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# WANTED....

# AN ARCHITECT

By

Ernest Ray Denmark, Editor.

SUPPOSE you should find the title of this editorial set out in bold, black face type among the Want Ads in your local newspaper tonight, you would probably rub your eyes and take a second look to be sure you were not seeing things. And, no doubt this advertisement would be answered by every architect in your community, including yourself.

Such an advertisement has, of course, not appeared and probably never will; yet, I am quite sure that the public would welcome some advice from the architectural profession at this time regarding the status of the building situation. There has been, as you know, a lot of publicity through the newspapers concerning the opportunity for wise investment in building but, so far, the public seems to have considered the information simply as more publicity in an effort to stimulate general business conditions. The problem represents a great opportunity for the architectural profession to step out and do the public a real service. It should be attacked in a concise and business-like manner with convincing facts and figures presented in an intelligent way. If this is done I believe it will greatly influence profitable investments.

This work cannot be successfully undertaken, if it is started with a selfish motive, rather should it represent an organized effort on the part of the profession in every community. The direct results to individuals will be forthcoming in the opportunity afforded by an increased volume of construction. Building materials and equipment are lower today than they have been in years and lower than they will be perhaps for some time to come. A study of prices reveal that the major items most closely affecting repairing or remodeling show savings as high as 25% over the same period last year. There are many buildings in every community which can be saved from obsolescence with but little cost based upon the present price of materials.

The local chapters of the A. I. A. in the South, the architectural clubs and other organizations in the profession should at this time make a complete study of the old buildings in each city and present their studies and recommendations to the owners. This information could be imparted through the mails or personally through an appointed representative from the organization sponsoring the investigation.

An opportunity for immediate and constructive action presents itself to the profession. Such a work would be a valuable investment in good will for the profession should it not actually bring financial returns.

TULSA BUILDING. TULSA, OKLA.
RUSH, ENDACOTT & GOFF, ARCHITECTS

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SOUTHERN
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*and* BUILDING NEWS

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# OFFICE BUILDING DESIGN

By

A LAYMAN

AN elderly English gentleman, a proud member of the older school of architects, sat crouched over his drawing board admiring with considerable satisfaction his completed study for the new Public Bath to be erected in the center of the town square, when his young assistant standing near by, but entirely unnoticed, moved over in front of the old man and remarked, "Sir, may I offer a little constructive criticism?" The Englishman lifted his eyes just enough to catch those of the boy and said, "Young man, do you know that the only time criticism is ever constructive is when you are propounding your thoughts to some one else, not when you are receiving it?"

As a layman I have no right to criticise you architects and will not even attempt to do so. At least let us understand each other. I do not believe more than a casual glance over the photographs to appear in this issue of *The Southern Architect*, and which you might have already gone over, is necessary to come to a fairly definite conclusion that there is considerable room for improvement in the design of office buildings in the South. The illustrations in this issue are quite representative of each section and each city in the Southern States from Oklahoma to Virginia and Florida to Missouri. The mirror is held up to you, presumably, in the hope that the picture you see will evoke some serious thought when next you are presented with a commission to do an office building, that is, if you are ever so fortunate to receive such a commission in these lean times.

An office building by the very nature of its function is a study in economics, and as such it should be considered by the designer. The plan then is the major item. It is the designer's opportunity as well as his limitation in carrying out his knowledge of æsthetic values. Unless the useful, economic and structural requirements are met satisfactorily, even the finest design values mean but naught in the eyes of the investor—your client. And unfortunately, sometime, it is better to keep in the good graces of clients than to produce a masterly design once and be talked about unkindly by even one client forever afterwards.

There remains only one thing further to say, and that is, take the exterior of your building, divide it up into the proper number of stories, make an arrangement of windows that is dictated by the renting and lighting conditions, and then proceed to make the resulting mass attractive, by one means or another. Whether the building happens to go horizontal or vertically I do not think makes the least amount of difference to the average man on the streets. If either is done well they will have their appeal to those of us who think perhaps we possess a little more than average appreciation for beauty whatever we happen to find it.

Personally, I am in sympathy with the new thought in design for commercial buildings. The day of the non-essential overhanging cornice should be no more, and ornament applied willy-nilly, as has been done in many of our finest buildings, should be given a rest. In the simple, truthful expression of the steel shaft and the possibilities for interesting masses lies the path towards which every designer should look with renewed interest. There is still an opportunity to effectively use the basis elements of our traditional styles, and I am not yet convinced that the most refined bits of ornament of the old order cannot be used with far more pleasing results than much of the garish, barbaric curley-cues which seem to be so popular with the extreme modernists.

I suppose it is a fact that the average person never lifts the eyes much more than two stories from the street level but, what about the view we have from our office windows? And, remember, the large majority of us spend better than three-fourths of every day inside office buildings. None of us are ever so busy that we do not have an opportunity to pause for a glance outside. There is nothing so shocking to our sensibilities of beauty as the view from our office windows. I believe you will agree with me that here is a criticism which is justifiable.

The personality of the building, its owner and tenants, has always to my mind been reflected in


STANDARD LIFE BUILDING, JACKSON, MISS.

N. W. OVERSTREET, ARCHITECT
JACKSON

DETAIL IN LOBBY

STANDARD LIFE BUILDING, JACKSON, MISS.

N. W. OVERSTREET, ARCHITECT

ENTRANCE DETAIL, SOUTHERN BELL TELEPHONE BUILDING, ATLANTA

the lobby. If it has been done in good taste I have every reason to expect to find in the offices up stairs men and women with some semblance of refinement; if it is ill designed and unkept I naturally expect to discover the opposite type of tenant. The designer should at least endeavor to sell his client on an attractive lobby as an economic investment. Stunting at this point is neither impressive or necessary.

Whether we travel up to the tenth, fifteenth or twentieth floor in an elevator cab of simple design or the most ornate, we are impressed with the speed at which we move, with the absolute perfection of the mechanical powers of the modern elevator and the smoothness of the ascending journey. But, what is the impression when we step out into the corridor at the floor called for? Here I think it would be a paying investment to incorporate at least some semblance of design. Isn't there some way to turn the cold plain walls of the corridors in all of our buildings into a more cheerful picture? Row on row of plain standardized doors with glaring printed names on each and every one; advertisements they are from "the skin you like to touch" to "steel rails and bars;" "Lydia E. Pinkham Compound" down through "No-Knox Gasoline." What a picture! Some days ago I had an occasion to call upon an architect friend of mine in a distant city in whose office I had never been. Going down the corridor in search of the number indicated on the register down stairs I suddenly found myself face to face with an old English door beautifully designed in solid walnut and there was a nicely polished brass name plate which read so and so architect. What a thrill! What a contrast to the usual office door? This little story might not go over so big with the "stock-door-boys" but I venture the assertion that our office corridors would appear a hundred per cent better if the idea were applied.

SOUTHERN BELL TELEPHONE BUILDING, ATLANTA, GEORGIA. MARYE, ALGER & VINOUR, ARCHITECTS, ATLANTA

## CONSTRUCTION DATA SHEET

Southern Bell Telephone Bldg., Atlanta, Ga.

Cubic Contents:

Present 6-story unit—2,308,000 cu. ft.
Ultimate 25-story unit—8,900,000 cu. ft., approximately

Structural Frame: Structural steel.
Structural Floor System: Two-way concrete slabs.
Fireproofing (Materials): Concrete.
Type of Heating System: Up feed vacuum return line system.
Type of Ventilators:

Supply and exhaust with centrifugal fans.
Dry filters and tempering stacks in supply.

Type of Elevators: Gearless traction—600′ per min.—car switch operated.
Type of Lighting: Direct lighting fixtures with enclosing globes.
Type of Radiators: Direct, cast iron.
Type of Plumbing Equipment:

Water supply through centrifugal pumps and house tanks.
Cast iron drainage piping. Vitreous china fixtures.

Type of Office Floors: Cement finish.
Type of Corridor Floors: Rubber tile.
Type of Office Walls (Structural Material): Hollow tile.
Type of Office Partitions: Hollow tile.
Type of Windows: Metal double hung and metal casement.
Type of Window Trim: Metal.
Type of Exterior Facing Material: Limestone.
Type of Doors (Exterior): Bronze and hollow ascaloy. (Office doors from corridors) Hollow steel. (Interior office doors) Hollow steel and oak. (Elevator doors) Hollow steel.

STERICK BUILDING, MEMPHIS, TENN. WYATT C. HEDRICK, ARCHITECT, FORT WORTH, TEXAS

## CONSTRUCTION DATA SHEET

Sterick Building, Memphis, Tenn.

Cubic Contents: 4,100,000 cu. ft.
Total Cost: $3,000,000.00.
Structural Frame: Steel frame.
Structural Floor System: Concrete joists.
Fireproofing (Materials): Gravel concrete.
Type of Heating System: Dunham differential system.
Type of Ventilation: Gravity and fans.
Type of Elevators: Otis high-speed, self-adjusting elevators.
Type of Lighting: Direct.
Type of Radiators: Corto radiators.
Type of Plumbing Equipment: Crane and Kohler.
Type of Office Floors: Terrazzo.
Type of Corridor Floors: Marble.
Type of Office Walls (Structural Material): Clay and gypsum tile.
Type of Office Partitions: Clay and gypsum tile.
Type of Windows: Campbell double hung.
Type of Window Trim: Metal stool, plaster jamb.
Type of Material for Spandrels: Cast stone.
Type of Exterior Facing Material: Cast stone, face brick and granite.
Type of Doors (Exterior): Bronze. (Office doors from corridors) Oak. (Interior office doors) Oak. (Elevator doors) Hollow metal and Benedict nickel on first floor.

PHILTOWER BUILDING, TULSA, OKLAHOMA. KEENE & SIMPSON, ARCHITECTS, ST. LOUIS, MO.

## CONSTRUCTION DATA SHEET

Philtower Building, Tulsa, Okla.

Cubic Contents: 2,575,000 cu. ft.
Total Cost: $1,800,000.00.
Structural Frame: Steel.
Structural Floor System: Reinforced concrete.
Fireproofing (Materials): Concrete.
Type of Heating System: Steam.
Type of Elevators: Electric.
Type of Radiators: Wall, located under windows.
Type of Office Floors: Terrazzo.
Type of Corridor Floors: Terrazzo.
Type of Office Walls (Structural Material): Brick and terra cotta.
Type of Office Partitions: Tile.
Type of Windows: Metal.
Type of Window Trim: Plaster jambs, marble stools.
Type of Exterior Facing Material: Limestone, brick and terra cotta.
Type of Doors (Exterior): Bronze. (Office doors from corridors) Wood and glass. (Interior office doors) Wood. (Elevator doors) hollow metal.

CENTRAL NATIONAL BANK, RICHMOND, VIRGINIA. JOHN EBERSON AND CARNEAL, JOHNSTON & WRIGHT, ASSOCIATED ARCHITECTS

## CONSTRUCTION DATA SHEET

Central National Bank Building, Richmond, Va.

Cubic Contents: 1,600,000 cu. ft.
Structural Frame: Steel.
Structural Floor System: Permanent steel dome concrete system.
Fireproofing (Materials): Gypsum and hard tile.
Type of Heating System: Two-pipe steam. Orifice valves. Graduated control.
Type of Ventilation: Fan supply and exhaust. Basement and main bank room.
Type of Elevators: Otis, 800′ per min. Signal control.
Type of Lighting: Bank, indirect. Offices, direct.
Type of Radiators: Fantom, under window stools.
Type of Plumbing Equipment: Standard San. Mfg. Co.
Type of Office Floors: Johns-Manville Mastic.
Type of Corridor Floors: Rubber.
Type of Office Walls (Structural Material): Brick.
Type of Office Partitions: Gypsum.
Type of Windows: Metal, Campbell.
Type of Window Trim: Metal.
Type of Material for Spandrels: Brick, black.
Type of Exterior Facing Material: { Granite base. Limestone four stories. Brick above.

Type of Doors (Exterior): Bronze. (Office doors from corridors) Metal. (Interior office doors) Metal and wood. (Elevator doors) Bronze.

WATTS BUILDING, BIRMINGHAM, ALA. WARREN, KNIGHT & DAVIS, ARCHITECTS, BIRMINGHAM

## CONSTRUCTION DATA SHEET

Watts Building, Birmingham, Ala.

Cubic Contents: 1,044,419 cu. ft.
Total Cost: $788,814.00.
Structural Frame: Steel frame.
Structural Floor System: "Toupet" tile with concrete fill.
Fireproofing (Materials): Concrete around structural steel.
Type of Heating System: Two-pipe vapor steam, down feed.
Type of Ventilation: None in offices, etc. Rotary venilators for (elevator) machine room. Exhaust fan for basement.
Type of Elevators: Four Otis unit multi-voltage, speed 700′ 0″ per minute. Tyler special design metyl-wood cabs.
Type of Lighting: Direct, ceiling units.
Type of Radiators: Five-tube radiators, legless. Hung on brackets from window stool.
Type of Plumbing Equipment: Wall hung water closets, pedestal urinals. Wall hung vitreous lavatories. Ice water. Wall hung drinking founts in corridors.
Type of Office Floors: Linoleum on cement.
Type of Corridor Floors: Marble floor. Travertine marble wainscot to ceiling. No borrowed lights in corridor walls.
Type of Office Walls (Structural Material): Brick.
Type of Office Partitions: Three-inch hollow tile.
Type of Windows: Campbells, steel double hung, weather stripped.
Type of Window Trim: Steel window stools, plaster jambs and heads.
Type of Material for Spandrels: Terra cotta and brick.
Type of Exterior Facing Material: Terra cotta two street fronts. Other two sides face brick.

Type of Doors (Exterior): Hollow bronze. (Office doors from corridors) Birch veneer, single glass panel. (Interior office doors) Birch veneer, single wood panel. (Elevator Doors) Tyler hollow bronze, special design 1st floor. Tyler hollow metal, single panel, enamel baked, typical floors.

ATLANTA CITY HALL, ATLANTA, GEORGIA
G. LLOYD PREACHER & CO., ARCHITECTS, ATLANTA

PLAZA BUILDING, ST. LOUIS, MO.
LAURENCE O. SCHOPP AND EDWIN J. BAUMANN, ARCHITECTS, ST. LOUIS

DADE COUNTY COURT HOUSE, MIAMI, FLORIDA
A. TEN EYCK BROWN, ARCHITECT, ATLANTA, GA.
AUGUST GEIGER, MIAMI, ASSOCIATE ARCHITECT

MILAN BUILDING, SAN ANTONIO, TEXAS
GEORGE WILLIS, ARCHITECT, SAN ANTONIO

## CONSTRUCTION DATA SHEET

Milan Building, San Antonio, Texas

Cubic Contents: 2,776,330 cu. ft.
Total Cost: $1,347,159.
Structural Frame: Reinforced concrete for entire building.
Structural Floor System: Reinforced concrete for entire building.

Type of Heating System: Full air conditioned thruout—circulation thru ducts. Heating and refrigeration plants in basement. Air conditioning units in alternate stories. Installed by Carrier Engineering Corp.

Type of Elevators: Automatic. Floor leveling. (Kasstner-Hecht.)
Type of Lighting: Direct. (Exterior flood lighting.)
Type of Radiators: Fintype in air conditioning units.

Type of Plumbing Equipment: Toilet rooms midway between floors alternating for men and women. China fixtures.

Type of Office Floors: Cork.
Type of Corridor Floors: Cork.

Type of Office Walls (Structural Material): Exterior masonry. Interior 2¼″ solid metal lath and plaster.

Type of Office Partitions: Wood.
Type of Windows: Brown (steel) center hinged, felt weather strips, plate gl.
Type of Window Trim: Plaster jambs and heads. Cast stone sills.

Type of Exterior Facing Material: Light-color blended rough brick. Cast stone trim. Polished granite pier bases.

Type of Doors (Exterior): Walnut, plate glass. (Office doors from corridors) Single panel, tapestry glass, oak wood doors and frames, ventilating louver at bottom. (Interior communicating office doors) Single panel wood (oak). (Elevator doors) Air operating, solid panels. Bronze in first story, steel elsewhere. Center opening, flush hatch.


JACKSON TOWER BUILDING, JACKSON, MISSISSIPPI. CLAUDE H. LINDSLEY, ARCHITECT, JACKSON

## CONSTRUCTION DATA SHEET

Jackson Tower Building, Jackson, Miss.

Cubic Contents: 1,172,510 cu. ft.
Total Cost: $625,000.00.
Structural Frame: Reinforced concrete.
Structural Floor System: Simple concrete beam and slab.
Type of Heating System: Dunham differential steam.
Type of Ventilation: None required.
Type of Elevators: Westinghouse signal control.
Type of Lighting: Direct.
Type of Radiators: Cast iron.
Type of Plumbing Equipment: Crane Co.
Type of Office Floors: Linoleum on cement.
Type of Corridor Floors: Terrazzo.
Type of Office Walls (Structural Material): Gypsum tile.
Type of Office Partitions: Wood removable partitions.
Type of Windows: Wood double hung.
Type of Window Trim: Wood casing.
Type of Material for Spandrels: Brick.
Type of Exterior Facing Material: Brick and stone.
Type of Doors (Exterior): Wood. (Office doors from corridor) Wood, aurora glass. (Interior office doors) Wood, solid panel. (Elevator doors) Tyler Co.

JACKSON BUILDING, ASHEVILLE, N. C. RONALD GREENE, ARCHITECT ASHEVILLE

## CONSTRUCTION DATA SHEET

Jackson Building, Asheville, North Carolina

Cubic Contents: 300,000 cu. ft., approximate.
Structural Frame: Steel.
Structural Floor System: Pressed steel joists, concrete slab.
Fireproofing (Materials): Tile and concrete.
Type of Heating System: Warren Webster Vapor Vacuum.
Type of Elevators: Otis.
Type of Lighting: Overhead semi-indirect.
Type of Radiators: Corto.
Type of Plumbing Equipment: Trenton potteries.
Type of Office Floors: Thomas moulding composition.
Type of Corridor Floors: Thomas moulding composition.
Type of Office Walls (Structural Material): Gypsum, no structural
Type of Office Partitions: Gypsum.
Type of Windows: Steel sash.
Type of Window Trim: None for offices, first floor walnut and marble.
Type of Material for Spandrels: Brick.
Type of Exterior Facing Material: Light buff brick.
Type of Doors (Exterior): Oak. (Office doors from corridors) Birch. (Elevator doors) Metal.


FIDELITY NATIONAL BANK, KANSAS CITY, MISSOURI. HOIT, PRICE & BARNES, ARCHITECTS KANSAS CITY

KANSAS CITY POWER & LIGHT BLDG., KANSAS CITY, MISSOURI. HOIT, PRICE & BARNES, ARCHITECTS, KANSAS CITY

# SOME ECONOMIC CONSIDERATIONS IN OFFICE BUILDING PLANNING

By

RICHARD W. ALGER, A. I. A.

OKLAHOMA NATURAL GAS BUILDING, TULSA
A. M. ATKINSON, ARCHITECT

THE first—and last—purpose of the Office Building is to produce income for its Owner. The most income for the least expenditure, is the ideal. This should be the objective ever before the eyes of the architect, but does not mean inferior materials, shoddy labor or barren design, any one of which scales down the possible return.

The rental secured must net the Owner an attractive income on the total investment in both land and building, and while the architect has no control over the value of the land, the value of the land has a very direct control over the character of the building, and the success of the venture. A building seldom appreciates in value, but any increase in value of the property as a whole, is almost always due to the enhancement in value of the land.

With this in mind, it is conceivable, of course, that a poorly planned, or extravagantly designed building might produce a profitable income owing to its peculiarly strategic location—but that is no credit to its designer. A well planned, economically constructed building on the same site, would have added materially to the net income.

One of the first considerations to confront the Owner and his architect, will be that of height. From an income this is solely to be decided on the basis of land value; providing, of course, that there are no extraordinary foundation problems, the solving of which would add inordinate cost.

It is true that in some localities, especially in small "boom" centers, buildings of excessive height for the locality are built for their advertising value; but this seldom proves a profitable investment for more than a year or two, and the architect should certainly not advise it.

The writer has in mind one city that just barely emerged from the medium sized town class no longer than five years ago, that began its progress by the erection of a sixteen-story office building at that time. It now has no less than eight or nine such buildings widely scattered over the business district, and surrounded by blocks of two and three-story structures. As a result, it is doubtful if any of these are paying investments, and before the land values justify them, they will have depreciated to such an extent that the rental scale will be greatly lowered, or they will have become obsolete.

Exterior design should, of course, be such as to permit of the maxima of light, air and flexibility of space. Simplicity should be the key-note. Excellence in design does not necessarily mean the ornate. Excellence and beauty have a very distinct income producing power, though the Owner may not always realize it.

THE SLATTERY BUILDING, SHREVEPORT, LA.
MANN & STERN, ARCHITECTS

101 MARIETTA STREET, ATLANTA, GA.
BURGE & STEVENS, ARCHITECTS

PETROLIUM BUILDING, FORT WORTH, TEXAS
WYATT C. HEDRICK, ARCHITECT

MEMPHIS COTTON EXCHANGE, MEMPHIS, TENN.
MANN & BROADWELL, ARCHITECTS

MERCHANTS NATIONAL BANK, MOBILE, ALA.
WARREN, KNIGHT & DAVIS, ARCHITECTS
OWEN & CLARK, ASSOCIATE ARCHITECTS


BELL TELEPHONE BUILDING, ST. LOUIS, MO.
MAURAN, RUSSELL & CROWELL, ARCHITECTS
I. R. TIMLIN, ASSOCIATE ARCHITECT


MEDICAL ARTS BUILDING, SHREVEPORT, LA.
FLINT & BROAD, ARCHITECTS

SOUTHERN BELL TELEPHONE, ATLANTA, GA.
MAYRE, ALGER & VINOUR, ARCHITECTS

Such obvious matters as the size of individual offices, widths of corridors, location of stairways, number and location of elevators, etc., are generally well understood by the architect, and no general rules can be laid down to cover individual cases.

Generally speaking, the larger the city, the smaller the office unit; and generally speaking it has been found that space units deeper than eighteen or twenty feet from outside wall to corridor wall seldom rent well. The units should be so planned as to be very flexible as to possible combinations of space.

Stairways have ceased to be of importance as far as their effect on revenue production is concerned, except in taking up space that otherwise might be rented. The building codes specify requirements as to number and widths; hence the minimum that will pass the building department is usually all that is necessary, except in cases where special service stairs are required.

Elevators, however, are another matter, and this problem should be studied thoroughly from the beginning. In fact the rapid handling of traffic is one of the fundamental considerations in office building design, and snap judgment as to the location, number and type of elevators, cannot be taken without grave danger of extremely unsatisfactory results.

In selecting materials, the greatest consideration should be given to the cost of maintenance. Even though the initial cost is greater, in many instances, when the cost of upkeep over a period of years is figured, the apparently more expensive material will be the cheaper.

The character of the interior finish is largely dependent on the kind of occupancy to be striven for. Protection from the weather, light, heat and the necessary conveniences, even with the minimum amount of embellishment, will attract a certain class of tenantry on account of the thus possible low rent. Any elaboration above this minimum will cause an increase in rental rate, and a corresponding rise in the standard of occupancy.

Therefore, in selecting the character of finish inside, and the kinds of materials, the architect should not try to force marble and other expensive items, unless the grade of occupancy from which the building will secure its revenue demands, and is willing to pay for it. On the other hand, it is just as poor judgment to design cheaply for the use of expensive tenantry, for such a building will lose caste as soon as more satisfactory space can be

COLUMBIA MUTUAL LIFE INSURANCE BUILDING, MEMPHIS, TENN.
I. ALBERT BAUM, ARCHITECT

found, even though filled with desirable renters at first.

Probably no single spot in an office building is a truer indicaiton of its character than the toilet room. Such rooms should be designed to allow proper ventilation, and if possible with direct outside light, and should be finished in materials that will stand abuse, and permit of easy and thorough cleaning.

So much for the clothing of the building inside and out, which must in a large sense act as a sort of "silent salesman" for the office space. After the minimum requirements are met, the embellishment should be carried only so far as will show a profitable return to the owner.

Obsolescence is growing daily in importance as a factor in determining the profitable life of an office building. Changes in mode of living, travel and communication are taking place so rapidly that what is the last word now, may be unusable a few years hence. We all know of excellent buildings built twenty years ago that are unprofitable today, not because of depreciation, but, for the reason that they are obsolete.

Therefore, there may be merit in the intelligent selection of materials on the basis of their depreciated condition say twenty years after installation, and that no great premium be paid for materials that show a usable life for much longer than that. Particularly is this the case for those hidden materials that make up so much of the mechanical and electrical equipment.

To sum up then, the architect should approach the office building problem with the determination to give the Owner the best medium possible to produce income. The plan and the design should be such as to invite the tenant, and make him comfortable. Bleak, forbidding or uninteresting exteriors do react against rentability, and therefore excellence of design is of great assistance toward filling office space. But the sacrifice of usable space to secure an effect on the exterior, is inexcusable.

Any expenditures made beyond the point of profitable return, should be made only at the Owner's express desire, and only after the architect has made him fully acquainted with the facts.

In office building planning, the architect becomes more of a business adviser to his client than probably in any other branch of his profession.

Many a building that has been launched as a monument to a man, has wound up as a market for the grave of a defunct investment.

BALTIMORE TRUST BUILDING
BALTIMORE. TAYLOR & FISHER.
SMITH & MAY. ARCHITECTS

MEDICAL ARTS BUILDING, FORT WORTH, TEXAS
WYATT C. HEDRICK, ARCHITECT

MERCHANTS BANK BUILDING, JACKSON, MISS.
WYATT C. HEDRICK, ARCHITECT

PROFESSIONAL BUILDING, KANSAS CITY, MO.
GEORGE E. McINTYRE, ARCHITECT

STATE OFFICE BUILDING, RICHMOND, VA.
CARNEAL & JOHNSTON, ARCHITECTS

MEDICAL ARTS BUILDING, KNOXVILLE, TENN.
MANLEY & YOUNG, ARCHITECTS

SOUTHERN RAILWAY BUILDING, WASHINGTON, D. C.
WADDY B. WOOD, ARCHITECT

TOWER BUILDING, WASHINGTON, D. C.
ROBERT S. BERESFORD, ARCHITECT

MASONIC TEMPLE BUILDING, NEW ORLEANS, LA.
SAM STONE, JR., ARCHITECT

B. H. WITHERSPOON

# WHAT IS WRONG WITH INSPECTION SERVICE?

By

TYLER STEWART ROGERS

*An Interview With B. H. Witherspoon, President, Pittsburgh Testing Laboratory*

THE recent organization of the National Engineering Inspection Association emphasizes a phase of architectural and contracting service which has received scant consideration during past years. This is the subject of safeguarding large building projects through the use of independent inspections, particularly as they apply to steel work, concrete, plaster and similar important phases of the structure.

If one examines the general conditions of almost any set of specifications for important buildings there will almost invariably be found clauses which require independent inspection or testing of the more important structural materials. It is, in fact, an inherent habit for architects and structural engineers to call for such service, to make certain that the important functioning parts of the building will meet the loads and stresses for which they have been designed. Another reason is that through such inspection and testing services expensive delays or failures incident to defective materials or workmanship can be avoided. Almost every architect has experienced some of the misfortune incident to the delivery of defective materials or to faulty construction.

The interesting point is that year after year the same phrasings and clauses seem to have been carried through the requirements for inspection services to a point where this is a habit, and as such do not usually receive proper consideration. In the first place, the inspection requirement is placed on the general contractor by the architect and as a rule the architect does not give very serious consideration as to who should carry out the independent inspection and testing work. Thus the way has been opened to allow faulty and inadequate inspection; in many instances carried out by organizations which are not really competent to do this sort of work. As a matter of general practice the contractor takes bids on services of this nature and his natural tendency would be to buy the service at the lowest possible cost, because it is a part of the cost in his general contract and also perhaps the human tendency would be to buy the most lenient type of independent inspection and testing service in order to save a too rigid supervision.

You will find here a situation which calls for some serious thought on the part of the architect. The probable reason why the inspection service is called for within the general contract is that it is often troublesome to make the owner understand the value of such service and to pay for it separately. It has, therefore, been found easier to bury this requirement within the clauses of the general contract and this is probably a satisfactory manner of handling the situation, except that the architect generally does not give sufficiently close attention to the organization which carries out the work and its qualifications for doing the job properly. This independent inspection and testing service, if the architect would only realize it, is vitally important in many instances to his own reputation, as well as to the owner's investment. The architect should control this service by making a study of the good inspection engineering organizations and testing laboratories and including one or more of them in his specifications as a rigid requirement, so that he can know that the project is not undermined through the possible weaknesses of careless and inefficient service of this nature.

When the architect undertakes an important building project he is certainly morally responsible and often responsible under the law for the safety

*In the residence of Mr. Oscar Webber, 619 Lake Shore Drive, Detroit, Michigan, complete telephone convenience is provided by fourteen telephone outlets, including two in the garage and one on the third floor. Built-in conduit carries the wiring for the telephone system which includes intercommunicating features.* LEONARD WILLEKE, Architect, *Detroit.*

# Planning in advance for telephones

## *contributes to the greater convenience and efficiency of the modern home*

ARCHITECTS today generally recognize the desirability of providing for telephone arrangements in their plans for new and remodeled residences. In this way the particular needs of each individual family can be fully met.

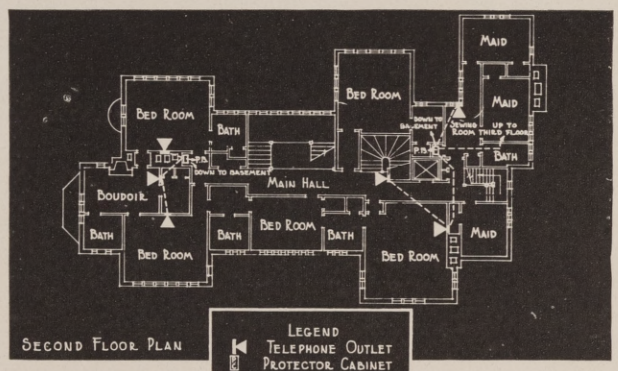
Telephone outlets are made available not only in all the important rooms, but also in particularly convenient locations in each room.

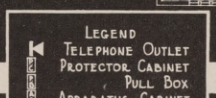
Conduit is specified within the walls and floors, furnishing telephone outlets at the locations selected. This results in improved appearance by concealing the telephone wiring, and guards against certain types of service interruptions.

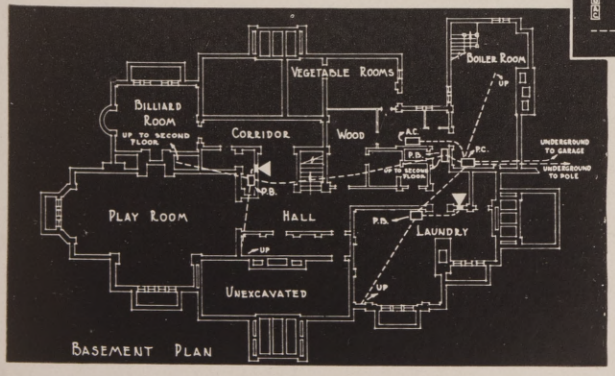
The position and number of these outlets need not necessarily be limited to immediate requirements, as it is often advisable to provide for possible rearrangement or expansion of the telephone service in the future.

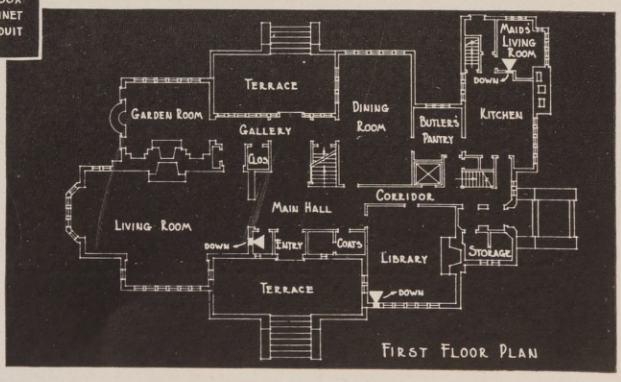
Your local Bell Company will gladly place important data about household communication at your disposal, as well as arrange for conferences between its representatives, your clients and yourself.

There is no charge. Just call the Business Office.



and security of the structure, both in design and workmanship. His responsibility is direct to the owner that such structures will be built exactly in accordance with the specifications which have been approved by the owner who in turn expects the architect to see that they are rigidly exercised.

All responsible architects know the carefully detailed supervision which is given to a job in order that it may be carried out in the best possible manner for the owner's interest. But architects and their field superintendents also know that it is not within their power or function to technically supervise the structural members and the basic materials which are delivered on the job to meet the requirements of the specifications. The architect cannot tell that the cement or plaster which is being supplied to the job meets the established standards which are part of the specifications, unless properly conducted tests carried out through responsible organizations give him this information. The architect cannot tell whether the steel work, reinforcing parts, etc., are properly manufactured, using the right materials. Here again the inspection service must go back to the point of production in the fabricating shops and on the job itself to provide insurance that the work is being properly done, using the right materials. In the very nature of the average relationship the architect cannot depend entirely on the contractor to carry out this function because he in turn is not equipped to do it.

Therefore, out of this situation there have been developed a number of independent inspection and testing services made up of groups of inspection engineers and of carefully organized testing laboratories. These organizations are created for the purpose of selling an independent and unbiased service which will make examination of materials delivered to the job and of the workmanship and design under which these materials are erected, so that they can report to the architect, contractor and the owner any actual disparities or deviations from the terms and qualifications of the specifications and of good structural practice. Each of the many independent inspection organizations are theoretically supposed to be capable, unbiased and efficient, but considering the human element; the elements of reputation, experience and the qualifications of the men who comprise the various staffs, it is but natural that just as there are poor, mediocre and good units in other service divisions of the construction industry, so there is a variation in the type of service and service organizations to be found in the field of independent and testing services.

When the whole subject is analyzed it is easily recognized that the independent inspection service is part of the architect's own responsibility and in effect the inspection service organization becomes for the time being a part of the architect's function. Strange to say, however, architects have for the most part fallen into a careless habit of leaving the selection and application of this important service largely to the contractor, part of whose work is actually subject to independent supervision. There is, of course, a difference in the price which is paid for this service and it is almost axiomatic that the cheaper the price the more inadequate the service will be. When buying independent inspection service it should be considered in the same manner that materials are purchased and if it is necessary to pay a little more for the services of organizations whose reputations are beyond criticism and whose knowledge and organized ability has been recognized and tested by time, this cost will be saved many times over in the additional values which are built into the structure.

Architects might just as well realize now that many abuses and unsound practices are to be found in this field of independent inspection. This condition is primarily the fault of the architect and one which he can easily remedy. What is the use of carefully safeguarding a building through specifications and then not carrying through to the point of knowing that the materials and workmanship specified are correct in their technical details and actual qualities? It, therefore, becomes obvious that in some manner, however tactful, the architect should control this situation without recourse and that preferably the cost of such service should be so arranged with the contractor that he cannot profit through the use of cheap services of this nature or a complacent service carelessly administered, which is the worst practice in existence in this field today.

The architect who becomes interested in this subject, and no architect can afford to ignore it, naturally would like to know how to safeguard the situation. It seems that the general practice now is to require independent inspection service on certain parts of the job and certain types of materials, such service to be paid for by the contractor and rendered by organizations supposedly approved by the architect. The contractor obtains bids from various inspection organizations and takes his recommendation to the architect which too often is given approval without knowledge of the qualifications of the inspection service involved. By such an action he immediately breaks down the safeguards which the inspection clause tends to erect and from that minute he is weakening his own position of service to the owner. The money which is spent under this situation is probably wasted, at least it has no provable value.

There are two or three ways for the architect to

carry out the purchasing of inspection service. It is, of course, most desirable if the architect or engineer could set up a separate fund and purchase inspection service independent of the contractor. Where it seems advisable to keep the cost of the inspection service within the general contract figures, so that it will not appear as an extra on the job, the general contract clause should be so written that the architect or engineer will approve the contractor's selection of an inspection agency. This means that architects and engineers should familiarize themselves with the leading organizations of this type and should call the representatives of the inspection service in for discussion before making a final decision, either as to the names of organizations which they will put into the clause or before approving the contractor's recommendation. It is, of course, preferable under this method of operating to have a definite sum allowed by the architect or engineer for the various services required and to create an agreement that any savings effected below such estimates should revert to the credit of the owner and that costs above the allowance as approved by the architect or engineer should be paid by the owner.

The standard specifications as developed by the New York Building Congress recognized this situation as shown by the following excerpts:

"When so specified under Part A of Trade Divisions, all cement for use on the work shall be tested before being accepted for use by a competent testing laboratory approved by the architect. The cost of such tests shall be paid out of the cash allowance approved in Part A of Trade Divisions."

And in another place, "Where, under Part A, special tests of materials furnished for work in this Division are specified, this contractor shall provide in his estimate the sums stated under Part A. These sums will be expended at the architect's discretion; any unexpended balance shall revert to the owner. All such tests shall be made in accordance with the standard method of test covering the particular material under consideration of the American Society for Testing Materials or of the Purchase Specifications for Concrete Materials of the American Concrete Institute."

It must be realized that the suggestions in this article do not imply in any sense that the average contractor desires to control inspection service nor to deliberately cheapen his job through the use of sub-standard materials or workmanship. It was found to the contrary that many of the better contractors select the very best inspection laboratories available, provided the allowance for such service is anywhere within reason. It is quite apparent that the proper type of inspection service will help materially in reducing delays which are involved either by the necessity of returning defective materials or tearing out work which for some reason is not up to requirements. For instance, there have been many cases of defective concrete work or defective plastering resulting from the use of improper aggregates or other constituent materials. The time element is of tremendous importance on the average large building job because every day may cost thousands of dollars in interest and delayed earning power of the structure. Therefore, delays even of short periods might cost more than the entire inspection service and it is just as much to the benefit of the contractor as to that of the owner to prevent these delays. Similarly the manufacturer of materials of good quality is helped rather than hindered by the right kind of inspection service and the job moves more smoothly for all concerned when adequate inspection service is applied.

It must be admitted that because of the careless attitude of many architects and contractors, inspection service has not held its proper important position in the construction industry. As a result it has in many cases fallen into disrepute and it is particularly unfortunate that it has so often been placed on a price competition basis. Inspection service should no more be subject to cut rate competition than should architectural or engineering service. It is either worth the reasonable fees charged or it is not worth employment. Just as the services of an architect or an engineer have been recognized as having standard values, provided they are carried out by competent men, so the competent inspection engineers and testing laboratories should be recognized in a fair manner, in accordance with the contribution of service which they are able to render. Naturally an inspection organization which enjoys a sound reputation, and does its job thoroughly, cannot compete with some fly-by-night cut rate type of organization which profits through its own inadequacy at the expense of the owner's pocketbook and the reputation of the architect and engineer. It is, therefore, suggested that architects make a brief study of the better inspections organizations and testing laboratories so that they can determine for themselves those who might be expected to render, for the owner's benefit at least, as good a service as it is their own desire to render as professional advisers.

In discussing this matter with B. H. Witherspoon, President of the Pittsburgh Testing Laboratory, which is one of the leading independent inspection organizations, some interesting information was developed. It was his opinion, based on a very careful analysis made over a period of many months, that the awarding of inspection contracts indicated that in only 20% of the buildings under construction was the inspection awarded in such a manner as to insure adequate, independent service. From

## CITY HALL . . Duluth, Minn.

Thomas J. Shefchik, *Architect* . . Duluth, Minn.
Charles Foster, *Engineer* . . . . Duluth, Minn.
Carlson Brothers, *Contractors* . . Duluth, Minn.

VACUUM steam heating, with five ventilating units serving various separate departments are in this building. Johnson Dual Control with 120 thermostats and complete control on all ventilating units is installed.

Under this arrangement the departments that are used only during office hours are heated to seventy degrees during such periods of occupancy and are set back to fifty degrees during the time which they are not in use. The police department and signal departments are used twenty-four hours a day and are carried at normal temperatures at all times. In this particular case the steam is purchased and considerable saving results from the use of dual control apparatus.

The ventilating units for the court rooms, council rooms, jury rooms and general office are arranged in accordance with the best ventilation engineering practices, so that air will be supplied at a constant temperature and humidity.

A unique feature of this installation is the heating of the main entrance vestibules by fan units and an arrangement of control by which these vestibules are maintained at a constant temperature, and there is never a draft of cold air due to opening of outside doors, which is a prevalent condition in the ordinary building in Duluth where very severe climatic conditions occur.

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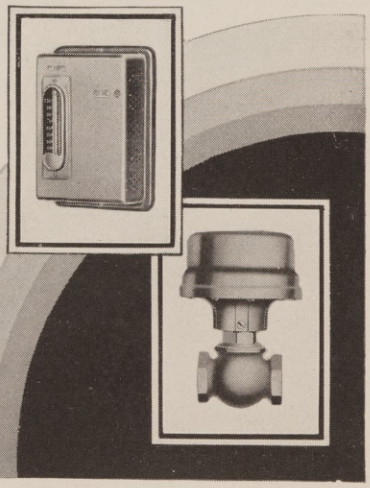

# JOHNSON HEAT AND HUMIDITY CONTROL

Mr. Witherspoon's point of view there seemed to be four factors involved as follows:

1. The inspection agency is employed by and works for the wrong client.
2. Qualifications, facilities and results of inspecting agency are not thoroughly investigated and considered.
3. Inspection service is considered a commodity instead of a professional service and bought on a price and not on a performance basis.
4. Inspection service is too frequently considered a necessary evil instead of a definite necessity.

The facts presented in this article constitute a startling indictment of present performance in the safeguarding of structural values, of the architect's and engineer's reputation and the owner's pocketbook.

If independent inspection is properly employed it should go far toward securing better buildings; safeguarding the interests of the architect and engineer; creating more satisfactory and more profitable operations for the contractor; and in general creating a mutually sound situation for all those interested in the building project, including even the manufacturer who wants to see his products properly used.

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## Literature Recommended for A. I. A. Files

### SOUND ABSORPTION TREATED IN LATE U. S. GYPSUM BOOKLET

THE speed with which modern business is conducted, together with the mechanical devices necessarily used, has created in most offices a noisy condition that takes a heavy toll of the energy and efficiency of executives and employees. Business executives and psychologists generally are agreed that excessive noise puts a penalty on business profit.

When noise is created in a room, it is rapidly reflected from one surface to another until its energy is completely dissipated. The plastered walls of the average room reflect about 97 per cent of the noise which strikes them.

The United States Gypsum Company, Chicago, hav recently issued a most instructive brochure, well illustrated, on Acoustone, the USG Acoustical Tile. The text informs us that when a room has been treated with Acoustone, from 50 to 65 per cent of the sound which strikes the tile is immediately absorbed and forever stilled. On each subsequent reflection of the noise to the tile surface an identical percentage of sound is dissipated. The time required to dissipate all the sound produced is thus greatly reduced. Sound, after its creation, does not continue in the room for an unnecessary length of time. Quiet results.

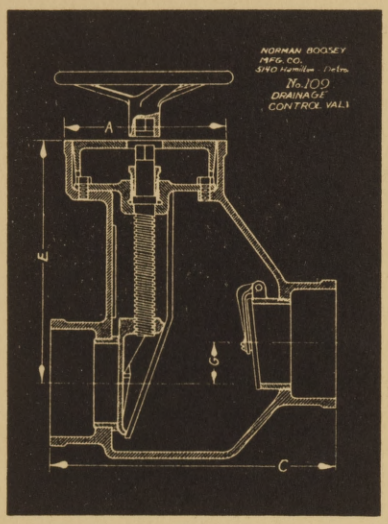
Among examples of the use of this product in the South are the following: State Capitol, Atlanta, by Edwards & Sayward, Architects; Brown & Williamson Company Building, Louisville, Ky., O. P. Ward, Architect; First National Bank, Port Arthur, Texas, Favrot & Livaudais, Architects; Department of Internal Revenue, Washington, D. C., by Supervising Architects Office; U. S. Veterans Bureau Hospital, Jefferson Barracks, Mo., by Supervising Architects Office. A copy of this brochure may be obtained by writing the U. S. Gypsum Company, Chicago, or from the district office nearest you.

### HISTORIC FLOORING ILLUSTRATED IN NEW BRUCE BROCHURE

CENTURIES ago in the "hand craft" era, when furniture and wood work of a home were the product of individual craftsmen, rough effects and interesting irregularities were not intentional, but the inevitable consequence of such handwork. Wood floors especially displayed the "casual" effects characteristic of the time. Solid oak planks, of necessity rough hewn, of ranging widths and lengths, determined by the size of available logs and the dimensions of the room, were traditional in the architecture of Renaissance Italy, France and Spain, Elizabethan England and Colonial America. These oak floors are still sound, mellowed and enriched by age.

The E. L. Bruce Company, Memphis, Tenn., have just issued a beautiful sixteen-page brochure, illustrating (several reproduced in full color) how today, solid floor planks as *crafted* by Bruce, bring this historic flooring into the modern environment. They conform to decorative requirements as to nicety of workmanship, but retain the "accidental" flavor which contributed much to the charm of the original floors. Random widths and lengths are now deliberately planned, and the floor may be laid out in any one of several authentic styles, to suit the taste of the owner. Varying widths the full length of the room; or varying widths and lengths combined; or for the more formal interior, equal widths. Beveled edges suggest the "cracks" ever present in early floors, which were certainly undesirable as cracks, but are of great decorative value, as defining individual boards, and emphasizing the random widths. Knots and unevenness of grain and color are more evident in oak planks of the so-called "lower grades," which differ from the higher grades only in such characteristics, not to any degree in strength or wearing qualities.

The illustrations and technical data make this brochure of exceptional value for the architect's file.

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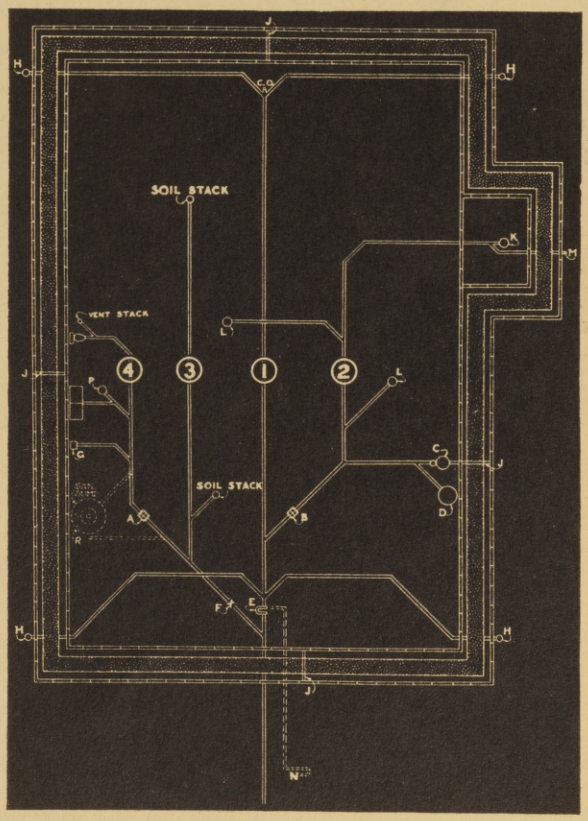
**Backwater Drainage Control Valve**

THROUGH the design and application of practical drainage systems, the engineer and plumber have reclaimed the basement. It is now being used for children's play rooms, gymnasiums, home theatres, hobby rooms, work shops, studies, offices and numerous other utility rooms.

The suggested drainage layout, shown below, illustrates a positive backwater drainage system that makes practical the use of the basement for any of these desirable purposes. It provides a method of keeping basements dry and odorless, regardless of street sewer conditions.




## BOOSEY'S DRY BASEMENT GUARANTEE

Drainage installed in accordance with the Boosey 1-2-3-4 System of Gravity Drainage, will positively prevent street sewage backflowing through the house sewer and flooding the basement, when the No. 109 valves A and B on lines two and four are closed.

These valves do not interfere with the free flow of water from the rain water conductors, or from fixtures above the basement that are connected to the soil pipe stacks.

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