

Journal of The American Institute of  
**ARCHITECTS**



DONATO BRAMANTE

October, 1946

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The Tennessee Valley and Its Development

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Office Organization in England

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Sullivan Ornamentation

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Today's Draftsmen—II

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Architects Read and Write

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Director of Education and Research

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City Planning from the Architect's Viewpoint

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UNIVERSITY OF ILLINOIS  
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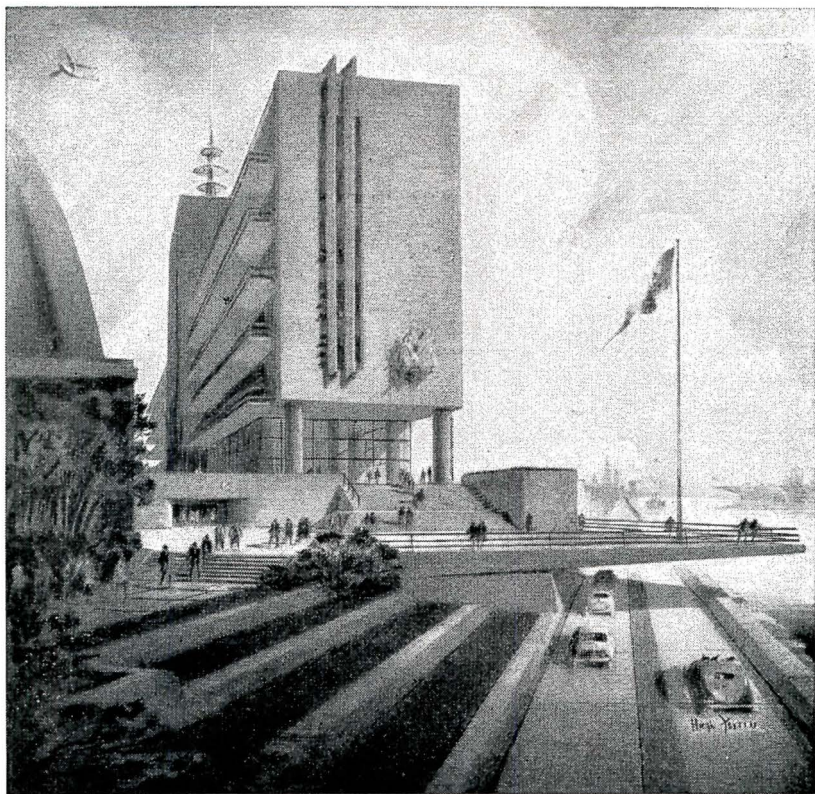
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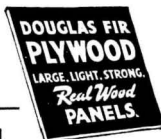
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# The Tennessee Valley and Its Development

By *Howard K. Menhinick* \*

DIRECTOR, DEPARTMENT OF REGIONAL STUDIES, T.V.A.

Excerpts from an address before the Seventy-eighth Convention, A.I.A. at Miami Beach, May 9, 1946.

FOR MANY GENERATIONS the Tennessee River has presented serious problems to the residents of its beautiful Valley. In the winter months of heavy rainfall its swollen, angry waters have swept through factories, toppled river-front homes, and cut away rich bottom lands as the waters plunged onward to the Valley of the Mississippi and the Gulf of Mexico. Its brown waters were laden with the top soil on which the people of the Valley were depending for food and fiber and health and education and all the other necessities and luxuries of life. One sage has characterized the river of these days as "too thick to swim in, too thin to plow."

Summer and autumn droughts

followed the rainy season of the winter and spring. The river became a narrow stream in a muddy channel. Mosquitoes flourished in the shallow stagnant pools of its backwaters, and malaria made serious inroads in portions of the region. Cotton, corn, hogs and tobacco became the mainstay of the people. Malnutrition, low incomes and inadequate medical services and schools characterized many sections of the Valley and its people. The mining of the soils and forests and minerals, the shipping of these raw materials to be processed elsewhere, and the exodus of the Valley's more ambitious sons and daughters to the prosperous manufacturing centers of the North and East, have resulted in

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\*Mr. Menhinick, a graduate of Harvard University in City Planning, taught in the Graduate School of Regional Planning at Harvard from 1929 to 1937. He joined the staff of T.V.A. in that year and is now Director of T.V.A.'s Department of Regional Studies—responsible for the Authority's architecture and site planning, and for the development of the recreation resources of the chain of T.V.A. bases. He is also a member of the Board of Governors, American Institute of Planners.

many hardships for the people of the Tennessee Valley.

Since 1933 a gradual change has been taking place in the Valley of the Tennessee River, which is about the size of England and lies as a great crescent in parts of the seven states of Virginia, Tennessee, North Carolina, Georgia, Alabama, Mississippi and Kentucky.

The Tennessee River has been changed from a wildly fluctuating coffee-colored stream to a chain of nine interconnected blue lakes impounded behind nine dams. On its tributaries are seventeen other dams and lakes. For the first time in history an entire river system has been brought under very precise control, harnessed, and put to work for the people of the Valley and the nation. It is at work generating low-cost electric power—twelve billion kilowatt hours of it in 1945. On its nine-foot channel, which extends 650 miles from Paducah, Kentucky, to Knoxville, Tennessee, are carried barges laden with corn, wheat, oil, gasoline, automobiles and other products. Thousands of pleasure boats dart in and out among its coves. On the shores of its lakes are state and local parks, group camps, boat docks, and vacation cottages. Its waters are being made safe for

swimming and other recreation uses by programs of stream sanitation and malaria control.

On the fields and forests and hills stretching away from the river to the far distant borders of the watershed, an even more significant change is gradually taking place. Thousands of acres of badly eroding hillsides are now planted with young trees whose roots hold soil and water in place. Thousands of additional acres are now green with winter cover crops and summer pastures. Up and down the Valley small home-owned and operated industries are processing raw materials.

There has come a change, too, in the outlook of the people, which the editor of a Valley newspaper has described very well. In answer to the question, "What has happened in this Valley since TVA?" he replied:

"We can write of great dams . . . of the building of home-grown industries and of electricity at last coming to the farms of thousands of farm people in the Valley, yet the significant advance has been made in the thinking of the people. They are no longer afraid. They have caught the vision of their own powers."

How have these changes been



brought about? The key is democratic planning and development. TVA has added to the region some essential tools, technical knowledge, ideas and stimulation. But the real job of planning and developing the Valley is being done by the people and their institutions, who are daily making decisions as to the kind of Valley they want and are implementing these decisions through their state and local governments, in their places of business, and on their farms.

Seven basic features inherent in TVA have made it possible for the Tennessee Valley Authority to make a worthwhile contribution to the development of Valley resources.

First is the structure of TVA. It is a public "corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." It has its own personnel and retirement systems. It can sue and be sued. It can operate with the speed and dispatch that are required for the successful management of a large and complex enterprise.

Second is its concern with all phases of resource development in the Valley—not with agriculture

alone nor forestry alone nor parks alone nor minerals alone nor industry alone, as is customary with Federal departments, but with all of these resources together, inter-related as they exist in nature. This exceedingly important approach has been facetiously characterized as one which recognizes that all of the elements of a problem are "inexorably inter-twined."

A third and important key to the functioning of TVA is the provision for making major administrative decisions not in distant Washington but in the heart of the Tennessee Valley where the problems occur. The central government must continue to be strong and must determine the basic national policies, as embodied in the TVA Act, have first-hand knowledge of the problems, of the people, and of Valley institutions, and then live with them. It is not enough to have decentralized regional offices, with major problems and policy questions referred to Washington for decision. The power to make the important administrative decisions must also be decentralized.

A fourth feature of significance is the provision for maximum cooperation with state and local

agencies. This method of work has enabled TVA to strengthen these agencies, as has been testified to by the Governors of each of the seven Valley states. Furthermore, this cooperative approach in effect adds to the small nucleus staff of TVA the staffs of other agencies in the Valley and the hundreds of thousands of individual citizens—farmers and businessmen and labor—who are directly associated with these agencies. It results in planning and development on a truly democratic basis.

A fifth feature of importance is the combining of planning and development in one agency. TVA could have accomplished only a fraction of its program if it had responsibility for the making of plans only and then had to rely on other non-participating and perhaps unsympathetic agencies to carry them out. In the direct-action phases of its program, such as the building of dams and powerhouses, TVA both makes the plans and executes them. In those phases of its program which are accomplished in cooperation with state and local agencies, these institutions participate with TVA from the very inception of projects, in both their planning and their execution.

A sixth feature which has much to do with TVA's success is its nonpolitical character. The TVA Act provides that no appointments may be made on the basis of political preference, and stipulates that any staff member or any director who uses political preference in employment or appointment shall be discharged. This instruction from Congress is meticulously observed in TVA.

A final feature is the complete absence of powers of compulsion. Except for the right to acquire title to land needed for the building of dams, reservoirs and transmission lines, TVA has no power to compel any one to do anything he does not wish to do. Whatever TVA accomplishes must be attained by demonstration, persuasion, and the authority of ideas. This lack of regulatory and other powers TVA considers a great asset.

The core of the TVA program is the development of the River. The series of dams, powerhouses and reservoirs on the Tennessee River and its tributaries was planned from the start as a complete and integrated system. TVA avoided the hodgepodge that inevitably results when the location



of a dam on a river system is treated as an isolated problem or is determined on the basis of politics and "pork barrel."

The building of the series of TVA dams and powerhouses, in quick succession one after the other, was accomplished by force account rather than contract. This method was deliberately chosen because it provides an opportunity to train and use local workers, to develop sound labor relations, and to obtain the economies that result from accumulated experience and from the transfer of skilled men, equipment and houses from one project to another.

The only credit line that appears on these TVA dams and powerhouses is the phrase, "Built for the People of the United States."

In the light of this basic philosophy, it is not surprising that the directors of the Tennessee Valley Authority consider it essential that the stockholders of TVA—you and all the other citizens of our country—shall be able to visit TVA dams and powerhouses with pleasure and safety. This objective is facilitated by providing good access roads, parking and picnic areas, rest rooms and guides. The pleasure of visitors is increased by

structures which are made as attractive as possible by the employment of qualified architects, by merging architecture and engineering at the very inception of a project, and by placing architectural design control in a strong administrative position. The millions of people of the United States who have visited TVA dams and powerhouses have indicated that they are pleased with the facilities that have been provided for their accommodation, and are proud of the structures of TVA. In the design of these facilities, members of your profession have made outstanding contributions.

The same dams that provide flood control and navigation opportunities have also made possible the generation of low-cost hydroelectric power. A large proportion of the twelve billion kilowatt hours produced in 1945 was sold at wholesale to 140 locally owned, financed, and managed municipal and cooperative retail distributors, through whom it reached 650,000 homes, farms, factories and places of business. Other large amounts were delivered directly to industrial plants for War production. The electricity was sold by TVA for thirty-nine million dollars, which produced, before interest

but after payments in excess of two million dollars in lieu of taxes, a net income of more than eighteen and one-half million dollars. This represents a 4¾% return on the power investment. On the basis of experience to date, the power net income will be sufficient in thirty years to repay the total TVA power investment of approximately four hundred and fifty million dollars, or to pay 2% interest and repay the entire power investment in sixty years.

TVA power is retailed by municipal and cooperative distributors at very low rates which are agreed upon in their wholesale power contracts with TVA. The average household consumer in the Valley uses 50% more power than the average consumer in the nation, yet his bill for this power is 20% less.



TVA explored the fertilizer problem with the land-grant agricultural colleges of the region and was advised to produce phosphates rather than nitrates. The application of phosphates with lime makes it possible for the soils of the Valley to produce leguminous hays and grass pastures which cover the fields during the winter period of heavy rainfall, and thus hold the

soil in place and reduce the speed and amount of surface water runoff. These hays and pastures in turn provide rich feed for cattle and dairy cows and other animals. In addition, the leguminous plants add nitrogen to the soil more economically than it could be added through the application of commercial fertilizers.

Trees, as well as grass and legumes, hold soil and water on the land. A TVA cooperative and demonstration forestry program is gradually convincing the landowners of the Valley that their best interests are damaged by the prevailing custom of annually burning the woodlands; likewise that their interests are furthered by sustained-yield management of their woodlands rather than by stripping the forests of the trees.

But man cannot live by bread alone. He needs opportunities for play as well as opportunities for work. It is fortunate, therefore, that the Tennessee River chain of lakes has added to the region the only element which was previously lacking to make it an ideal vacation land—namely, water for recreation. The people of the Valley are swimming and fishing and boating on the lakes, and they are increasing their incomes by pro-

viding services and facilities for the visitors who come from near and far to enjoy the "Great Lakes of the South." Serving tourists has in fact become a major Valley industry. In 1941, the last year before the War, more than eight million out-of-state visitors came to Tennessee alone and spent there more than one hundred and four million dollars.

When TVA built Norris Dam, there were in the Valley no rural parks of the kind that you and I know as state parks. TVA, in cooperation with the National Park Service and the Civilian Conservation Corps, built Big Ridge and Norris Parks as demonstrations. They were typical state parks, with overnight cabins, bath-houses, boat docks, bridle trails and picnic areas. The people of the Valley visited these parks, liked them, and asked TVA to build more of them. TVA suggested if the people wanted more parks they should establish a state department of conservation and develop their own. TVA assisted in the drafting of legislation to create such a department in Tennessee. TVA cooperated by leasing to the state, for one dollar a year, lands along its reservoirs suitable for state park development. Additional parks in

other parts of the state have been established, and today Tennessee has a very fine system of state parks. By the combined use of demonstration, technical advice, and shorelands acquired in connection with its reservoir construction program, TVA stimulated the State of Tennessee to add park development as a new function of state government.

This matter of giving technical advice, we have discovered, requires skill and a full measure of humbleness. After years of experience, TVA staff members are convinced that the process of giving technical advice is frequently more a matter of learning than of teaching; and the people of the Valley have come to accept TVA staff members not as all-wise teachers but as fellow workers.

Democratic planning and development are at work in the urban communities of the Valley as well as in the rural areas. There are few large cities in the Tennessee Valley, but there are many small and medium-sized communities whose growth has been retarded. With the new resource and industrial development that is taking place, cities of the Valley are now growing more rapidly than comparable cities elsewhere in the



United States. These Valley cities have an unparalleled opportunity to guide their new growth so as to avoid the mistakes that have normally accompanied rapid urban development. TVA is helping them direct their new growth so that they may continue to be pleasant towns in which to live and convenient centers in which to do business.

TVA prepares preliminary sketches but insists that any local municipal Power Board hire a private architect to develop the plans and specifications and superintend the construction. TVA sketches are made available to the architect by the Power Board, and TVA stands ready to give the architect any requested technical assistance in interpreting or developing the building requirements and sketch plans. Sometimes the architects do not achieve the potentialities of the sketch plans, but the process of developing the plans from the sketches frequently has an educational value for the less well-trained and experienced architects in the smaller communities of the Valley. This by-product is a TVA objective.

I wish there were time to tell you of some of the other TVA programs — of the construction vil-

lages, for example, and particularly the latest one, Fontana, and its conversion to a recreation resort. I wish there were opportunity to tell you of the part these construction villages have played in making TVA workers more efficient and contented. There is the story of the economic assembly of land required for the dams and reservoirs, and of the methods developed for helping families find new homes. There is an interesting story in the preservation of the archeological records of prehistoric life along the Tennessee River, and in the programs for improvement in local government and finance under which the cities and counties of the Valley are becoming better managed and financially sounder. These and many other programs, taken together, planned and carried out jointly by TVA, the state and local institutions of the region, and individual citizens, have resulted in progress for the Valley. In terms of annual income, bank deposits, business sales, and almost every other economic index, the Tennessee Valley is advancing more rapidly than the nation as a whole. There is every reason to believe that this trend will continue in the years ahead.

There is one thought I hope you

will retain. Whatever has been achieved in the Tennessee Valley has been accomplished by a process of democratic planning and development, voluntarily entered into and carried on by the people of

the Valley without coercion or regulation. Victor Hugo would have understood this method of river valley development, for he once said: "Greater than armies is an idea whose time has come."



## Sullivan Ornamentation

*By George Grant Elmslie*

Reprinting, with corrections and modifications, an article by Mr. Elmslie in the Illinois Society of Architects *Monthly Bulletin* of June - July, 1935

MANY COMMENTS have been made on what is universally known as Sullivan ornamentation—some literate, some illiterate.

It has been said that the inspiration for this work, by Louis H. Sullivan, was derived from various sources, Eastern and Western. Some have said it came from Spain and her Moorish civilization; some, from the Near East and from India; some have said the leaves were thistle leaves, acanthus leaves, cabbage leaves, and so on. All of this is just plain nonsense as far as the origin goes, and is easily proved as such by evidence at hand. Mr. Sullivan developed, at the close of his life, a complete and fascinating illustrated thesis

on his ornament; the original drawings, with text, are now permanently housed in the Burnham Library at the Art Institute of Chicago, where all may see and enjoy them. These drawings were published in portfolio form by the Press of The American Institute of Architects. While they only approximate the superb brilliancy of drawings made in earlier years and now unfortunately lost, they set forth the basis of the ornament very well.

He did this work with his usual thoroughness and serious care, and especially so with so much misunderstanding and blatant assurance of ignorant critics abroad the land, professional and lay, who

thought they knew all about it.

Perhaps the text is occasionally verbose, and passages are introduced here and there, explaining or rather disclosing, philosophical and spiritual elements which in subjective analysis are purely personal matters of interpretation. Full understanding of these elements is not vital to the enjoyment of the work by the average observer, any more than in the more abstract elements in music. It has been said that the portfolio is misnamed in being called "A System of Architectural Ornamentation." This is true, as I look at it; the word "architectural" should not have appeared.

The chief point of interest in the system as a whole is that it lends itself to decorative design in practically all the materials used in building construction. It has been effectively and interestingly used not only on exteriors and interiors, but also in designing rugs, draperies, glass, pottery, and so on. Its most engaging and fascinating quality is its flexibility and plasticity, but it is not an open sesame to the thoughtless—far from it. Hence the myriad caricatures in practically every town in the United States of any appreciable

size. A vogue? Yes! But a most discouraging and witless vogue.

There is scarcely a city, large or small, in this country or Canada that does not contain some of this ornament in debased form. Sections of complete originals were used and abused to almost complete distortion of real values. Since there was no real understanding as to what the ornament really signified in its rhythmical, organic sense, it would have been much better if it had been left alone by the thoughtless and those who make their living by ineptly pilfering.

The real source of the ornament—one may say its inspiration—was Gray's *Botany* and little else. That this is true is well authenticated by his well-thumbed copy of this splendid book, showing his careful, accurate and deeply sympathetic studies in plant morphology. There is also in existence his original sketchbook wherein he noted down the various elements of the origins of plant life and their final development into complete flower forms. This was a fascinating world to him, as he often declared, and of which he never tired talking to those who were interested. He was especially fascinated by leaf growth



and the differentiations and permutations of forms within a single genus of plant, as well as the extraordinary and well-nigh incredible ways in which leaves grow from the parent stems. He followed and dramatized in poetic manner this play of organic growth in most of his ornamental work.

In proceeding, Sullivan established by simple axial lines and curves the basic nature and structure of his ornamental themes, and then orchestrated them much as does a musician in developing his basic musical themes. During his creative processes he fully recognized that there are myriad ways in which a basic concept may be developed. But, most important of all, he considered that its *organic nature* must be definitely (although in varying degrees, depending on the original conception) in evidence, no matter how rich, extended and involved it may become as the work progresses, under his masterly hand, to its natural terminal. It is high-spirited enjoyment and serene pleasure to work on this basis, because it is not an artificial one but a natural one, and so is responsive to our creative impulses normally exercised.

There is much of the constitution of music in this ornament. One discerning critic said that one brilliant and delicate motif reminded him of a Schubert Song. Music by its very nature is the most sensitive, subjective and unitary of all the arts. The more of essential music there is in any art work, the more it approaches the natural and eternal. Since this ornament displays in its structure, as the writer believes, qualities of rhythm, of harmony and counterpoint, and various forms of elaborate musical synthesis, just so does it approach the august throne of sound.

That one may gather inspiration from the out-of-doors was a lifelong Sullivan thesis. The concept, Growth and its correlative Decadence, was ever present in his mind as the all-dominant feature of nature. The growth from the seed to its full exfoliation and then leaving behind, in decadence, as part of its life, a germinal and vital substance for another springtime, appeared to him as a grand natural processional. He conventionalized natural forms to his heart's content, ever keeping in mind the sense of growth and expansion of his germinal thought.

With this quality of thought in

mind, with its infinitude of possibilities for the sensitive mind in the art of expression, in the enrichment of the established nature of a building, how pallid and dry, how spineless, cheerless, pessimistic and moribund is the decorative work of our day—with rare exceptions.

Much of Sullivan's early work in ornament, while it has a certain naive felicity and interest, was rather stiff and formal, but the fundamental basis is there, in reality, for all the ornamental work he ever did. While this early work was sharp and angular in many ways, it was, nevertheless, vertebrate as some of his later work was not; as witness a lot of the over-exuberant evolutions and involutions of some of the work

from 1910 and on, wherein the vertebrate system seems partially lost.

But, taking it all in all, it was only over-joyous at times. While occasionally it was not as well related to the structure as it might have been, it is nevertheless the work of a virtuoso, and as such it is at times, as in music, somewhat over-rich and exuberant. It was very worth while and brought real and enthusiastic pleasure to many here and abroad the world. It is not difficult for the thoughtful to design, in a personal manner, on the basis Sullivan laid down. In scores of patterns yet unborn it may continue to its destined end, as all things of a like nature ultimately end, and make room for the new.

## Director of Education and Research

WITH the appointment of a Director of Education and Research, The A.I.A. moves into the new pattern contemplated by the Committee on the Structure of The Institute, and approved by the Miami Convention.

Mr. Walter A. Taylor has accepted the appointment of The Board, through its Executive Com-

mittee, and is assuming the duties of the office on October 15.

Holding degrees in both engineering (Ohio State) and architecture (Columbia), with additional graduate work at Columbia and in Peking, Mr. Taylor's experience has included both teaching and practice. He is at present registered in four States and holds

a certificate of NCARB. Syracuse University has just accepted his resignation as Associate Professor of Architecture and History of Architecture, a post he has held since 1939, teaching history, esthetics, mechanics, strength of materials, reinforced concrete. This post Mr. Taylor resigned when accepting the A.I.A. appointment. He has taught in four universities, including Central China.

Following ten years of the usual professional internship in various offices, Mr. Taylor was associated, as a principal, with J. V. W. Bergamini in China, with Dr. George

Merrill, in New York, and as a partner in the Office of Hobart Upjohn, New York. As architect, associate or consultant, his work has included buildings in 25 states and 7 foreign countries.

Contributions in professional and other publications have appeared under Mr. Taylor's name with fair regularity during the past twenty years. Admitted to The Institute in 1931, his membership has been in the New York Chapter and subsequently in the Central New York Chapter. Mr. Taylor is 47 years old, married and has two sons of high-school age.

## City Planning From the Viewpoint of the Architect

*By Henry S. Churchill*

An address before the 78th Convention, A.I.A. at Miami Beach, May 9, 1946.

I HAVE FOUND this to be a very difficult paper to put together, and that for several reasons. The subject is important and timely, and the audience is distinguished. There is, therefore, sufficient reason for sincerity and clarity, an orderly presentation of a complex matter. If clarity is notable by its absence, part of the reason, at least, is a lack of definition as to

just what urban planning means, or just what an architect is, or why his viewpoint should be any different from that of any other bewildered citizen.

It is perhaps an indifferent matter whether this question is ever resolved in any final fashion, and so for my purpose in this brief talk I have simply assumed two things: the first is that the archi-



tect *is* merely a bewildered citizen, with a special interest in spatial relationships and a type of mind which, generally, enables him to approach a problem synthetically rather than analytically. That is a way of avoiding saying that his is a creative approach. We are still somewhat ashamed of being called imaginative and creative.

The second assumption is that the complex of problems lumped under the label "city planning," or in the fancy nomenclature of the moment, "urbanism," is merely a state of mind, the result of a series of maladjustments. A city-planner, or "urbanist" therefore is a man — any man — who really worries about the city he lives in; and a professional city-planner is a man who worries about any city, for pay.

Now a state of mind is a real thing, and the state of mind that we find ourselves in today about our cities is very serious. It is one of frustration and fear, and this frustration and fear comes about, as always, from observing the action of compelling, uncomprehended forces on familiar things and ways without being able to do anything about it.

These forces are in nature economic, social and technological.

They are the uncontrolled, and perhaps uncontrollable, result of Western man's peculiar bent for seeking out many inventions. Whatever the reason, our cities are no longer bearable in terms of present hates or future hopes. They are changing, falling apart, because people will no longer tolerate them as they are, and because people no longer, with the technology available today, *have* to tolerate them. Escape is already possible, so change is inevitable.

Our business men are aware of this, and are afraid because they do not understand what is going on in terms of conventional business; our ordinary citizens know this, and despair or are resigned because the escape they seek is without direction and for the moment uncertain; our planners know it and are frustrated because they try to plan without objective or support. Indeed, how can they hope for support without an objective?

Characteristically, we seek to find our way through pseudo-science: by statistical analysis of dubious economic material, by the attempted reduction of the human spirit to the statistical average. Characteristically we avoid coming to grips with the facts, with the

new forces at work, the spiritual and human values that are coming to replace our former materialism and indifference.

I have watched and studied this process of analysis for a good many years now; I have indulged in it myself, because no one can hope to escape the processes of his own time and because, also, analysis must of necessity precede synthesis. But analysis, important as it is, is not enough. Statistics are useful only as they provide groundwork for an objective, and that objective must be more than a summation.

And it is here that I make the plea for the interest and viewpoint of the architect in the most important job that he can set himself—the continuing job of remaking our cities in the pattern of new technological forces, the rhythm of the new way of life that is evolving.



It is important and indicative that The Institute is devoting so much of this Convention to the discussion of urban problems. It is not a new subject; the past proceedings of various Conventions contain many reports by committees that have given earnest and

devoted effort to it. There are many architects who have made great contribution to the philosophy and techniques of city-planning. Yet, on the whole, the profession as a whole has failed to take the leadership which, by its collective capacity for creative thinking, it is entitled to assume.

I want at this point to restate my contention that the architect is *not*, merely by reason of his being an architect, therefore also qualified as a city-planner, or that every architect should try to educate himself to become one. It depends on how he feels, for as I said, a city-planner is a man who worries about his city—he may be a land-planner, an economist, a lawyer, a public official, or an architect; as soon as he is concerned with a better environment for urban living, he is on the way to becoming a city-planner. There are too many kinds of city-planning, all essential to the process as a whole, for any one discipline to arrogate to itself a proprietary interest, a professional exclusiveness.

But I do think that the architect has a special contribution to make to this process of city-planning, a contribution which he has avoided making; and that unless he makes it, the work that others contribute

becomes wellnigh worthless in the light of human satisfactions.

And this, let me remind you, is the first time in history that the city-planner has been able to give consideration to human satisfactions. It is this that makes the present opportunity of such tremendous importance, that makes the architect's part so vital. He is today concerned not with the glorification of the individual prince or power but with the essential qualities of the physical well-being of all people.

We are today faced with a huge demand for shelter; there are hundreds of thousands without homes. We are faced with a huge demand for work space—offices and factories. These demands are not only for new space, but for the replacement of old and obsolescent space, for better conditions of living and working, transportation and recreation. We have an ever-increasing pressure for something better, for a realization in physical fact of the technological possibility. We cannot sit by and let the short-sighted realtor, the dead hand of the mortgage and the futile machinations of the tax-assessor keep us from going forward.

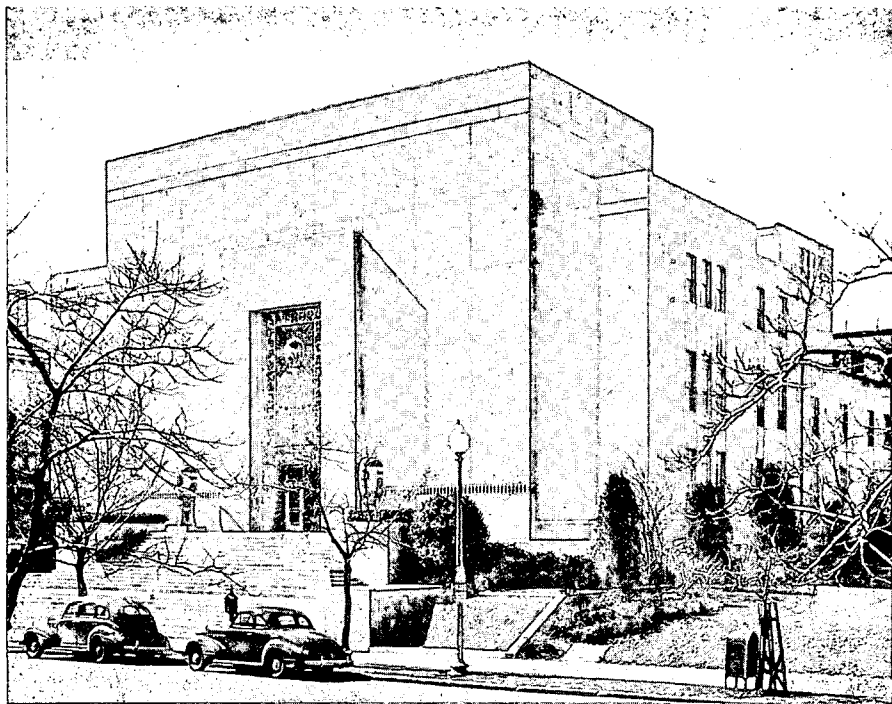
The architect must realize and

accept responsibility, he must have a part in all this, not merely passive acceptance, mere acquiescence for the sake of the jobs he will get. He must educate his clients, not just take orders from them. And he can do it, for he can prove to them that their economic life, their profits, depend on going with the current of technology and not in trying to stem it. Unconsciously the people are reacting to the future; it is the uneducated—or perhaps I should say mis-educated—business man and money owner, those fearful of their vested interest and without vision, who block the progress that must come anyhow.

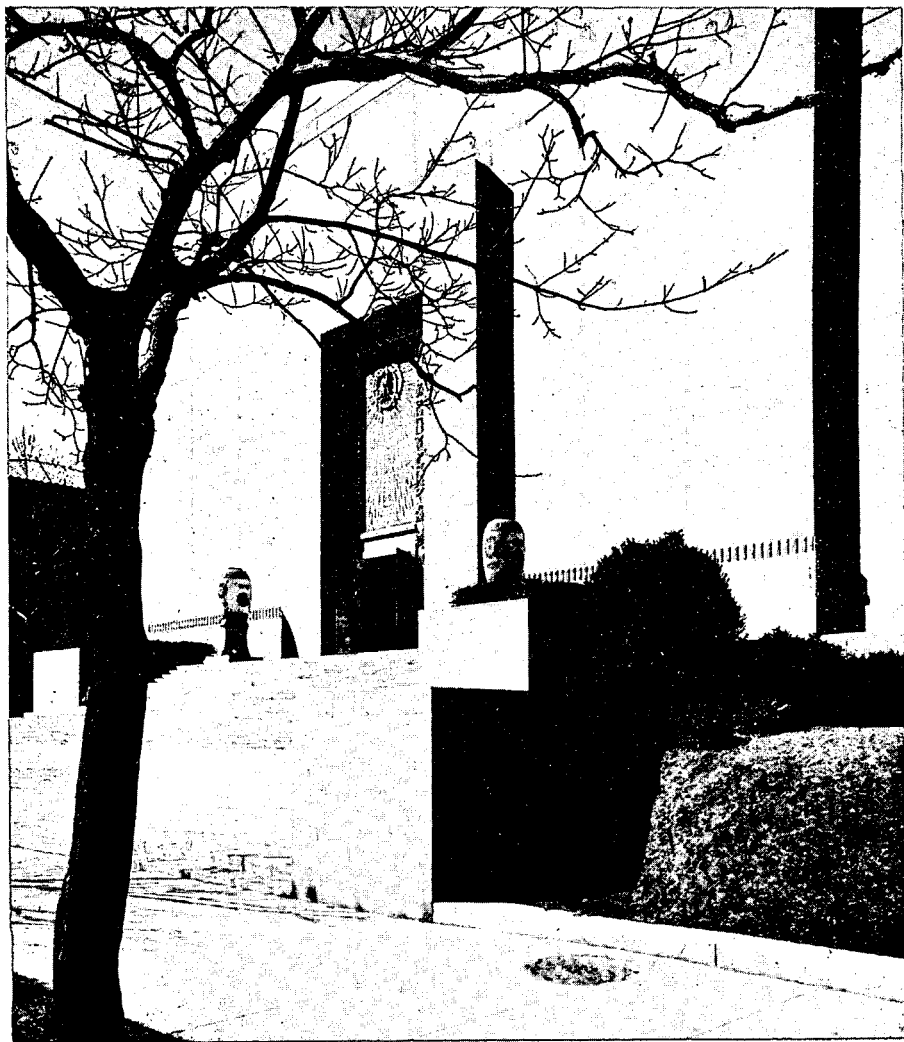


This responsibility of the architect is not just an abstract concept. It is his business to know the reasons for the shifts in urban population which will result in loss or gain in property values, to have some insight into the traffic problems that are forcing merchants and manufacturers into new locations. What are the developments in communications and electronics—even without considering nuclear fission—that are making cities into new patterns and that will force economic change and politi-





SCOTTISH RITE TEMPLE  
WASHINGTON, D. C.  
PORTER, LOCKIE & CHATELAIN, ARCHITECTS



ENTRANCE, SCOTTISH RITE TEMPLE, WASHINGTON, D. C.  
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cal action and legal sanction to follow these inevitable patterns? These things are important to you, and their translation into the city-planners' jargon of net and gross densities, zoning, land uses per thousand population, dispersal patterns, parking, and so on, are merely another technical language which you should know as well as you know about rafters, BX cable and B.t.u.'s. Your clients will be grateful if you can help them decide where to build as well as how to build it.

On a broader and more civic-minded scale, the architect's interest becomes one of translating the professional city-planner's statistics and land-use maps into space relations for the actual use of real people. Land-planning is two-dimensional; the architect must take it off the paper and make it visible. He does this by putting buildings on the land, and those buildings are paid for by business men and occupied by people who, in one way or another, make the land and buildings profitable. The architect is, or should be, the link between the city-planner and the public: Where the city-planner necessarily deals in generalities, the architect can explain in specific terms to the specific client what

the generalities mean when applied to his business, to his living, to the future of his children.

There is another point here that I want particularly to make. The urban problem is so vast that it touches every architect in some aspect of his practice. Yet we sit back and as a profession virtually ignore the fact that the biggest building boom in history, the greatest remaking of our cities, is already going on without us.

As Tracy Augur has summed it up in a recent paper to the American Institute of Planners: "We have set our sights at building 12,600,000 new non-farm dwellings in the next ten years. During the same period we shall build an equivalent amount of new streets, sewers, factories, schools, shops, and all the other components of city structure. In short, we shall build urban structure sufficient for more than forty-five million people. This is equal to 900 cities of 50,000 population, 200 more than the 700 that Dr. Wirth calculated would be necessary to achieve dispersal of our existing centers to that level. What is more, we shall probably build in the same period enough new highways, airports, railroads, power lines and like facilities to tie a



decentralized pattern of cities together into a well-integrated production system.

"In and around practically every metropolitan center in the land we shall build in the next decade the equivalent of one, two, three or more complete satellites of thirty to fifty thousand population, and think nothing of it. We shall cause stupendous economic dislocations and create staggering social and political problems, and we shall not worry one iota about the cost, the loss of the investment in displaced facilities, the disruptions of land values and tax sources, or the social problem of moving a third of the nation's families to new homes. We shall do all that without giving it a second thought, because it will be done in the normal way, within the framework of city development to which Americans are accustomed. There will be new subdivisions of land around city fringes, new houses in old suburbs, new apartments and stores and office buildings downtown, some slum clearance and redevelopment, new streets, new schools, etc. But when all this is done, ten or more years hence, American cities will remain substantially as they are today. They will not be any better fitted to capture the

benefits of the atomic age for their inhabitants and they will not be any better fitted to protect them from the awful mass destruction that atom bombs can bring."

The events detailed by Mr. Augur are in fact occurring. At this very moment subdivision after subdivision is springing up, setting the pattern of our future, and nearly all of them are being done without benefit of architect or planner. It is not, gentlemen, a question of the small house and whether that house is well or indifferently or badly designed. It is that vast areas are being planned without thought for the community as a whole; that they are, again, just streets with houses along them, unrelated to any overall pattern for living, for work, or for the economics of civic administration. We are building today, by the thousand, developments that are blighted before they are occupied; to match, in our thoughtlessness and our lust for an immediate profit, the vast areas of blight left behind in our city cores by previous generations of speculation and gambling. We are letting our future be wrecked in the pattern of the past, in the pattern of gambling and speculation recently extolled as a high virtue

by the president of the Home Building Association of Metropolitan Washington. "This country was built up on speculation and gambling," said Mr. Carr. "There is nothing wrong with it." Do we let this happen without protest because we are inert or because we don't like the New Deal or because "City-planning isn't architecture," or because the Producers' Council says we shouldn't? Why are we not heard from, positively and constructively?

This *is* our problem, as citizens with a special training. It is our particular problem in our particular city, because planning is a continuing problem and in our own city we can and must live with it. It is our problem because the professional city-planner is powerless to handle it alone. The political pressures of short-sighted real-estators and material manufacturers against him are too great for him to combat without help. His analyses and maps and charts are meaningless unless they are related to the practical problem of the everyday businessman and citizen, who is *your* client Mr. Architect, in your city. The city-planner deals with administrative problems, with maps, with two-dimen-

sional abstractions—and I say abstractions advisedly, in spite of the city-planner's illusions that he is dealing with realities. Realities only exist in three dimensions or in none—in tangible form or as ideas. City-planning, so far, has failed to become real in this country because the meaning of the planners' abstractions has not been made intelligible to the public. The architect, whose whole function is to make abstractions real, whose creative faculty is that of breathing life into ideas, is the logical interpreter.

We must, therefore, as a profession take vivid part in what is going on. We are being faithless to ourselves if we let the real-estate boys emasculate the urban housing and redevelopment bills for their selfish interest: more than that, we fail in our capacity for civic leadership when we do not take an active part in the drafting of those and other bills. The profession, through The Institute, should help formulate the national bills; the Chapters and individuals should help draft the State and local bills that implement the enabling acts. Laws are passed by pressure, after they have been written by people vitally concerned

with what they are to accomplish: once written and passed, it is too late to complain that they do not comprehend our interest or our ideals.

It is part of the architect's job to be concerned with, to formulate the ideas for legislation that affects him not only as a professional, but that affects him as a citizen and as a human being. This is a democracy, gentlemen — act as though it were, and take your part in shaping it. We cannot sit back and say in the future as we have, God help us, in the past, that we are "helpless and afraid in a world we never made." As architects, as creative human beings, we must help make our future as we would wish our children to have it. This

is a time of crisis, and we cannot abnegate our responsibility to posterity.

Finally, therefore, I urge that this Convention empower the Committee on Urban Planning to take steps toward the forming of a National Conference on Urban Planning, which will help to formulate and correlate the thinking and action of all the various related disciplines. The American Institute of Planners, the American Society of Planning Officials must be asked to cooperate as full partners in this. Lawyers and administrators must take part. We can assume leadership — but we must do so in humbleness and devotion to a purpose that transcends our sole ability.

## Today's Draftsmen—II

*By Charles F. Cellarius, F.A.I.A.*

Expansion of informal remarks by the author before the Miami Beach meeting of the Association of Collegiate Schools of Architecture on May 7, 1946. Part I, dealing chiefly with the program and procedure for veterans' training, appeared in the September JOURNAL.

HAVING DISCUSSED the veterans' training program, as it applies to architectural draftsmen, it might be worth while to consider what the architect wants in a draftsman. There are many

desirable qualities, of course, but we might list briefly the following:

1. Good taste or an appreciation of good design
2. Skill in drawing



3. Knowledge of construction details and building materials

4. A broad background of knowledge

5. Creative or design ability

6. High ideals for his work or profession

7. Interest in economic values in building and in social betterment through building

8. An ability to deal with people, and a spirit of cooperation and tolerance.

To check the above list with the thinking of other practitioners, I submitted it to several architects, asking for possible additions to the list and comments on the relative importance of such qualifications. Here are some of the answers to that inquiry:



D. K. ESTE FISHER, JR., F.A.I.A.  
of Baltimore:

"I believe that in the older type of thinking the average architect has looked upon the draftsman as a sort of 'mechanic,' more or less expert in some rather restricted branches of the drawing trade, a supplement to the higher attributes (which you list) exhibited in all their glory only in the architect himself. I suspect that this attitude has been at once the cause of

and the result of the paucity of truly trained *and cultivated* draftsmen until recent times and, perhaps, of the rather over-sharp distinction in our profession between 'architect' and 'draftsman.' It may also account for a generally rather low scale of compensation for all but a few of a class of men in whose hands rests a very real burden of technical responsibility.

"I have had occasion to comment before that in the Law the young student and practitioner, however lowly his degree in employment, is generally dignified as 'lawyer'; the third-year medical student is titled 'doctor'; and the young 'engineer' is recognized by that term as being in the process of acquiring a highly technical knowledge and experience. Yet there has been a somewhat insidious distinction between 'architect' and 'draftsman,' the former applying only to one engaged in 'independent' practice. It is true, no doubt, that a generation ago there were (and still are, for that matter) many draftsmen who became so through fortuitous circumstances, as some become bank clerks or grocery boys or steamfitters, rather than by selective choice, and generally without much, if any, education beyond

the eighth grade. There were also many who, because of a vague urge for the arts, but lacking means or facilities for education, artistic or otherwise, acquired such skill and knowledge as they had 'the hard way' and by the catch-as-catch-can way of the ateliers and Beaux-Arts problems. As a result there has been an oversupply of undertrained pencil-pushers, of a relatively low order of capacity except in manual dexterity, void of hope except as wards of an ever-generous Uncle Sam. As a corollary, 'The voyage was long, the wages low, leave her, Johnny, leave her!' for the young man from architectural school who was under urgent compulsion to get out on his own—to be an 'architect.' I could cite chapter and verse in case after case of men with the best background and schooling who 'hung out their shingles' without sufficient groundwork in basic practical experience to command confidence in important enough work to build a practice, who would have been better off in every way today as 'draftsmen' in offices such as yours or mine, but could not brook the indignity of it.

"That picture is changing—has changed, perhaps. Maybe we can better it by a little more gener-

osity with the name 'architect.' When you and I were in school one could count the Schools of Architecture on one's fingers, and only a few were good. Now there are a hundred and they turn out your 'architects' in droves—some say too many, though we are all crying for more *good* draftsmen! These youngsters are far better fitted to be architects, when they have acquired experience, than were our generation, whether from the schools or not. They are also far better grounded to become the draftsmen whom, by the very nature of architectural practice, the offices require. It is to be hoped that a substantial number of them will be satisfied to remain, perhaps all their lives, in salaried positions in architectural organizations, making there real and important contributions to good architecture and earning more, in most cases, than the uncertain pittance which attaches to so many small 'independent' practices.

"Under these circumstances, men of this type *as draftsmen* bring to their practice 1, 4 and 5 qualities which you enumerate and at least some of 2 and 3 which, with energy, can be greatly *and quickly* improved by the practical rough and tumble of a going office in

varied general practice. Skill in drawing is likely to be the weakest from the employer's immediate point of view. The schools might think more about that.

"It seems to me that basically what the average architect should want in a draftsman is not only skillful hands to make drawings, but minds sufficiently cultivated and trained to understand, in the broadest sense, what those drawings are all about; intelligences which can meet more than half-way the clients' problems and the bosses' solutions of them; not mere hidden automata pushing instruments around, but thinking assistants who, with a minimum of guidance and without shrinking from initiative, can meet with clients and associates and carry a major portion of the live burden of design, of production and of administration.

"The young man in architecture should, I believe, think of himself as rising to the status of 'independent practice,' if ever, only through the process of many years as a 'draftsman' of *this kind*, not as so often has seemed to happen, by persuading some friend of the family to throw his way some job too large for his experience, to start him off on a career of questionable

promise. This the schools could teach—I wonder if they do."



HENRY H. GUTTERSON, F.A.I.A.  
of San Francisco:

"Whereas I think your listed qualities cover the situation, I found myself changing the order of importance; then I folded up your letter and, after an interval, wrote my own list as follows:

"Basically, draftsmen (or women) should have:

1. High ideals for their work in a moral, esthetic and professional sense
2. Outstanding potentialities and interest in design—both historic and contemporary
3. Facility in accurate expression in mediums easily understood by laymen
4. An ambitious and tolerant viewpoint, combined with industry
5. Interest in and concern for structure, including details
6. Interest in and concern for economic values in buildings
7. Interest in and concern for social betterment through building
8. At least six-month's apprenticeship under a practicing architect as mentor, paralleling a medical student's internship.



"Their training should have included:

1. Freehand and mechanical drawing and modeling
2. Architectural history
3. Design and planning
4. Mathematics through calculus
5. Basic structural and mechanical engineering
6. At least vacation-time field experience on construction projects.

"I realize that there are few such men in these times, but I believe that we should all set our standards high and help the younger men to reach for them.

"I cannot help reiterating my strong conviction that young architectural school graduates with whom I have had contact are sadly deficient in:

1. Freehand drawing
2. Any real understanding of, or interest in, architectural style
3. Contact with actual building techniques.

"Since a great many clients are still insistent on architectural service involving an historic architectural style, it is increasingly difficult to recruit men who can be helpful in such programs. This is not said with any desire to introduce the subject of traditional

vs. contemporary approach, but purely in recognition of public demand, in the meeting of which architects will be judged by their public.

"I am firmly convinced that, as a group, we are rapidly working away from the falsities and complications of yesterday's practice. I think this will be a painless educational process in which the architects will take the natural lead, but I do not believe that we can lead by fiat, even though our architectural faculties and students would have us so believe."



JOHN F. STAUB, F.A.I.A. of  
Houston:

"'What an architect wants in a draftsman,' unless qualified, becomes as much a social question as a technical one.

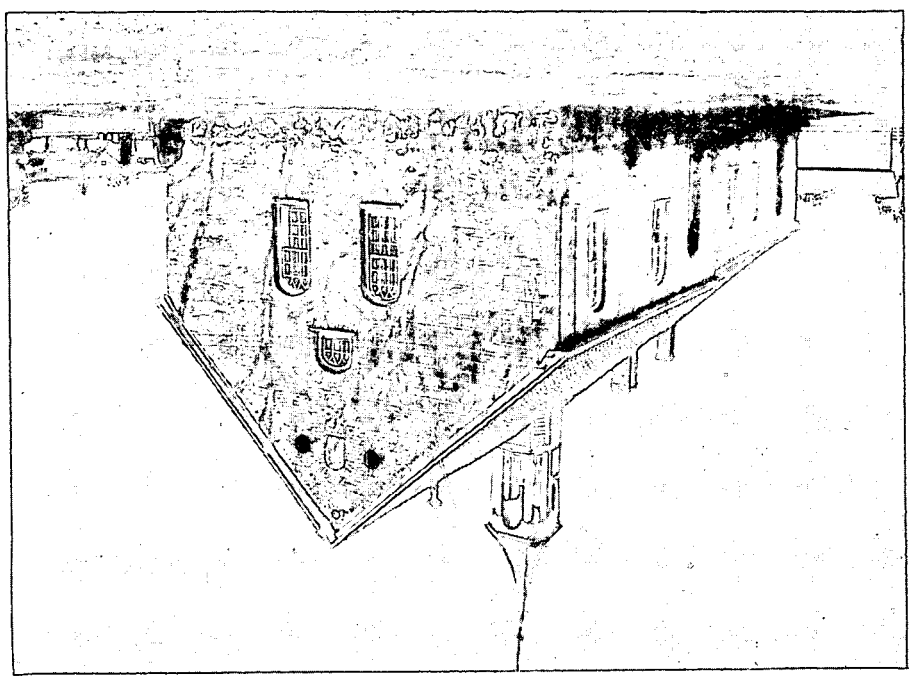
"As you know, except in very small offices, there are usually, and in my opinion always should be, a few younger men not as well equipped technically as the architect expects his average draftsman to be. These apprentices are usually college graduates with little or no practical experience but with inherently more creative ability and better taste than one



THOMAS JACKSON LIBRARY  
WEBB SCHOOL FOR BOYS  
CLAREMONT, CALIF.  
MYRON HUNT AND H. C. CHAMBERS, ARCHITECTS

BETHABARA MORAVIAN CHURCH  
(late eighteenth century)  
OLD TOWN, FORSYTH COUNTY, N. C.  
*From Historic American Building Survey*

*Do you know this building?*





finds in the more technically skilled.

"From a purely selfish viewpoint such men would not be wanted but, thank God, most architects consider it a privileged duty to look to the future good of the profession as a whole and forego a young draftsman's unfamiliarity with the tools of his profession. Architects therefore employ youngsters that are, to the individual architect, a comparatively poor investment; however, these men are likely to become the architects of the future generation.

"Since our office is not one where the speed of output is of greatest concern, this letter may not correctly reflect the opinion of the majority, but I hope may be of some help to you."



OSCAR S. EKDAHL of Topeka:

"The qualities you set forth are very good, but I would like to suggest some additions and rearrangement, to wit:

1. A spirit of sincere cooperation and tolerance for opinions of others—a prime requisite in any young person, be it in the professional or any other field of endeavor

2. Knowledge of building materials and methods of construction

(a) Supervised field trips to construction projects should be a part of the curricula

(b) Employment on construction projects during summer vacations as a laborer or as an apprentice in any trade. (This seems to me to be more valuable than experience in an architect's office, required by some schools before a degree is given.)

(c) Alertness to new materials and methods of construction, by studying current architectural magazines and Sweet's catalogues

3. Acquaintance with structural design and mechanical design

(a) Balance theoretical instruction with practical use of handbooks for selection of proper materials and equipment. Office practice today favors employment of consultants who are specialists in structural and mechanical fields

4. Background of general knowledge for a more interesting personality and an alert citizen

5. Appreciation of good design and a desire to determine why it is good

6. Creative or design ability

7. Proficiency in drafting and delineation."

GEORGE H. BOND of Atlanta:

"Even though the young man has a meager knowledge of construction details and of the mechanical work involved in a building, his ability to produce a good drawing, even as a tracer, means a lot to his employer. We all know that, for a long time, most young men do not earn their salt in an architect's office when fresh from college. It has been my experience, however, that if the man has had a good school training and can produce a good clean drawing, he can compensate to a large measure the employer's cost in training him as a valuable asset to his office.

"Since most offices have as their skilled designer either the boss himself or a long-time member of the organization as its head, the young man's appreciation of good design or taste is not as important as his skill in drawing. I am referring of course to the first year or so in the office.

"A subject of great importance both to the young draftsman and to his employer, is a man's ability to *know people* and how to deal with people. I realize that this is something that the man himself has to acquire, and cannot be learned at college. For this reason it might be well for employers to

give their young men an opportunity, whenever it is presented, to contact people, clients, salesmen, prospects, etc. When a man has ability along this line he can take a great load off his boss' shoulders."



GEORGE C. WALTERS of Cleveland:

"Recognizing that a young chap fresh from school cannot be expected to set the world on fire, even though he may feel perfectly competent to do so, I would say that my ideal of a graduate would be as follows:

1. Highly intelligent and retentive memory
2. A neat draftsman and letterer
3. Well-versed in construction details
4. An appreciation of decent design, and by this I do not mean 'moderne' cheese boxes
5. Some design ability, and ability to make tolerably good presentation drawings.

"I feel if a man is intelligent and has a natural or acquired ability to make decent drawings, and also has had a reasonably thorough grounding in design, construction details and the mechanical trades,

he can be depended upon to absorb the finer and the more technical points of architectural practice.

"It is foolish to assume that an architectural graduate, who five years before was only just out of high school, can be presumed to be a perfect assistant. Today's crying need is for men who can do what they are told and do it in a comprehensive and clean manner. Too many graduates can not even draw. I would never tolerate their sloppy efforts to go out of my office. The young men, and a lot of the older ones too, have no real idea of putting anything together; they never tried to actually assemble something tangible.

"Many graduates have no basic knowledge of design and their efforts are pitiful. How many men do you know who could be relied upon to take a roughed out scheme and a tentative design and actually finish it into a fairly decent presentation? The schools in recent years seem to have failed to turn out the high-caliber men they used to, or is it that we are getting older and more critical?"



It is obvious that skill in drawing and knowledge of construction details can be acquired in the

office; so to some extent can good taste. For the development of most of the other qualities, school instruction is essential. Without it the office can carry a man's training only so far—it cannot make a future architect out of him nor even a fine designer except in rare cases. Neither an office training nor a school training is sufficient in itself.

It is possible that in a rush period an architect will be willing to hire any man who knows how to draw and who has enough knowledge of construction to be able to make an acceptable working drawing, but the man in whom he is really interested, whom he wants as a part of his permanent organization, and on whom the future of architecture is going to depend should have a broad background of knowledge, high ideals, executive ability and a spirit of understanding and tolerance. That is the kind of man the colleges have been trying to turn out. He comes to the architect with little practical knowledge, but the architect is perfectly willing to give him his practical training even though he is usually a liability in the office for some time.

The profession does not expect the colleges to turn out skilled



draftsmen. I find many, however, who do not believe the colleges are doing as much as they should to turn out men who will fit into the office of the practising architect. I have had one or two recent graduates whose services I could not use. They have been so interested in Modernism that they had no understanding of, or use for, traditional architecture. I have nothing against Modern architecture, although I realize it is a step toward something else and not yet a finished product as some of our recent graduates consider it. But not many of my clients want Modern design. It is important, therefore, that the draftsman have a broad background and an understanding of both traditional building and of modern design. He should have this if only for the future of architecture, for I feel sure that style of the future will be developed by men who are familiar with and can build upon the architecture of the past, rather than by those who

think they can throw away our centuries of history and start anew.

As I see it, the schools should teach the fundamentals of design—not style nor periods. As your president has said, the musician has to learn the notes of music today, just as he did a hundred years ago. The architect should be taught fundamentals which he can apply after graduation in whatever way his taste dictates.

Possibly an apprentice training, with the opportunity of carrying on some college work at the same time, would give a young man a better understanding of his needs than when his first contact with the practicalities of an architect's office comes after he is graduated from college.

If the colleges of architecture can find a way of cooperating with the employer in training apprentices, it is possible that we can not only solve our present shortage of draftsmen but add bright names to the next generation of American architects.



Formal notice observed on the bulletin board of a British hospital by Ralph Walker, F.A.I.A.: "After the butler has rung the bell she shall go the buttery accompanied by such patients as shall be able to carry the beer to the ward, taking care however that none is embezzled on the way."

# Office Organization in England

By *Frederick Gibberd, F.R.I.B.A.*

Part of a symposium by three speakers before the R.I.B.A.: one speaker on the small office, one the large office, and Mr. Gibberd on the medium-size office. Reprinted from the *Journal of The R.I.B.A.* for June, 1946.

I SHOULD LIKE to be able to tell you exactly what constitutes a medium-size office but I am afraid I cannot. My personal view is that the size of a medium office is the amount of work the principal himself can design. I realize that that will not do as a definition because some principals do not do any designing at all, but I have always felt that personal design is the most valuable of the services given by the architect to his client. Of course, I am a reactionary. I believe that art is much more important than science; so I feel that when the principal has as much design work as he himself can do he should definitely refuse work. I know quite a few architects having medium-size offices who refuse work because they are afraid they will grow into large organizations.

One man doing all the work he could reasonably do should be able to function with an efficient staff of about fifteen people. In order that the principal shall have time to design, it is necessary that he

ration his time spent on interviewing, meetings and doing the sort of thing I am doing now. He has to reserve certain days each week exclusively for the drawing-board. I do not want to give the impression that I think the principal should spend his time doing perspective sketches with a 3B pencil and handing them out to the staff all 'round him. By the word "design" I mean design from the aspects of construction and function. In other words, one has to get to know the problem and the various constructional systems with which one is dealing. On the other hand I do not wish to suggest that no one else in the office should design. Most of the senior members of the staff are designing as they work out their problems.

With regard to the staff structure of the medium-size office, this is made up of the principal, the manager, chief assistants, draftsmen and the secretarial side. The principal is responsible for getting work, he is responsible for design



"Of course, I am a reactionary."

and the general direction of the office. The manager is responsible for seeing that the work is carried out, dealing with the staff—both drawing office and secretarial—and he should know everything that the principal knows. The chief assistants are responsible personally for carrying out particular jobs. Each assistant is generally a specialist in some particular building type; one may know a lot about theaters, another housing and another industrial design, and I think it is desirable also that assistants should be competent to deal with clients direct and not through the principal. The draftsmen are attached to individual assistants. The secretarial side consists of the personal secretary to the principal, the typist who

deals with the general typing, filing and that sort of thing and, last of all, the office boy who is learning how to draw and who will one day most certainly be an architect. He files drawings, keeps stock of materials, runs errands, etc. This is not a sort of pyramid structure but a series of teams which have particular jobs for which they are each equally responsible.

You will notice that I have not included any specialists. I do not think it is financially possible for the medium-size office to have on its staff a structural engineer or a heating or lighting engineer. I do not know what the solution is to this specialist advice when the client will not pay for it. Personally, we ask advice of various specialists who are friends of ours. We always go to the same people, and I do not think it is more expensive than trying to do it yourself in the office. In the long run I think it is definitely cheaper and certainly much more efficient. I do know of one architect who has all his drainage schemes worked out by a specialist, and he is certain it is cheaper in the long run.

Regarding the type of work in the medium-size office, I think it is necessary to specialize a little, but only a little; otherwise if you

become too much of a specialist you will be at the mercy of trade fluctuations or at the mercy of a particular client. I had one particular run where I had some large buildings for one man and he gave me, to put it bluntly, quite a lousy time. Now I have three good clients and I can always say: "If you will not accept this design then I must resign;" but if you have an organization hinged on one particular client, obviously you have to think many times before you say: "No, I am going to do this," if you feel you must do it a certain way, as you often do on matters of design. I think to specialize in widely different building types is an advantage, because that brings you into contact with quite different types of clients, and obviously when you get a slack period on one type of building the other types will help to keep the balance in the office.

Now I come to the organization of work. My particular office is run to a sort of progress schedule, which is a large sheet of paper divided up vertically into days for the period of one month. Alongside are the names of the jobs and then reading across the columns we fill in the progress on a job as we make it. At the beginning of

the column are the name or initials of the person dealing with it, and each week there is a discussion between the man in charge of the job, the manager and the principal, and the job is planned ahead. We note on the schedule what we are going to do and mark it off as we do it. We also record on the schedule any meetings which are held and any drawings which are prepared, so we can see the position of any job in the office. This schedule is stuck up in the office so that anyone can see how far a particular job has progressed.

Apart from this weekly meeting we also have a monthly discussion in the office on general matters. The idea is to get everyone to-



"The chief assistants are responsible personally for carrying out particular jobs."



gether so that each member of the staff can have his say in the running of the office. Various matters are discussed. It may be the presentation of a drawing, and when it is finally agreed, it is typed out and put into a little book which has the pompous title of "Office Routine Book." My office has just decided that they are not going to work on Saturdays any more—a decision in which I was a minority—but they assure me they will work very much harder, so they are trying it.

Then we have what we call job history. Each job of any size has a box file in which is recorded everything that takes place, which helps to plan the job. In the front there is a diary, and each week we write down what we are doing. There is a list of work that has to be done, and as it is done it is ticked off. It also contains schedules and specification notes, and contains all the odd costs one obtains when a bill of quantities is being prepared. At the bottom of the file we have general data. The idea is that this file shall be a sort of brain so that if anyone is ill the job does not go down the drain; you can go to the file and find out what is going on and how the job can be taken over and carried on.

With regard to drawings, we work to three standard drawing sizes, and if it means a bit of extra photo-printing we do not mind. I am always amazed at the amount of time that can be wasted in just handling drawings. We have a standard method of presenting drawings and a standard method of draftsmanship. I think it is desirable that one's work should have character on paper, and I feel that the only way to get it is to ask everyone to pool their skills, and get a common method of lettering and common method of putting dimensions or a north point, so that no one is able to tell who prepared a certain drawing. We are trying to extend this information sheet by including general information which one is always wanting, such as window sizes and so on. The drawings themselves are numbered, initialed, checked and dated.

I think it is worth mentioning the storage of drawings. I am certain that the only way to keep negatives is in the plan chest, preferably made of metal, and they should only be taken out when they are required for printing. Every negative is immediately printed, the prints done up into

bundles and kept in flat portfolios which go in shelves. This keeps them flat, whereas if they are put into the ordinary drawer they curl up. We also keep sub-contractors' drawings in portfolios. When the job is over, the prints are destroyed and the negatives are stored in metal tubes. Revisions that are made are, of course, marked on the print in the usual way and we bring the negatives up to date at intervals.

We have a standard office detail, that is, a series of drawings showing equipment or systems of construction such as copings, doors, etc., which have been designed and issued for each job. I think it is better to have a standard detail and push it out to jobs which are suitable. It saves time and gives the work a certain amount of cohesion.

A thing I have found most useful is a data file. It is a foolscap metal filing-cabinet which is divided up into various headings such as materials, lighting, heating, sanitation, doors, windows, electrical equipment and so on. It consists of a series of folders, each folder having a reference number, title and sub-title, so if you want light fittings you look under lighting, then you find the sub-heading

which enables you to put your hand on the folder dealing with electric light fittings. Then there is also a folder for each manufacturer, so that when data comes into the office, instead of finding its way into the waste-paper basket or, what is perhaps worse, on to a shelf only to be forgotten, all the manufacturers' blurb is torn out and the data is put in the folder. We also have box files for various types of buildings. We have one for commercial buildings, another for flats and so forth, and each one is sub-divided into different types, which enables us to look up any particular job that has been done.

On the secretarial side the subject which I think needs most mention is that of correspondence, because I have found that this can get all over the place. How often has a lost letter been hunted only to be found under somebody's drawing-board? I think the simplest way is for the secretary to open the letters in the morning, stamp and date them and put them on the principal's desk. After the principal has looked through them the manager can collect them and distribute to all concerned. If the principal does not turn up, the letters are still distributed. The person dealing with a particular

letter initials it after he has replied to it, so that when the secretary looks at them, she can file them if they are initialed, or chase up the person concerned if one is not initialed. By that method there is a check on all correspondence.

Other very useful things we have are standard specification clauses and standard methods of presentation. Similarly we have standard methods for reports which are filed in different colored folders. Standard colors and color schedules have also been found to be of great assistance. We get the manufacturer to supply us with tinted pieces of paper which we cut up into foolscap size. We then cut them into thin strips which are pasted on to a piece of paper and against each color we type where it is going to be.

In conclusion I would like to stress that I have been giving a very personal view of the organization of one particular office. There are, of course, all kinds of ways of running the medium-size office, and I look forward to hearing about some of them in the discussion.

“Among all the professions which have contributed to the successful outcome of the War, none stands higher, I think, than the architects.”—Col. ALBERT W. BURTON.

## The Sound of “Rebuilding America”

THOSE who attended the Miami Beach Convention will recall trying to share with a local broadcasting station’s microphone the Forum of the Air discussion of “Rebuilding America.” Under the leadership of Vice-president Lunden, those who took part in the discussion were: Carlos Contreras of Mexico, Henry Churchill of New York, Sumner Spaulding of Los Angeles, Jerrold Loebel of Chicago, Louis Justement of Washington and Howard K. Menhinick of the T.V.A. The talk went not only on the air locally but also into a record—thirty minutes of it, fifteen minutes on each side of a 16” audio-disc record. A recording also was made of the talk addressed to the Convention itself by Carlos Contreras—on two of these discs. If any of The Institute’s Chapters or State Associations would like to use either or both of these recordings in a meeting, and can provide the loudspeaker equipment they would require, the records are available at The Octagon.



## Books & Bulletins

**HOSPITAL PLANNING.** By Charles Butler, F.A.I.A. and Addison Erdman, A.I.A. 256 pp. 8¼" x 11". New York: 1946: F. W. Dodge Corp. \$10.

Since the late Edward F. Stevens' book, "The American Hospital of the Twentieth Century," the latest edition of which appeared in 1928, long steps forward have been made in hospital technique and hospital planning. These steps the authors have explained and illustrated in meticulous detail. Mr. Butler's extensive experience in hospital design and Mr. Erdman's unique opportunities for research through the Langley Scholarships have brought together a vast fund of specialized technical information, clearly set forth and profusely illustrated.

**TOMORROW'S HOUSE.** By George Nelson and Henry Wright. 220 pp. 8"x11". New York: 1945: Simon & Schuster. \$3.

*Architectural Forum* editors unmask the batteries of their contemporary thinking and aim at the prospective house builder. There is a strong intimation that the architect of ten or fifteen years ago should have been jailed for incompetence. There is also a lot of caustic comment on why people build what they like to live in. Here will be found plenty of constructive ideas as to how the house may be made an efficient machine, and very little realization that

something more than a machine is what people want.

**INSTITUTIONAL HOMES FOR CHILDREN.** By Appleton P. Clark, Jr., A.I.A. 128 pp. 9" x 12". New York: 1945: William Helburn, Inc. \$7.50

A summation of the general architectural requirements in work of this little-understood classification, with plans and photographs of upwards of 100 examples.

**HOUSING AND CITIZENSHIP. A Study of Low-cost Housing.** By George Herbert Gray, F.A.I.A. 270 pp. 8¼" x 11¼". New York: 1946: Reinhold Publishing Corp. \$7.50

The late Major Gray gave much of himself in this posthumous work, developing a background of social consciousness, both abroad and in our own country, and a technological and economic framework on which our efforts might be based. There are numerous plans, photographs and a bibliography.

**HANDBOOK OF RESIDENTIAL WIRING DESIGN.** For single-family dwellings. 30 pp. 6"x9" (pamphlet). New York (Room 2650, 420 Lexington Ave.): 1946: Industry Committee on Interior Wiring Design. 25¢.

A revision of part of the book of same title issued in 1937. Sponsored by seven organizations in the



electrical field and endorsed by the A.I.E.E., the A.S.A.E., and the Illuminating Engineering Society.

**BATTLE FOR PRODUCTION.** 5th Report of the Director of War Mobilization and Reconversion. 80 pp. 6" x 9". Washington: 1946: U. S. Gov't. Printing Office. 15c.

Analytical and historical review of the progress of reconversion toward full peacetime production and employment.

**HANDBOOK OF DESIGNS AND DEVICES.** By Clarence Pearson Hornung. 240 pp. 6½" x 8¾". New York: 1946: Dover Publications. \$3.75

Talbot F. Hamlin, who writes a foreword to this volume, welcomes it as a primer of geometric space division—not a compendium of forms to be copied blindly, but rather an alphabet of abstract forms to stimulate the creative imagination.

**ARCHITECTS OF CHARLESTON.** By Beatrice St. Julien Ravenel. 348 pp. 6½" x 9¾". Charleston, S. C.: 1945: Carolina Art Association. \$5.

With the architectural treasures of Charleston the architects of America are fairly familiar, but the names of the men who conceived these works are for the most part shrouded in the mists of unrecorded history. Miss Ravenel's painstaking researches among newspapers and town records of the day have enabled her, with

the help of Carl Julien's photographs, to fill an obvious gap in the architectural literature of early America.

**MINIMUM DESIGN LOADS IN BUILDINGS AND OTHER STRUCTURES.** 26 pp. 7¾"x10¾". New York (70 E. 45th St.): 1945: American Standards Association. 50¢.

A standard, approved June 19, 1945, developed as one in a series proceeding from technical committees under the American Standards Association. Dead loads, live loads, soil and hydrostatic pressures, wind loads and earthquake loads are all considered and specific findings tabulated.

**PAINT MANUAL.** With Particular Reference to Federal Specifications. By Percy H. Walker and Eugene F. Hickson. 172 pp. 5" x 7½". Building Materials and Structures Report BMS105, issued by National Bureau of Standards, Oct. 11, 1945. For sale by the Supt. of Documents, Washington 25, D. C. \$1.

**CHRISTIAN SCIENCE CHURCH EDIFICES.** By Charles Draper Faulkner, A.I.A. 418 pp. 9" x 12". Chicago (307 N. Michigan Ave.): 1946: published by the author. \$6.50

A book addressed chiefly to building committees and other interested laymen. Excellent illustrations are from the executed work of 44 architects and architectural firms.



## Architects Read and Write

*Letters from readers—discussion, argumentative, corrective, even vituperative.*



### THE VETERANS TRAINING PROGRAM

BY HARRISON GILL, Chattanooga, Tenn.

I HAVE JUST received the September issue of the JOURNAL and have read the leading article on draftsmen with great interest. However, I must point out a very grave error in the description of on-the-job training for veterans.

During the last few days of the last session of Congress a bill was passed which reduced the maximum monthly pay for any veteran in this program to \$175, for single men, including the \$65 from the Government. For married men the maximum is \$200 including the \$90 from the Government. In other words the Government's participation begins to be reduced as soon as a man's weekly wage goes above \$27 and is eliminated completely when his weekly wage is in the vicinity of \$44. Except for absolute beginners, with no previous experience, this program is now almost useless to architects, under present draftsmen wage scales.

We have one man at present in our office on this program. He is married and had had some experience before the War, but naturally his earning capacity now is not what it would have been if he had been engaged in architectural work during the time he was in the Army. In our case, we shall either have to let this veteran go, or pay him more than he is worth at the present to us. I understand that this change in the law will also affect a large percentage of veterans now on this program in architectural offices.

It seems to me that The Institute should join with employers who are registering a protest against the change, and I feel sure that the veterans themselves will take some action. At this time, when we are in such great need of trained men, the change in the law will handicap us considerably.

### "ARCHITECT - ENGINEER"

BY DENNIS E. DONOVAN, Oklahoma City

SOME TIME AGO I read in the JOURNAL a cry from the editor to the profession for help. The response has been magnificent.

I would like to mention particularly the articles by MESSRS.

Richard M. Bennett, Waldron Faulkner and Sherley W. Morgan, in the August issue. There have been others in past issues, but I cannot recall the authors. I give all my copies of the JOURNAL

JOURNAL OF THE A. I. A.

to a first-year student in architecture. Perhaps they will inspire him too. Why do I have to give away my copies? He should be furnished with these bundles of inspiration, so that he may learn the truth about the profession he is studying. Where do his fellows get their quota of inspiration and information?

But Mr. Morgan's article strikes deep into my soul, if I have a soul. Maybe I should have said my stomach! For how can a hyphenated architect-engineer have a soul? I despise hyphens so much that I replaced one with an & in my letterhead. But it is still a hyphen, and must remain in my letterhead as a mark of distinction between myself and those members of the profession whose fancies still dwell in the pre-scientific era of the nineteenth century.

After four years in a university, one may receive a degree of Bachelor of Science, with a major in Architecture or 'most any thing else. After five years, why may he not receive a degree of Bachelor of Architecture, with a major in Science, Esthetics, Commerce, or most anything else that is relevant?

Give a man a name and he may live up to it! Dub him with a degree in Architectural-Engineering, and he is apt to become a hopeless, hyphenated, homeless creature. Likewise, his associates who are dubbed Architects will shun all stigma of Engineering in order to avoid having the hyphen affixed to them.

If our unification program is really to be an architectural success, it must be organic, with its roots in the schools among the students.

## The Editor's Asides

IT SEEMS a far cry to the dark days of fourteen or fifteen years ago, when many architects were wondering chiefly how long they could continue paying office rent. A letter to fifty of the country's architectural firms who might represent the busiest sector of the profession brought astonishing news of present activity. My inquiry sought a measure of the business actually on the boards. These in-

dividual figures, naturally, are held in strict confidence, the total only being available for release. A tentative guess, before the letter went out, was that there might be found in these fifty offices about \$800 millions worth of work in hand. That would have been unprecedented in all the history of building. The extent of today's activity, however, far outdistanced that dizzy figure. In the 48 offices



from which I've heard, to date, the amount of work actually in hand, not counting "probabilities" in the offing, totals \$1,413,390,000. To save your figuring, that means an average per office of over 29 millions. Is that a record or is it a record?

ALBERT F. HEINO of Chicago, architect for the United Air Lines, is concerned over the profession's failure to grasp the speed and volume with which this country's airport facilities must be extended. There is scarcely an airport now in existence—even if built last year—that is not manifestly inadequate today and will be hopelessly outgrown in five years. One of the chief difficulties facing the planner lies in the fact that the rapidly increasing space needed for scheduled airlines to discharge and receive passengers is getting beyond the limits of pedestrian traffic; One cannot ask a passenger to walk a mile from the waiting-room to his plane.

THE SMALL HOMES COUNCIL, University of Illinois, is undoubtedly doing a lot of good in issuing its free circular on "Interior Decoration." It urges, in simple language, the layman's better under-

standing of scale, form, color and arrangement. I could be a lot more enthusiastic over this effort if it didn't illustrate my pet peeve—window curtains and draperies that keep on going after they pass the windowsill, and touch the floor. We don't make shutters half again as long as their windows; why do it inside with draperies? Functionalists, will you rally 'round?

J. FRAZER SMITH, distinguished editor of *The Tennessee Architect*, and only incidentally a busy architect, stopped over to see the Octagon staff. His nose for news is satisfied only in a wide range beyond his Memphis desk. And he boasts an art editor, Estes Mann, a luxury to which the JOURNAL has not yet aspired.

VARIOUS DEVICES have been proposed to assure the printing of an architect's name in connection with illustrations of his work in the newspapers. For completed buildings there is not much hope except in the good will of the newspaper editors. In the case of preliminary perspectives of projected works, however, the designing architect has more effective control. There is the possibility



of copyrighting the drawing, in which case there is severe penalty for a publisher's failure to print the copyright credit. Copyrighting, however, takes time and a little bother. A more readily employed safeguard has been approved by no less a legal authority than The Institute's counsel and also by The Honorable Emory H. Niles of Baltimore's Supreme Bench, and a long-established friend of the architectural profession. Drawings or photographs of drawings are merely rubber-stamped when given to the press. The stamp reads:

THIS DRAWING, AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF THE ARCHITECT,.....  
....., AND MAY NOT BE REPRODUCED WITHOUT HIS PERMISSION AND UNLESS THE REPRODUCTION CARRIES HIS NAME AS ARCHITECT.

HERE'S A PUBLICITY RELEASE which I've been mulling over for some weeks. There ought to be in it a moral which I should point out—or a sermon, or at least a wise-crack. Dean Hudnut or Roger Allen could certainly make grist of it. All I can do is to give it to you straight:

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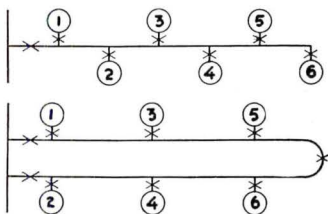
DOUGLAS ORR employs a new aid in his architectural practice—a younger cousin of the dictaphone which is mounted in his car. After a visit to a client, a building committee, a superintendent on the job, a stone quarry or a sculptor's studio, he re-enters his car and drives on to the next appointment. On the way he flips a switch and, while driving, dictates to the recording apparatus the substance of any decisions reached or instructions to be given his office organization. While the matter is fresh in his mind he records his findings. The battery of the car furnishes the slight power required for the recording. Only one slight trouble occasionally bothers Orr's secretary, when transcribing the record: interspersed with factual records and instructions she sometimes hears what Orr, sotto voice but not sotto enough, has felt obliged to say to some truck or taxi driver who has tried to cut around him or crowd him off the road.

OCTOBER, 1946

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*Third Printing, Revised 1943 Edition*

Prepared under the direction of WILLIAM STANLEY PARKER, F.A.I.A.

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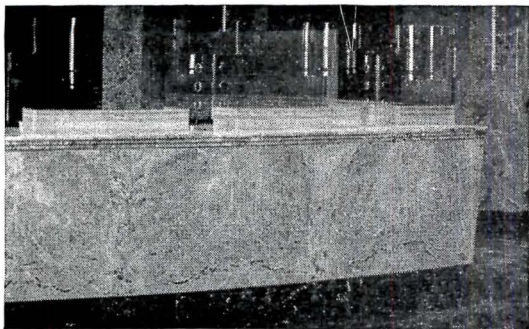
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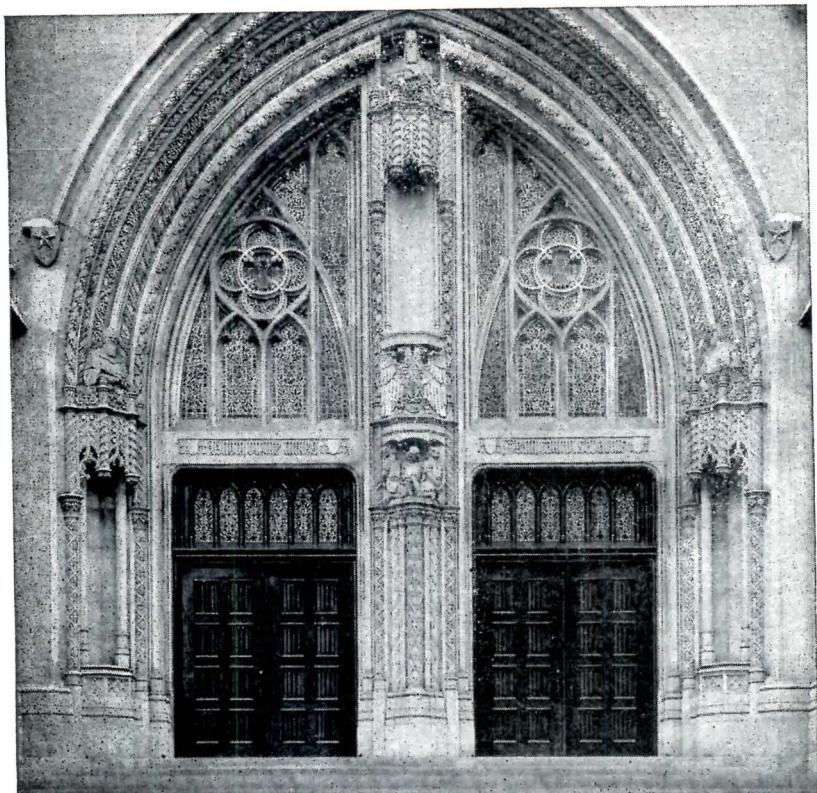


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