

# NORTHWEST ARCHITECT

VII

Published By Minnesota Association of Architects

*na*

NO. 1

*me*

"Through the ages when architecture was a direct and developing art, architects were masters of building, engineers, masons and carpenters, in immediate contact with materials. Experiment must be brought back once more as the centre of architecture, and architects must be trained as engineers are trained."

"But we cannot reach any satisfactory definition of architecture on the principle that architecture is good building and building in itself is bad building. That idea embodies an absurdity."

"On the other side it is said, 'Much building is mean and poor, and is that architecture?' Not that, either. Every art must be judged on its positive side, by its strength, not by its weakness and defects."

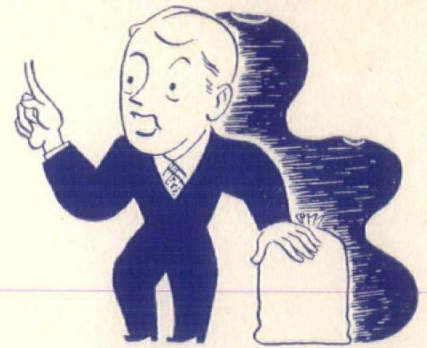
"When a better modern architecture is to emerge, we shall necessarily find a greater interest in it and a sounder basis of criticism. In the days when the cathedrals were built, people were as concerned about them as we are about cricket. The arts can only flourish when there is a common interest in them, and constant criticism by all - that is, by all people except critics . . . . ."

—W. T. LETHABY



## SPEAKING

**OF SPECIFICATIONS,** are you familiar with the U. S. Government Specifications SS-C-181b for masonry cements? The Type I specification is not so difficult to meet; but the Type II specification—which covers masonry for general use—is the most demanding on record. The best recommendation we can offer for Hawkeye



Masonry Cement is that it meets the Type II specification. This superior product is consistent with the policies of an organization which, for more than thirty years, has established a record of dependable performance with Hawkeye Portland Cement.

*Hawkeye*

**PORTLAND CEMENT CO.  
DES MOINES, IOWA**



## CONSTRUCTION IN A POST-WAR WORLD

That there will be construction in a post-war world is indicated by the current drop in building permits throughout the country and the Twin Cities. This reduction is now estimated at 70% below 1941 and will probably be greater for 1943 and subsequent years for the duration of the war.

To go along with this accumulated backlog of needed housing and industrial and public works construction will go new developments in materials which will give the initiative of the architects the greatest possible field to operate and will tax the ingenuity of the builder to execute.

Simplification of building codes is a trend already becoming noticeable, particularly through WPB regulations in the plumbing and heating field, electrical and reinforcing concrete branches.

New metals are being developed and produced in a volume that will make them economically feasible for construction of all types.

Post-war construction will probably offer the greatest opportunity yet seen by the architects and builders of the nation.

(This and our subsequent advertisements in the Northwest Architect are sponsored by the following members of the Builders' Division, ASSOCIATED GENERAL CONTRACTORS OF MINNESOTA)

Anderberg, O. R. Co.  
The Barnett & Record Co.  
Baumeister, Wm. Constr. Co.  
Cederstrand, August Co.  
Cook, George F. Constr. Co.  
Dunnigan Constr. Co.  
Field-Martin Co.  
Ganley, Ernest M. Co., Inc.  
Giertsen, Walter D. Co.

Hagstrom Constr. Co.  
Johnson, Drake & Piper, Inc.  
Kraus-Anderson Co.  
Leck, James Co.  
Libbey & Libby Co.  
Lindstrom & Anderson  
Loving Constr. Co.  
Midwest Contracting Co.

Madsen Constr. Co.  
Naugle-Leck, Inc.  
Romer, F. J. Constr. Co.  
Rule, C. F. Constr. Co.  
Splady & Haagenon  
W. C. Smith, Inc.  
Standard Constr. Co., Inc.  
Steenberg, Paul Constr. Co.  
Sweitzer, J. S. & Son

**SKILL**



**INTEGRITY**

**RESPONSIBILITY**



# Northwest Architect

Volume 7

Number 1

NOVEMBER

1942



## In 1874 "Modern" Was Also Their Word

*A word in explanation to our many readers who are not architects.*

Mr. H. W. Fridlund, Editor,  
NORTHWEST ARCHITECT,  
St. Paul, Minnesota.

Dear Mr. Fridlund:

In reply to your comment on Mr. Munsford's excellent and very entertaining book "The Brown Decades," his criticisms are generally sound but he begins his brown fall too soon, thus does some injustice to the colorful "General Grant" era and tends to be influenced by our erroneous popular estimates of the very brown "gay nineties."

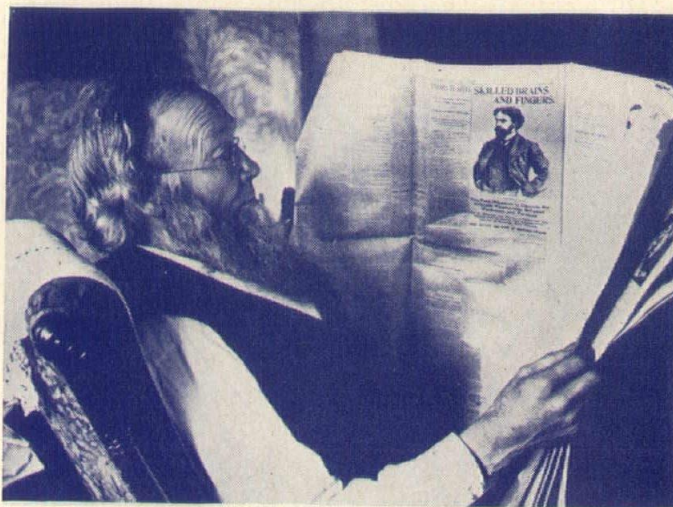
In our smug egotism, we are prone to think that all the bright new ideas were born with and for our accepted time, but previous to the World's Fair of 1893, people generally liked color as much as we do, and were not afraid to use it. I was recently astonished to see some color prints of the first Crystal Palace Exposition, in London, 1857. Both the halls and the exhibits were glowing with beautiful imaginative color, and showed the same clever functional design and general creative freedom which we like to think as "modern."

The 1870's in America, were the natural heirs of this world movement in the arts which continued in more or less healthy development and production until 1893. But in that year the World's Columbian Exposition at Chicago destroyed normal flow of native American architecture and decoration, and for the next forty years, made people self-conscious. Sincerity disappeared in "good taste," and the "authentic" copy replaced creative design. People became obsessed with the conventions and pretensions of pseudo art and nouveau riche society, style was more sought after than content and character. There were to be forty long years of imitation before the great depression of 1930, and the revolt of youth again gave American architecture, generally, a cleaner view of the building art and an honest satisfaction in organizing and shaping the materials of construction to a plan and pattern, to a surface and finish, which natural craftsmen and more candid generations of youth could approve.

Sincerely Yours,

WILLIAM GRAY PURCELL.

## Who Was Dr. Gray?



IF you love the joys of life in the wilderness you might like to know more of the books called "Campfire Musings" and of their author, who was a well-beloved character in American Journalism. He was one of the first writers to interest any considerable audience in a literature of nature and from 1885 to 1901 his work became known around the world wherever English is spoken.

In an Ohio log cabin, when Lincoln was 21, William Cunningham Gray was born, and in his long life, 1830-1901, he saw the transformation of America from rough pioneer days to the new world era of scientific achievement and more general prosperity.

He was essentially a pioneer spirit, and made an original and lively approach to everything he did. He was the first "columnist" (1875). He introduced to newspapers the special report technique (story of Northern Pacific R. R. completion, 1883.) He made almost the earliest regular use of half-tone newspaper illustrations (1891). He installed the first typesetting machines (1892). He was one of the first to print photographs taken in natural colors (1897). In 1898 he made a trip through the South and first brought to public attention the deplorable conditions of child labor in the cotton mills. He was one of the first special writers to carry his own camera for picture reporting, (Lapland Reindeer Expedition to Alaska, 1899).

He was the outstanding layman in the Presbyterian Church of his day and was largely responsible for breaking up the old ungracious chop-logic of the hardshell theologians thereby turning Protestant attention to the simple humanity of the New Testament. A powerful athlete, brilliant mind, and great heart, the genial Dr. Gray filled his life with good works, all in true sportsmanship and seasoned with hearty laughter.



# DR. GRAY BUILDS A HOUSE



1874

TEN YEARS after the Civil War our United States entered a period of severe business "panic" as it was then called, which had begun Sept. 18, 1873. The vast damage caused by the Great Chicago Fire of October 9, 1871, was far from being made good and in a considerable political turmoil, General Grant was elected Republican president in November, 1872. The citizens looked out upon a very depressing picture.

Now just why a Chicago editor, without capital, working on a salary, should have decided to build himself a dwelling in that following discouraging Summer of 1874 we do not know, but here is the house still standing after 68 years of service. Of course the \$6,000 a year salary which he then received, at a time when common labor was \$1.00 a day, and carpenters got only \$1.50 for ten hours' work, was really an upper bracket income, and for Dr. Gray to invest less than a year's income in what proved to be a safe bet on the country's future was not a bad decision for a man of 44 with two children.

The surprising thing was that this master of the Writing Arts hired an Architect and paid him about \$100 for plans plus half a dozen visits to the work. In those days journeymen printers, barbers, and architects had a reputation for allegiance to strong drink that was even more insistent than the other demands on their several skills, and fourteen years later when Dr. Gray again hired Architect Charles Miller to plan another and larger home on N. Kenilworth Avenue it was with some difficulty that our professional brother was able to keep sober long enough to com-

plete the drawings. However, sobriety was unnecessary for the visits of supervision; indeed a little friendly sip from the hip eased many a builder's minor slip.

## And So What?

In these stirring times with all the world and his draughtsman going in for modernity and streamlined buildings, why picture this old Biedermeier historical junk and want to write about it.

The answer, as I see it, is to clear our architect's mind concerning the relation between buildings already built and buildings that are going to be built. Just because of all the current excitement over what is slick, tricky, self-important, sophisticated, we can't burn up all the old houses and throw away all the used furniture, indeed from now on, even less than ever. But this does not mean that we have to pass our lives in surroundings that are unintelligent and unstimulating, nor are we obliged to put up with that unhealthy kind of make-believe which tries to restore an old house to a time and feeling alien to our living world and force us to live the pretense of being a person of long past times — a wholly false and unsatisfying procedure.

Architects have got to get clear about their function in society. Their job is to relate People to their Environment in order to make Happiness possible. The *inter-relations* of a given building are unimportant, compared to its relation with the man who owns it. For the architect, as an arbiter of good taste and practical aesthetics, to dump onto the client the architect's idea of what the architect thinks is beau-



tiful is certainly wrong. The man who uses a building is entitled to his own kind of a good time.

### Architect As Prophet

Of course this issue is much larger than the whims of any one citizen at home and if the architect is truly sincere and humanitarian it is his duty to see that clients who are plainly not enjoying life as they might are led into situations where new and better common joys can be found. But we must be conscientiously clear on the idea that we are here to enable our client to make his own good life and not try to do it all for him.

However, far in advance of our time, we must be sure to put our buildings on that road which the common man will inevitably travel. Most architects, and the best of them, just can't get far enough outside themselves to cease designing according to some academic theory — even "Form and Function" — and then handing such mere words-fathered buildings to their clients as an answer to pressing needs.

As a draughtsman, through the consultation room door, I could hear clients just pleading with my boss for certain arrangements and details which, using the silly reasons that "important" architects used to give, he told them they couldn't have.

I just itched to tell those clients that they were right, to urge them to stay with their demands. I knew how much beauty and goodness the obvious plan and design answers to their wishes could bring into the stuffy project.

### Specifications

Architects of today may be a bit taken aback by the details of this old Gray dwelling of 1874.

It cost \$4000, including the \$900 lot, 90x125. This was about \$1.50 per square foot (six cents per cubic foot!) as compared with say about \$4.00 per square foot for houses in Pasadena today (35c per cu. ft.)

But just what did Dr. Gray get for his money and what did he not get?

The sills of the house were of framed 8x10 timbers, with both the joist and studs morticed into them. There was matched fencing under the beveled clapboard siding but no building paper and the wind blew through and lifted the carpets on occasion. The building paper "forgotten" by "old man Arnold" the contractor (old at 45!) and its absence unnoted by Charley Miller, was the subject of no small amount of recrimination in the final settlement.

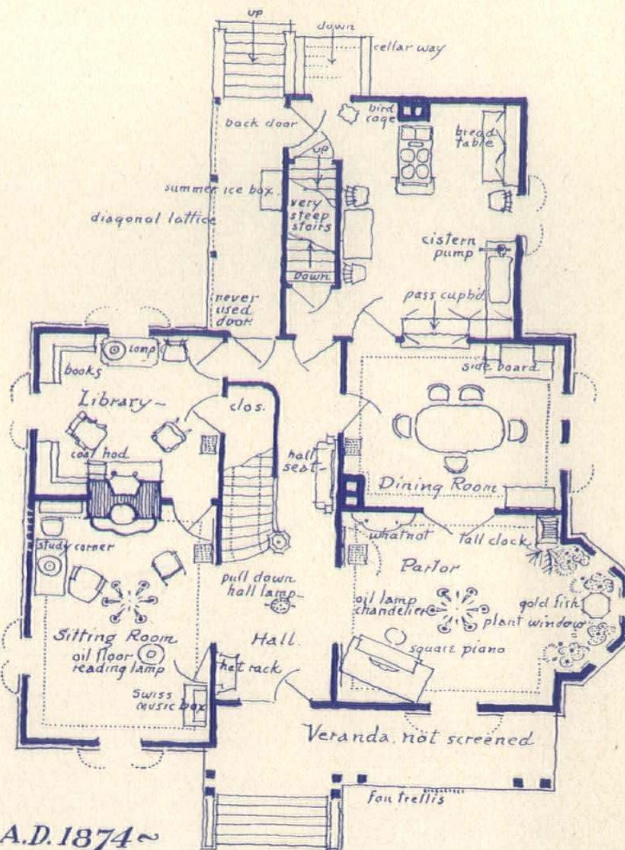
There were tin porch decks and tin on the flat of the roof, plenty of fancy mill work, paneling, brackets, sawing, curve-shaped porch step ramps, as you will see. The pair of front doors had panes of sand-blasted glass cut in floral patterns with margin framing lines. In those days every one had a blue guest room and this one had a round art window in ruby glass with transparent flower patterns cut in its surface.

**FOR CAMERA FANS:** The photograph on the opposite page was taken by an itinerant photographer in 1884. Although the first photographic dry plates had appeared on the market in 1881, this photographer had a complete dark room built inside his wagon, and his horse munched grass at the side of the road while he crawled inside and sensitized his wet plates. The exposure was long, five or six seconds with stop sixteen. Then he went back into his traveling dark room and developed the plate before it had time to dry. The photograph was finished as an "albumen silver print" made by sizing paper with white of egg and when dry floating it for several minutes on a solution of silver nitrate. When this was dry the sheets were fumed for a considerable time in a tight box over a dish of strong ammonia to increase sensitivity. The toning was done with chloride of gold, acetate of soda and hypo. The original albumen print from which this engraving was made is in excellent condition and appears to be unfaded after sixty years.

### Utilities

Before looking at the rooms within and their decoration and furniture we might examine the equipment.

There was no gas piping, no electric wiring of course, and very little plumbing. A warm air furnace, in the cellar, was equal to about half duty. The



This is the characteristic post-war-between-the-states plan which was developed with every possible variation in design until, beginning in the early 1890's, it was finally supplanted by the symmetrical New England type generally called Colonial, and the rooey half-timber imitations called English.

required heat was made up for by the continuous burning of two fireplaces, together with the coal cooking range in the kitchen. As the bedrooms in winter were generally at a temperature under 60° especially mornings, the children always grabbed their heap of clothes from where they had dropped them on the floor the night before, scampering and dragging down stairs to dress on the rug in front of the "sitting room" fire. This "grate" and that in the library burned glowing anthracite or in milder weather sooty shards of cannel coal.

The first floor plumbing consisted of two items—a kitchen sink with drain, and at its end a pitcher pump,



which drew rain water from a very large stone cistern beneath the kitchen. The water was always tobacco color and rather smelly. Out in the yard, the drinking water came from a hand pump on the lot line which was shared with the neighbors. There was a three-holer at the end of the grape arbor, about fifty feet from the back door and an equal distance from the drinking water supply.

### Saturday Nights

The bath room was off the back hall "in the wing" on the second floor. It was not heated except when they left open the back stair door to the hot kitchen. Here was a great white pine case, tin lined, to serve as a bath tub. The bath water ran out a drain by its own power but had to be carried up in buckets from the kitchen. Baths were thought to be "weakening," the chief cause of colds, and were taken infrequently. They were often prescribed by the Doctor on various counts who received \$1.00 per call for his advice.

There was no wash basin and no w. c. of course, in the bathroom, but each bedroom had a marble-topped wash stand with a very fancy "set" of china pitchers, wash bowl, cup, tooth brush vase, soap dish and large poreclain "jar" with metal bail for waste. Under the wash stand were drawers for towels and a cupboard for a useful item which more frequently was kept in a "commode" beside the bed—when not under it.

Although this equipment all seems primitive to us, it describes the conveniences of that day, enjoyed or put up with, by every one and their "hired girl," who by the way, received \$3.00 per week as cook, and \$1.75 to \$2.00 if "second girl." The hired man lived in a little room partitioned off the hay loft in the barn, got \$18 to \$20 per month and board.

### Story Book

This was one of the really fine homes of the village. Here, for fifteen years, came the men and women whose names then made news. And those so-called "Brown Decades" of the 70's and 80's were much more colorful, and the "Gay Nineties" not nearly so rollicking, as the fictionized history of today's advertisement writers would like us to believe.

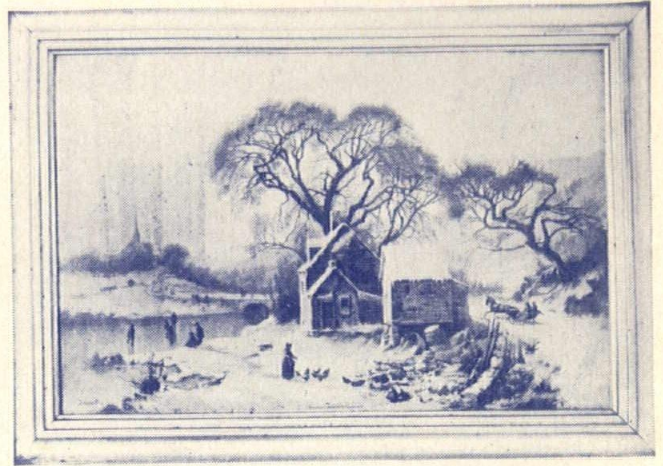
This dignified old Gray home on South Boulevard had a studio in its broad tower. Here, Mrs. Gray painted portraits and landscapes, and a dozen mothers of today's Oak Parkers gathered two mornings a week to paint china. The old parlor, library, and sitting room are rich in memories of writers, lecturers, explorers and hunters, students of social science (in those days called reformers) and men and women of every calling, who came to refresh their spirits or recruit their courage by contact with Dr. and Mrs. Gray.

As a boy I recall the visit of old "Ned," a very black man with grizzled grey hair, who came from South Dakota to say thanks for his freedom. Young William Gray, and his father Jonathan, who, from 1825 to 1861 ran that section of the "underground railway" from Pleasant Run to Hamilton, Ohio, had helped carry Ned to Canada and to Freedom one dark night in 1844. For thirty-five years, scarcely a week had passed without some runaway slave, man or woman, often terribly injured from beating, being hidden in the woods or cornfield for a day or so until he could be given a midnight lift in the old spring wagon to the next "station." Posses of sheriffs and slave hunters with their dogs, searched the farm on many occasions, year after year, but never was any black man found. Indeed, the penalty for aiding a runaway slave was con-

fiscation of the farm, but this did not deter those Scotch "covenantors" from following the urge of their humanity.

### No Interior Decorators

The west parlor of Dr. Gray's high-ceilinged mansion reflected the formal dignity and elegance of the accepted social amenities of the 1870's. Notice how tall and narrow the windows, not for seeing out they were, but to provide a setting for the long ecru lace curtains, decorated with a soft colored filled-in pattern. The tops of the windows were finished with "lambrequin" heads and from under them, hung overdrapes in long folds of French rep of bookbinder's



**T**HIS is the old Prang chromolithograph brought from Cincinnati in 1868, that hung in Dr. Gray's 1874 parlor, and on our family walls until this very day. By 1888 people had become so "modern" that "chromo" was slang for our "old hat," "stuffy," "dated."

But you will find that this artist T. Morviller did easily what our writhing brush battlers strive for so hard—he "realized" his material in its three dimensional existence. His plane counterpoint is clearly defined and his form organization is stereoscopic. I wish I could give you his colors.

This manner of painting which only a decade ago was thought hopelessly old-fashioned is now *recherchez* and a picture definitely reverting to this metier, "Thanksgiving Kitchen," got the \$500 Logan prize at Chicago in 1939, much to Mrs. Logan's disgust. The painters too have their "style" battles.

green. The wide double-hinged doors to hall and to dining room were also very tall, their woodwork in varnished golden ash, heavily moulded, the panels margined with black walnut to match the furniture. Such great doors, swinging inconveniently into furniture, were in constant use when heating plants were very sketchy and at least half the heat had to come from glowing beds of anthracite coal in the fireplaces. In milder weather, the flaky slabs of cannel coal burned with a very black smoke and changing patterns of red flame.

The walls of this parlor were a sort of woven fabric design in wallpaper of tawny color, with some green accents like the curtains and on the walls hung oil paintings in heavy, deep cupped, ornamental gold frames. The piano, a square grand and very ornate, was of rosewood, almost black. The prize object in this room was a colored lithographic "Prang" print in a smooth gold frame, of skaters on jade ice, with a yellow sunset and green winter sky above the aged winter trees.

### Interlude

At this point, I had a longing to see that picture again. It had been lost for years and had come to



light only last month. Jean brought it down from the attic, wiped off the dust and shooed away the silver fish. We took down the brilliant color-smart Van Gogh Portrait of a French Lad in a Black Hat, and hung up this old friend on the wall opposite where I write. We find it really an experience. Like an evening of Stephen Foster records.

The soft gold frame and the mellow print, glow together like candle light. The whole scene is pleas-

antly unreal. Even the snow isn't cold, but that's the way they wanted it. After all, that's only what we do, make pictures of what is lacking in our lives. This picture tells as much about these forebears of ours, as does the funny old Gray home, with its decorous deportment but unashamed sentiment and warm unself-conscious human concerns. This post Civil War art is all heart and earned wisdom, nothing intellectual. It is satisfying—WILLIAM GRAY PURCELL.

## 1884 --- Back to the "Horse and Buggy!" --- 1942

We might just as well face it and learn what we can about our new transportation. Here you have the young folks, on their Sunday afternoon drive of six long miles in grampa's phaeton. The women's hats at least are prophetic. Children's fashions and men's hats and moustaches are distinctly dated, only the horse holds



his head high without a check rein, conscious of his destiny. Today they'd call this carriage a club-coop-convertible. The back seat folded forward, up and over upon the front seat to make a one-seated "doctor's rig," the folding top had side and splash curtains and there was plenty of patent leather trim.

### Selections from "Campfire Musings"

by William C. Gray

**M**ANKIND has never willingly relinquished the campfire. It is not preference, but necessity, that has driven him indoors. Even there he carried and rekindled its embers, and it became the hearth-fire: a flame, sister to the flame of love. So much he rescued from the loss of Paradise. It is not till the overcrowding of his own kind has exterminated the game and ravaged the forests with steel and fire, and not till the increase of competing herds has exhausted the pastures, that man will fence in for himself a patch of the wilderness, domesticate for himself a few of its birds and quadrupeds, and build for himself a castle. Civilization is to him a choice of evils, and he has never forgotten nor ceased to long for Paradise, with its unlimited breadth and freedom—with its campfires glimmering on distant hill or mountain-side or stream; their rays telling of fellowship, hospitality, and liberty.

**I**T has been a day of rain—the pines are sighing in the wind and tossing their plummy branches as if flurried and disturbed. The pine is a sensible tree. When the wind is so strong as to endanger its hold in the earth, it casts off limb after limb, until its strength of root and bole are adequate to hold the remainder of its foliage against the gale. It strips itself to the conflict, and yet sacrifices not a twig that it can safely retain.

The evening campfire burns low. One by one the brands have dissolved into coals, and one by one the little circle has retired into the cabins and gone to sleep. I take from a pile of the skeleton of a dead pine one of its huge resinous bones and cast it on the coals. The surrounding trees have all retired into the silent darkness to repose from the toils of the stormy day—now with its wrestling winds also gone into the darkness of the past. Immediately the yellow flames shoot up high, and the trees step out of the darkness on silent feet, with a surprised expression, as if to say, as they look down upon me, "Why, we did not expect you to call for us again." And there they stand waiting, with the stars glittering in their tangled hair.

*In the following issue the Northwest Architect proposes to show an example of the final form of this truly traditional American architecture and to examine some of its implications for any war-marooned architect who will have courage enough to return to the changed world and say, "Well, O.K., what next?"*



# News OF THE MINNESOTA ASSOCIATION OF ARCHITECTS

## WHERE ARE THEY?

G. W. Shifflet is now with the Proudly Engineering Co., at La Junta, Colorado.

Larry Bakken is now Lt. Bakken, U. S. Navy.

Ray Corwin, Wilbur Backstrom, Ed. Buenger, Paul Havens, and A. R. Melander are in Great Falls, Montana.

Milt Bergstedt is teaching sheet metal layout work at Vocational High School, St. Paul.

Tom Ellerbe, John Dawson, Dick Reinecke, Dell Corwin, Magnus Jemne, William Alban, and Ed. Larson are among those holding the home fort of Ellerbe & Co.

It's Colonel Bettenburg now and you may be sure Phil is doing a real job somewhere between London and Tunisia.

Carl Stravs has just returned from Wyoming, where he has been for over six months.

Bill Dorr, who was "deep in the heart of Texas" for over three months, is back at his Wesley Temple office.

Cy Pesek, Ken Fullerton, Arnold Melius and Hal Fridlund are still at Rosemount with the U. S. Engineers.

Gene Schaefer and Ernie Croft are with du Pont at Rosemount.

Cliff Taylor and Bill Ingemann are Air Corps Captains somewhere south of the Mason-Dixon.

Bert Smith is at Walla Walla, Washington.

## Hoopskirts

Architects who would like a more detailed view of daily life as it was in the "horse and buggy" era will find a lot of enjoyment reading "Big Family" and "Country Lawyer" by Bellamy Partridge—grand books for reading aloud.

Another most amusing and entertaining account of this era will be found in "Maud" by Richard Strout. This gay Maud Rittenhouse, by the way, sold her first story to Dr. Gray's Chicago paper, "The Interior".

## Editing and Publishing Committee

H. W. FRIDLUND, *Chairman*  
ROBERT CERNEY  
K. M. FULLERTON  
JOHN JAGER

F. C. KLAWITER  
A. O. LARSON  
G. W. SHIFFLET  
GILBERT WINKELMANN

## H. W. FRIDLUND, Editor

Publication office, 2642 University Avenue, St. Paul, Minnesota. Published six times during the year.

NORTHWEST ARCHITECT and its publishers, the Minnesota Association of Architects, disclaim any and all liability for statements made by authors in contributed articles.

## ART GUM CRUMBS

Yes! We still gotta have proofreaders.

We were copying from our Egyptography and marked a case where Cleo was reclining on her pile of rugs and pillows when a curyer comes in with some dismal dope on some dismal dope. We transcribed "—and Cleopatra rose up in her wrath and gave a scornful order for the man's beheadal."

One little "i" we used in the whole sentence but the composer thought an "o" would look better.

Well—really—

\* \* \*

SICK—SILLY AND—ER—SENTENCES.  
(Apologies to Holland)

kmf.

V must be as fierce and vicious  
As the Nippon sons ambitious.

\* \* \*

Steatopygia is an enlargement of the stup-end-o-us.  
(see Webster.)

\* \* \*

Pumpkin Biter—A big-mouth, wide open.  
(Works for Hitler)

\* \* \*

SPECTACLE: Get more than your hands can hold and then try to wave "good-bye" to trouble.

\* \* \*

Better to be bury busy—the busy doodi but they never dyidle.

\* \* \*

JUDGE: "Must have settled that case justly—both sides are kicking."

\* \* \*

The basic difference between a "Terrace" and a "Tavern" is just a matter of Deep-fryer control and Fly-count.

\* \* \*

"Hi Stork! Where's your new job?"

"Northampton—light duty though—just goin' 'Boo'." Hm.

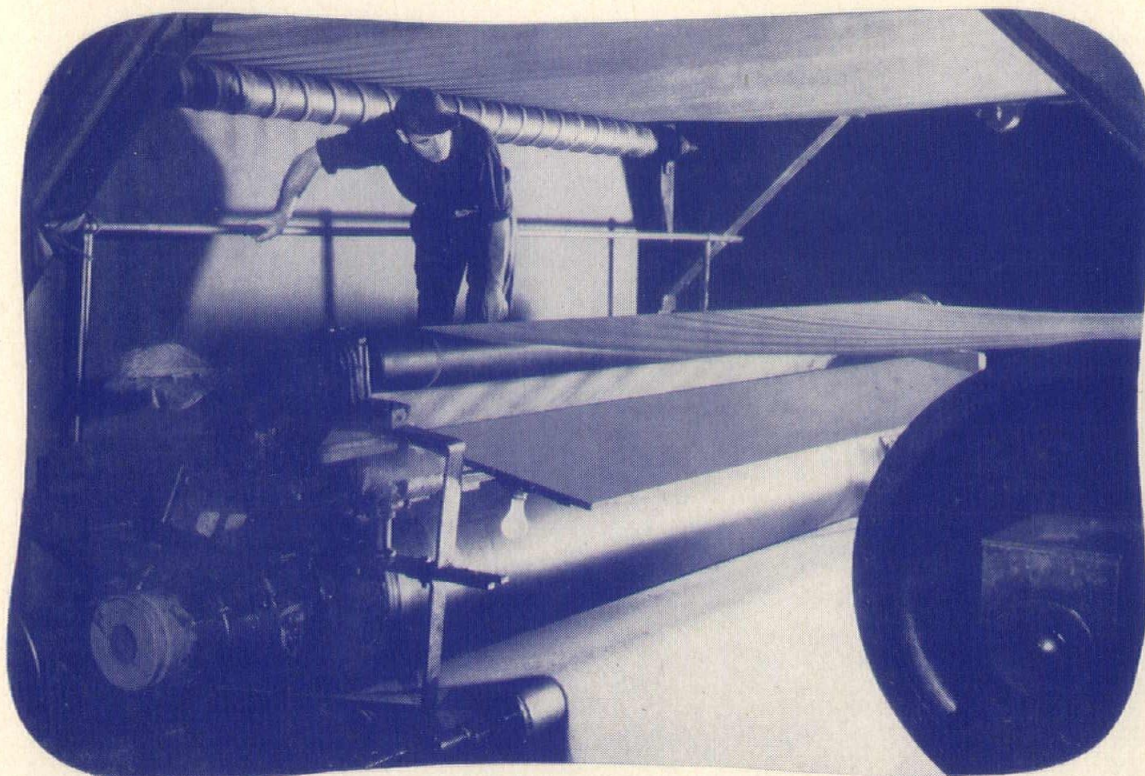
\* \* \*

POKER PLAYER—calling for help on a desert—"Oasis—OASIS."

\* \* \*

Alcott wrote a book called "Little Women." Junior is writing a small one with the same title—All figures though.



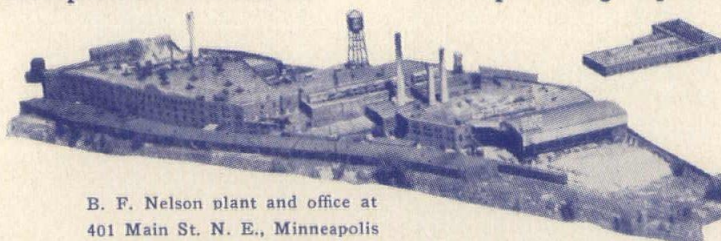


## His Job Is Part of Your Specifications

This man's job is helping tend the largest roofing felt machine in the world. Here, in the B. F. Nelson plant, is produced, under the strictest laboratory control, the high-quality felt used in the construction of Nelson's Master Bonded Roofs. The same pride this man takes in his job is reflected all through the Nelson organization. Great importance is placed on the high-quality workmanship and superior materials incorporated in Nelson's Master Bonded Roofs as well as all other Nelson products.

That is why, when you specify a Nelson Master Bonded Roof—your client is getting more than a written guarantee. Back of every Nelson Master Bonded Roof is the manufacturing experience and the reputation of the B. F. Nelson Mfg. Co. for seventy-four years of business integrity. All Nelson Master Bonded Roofs are applied, inspected, and serviced under the supervision of qualified built-up roofing experts. Make sure your

specifications call for a Nelson Master Bonded Roof.



B. F. Nelson plant and office at  
401 Main St. N. E., Minneapolis

**THE B. F. NELSON MFG. CO.**  
401 Main Street N. E. • Minneapolis, Minn.



# The Young Architect Cries for Leadership

IN this, our first year of World War II, The American Institute of Architects met for solemn deliberation from June 23rd through June 25th, 1942, in Detroit. This year's "Annual Meeting," as it was called, was serious, continuous and realistic. The necessary mechanics of such a meeting, as they relate to the year's affairs of The Institute, were cut to a minimum. Before the members there hovered the gruesome spectre of the war's depredations upon the profession, but no note of complaint was sounded throughout the proceedings and, to The Institute's credit, no idle resolutions of patriotic statements for publicity came forth. The Institute took stock of the architect's position in the American world of today.

Preceding the meeting, the representatives of the Collegiate Schools of Architecture discussed their mutual problems relating to education and, separate still from these deliberations, The Institute Committee on Education met for its discussion of the subject. A period of the Annual Meeting time had been set aside for general discussion of education by the representatives of the profession from all over our land. However, because of the other features of that afternoon's program the discussion never got under way. The remarks which were planned to start the proceedings were contained in a scholarly statement of the views generally accepted as those of one side—the traditionalist side—of the time-honored discussion about what constitutes architecture. It is to be remarked that the very negative attitude of the assembled architects toward the highest purposes of their profession is commentary enough upon their present frame of mind. It is conjecture, of course, to assume that were the pressing burdens and anxieties of the times removed from the architect's minds, a spirited discussion would have ensued. I venture to state that such a discussion would have resulted in a more widely accepted belief that structural facts should play a more important part in architectural education than heretofore.

No generation of architects ever forgot they were builders. There were times not so long ago when architectural education became lop-sided, stimulating the imaginative faculties and veering toward the conception of monumental forms and the continuation of a classic heredity almost to the complete exclusion of the fundamental needs of a *builder's* training. In those purple and gold times the lust of proud youth to seek his own architectural destiny was too often suppressed by olympian condescension but firm guidance in the good and tried old formulas. One had to be strong to survive the impact of such imponderables. But lest some of our smarties both young and old seek to pour ridicule upon the architecture of those times, let them stand on Fifth Avenue and 36th Street in New York and contemplate the old and the new buildings about them. The old are at least harmonious and elegant. In the new, one senses a vain effort to be clever. One senses that the death knell is ringing over this part of one of the finest streets in the world.

"What is wrong and what must we do?" asks the young man. "Give us leadership!" says he. He wants an answer. We can take him aside and whisper in his ear, "The day of the centre line is over. It produces static compositions. Mark you this: always strive for balance, never symmetry. There is the secret." This at least is clear. It abolishes the old credo once and for all. Time is saved for the student. It is the law.

We can tell the young man that all his work should have social consciousness. His conceptions should strive to integrate the technological aspects of our civilization and the human aspirations of our life today. This, of course, is not as clear as the preceding formula. Such statements lead to, in fact are, abstractions which though they have widely recognized implications, have little meaning for those who strive for the realities of putting one stone upon another, or to be more modern, putting one lally column where it works twenty-four hours a day.

Some teachers who have espoused revolutionary attitudes and some practicing architects who have seen a new light are inclined to look upon other contemporaries as remaining in the status quo of their own youth. They fail to see that in a changing world others besides themselves change. In the normal movement of a people each individual sees a slightly different view. It is by looking back that one sees if forward progress has been made. In architecture the test of progress is in the uniformity of expression which develops in a given area, be it a whole country or a part thereof. The uniformity need not be in detail, but on broad lines. What many of us think of as a new California architecture is an identifiable aspect of newer houses there that, with a certain uniformity, expresses the spirit of a buoyant people and their locality. It is a definite attribute, not an abstract "international" one.

Can this aim be taught? Perhaps—indirectly; not specifically.

A survey made some six years ago by R. L. Duffus (*The Architectural Record*, September, 1936; Reprinting *The Octagon*, Vol. 8, number 9) shows divergent views on architectural education. No one stresses the fact that the expression of the spirit of a people is a timeless attribute of good architecture. The comments do not reflect great credit upon the profession. A broad understanding of basic values seems to be lacking in most of the comments. I wish, for example, that someone had stressed the point that too often and too long we in America have followed the teachings of other nationals. Can we not take our own steps? Have we not courage and faith of our own? The plasm from which a new American architecture can grow is to be found in the intangible but real faith in our own way of life. We should accept our responsibility to work for a slowly moulding and confident culture and architectural purpose of our own, rather than grasp at each easy and too often imported formula that asserts its own invulnerability.

Does the young man want to be taught a kind of



architecture so that he may have a ready-made vocabulary of detail? It seems to me rather that he should be made aware of his responsibilities in this rapidly changing world. The best a school can do for a student is to indicate the way, provide an orderly means of study, give encouragement, stimulate an awareness of the life he lives, help him to use the tools of his profession, and guide him toward the search for a beauty in the world of today.

It is trite to say that the aim of education is to make people think, but it is nevertheless basic. There are subjects in which teaching strives to impart factual data. In other subjects training strives to develop qualities rather than to impart facts. The architect's training should be of the latter sort. He must have factual training too, of course, but basically his training to conceive three-dimensional space, to acquire flexibility of mind as well as to use the tools of his profession, is paramount. School training can hardly do more than that.

There is need for improvement in our schools. How to find a better balance between broad basic aims and the equipment that fits a young man for an immediate job is always a real problem. It is especially so today when vast building problems of national scope are paraded before us. A flood of statistics, for example on housing, becomes so absorbing that the scale of the human family with its desires and affections is lost in the maze. Statisticians who have never had the responsibility for one job formulate standards. Men who have not faced the problems inherent in the democratic process of dealing with fellow men find formulas for other peoples' behavior, even to how they should apportion their incomes, for example. Town planning becomes a slide rule and statistical affair instead of an understanding that it is natural democratic growth based upon coöperative action of the citizens, the government, the bankers, the architects, the engineers, the poets of a community. Rules and patterns become abstractions. When such teaching is the case, the school needs improvement.

It is my contention that today many schools—not all—are turning out men who are better trained to practice their infinitely more complicated professions than heretofore. They are aware in attacking their problems that there is a North, East, South, and West, that there is sunlight, earth, wind, and rain. They know that buildings are complicated mechanisms of concrete, stone, steel, glass, wires, pipes, transformers, and many other items. I have seen young men with no apparent ability to think or draw, with no especial qualities of versatility at the start, develop in four years to the point where they could turn out very creditable architectural works.

Some have gone out obviously bemoaning the lack of having acquired an easy formula for success, but aware of the responsibilities they must assume. If they fail of courage it is woeful but it is good to know it soon—for there is no easy road to creative excellence except through energy, pride, and faith. In my opinion too many people have assumed that the architect, to fit into our world today, should be an engineer, a site planner, a furniture designer, a promoter, and a businessman all in one—a sort of super jack-of-all-trades. That our woes at this very hour are real is, of course, true. In a war of survival the basic attributes of an architect's abilities have

*(Continued on Page 14)*

# CARNEY BUILDING PRODUCTS serve the war effort

Carney Building Products are moving fast to all fronts of construction activity.

They are speeded to big jobs throughout the Northwest—to Defense Home projects, to Munitions Plants, to expanding War Industrial plants, to Airports, to Access Highway construction.

Here are some of the Carney Products—some of the jobs they are doing today.

## CARNEY ROCKWOOL

Nature's finest insulating material goes into hundreds of Minnesota Defense Homes. Attic and sidewall insulation in these homes make them warmer in winter—cooler in summer—and, reduces the fuel requirements for year-round comfort. Carney Rockwool in Defense Homes helps release both fuel and transportation facilities needed for the war effort.

In a Nebraska Ordnance plant, Carney Rockwool insulation is helping to cut fuel waste and boost production efficiency.

## CARNEY NATURAL CEMENT

It is used in Minnesota and South Dakota for Airport Runways. It is in the many new Access Highways in Minnesota connecting War plants, Training Centers, Airports, with trunk roads. Combined with Portland cement, Carney Natural Cement makes a Blended Concrete that is workable and highly resistant to salts, acids and frost action.

## CARNEY MASONRY CEMENT

For 59 years the accepted standard of building construction, Carney Masonry Cement has the values that make it vitally important to war needs. The superior plasticity of Carney Masonry makes it easy to work. It is free from efflorescence, hardens quickly and increases in strength as it hardens.

Key buildings of Minnesota and Nebraska Munitions plants are going up with Carney Masonry Cement.

**Other Carney Products:** Carney Natural Cement, Carney Masonry Cement, Carney Rockwool, Industrial Insulation, Insulation Cement, Crushed Stone, Rip-Rap Cord Rock.

**CARNEY**  
**BUILDING**  
**PRODUCTS**  
**MANKATO, MINNESOTA**



# Need for Progress in Scientific Planning

Architecture, engineering, and scientific principles of construction have never had a fair trial as factors in the development of cities!

Why?

Because individual buildings are controlled by the environment of their local areas and should be an integrated part of a general scheme of design; but, as yet, the general environment of local areas is not determined by general design control.

As a result, we have numerous well designed buildings; but, as a whole, the architecture, planning, and design of extensive districts of cities, if not bad, is at least not good, and frequently is disagreeable, and the efficiency and continuing value of such districts falls off too quickly.

Because of the manner in which cities have been developed, lacking the benefit of over all design control, and engineering and construction science, the resultant product does not provide even a basis for comparison as to what the desirable development of cities could be; and the public at large have not been led to see the need for and to demand adequate design and planning consideration.

There has been tremendous progress in the scientific, mechanical, and practical fields. Witness all the present marvels such as:

Radio, Television, Air conditioning, Aviation, Plastics, Metals, Automobiles, Building material, Sound transmission, Moving pictures, Chemistry, Electricity, and so forth in a longer list than this.

But cities have not progressed in harmony with development in these and other fields. Cities are archaic and obsolete. Cities now stand on the brink of revolutionary change.

The war has temporarily obscured the trends which indicate fundamental change in the structure and organization of cities; but we shall see these developments on greater scale than ever, at the close of this war.

Opportunity stands before the architects, engineers, and constructors to take hold of and give needed directions to the development of these changes which, in the long run, will completely alter urban areas.

As to the present problems of communities, we should establish and recognize at least one great historical division in the record of community development that hinges upon creations in science and mechanics.

Up to the beginning of the twentieth century, in all history, urban growth was based on concentration. Means of internal transportation and communication in urban areas limited to foot movement, horse cars, the electric cars, steam cars, etc., confined population to limited areas, and dictated the pattern of cities, which are now condemned, at least in part, as too congested, inconvenient, uneconomical, and unhealthy.

During this period of growth, scientific and practical effort was applied toward meeting the problems which were inherent in such urban structures. Concentration was accepted as natural and inevitable. Not questioning the need, effort was made to meet the problems of concentrated population and urban activity.

During this period, we acquired:

1. Systems of water works for domestic use and fire protection.
2. Sanitary systems for disposal of wastes and prevention of disease.
3. Building and housing codes for safety and the protection of the social needs.
4. As population and commerce piled up, we learned how to build higher buildings and to concentrate more people and activity in a given space.
5. In the late part of the 1800's, we began to think that open spaces in our congested cities were needed, so we planned and built parks to provide breathing spaces and for recreation.
6. We developed our educational system; we built museums and art galleries.

But in general, the development of the community followed a regular pattern in the slowly expanding waves of construction at the periphery of the city. In some outlying districts, satellite communities of small importance formed in areas adjoining the main body of the city. This period of community growth was characterized by a process of accumulation and intensification without much over all control or design. The basic pattern of community structure was then established, with all its inherent conflicts, confusion, and wastes. This is the structure that planning has struggled with up to this time. Most of the work has been simple correction on limited scale. The fundamental pattern remains.

These development trends were broken in the early part of the twentieth century mainly by two factors, one of which was primary—the automobile, and secondarily with it—the development of means for economical electric power and its distribution.

Economical electric power was in itself unable to break the original pattern of community development; but, when with it was combined comparatively inexpensive flexible transport by means of the automobile, a whole new chain of development in community pattern and condition was set up.

The boundaries of urban areas were broken. Population began to flow out into widely expanding areas. The war has interrupted this program, but it will likely be resumed.

Where before, the trend of growth was on the basis of centralization of activity, and the development of the community structure was based on it, lately, the trend has been on the basis of decentralization, and we have to consider what this trend will mean as to the probable future community structure.

We know now that the effects of this change will be revolutionary as to community pattern and organization. Population intensities will decline; community areas will grow.

We have already seen the exodus of people from the central areas of cities, leaving vacant areas of blighted property. We suspect that the central cities, losing population and tax support, are going to be confronted with ever-growing financial problems.

We believe that community organization will have to be reconstructed, and that community governments will have to be reassembled into new groupings, if these problems are to be effectively encompassed.

Cities that are founded upon sound economic support, in the form of logical industry, business, and services, will survive and have opportunity for reconstruction.

In any study of the future of this community, we need to carefully determine what resources are available for community support, and in what directions these resources can expand. We have not yet seriously tackled this field of scientific study.

We have seen what industry has been able to do through its investment in scientific research, experiment, and development; but we have not had the foresight to apply this intelligent procedure adequately to the potentialities of cities on any measurable comparative scale.

We need to improve our general transportation facilities—air, rail, highway, and waterway.

We need particularly to improve our terminal facilities, and to coördinate these facilities with each other and with an effective program of future land use.

We need to better regulate the extension of this new urban development, to conserve natural values, and to establish the basis for a sound and economical development.

We will have to plan for the long term rebuilding of extensive areas of our present cities on the basis of a more intelligent plan than before, if we admit that cities were ever generally built according to plans.

We need to recognize that the city is built to serve the functions and needs of a people, and that people are not subservient to previous conceptions of the patterns of cities.

All this and much more.

You may ask perhaps, "Where does the architect, engineer, and contractor get into this endless chain?"

I suggest that, while we have a great many scientists, we have too few interpreters of the effect of scientific development upon life or the opportunities of scientific development for enhancing life and bettering communities.

As scientists, the professional men of the building industry have the facilities for analysis. It is part of their job to



study the meaning of scientific progress as it affects urban communities. It is part of their job to see that the problems of cities are viewed in the light of scientific progress. It is part of their job to see that scientific knowledge is applied in plans for the future development of communities.

Part of the problem is to create understanding by the public and public officials of the meaning of changes affecting their communities. Lack of knowledge or inability to understand is the greatest obstacle to progress and the greatest hazard that communities now face. We need instructors.

We all know that it is the tendency for peoples and their governments to delay or avoid recognition of difficulties until there is positive danger of damage. In these swiftly moving times, this is doubly dangerous. Perhaps we will some day find out that this is the cause of wars as well.

It is sound and intelligent to study and, on the basis of facts determined, or even upon well-considered estimates, to make plans for future development.

It is not sound to pretend to study and plan, or to make half considered plans.

We have talked of planning as applied to cities for a long time as though effective and scientific planning actually existed. The fact is, we have yet hardly begun to plan. The fact is that we have been unwilling to make it possible to have sound and effective planning based on scientific studies.

The architects, engineers, and contractors can make it part of their job to try to see to it that we begin to make progress toward effective planning. It would pay, not only in a future in which urban districts would be immensely more satisfying to live in, and more effective to carry on business in; but because as designers and constructors, they could have a large part in the future building of cities.

You may well ask, "What are the prospects that anything will be done?"

We are now in a great war to preserve our own system of community life. All our efforts will be devoted to winning that war.

The pouring out of the vast resources of this country and of the very life of its people will mean little if, on our return, we go back to the inefficiencies and frustrations which, in such large measure, have controlled our lives in the past. I doubt that the people of our country would complacently accept such conditions. What is true of the general condition is true of our urban communities.

The outstanding economists of this country tell us that after this war is won, one great part of the winning of the peace and one great part of our effort to provide for the employment of people through the use of the resources of the country will be in the reconstruction of our cities, in which nearly two-thirds of all our people live.

We now recognize that the maintaining of our standards of community and national institutions lie in proportionate measure, in the lives of this section of our people. We shall maintain and improve the standards of these institutions if we maintain a happy, prosperous, and constructive people in our urban areas.

When this war is won, our one great problem—our primary economic, social, and political problem will be to find an outlet for the tremendous production of the vastly enlarged economic machinery of this country.

Look around. Where can the force of this production be profitably applied?

If you look too far beyond the cities, in which so large a portion of our people live, you will seek in vain. Here is the new frontier—not to be followed in haste and wasteful exploitation.

From now on, we need to plan before we build. The architects, engineers, and contractors have their part to play in this new period. It will be too late if we wait until the war is won. We must begin our studies and begin our plans now.

It is there that the architects, engineers, and contractors have their present opportunity. They can see to it that a beginning is made on the plans for post-war reconstruction.

What are other cities doing?

All over the land, realization is dawning that plans will have to be prepared before the war closes, or it will be too late.

We must be prepared for conversion from war to peace. If we fail to prepare, the resulting confusions may shake the economic, social, and political institutions of this country to their very foundations.

In New York, Mayor La Guardia, it is said, has requested a fund of ten million dollars for the preparation of archi-

## Balsam-Wool

SEALED  INSULATION

Tested in the most rigorous of climates—proved by performance in 250,000 homes—Balsam-Wool Sealed Insulation, applied by the Famous Minnesota System—is the SURE way to insulate. Write for information about the DOUBLE advantages which Balsam-Wool provides.

## Nu-Wood

  
*Kolor-Fast*

### INSULATING INTERIOR FINISH

Exclusive style and beauty—harmonious FADE-PROOF colors—plus insulating and acoustical value—put Nu-Wood Kolor-Fast Insulating Interior Finish in a class by itself. Write for full information—and ask about Sta-Lite, a new reflective board with 76% light reflection.

### WOOD CONVERSION COMPANY

Dept. 186-9, First National Bank Bldg., St. Paul, Minn.

Nu-Wood . . Products of Weyerhaeuser . . Balsam-Wool

## HEATILATOR FIREPLACE

Heatilator cuts fuel bills — Saves materials and labor — A correct form for the masonry — Circulates heat — Will not smoke.

### Heatilator Co. Syracuse, N. Y.

TWIN CITIES OFFICE

850 Cromwell Ave.

St. Paul, Minn.

## TECO CONNECTORS

NOW IN STOCK

available on priority

Northwest Distributors:

B L W, Inc.  
Br. 3259

126 So. 8th St.  
Minneapolis

George T. Warner

## ELECTRIC BLUE PRINT CO.

Architect's Supplies  
Photo Copies  
312 Minnesota St.

Drafting Room Equipment  
Planograph Printing  
GA. 2368 St. Paul, Minn.



tectural and engineering plans for needed public works totalling seven hundred million dollars, and including every phase of municipal activity.

In this state, Governor Stassen has proposed the accumulation of funds for post-war construction by segregating funds previously allocated for construction and accumulating reserves from current funds normally allocated for maintenance and construction.

So far, provision in this state has been made only in small measure for funds for the preparation of needed plans for post-war construction. The building industry should take it upon itself to urge that such funds are needed now and should be provided, and soon.

In the prosecution of these plans, the object of the building industry should be to see to it that future building construction follows and is a part of general community design. As we build, we need to build for long-time continuing values, such values as can be obtained only where building development is part of a sound community program. It requires that design, both general and detailed, shall be a part of all future building construction.

It follows that every effort should be made to incorporate in post-war reconstruction the benefit of scientific progress in every field.

We shall have to inaugurate new departures if our cities, in the future, are going to measure up to progress in science and practice in general, and we are now far behind and below our potentialities.

When architects, engineers, and constructors, cooperating with city planners, are permitted to incorporate the new facilities for improved living into the schemes for the future building of cities, on the basis of complete and harmonious design, then the environment of cities will take on a new appearance, life in cities take on new and enhanced meaning, and architecture, engineering, and construction achieve the recognition they need and deserve. These constructive agencies will then have a real place in the development of cities, and cities will then have real and actual city planning.

## YOUNG ARCHITECTS

(Continued from Page 11)

comparatively little use. Architecture suffers in time of war. Is it any wonder that the young architect faces the world with insecure feelings?

We must realize that we are but part of a coöperative world. This is especially true in our American way of life. The architect is but one of a group of statesman, engineer, economist, promoter, etc., who will plan what we hope will be a better world after World War II.

It is quite possible that our contribution toward a richer life in which architects must and will play a significant part may, for the moment, have to be in dreams only. In total war a nation girded for harsh action may have to by-pass all other functions of the architect except that part which only a few can contribute toward winning a victory of arms. Until that time comes, and it will not be of our choosing but will be the result of military decision, I see no reason why the schools should commit the sort of scholastic hara-kiri suggested by one member of our profession who proposed that all architectural schools voluntarily shut down. There is no reason why the young men and women now studying should not continue their training for a better day except the possible dictates of a total war effort.

The young man wants leadership! I do not recall having heard that such as Christopher Wren, Louis Sullivan, Charles McKim, Paul Cret, Ragnar Osberg, nor any of the other really creative men asked for it. It is to be hoped that the leadership the young man of today will appreciate is the inculcation of an idea that the new world as well as its architecture is his responsibility, and that to find the spirit of his own people and to translate it into a living reality by means of his own inventive genius is his hard but stimulating task. And I am one who believes that if he wills to survive the discouragements that beset the whole profession today he will accomplish his task nobly.

EDGAR I. WILLIAMS.

*Mr. Williams is President of the New York Chapter of The Institute.*

## ★ Buy War Bonds and Stamps ★

### BLUE PRINTING PHOTO COPIES--PLANOGRAPHS

*Complete Equipment for  
STUDIOS AND  
DRAFTING ROOMS*

**H. A. ROGERS CO.**

AT. 2247

911 MARQUETTE AVE.

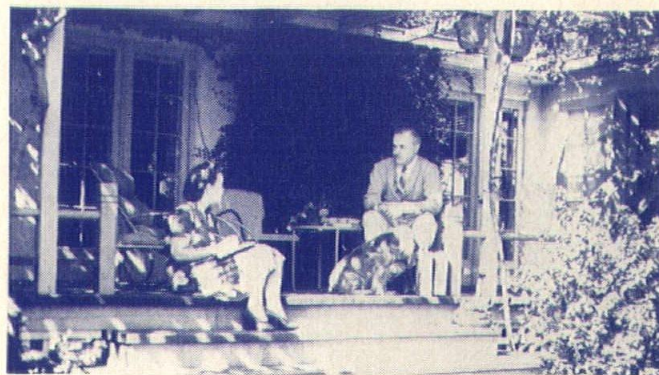
### E. E. BACH MILLWORK CO.

3121 Hiawatha Ave. - Minneapolis  
Distributors of Andersen Casement Units and  
Andersen Narroline Frames

### ACME STONE COMPANY CONCRETE BLOCKS and PRECAST CONCRETE JOISTS

Phone  
Regent 5123

Office 2937 Lyndale Ave. So.  
Minneapolis, Minn.



### MEET MR. PURCELL

NORTHWEST ARCHITECT is deeply indebted to William Gray Purcell for the splendid editorial contributions he has made over the past several years.

Above is reproduced a picture of Mr. Purcell as he prepares the feature story for the next edition of the publication.

NORTHWEST



*Now Available*  
FOR PRIORITY CONSTRUCTION

# RILCO

## Laminated Wood Arches

*Engineered for the Job...  
Delivered to the Job...  
Ready for Erection*

Whatever the type of building you're planning, wherever its location, *North, South, East or West*, Rilco factory fabricated wood structural members are manufactured in five strategically located plants and are available for priority building. Complete engineering data, design service and consultation are available to you. Write today for information on Rilco Products.

# RILCO

DESIGNERS AND FABRICATORS OF  
ENGINEERED WOOD PRODUCTS FOR  
A WIDE VARIETY OF USES

**RILCO LAMINATED PRODUCTS, Inc.**  
*A Weyerhaeuser Institution*

1581 First National Bank Bldg., St. Paul, Minn.  
Factories: Albert Lea, Minnesota; Brodhead, Wisconsin;  
Chicago, Ill.; Huntington, Indiana; Wilkes-Barre, Pennsylvania



## A COMPLETE *Landscape Service*

with reliable plant materials and competent workmen. Workmen insured and plant materials guaranteed.

**The H. G. Loftus Co.**  
Nursery Office, Cleveland and Roselawn  
St. Paul, Minn.

Midway 8077

Evenings, LaSalle 7179

ARCHITECT

# A. C. Ochs Brick & Tile Company

Manufacturers of  
Artistic Face Brick, Common Brick and  
Structural Building Tile for  
Every Purpose

Executive Office,  
Springfield, Minnesota

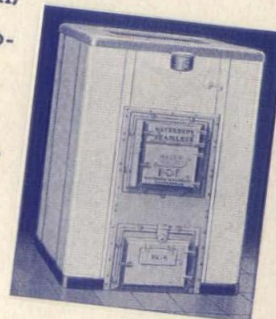
General Sales Offices  
906 Foshay Tower  
Minneapolis, Minnesota

# WATERBURY

## SEAMLESS FURNACES for REPLACEMENTS

FOR those who must replace leaky, worn out furnaces and who want to completely eliminate future possibility of air contamination by coal dust, smoke, soot, ash dust and gas fumes, the Waterbury Seamless Furnace is the logical answer—guaranteed gastight for the life of the furnace—SAVES FUEL—delivers clean, healthful heat, economically.

There's a WATERBURY for any home, any fuel. Engineering service to architects.

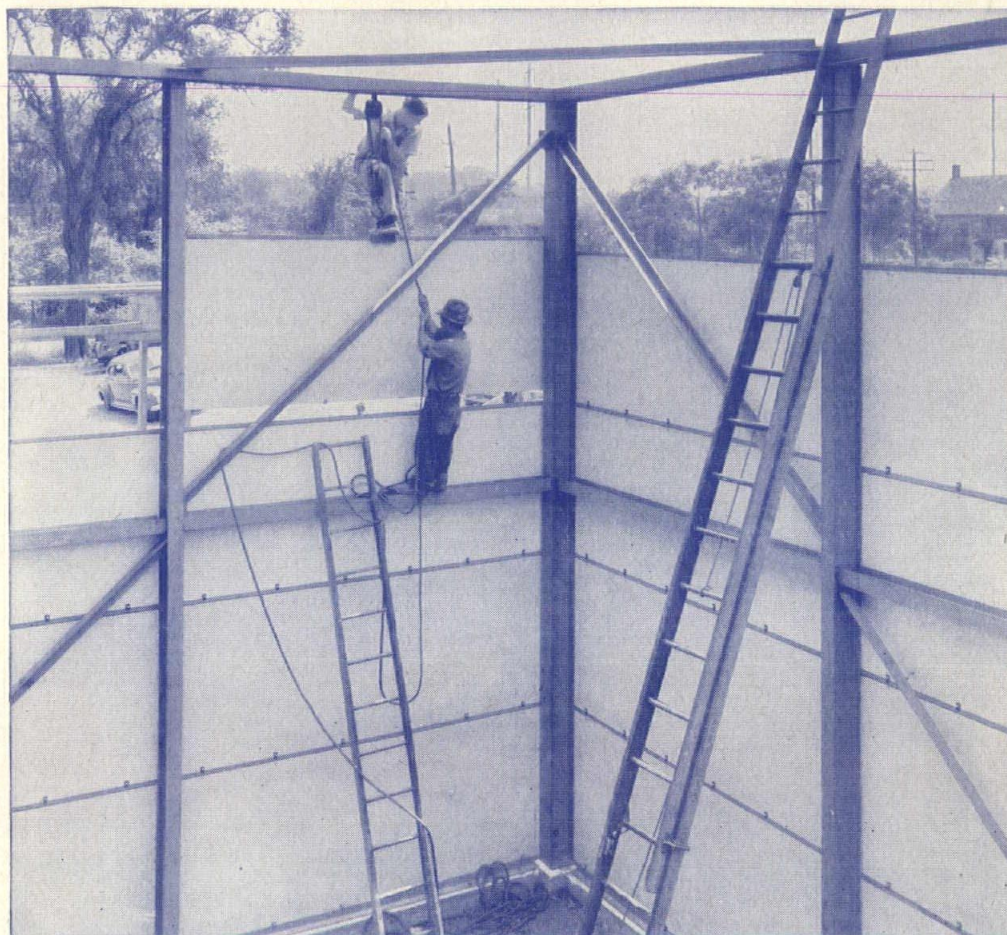


**The WATERMAN-WATERBURY CO.**  
1121 Jackson St. N. E. Minneapolis, Minn.



# CEMESTO OFFERS 3 BIG ADVANTAGES

## for Fast Factory Construction With Steel Framing or Wood Framing!



**Combines Strength, Insulating Efficiency, Good Looks**  
**NO OTHER FINISH NECESSARY—INSIDE OR OUTSIDE!**

ARCHITECTS are finding Celotex Cemesto a practical and versatile material for enclosing many types of industrial structures which must be rushed to completion. It has repeatedly demonstrated its ability to replace combinations of materials in hangars and ordnance plants, ammunition depots and storage buildings, assembly shops, machine shops, etc.

This product may be used with steel or wood structural framing, or reinforced concrete framing. It combines in one material—erected in a single operation—structural strength, proved insulation, resistance to

weather, and resistance to fire. Its gray asbestos-cement surfaces do away with necessity for painting or other surface treatment. Its core is Celotex insulation board with a thermal conductivity of 0.33 per 1" thickness.

Standard thicknesses are 1 1/8", 1 9/16", and 2"; width 4'; lengths, 4', 6', 8', 10', and 12'. Weight, 3.8 pounds to 5.3 pounds per sq. ft.

Write for detailed application sheets and sample!

The word Celotex is a brand name identifying a group of products marketed by The Celotex Corporation.



THE CELOTEX CORPORATION • CHICAGO