat more color was introduced into the building than is customary in large buildings of this type but it was thought safe to stay away from somber and dull effects. The architectural style was inspired by the Italian and Spanish renaissance.

Generally the building is eight stories high in the center and six and seven stories in the wings. It contains three hundred guest rooms and over two hundred baths, proportioned and connected after a study of the exact requirements of tourist hotels. Large closets, four feet square and ample furniture space are provided.

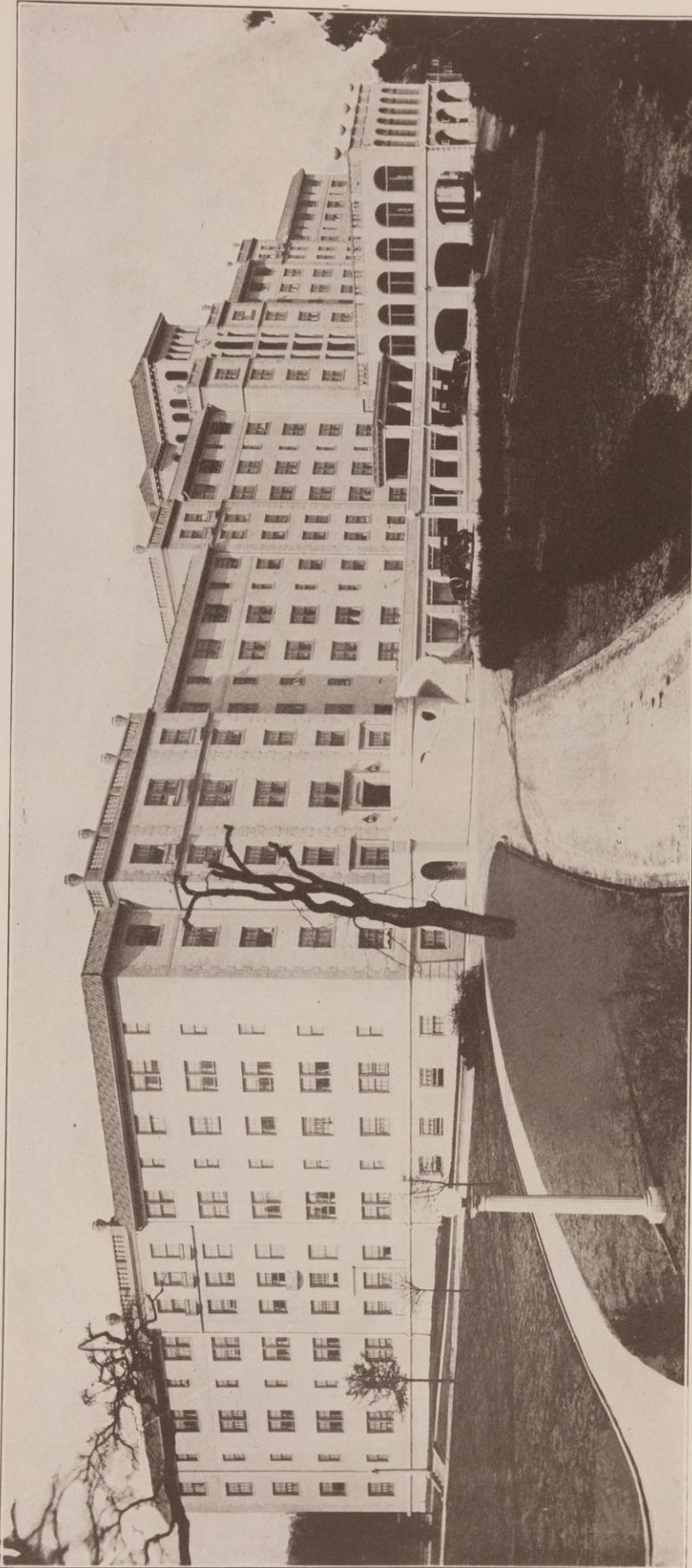
The building proper runs North and South four hundred and thirty-two feet and is forty five feet wide and has two wings two stories high, one running West one hundred and sixteen feet and one running East sixty feet. These comprise the service wing and solarium wing.

Considerable study was given the skyline of the building by the architects and they seem fully repaid when the building is viewed from a distance of several miles. It contrasts pleasingly with the sky and wooded background.

The idea of informality has been carried out in the public rooms and while the large dining room, lobby and solarium run east and west on a common center line, the public rooms north and south of this group are related to one another most informally. In this connection important functions relate to the dining room scheme and the ball room. At the beginning and end of seasons when naturally there are fewer guests, meals will be served in smaller dining rooms. On the other hand, should an excessive number of non-resident guests desire their meals at the hotel, the ball room may be brought into use with the four dining rooms and nearly seven hundred people served. The ball room has been made to accommodate a reasonably large group of dancers any time they so desire but was purposely kept smaller than the large metropolitan ball rooms because of the very rare occasions when such a room is needed.

The idea of comfort and convenience strikes

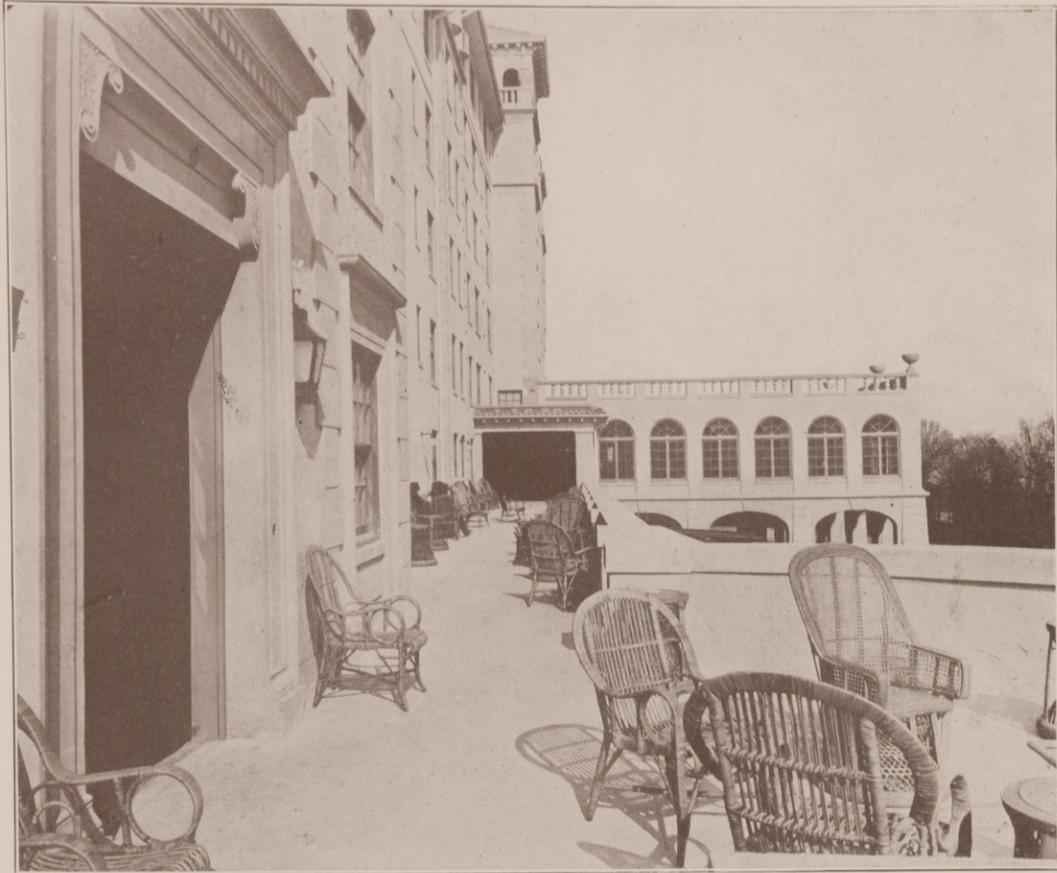
(Continued on page 62.)



Foundation Co., Builders.

BON AIR-VANDERBILT HOTEL, AUGUSTA, GA.

McKIM, MEADE & WHITE, ARCHITECTS—WILLIS IRVIN, ASSOCIATE, AUGUSTA.



TERRACE FROM CIRCULAR STAIR ENTRANCE.



MAIN LOBBY TOWARDS SOLARIUM
BON AIR-VANDERBILT HOTEL, AUGUSTA, GA.

McKIM, MEADE & WHITE, ARCHITECTS—WILLIS IRVIN, ASSOCIATE.



CORRIDOR LOOKING NORTH FROM MAIN LOBBY.



SOLARIUM LOOKING TOWARDS LOBBY

BON AIR-VANDERBILT HOTEL, AUGUSTA, GA.

McKIM, MEADE & WHITE, ARCHITECTS—WILLIS IRVIN, ASSOCIATE.



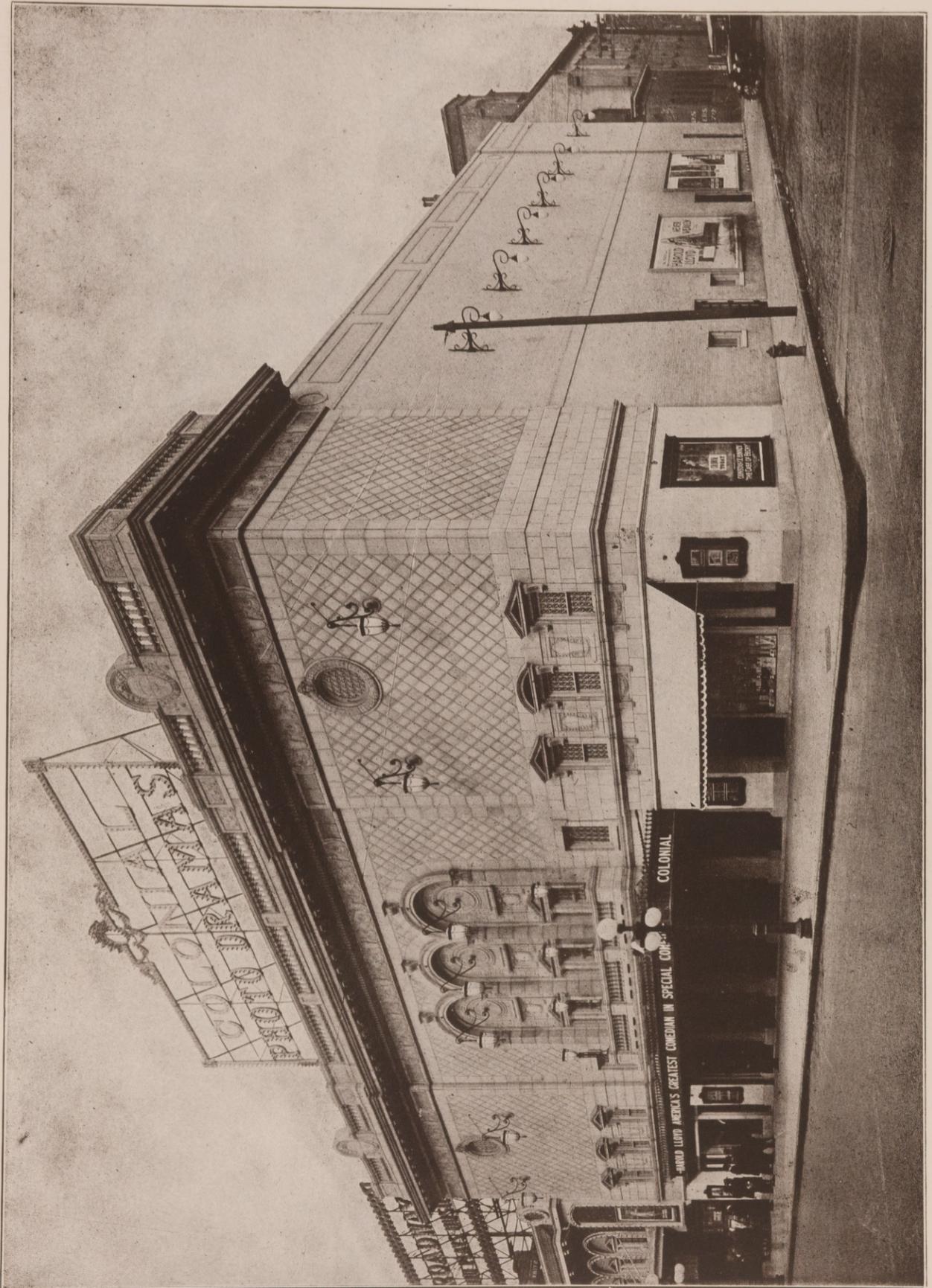
ENTRANCE MAIN DINING ROOM FROM LOBBY.



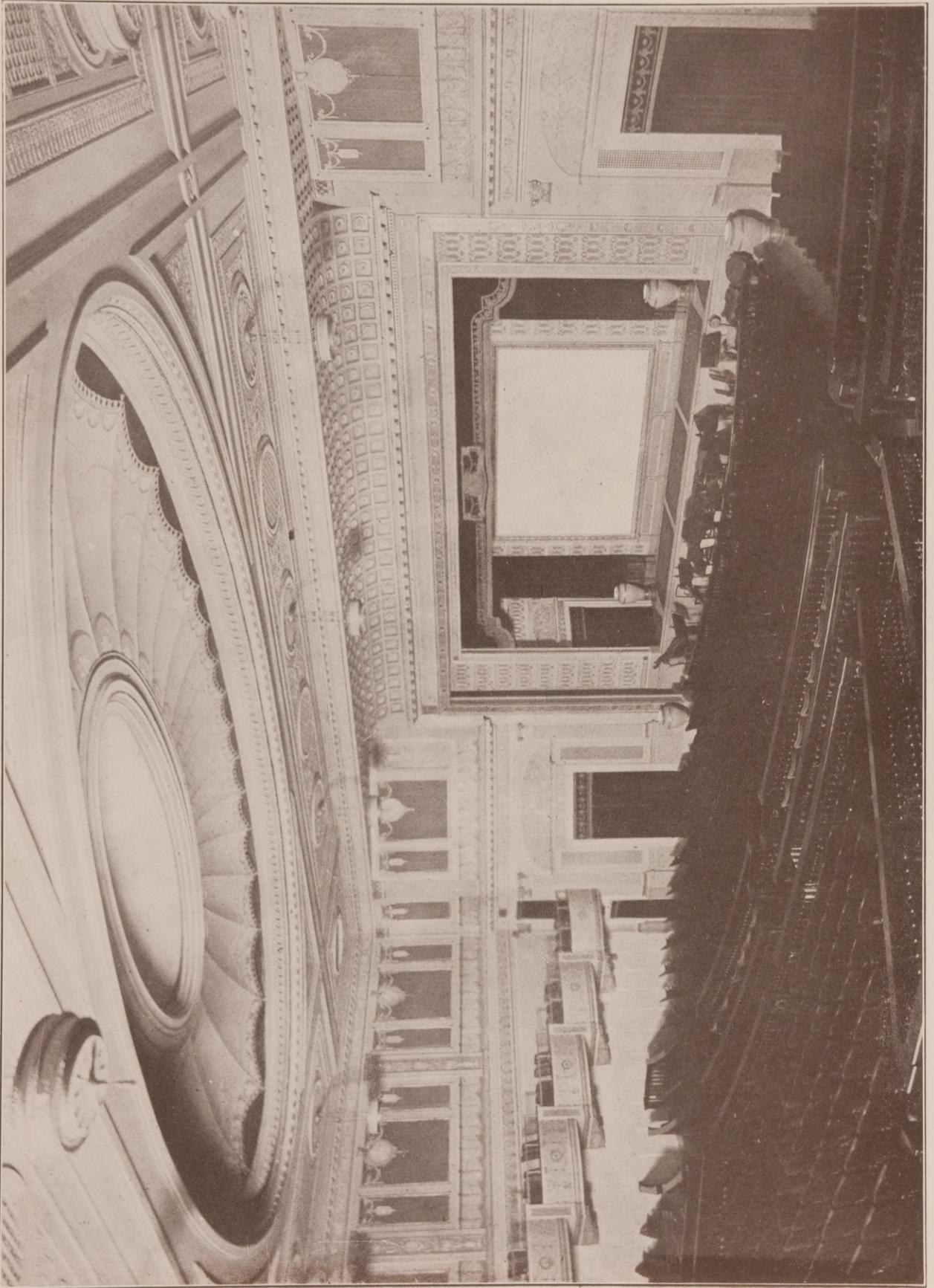
MAIN DINING ROOM

BON AIR-VANDERBILT HOTEL, AUGUSTA, GA.

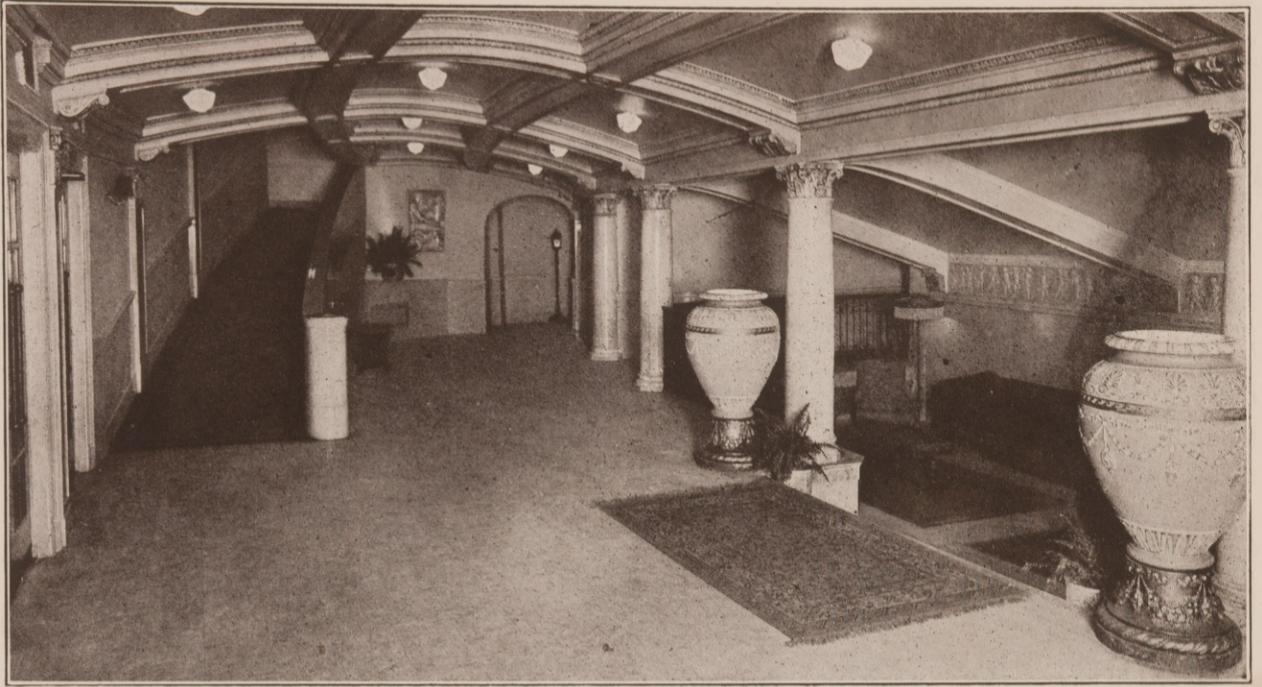
McKIM, MEADE & WHITE, ARCHITECTS—WILLIS IRVIN, ASSOCIATE.



COLONIAL THEATRE, RICHMOND, VA.
CARNEAL & JOHNSTON, ARCHITECTS.



VIEW OF AUDITORIUM.
COLONIAL THEATRE, RICHMOND, VA.
CARNEAL & JOHNSON, ARCHITECTS.



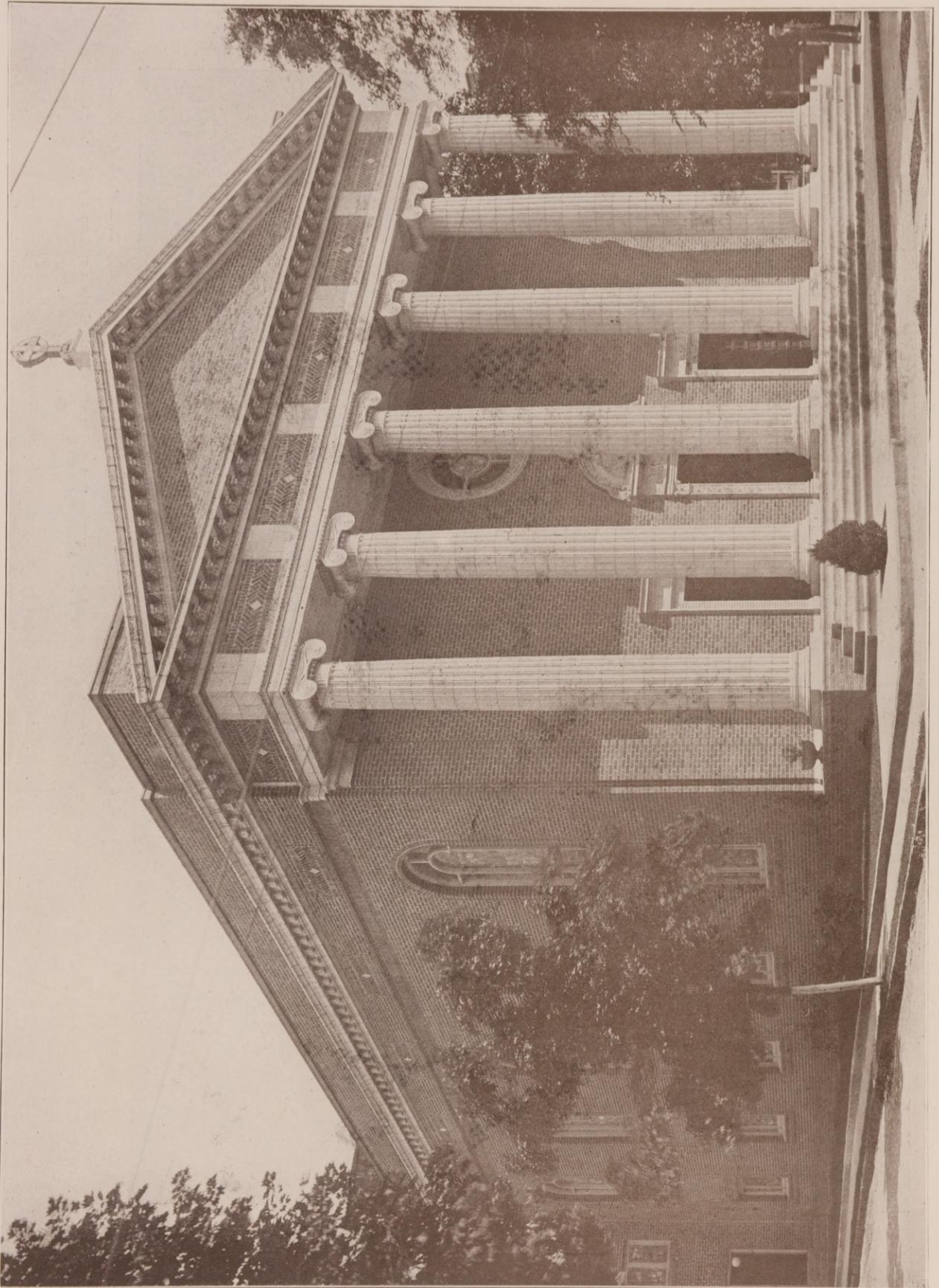
VIEW OF LOUNGE.



VIEW OF FOYER

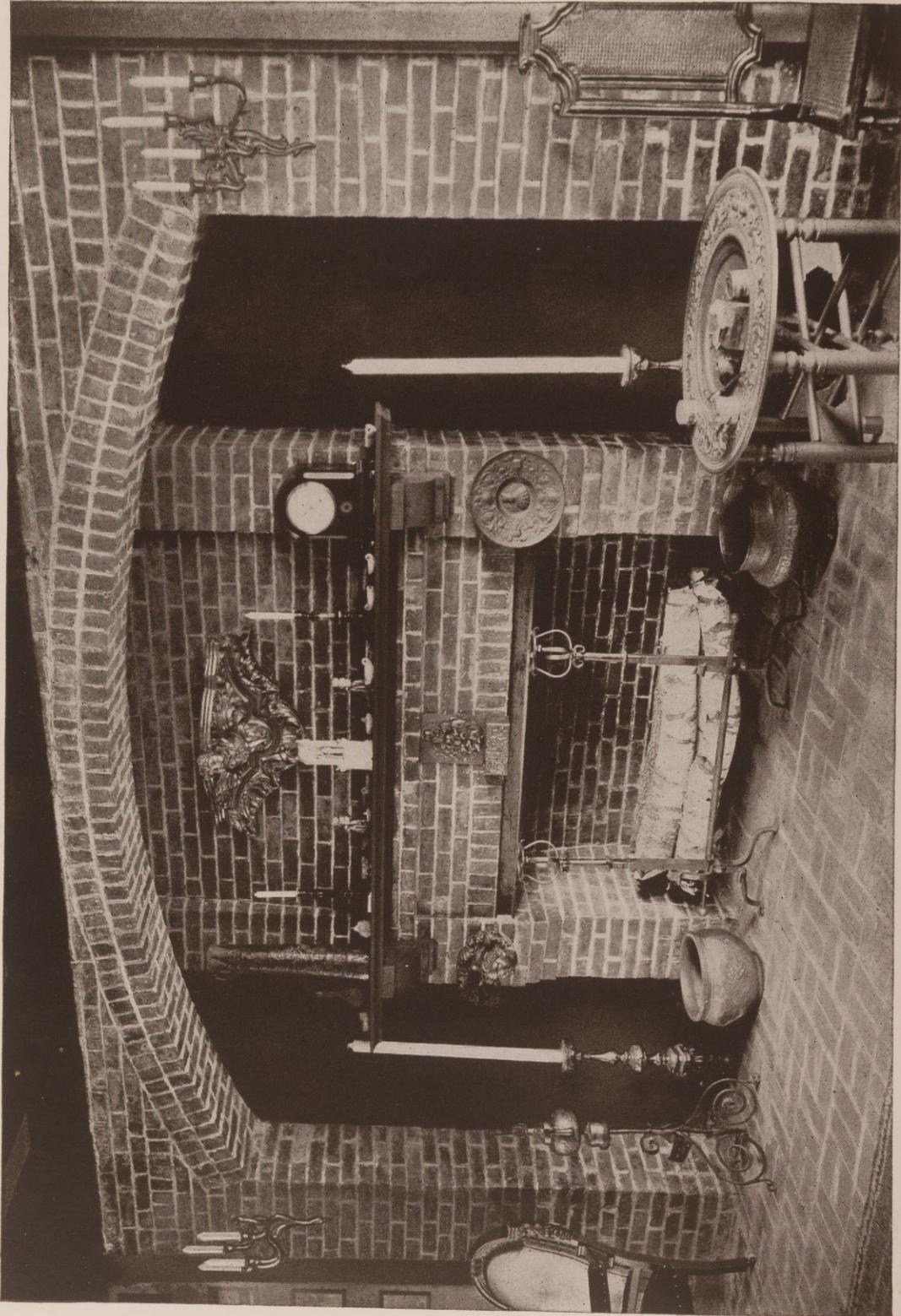
COLONIAL THEATRE, RICHMOND, VA.

CARNEAL & JOHNSTON, ARCHITECTS.



FIFTH AVENUE CHURCH OF CHRIST, KNOXVILLE, TENN.

CHARLES I. BARBER, ARCHITECT.



FIREPLACE IN RESIDENCE, IPSWICH, MASS.

Nothing will burn here but the logs on the hearth, the wax candles, and the tobacco of a few cronies that gather around this glorious spot on a cold winter night, to measure wits, swap yarns, or reconstruct the world.

Philip B. Howard, Architect.

The Value of the Fireplace

COMPANIONSHIP is among the greatest blessings that life holds; and we all know, who have had the opportunity to make the test, that whether this be the companionship between two or more living personalities, or the solitary companionship between a man and his books, it grows warmer and more animate before the cordiality of that royal companion, the open fire.

In the old days when open fires were an unavoidable necessity for bodily comfort, men also felt, sometimes unconsciously, perhaps, and poets understood and immortalized, the sentiments that flower in the atmosphere around the hearth, writes Bertha M. Howland, in "The House Beautiful."

With the advent of better heated houses the fireplace for a long period of dreary years underwent a sort of eclipse and seemed to be forgotten, but at last, in homes of taste and comfort and especially in the shifting season of spring and autumn it seems to be "coming into its own" again.

The methodical "head of the house" who for the sake of economy or the protection of his furnaces has his heat disconnected on the first day of May, regardless of the peculiarities of that particular season, and decrees that it shall not be reconnected until the fifteenth of October, would spare himself many doctor's bills and much discomfort, did he but recognize the possibilities and pleasures of the open fire. And apart from this there is no season of the year when the delights of an open fire do not add to "the joy of living."

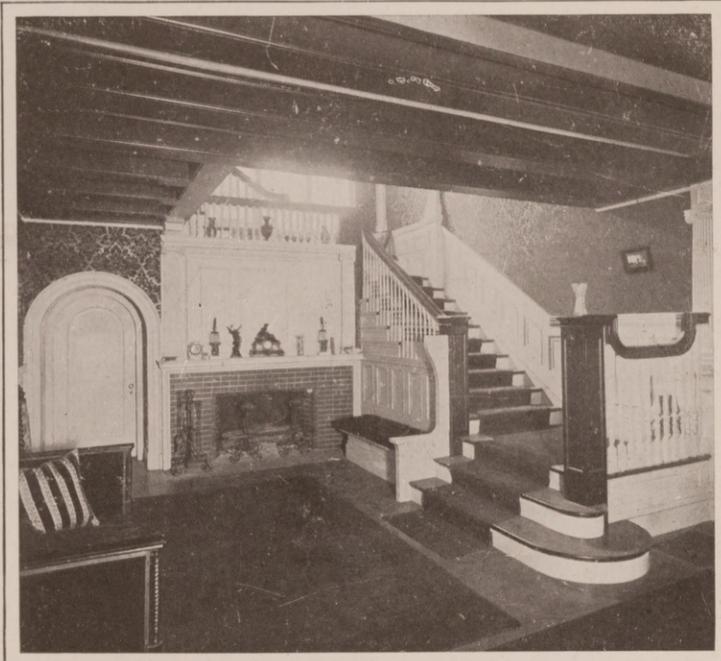
At the most formal gatherings, in the drawing-room before dinner, and when coffee is served after dinner, it will always be noted that the most animated group of talkers are standing or sitting around the lighted hearth. In intimate gatherings, how much more intimate, free, and gay is the interchange of thought, warmed by the burning of logs! And the solitary man or woman receives infinite cheer and comfort from

the crackling and dancing flames, which are often the only voice that speaks to them throughout the succession of otherwise lonely days and evenings.

It is rather an appalling fact that the average home hunter can find in almost no apartment or house, built to rent, at the present day, an open fireplace in which to light that fire by which they might be blessed. This state of things is almost like a blight.

There is, to be sure, sometimes found that abominable, soulless compromise, the gas log, which, had it any voice at all, would sing in one's ears only "as sounding brass and tinkling cymbals." No wonder that life has grown restless, and that so many prefer the movies and the motor to a heartless home!

Utility and cleanliness are the excuses behind which many a person has hidden to explain why the fireplace has been blocked up, despised, or suppressed altogether. The stove was more utilitarian, the furnace was less trouble, the steam system is cleaner, which is all true, but no one of them beyond supplying physical warmth, contributes anything to the happiness



and inspiration of life. As a wit once said, "What patriotic appeal is there in the watch cry, 'For stove and home!'"

There are persons who have gone so far as to block the fireplace openings with carefully fitted embroidered screens, and set rows of pottery in front that showed no illusion in any one's mind that the family decree in regard to open fires was inflexibly, "Es ist verboten!"

There are others, who though they make the concession of leaving the fireplace and having all the accessories essential to an open fire neatly in place, so arrange their furniture as to preclude all thought of any sense of intimacy between the occupants of the room and the fire upon the hearth. There are many rooms to be found with the comfortable Davenport in a remote corner

and the chairs turning their backs in more or less degree to the neatly laid pile of wood, only waiting for the spark to let loose its cordiality and good cheer.

It was of such a room as this that an amusing story was told. A friend of mine once hired a furnished house—furnished even to the owner's well-trained servants. On the first chilly morning, my friend's wife told the waitress to "touch off" the well-laid pile of white birch logs in the dining-room fire-place. Horror spread over the maid's countenance. "Why, madam, I don't think I ought. I've lived with Mrs. S— for fourteen years, and those logs ain't ever been touched, except to dust them twice a year!" One's soul shrivels at the thought of breakfasts, of daily life, and of cheerless evenings in a household where fire-places and good birch wood are only things "to dust!"

The fireplace should be the center of life. A comfortable chair and a comfortable sofa flanking the fireplace, with the low bench in front, are suggestive of cosy chats. Here is the little tea table close at hand and next to the sofa the reading lamp and books at one's elbow. One imagines here afternoon tea hospitality, informal gatherings after dinner, and quiet evenings at home full of companionship and comfort. What a homelike atmosphere pervades such a room!

The feneder seat which is illustrated, has long been popular in England and in the last few years has been gaining favor in this country. It is a delightful perch for incidental chatting, while one sips one's after dinner coffee and the men smoke their after dinner cigars.

There are some halls that are ample enough to use as reception rooms, but even if it only serves as the momentary resting-place of the waiting visitor, to what a state of good humor one instantly rises if greeted by the glow of burning logs. One of the illustrations shows a charming suggestion of a simple attractive fireplace nook in a front hall.

So much for the pleasures gained from the fireplace in the hall and in the living-rooms of the house, the dining-room or the library, but there is probably no room in the house where its good cheer is more keenly felt than in a bedroom. The open fire is a cheery thing to dress by and equally so to read by as one sits perhaps in a cosy wing chair in that last, most peaceful hour of the day, before going to bed. And what a source of comfort it is to be a prisoned invalid! After the lights are turned out, there is a sense of companionship in the glow of the embers, and the slow and ever slower, faint and ever fainter, snap of the wood from moment to moment, as the embers die. The unfortunate

person who has never known these pleasures is pitifully unconscious of what they mean.

A few years ago I was called to a house, recently bought, to plan some matters of refurnishing. I was taken to the house in the owner's limousine, richly appointed, even to the fresh orchids in the cut-glass flower holder. The house breathed and oozed money, perhaps recently acquired and certainly unwisely spent. Mrs. Owner explained to me that until now they had always lived in apartments.

The special problem that we had to consider was Mrs. Owner's bedroom. The furniture was easily settled, it was to be an Adam painted set, and the curtains, upholstery and rugs were fairly easy problems. But she turned to me with a knitted brow and said timidly, "The thing that really puzzled me is the fireplace. Do people have fireplaces in bedrooms now?" Such a remark seemed almost inconceivable, but guessing the keynote of her nature I felt justified in saying, "Oh, yes—if they can afford them." Then I added, "The thing to do is to have a little fire here in the evening, and in the morning have your maid come in and light it before you get up." It was a new idea to her, but I hope that she has felt that life is a sweeter thing under the influence of this new element of light and comfort.

The construction of the fireplace and overmantel is of course open to infinite varieties of treatment—but in the average house the most important points to consider are comfort, simplicity of design, and good proportion.

For comfort, the fireplace in the living-room should be large enough to burn good-sized pieces of wood, and wide enough to allow it to be a gathering place for more than two or three persons. A good width for the opening is not less than three feet, and a better width is three and a half or even four feet.

This also gives a good proportion to the fireplace. The height of the opening is influenced by the drawing capacity of the chimney and the average height is twenty-eight inches. As a fireplace never looks hospitable that is narrower than its height, or even equal to its height, that is, square, it should for the achievement of good proportion be, as said before, at least three feet wide.

The usual materials for the hearth, face, and fireback are brick, tile, stone, or iron. Of these the waterstruck brick (not pressed brick) is usually most desirable in a private house, though there are pleasant alternatives in the use of so-called Roman brick, which is made in many different colors, and tapestry brick.



EDITORIAL COMMENT

ALL-YEAR DEMAND FOR MATERIALS PROMISES FIVE BILLION DOLLAR BUILDING BOOM FOR 1923.

The greatest year of construction activity in American history is in prospect for 1923 according to reports from all branches of the building industry.

Conservative estimates place the probable new building expenditures in all lines for the next twelve months at \$5,000,000,000.

Hitherto unprecedented activity during the fall and winter is cited as the outstanding reason for this past program. In almost all sections of the country, the 1922 construction boom continued through the fall and early winter, resulting in a sustained demand for materials and labor. This action followed the desire of men engaged in building to profit from past experience which has shown that it is better to maintain an efficient working organization intact, than to disband because of the largely imaginative difficulties of winter construction.

Contractors, quick to grasp an opportunity for all-year work, not only completed many jobs that in previous years would have been carried over, but took on new contracts for prompt delivery.

The early days of 1923, therefore, find a heavy demand for steel, cement and other building material. The contractors and builders, displaying newly acquired wisdom, are taking no chances of being caught with an overload of contracts without materials to build when the first opportunity appears.

The resultant activity is making itself felt all along the line. Railroads are enjoying in the ordinary slack season a measurable increase in freight traffic. Manufacturers of building materials are being relieved to a certain extent of carrying the tremendous costs of overstocked warehouses with the usual necessity for suspending plant operations.

The movement of stocks without interruption through the winter has enabled manufacturers to keep going because a steady demand was calling for shipments of their products.

This movement, aside from its beneficial effect to the builder at the present time, is seen as a possible means of levelling the first peak load of demand in the spring.

It is noticeable in the advertising of contractors and builders at the present time that they

are offering to take contracts with the promise of 60 or 90 day delivery on homes. If these opportunities are taken by prospective home-builders, it will enable contractors to keep the road clear and take care of the predicted influx of tardy planners when the so-called "building season" is in full swing.

Every encouragement should be given to a continuance of the present pace in construction work. The taking of early contracts, purchase, shipment and storage of materials for building projects will release the heavy grip of peak load demand and unbalanced seasonal activity which have held the American construction industry at its mercy for so many years.

The experience of 1922 and the progress shown thus far in the new year, demonstrate amply the fallacy that any "season" for home building exists. It appears that 1923 will offer definite assurance of these facts which builders have attempted to impress upon the public for years.

If the transportation system can be kept at even keel, and the demands of traffic spread over a twelve-months' period instead of approximately seven, while stocks are kept moving from the manufacturer to the job, America's annual building bill can be materially reduced in proportion to the amount of work done. Semi-annual congestion in railroads, affecting building materials, foodstuffs, coal and a great many other basic activities also will be cleared up.

That the railroads not only recognize this spreading demand but are planning active representation in the building boom itself, is shown by reports of *The Railway Age* which place the possible construction expenditures by roads at more than \$900,000,000 this year.

This estimate is based upon the actual budgets of 31 roads controlling 40 per cent of the nation's trackage which show \$387,000,000 set aside for 1923 work. Much of this total will go into stations, under-passes, viaducts, bridges, terminals and shops, and general betterments, the need for which has become acute.

The result assures not only the biggest year for 1923, but that it will exceed 1922—a record breaker in itself—by at least \$1,000,000,000.

Urge the people to start building now without delay—get your materials at once.—"Portland Cement Association Bulletin."

PERSONAL MENTION



M. Leo Elliott.

The M. Leo Elliott Gold Metal Award is a great boost for the architectural profession in Florida.

At its last annual meeting the Florida Association of Architects were indeed glad to accept the generous offer of Mr. Elliott to donate annually a solid gold medal of unique design, with suitable engraving, to be awarded each year by the Association to the architect or firm of architects designing the best piece of architectural work executed in Florida during the year.

A committee of three has been appointed by the association, whose duty it will be to study the various buildings monuments, etc., of special architectural merit erected during the coming year, and make its report to the next annual meeting when the award will be made.

Not only has a friendly rivalry sprung up among the architects over the award, but the various towns and cities are becoming more interested in better architecture in the hopes of capturing the prize.

The time has been extended in the competition for a design for the proposed Calvary Baptist Church at Washington, D. C. Competitors' sketches will be accepted up to and including September first.

Lawrence S. Funke has opened an office for the practice of architecture at 368 Peachtree Street, Atlanta, Ga.

A. M. Schneider announces that the removal of his offices to 1731 K street, N. W., Washington, D. C. Mr. Schneider formerly had offices at 2000 Sixteenth street, N. W., Washington.

Theodore L. Perrier, architect, has removed his office to 602 Tulane-Newcomb Building, 211 Camp Street, New Orleans, La.

O. P. Reuter, architect, Fifth and Main streets, Louisville, Kentucky, announces that he now occupies offices at 410 Commercial building, Louisville.

Arthur Lazarus, a national authority on costs, has resigned as Chief of the Cost Accounting Bureau of the Chamber of Commerce of the United States, to resume professional practice, with offices in Washington and New York.

It is announced that Ralph W. Yardley, 865 Washington Avenue, Memphis, Tenn., has been selected by the Municipal Auditorium Commission of Memphis to take charge of the construction of the new Memphis Municipal Auditorium upon which work has recently started. Pfeil & Asmund, of Memphis, are the architects for this auditorium which, it is estimated, will cost in the neighborhood of two million dollars.

Announcement is made that Edw. F. O'Brien, Jr., is now associated with David S. Castle Company, architects and engineers, Dallas County State Bank Building, Dallas, Texas. Mr. O'Brien would appreciate receiving manufacturers' samples and catalogs.

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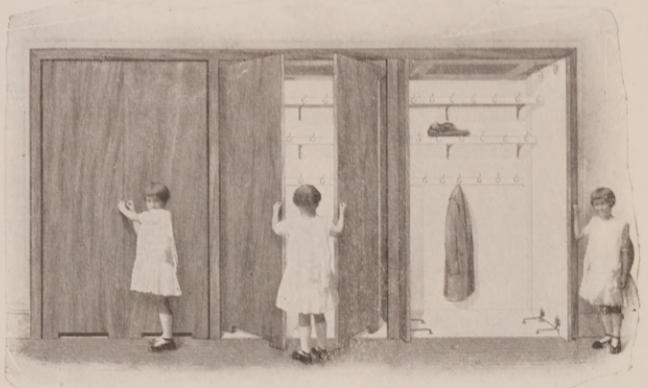
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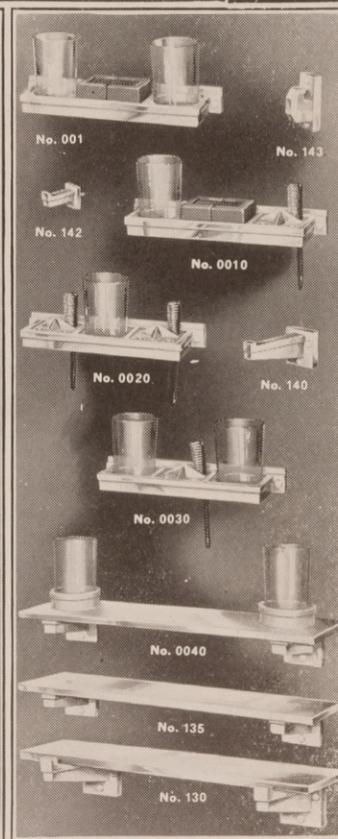
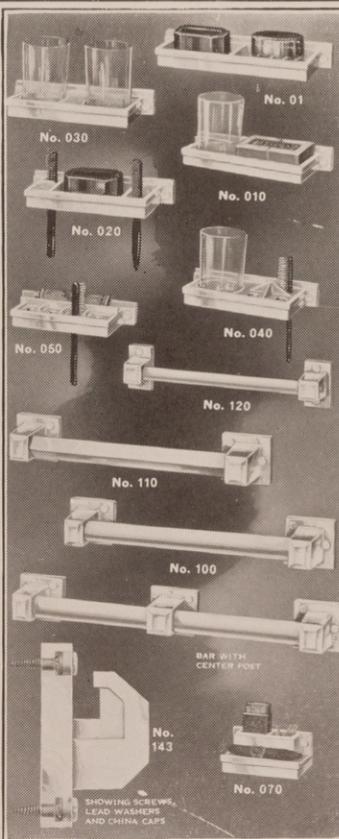
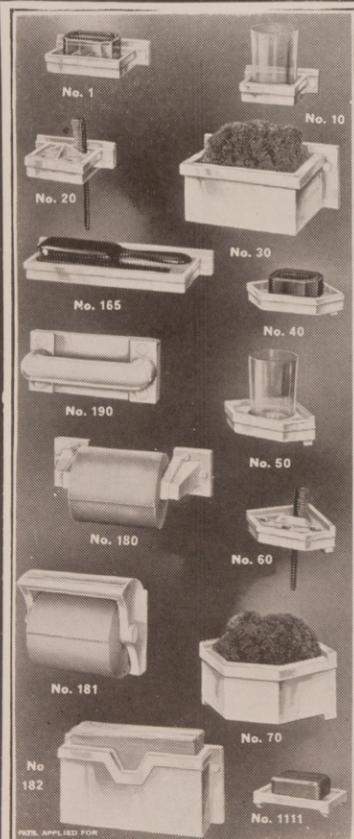
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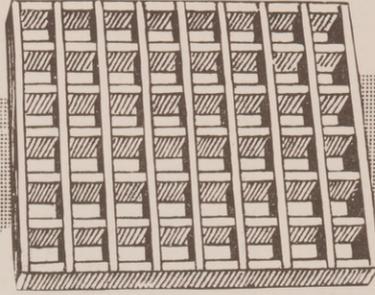
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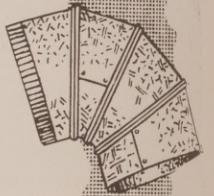
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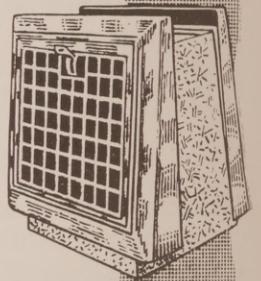
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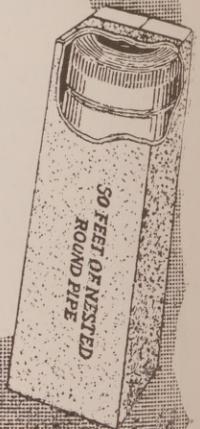
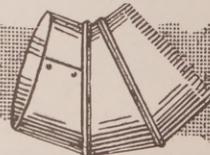
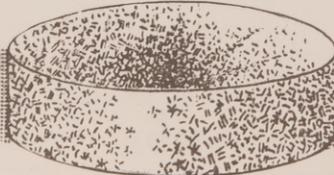
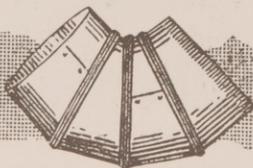
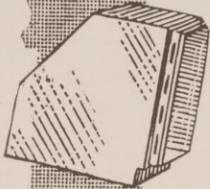
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G. L. Miller & Co., Inc., Semi-Annual Survey Shows Total From 119 Cities, South, Amount to \$516,162,254, 1922

Increase of 43.7 Per Cent. Over 1921

OVER half a billion dollars was spent in building development in the chief urban centers of the south in 1922, according to figures covering 16 states from Maryland to Texas. This does not include thousands of smaller towns and industrial villages in which development has been exceedingly active during the year. In all probability, were statistics available, the record would show a total southwide construction program of a billion dollars.

In 119 cities, having a combined population of only slightly in excess of the population of New York city, \$516,162,254 was spent during the year in providing homes for a rapidly expanding commerce and new plants for the hundreds of new industries that are arising like magic from Baltimore to El Paso.

Of this amount, \$431,027,254 was covered in permits issued for building within city limits, while \$40,135,000 was reported by about 50 cities as having been spent on the immediate outskirts of those cities, chiefly in industrial expansion.

In 91 cities, where comparative statistics are available, the gain of 1922 over 1921 was 43.7 per cent. It is interesting to note that the percentage of gain during the first six months, as published in this survey in September, was 42.7, showing that a steady ratio has been maintained for the entire year, with the advantage slightly in favor of the closing six months.

An Index to Growth.

Here is the surest index to the growth and progress of the south which could be summoned before the business men of America. These figures tell more graphically than pages of elaborate description just what a tremendous transformation is coming over this section of the nation which was long ignored by the financial and industrial interests of the country; but which today is coming into its own with a mighty impetus which can not be checked.

It is interesting to note that the year was begun under auspices far from favorable. The

farm value of the south's crops in 1921 had been exactly one-half the five-year average prior to 1921. The south's business in years past has been largely dependant upon crop returns for its impetus. Yet in spite of this handicap, the people of the section launched the greatest building program in its history and carried it through to a remarkable conclusion.

State and Municipal Improvements.

The half billion dollars spent in building was by no means all the money that was being spent during the year for general improvements. Practically the same amount was being invested by state and city governments in public development, such as good roads, streets, waterworks and sewers.

Of forty-eight cities reporting, the majority were spending from half a million to five million in civic betterment. \$102,249,689 was being expended by these cities. Considerably over \$165,000,000 was put into good roads of a highly improved type by the sixteen state governments. School construction, especially rural school building went forward at an unprecedented pace.

Total bonds sold in the south for public improvements, as reported by The Manufacturers' Record, amounts to the huge total of \$315,788,310 for the year, of which the largest portion went into good roads.

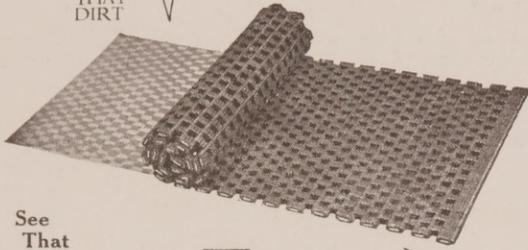
An item of \$41,188,200 was listed under bonds for sewer construction. Nothing could give a better idea of the way in which the people of the south are modernizing their life and elevation standards of living. Northern travelers who ventured below the line 20 years ago took back home with them harrowing tales of the lack of modern conveniences. But that day has long passed, as the forty millions worth of sewer construction amply shows.

Over \$100 Per Capita.

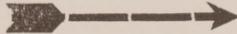
In two states of the south, Florida and Oklahoma, more than one hundred dollars was spent

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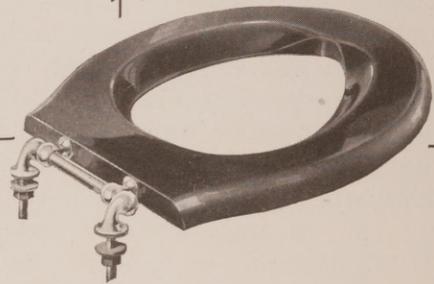
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in new construction for each man, woman and child in the state. Florida for a number of years has held first place among southern states in this regard. Oklahoma, profiting by the huge gains made by Tulsa, is only fifty cents per capita less than Florida for the year.

North Carolina, with \$92.54 per capita, ranked third in this classification, and probably, were totals for the entire state available, would push the leaders even more closely; for scores of the smaller towns unlisted in this survey showed remarkable development. Tennessee came fourth in the per capita list closely followed by Texas, where the entire commonwealth is making enormous strides.

Omitting Washington, where the building program has been of unusual proportions for 1922 and where the future outlook is excellent for a continuation of record totals, the largest gains for the year over 1921 were registered in Mississippi and Kentucky. Mississippi's 114.1 per cent gain is significant, and reports of proposed construction indicate that this state, which now ranks at the end of the list, particularly because of its few larger centers, is now coming forward with determination.

The past year will stand out in the history of southern development as one of the great years of progress. It may be, and probably will be surpassed several times in the next decade; but it marks the beginning of a new step forward along every line which will eventually lead to a fuller realization of all the marvelous resources and advantages with which the section is so richly blessed.

COMPARATIVE BUILDING BY STATE BASED UPON PRINCIPAL CITIES.

| State | Number Cities | Population of Cities. | Building Permits 1922. | Entire Year 1921. | Gain or Loss Per cent. | Bldg. Per Capita. |
|--------------|------------------|--------------------------|---------------------------|----------------------|------------------------------|-------------------------|
| Alabama | 4 | 295,043 | \$ 11,181,854 | \$ 9,359,176 | 19.5 | \$ 37.88 |
| Arkansas | 3 | 113,292 | 6,044,660 | 5,323,017 | 13.5 | 53.35 |
| Dis. of Col. | 1 | 457,571 | 54,001,324 | 24,322,134 | 122.0 | 123.41 |
| Florida | 11 | 250,998 | 27,783,883 | 27,455,234 | 1.2 | 110.68 |
| Georgia | 9 | 471,848 | 28,552,911 | 17,910,122 | 59.4 | 60.51 |
| Kentucky | 5 | 398,761 | 21,677,871 | 10,131,915 | 113.9 | 54.36 |
| Louisiana | 5 | 483,985 | 19,590,045 | 14,578,749 | 34.3 | 40.47 |
| Maryland | 3 | 774,729 | 44,548,631 | 38,804,030 | 14.3 | 57.50 |
| Mississippi | 3 | 64,046 | 2,250,886 | 1,051,184 | 114.1 | 35.14 |
| Missouri | 5 | 1,241,779 | 52,339,212 | 34,358,334 | 52.3 | 42.04 |
| State | Number Cities | Population of Cities. | Building Permits 1922. | Entire Year 1921. | Gain or Loss Per cent. | Bldg. Per Capita. |
| N. Carolina | 11 | 261,170 | \$24,070,100 | \$15,195,671 | 51.7 | \$ 92.54 |
| Oklahoma | 5 | 223,172 | 25,572,285 | 18,287,328 | 39.7 | 110.10 |
| S. Carolina | 4 | 151,245 | 5,793,121 | 5,187,327 | 11.6 | 38.30 |
| Tennessee | 5 | 428,848 | 24,699,185 | 20,230,529 | 71.5 | 80.91 |
| Texas | 12 | 848,835 | 65,827,184 | 52,437,078 | 25.5 | 77.66 |
| Virginia | 5 | 403,952 | 24,940,722 | 17,886,269 | 39.4 | 61.74 |
| W. Virginia | 5 | 193,901 | 12,155,136 | 9,088,879 | 33.7 | 62.68 |
| Total | 91 | 6,579,190 | \$441,439,045 | \$307,219,207 | 43.7 | \$67.09 |

WEST VIRGINIA'S NEW CAPITOL TO BE GREATEST OF ITS KIND.

West Virginia's new capitol, the general exterior design of which has been approved by the State Capitol Commission, when completed will be classed among the finest buildings in the world. The commission, which has charge of the entire project, will have at its disposal \$9,500,000,

authorized by the last session of the Legislature for a new state house to take the place of the historic old building destroyed by fire. It is estimated that \$2,000,000 will be necessary to purchase the site, and the remainder will be for the building. Cass Gilbert, of New York, is the architect.

The new structure will be of the Renaissance style—in reality three separate buildings—a main structure with an impressive dome and two wing buildings, one on either end, and these three divisions represent the three departments of state government, the legislative, the judicial, and the executive. The site gives the West Virginia hills as a background, the Great Kanawha River flows in front of the building and other beautiful hills are across the river.

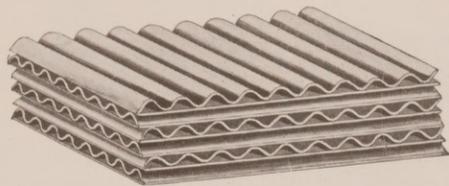
Provisions will be made in the building for every office in the state, and each will be arranged for future needs. Accommodations will be provided for new branches of administrative government that may be created. The entire site includes about 17 acres with a frontage of 1,000 feet of Kanawha street. The grounds will be terraced, trees and shrubbery planted, and driveways will lead from the four streets by which the site is bounded. The main building will contain a spacious rotunda directly beneath the dome. There will be an entrance from two street sides. Two wings similar in construction will be placed on either end of the main building. There will be a "main floor" and two other floors, and the entire structure will be seven feet above the high water mark.

Discussing the erection of the new Capitol, Mr. Gilbert recently said: "It is my desire that the building be of a very dignified and pure type of architecture, something that will last and be permanently approved by the best public taste. I believe that a simple dignified structure of fine proportions is far more satisfactory than any amount of elaborate embellishment, or so-called novelty of detail.

"There will be really two main fronts and the entrances will be through columned porticos on a great scale and the approach will be a splendid flight of stairs on each front. The whole structure will be crowned by a dome of majestic proportions, rising to a considerable height, and to be a conspicuous and notable feature of the landscape from every point of view.

"Personally, I am intensely interested in this whole matter. I want to make this Capitol building the crowning work of my life. It is the type of building to which I have devoted the past 25 years and I feel that the opportunity is now presented to me for a splendid architectural monument."

Asbestos Air Cell Blocks

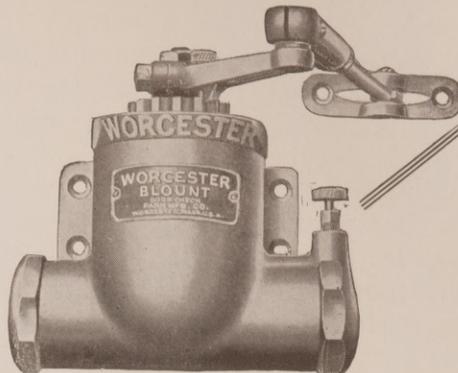


For lining ceilings, covering boilers and other hot surfaces these blocks have proven to be very efficient. They are made of corrugated asbestos paper which leaves small spaces for confining of air.

Whenever in need of Pipe and Boiler Coverings or kindred articles, remember that there is a "Diamond N" product that is built for that particular purpose. If a job puzzles you, ask us what we have for it.

Write for prices

Norristown Magnesia & Asbestos Co.
Norristown, Pa.



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Worcester Blount Door Check

They save wear and tear—eliminate slamming—prevent breakage—bring peace and quietness into home, office, and factory. Standard for 30 years—now offered with SEVEN improved door closer features that make it the most satisfactory door closer on the market. Made in SIX MODELS—a style and size for every door. Be sure to specify "Worcester Blount Door Checks"—BEST—always.

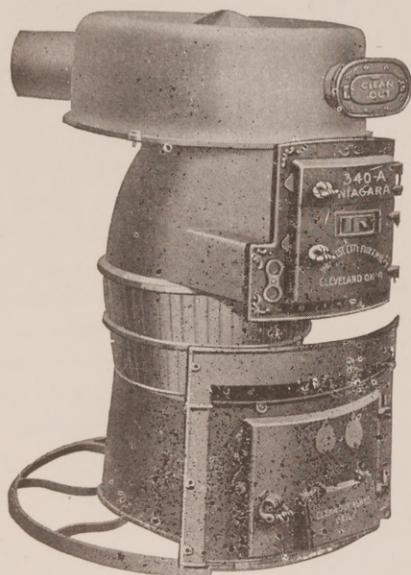
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Made of Clean high grade pig iron

A profitable proposition
for Dealers and users

Made by

The Forest City Foundry & Mfg. Co.
1220 Main Avenue
Cleveland, Ohio

We are also makers of the Monarch Furnace

Building Permits, by Cities, for the Entire Year, 1922

Compared with a similar period for 1921, and a forecast for the first six months of 1923

| CITY | Pop. 1920 | Est. Pop. 1922 | Inc. Suburbs | Permits Entire Year | | Est. Bldg. Outside Limits, 1922 | Forecast 1st 6 Mos. 1923 |
|-----------------------------|-----------|----------------|--------------|---------------------|------------|---------------------------------|--------------------------|
| | | | | 1922 | 1921 | | |
| ALABAMA | | | | | | | |
| Anniston | 17,734 | 22,500 | ..... | \$ 316,005 | 6,559,092 | \$ | ..... |
| Birmingham | 178,806 | 7,336,198 | ..... | 7,336,198 | ..... | ..... | ..... |
| Florence | 10,829 | 600,000 | ..... | 600,000 | ..... | ..... | ..... |
| Mobile | 60,777 | 1,161,579 | ..... | 735,430 | ..... | ..... | ..... |
| Montgomery | 43,466 | 1,018,077 | ..... | 513,654 | ..... | ..... | ..... |
| Tuscaloosa | 11,992 | 1,666,000 | ..... | 1,542,000 | 400,050 | 465,000 | ..... |
| Bessemer | 18,674 | 255,916 | ..... | 630,200 | ..... | ..... | ..... |
| ARKANSAS | | | | | | | |
| El Dorado | 3,884 | 927,195 | ..... | 1,957,195 | ..... | ..... | ..... |
| Fort Smith | 28,870 | 1,470,054 | ..... | 993,396 | 3,000,000 | 2,000,000 | ..... |
| Little Rock | 65,142 | 3,908,781 | ..... | 3,620,659 | ..... | 1,000,000 | ..... |
| Pine Bluff | 19,250 | 665,825 | ..... | 708,962 | ..... | 300,000 | ..... |
| DISTRICT OF COLUMBIA | | | | | | | |
| Washington | 437,571 | 54,001,324 | ..... | 24,322,134 | ..... | ..... | ..... |
| FLORIDA | | | | | | | |
| Ft. Lauderdale | 2,066 | 3,900 | ..... | 250,000 | ..... | ..... | ..... |
| Jacksonville | 91,558 | 5,863,278 | ..... | 5,087,310 | ..... | ..... | ..... |
| Key West | 18,749 | 310,730 | ..... | 150,000 | ..... | 150,000 | ..... |
| Lakeland | 7,062 | 1,193,010 | ..... | 250,000 | ..... | 750,000 | ..... |
| Miami | 29,571 | 4,784,894 | ..... | 5,515,800 | ..... | 2,000,000 | ..... |
| Miami Beach | 644 | 1,500,000 | ..... | 1,503,205 | ..... | 750,000 | ..... |
| Ocala | 4,913 | 450,000 | ..... | ..... | ..... | ..... | ..... |
| Orlando | 9,282 | 3,002,458 | ..... | 1,596,118 | ..... | 2,000,000 | ..... |
| Palm Beach | 1,150 | 400,845 | ..... | 992,480 | ..... | 600,000 | ..... |
| Pensacola | 31,035 | 338,979 | ..... | 1,076,803 | 204,000 | 350,000 | ..... |
| St. Augustine | 6,192 | 121,746 | ..... | 385,050 | ..... | 2,000,000 | ..... |
| St. Petersburg | 14,237 | 4,107,665 | ..... | 4,584,970 | ..... | 2,000,000 | ..... |
| Tampa | 51,608 | 3,056,814 | ..... | 4,057,928 | 600,000 | 2,000,000 | ..... |
| W. Palm Beach | 8,659 | 2,718,544 | ..... | 1,481,670 | ..... | 2,000,000 | ..... |
| Tallahassee | 5,637 | 1,008,790 | ..... | 98,000 | ..... | 130,000 | ..... |
| GEORGIA | | | | | | | |
| Athens | 16,748 | 338,650 | ..... | 488,124 | 200,000 | 500,000 | ..... |
| Atlanta | 200,616 | 20,584,734 | ..... | 11,236,776 | 4,500,000 | 12,000,000 | ..... |
| Augusta | 52,548 | 2,398,127 | ..... | 1,569,837 | 90,000 | 1,500,000 | ..... |
| Brunswick | 14,413 | 86,380 | ..... | 235,283 | ..... | 350,000 | ..... |
| Columbus | 31,125 | 558,720 | ..... | 567,883 | 853,000 | 1,000,000 | ..... |
| Griffin | 8,940 | 55,140 | ..... | 70,570 | ..... | 100,000 | ..... |
| Macon | 59,095 | 1,569,916 | ..... | 930,136 | 1,200,000 | 1,000,000 | ..... |
| Savannah | 83,252 | 2,999,600 | ..... | 2,085,059 | ..... | 250,000 | ..... |
| Waynesville | 11,376 | 423,457 | ..... | 302,400 | 150,000 | ..... | ..... |
| LeGrange | 17,038 | 299,600 | ..... | 225,500 | ..... | 500,000 | ..... |
| Decatur | 6,150 | 806,085 | ..... | 534,907 | ..... | ..... | ..... |
| KENTUCKY | | | | | | | |
| Covington | 57,121 | 999,580 | ..... | 1,332,150 | ..... | ..... | ..... |
| Henderson | 12,169 | 61,600 | ..... | 32,220 | ..... | ..... | ..... |
| Lexington | 41,534 | 2,231,141 | ..... | 1,038,998 | ..... | ..... | ..... |
| Louisville | 256,877 | 16,736,750 | ..... | 7,438,300 | ..... | 9,000,000 | ..... |
| Owensboro | 21,060 | 513,330 | ..... | 300,247 | ..... | 500,000 | ..... |
| Paducah | 24,738 | 431,030 | ..... | ..... | ..... | ..... | ..... |
| Frankfort | 9,505 | 1,000,000 | ..... | ..... | ..... | ..... | ..... |
| LOUISIANA | | | | | | | |
| Alexandria | 17,510 | 867,939 | ..... | 876,000 | ..... | ..... | ..... |
| Baton Rouge | 21,782 | 1,412,845 | ..... | 1,493,387 | ..... | ..... | ..... |
| Lake Charles | 13,088 | 962,332 | ..... | 284,277 | ..... | ..... | ..... |
| Monroe | 19,600 | 401,060 | ..... | 745,882 | 300,000 | 350,000 | ..... |
| New Orleans | 387,219 | 10,494,850 | ..... | 8,043,159 | ..... | 4,000,000 | ..... |
| Shreveport | 43,574 | 6,068,529 | ..... | 3,871,485 | 3,000,000 | ..... | ..... |
| MARYLAND | | | | | | | |
| Baltimore | 733,826 | 43,204,620 | ..... | 36,924,923 | ..... | 20,000,000 | ..... |
| Cumberland | 29,837 | 1,028,000 | ..... | 1,102,374 | 225,000 | 600,000 | ..... |
| Frederick | 11,066 | 316,011 | ..... | 776,733 | ..... | ..... | ..... |
| MISSISSIPPI | | | | | | | |
| Jackson | 22,679 | 1,232,050 | ..... | 574,326 | ..... | 450,000 | ..... |
| Meridian | 23,436 | 538,985 | ..... | 377,048 | ..... | ..... | ..... |
| Vicksburg | 17,931 | 479,851 | ..... | 99,810 | ..... | ..... | ..... |
| MISSOURI | | | | | | | |
| Joplin | 29,902 | 112,640 | ..... | 234,920 | 141,718 | 150,000 | ..... |
| Kansas City | 324,410 | 12,402,000 | ..... | 23,134,140 | 16,025,225 | ..... | ..... |
| St. Joseph | 77,939 | 668,195 | ..... | 1,237,419 | 1,095,044 | ..... | ..... |
| St. Louis | 772,897 | 14,157,677 | ..... | 25,310,503 | 16,120,370 | 2,500,000 | ..... |
| Springfield | 39,631 | 1,732,500 | ..... | 2,422,180 | 975,967 | ..... | ..... |
| NORTH CAROLINA | | | | | | | |
| Asheville | 28,504 | 1,332,297 | ..... | 1,323,450 | 1,845,474 | ..... | ..... |
| Charlotte | 46,338 | 3,087,505 | ..... | 5,148,656 | 2,353,808 | ..... | ..... |
| Durham | 21,719 | 644,107 | ..... | 1,208,122 | 1,422,105 | 600,000 | ..... |
| Gastonia | 12,871 | 2,783,701 | ..... | 707,592 | 1,783,701 | 800,000 | ..... |
| Greensboro | 19,861 | 1,065,106 | ..... | 4,223,137 | 1,944,083 | 137,000 | ..... |
| Hickory | 5,072 | 188,175 | ..... | 329,525 | 57,100 | 1,000,000 | ..... |
| High Point | 20,000 | 829,500 | ..... | 581,707 | ..... | 800,000 | ..... |
| Raleigh | 14,418 | 1,709,547 | ..... | 3,020,346 | 2,884,835 | 100,000 | ..... |
| Washington | 6,314 | 478,500 | ..... | 951,000 | 892,700 | 600,000 | ..... |
| Wilmington | 33,372 | 51,382 | ..... | ..... | ..... | ..... | ..... |
| Winston-Salem | 48,399 | 1,838,779 | ..... | 3,286,857 | 2,426,467 | ..... | ..... |
| OKLAHOMA | | | | | | | |
| Ardmore | 14,181 | 405,310 | ..... | 907,905 | 1,576,302 | ..... | ..... |
| Chickasha | 10,179 | 483,500 | ..... | 683,500 | ..... | 350,000 | ..... |
| Enid | 16,576 | 511,465 | ..... | 1,613,042 | 607,062 | 600,000 | ..... |
| McAllister | 12,095 | 195,660 | ..... | 889,885 | 363,535 | 500,000 | ..... |
| Muskogee | 30,277 | 717,345 | ..... | 2,131,999 | 1,119,475 | 1,000,000 | ..... |
| Oklahoma City | 91,295 | 3,274,335 | ..... | 7,698,137 | 7,797,797 | 250,000 | ..... |
| Oklmulgee | 17,430 | 775,775 | ..... | 1,215,775 | 1,662,885 | 5,000,000 | ..... |
| Sapulpa | 11,634 | 352,198 | ..... | 571,125 | ..... | ..... | ..... |
| Tulsa | 72,075 | 8,966,118 | ..... | 13,636,489 | 7,346,696 | ..... | ..... |
| SOUTH CAROLINA | | | | | | | |
| Charleston | 67,957 | 1,632,395 | ..... | 2,413,847 | 1,368,294 | ..... | ..... |
| Columbia | 37,524 | 793,878 | ..... | 1,581,993 | 1,570,870 | 1,500,000 | ..... |
| Greenville | 23,127 | 532,418 | ..... | 1,234,418 | 1,342,730 | 800,000 | ..... |
| Spartanburg | 22,637 | 273,360 | ..... | 562,863 | 905,433 | ..... | ..... |
| TENNESSEE | | | | | | | |
| Chattanooga | 57,895 | 1,047,253 | ..... | 2,548,568 | 2,477,030 | 3,400,000 | ..... |
| Johnson City | 12,442 | 202,675 | ..... | 481,400 | 706,525 | 750,000 | ..... |
| Knoxville | 77,818 | 2,548,152 | ..... | 5,042,174 | 4,237,590 | 3,500,000 | ..... |
| Memphis | 162,351 | 189,000 | ..... | 20,883,000 | 9,377,025 | 10,000,000 | ..... |
| Nashville | 118,342 | 3,284,360 | ..... | 5,744,095 | 3,342,359 | 1,500,000 | ..... |
| Humboldt | 3,913 | ..... | ..... | 175,000 | ..... | ..... | ..... |
| Jackson | ..... | ..... | ..... | 377,432 | ..... | ..... | ..... |
| TEXAS | | | | | | | |
| Arlene | 10,364 | ..... | ..... | 993,907 | 1,297,224 | ..... | ..... |
| Amarillo | 15,494 | 1,104,600 | ..... | 2,005,220 | 1,304,630 | ..... | ..... |
| Austin | 34,876 | 335,335 | ..... | 684,297 | 1,167,666 | 1,475,000 | ..... |
| Beaumont | 40,422 | 843,815 | ..... | 1,344,834 | 2,341,184 | ..... | ..... |
| Dallas | 158,976 | 8,897,582 | ..... | 18,646,988 | 15,000,206 | 2,000,000 | ..... |
| El Paso | 77,560 | 1,662,396 | ..... | 3,294,672 | 4,652,712 | 10,000,000 | ..... |
| Fort Worth | 106,482 | 8,796,677 | ..... | 12,128,722 | 4,652,712 | 2,000,000 | ..... |
| Galveston | 44,255 | 628,527 | ..... | 2,131,288 | 1,937,025 | 5,000,000 | ..... |
| Houston | 138,276 | 6,541,499 | ..... | 13,418,469 | 10,400,610 | ..... | ..... |
| Port Arthur | 22,251 | 620,693 | ..... | 1,232,258 | 1,210,954 | 1,000,000 | ..... |
| San Antonio | 161,379 | 2,759,586 | ..... | 7,362,974 | 7,515,045 | 5,000,000 | ..... |
| Texarkana | 19,737 | 250,000 | ..... | 1,125,000 | ..... | 100,000 | ..... |
| Waco | 38,500 | 1,162,505 | ..... | 2,088,574 | 1,351,703 | ..... | ..... |
| VIRGINIA | | | | | | | |
| Richmond | 30,070 | 340,419 | ..... | 942,209 | 716,985 | 1,000,000 | ..... |
| Newport News | 35,595 | 556,720 | ..... | 642,467 | 561,038 | ..... | ..... |
| Norfolk | 115,777 | 2,300,540 | ..... | 4,980,520 | 5,050,168 | ..... | ..... |
| Petersburg | 31,009 | 237,072 | ..... | 455,751 | 468,715 | ..... | ..... |
| Richmond | 171,667 | 909,147 | ..... | 15,116,022 | 9,299,870 | 1,000,000 | ..... |
| Roanoke | 50,842 | 1,292,085 | ..... | 3,259,524 | 2,285,899 | ..... | ..... |
| WEST VIRGINIA | | | | | | | |
| Pinefield | 15,191 | 409,505 | ..... | 1,112,432 | 1,729,150 | ..... | ..... |
| Charleston | 99,608 | 1,637,395 | ..... | 3,157,996 | 3,240,400 | ..... | ..... |
| Clarksburg | 97,860 | 488,090 | ..... | 969,190 | 250,000 | ..... | ..... |
| Hammington | 50,177 | 1,668,910 | ..... | 3,255,930 | 3,436,102 | ..... | ..... |
| Parkersburg | 20,039 | 670,000 | ..... | 1,340,000 | ..... | ..... | ..... |
| Wheeling | 56,908 | 1,450,695 | ..... | 3,432,020 | 1,251,377 | ..... | ..... |
| Welch | 3,500 | 191,000 | ..... | 277,000 | ..... | 600,000 | ..... |

An Investment in Health!

The "Universal" Sanitary Systems provide a method of sewage disposal to those isolated from the city or town sewer system.

This applies to the country home, farm house, suburban, industrial or mining village.

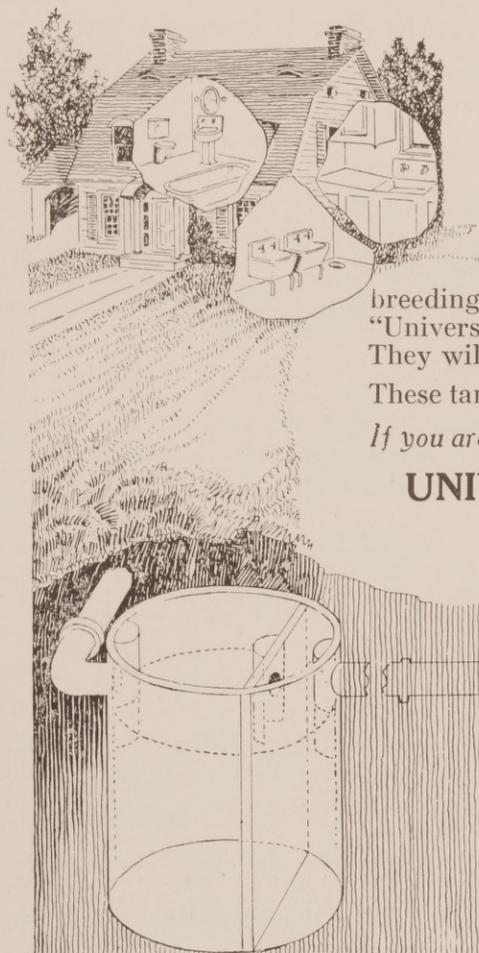
It is recognized by all health authorities that the disease breeding, soil polluting, unsightly outhouse must go. The "Universal" Septic Tanks solve the problem in a satisfactory way. They will operate with or without running water.

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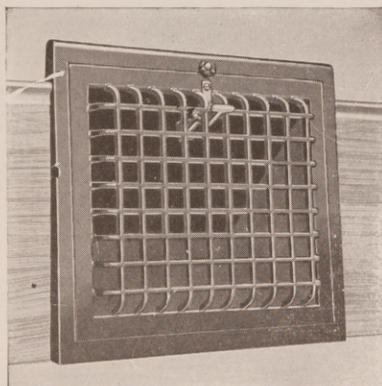
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Walworth Registers will last a lifetime—will not rust or warp out of shape. Maximum capacity for a given size. A Register which will appeal to all who use it.

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CLEVELAND

General Conditions, South, Favorable to Great Increase in Building During 1923

IN considering what the new year will bring the south, it is necessary, first of all, to briefly review the situation which confronts the entire nation at the present time, for the south may aptly be termed the national bank in which unlimited deposits may be made by the entire nation and the south, as this bank needs these deposits in order to operate on a continually larger scale.

1923 opens with the general national business situation considerably stronger than it was at the beginning of 1922. Through the liquidation of bank loans and the increasing accumulation of cash reserves, the country's chief credit condition is appreciably improved. Production is practically normal throughout the entire country, and unemployment is noticeable only in widely scattered communities. The tremendous building activity continues with the large majority of cities reporting shortage of apartments, homes and business structures. The general trend of prices is now upward and this, combined with the increasing demand for commodities and service, results in plans for business expansion all along the line. Advertising agencies are pressed for time to develop campaigns for the advertising of the largest manufacturers.

Railroad traffic and car loading are steadily growing in volume, and railroads are beginning to purchase new equipment; witness the order of the Pennsylvania railroad recently placed for 300 locomotives. The buying power of farmers is much greater than at this time in 1922; their loans of 1919 and 1920 having been largely paid off during past year as a result of the increase in total crop value of about \$1,500,000,000.

Foreign trade is holding steady despite political upheavals in Europe and slow revival in some countries which are markets for American goods. On the whole, practically every authority agrees that the first six months of 1923 will show the favorable result of all the hard work done by American industry, agriculture and financing in 1922.

In the work of bringing the nation back to same conditions and methods, the south has played an extremely important part. It was in the south that federal reserve rediscount rates began first to drop. The south contributed over \$1,000,000,000 of the total crop value increase of \$1,500,000,000 of the entire nation.

The Cotton Situation.

The cotton planter is enjoying his greatest prosperity since the early part of 1920. His profits in 1922 were around \$333,000,000, as compared with about \$60,000,000 in 1921. In

the banner year of 1920, these profits were \$575,000,000 and in the two preceding years, about \$500,000,000 each, but these were war results without parallel in peace times. Before the war cotton profits usually varied from \$150,000,000 to \$250,000,000 per year, which is considerably less than the figures for 1923.

The question of demand for 1923 cannot be separated from domestic and foreign political questions, for the reason that cotton demand depends upon continued domestic prosperity and restored foreign prosperity. Nevertheless, it seems unlikely that there will be no diminution in demand for cotton during the coming calendar year. The only possibility of this lies in the chance that prices will rise to a point where consumption will be automatically curtailed, but this seems unlikely since there is at the present time, an actual shortage of approximately 2,000,000 bales. In any event this will not affect the first six months of 1923, and ample time exists in which to check and collect for price boosting.

The supply of cotton depends largely on whether the south will plant an acreage small enough to raise a large crop. This seems like a contradictory statement, but the fact remains that the ability and means of the growers to fight the boll weevil and to buy fertilizer and arsenate is limited. This limited ability should determine the limits of acreage which can be successfully cultivated. If the attractive price of cotton leads the growers to recklessly and indiscriminately plant excess acreage, a smaller crop will result from a smaller acreage. On this point a note of warning should be sounded, since no decrease in the cost of fertilizer or arsenate can be looked for.

Southern Securities Stand High.

The present solidity of the south and the confidence of the nation at large in the south, is clearly reflected in the standing of southern securities. A careful study of the record of these securities over the past six months as compared with last year's average and the last ten years, shows not only a general healthy tone with steady improvements, but compares favorably with any other section of the country. The upward movement of southern railroad securities reflects the increase in the earnings of southern roads. Public utilities are expanding and at the same time showing substantial surplus in their income accounts, while the leading industrials are making a good showing. In the railroad group, to deal with specific examples, we find that such representative southern carriers as At-

lantic Coast Line, Illinois Central, Southern Railway, Louisville and Nashville, Central of Georgia, Mobile and Ohio, New Orleans, Texas and Mexico, and Nashville, Chattanooga and St. Louis, have shown an average of \$14.07 estimated 1922 earning on their common stock. They have earned approximately 5.16 per cent on their combined property value of \$1,809,300,000 which is well above the national average earnings. Based on a par value of \$100 the average price of these common stocks is higher than the average price of forty leading American rails as recorded in the Dow, Jones averages. Their upward trend for the year has been more pronounced than the national average.

BON AIR-VANDERBILT HOTEL.

(Continued from page 32.)

one very forcibly upon the most cursory examination of the public sections. Instead of a few very large rooms as might have been the case, there are a score or more public rooms ranging from the large dining room down to comfortable parlors one would expect in the better class of residence work. The architects sought to get away from the "commercial hotel" in handling the lobby and adjacent rooms and have succeeded in introducing sufficient variety and interest to meet the requirements of resident guests. More than two-thirds of the entire second floor or twenty-four thousand square feet, is devoted to ball room, solarium, lobby, parlors, etc.

All rooms in the building are painted and the public rooms are especially rich in color effects. The electrical fixtures furnished by Caldwell, New York, splendidly set off all interiors.

In many respects the Bon Air-Vanderbilt reminds one of a miniature city in that it is almost completely self-sustaining. There is a small street, along the main facade, lined with shops in front of which runs a curb and sidewalk. Guests may enter these shops from inside the building or out. Completeness, compactness and economy of operation were sought after in the design of the mechanical and service features and these have been attained. Under the main dining room seating five hundred people, is located the big modern hotel laundry caring for all the bedrooms and table linens and guests' laundry. \$2,600.00 worth of washers, driers, starchers, ironing boards and shapers fill the 3,000 feet of floor space in orderly manner, each set of machines following the other in related sequence and the whole related conveniently to the main service corridor and the building.

The refrigerating plant installed at a cost of \$21,000 and adjacent to the laundry and other

service portions will amply supply ice for the present hotel requirements and any future additions. The refrigerators were manufactured by the Dewett Refrigerator Company.

The big kitchen and accessory rooms occupying 6000 or more square feet of floor space, are the last word in compactness and efficiency. The kitchen equipment and accessories are arranged in compact orderliness and directly visible from the chef's office. The method of disposing of smoke from the kitchen and ovens at first appeared to offer a problem because of the necessity of erecting a new chimney nearly nine stories high. The first scheme of underground feed into a new chimney stack was abandoned and flues were carried across the ceiling 110 feet to the large boiler chimney over 90 feet high. The result has proven most efficient in the operation of the ranges, ovens and boilers and some considerable expense has been saved. Kitchen and adjacent rooms have in addition to natural ventilation artificial controlled ventilation. All fumes and odors are drawn out of these rooms through metal ducts and a powerful exhaust multivane fan of Sturdivant make discharges them outdoors at a safe distance from dining room and bedrooms. Adjacent to the kitchen is the butcher's shop with four large refrigerators thoroughly insulated. Joining the kitchen on the opposite side comes the bakery, occupying 2000 square feet with large ovens for pastry, cakes and bread. Just across the service corridor from this comes the steward's room, equivalent in size to six large bedrooms with receiving clerk's office, steward's office, four big refrigerators for cheese, canned goods, butter, eggs, milk, fruit, vegetables and other produce. The kitchen with its accessory rooms closely related and convenient for saving of steps, is directly underneath the main dining room and service from kitchen to dining room is arranged most directly. Food carried from kitchen by electric dumb waiters to a large serving pantry on second floor, adjacent to dining room and itself half as large as the kitchen. Here food is prepared for the dining room, dishes and glassware washed by a large automatic dishwasher, with a capacity of 900 dishes per hour, and all intermediate service carried out. The cost of the kitchen equipment was \$22,000, and was furnished and installed by L. Barth and Sons, of New York.

The builders of the Bon Air-Vanderbilt are the Foundation Company, of Atlanta and New York; the architects, Willis Irvin, Augusta, Ga., in association with McKim, Mead and White, New York City; the lessees Walton Marshall and Burton White, of New York, and the owners, the Bon Air Hotel Corporation of Augusta, Ga.

CH&E.

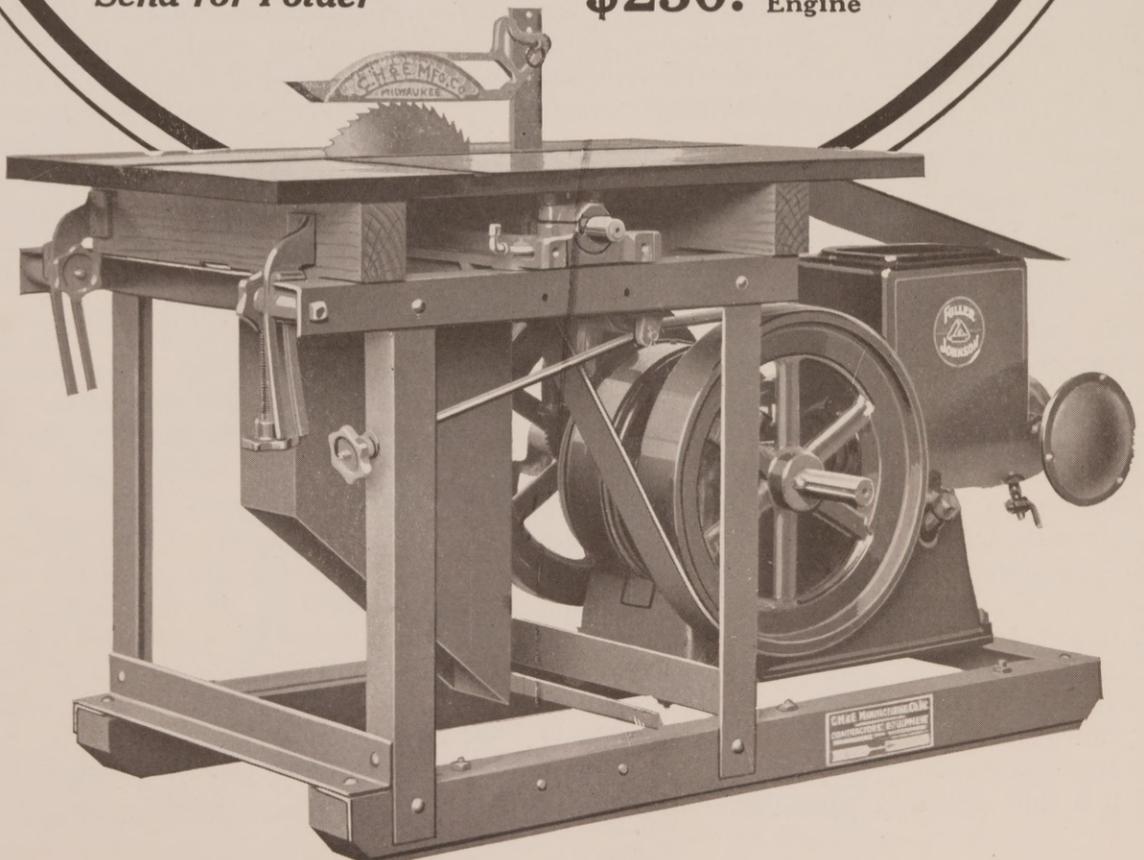
The NEW "HOME BUILDER'S" SAW RIG

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New Records to Be Set in 1923 Prospects Show

OUT of fifty-seven cities reporting definitely on building prospects for the first six months of 1923, only seven indicated that there would be any abatement of the large building volume of the past year, and in each of these cities the indicated loss was slight. Of the remaining fifty, at least half stated that the volume would be increased, some as much as a hundred per cent.

These estimates were founded upon work already under contract or for which plans were drawn. They are, of course, subject to revision. In event that the upward movement of prices on building material is not checked at once, it is probable that large numbers of important structures which have been announced will be held over until fall. But if prices are reasonable, the south faces another record year.

That this forecast will be borne out is evidenced already by large permits in a number of the leading cities during the first half of January. Dallas reported in excess of a million and a half for a single week, and Atlanta issued permits for over one and three-quarter millions on the second day of the month.

The program for 1922 just began to touch the actual needs of the section. The unusual volume of home building reported from all quarters has not yet restored the residence situation to normal. The present pace must be maintained for fully five years in the more progressive centers to catch up with the demand. The significant progress made in the erection of hotels and apartments will be continued, with residence hotels forming an ever-increasing proportion of such structures.

The commercial and industrial needs of the south are growing even faster than the building program. Office structures are filled long before they are completed. Department stores in all the large cities find their present quarters too small, and the number of modern and beautiful stores now being erected is a tribute to the present plane of merchandising in the section.

Requirements Outlined.

A questionnaire answered by 83 chambers of commerce as to the definite building requirements of the various cities brought forth interesting information as to the present shortage. Of the total number replying, sixty-five specified a continued shortage of homes; sixty-two reported a lack of apartments, and, for the rest, the number reporting hotels was 46; industrial structures, 45; warehouses, 43; office buildings, 30; stores, 28, and theaters, 20.

It is thus seen that beyond the housing prob-

lem, the first demand is for industrial and warehouse structures. A number of communities stressed warehouses especially, the demands for which is steadily and insistently increasing.

Authorities Quoted.

This trend towards increased business and industrial building is general for the country, according to estimates made by officials of the F. W. Dodge company and published in *The Architectural Record*. While the residential building still maintains its supremacy, its lead will be materially reduced in favor of the other items of construction.

To this extent, the southern situation seems to parallel the national building field. But if indications suggested at the beginning of this article are borne out, the forecast as to lessening of total building made by the Dodge company for the entire country will not be fulfilled in this section. This opinion is also shared by a number of architects and contractors who are closely in touch with the conditions now existing in the south.

Officials of the southeastern headquarters of the Foundation company, one of the largest construction firms in the country, look for an acceleration of the building program, especially relating to industry. In a statement prepared for this survey, they state:

"There is an outlook for a marked boom in the industrial building field in the south during 1923, with the usual amount of hotel and apartment construction which has been running very heavy for the past two years.

"The section has just begun to strike its industrial stride, and with the reopening of textile building, all industrial building will be greatly stimulated. There is also an unusual demand for large storage warehouses for farm products following the present movement among the farmers for co-operative selling.

"The Foundation company now holds contracts in hand for 1923 aggregating twice the amount in sight at this time 1922. We are figuring on the largest business throughout the section that we have enjoyed since opening our southern office."

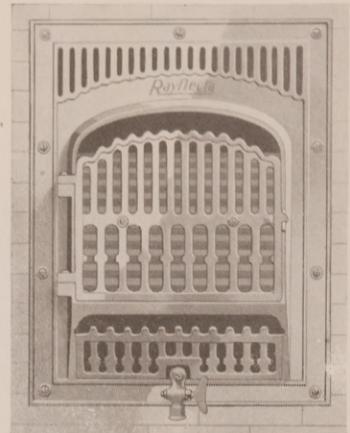
G. Lloyd Preacher, of G. Lloyd Preacher & Co., architects of Augusta, Atlanta and Raleigh, whose business in the Carolinas, Georgia and Florida during 1922 aggregated \$7,500,000 and who have plans already for 1923 construction over half this amount, is most optimistic for the coming year. He says:

"If finances are available, and if building ma-

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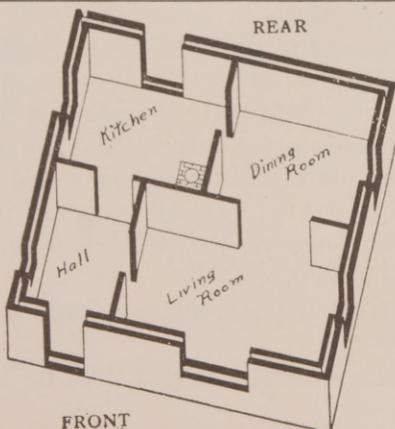
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Forms removed from house after first pouring, showing how partitions are poured with outer walls.

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What are Building Costs?

The Contractor a Manufacturer

By A. P. Greensfelder,

(Fruin-Colnon Contracting Co., St. Louis, Mo.)

People frequently discuss building costs as if bricks and bricklayers, materials and labor were the only items worthy of consideration. Broadly speaking, men and materials do comprise the total expense in construction work, just as they do in any other article produced for civilized man.

What we wish to emphasize, however, is that most people really think that the walls and floors of a building, the visible completed objects, are the only costs that enter into the expense of erection. They think differently, however, when they find it necessary to buy a stick of wood at the lumber yard or a pair of hinges at a hardware store, which may be needed for an extra partition after they have moved into the new building.

From their own books business men know just the sort of expense items they must add to the cost for fixed charges, operating expense and legitimate profits. They understand that their selling prices must include rent, taxes and insurance, contingency charges, interest and profits.

Builder Has "Overhead."

The builder is a merchant. He is also a manufacturer, differing from the usual producer in that the builder's factory is portable and frequently without a roof, at least until nearly the end of the job. The builder has a fixed office, a warehouse and yards for storage of machinery and materials. The annual upkeep of these adjuncts must be sustained by field construction executed during the year.

The builder also has selling expense. He must advertise and call upon architects, engineers and owners before he secures a customer. He must pay his estimator to make a quantity survey of the plans, because the owner does not tell him what he tells everybody else he buy from—the quantity of materials he wants to purchase. The builder's purchasing agent then locates the materials at market prices; and, after careful estimates are made, conferences held and a financier consulted, a contract is made with a future owner and the builder assumes the title and agency of a contractor.

As agent, the contractor arranges to incur the following expenses: Surety bonds, liability, fire and tornado insurance, building permits, water license, city inspection fee, temporary public utilities service, transportation of materials and drayage of equipment. Not a single item would be visible to a visitor to the building site, and yet they may constitute 10 per cent to 15 per cent of

the cost. Then there is bank interest, because the owner does not advance money for payrolls and material bills. There is also ice and coal, oil, stationery, carfare, postage, rope, perishable tools, scaffolding, demurrage, war taxes and other miscellaneous items which are consumed.

Equipment Costs High.

On a job of any size at all, the contractor must provide labor-saving equipment, such as concrete mixers, steam shovels, derricks, hoisting machines, power saws and similar machinery. While they are truly labor-saving and produce economy, they cost about 4 per cent of their value each month. Then, there is the greatest of intangibles, brains, which, mingled with experience, knowledge, good judgment, aptitude and industry, produce that supervision which makes for good results. Brains insure satisfactory service. This is represented in the contractor's organization in many ways. The ablest superintendent, for instance, makes the fewest mistakes, has initiative, plans his work ahead, keeps his men cheerfully together and gets a quality job done ahead of time within the estimated cost. Such men earn good wages and are worth it. Every merchant and manufacturer knows how scarce leaders are.

Then appear such contingency items as frost, rain, labor strikes, railroad delays and accidents, many of which are common to most industries, but all of which frequently confront the contractor. The law of averages applies the proper charge on such items to the work. Finally, to the actual outlay for materials and labor must be added a remuneration for the contractor sufficient to induce him to remain in business, subject to hardships and risks, and yet keep his financial credit good enough to start the next job.

Do you still think men and materials embrace all building costs?—"Constructor."

SUSPENDED CEILING SPECIFICATIONS.

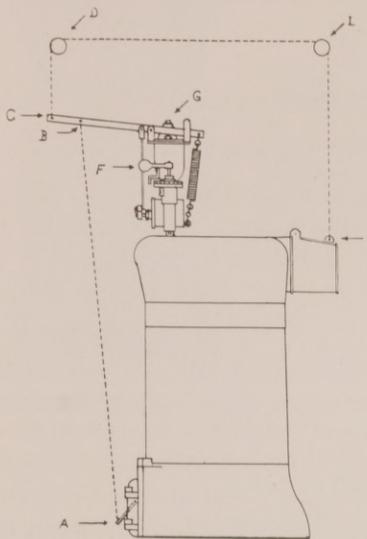
After much research in connection with the common practice in the different localities throughout the United States, the following specifications have been approved as being the minimum safe specifications for suspended ceilings.

It is to be regretted that much suspended ceiling work is being erected in a sub-standard manner, and if failure occurs, it will be through no fault of the manufacturers.

Hanger.—The vertical member which carries the steel framework.

The minimum size for hangers shall be No. 8

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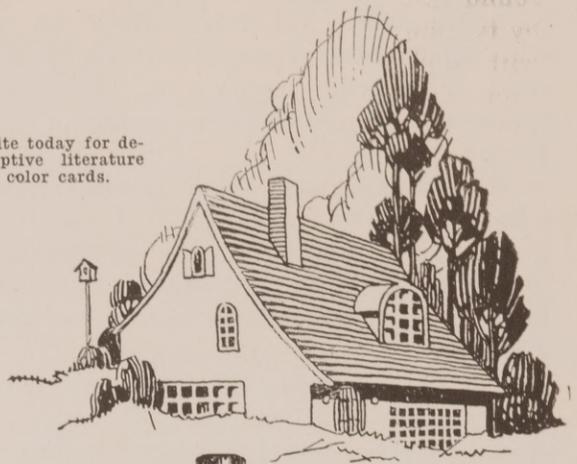
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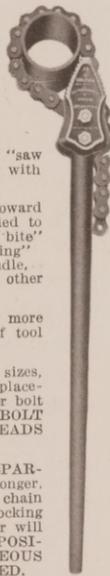
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JAWS: Drop forged tool steel, hardened and "saw tooth tempered," permitting resharpening with a file.

TEETH: Milled at an angle—"UP" and "IN" toward center line of wrench when tool is applied to pipe. This angle tooth gives IMMEDIATE "bite" on pipe even when teeth are dull without "cramping" wrench. The angle teeth force jaws against handle, eliminating "SPREADING" jaws, as in ALL other designs.

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galvanized wire 1 3/16 inch flats or 7/32 inch round mild steel rods. The wire is to be attached by twisting three times, flats attached by bolting with 3/8-inch bolts, rods by twisting twice, or by right angle bends and wiring. They shall be spaced not to exceed 4 foot centers in either direction.

Runner Channel.—The heaviest horizontal member.

Runner channels are to be not less than 1 1/4-inch channels with a minimum of .442 lbs. per lineal foot. They shall be spaced not to exceed 4 feet on centers.

Furring Channel.—The smallest horizontal member, to which the lath is attached.

Furring channels shall be not less than 3/4 inch channels with a minimum weight of .276 lbs. per lineal foot, attached to runner channels by at least three loops of No. 16 galvanized wire at each crossing. They shall be set on various centers, depending upon the lath to be used. A maximum of 11 3/4 inch centers shall be used for 3 lb. flat lath, 14 3/4 inch centers maximum for 3.4 lb. flat lath, 19 inch centers maximum for 3 lb. rib lath.

Metal Lath.—The plastering base and reinforcement.

Metal lath shall weigh not less than 3 lbs. per square yard. Metal lath shall be attached to the furring channels by No. 18 gauge annealed galvanized lather's wire every 6 inches along the furring channels.

SIXTY-FOOT COLUMNS ECONOMICAL IN 5-STORY BUILDINGS.

In all office building construction, a saving in the time of erection always means a direct saving in the cost of the building, for the floor space is rented sooner and a return on the money invested is obtained. For this reason, anything that can be done to speed up the erection of the frame of a building will be found to be economical.

This was found to be the case in the erection of a five-story steel frame office building at Santa Rosa. Here the time of erection was shortened by using columns sixty feet long. The columns were made strong enough to carry the load above the first floor and erected as one unit. The first-story columns had to be of considerable heavier section, but from the second floor to the roof, the column was erected in one piece. in one piece.

It was found that the saving in splice plates and rivets and the shop work saved by the elimination of the splices more than made up for the extra material required to give sufficient area at the lower end of the column. Another item of

delay eliminated was the necessity for repeated raising of the derricks as is the ordinary procedure when erecting two stories at a time. It was necessary also to plank entire bays for riveting.

STEEL AS AN ARCHITECTURAL MATERIAL.

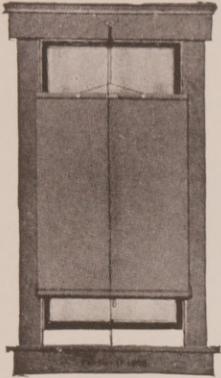
(The Engineering Review, London.)

One of the difficulties with which structural steelwork has had to contend in the past in attaining its legitimate position for buildings other than workshops, has been that architects are trained principally from the artistic and historical standpoint and that they have regarded steelwork as inherently ugly.

This difficulty is a strange one from one viewpoint, because in a steel frame building the steelwork can be completely hidden and the external walls, which function only as fillings between the openings of the steelwork, can receive architectural treatment to follow any style or order desired. If architects are willing to take structural engineers into their counsels early in the development of the plans of a building much economy of materials can be effected and many vexatious alterations of plans avoided, and it is hoped that the younger generation of architects is being trained with due regard to the legitimate function of steelwork in construction, and that they will not adhere to older methods because they understand them better. The architect has to cover a very wide range of activities, in all of which it is humanly impossible for him to be a specialist, and one cannot see that he should regard it as derogatory to his professional standing for him to refer matters relating to steel construction to engineers who have specialized upon that class of work and who are familiar with its technical intricacies.

But a new school is arising among architects which objects to the hiding of the members upon which the building relies for its strength, and is opposed to "sham" wherever it can be avoided. It is from this school of architects that we may hope for much future progress in steel construction. As engineers we have always denied that steel structures are inherently ugly; in fact, we believe that there is close co-relation between efficiency and beauty. We believe that the architects can, and ultimately will, succeed in designing buildings with exposed steelwork that will give the necessary artistic effect for which the architects are legitimately striving; but the dictum as to the undesirability of putting new wine in old bottles applies here as in many other matters, and it will be necessary to cast right aside ideas of architectural form which were based upon block stone construction.

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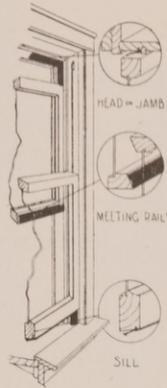
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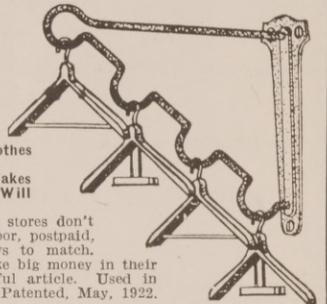
They Keep the Suits Apart. They Save Time and Space. They Keep Your Clothes in Order.

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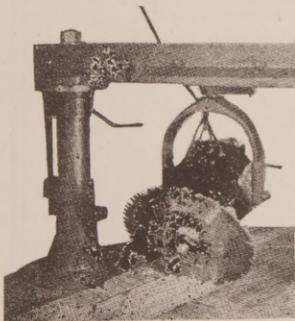
Put one on Your Closet Door—it Takes the Place of the Ordinary Hook and Will Accommodate Four Hangers.

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NEW RECORDS TO BE SET IN 1923 PROSPECTS SHOW.

(Continued from page 64.)

materials keep to a reasonable level, 1923 will walk away from 1922, in spite of the fact that the past year has set such a high record.

"The south is from six to eight years behind on its building program already, and its development along every line at the present moment is so rapid that it will be difficult for the section to catch up with the shortage, no matter how much it spends on construction.

"Nothing short of a severe tightening up of finances will retard the building movement—and in view of the fact that investors seem to be awakening to the desirability of southern real estate investments, I do not anticipate this eventuality. The recent rise in building commodities has made many builders nervous, and a further attempt on the part of manufacturers in this direction may have serious consequences. But apart from this, the future has a decidedly roseate aspect."

In an attempt to give a more adequate idea of the size of cities where census figures misrepresent on account of constricted incorporated areas, the general statistical tables in connection with this survey gives the estimated population of each city in 1922 where information was available, together with the population of the immediate suburbs which are in reality a part of the industrial and commercial community.

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Made from fragments of old jugs and shale

80 STOCK SHAPES IN THREE DIFFERENT TEXTURES.
Write for sample and cuts of artistic fireplaces.

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ATLANTA, GA.

Things to Know About the Artisan Bolt Utility. John Whittaker & Co.

By reason of the "drawing" feature, brought about by action of the bevel ends over the rollers in the keepers, the ARTISAN Bolt is the most useful locking attachment for large hinged doors that is manufactured. This feature is exclusive with the ARTISAN Bolt, and is protected by patent.

The vast majority of doors are warped to some degree, thereby making it annoying, if not difficult, for other bolts to be locked. In the latter case, it is necessary to press against the door to allow the blunt ends of the bolts to engage in the holes made for them in the keepers; whereas, by a simple quarter turn of the handle on the ARTISAN Bolt, top and bottom of the door are drawn into position simultaneously, and the bolt is locked, in spite of a warped condition of the door.

Another feature, which makes the ARTISAN Bolt of superior utility, is its suitability for any door up to eleven feet high. All that is required, for such adjustment, is to cut the rods off to the desired length and fasten the heads on the ends of the rods. It is, therefore, unnecessary to mention the door height when ordering. This feature proves convenient to the hardware man in taking orders and in carrying stock.

The ARTISAN Bolt is reversible for right or left hand operation, and is adapted to inside or outside swing.

The existence of anything is justified by its usefulness to society, only, and anything lacking in sound value has a precarious life. The valuable usefulness of the ARTISAN Bolt presages a successful existence in the order of things 'hardware.'

Construction.

In general, the various parts, both major and minor, are designed and manufactured to pro-



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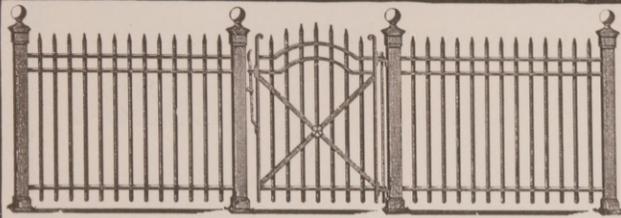
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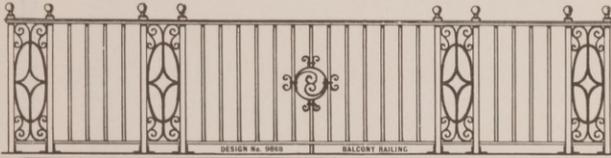
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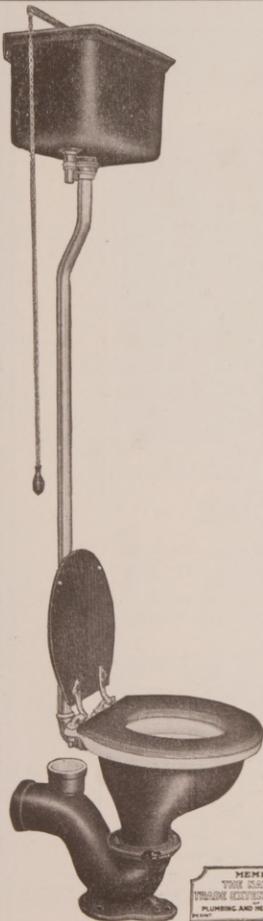


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vide ample strength for any reasonable use that it may be put to.

The gears and racks are heavy cold-rolled steel stampings; the rods, 1/4" x 5/8" steel bar; the heads, special alloy, aluminum die castings of high strength and lasting wearing qualities; the handle, heavy steel stamping, shaped to withstand beading or breaking; case, case plate, keeper-plates and brackets, stampings of proper dimensions; keeper-rolls and pins, brass to prevent corrosion; screws of proper size.

Stop notches are upset on the case plates, to stop the racks against, when the bolt is in extended position. The set-screws, which hold the heads on the rods, are case-hardened, cup point. A bracket is provided, at each end, for the heads to slide in, and to relieve the rods from bending-pressure. All parts, which are not made of non-corrosive material, are sherardized and japanned. Ample strength is thus provided, without excessive weight and bulkiness.

Care in manufacturing, plus rigid inspection, are combined to make the ARTISAN Bolt the true product of an artisan.

See our advertisement facing back inside cover page in this issue.

To the Progressive Architect.

Dear Sir:

Under the present demand for conservation and increased efficiency, it is imperative that the Architect eliminate the Cloak Room and install Practical Ventilated School Room Wardrobes, thereby saving at least 15% in time and cost of construction, as well as space, fuel and upkeep, and at the same time provide the most efficient convenience for the pupils under the direct supervision of the teacher.

Wardrobes with hinged doors that swing into the rooms are improvident of space and interfere with the use of the adjoining compartment. Doors provided with tracks, guides or rollers are hard to operate, noisy, and in case of settlement or shrinking, swelling or warping of the wood, stick and bind, putting them out of commission. The DEAD FALL DOOR should be considered criminal. It is a constant menace when raised and is then out of the reach of the smaller pupils.

The Evans Vanishing Door Wardrobe is the ONE PRACTICAL to install, in which no objection can be found. The doors cannot stick or bind, as they are hung on double pivoted arms top and bottom, and close against Felt instead of between Jambs. They are not affected by settlement or any movement of the wood. There is nothing about them to wear out or get out of order. The doors move easily, silently, and require no additional floor space. The Sanitary Ventilation is right. They are correctly designed and properly built.

Shelby Drawer Pulls

Drawer Pulls are one of the many lines of Builders Hardware manufactured by The "Shelby Spring Hinge Company."



Crescent



Oval



Square Back

Our pulls are stamped from wrought steel, brass or bronze metal and finished to match all Builders Hardware Finishes.

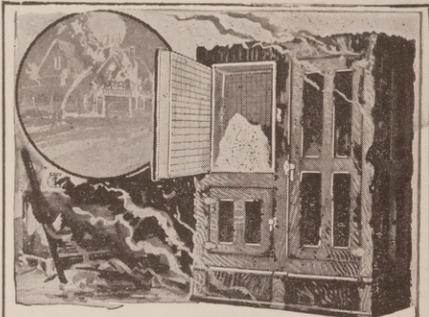
Write *today* for catalogue describing this and other lines of Builders Hardware.



Beveled

The Shelby Spring Hinge Co.

Shelby, Ohio, U. S. A.



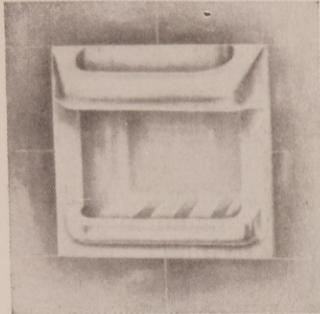
The Ice That Went Through Fire

An Iowa building recently burned to the ground. Two days later a charred Herrick Refrigerator was dug out of the ruins. It still contained ice, and the food contents were in perfect condition—Saved by Herrick 5-Point Mineral Wool Insulation.

HERRICK
DRY AIR SYSTEM
REFRIGERATOR

A refrigerator that can defy a raging fire can protect ice and food against any weather conditions. Ask for full details about Herrick insulation and 26 other extra-value features. Name of dealer and booklet free.

The Herrick Refrigerator Company
River St., Waterloo, Iowa
Outside Icing Refrigerators in Many Styles



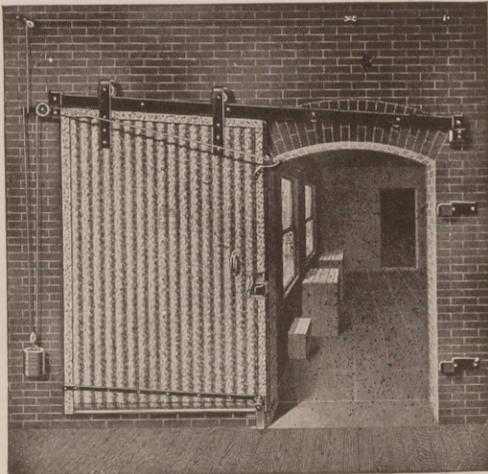
ALL WHITE
RIGHT
TRADE MARK



2 PROJECTING LINES AND A RECESS LINE

Our Fixtures are the finished Products of 12 years experience, exclusively devoted to the manufacture of Bath Room accessories, and manufactured under our own roof.
A trained organization striving for perfection. Send for catalogue.
BAY RIDGE SPECIALTIES CO., INC., 682-92 Stokes Ave., TRENTON, N. J.

M & E "ALMETL" FIRE DOORS & SHUTTERS



are fully approved by the Underwriters Laboratories; the Associated Factory Mutual Laboratories; the Southeastern Underwriters' Association, and recommended by Fire Prevention Authorities.

They are built along the lines of correct engineering principles and embody every known feature for effective resistance against fire. Their construction is entirely of non-combustible materials—so rigid and so sturdy they should easily last as long as the building itself. They are easy to operate and in all the best Fire Door investment procurable.

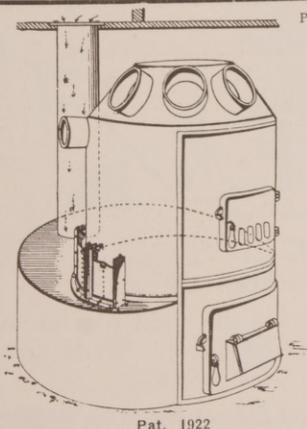


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Attachment applied to any make of Warm-Air Heater will make it 100% efficient.

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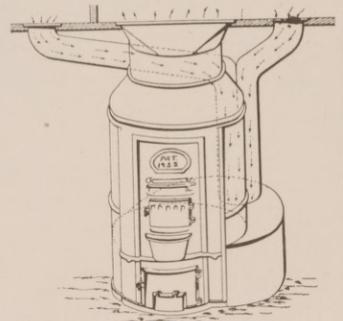
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The Architect is the Guardian of the Public Purse. To him is left the selection of Modern Methods, and his success is largely measured by the wisdom of his choice. The Evans Vanishing Door Wardrobe pleases Pupils and Public and will add a distinctive, progressive touch to any school. Whether the jobs are large or small, this wardrobe is of proportional importance to the public. It is now in general use as standard equipment. You can make no mistake in using it. I thank you.

See our ad in this issue.

Yours truly,

W. L. Evans.

P. S.—Should you favor us with Specifications, we would appreciate an advise as to the requirements, and if you will send us a list of the bidders we will send each quotations and a copy to your office.

Patent Device for Windows Is Invented.

A device that will lower the upper sash by means of the lower has been patented by Henry C. Trost, of the architectural firm of Trost & Trost, of El Paso.

Four parts of metal, all stamped from the same piece, constitute the device. To engage the upper sash the user pushes the lower one upwards until a clicking sound occurs, which is the contact made between the pendulum device on the lower sash and the beveled surface of the metal attachment on the upper.

Permits Full Opening.

The upper window can be lowered or raised any distance.

Mr. Trost said he realized the need of inventing a device that would eliminate the inconvenience of raising or lowering the upper sash. It can be adapted for all sizes of windows.

"Just Christian science," said Mr. Trost, explaining how he had worked it out after years of study. He threw many designs away before he was successful, he said. It will be manufactured soon.

Value of Construction In Leading Florida Cities.

| | November | Total to Dec. 1 |
|-----------------|--------------------|---------------------|
| Jacksonville | \$ 336,237 | \$ 5,327,553 |
| Miami | 191,400 | 4,366,944 |
| Miami Beach | 116,130 | 1,458,435 |
| St. Petersburg | 239,150 | 3,835,665 |
| Tampa | 187,265 | 2,695,540 |
| West Palm Beach | 91,310 | 2,423,269 |
| Palm Beach | 99,400 | 772,995 |
| Lakeland | 131,825 | 1,140,335 |
| Sanford | 389,285 | 846,500 |
| Pensacola | 34,898 | 430,940 |
| Total | \$1,969,893 | \$25,776,490 |

A NEW SASH CORD FASTENER

Superlative Grip Coupler

Lower Cost—Better Job—Less Cord—No Knots—Neater—Easily Attached—Perfect Adjustment.

Approved by the leading architects and builders. No change in groove or boring on sash necessary. Replaces the knots and saves labor.

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AGENTS WANTED IN THE LARGE CITIES

We

Manufacture

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Rounds and Squares

NEW BILLET STOCK

All Sizes— $\frac{1}{4}$ " to $1\frac{1}{4}$ "

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For that cool, non fading Bluegray side walk or stucco, ask your dealer for

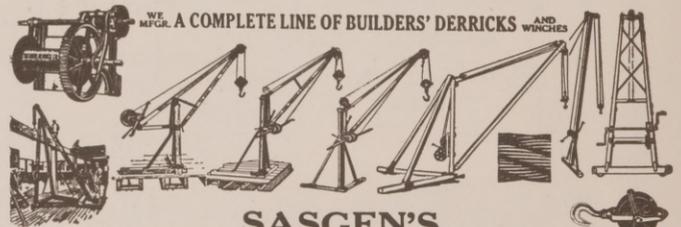
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SASGEN'S

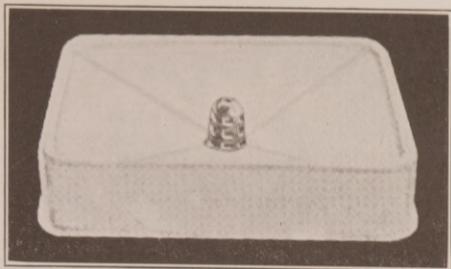
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Will show you how to get the right derrick at the right price, and get it quick. Write now for Circular No. 20.

SASGEN DERRICK CO., Grand & Albany Aves., CHICAGO

Canadian Office: 1 Wabash Avenue, Toronto.

New York Office: Grand Central Terminal.



B and S REFRIGERATOR DRIP PAN

It simply cannot overflow because of the high perforated strainer that will not clog even should dirt collect around sides.

Made in porcelain enameled pressed steel, and galvanized. All parts of pan slope to center. Can be set without tools when roughing is in. The strainer, tapped wide, compresses gasket against pipe and shoulder of pan.

This PAN was formerly sold through a selling agency but is now being handled by Plumbing Supply Houses or direct from us.

Manufactured by

ENTERPRISE MFG. CO.

815 Syms St.,

West Hoboken, N. J.

A HOT WATER SERVICE

that is within reach
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Wonderful, automatic gas water heater. Hot water on the instant at a saving of 50% of the usual cost.

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Jobbers!

*Write for prices
and details.*

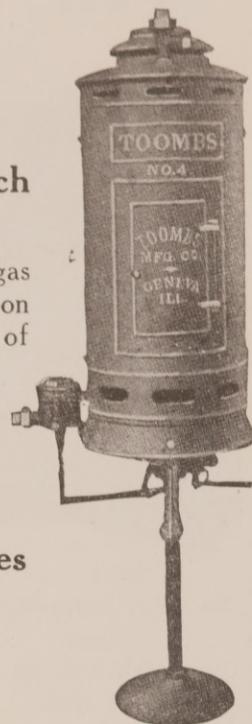
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Add a room

Save space

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THEY add a room by easily making available all attic space; they save the space usually taken up by a box stairway, because they fold up into the upper room, out of sight and out of the way; they cut the cost because they cost less. Nothing but a handsome wood ceiling panel shows from below when the stairway is not in use.

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Attention!

Get in LINE with all the Regular Contractors, Carpenters and Builders. What you need is an improved Schlueter Floor Surfer to scrape all your old and new floors.

Why surface by hand and suffer —Loss of Time—Money, and Contracts on account of unsatisfactory work, when you can purchase an IMPROVED SCHLUETER SURFACER — the machine with all troubles left out?

"The SCHLUETER Surfacers are worth their weight in gold" as one of our customers describes them, and he is right.

A few jobs and the machine has paid for itself. In a short time the people will know who and what you are; you get the

work because you have the TOOL. You advance to a higher grade and are a man of high class work, for that is just what the people of today demand.

We want to send you a SCHLUETER on Trial and let you see for yourself the quantity and quality of work it accomplishes.

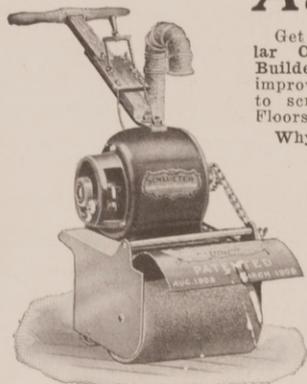
The Improved SCHLUETER Floor Surfer

will surface right up to the wall or baseboard without the use of Side Roller. Just the Machine you would want for surfacing all floors whether old or new. Perfect results guaranteed. More than 20,000 of our Machines now in use. Guaranteed against defect in material and workmanship for five years.

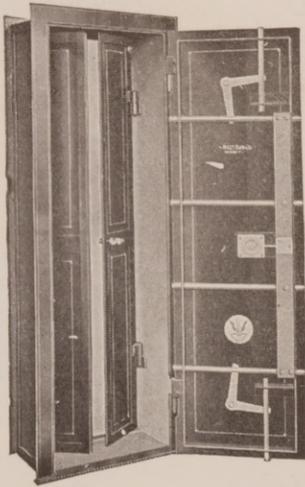
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MANUFACTURERS OF

Vault Fronts Vault Linings Grills and Gates
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No. 1AA Fireproof Vault
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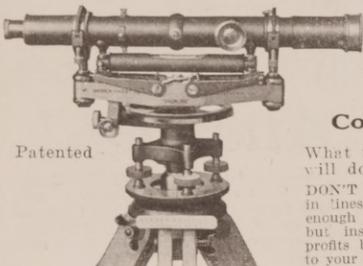


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This company maintains a department for co-operating with architects or clients in solving problems encountered in selecting and installing vaults.

Prices and estimates will be promptly furnished on application.

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What it is doing for others it will do for you.

DON'T WAIT until a costly mistake in lines or levels eats up more than enough of your profits to pay for it, but insure accuracy and safeguard profits by adding a "Sterling" Level to your equipment right now, TODAY.

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 We Repair and Adjust Transits and Levels of ALL makes.

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Lately, there have been a great many people going around selling formulas to the dealers, which are supposed to be good formulas for making MAGNESITE STUCCO. Beware of these, Mr. Dealer. Every contractor and architect knows good stucco and if he is "stung" once with his home made brand, he will, of course, turn his orders over to the dealer who handles a guaranteed stucco. It takes years of experience, as well as a broad chemical knowledge to manufacture good MAGNESITE STUCCO.

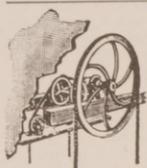
Watch your step Mr. Dealer.
 "A word to the wise is sufficient"

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 Magnesite for Stucco

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Elevators and Dumbwaiters.



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Made of 26-gauge galvanized iron, double seamed and solderless, over hard wood frames, and first-class hardware. Also manufacture standard covers, galvanized adjustable elbows, smoke pipe, and ash can.

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