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NORTHWEST ARCHITECT

JANUARY 1950

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VOLUME XIV

NUMBER ONE



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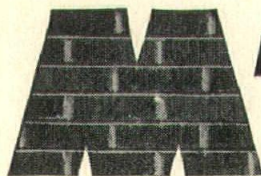
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Northwest Architect

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1950

NUMBER 1

H. W. FRIDLUND, A.I.A., Editor
C. I. LORETZ, Business Manager

Official Publication
Minnesota Society of Architects

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President

CHALLENGE - 1950

Of all the arts, architecture is one of the most evolutionary for, with its blending of art, science and actual building, it must ever be in step with or ahead of its times. And its history has proved that it usually is among the leaders in progressive thinking. In 1950, heralded by many as a noteworthy year because it marks the middle of the greatest century in history, the challenge to architecture and its devotees is definite.

Those members of the profession who have proved themselves in the war years and through the trying times of too little housing for man, business and industry and too little material to meet the structural needs in supplying that housing, are well equipped to face any challenge of 1950 and meet it successfully. Therefore, it is with definite hope and a faith that they "can do" that members of our profession start out this new year.

Its challenges are many. They are local and national—even international—and no one can plan for the future without taking into consideration the things that portend. The housing need still continues, although the bitter edge of the need has been dulled by record production. Materials, which were somewhat out of the woods, are still not the plentiful things we might desire for the fullest expression of our plans.

Big news of the past years has been the release of atomic energy and while its most commonly thought of use has been in relation to The Bomb, which now seems to be fairly well common property among the major world powers, there is opening a marvelous world of potentially valuable uses for this unbounded supply of energy. What its use in the world will be

remains for man to decide and in the decision architects will be able to have a constructive, intelligent voice, if they so decide and so strive. The shadowed impact of The Bomb also has a distinct effect on architecture's course in this year and all those of the future.

In dealing with the problems of 1950 and seeing that they are solved for the best results for the most people, architects must be active not only within the limits of their own profession but must expand their work and the limits of the profession to include civic activities. Government and its many associated activities demand of the citizen of today that he know what is being done, help do it or correct its course should it wander into wrong pathways, and contribute his best thoughts as to the overall direction in which his economy is headed. The architect, by inclination and the very nature of his training, can give much to this work.

So, in 1950, we find much to challenge us and tax our best efforts. But we must find time from meeting the bare challenge to play and study and re-create that freshness which is the foundation on which any artist's work rests. The balanced designer is he who produces the best work for the present and the most lasting. It was ever thus, as any student of the profession will witness.

Opening the year's activities with an excellent opportunity to meet with others in the profession, compare ideas and notes and "give and take" for the benefit of all is the North Central Region Convention of A.I.A. I hope to see many of you there.

H. W. Fridlund, Editor.

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Publication Office
2642 University Ave., St. Paul 4, Minnesota
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NORTH CENTRAL CONFERENCE

WILL PRESENT MUCH TO
CHALLENGE ARCHITECTS,
MINNEAPOLIS, FEBRUARY 17-18



President Walker

Featuring a series of seminars on the outstanding recent architectural work of this region, as submitted by the originating architects, the annual meeting of the North Central State Region of the American Institute of Architects will present a thought-provoking program in the Nicollet Hotel, Minneapolis, February 17 and 18, according to Robert Cerny, chairman for the regional conference.

A.I.A. members in the states making up the region have submitted their best work of recent years and a selection committee has gone over the projects. Each included plans, photographs and other visual material, which will be displayed during the meetings. Also to be shown during the event will be work of students in the University of Minnesota School of Architecture.

Actual timing of the seminars can not be scheduled in advance, Mr. Cerny said, because following each presentation of a project a panel will discuss merits and weak points of the designs and there will be some floor discussion.

President Ralph Walker of A.I.A. will attend the conference and speak at the dinner meeting on Friday, February 17. Wilbur Tusler, regional A.I.A. director, will also speak at the meeting. There will also be a Friday noon luncheon and it is expected one of the projects will be featured during the luncheon.

Two prominent architect-editors will be on the discussion panels. Thomas Creighton, editor of *Progressive Architecture*, and Douglas Haskell, editor of *Architectural Forum*, will add their experienced comments to those of other panel members. The panel members will call on those presenting the projects for answers to pointed questions concerning their presentations. Among the projects to be presented will be the following . . .

Norman J. Schlossman of Loeb, Schlossman and Bennett, Chicago, will show a half-hour color motion picture of the company's Dearborn Homes, one of the outstanding modern housing projects. In the project there are 16 buildings which will house some 800 families.

Lawrence Perkins of Perkins & Will, Chicago, will present one of the firm's recent schools and in the same category Paul Schweickhard of Schweickhard & Elting,

Lake Forest, Ill., will give a slide presentation of Maryville College, Illinois higher educational planning project.

E. A. Merrill of Skidmore, Oings & Merrill, Chicago, plans to bring to the members of the conference a recent building project of his firm's and the Ellerbe Company of St. Paul will present the well known work done for the Mayo Hospital, Rochester.

A modern country club will be presented by Harold Spitznagel of Sioux Falls, S. D.

Responsible for the many activities which go into making the regional conference a success were a number of committees working under the general direction of Mr. Cerny. These committees and their chairmen were:

FINANCE: Arnold I. Raugland, Minneapolis, chairman, John Lindstrom, Minneapolis, and Brooks Cavin and Larry Hovick, St. Paul.

PROGRAM: Robert G. Cerny, Minneapolis, chairman, Leon Arnal, Minneapolis, and Milton Bergstedt and Ed Larson, St. Paul.

PUBLICITY: David J. Griswold, Minneapolis, chairman, Collis Hardenbergh, Minneapolis, and Gerald Buetow, St. Paul.

ATTENDANCE: Wilbur Backstrom, Minneapolis, Chairman, Gordon A. Schlichting, Minneapolis, and Louis Lundgren and Herbert B. Crommett, St. Paul.

ARRANGEMENTS: Hubert M. Walters, chairman, George Klien and Victor Gilbertson, Minneapolis.

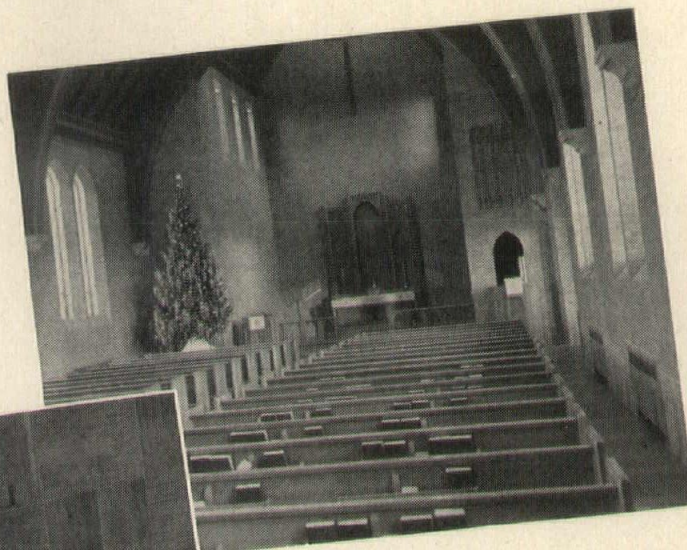
EXHIBITION AND PROGRAM DESIGN: Harlan E. McClure, chairman, and Gordon Heck, Minneapolis.

REGISTRATION: Clair Armstrong, chairman, and Victor Gilbertson, Minneapolis.

Wilbur Tusler, ex-officio member as regional director, Philip Bettenburg, ex-officio as secretary, St. Paul Chapter, and Roy Thorshov, ex-officio as president, Minneapolis Chapter.

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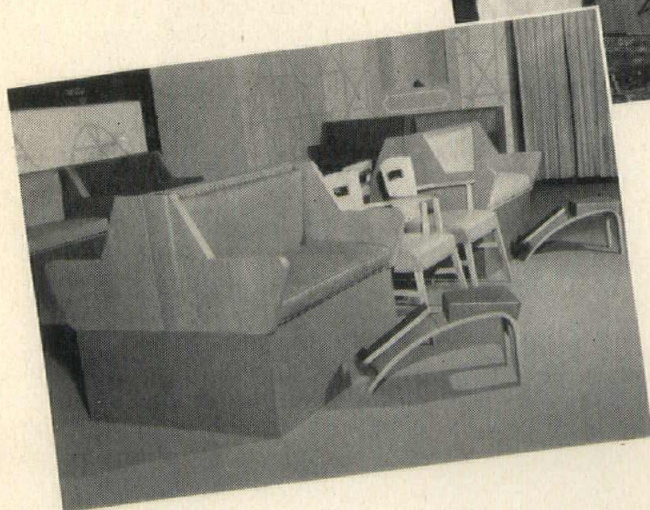
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OFFICERS OF A.I.A. GROUPS DISCUSS AIMS OF NORTH CENTRAL MEETINGS



Vice President Stanton,
American Institute
of Architects



President Pinault,
Minnesota Society
of Architects

Greetings to our Northwest Central friends with all good wishes for a most successful conference and good New Year.

Frequently our consciousness feels that it is later than we know. Architecture is long and life is fleeting. These alarms stir us to constant self analysis.

What, then, are our objectives? Is it in serving our country and inevitably ourselves? If so, can it be achieved by inner circle self criticism, repetition of truths and principles long ago accepted, by an exchange of clever double-talk? These can be interesting, exciting and helpful but does pleasure in our own congenial circle dull our appreciation of the great challenges beyond our narrow borders?

It is good that we feel constantly critical of our educational facilities and standards. At the same time, we ruefully regret the public's lack of appreciation of our fine talents and real worth. This is not a revelation but an idea that needs constant reappraisal.

We have made great advances lately in public education but we have just scratched the top of a very fertile field. Participation by architects in public affairs is important. Active interest in apprenticeship councils, city planning commissions, symphony societies, library boards and school boards should be a common experience for us in every community. Programs of appreciation of the arts and architecture should be encouraged in our kindergartens and throughout the upper grades. Appreciation of the functions of the profession might be greatly enhanced over a few short years.

Perhaps we should turn the circle inside out and give our objectives a freer chance.

*Glenn Stanton, First Vice President
American Institute of Architects*

On behalf of the Minnesota Society of Architects, as host, I am grateful of this opportunity to extend a cordial welcome to all architects who plan to attend the February meetings inaugurated under the sponsorship of the North Central Region of the A.I.A. The Minnesota Society will lend its hearty support and co-operation to the success of the meetings and to help bring about a better appreciation of our professional interests.

*Louis C. Pinault, President
Minnesota Society of Architects*

* * *

The Minneapolis Chapter, A.I.A., in co-operation with the St. Paul Chapter, A.I.A., welcomes all members in the North Central States Region to the Regional Convention. We will do everything possible to make your visit here pleasant and worthwhile. A very interesting program of vital information to every architect has been arranged. The President of the Institute, Mr. Ralph Walker, will be here. It is by meeting together, exchanging ideas and information, discussing our common problems and aspirations, that we can help the Institute become an even greater and more influential organization in our society. We anticipate the pleasure of your visit to the Twin Cities.

*Roy Norman Thorshov, President
Minneapolis Chapter, A.I.A.*

* * *

Welcome, fellow architects of the North Central Region, to the Twin Cities. The St. Paul Chapter is happy to have the opportunity to assist and co-operate with the Minneapolis Chapter in being local hosts to you during this auspicious district meeting. We hope you will all have an interesting and enjoyable stay with

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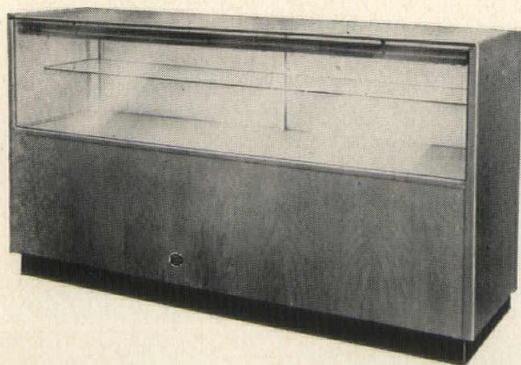
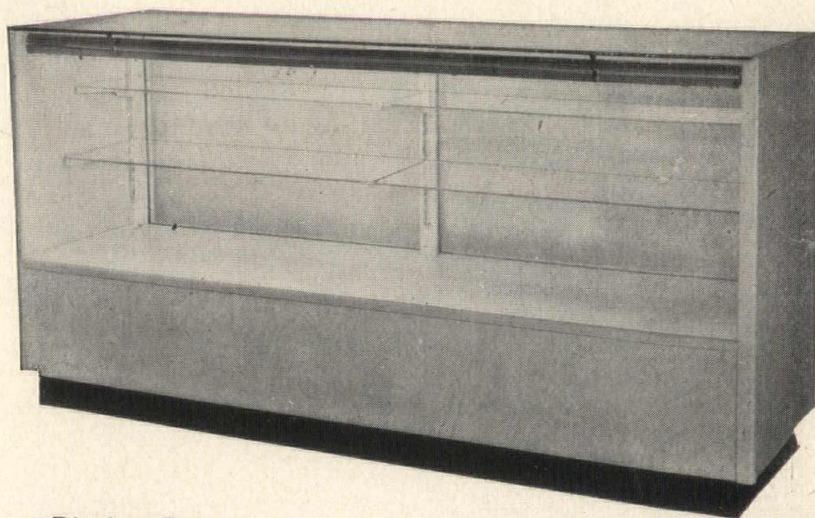
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us and that you will feel free to call on us for anything we may be able to do to assist you during your stay and to make it a very pleasant visit.

*P. C. Bettenburg, President
Saint Paul Chapter, A.I.A.*

* *

The second annual meeting of the North Central Region, The American Institute of Architects, is significant of the spirit of cohesiveness and co-operation which is rapidly spreading throughout our profession. Despite occasional local differences, the great majority of architects are aware of the advantage and the necessity of professional unity and recognize that the Institute, its national divisions and its chapters, are the appropriate effective instruments with which to achieve

this desired result. It is only through the enlightened action of these groups, as typified by this forthcoming meeting, that we can continue to grow in strength and in service to the building industry, the public and ourselves. May this meeting be but one of a long and successful series which will contribute to a spirit within our profession towards research and development, fellowship and mutual respect.

*Norman J. Schlossman, President
Chicago Chapter, A.I.A.*

* *

It is the hope of the Southern Illinois Chapter, A.I.A., that these regional meetings will be of real benefit to the profession; that they may be the means of a closer co-operation among all members of the architectural profession, with the ultimate result that the architect will again take the leadership in construction as the "Master Builder" his name implies.

*Ralph P. Hornbuckle, President
Southern Illinois Chapter, A.I.A.*

* *

The Duluth Chapter, A.I.A., is the youngest and smallest chapter in the Minnesota Society of Architects but, though small in numbers, the chapter has an aggressive spirit and tries to do its utmost in advancing the interests of members and the profession as a whole. With this in mind, we of the Duluth Chapter want to welcome to our state those fellow architects from other parts of the North Central Region attending the Regional Convention in Minneapolis. We shall be represented and hope that all those present will be able to and do take part in the important considerations which are sure to be brought before the meetings. Later in the year it is hoped many of those who attend the Region's Meetings will be present in Duluth when that city's chapter plays host to the Minnesota Society of Architects' 1950 convention, next June 23 and 24. We feel sure that both sessions will be successful in attendance and in the active parts played in proceedings of those who are present.

*Otto M. Olsen, President,
Duluth Chapter, A.I.A.*

* *

We, the members of the Architects Association of Illinois, extend to Mr. Wilbur Tusler, Regional Director, North Central States Region, our sincerest wishes for the success of the forthcoming North Central Regional Meeting of the American Institute of Architects, to be held in Minneapolis in February, 1950. We believe that meetings of this kind offer great opportunities for advancement of the architectural profession, allowing us to compare our personal views and learn of the activities of all the integrated organizations comprising the North Central States Region. These meetings permit us to become acquainted with our professional brothers, thereby creating unity and strengthening our standing as architects in our own communities. We look forward to this meeting with great pleasure.

*William J. Ryan, President
Architects Association of Illinois*

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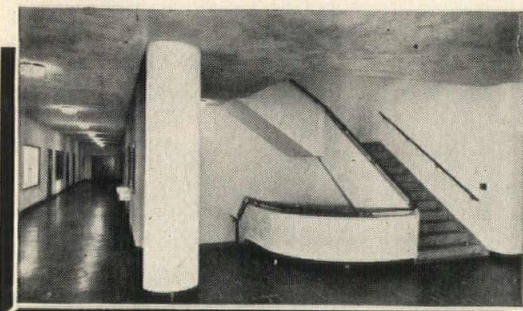
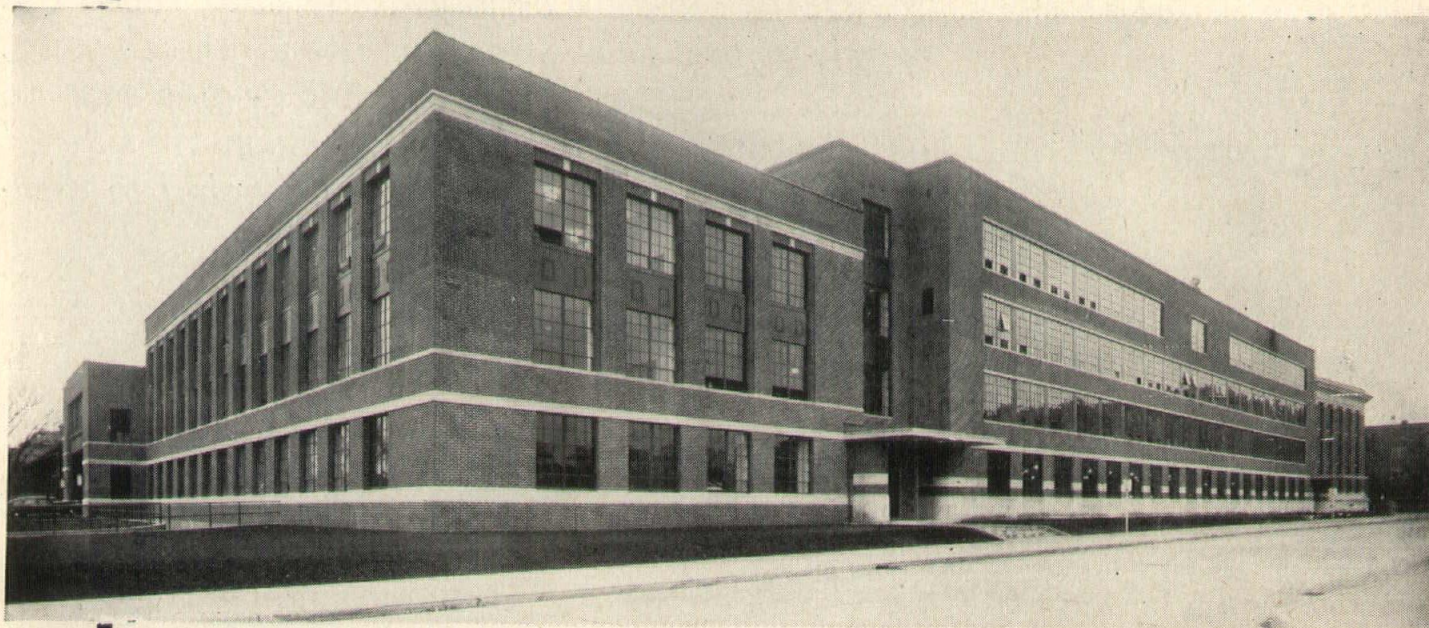
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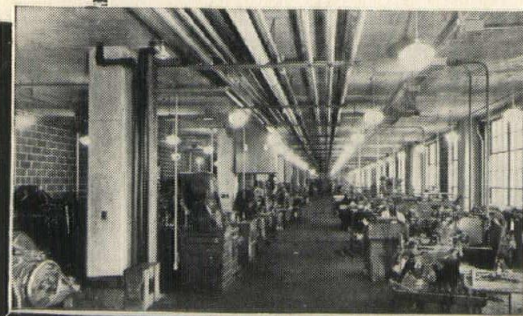
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"COME, come," I hear you say, "do you mean to tell us that smoke does not rise up the chimney, or that the updrafts on which the eagles soar do not rise along the warm summer mountain sides?"

"Yes, that is exactly what I am going to demonstrate—and report the results."

BY WILLIAM GRAY PURCELL

LITTLE MISS MUFET, in the fresh cool air,
 Sat on a tuffet, with comfort as in any home,
 Eating her curds and whey, see "Food" number NORTHWEST
 Along came a spider, a real true spider, ARCHITECT
 And sat down beside her this well-meaning spider,
 And frightened Miss Muffet away.
 (Ever afterwards healthy and gay.)

AS THE WALRUS said to the Carpenter "these architects have got to push themselves away from the drawing boards, go outdoors to any convenient tuffet, stump or, even better, to Mr. Baruch's park bench, and try whether they can learn the true inward ways of the world and its successful works for the tribes of mankind." Said the Carpenter "As I was tearing a page or two out of the Monkey Ward catalog last summer I learned something about spiders and their very considerable effect on architecture." The Walrus agreed that, afloat or ashore, it wouldn't do to get careless with even the smallest and most innocent looking pill boxes of architectural blasting powder—"no telling when it might backfire." They are backfiring on the Architects all the time, with some very costly results.

THIS IS GOING to be a very practical report for people who are plagued with a lot of equipment that won't work, and really never would have worked :: :: Common sense is what you will find here. Some practical experience about what WILL work, what WON'T work, and WHY.

WHEN YOU MEET an idea that every body acknowledges without any special concern about it, and toward which every one is quite ready to agree that there is really no need for proof that what *appears* to be the case, *actually exists* in fact . . . well in such circumstances the chances are that it isn't true. You can at least be sure that some very important factors are not what they appear to be. Now this is no smart paradox. The reason for this common obstruction to clear action is that everything is changing all the time and your work-a-day generalizations just cover too much territory. Some of the eggs won't hatch in the new setup.

Hot air "rising" is our example, just one illustration out of many.

If we can clear up a simple case such as this hot air paradox, we may be able to dodge a lot more unnecessary costs and dissatisfactions all around.

Old fashioned "warm air house heating furnaces," the kind with big round pipes all over the cellar ceiling, are now happily obsolete. They were largely displaced along about

1910 with "hot water heating." But this hot water heating, low pressure, vapor systems and the like, were also hung up on the same inverted thinking which made every Architect and Engineer say that the "hot water *rose*" to circulate in the pipes, just as they had said the same thing about hot air in "furnace" pipes.

SO WE SAY here and now that **HOT WATER DOESN'T RISE, and HOT AIR DOESN'T RISE. BOTH HAVE TO BE PUSHED UP, or they will remain where they are.**

O YES, of course, "they" knew that, but they just "knew" and let it rest at that. They didn't *do* anything about it. They just let the words "Hot air rises" go perching around on their thoughts like spoiled pet black birds. What they "engineered" were the *symbols* of heating science; the actual heating plant in the basement just tagged along as best it could.

So back in the simple village days of 1915 when "Purcell and Elmslie" had a heating plant to design, I worked up a sort of rite to exercise this pest of a distracting misstatement. I would sit quiet before the board, lay down my pencil, fold my hands and say firmly, "*Hot air* (or hot water) *does not rise*, it cannot rise in big tin ducts or in small iron pipes. Let me continuously remember to somehow keep building up the weight or force **THAT IS GOING TO PUSH THE AIR UP, AND TO DECIDE HOW AND WHERE ARE WE GOING TO APPLY THAT PUSH AND HOW MUCH.**"

You are right, that is all pretty old stuff and today we put a good squirrel cage fan behind the air and drive it through the ducts or introduce an electric impeller pump in the hot water supply line. There are, by the way, a good many hundred thousand old heating plants in U. S. A. that could be helped a lot by one or another of these aids to quick circulation and with considerable saving of fuel and breakfast time comfort.

What is not old stuff is that due to the passing of circumstances which are not now live issues, people tend to think, that, having found the correct answer to a given problem they can stop thinking about it. The object of this writing is to demonstrate that answers are only a link between what to do and how to do it.

What to do changes all the time.

How to do it changes all the time.

But how to make and use a link that will work is a mental skill that has to be kept fit with constant practice.

The problems are always new, they can only be met with active thinking, not with token thinking.

Man discovered very early that he could keep his practical acts in a better order of procedure by inventing names, both for things and what he proposed doing with them. Thus nouns and verbs were born.

Soon these words became so lively and fascinating and enabled people who used them to feel so important, that the words put a blind between the idea in the man's head, and the things and the work needed to implement the idea. As he tried to think about his world and how to live in it with success, he found that both the objects and the acts tended to get mixed up and more or less lost. At the same time the tokens, spoken and written, demanded to be dealt with as if they were the realities.

This "literary," wordy world, a sort of verbal universe, even with primitive men, indeed especially among primitive men, soon ruled all the thoughts of men. People became the slaves of various superstitions, religions, philosophies, cults, orders, which burdened every waking minute of people's lives and all but stopped normal development the world around.

We have only just discovered that we "the civilized people" continue to carry this burden of verbal rubbish and that unless we can get at the facts behind the words—agree on these facts—and then deal with them as *act-ualities*, the much more complicated modern world of the machine will deal with us to no good end. There is just too much *civ-ic* in civilization and too much *phys-ic* too. We are obsessed with curing the pain of what pricks us, but unwilling to deal with the thorn.

WHAT is the 1949 edition of the kind of mass-thinking that was responsible for those old warm air furnaces that always failed to heat a room or two "on the north side of the house"?

TODAY'S ARCHITECT gets a lot of help from machinery. As a result the old hand-trained and very useful mental link of craftsmanship between what to do and how to do it tends to lose its bounce. Let's look at how this affects another overheated-air headache. I refer to the inverted thinking that has been applied to the design of the now popular flat roofs and that has led to a lot of constructional and esthetic detailing that is pure rube-berg gadgeting.

I refer to the many under roof and between roof joist "air circulating" provisions that will not and cannot be made to *circulate*. I also include nearly all screened attic space louver and transom openings, and even most arrangements for fan driven attic ventilators. The general run of these service equipments simply *will not work*, and the time and labor expended on them is *wholly* wasted. The two or three ways they can be made to work are seldom arranged for. Even where automatically controlled, continued successful operation of such installations, rests not so much on clever mechanical design as upon human nature and how it works.

The first comfortable word token that plugged vents against all moving air was "screened opening." Designers just worship the very sound of these words. But token-in-place-of-action is exactly what also plugged the idea vent of the designer against his finding the correct answer. Miss Muffet's grampa would have known that one, SPIDERS!

Even without the spider's woven and felt dampers stopping up the intakes, no one could drive air—not with a compressor—through most of these architect-designed

roof, wall, and window-sill "vents." But let us be broad-minded and assume that in the best designed short ducts there actually could be a gentle breathing through the screen. O! Solomon and all the ants, here is the spider's hunting ground made to order.

Within a week good webs are spread to catch the decoy breeze which flows gently through such screened openings. Damaged sections of web blow against the wires and stick there. When hunting gets poor or weather changes, air trash of every kind catches in the webs, and in no time the screen is a felt mat—closed tight. I have tried all the kinds of wall, roof, attic, ceiling vents and under floor vents. The only kind that will continue to work are those *where the screen surfaces are inside the house in plain sight* so that the housewife cleans them automatically as a part of her long conditioned social consciousness against dust and spider webs. Such inside screens on *reachable* openings (not transoms you have to climb a chair to reach) are all right even if vertical, provided they are in plain sight. In the instance of these new all glass walls, with louvers beneath the "window," it is possible that partially concealed horizontal screens will be kept free if at top of a base board, or on level with the window ledge where *easily accessible* and where *outside* accumulation and mat can be brushed out of the mesh from *inside* to fall back on ground *outside*. Vertical louver screens beneath large glass areas will work if the closing-damper wall-panels can be opened to show the mats forming on the screens and thus warn the dust-wife. (It's the dust and spiders that worry her—not the lack of air to breathe.)

WELL, THERE IT IS! Hot air doesn't rise. Nothing "rises." Man and his idea must pull up out of Inertia and get along on his own Godgiven energy. If you leave an idea in words it doesn't exist. It isn't *act-ual* and it isn't real. (See appraisal of Philosopher John Dewey in *TIME*, October 31st, 1949—page 35)

BECAUSE of the fire hazard you can't have unscreened openings into construction spaces, attics and the like. A mysterious fire originating in the attic of one of my investment houses at 10 A.M., where no flues or electric wires existed, burned the house half down. Firemen and insurance men were stymied. Mr. Pleasant, our U. S. Forest Warden (we live in Angeles National Forest) gave us the clue. A bird carried a lighted cigarette stub through the rusted out attic vent screen. The bird's flight fanned up the stub, which, dropped in the nest material, set off the blaze. He says many forest fires are caused by curious busy-body birds picking up the lighted stubs on the paved highways and flying them back into the woods until they get too hot to hold.

It ought not to be necessary to remind any architect that an 8 x 10 air passage lined with wood, with rough textured insulation surfaces, or what-not, will not permit superheated air to flow easily; too much friction! We used to say of 8-inch round tin heating ducts, "three bends equal a complete plug." Not only matted screens, but air friction seems wholly ignored in every detail I've seen in the architectural press for ten years, except in fully engineered and powered air systems where everything gives way to the engineer's figured requirements. *Don't discount unwanted heat by trying to move the hot air.* Don't go on assuming that air will provide its own motive power and rush through whatever channel you make for it. Insulation and more insulation is *the only answer.*—W.G.P.

REGISTRATION and WHAT IT MEANS to REGISTRANTS

A. REINHOLD MELANDER, A. I. A.



Mr. Melander

FOREWORD

When we estimate the vast amount of building that will be produced in the near future we come to the conclusion that the face of the civilized world will be greatly changed. In order to understand present provisions for the protection of the health and well being of that architectural face it is essential to have a general idea of the evolution which has brought about these provisions, as it is only with this knowledge that one can understand the reasons for the changes of the past and the probable direction of future changes.

Until the latter part of the eighteenth century there were no professional architects in the United States. But by the end of the century there were talented gentlemen like Thomas Jefferson who were keenly interested in architectural design and there were European trained men in whose offices the young aspirants of the day could be apprenticed.

The better to establish the growing need for a practical and efficient manner in which to determine fitness of men for professional practice the establishment of State Registration Boards came into being. It is through the efforts of these boards toward establishing good architectural practice that the services of the architect are more fully understood.

The Minnesota State Board of Registration for Architects, Engineers and Land Surveyors is composed of three architects and six engineers. Previous to 1949 the board was composed of three architects and four engineers. At the last session of the legislature the total number of engineer members was increased from four to six, making a total board membership of nine.

The original Minnesota law was passed by the State Legislature in 1921. (In 1897, Illinois was the first state to have a registration law.) The law of 1921, due

to political exigencies, provided for voluntary rather than compulsory registration. The act was amended in 1933 but still had many weak points and exemptions, particularly in its application to the building industry, which to a certain extent nullified its effect except for strictly private work. In 1943 an attempt was made to strengthen the law but its passage failed in the closing days of the legislative session. The law was finally amended in 1945 and again in 1949.

Fundamentally, professional registration is premised on public benefit. The purpose of the law is to safeguard life, health and property and to promote the public welfare by requiring that any person in either public or private capacity practicing or offering to practice architecture, engineering or Land Surveying shall be registered. The provisions of the law have raised the standard of these professional services in connection with planning, design and supervision of public and private structures and works so as to widely affect a large proportion of the population in our state. The reason for registering is not to form a closed corporation of these professions with the object of restricting the number of those practicing. On the contrary, the purpose of registration, as the board interprets it, is to make the operation of such a law a benefit to the general public.

Registration has been in existence for some years but for a relatively short time when compared with the years registration was *not* required. It will be a period of years before the public has been completely educated to the fact that registered men alone are available for legal employment.

QUALIFICATION

Professional titles should be used only by those who first by adequate examination have demonstrated their ability to competently render the service named by the title which they desire to use. The state should prohibit the use of a professional title by all others.

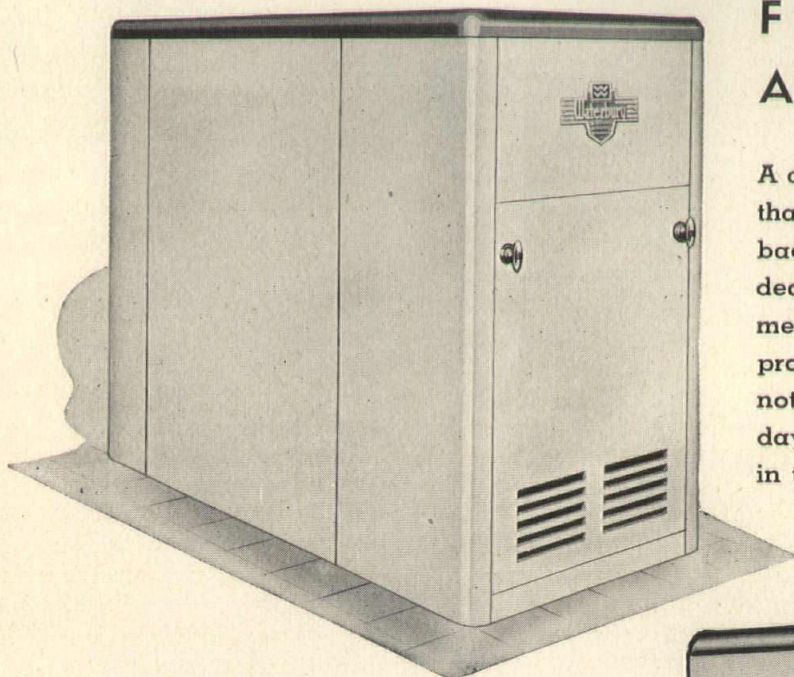
The busy man of today (our client) is rarely in a position to judge the qualifications of an individual to perform his architectural work. Therefore he should be given assurance that the selection of an architect can be safely done by title and that the legal right to use a title indicates technical competency.

A. Reinhold Melander, A.I.A., practicing architect in Duluth, Minn., has served as a member of the Minnesota State Registration Board for Architects, Engineers and Land Surveyors since 1938 when he was appointed to fill the unexpired term of the late Mr. F. G. German. He has served continuously since that time and is the senior architect member of the board.

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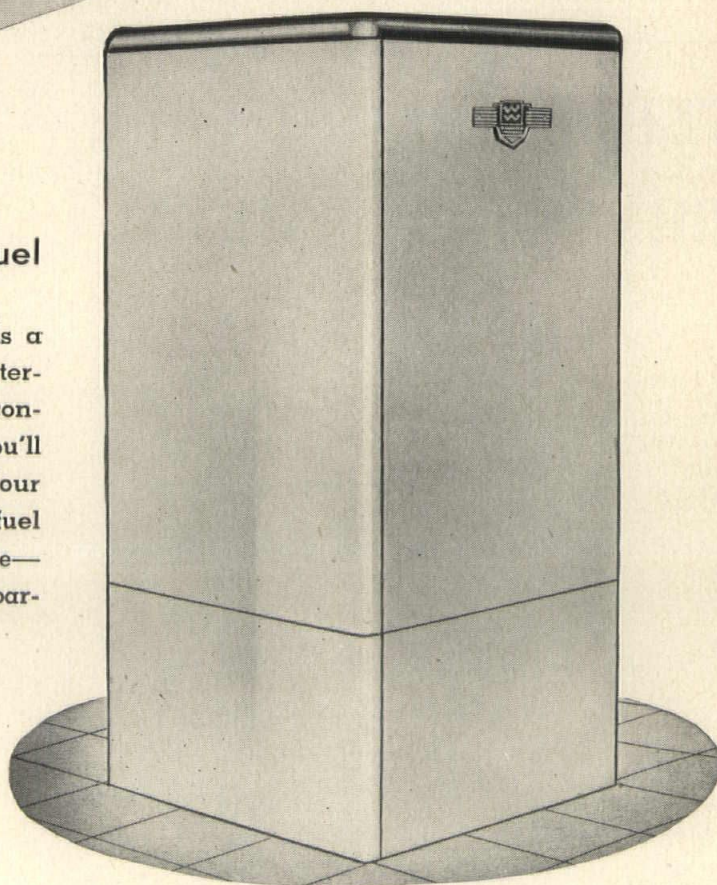
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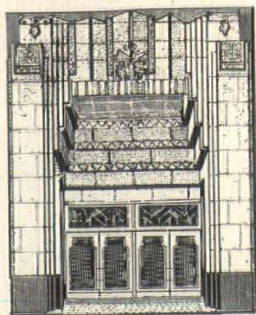
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Minneapolis 13, Minn.

The services of a professional man are primarily in the form of advice. The professional man's first duty is to give his advice based on the facts of analysis and need, without fear or favor.

Often men are led to choose a life work by the attractions of glamour and remuneration and without the consideration of their personal fitness. The proper functioning of a profession is so demanding that when an individual is discovered to have no natural instincts for, or joy in, the life work which he has chosen he should be persuaded to give it up due to the exacting demands of a profession. The barrier of compulsory examination must enter in. Personal notion is secondary to public interest.

It is interesting to note in the statistics compiled by our board that of the total number of architects registered in Minnesota (about 400 in 1948) 75 per cent are engaged in the consulting and private practice of architecture.

FRAUD

Fraud is misrepresentation. Titles imply certain qualifications.

It is fraud against the public for a person to use a professional title in a state where there is a registration law if that person is not legally registered.

The use of the title "Architect" must be restricted to those who have demonstrated their qualifications to perform the functions implied by the title. The Minnesota State Registration Law prohibits the use of the word "Architect" except for registered men. There are three major professional frauds in architecture which may be practiced:

- (1) the use of a professional title when one is not legally qualified to use it;
- (2) the offer or advertisement by incompetent persons to perform services equivalent to those of the registered man even though the title is not used;
- (3) the use of a registered architect's seal on documents not prepared by him.

The Minnesota State Registration Law also provides for the filing of complaints of unprofessional conduct against registered professional men. It provides for a fair, competent trial on the charges preferred, for technically competent adjudication of the evidence presented and for the rendering of a decision that is fair to both the public and to the miscreant on trial.

Just as it is misrepresentation for a doctor to prescribe a medicine in which he has a profit-sharing interest, so it is likewise misrepresentation for an architect to engage in the contracting business. The very nature of the contracting business demands an interest in costs and materials and therefore bars the architect from acting professionally in a manner that is fair to his client and to contractors. He is not able to perform his work without bias or prejudice.

ENFORCEMENT

The Minnesota State Registration Board employs the services of an attorney who is deputized as a special assistant in the attorney general's office for the purpose of investigating complaints and prosecuting cases where action is authorized by the board.

NORTHWEST

Over a period of time the board and its attorney investigate many construction projects in order to establish whether or not a registered architect or engineer has been employed; it also investigates many jobs brought to the attention of the board by registered men.

We find that these investigations fall into the following four groups:

1. Jobs on which registered men have been employed but whose names have not been publicized in connection therewith.
2. Jobs that we are satisfied did not involve the employment of a registered man prior to our first inquiry but which resulted in the immediate employment of a registered man.
3. Jobs which are being constructed under plans prepared or furnished by the owner to a contractor; and
4. Jobs on which non-registered men have been employed.

Of course our inquiry ceases when a registered man advises of his employment on the job and that generally forecloses any further inquiry relative to groups 1 and 2. As to the third group, the board has not yet determined what attitude it desires to take. Certainly it indicates that no one has been employed as an architect or engineer and that the owner has prepared his own plans. As to this group, it has been our endeavor when we meet it soon enough to attempt to persuade the owner that he should employ a registered man on the theory that he would profit by such employment. We have succeeded in some instances and failed in others. As to the fourth group, if we succeed in obtaining sufficient evidence so that proof can be produced in court that a non-registered man actually accepted employment contrary to the law, we have sworn complaints and in a few instances arrests have followed.

It behooves all registered architects and engineers to be alert and in a position to advise the board of projects where non-registered men have been employed. This information ought to be submitted promptly before the project is completed. After a building has been finished or substantially finished the most we can do, if we discover the facts, is to bring about an arrest of the violator. This does not help the owner, who, of course, does not then have the advantage and benefit of the employment of a competent man nor does it bring about the employment of a registered man.

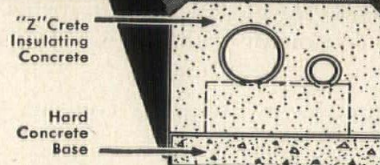
At times efforts are made by unqualified people to obtain special legislation for registration. In the instance of our own state this resulted in the adoption of such special legislation at the last session of legislature. All architects should be constantly on the alert against such efforts. When they are brought to our attention we must talk to our representatives in the state legislature for the purpose of stopping the adoption of such legislation.

Registration of architects, engineers and land surveyors is, as has been stated, not for the profession basically but for the benefit of the public. We must teach ourselves that such laws are not written to protect and grant monopoly to a favored few but to guarantee the safety, health and welfare of the general public.

ARCHITECT

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NO OTHER INSULATION FOR UNDERGROUND PIPING OFFERS ALL THESE ADVANTAGES:

Extra Efficiency—Assures less heat loss than other methods. From 4 to 6 inches of insulation on outside of pipes.

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Permanent—"Z"Crete insulation will not disintegrate, deteriorate, crack or crumble. It is rodent, vermin and fireproof.

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CONSTRUCTION PAYMENT FORMS

ROY NORMAN THORSHOV
Long and Thorshov, Inc.,
Minneapolis, Minnesota

Each contractor has his own method of presenting a breakdown of his construction cost immediately after award of contract, as well as his own method of submitting monthly invoices for payment. With several different jobs under construction and sometimes more than one contractor on a single job, the method of control and approval of breakdowns of cost as well as monthly invoices for payment becomes rather complex in an architect's office. We felt that if a uniform set of forms could be developed so every contractor would present his breakdown as well as his monthly invoices in the same manner, that records could be kept more simply and vouchers could be speeded up for payment. Our office consequently developed a set of forms which it furnishes to the contractor with specific instructions for their use.

Immediately after the award of a contract, forms

covering the detailed breakdown of construction costs are sent to the contractor. This form is made out in five copies, each a different color, with one copy to be retained by the contractor.

The top of the form (see illustration "A") listing the name of the project, owner and contractor must be completely filled out. The commission number on the line with the architect's name is the commission numbering appearing on the drawings for the specific job.

There are seven headings on the form. In column No. 1 a number is given for each item which is described in column No. 2. On some of the items such as excavating, concrete work, and steel it is possible to give the total number of units used in the job. On such items the number of units is listed in column No. 3. The cost of the items is then broken down in columns No. 4,

| DETAILED BREAKDOWN OF CONSTRUCTION COST | | | | | | |
|--|--------------------------------|---------------------------------|---------------------------|------------------------------|----------------------------|---------------------------|
| Sheet 1 of 1 sheets | | | | | | |
| Name of project <u>Office and Warehouse Building</u> | | | | | | |
| Owner <u>Lake State Power Company</u> | | | | | | |
| <u>Independence Falls, Minnesota</u> | | | | | | |
| Contractor <u>Lake City Construction Company</u> | | | | | | |
| <u>Minneapolis, Minnesota</u> | | | | | | |
| Long & Thorshov, Inc., Architects Comm. No. <u>47-32</u> | | | | | | |
| Item No. (1) | Description of Item (2) | Number and Kind of Units (3) | Labor Cost Dollars (4) | Material Cost Dollars (5) | Other Costs Dollars (6) | Total Cost Dollars (7) |
| Subtotals Brought Forward. | | | | | | |
| 1 | Bond | | | | 1500.00 | 1500.00 |
| 2 | Building Permit | | | | 75.00 | 75.00 |
| 3 | Temporary Buildings | | 200.00 | 300.00 | | 500.00 |
| 4 | Excavating, grading & backfill | 3000 yds | 1100.00 | 700.00 | 1000.00 | 2800.00 |
| 5 | Form work | 2000 sqft | | 500.00 | 1200.00 | 1700.00 |
| 6 | Concrete | 100 cu.yd. | 5000.00 | 3000.00 | | 8000.00 |
| 7 | Waterproofing | | | | 125.00 | 125.00 |
| 8 | Reinforcing steel | 15 tons | 2000.00 | 1930.00 | | 3930.00 |
| 9 | Structural steel | 25 tons | 3500.00 | 2600.00 | | 6100.00 |
| 10 | Miscellaneous metals | | | | 1750.00 | 1750.00 |
| 11 | Steel decking | | 3350.00 | 11278.00 | 1300.00 | 15928.00 |
| 12 | Brick, tile, chimney, masonry | | 10500.00 | 7162.00 | 1850.00 | 19512.00 |
| 13 | Carpentry and millwork | | 3600.00 | 2900.00 | 750.00 | 7250.00 |
| Totals | | | 30,250.00 | 29,670.00 | 8,350.00 | 68,270.00 |
| Approved by _____ Date _____ (Contractor) | | | | | | |
| CONFIDENTIAL (Not for public inspection) | | | | | | |

"A"

| PERIODICAL ESTIMATE FOR PARTIAL PAYMENT No. 2 Date <u>May 1, 1949</u> | | | | |
|--|--|---------------------------|--------------------------|------------------------------|
| Sheet 1 of 1 sheets | | | | |
| For the period <u>April 1, 1949</u> to <u>April 30, 1949</u> inclusive | | | | |
| Name of project <u>Office and Warehouse Building</u> | | | | |
| Owner <u>Lake State Power Company</u> | | | | |
| <u>Independence Falls, Minnesota</u> | | | | |
| Contractor <u>Lake City Construction Company</u> | | | | |
| <u>Minneapolis, Minnesota</u> | | | | |
| Long & Thorshov, Inc., Architects Comm. No. <u>47-32</u> | | | | |
| Item No. (1) | Description (2) | Total Cost Dollars (3) | Per Cent Complete (4) | Amount Earned To Date (5) |
| (Subtotals Brought Forward) | | | | |
| 1 | Building Permits | \$ 75.00 | 100 | \$ 75.00 |
| 2 | Bond | 1500.00 | 100 | 1500.00 |
| 3 | Temporary Buildings | 500.00 | 100 | 500.00 |
| 4 | Excavating, Grading & Backfill | 2800.00 | 65 | 1820.00 |
| 5 | Form Work | 1200.00 | 90 | 1080.00 |
| 6 | Concrete (footings, walls, floors, etc.) | 8000.00 | 50 | 4000.00 |
| 7 | Reinforcing steel | 3930.00 | 50 | 1965.00 |
| Totals | | | | \$10,680.00 |

"B"

No. 5 and No. 6 as to labor cost, material cost and other costs. Often an item is a subcontract, so it is impossible to break down the labor cost and the material cost. Such an item is listed in column No. 6 and again in column No. 7. Column No. 7 must be the total of columns No. 4, No. 5 and No. 6, columns No. 4, No. 5, No. 6 and No. 7 must show totals and the total of column No. 7 must be the contract amount.

The form is signed by a responsible member of the contractor's organization, and dated. If more than one sheet is required, this is noted in the numbering system of sheets at the upper right-hand corner of the form.

The contractors are next furnished with sets of Periodical Estimates for Partial Payment to be used each month.

The instructions for filling out this form (see illustrations "B" and "C") are as follows:

The monthly estimate is made out in five copies, each sheet being a different color. The final copy is retained by the contractor and the other four copies are transmitted to the architect for checking and approval.

On the first line is indicated the number of the estimate (whether it is the first, second, third or fourth estimate). The date is the date upon which the estimate is prepared. If more than one sheet is required in the presentation of the estimate, this must be noted in the upper left-hand corner. The date covered by the estimate, the name of the project, the owner and the contractor and the Architect's commission number must be completely filled in.

| CONTRACT RECAPITULATION | |
|--------------------------|---------------|
| Date | MAY 14 1949 |
| Contract amount | \$ 120,000.00 |
| Extras approved to date | None |
| Credits approved to date | None |
| Net contract this date | 120,000.00 |

CERTIFICATE OF THE CONTRACTOR OR HIS DULY AUTHORIZED REPRESENTATIVE

To the best of my knowledge and belief, I certify that all items, units, quantities, and prices of work and material shown on this Periodical Estimate are correct; that all work has been performed and materials supplied in full accordance with the terms and conditions of the corresponding construction contract documents between Lake State Power Company (Owner) and Lake City Construction Company (Contractor) dated _____, and all authorized changes thereto; that the following is a true and correct statement of the contract account up to and including the last day of the period covered by this estimate.

| | |
|---|--------------|
| (a) Total amount earned (col. 5) | \$ 10,680.00 |
| (b) Retained percentage | \$ 1,068.00 |
| (c) Total earned less retained percentage | \$ 9,612.00 |
| (d) Total previously approved | \$ 2,700.00 |
| (e) Amount due this estimate | \$ 6,912.00 |
| (f) Unpaid previous estimates | \$ None |
| (g) Total amount due | \$ 6,912.00 |

Contractor, Lake City Construction Company By _____ Title _____

CERTIFICATE OF THE OWNER'S ARCHITECT

I certify that this Periodical Estimate, to the best of my knowledge and belief, is a true and correct statement of work performed and materials supplied by the contractor, and that the contractor's certified statement of his account and the amount due him is correct and just, and that all work and material included in this Periodical Estimate have been performed in full accordance with the terms and conditions of the corresponding construction contract documents and authorized changes thereto.

LONG & THORSHOV, INC., ARCHITECTS

By _____ Date _____

"C"

The breakdown of the estimate will cover all work done up to and including the final date of the estimate.

(Continued on Page 54)

BETTER MORTAR MEANS BETTER BRICKWORK ... AND CARNEY MASONRY CEMENT GIVES YOU BETTER MORTAR

A fine example of the perfect, clean bond and true matching possible through the use of Carney Masonry Cement as a mortar, the new major addition



Mechanical—Aeronautical Engineering Building
University of Minnesota, Minneapolis, Minnesota

Hagstrom Construction Co., General Contractors, St. Paul, Minn.
Roy V. Lund, Assistant Supervising Engineer, U. of M.
C. H. Johnston, Architects and Engineers, St. Paul, Minn.

to the Aeronautical Engineering building of the University of Minnesota shows the happy results of a combination of inspired architecture, integrity of engineering design, proper selection of materials and capable building.

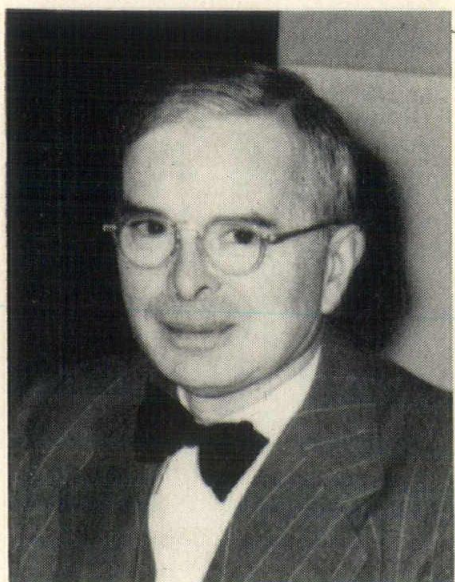
This mortar permitted construction to proceed through the typically severe Minnesota winter of 1948-49 without delays due to bad weather; a tribute both to the flexibility of the mortar and the skill of the master craftsmen on the job.

While the matching must be seen to be properly appreciated, the photograph gives some idea of its effectiveness. The new construction starts under the right-hand radio tower on the near side of the first "return" on the right.

Over the years, nearly every one of the university buildings has been erected with Carney Masonry Cement ... a typical example is the Winter Sports Building just being completed. (C. H. Johnston, architects and engineers—Sauers Construction Co., general contractors; both of St. Paul.)

CARNEY
Quality

BUILDING PRODUCTS SINCE 1883 • Mankato, Minnesota



A Letter that Took Fifty Years to Write

from NEWTON HOLLAND, of Rochester, Minnesota

EVERY LITTLE CITY in the land should know what a man, an idea, and an old church building can do. Now after six years this letter, accepted by men of good will, has produced an institution that makes better and happier citizens, young and old. It has been done in Rochester, Minnesota, it has been done in Utica, New York, it can be done in your city.

DEAR Fellow Citizens:

This is a birthday letter, written on my fiftieth birthday for no better reason than that it is dictated by some sort of an inner urge. So many of us have a tendency to live within ourselves that we often fail to share our common experiences and feelings with others. Many times I have been helped by being able to discuss my problems of the moment with another person. This leads me to the belief that perhaps someone may find something of interest and help in this testament.

AS I ROUND OUT fifty years in this fascinating world I am moved, first of all, to admit my obligation to the social viewpoint of the great Albert Einstein. In fact, this letter will but elaborate in a local sense the essay which he contributed to a symposium known as *LIVING PHILOSOPHIES.

Albert Einstein's statement is the finest human expression that it has been my privilege to know and I quote him from the beginning of his essay:

"STRANGE is our situation here on earth. Each of us comes for a short visit, not knowing why, yet sometimes seeming to divine a purpose."

"FROM the standpoint of daily life, however, there is one thing we do know: that man is here for the sake of other men—above all for those upon whose smile and well-being our own happiness depends, and also for the countless unknown souls with whose fate we are connected by a bond of sympathy. Many times a day I realize how much my own outer and inner life is built upon the labors of my fellow-men, both living and dead, and how earnestly I must exert myself in order to give in return as much as I have received. My peace of mind is often troubled by the depressing sense that I have borrowed too heavily from the work of other men . . ."

"YET EVERYONE holds certain ideals by which he guides his aspiration and his judgment. The ideals which have always shone before me and filled me with the joy of living are goodness, beauty and truth. To make a goal of comfort or happiness has never appealed to me; a system of ethics built on this basis would be sufficient only for a herd of cattle.

"WITHOUT a sense of collaborating with like-minded beings in the pursuit of the ever unattainable in art and scientific research, my life would have been empty. Ever since childhood I have scorned the commonplace limits so often set upon human ambition. Possessions, outward success, publicity, luxury—to me these have always been contemptible. I believe that a simple and unassuming manner of life is best for everyone, best both for the body and the mind.

"THE MOST beautiful thing we can experience is the mysterious. It is the source of all true art and science. He to

whom this emotion is a stranger, who can no longer pause to wonder and stand rapt in awe, is as good as dead; his eyes are closed. This insight into the mystery of life, coupled though it may be with fear, has also given rise to religion. To know that what is impenetrable to us really exists, manifesting itself as the highest wisdom and the most radiant beauty which our dull faculties can comprehend only in their most primitive forms—this knowledge, this feeling, is at the center of true religiousness . . . It is enough for me to contemplate the mystery of conscious life perpetuating itself through all eternity, to reflect upon the marvelous structure of the universe which we can dimly perceive, and to try humbly to comprehend even an infinitesimal part of the intelligence manifested in nature."

TO THESE CONCLUSIONS of Albert Einstein I pay homage as I complete a half-century of living.

So I'm fifty years of age. It's incredible! Why only yesterday, with a few sandwiches in a paper bag, the boy swung along a road with a group of other boys, thinking how glorious it was to be young, drinking in the fresh air and speculating on what we would do when we grew up—what worlds we would conquer—what bright castles we could build! It seemed impossible that some day that boy would be fifty years old—why, that's fantastic. No, not fantastic at all—the clock keeps ticking on.

And he's not too depressed about it either. When you're fifty perhaps you have climbed up on a plateau from which you can survey the world from a more or less detached and self-less position. The vistas are lovely and they challenge the mind and soul.

Fifty years old—and how many years yet to go—five, ten, fifteen, twenty (as we used to count while playing tag) twenty-five, thirty or more? But the best, the richest years

**By Albert Einstein, reprinted from LIVING PHILOSOPHIES, Copyright, 1930, by Forum Publishing Company. Copyright, 1931, by Simon and Schuster, Inc.*

of them all. All selfishness ought to have gone from our lives by now; our hearts should be filled with a wondrous compassion for our fellow men. What can we do to help others get greater satisfactions out of their daily life?

WELL, how to go about it?

Albert Einstein, you recall, said:

"Without the sense of collaborating with like-minded beings in the pursuit of the ever unattainable in art and scientific research, my life would have been empty."

The greatest thrill that one can get from life is that of creating something. I've had women tell me that they never did anything that made them feel really proud until they had a baby. It's pretty hard to top that kind of creative effort. However, there are many other avenues we can use to express our creative energies, thru our work and in our personal lives.

And I admit that I have something concrete to propose. Something right here in Rochester, the principal function of which would be to stimulate the creative urge as well as the capacity to appreciate the beauty that another has expressed.

It is my feeling that one of the reasons for the explosiveness of our daily life, which may derive from social, economic, racial, religious or other origins, is due to the fact that we do not make adequate provision for what might have been known as the "aesthetic" values or more simply, a common appreciation of the ideal of beauty. The first civilized man was he who climbed a mountain just for the view.

TO DIGRESS for a minute:

We are all queer mixtures of nobility and smallness. So many times I have seen in others, as I know others have in me, a nobility of spirit combined with episodes which I wish hadn't happened. Perhaps this country right now is in one of its "small" phases. Let me illustrate. Until the relatively recent past, say a few thousand years ago, man lived in horror of the night. Huddled in a dark cave or on the prairie, his nights were hideous with the howls of predatory animals which threatened to kill him and his family. (The men who have been in service know this horror of the dangers of the night.) And his days were no better, for at the conclusion of each day, he knew, came the horrible night again—he was never free from fear from the terror of darkness, from the time he was old enough to know fear until he died. But because Edison and other people dreamed ("the labors of other men" again), we now throw a switch and fill our rooms with daylight, and we can write a letter such as this at 3:30 in the morning in the glow of a kindly lamp, as the wind rages and the rainy night is black outside. And yet we let ourselves be unhappy because we can't have a new car or radio right now. We're really better than that, aren't we?

To show our appreciation of what living in this modern, comfortable world of ours means to us, what can we do in Rochester to give back to society a small portion of the great values society has given us? Can we feel as a community, as Albert Einstein feels, "how earnestly I must exert myself in order to give in return as much as I have received." He's done pretty well, we'd say. Writing the equation for atomic energy wasn't a small contribution.

ARCHITECT

The writing of his philosophy was another of many gifts he has made to our modern world.

BUT BACK again to this special interest.

A number of people here would like to see in Rochester a civic center, wherein persons interested in the arts and crafts . . . the writers, the musicians, the Theatre Guild, the camera group, and all others pursuing "creative" activities — could be housed, and wherein we could exhibit our "creations" or could perform for the benefit of others in the community. After all, both good listening and good seeing are creative experiences, too.

We'd like to see a gallery and a school of art that could bring exhibitions here, not of just paintings alone, but of "every day art" — pots, pans and door knobs, the new textiles, fabrics and the hundred other well designed products of our modern age assembled under the supervision of a trained director. Also we'd like to see all the arts mentioned above co-operating in presenting pageants, concerts, exhibits, plays, which could be written, acted, staged and enjoyed by our own townspeople. We are not interested in trying to make Rochester a fifth rate copy of some other city but we want it to be "top hole" Rochester.

Such a project will take time, thought, effort; but we do believe that it can be the most exciting excursion any of us has ever made. We can't give you the complete blueprints now, but should you wish to volunteer your aid, dear citizen, give me your name and your special interest and we'll call on you to help us develop the idea. You may want to give some of your time or your willingness to work — as a craftsman, perhaps — or you may wish to give money. Either will help to light the candles in the heart of some child as he stands before a fine painting, and, wrapped in wonder with the beauty he sees there, thrills to a new promise of a finer life. If we can work this magic for one little boy or girl, or man or woman, we will all be repaid a thousand fold for our investment. In the big book which we have ready, everyone who contributes will be listed — the amount or nature of the gift will be known only to the board of directors.

TAKE the pioneer days.

If a man's home or barn burned all the neighbors pitched in and built him a new one — that was the spirit of the frontier. That's the way we'd like to build The Rochester Art Center — with everyone doing his share as a citizen of Rochester. The members of the Izaak Walton League built their Club House here that way. All Rochester can co-operate in bringing into being its Art Center.

Often people say, "I don't care about art," or "Art is all right, but I leave it to the women folks" or similar expressions. That is plainly ridiculous talk. Every man is an artist and spends his life modeling a face and a body (his own). What worlds of meaning that modeling suggests. The face reflects the heart of man. We have no alternative — if we live selfish, self-centered lives, our faces advertise that fact to all the world. If we start thinking about "the other fellow" that shows up with surprising quickness in our faces, too. Have you really looked at yourself carefully in the mirror lately? And what did you see? Did it please you? If you didn't like what you saw and you'd like to improve it, remember what the school teacher said to his students, "We cannot all have a great mind, but we can all have a great heart." Sculptor, it's up to you.

AND WHY do we want to do this now?

Robert Hutchins, president of the University of Chicago, has said, "Civilization is engaged in a race between education and annihilation, and the time is short." The Rochester Art Center project, dear friends, is an educational one in the field of the arts with no profit for anyone (save the spiritual dividends). The arts speak the universal language — the respect engendered by a fine work of art endures whether it was created by a white man, a colored man, a Jew or a Buddhist. This universal respect is something we need more of in our modern world. Yet if we build well here in Rochester, perhaps the emphasis we put on "goodness, beauty, and truth" will spread afar and by so doing will touch the hearts of men everywhere.

WE ARE currently looking for common denominators.

We are looking for something that will unite peoples of all races, colors, and philosophies. What is there that we all have in common? Immediately I can think of one thing — it is those wonderful tools we so often take for granted, the greatest engineering achievement the world has ever known — the human hand. In human hands we see those magnificent instruments which literally have lifted man out of the primitive ooze up on to his present plateau. Look at your hands now, dear reader, and marvel at them. See how strongly the thumb is made, how heavily muscled — how it opposes the four sensitive, flexible fingers, so that you may perform an almost limitless number of operations with the hand easily and gracefully. If a great industrial company were to try to develop a machine that would do one-tenth of all the operations that the human hand is capable of, the machine would be the size of a house and it would cost a billion dollars.

HANDS GUIDE.

Human hands can now either build the most beautiful world we have ever seen or they can tear our present world into shreds and pieces, as we have seen attempted twice in one generation. They can either pull the trigger or paint a picture.

HANDS SHAPE.

And so we have the highest respect for those who labor with their hands. The craftsmen, wherever they are, and whoever they may be, who have contributed much to the beauty of living all thru the ages. Let me quote from a letter I received recently from a friend — an architect — emphasizing this point — "In the long run, what else is remembered outside of facts and dates, except the things that man has created? It is by the product of their aesthetic

MISSOURI VALLEY POWER HAS HIGH NORTHWEST POTENTIAL

The much discussed and, now under construction units which make up the tremendous "Missouri Valley Authority" or Pick-Sloan Plan power and flood control projects in the Northwest states has been given a careful study by one of our staff writers and an exclusive feature on this project, which has many possibilities for the architect in itself and in the development of affected towns and areas, will be found as the center of this issue. Turn to pages 27 to 34 for a fact-packed bit of reading.

urges that we judge the races of the past. What would the Mycenaean Greeks be without a Homer, or the great Greeks themselves without the things of beauty that they produced? As a classic example, what do we know about the Phoenicians, even though they monopolized the business of their era? They did not create anything. Compare what they left to the story that Egyptian art tells of the brilliance of their civilization."

HANDS GIVE.

We might ask ourselves what we are leaving as a memorial to our civilization that will induce historians of the future to deal charitably with our present age. Can we be proud of the fruits of our culture? I think there is still time to leave much more that is beautiful.

HANDS FREE.

Certainly a part of the satisfaction that we get from working with our hands is the quieting and strengthening effect it can have on our nerves. Let me illustrate with the case of Private X, a painter friend of mine who returned some months ago from the Pacific theater. The first time I saw him I was shocked at his extreme nervousness, for he had always been well adjusted in his civilian life. He said he, too, was conscious of his nervousness, but that he couldn't seem "to quiet down." We fell to talking about painting and I asked if he had done any drawing while overseas. He said that he had done some pen and pencil sketches, and I asked to see them the next day. He brought them in, and I suggested that he work these drawings up into a number of oil paintings for I remembered that he had enjoyed working in that medium. This he agreed to do and when I saw him a month later he was a different man — gone was the fidgeting and the nervousness, his self-assurance had returned and he was again in harmony with his world — the painting had tided him over a difficult transition period and had restored him as a useful member of the community. Thus the arts can pay off in two fields — they can create beauty in the doing, and they also are conducive to our peace of mind.

SO TODAY I am fifty years old.

Not a bad age when you get up here where the trees aren't too thick (nor the hair either for that matter). From here on in I want to walk and work with like-minded people, to create a climate here in Rochester for a more complete development of our human resources, feeling that by so doing we are enriching both the community and ourselves. As I close my eyes, I can see him standing there now — the little boy with the well-worn sweater — the boy for whom The Rochester Art Center is to be built. If we can fill his heart with the love of beauty and open his eyes to the glory of the arts, we will know the greatest reward that life can give any of us. Does your heart say, "I want to be in on this great adventure?" — If it does, this letter has not been written in vain.

Sincerely your fellow citizen,
NEWTON HOLLAND

Reprint from Rochester (Minnesota) Post-Bulletin of Nov. 15, 1946.

AND WHAT OF NEWTON HOLLAND?

NEWTON HOLLAND was born in Winona, Minnesota, November 15, 1896. Lived there until 1913. Moved to Rochester, Minnesota, where he was graduated from high school in 1914. Thence to the University of Minnesota, where after a six months' service in
(Continued on Page 51)

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PLYWOOD FORMS SPEED POURING OF HUGE PARKLABREA PROJECT

The largest architectural concrete job in the country, the Parklabrea housing project being constructed in Los Angeles for the Metropolitan Life Insurance Company, has three-story plywood forms to hasten pouring of the concrete.

Use of the Douglas fir, plastic overlaid panels allows their reuse after one section is poured, thus speeding the operation with a minimum of change-over. The highest of the structures which will house 2,754 families is 13 stories high, maximum under L. A. housing building codes.

Design of the structure is unique in many ways for special slab construction had to be developed for the pouring of floors, etc. The accent buildings are planned to obviate airshafts and inside courts. An x-shaped

plan, with the intersections of the lines elongated to form a rectangular building core, was used. Thus all apartments were assured of ample light, space and a view at least fair and ranging to excellent.

The buildings were designed and are being built with the possibility of earthquakes in mind and an army of some 2,000 workmen is laboring on the major and sub-contracts which split up the work.

Commenting on performance of plywood panels on such a huge concrete job, which tests them to their utmost, the architects said "they are light and easy to use; their large size means big areas are covered rapidly and because there are few pieces to handle, work is speeded."

RECORD NUMBER OF BRICK MASONS BECOME JOURNEYMEN

With almost 800 apprentices having completed their three years' training, journeymen ranks among brick-masons was swelled by an all-time record number of graduates in the first nine months of the past year, according to W. J. Goodwin, Jr., president, Structural Clay Products Institute.

Almost half of the graduates entered journeyman status during the third quarter, height of the building season. Mr. Goodwin said there are 12,295 apprentices currently in training. Most of the graduates were war veterans.

Wilson DOORS FOR ALL SERVICES

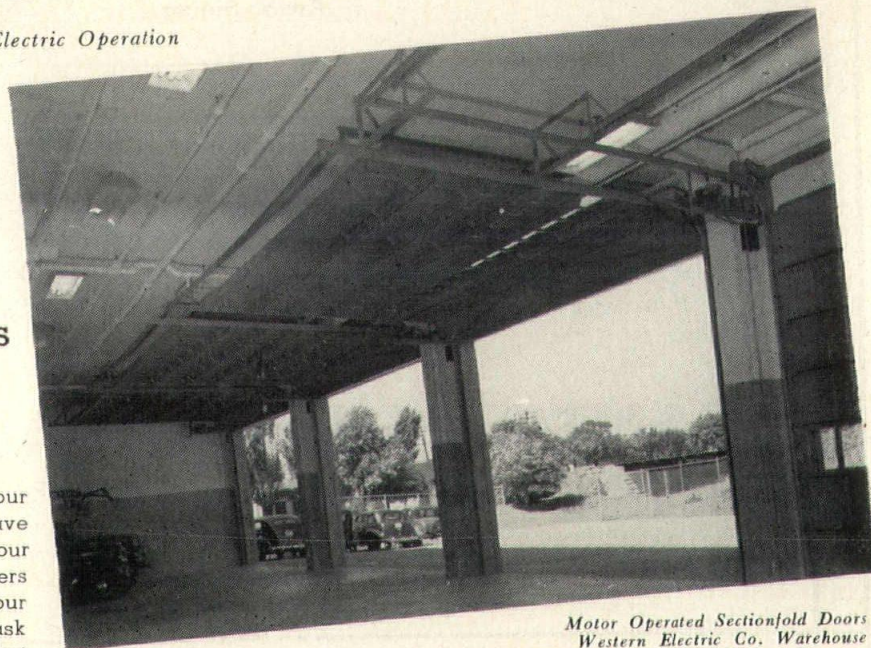
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NORTHWEST



Harnessing of **MIGHTY MISSOURI** *Ushers in New Economic Era*

Excavation and construction on Garrison dam in North Dakota illustrate tremendous scope of projects under way.

*Irrigation, power development, flood control
and navigation hold promise for business
and agricultural progress in ten-state area.*

H₂O, YOU PROBABLY LEARNED IN SCHOOL, IS THE CHEMICAL FORMULA FOR WATER.

But did you ever think of H₂O as the formula for an industrial and commercial revolution?

Well, many people are thinking of water in such terms in the huge area forming the Missouri river basin. This area will benefit from the federal government's comprehensive plan for conservation and use of the waters of the Missouri river and its tributaries. Known as the Pick-Sloan plan, it is the outcome of efforts by Major General Lewis A. Pick of the Corps of Engineers, U. S. Army, and W. G. Sloan, Department of the Interior. Their ideas of a Missouri river water development program were combined in the Flood Control Act of Dec. 22, 1944.

The Pick-Sloan plan, regarded as one of the most ambitious undertakings of its kind in all history, will involve an estimated expenditure ranging from \$8,519,360,000 to upwards of \$14 billion—depending on how much of proposed but as yet unauthorized projects are included. Part of the cost is to be repaid by water and power users. Work, being completed step by step as

Congress authorizes appropriations, is expected to take more than a quarter of a century. Meantime, individual projects are being completed, with important results to the economy of the regions affected.

Includes 10 States

The Missouri basin, draining an area of 530,000 square miles and comprising one-sixth of the United States, includes all or part of these 10 states: Montana, North Dakota, South Dakota, Nebraska, Wyoming, Colorado, Kansas, Minnesota, Iowa and Missouri. The central northwest states, several of which are located in the Missouri water shed, are already a top market for manufacturers, wholesalers and retailers, and, even if the Pick-Sloan plan falls short of the claims of boosters, the river development program seems certain to exercise a decidedly beneficial effect on commercial activity that will make these states an even greater market.

A large part of the Missouri valley has been subject in the past to violent fluctuations in moisture, and the assurance that the waters of the "Big Muddy" will be conserved is having a potent effect in inspiring greater confidence in the future. It is predicted that the benefits of the water development program will be felt not



only in the states directly affected and those adjoining but ultimately throughout the nation.

The Pick-Sloan plan includes a comprehensive program to permit storage of approximately 110,000,000 acre-feet of water for multiple-purpose use. Its provisions include water for irrigation of nearly 5,000,000 acres, the ultimate production of an estimated 10,000,000,000 kilowatt hours of electric power annually for industrial purposes, pumping irrigation waters and farm and home electrification. It is being counted on to eliminate floods through a combination of hold-back reservoirs and municipal and agricultural levees; it is expected to benefit Missouri river navigation through completion of the nine-foot authorized channel up to Sioux City and through stabilization of river flow; it will help several cities solve their municipal water supply problems.

Five Main Stem Dams Being Constructed

The project involves construction eventually of 138 dams and reservoirs on the Missouri and its tributaries. Five dam-and-reservoir units—in addition to the already-completed Fort Peck dam in northeastern Montana—are being constructed on the main stem of the Missouri by the Corps of Engineers. These are:

Garrison reservoir, 75 miles north of Bismarck. Termed the largest earth-fill embankment in the world, it is designed to store 23,000,000 acre-feet of water. The dam will be more than two miles long

and 210 feet high. It will inundate approximately 390,000 acres at maximum normal pool, and it will control a drainage area of 180,940 square miles. This multiple-purpose reservoir will provide water for irrigation, development of hydroelectric power and improvement of navigation, municipal water supply and sanitation. Generating units of 240,000 kilowatts are planned for initial installation.

Oahe reservoir, near Pierre, is designed for storage capacity of about 20,000,000 acre-feet, with a surface area of 298,000 acres. The dam will be 9,300 feet long, 242 feet high, and initial power installation will be 140,000 kilowatts.

Fort Randall reservoir, near Wagner, So. Dak., not far from Yankton, will have a capacity of 6,200,000 acre-feet, surface area of 108,000 acres, initial power installation of about 160,000 kilowatts. The dam will be 10,000 feet long and 160 feet high.

Big Bend reservoir, in the vicinity of Fort Thompson in central South Dakota, will have a storage capacity of 450,000 acre-feet, with a contemplated total power installation of 120,000 kilowatts. It will be 90 feet high and 9,000 feet long.

Gavins Point reservoir, near Yankton, will have a capacity of 170,000 acre-feet and will serve as a regulatory structure for upstream releases of water,

with a potential hydroelectric power installation of about 80,000 kilowatts.

Fork Peck reservoir, completed before the Pick-Sloan plan was authorized but which has been adopted as a part of the comprehensive program, has a drainage area of 57,725 square miles, a total storage capacity of 19,400,000 acre-feet, a water surface of 245,000 acres. The dam is 250 feet high and 21,000 feet long, with initial power installation of 50,000 kilowatts.

Other reservoirs will be built on tributaries where they are intended primarily for flood control; reservoirs designed primarily for irrigation will be built by the Bureau of Reclamation.

What It Will Mean to the Region

Interviews with residents and businessmen in the areas affected shed light on what efforts to conquer the temperamental Missouri might mean to the economy of the region.

Edwin F. Schum, automobile dealer and president of the Fargo Chamber of Commerce, reflected the concern of Fargo business people over the welfare of their state—a concern based to a large extent on the fact that their city is a vital wholesale distributing center. Schum saw in the water development projects a stabilizing power for North Dakota's economy and for an improvement in markets.

Homer Ludwick, secretary of the Fargo Chamber of Commerce, and secretary of the eastern North Dakota Water Development Association, cited the fact that industry is being encouraged to locate inland, to get away from concentrations in coastal areas. He pointed out that, with conditions to be improved through water development, this makes North Dakota a "natural" for the location and expansion of industry and business.

John Paulson, staff writer for the *Fargo Forum*, has covered North Dakota water development projects since their inception but, in spite of being steeped in the subject, he is able to give a dispassionate evaluation of the program. He sees substantial benefits to community and business life from assured municipal water supplies, irrigation, flood control and development of electric power to encourage expansion of industry. There is a great need for electric power in North Dakota, he pointed out, and much work on rural electrification is going ahead these days in anticipation of lower-priced power expected from the Garrison dam.

One of the most important economic effects, as Paulson sees it, will be the improvement of property values

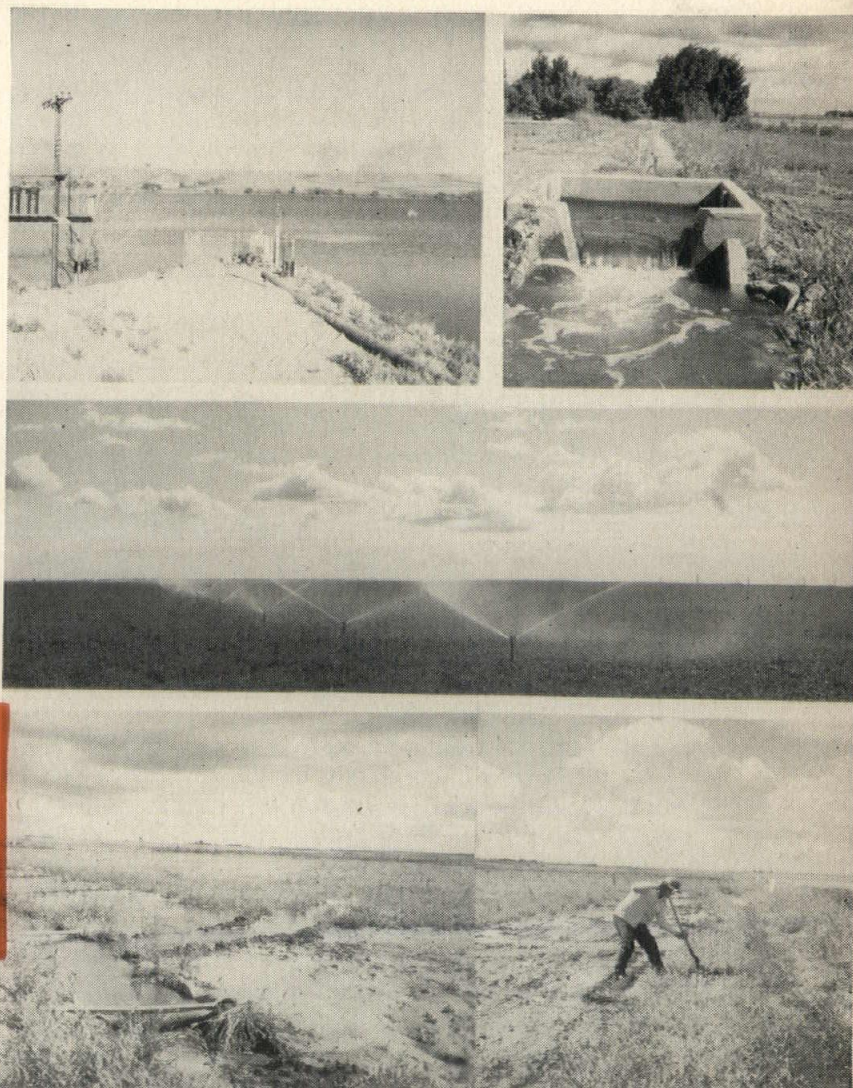
in the more westerly part of North Dakota, making for a better distribution of the tax burden over the entire state.

Tax Problem Highly Important

This aspect of the program is one that is high on the list of water development benefits in the minds of many others. They point out that the greater population that will be supported by an improved economy will strengthen the tax structure of every government unit.

A greater demand for all kinds of electrical merchandise is among the stimulants which the hardware business will receive from control of water resources, as T. O. Smith, president of Dakota Hardware, Fargo wholesale firm, sees it. This would follow the extension of power to more farms, homes, factories and businesses. Provision of more adequate water supplies in western North Dakota will help build his trade territory, he believes. That more standing water in the state will also provide a habitat for waterfowl and improve hunting and therefore the sporting goods business is another possibility advanced by Smith. He sums up the whole matter as a development that will help crop production, restore population and promote trade. "We are all looking for a gradual, healthy development," he said in speaking for the management of his firm.

M. J. Sullivan, manager of the Fargo branch of Griggs-Cooper Co., wholesale grocers, looks upon the water program as a benefit to his and other business



Irrigation is among chief hopes from the Pick-Sloan plan. Here are scenes from Bureau of Reclamation experimental farm near Bowbells, N. Dak., showing water being pumped from lake and flowing into main irrigation ditch, use of sprinkler system and water from ditch turned onto fields.



Coordinating Committee

Governors of Missouri Basin states are active in guiding destinies of water program. Photo shows members of Inter-Agency Committee, composed of federal and state officials. Left to right—Gov. George T. Mickelson, South Dakota; W. G. Sloan, co-author of Pick-Sloan Plan; Division Engineer Brig. Gen. S. D. Sturgis, in charge of Missouri river construction for Corps of Engineers; and Gov. Val Peterson, Nebraska. Inset—Gov. Fred Aandahl of North Dakota.

because of the simple fact that it will make North Dakota a better place in which to live. In elaborating somewhat on his views, he cited the probability that as the population increases there will be more mouths to feed and therefore more opportunities for expansion of food distribution. "It's good for the state and good for us," said Sullivan.

Fred C. Hagen, president of the Eastern North Dakota Water Development Association and treasurer of the North Dakota Reclamation Association, is associated with Moody's Department Store, Fargo soft goods retail outlet, and is therefore in a position not only to be well posted on the workings of the water development program but also able to see what they are capable of doing for business.

"No community can grow beyond its water supply," Hagen said emphatically. He referred specifically to the benefits that Fargo will receive in the way of an assured municipal water supply. "Lack of water has held back development of industry in North Dakota," Hagen pointed out.

Municipal Water Supply Problem Recognized

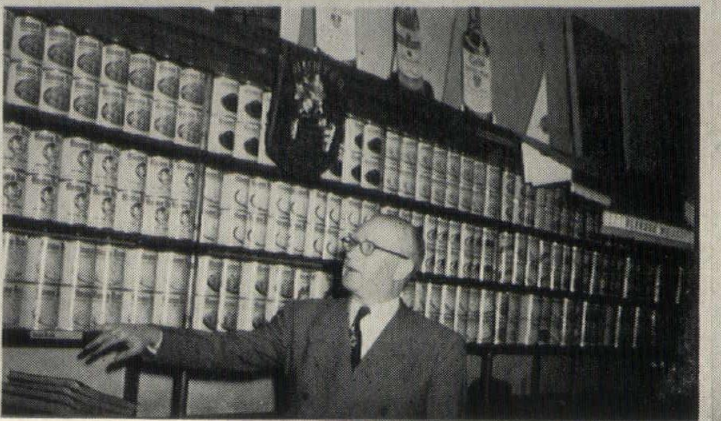
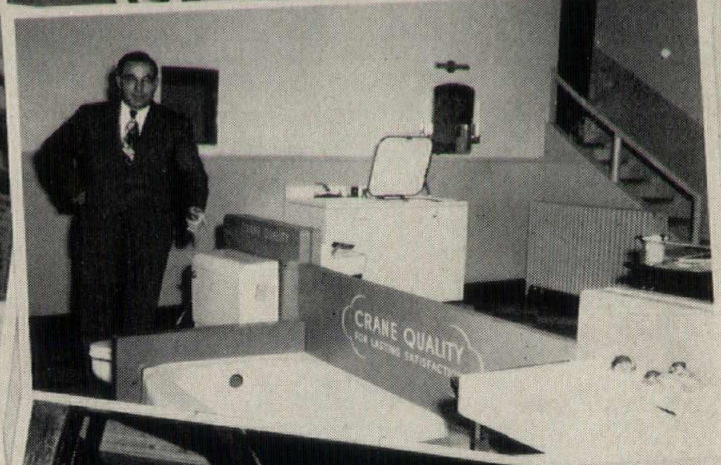
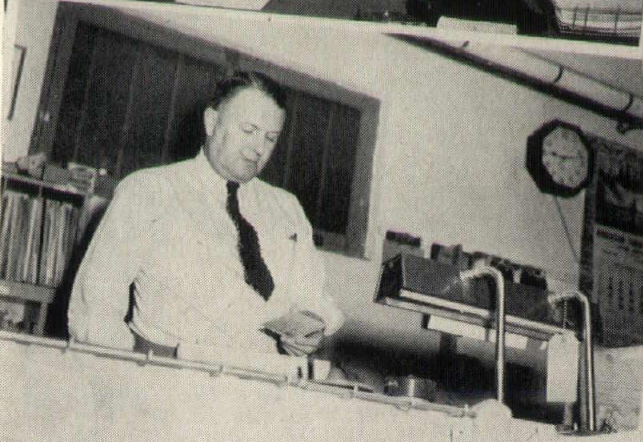
The matter of providing adequate municipal water for communities which face the threat of dwindling supplies is one that has been given official recognition in the Pick-Sloan plan. It is anticipated that safe water from the Sheyenne river will be delivered as municipal supplies to 19 cities and towns along that stream and the Red River of the North, including the key communities of Fargo and Grand Forks, N. Dak., and Moorhead and East Grand Forks, Minn. Dickinson, N. Dak., and Huron and Mitchell, S. Dak., are other cities which will be able to alleviate water supply and sanitation problems through facilities of the water development program.

Populations cannot grow and industry and business cannot thrive where the water supply may be adequate in some years and inadequate in others, it is pointed out. Water is needed for human consumption and cleanliness, for sanitation and sewage disposal, for fire protection and other uses. Industries adapted to the agricultural character of much of the economy of the Missouri basin—such as sugar beet processing, canning, potato washing plants—must have a dependable source of great quantities of water.

F. S. Erjavec, vice president and general manager of Northern Drug Co., Fargo, looks upon the plan for conservation and use of water resources as a potent factor in stabilizing the economic life of his trade territory. It has a particular value, as far as he is concerned, in its promise to alleviate the violence of fluctuations back and forth between high and low levels of prosperity to which the Dakotas have been subjected as the cycles of drouth and plentiful rainfall have come

These businessmen represent some of lines that stand to benefit from Missouri basin projects. Top row—F. S. Erjavec, vice president and general manager, Northern Drug Co., Fargo; Edwin F. Schum, auto dealer, Fargo; second row—George Fogarty, hardware merchant, Valley City; Eugene King, branch manager, Crane Co., Fargo; third row—Fred C. Hagen, staff member, Moody's Department Store, Fargo; G. O. Martin, co-owner Huron Lumber Co., Huron; fourth row—Mayor Curtis Olson, auto dealer, Valley City, and M. J. Sullivan, manager Fargo branch, Griggs-Cooper Co.

Business Men Hail River Program



and gone. North Dakotans are deriving a renewed confidence in the future of their state from river development plans, and these should inspire confidence in people from other states who contemplate locating there, Erjavec believes.

Eugene King, manager of the Crane Co. branch at Fargo, looks for the opening of a new merchandising frontier for his and other businesses in North Dakota. Irrigation, power and expanded electrification will create lucrative new fields for his line of plumbing fixtures and supplies, he believes.

"We Just Need Water"

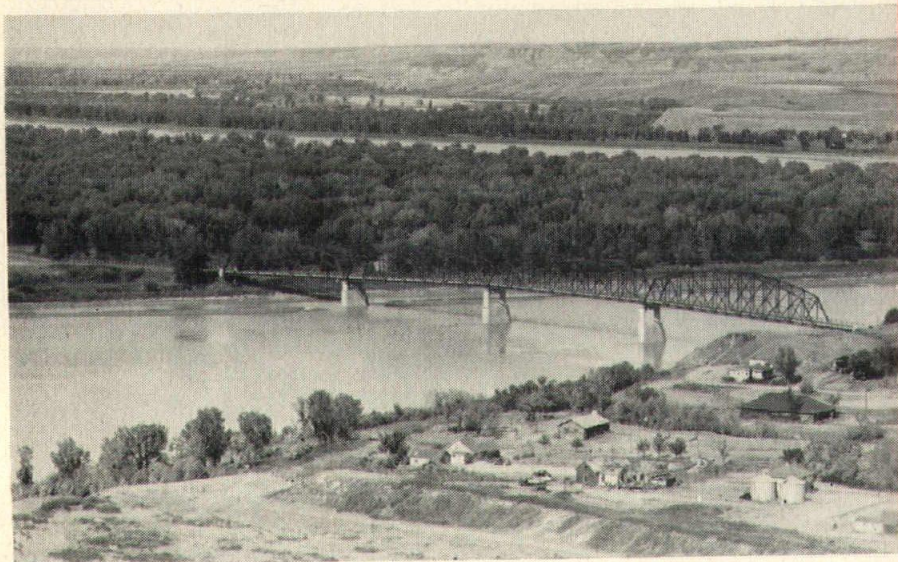
Curtis Olson, Valley City, is another North Dakotan who is in a position to be well informed on the technical aspects of water development and at the same time to appreciate what it might mean in terms of business opportunities. Olson, mayor of Valley City, is a member of the North Dakota Water Conservation Commission, a state agency, and is owner of an automobile sales agency. He stated: "I'm satisfied that in 20 years this will be one of the easiest states in the union in which to make a living." North Dakota has everything it takes to earn a good living, he said. "We just need water."

J. J. Walsh, secretary and chief engineer of the

North Dakota Water Commission, was interviewed in his office in Bismarck's tall, modern capitol. His views on the subject were a confirmation of the tempered optimism reflected in talks with others in the state. Irrigation and electric power to be derived from the flow of the Missouri river waters have tremendous potentialities for the future development of North Dakota, in his opinion.

R. B. Hipple, publisher of the *Daily Capital Journal* at Pierre, capital of South Dakota, and a member of the Missouri States River Committee, radiates confidence in the benefits which he believes his trade area will get from the Oahe dam being built near Pierre. A canal from the Oahe reservoir will be built to Huron, a distance of more than 100 miles. This will carry water to irrigate 750,000 acres in the Huron area.

The most important of the benefits promised by river development, in the opinion of Hipple, is irrigation. It will result in several times as much production from the land as is now being obtained, and towns and cities in and near the project will be on a much more secure basis than before, he said. Industries which will locate in South Dakota to take advantage of water development will be primarily for the purpose of processing locally-produced raw materials, believes the Pierre pub-



Water to Engulf Present Town of Sanish

Huge lakes which will be formed by waters impounded behind main-stem Missouri river dams being built under the Pick-Sloan plan have created a new kind of "displaced persons" problem.

Sanish, a community of nearly 500 population on the Missouri river banks northwest of the Garrison dam, will be entirely inundated by reservoir waters, and the town will be rebuilt by the government at a new location. The bridge which spans the Missouri river at Sanish will also be relocated, as reservoir waters will

cover the site. Photo shows the Sanish bridge and part of the town.

The nearby community of Van Hook will be partly inundated, and, because vital business property will be under water, the government will purchase the entire town.

Another relocation problem is the Oahe reservoir area in South Dakota. There 4,000 people will be displaced. In addition, the program will necessitate moving and relocating highways, railroads and power lines.

lisher. He discounts the location there of any substantial concentration of heavy industry.

Water to Be Used and Re-Used

Commenting on the power aspects of the program, Hipple said: "It's not generally realized that there never will be surplus power, even from maximum production to be realized from river projects. We will need more power than the river can provide by 1970." Hipple also stressed the fact that the program is a unified one, with all projects working together and supplementing each other to make maximum use of river water before it gets away downstream on its journey to the ocean. Three quarters of the water used for a particular purpose is returned to the river for re-use, he pointed out.

Another newspaper publisher active in river development work is Robert Lusk, at Huron, near which will be located the great Oahe-James irrigation project. Lusk, publisher of the *Huronite* and *Daily Plainsman* and a director of the National Reclamation Association, testified that Huron had gained between 3,000 and 4,000 in population since the end of the war and that substantial investments in construction and in lands had occurred during that time which may be traced largely to the influence of the projected irrigation development.

G. O. Martin, co-owner of the Huron Lumber Co., provided an example of how putting the Missouri river to work will affect the building material business. With the coming of more farmers to operate the lands which will be irrigated, there will be a stepped-up demand for construction materials for farm buildings, city and town residences and business and industrial establishments.

Cites Increased Interest in Region

Fred Monfore, still another South Dakota newspaper publisher, conceded that "one can only guess as to just what the completion of the Missouri river development program will mean to the valley in an economic and business way. Generally speaking, the belief is that it will mean the movement of considerable industry into the area with an accompanying increase in population. Turning to the local effect of the program, Monfore, publisher of the *Yankton Press & Dakotan*, stated that, aside from the stimulus due to construction activity on the Fort Randall dam, which is well along, "there has been a noticeable increase in the interest in the potentialities of the valley on the part of business and industry...."

"There is no question in my mind but what completion of the program will in the course of years work a transformation in the economy of the valley," said Monfore. "A tremendous increase in population as well as industry should result."

Various estimates have been made as to what the completion of the comprehensive plan for development and use of Missouri river water resources would mean in terms of population growth. The Bureau of Reclamation has indicated an agricultural population gain of 212,000, and, with twice as many new people supported

in neighboring towns and cities, this would make a probable total gain of 636,000 persons in the farm states of the Missouri basin, according to the Bureau.

Irrigation Brings Population

In support of expectations of increased population, it is pointed out that each new irrigated farm creates a need for two additional families in the trading area to aid in the processing of increased produce. Examples can be cited almost at will by reclamationists to show what irrigation has done, population-wise and otherwise, wherever it has been practiced.

Visits to Bureau of Reclamation headquarters in Bismarck and in Huron brought out plenty of enthusiasm for river development projects, especially for irrigation, which is among the Bureau's major parts in the river-harnessing drama that is unfolding in the Missouri basin.

Among the points singled out for special attention is the possibility of production of larger amounts of food on smaller acreages. Irrigation was also held up as the hope of the Dakotas in getting away from the one-crop type of agriculture, which in the past has seen farmers prospering when the grain crop was successful and sold at a high price and going broke when it failed or declined drastically in market value.

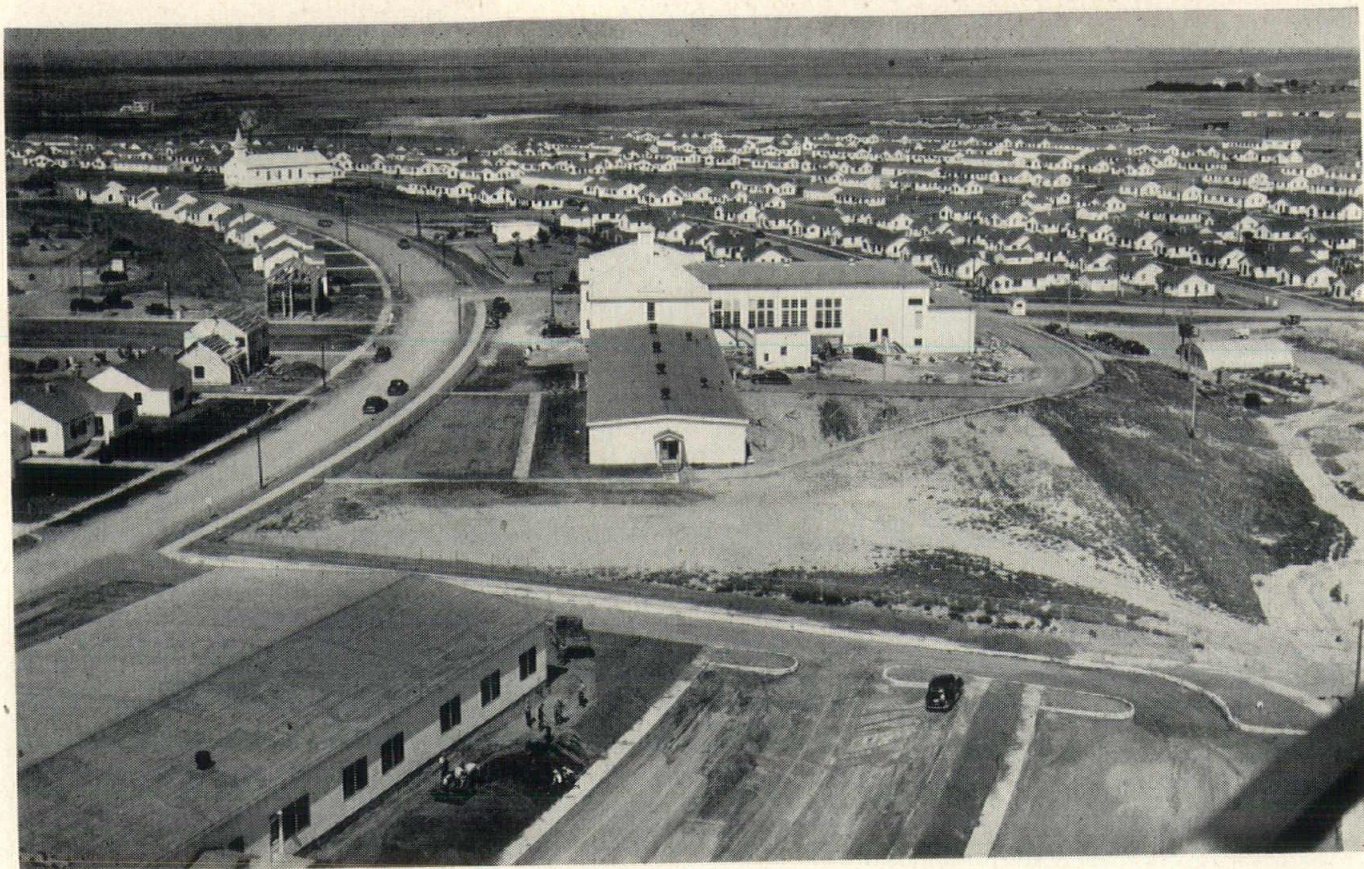
It is pointed out that farmers on irrigated lands have a variety of crop and livestock enterprises as part of their diversified operations, enabling them to turn to another line of production when one source fails to yield adequately.

The diversification that is possible under irrigation is also given as an answer to the argument that the additional land to be brought under production through irrigation will aggravate the surplus problem. It is contended that, with the assurance of favorable growing conditions through irrigation, the farmer can switch from surplus to non-surplus crops. And the growing rate of U. S. population—greater than a million a year—demands expansion of farming operations, it is claimed.

Cite Business Opportunities

The distinctive features of irrigated farming will mean a boost for city and town incomes and opportunities for new business ventures, the boosters are quick to point out. Because of farm operations which will be feasible under irrigation that were either impossible or restricted under dryland methods, there will be opportunities for opening beet sugar refineries, alfalfa meal mills, soybean processing plants, canneries for fruits and vegetables. Decentralized packing plants will fit into the picture, too, as irrigation makes possible highly productive year-around livestock feeding. And all of this is to say nothing of business expansion to be made possible through increased local demand for seeds, fertilizers, and crop storage facilities.

The scope of the Missouri basin program is so huge, its ramifications so involved and its ultimate effects so far-reaching that any attempt at an accurate appraisal at this time is problematical. Of prime importance is the fact that it is under way, heralding a new era for the economic well-being of the region.



RIVERDALE . . . *the City of Fantasy*

LIKE a page from Arabian Nights, what was a treeless, wind-swept prairie four years ago has been transformed into a city of 3500 people . . . the newest and most modern in the state . . . with homes, shops and all the conveniences and frills to make for comfortable living.

That is Riverdale, North Dakota, about 75 miles northwest of Bismarck. Built by U. S. Army Engineers to house construction workers and administration personnel employed on the Garrison Dam, greatest earth-fill embankment ever undertaken, the damsite is but a few short blocks from Riverdale.

The excavation's first shovel of dirt was turned in October, 1946, following a year of preparatory work, during which time some temporary housing, a blacktop highway connecting the site with U. S. 83, and a railroad spur to the mainline north of Underwood were built. Riverdale is expected to boast a population of 5000 by 1951, when construction is scheduled to be at its peak.

Work on the dam, said by the engineers to be ahead of schedule, is well along. Date for completion, when power will be turned on, is set for 1954.

Folks of Riverdale are housed in both permanent and prefabricated homes, dormitories, a government-owned hotel and a trailer village. A government-appointed manager replaces the customary officialdom. There is a

combined grade and high school, church, telephone system, power, water treatment and central heating plants. Fire and police protection, hospital and medical services, a movie and other recreational facilities are provided. Lignite from the excavation supplies the fuel, with surplus stockpiled for later use.

Streets are hard-surfaced, curbed and modernly lighted. The shopping center includes a hardware-appliance store, drug store, food market, auto service station, clothing store and other retail establishments. All stores are privately operated on a concession basis.

That is Riverdale today. After 1954, then what? When major construction is completed, only a small force of people, for operation and maintenance of the dam, will be required. The future of Riverdale as a business center appears to be in the lap of the gods. Some of the residents hold out hopes that tourist trade and farming will keep it on the map.

Additional government property may be leased for business purposes, and land beyond the town's boundaries may be developed for business or industry.

The Army Engineers, as is the case with other dam and reservoir projects involved in the Missouri basin program, are co-operating with federal and state agencies in fish and wild-life promotion. They visualize the reservoir and dammed-up waters a mecca for fishermen and hunters in the years to come.

CONSTRUCTION CONTRACTS IN NORTHWEST UP 32 PER CENT

Building and engineering contract awards showed a 32 per cent increase, with 52 per cent of the contracts being in public-account work, for the first 11 months of 1949 over the corresponding period of the previous year in Minnesota, North and South Dakota, according to the F. W. Dodge Corporation.

Biggest increase was a 54 per cent jump in government commitments, compared with private construction awards' increase of only 15 per cent. In some sub-divisions of the private construction field there were drops from highs of the preceding year.

Total awards were for \$369,391,000 in the three-state area, the report, released by Edward N. Swanson, Dodge district manager, said. Public-account made up \$191,714,000 of this amount, private sources accounted for \$177,677,000.

(Meantime, reports from Washington indicated an all-time high in housing starts during the past year, with some tapering off to come in 1950. Houses, especially in the higher cost brackets, will drop off, as will privately owned apartments, while government low-cost housing projects will roll along.)

A swing to apartment construction was seen in that section of the report which showed awards for this type of construction were up 106 per cent. Single family residences declined. In non-residential awards, educational and religious building led a marked increase for structures designed for public agencies. There was

a drastic reduction in manufacturing building awards and moderate drop in commercial building contracts.

Public works and utilities were up 57 per cent as streets, highways, sewer systems, etc., were pushed into production and there was a distinct gain in privately financed engineering projects.

RAILWAY STATION SUBJECT OF 1950 LeBRUN AWARD

The \$2,800 LeBrun Traveling Scholarship will be awarded in 1950 for the best design of a suburban railway station, according to the announcement of the New York Chapter, A.I.A., scholarship committee, headed by R. I. Carson.

Winner of the scholarship will use the money for at least six months' travel outside the United States while studying architecture. Applicants must be nominated before February 10, 1950, by a member of A.I.A. Contestants must be over 23 and under 33 years of age, citizen and resident of the United States, have at least two years' practical experience as architect or architectural draftsman and not be beneficiary of any other traveling scholarship.

In 1949 the first woman to win the scholarship, Miss S. Agatha Turner, Lubbock, Tex., carried off top honors. The award was first made in 1912.

Address of the committee is: LeBrun Scholarship Committee, New York Chapter, A.I.A., 115 E. 40th St., New York, N. Y. A committee of three New York members will judge the entries.

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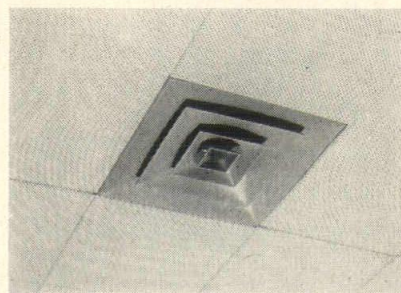
ECONOMIC FUNCTION—This house was Indigenous Architecture because this prairie trading post had to build and furnish its best mansion with every item brought in sixty miles from Omaha. The furniture was "picked out" at "Marshall Field's" in Chicago. The home came alive with inevitable design patterns, a tradition of choose and make do.

EMOTIONAL FUNCTION—This house was Living Architecture because it deeply satisfied Mary Purcell who came as a bride to live in it; because it pleased the townspeople, cowboys, and homesteaders who rode past its white picket fence when they "came-to-town" of a Saturday. There were no professional critics. For the three children who grew up here life was satisfying, interesting, alert and moral. It would be hard to find a better example of the characteristic American architecture of that day.

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TRUTH *and* TRADITION in House Design

Passed on to Northwest architects are thoughts garnered from an Englishman, W. R. Lethaby, who has had his say thusly:

"Our aim should be to develop a fine tradition of living in houses. It is a matter for experiment, like flying. We should seek to improve in detail point by point. There are enough sketch designs; now we want solids. Exquisite living on a small scale is the ideal. 'House-like' should express as much as 'ship-shape.' Our airplanes and motors and even bicycles are in their way perfect. We need to bring this ambition for

perfect solutions into housing of all sorts and scales.

"The chief obstruction to our having better houses has been the superstition that they should be built in a style. There is a great difference between being built in an imitative style, Elizabethan, Jacobean, or Georgian, and being built *with style*. A motor car is built with thought for 'style,' that is, finish and elegance, but it is not built to look like a sedan chair or a stage coach. To be concerned with style imitations and what the Americans call period design is not only irrational in itself, but it blocks the way to any possibility of true development. If you have your eye on *that*, you can't see *this*.

"To go on building houses in the cocked-hat and brass-candlestick style is not only rather imbecile play acting but it destroys rational growth. We have to put an efficiency style in the place of this trivial, sketchy picturesqueness. Even leaving out the style trimmings would be something. If you cut away disease and surplusage, you strengthen and consolidate. There are many cases in which the half is greater than the whole. We have to prune our building forms as we prune a fruit tree and sternly cut away the dead wood. Whenever we concentrate on some direct datum, some reality like health serviceableness or even perfect cheapness, true style will certainly arise as the expression of this and the other human qualities embodied.

"To design in 'a style' is to design a seeming which stands in the place of style proper. This style superstition is a much greater evil than I could persuade you to believe. It filters down to lower and lower strata and the poor man is at last persuaded that nightmares of vulgarity and discomfort are necessary offerings to 'style.'

"The dwelling house should be sound, dry, light, warm and sweet. We should save in all thoughtless extravagances and concentrate on the conquest of dirt, disorder and waste. Houses must be built for living rather than for letting. A false and confusing opposition between science and art has been allowed to arise and indeed is rather fostered by expert simulators who 'go in for old world effect'; but properly there is no strife between science and art in architecture. It does not matter

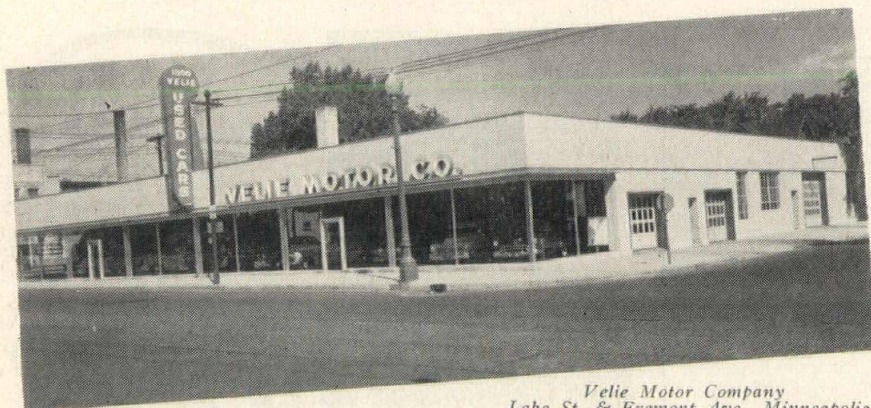
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a bit if we call flying an art or a science; the art of house building is practically one with the science of housing. If we must worry over strict definitions, 'science' may stand for codified preliminary knowledge, and 'art' for operative skill, experiment and adventure. Science is what you know; art is what you do. The best art is founded on the best science in every given matter. The art of shipbuilding is the science of shipbuilding in operation. The notion that there are special 'art forms' or 'art colours' has led to all sort of pretences and sham picturesqueness. Art is high competence in doing what is worthy to be done."

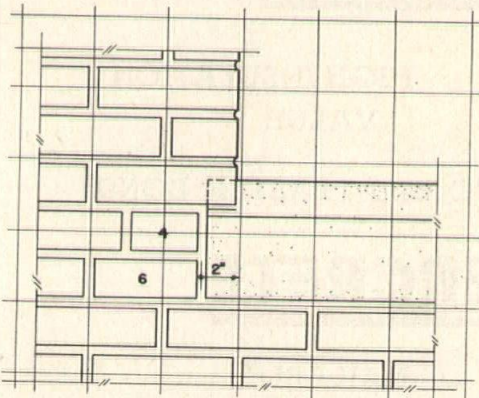
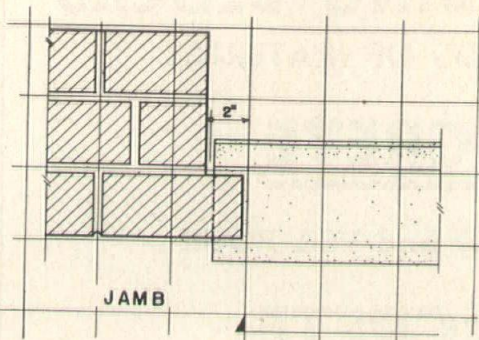
Lethaby wrote that in 1920 and much of what he says can be used in pointing fingers at sham of today but even more prominent are the ways in which American architecture has fulfilled the desires of the British writer for our ranch houses, fit application of materials and development of materials for new, indigenous uses and many other forward steps have done what he asks of the designer.

Northwest Architects on Training and Registration Survey

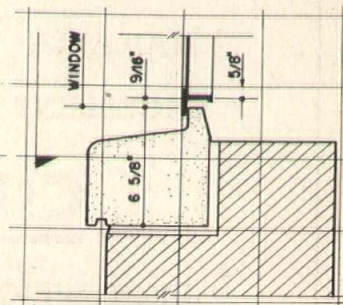
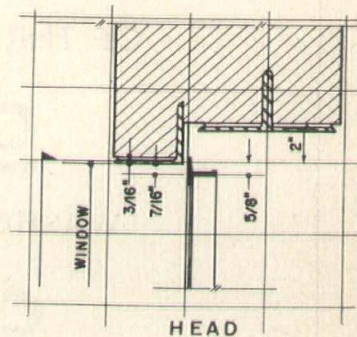
Northwest architects are represented on the committee guiding a national survey of education, internship and registration in architecture with inclusion of Roy C. Jones, Minneapolis, as representative of the National Architectural Accrediting Board, and Turpin C. Bannister, Urbana, Ill., as a representative of the architectural schools.

"All the standards related to architectural education and registration

MODULAR DETAILS FOR SOLID-SECTION STEEL WINDOWS USING STONE SILL



ELEVATION



SILL

FIG. 1

FIG. 2

HEAD—For matching conditions at jamb and head, the frame bar center is placed 7/16" below the lintel. (See figure 2) This places the bar center 5/8" below a grid line when an angle lintel is used.

STONE SILL—The bar center at the sill is 5/8" below the grid line or 3 3/8" above the grid opening to conform to the normal grid opening which is 4" greater than the distance between bar centers. The stone sill shown above may also be used as a lug sill. (See figure 1)

Many questions have been asked concerning the variety of steel window heights that can be used with stone sills. The stone sill shown in the drawings above was developed especially for the solid-section window. In clay masonry construction with 4" high modular face brick or tile units, this sill can be used with all window heights. Where 3c. to 8" or 8" courses are used, it applies to all window heights except 3'-1" and 5'-1" (3'-0" and 5'-0" between bar centers). Where these heights are used, 4" supplementary unit heights are required under the sill.

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should be as uniform as possible throughout the nation, permitting, however, that freedom of flexibility to develop which enables a profession to become progressively competent under changing conditions and inventive ideas," Ralph Walker, A.I.A. president, said in a preliminary report before actual launching of the A.I.A. sponsored survey.

The national committee is under chairmanship of Dr. Edwin S. Burdell, director of Cooper Union, New York, the only member who is not a practicing architect. Dr. Burdell is an outstanding educator.

The study, which is newly launched and will probably take a year to collect and evaluate its data, will be an appraisal of the problems and responsibilities of the A.I.A. in the fields of professional education and license to practice with provision of facts dealing with existing educational patterns, training procedures, registration requirements and related topics.

Checklist on Driveways

The modern architect is responsible for more than just the layout of the building proper; he must keep a weather eye on the site and best use of the area where the building, be it home or business structure, is located. One of the much used features of a building site is its driveway. Some of the things that enter the picture of the two major kinds of buildings and their car service areas are listed here.

COMMERCIAL STRUCTURES:

The driveway must serve that part of the building where materials and stocks are received and shipped and must be engineered into that part of the building ("the shortest distance between two points is a straight line").

Surface must be safe and depth of concrete or other material must be adequate not for the average load to be handled but to the maximum-plus-safety-margin load.

Sufficient maneuvering space must be provided where trucks and other vehicles must turn and back, leave platforms, pass parked vehicles, etc.

Width should be plentiful and where dual-tired trucks run the

NORTHWEST

added width must be taken into consideration.

Adequate clearance of adjoining buildings, trees, poles and so on must be assured.

Grade must be made so as not to overtax motive equipment hauling maximum loads. Grade must also be made with winter's driving conditions in mind, with adequate drainage and easy cleaning important.

Twists, turns and fancy layouts are taboo along driveways.

If parking during deliveries to the building serviced must be done, space should be supplied, if and when available, for such parking out of the traffic lanes.

Service driveways which must feed into alleys should be set so as to allow speedy and easy entrance and exit with clear visibility into and along the alleyway.

Unloading platforms must be truck-bed level.

RESIDENCES:

Driveway must not consume too much of valuable yard space.

It should be wide enough not only for the family car but for passage and parking of delivery trucks and others using it while visiting the house. Dual wheels on some trucks, like those making delivery of major appliances, coal or other fuel, etc., should be taken into consideration.

Where possible there should be no twists or turns or skidding angles in the contour of the driveway.

When used as service driveway, coal bin chutes, oil pipes, etc., should be convenient to the driveway. This also applies to kitchen entrance, etc.

The driveway must not be too steep, this being especially import-

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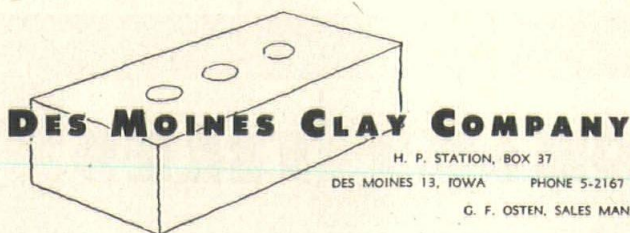
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FACE BRICK GLAZED TILE COMMON BRICK METAL WINDOWS



ant in the wintry north where ice and snow make steeply pitched (more than six degrees) driveways iced slides many months of the year.

Proper drainage must be allowed for so melting snows won't form ice on driveway or against garage doors. This should also carry away summer's rains without flooding the garage floor.

Obscuring yard plantings and corners of buildings should be kept out of the vision line of the car driver as he leaves the driveway to enter the street.

If the driveway gives onto an alleyway, it should be wide enough and have an apron wide enough so an easy turn can be made, without backing and maneuvering.

A driveway should be usable as a car washing platform, with water nearby.

It should also be useful as an off-the-street parking space for home owner or visitor so cars will be taken out of traffic areas.

The gutter pitch should be such that no bumper will jar against the pavement or low fenders scrape on adjoining curbs.

Concrete must be of adequate thickness to carry the maximum-plus load of servicing trucks, not merely the weight of the family car for if it once is cracked by a heavy load, the lighter pleasure car load will keep gnawing at the crack.

Proper expansion and contraction in the northern climate must be allowed for.

Glare from a concrete driveway can be considerable and it should be dulled or the driveway made of other materials. The sun's reflection is hard on the eyes and heat from a wide stretch of concrete is high.

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JACKSONS, FATHER AND SON, SPAN 60 YEARS

Since horse-car days the name Jackson has been associated with the products of The J. G. Wilson Corporation, makers of doors and rolling partitions. Ralph F. Jackson, father of Joel F. Jackson, became identified with the products of this concern in the year 1888 and



Joel Jackson

continued to sell them throughout the Northwest territory until 1938, when his son took over.

Joel F. Jackson is well known for his part in the development of the overhead type door, which he introduced in this territory more than twenty-five years ago at The Northwest Auto Show held in the Over-

land Building at 2572 University Ave., St. Paul. In 1936 Mr. Jackson disposed of his interest in the company he had formed to sell and install overhead doors and became identified with the products of The J. G. Wilson Corporation.

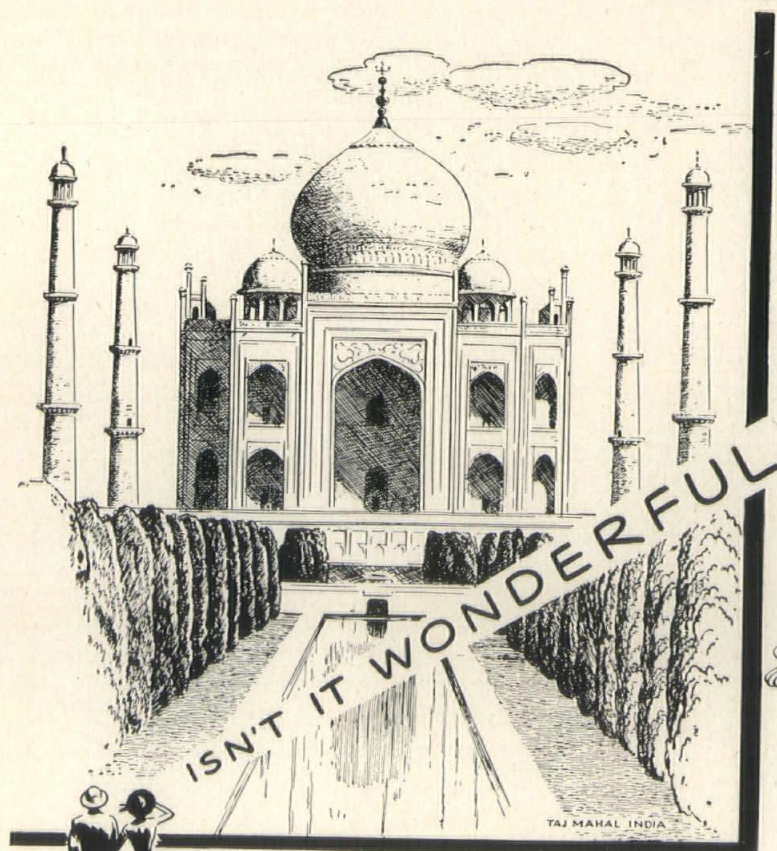
Mr. Jackson's long experience with rolling steel and overhead type doors is frequently made use of by architects and engineers, who consult him when confronted with difficult problems involving the use of these types of doors.

EARLY WRIGHT STRUCTURE GOES UNDER HAMMER

Sold for \$5,000 recently by the City of Buffalo, one of the first Frank Lloyd Wright masterpieces, the Larkin Building, one of the first air-conditioned buildings in the country, is going to pieces under the wreckers' hammers.

The building was considered one of the earliest designs of the machine age's reactions in architecture and started a trend on the Continent which renovated thinking on things from monuments to small packages.

The building had been taken over by Buffalo for non-payment of taxes and was appraised at the time at \$138,960. The Western Trading Corp. bought it and will wreck it to make space for a new building. Many architecturally minded persons raised their voices against wrecking of what they would like to see made into a museum of early progress in American design but the din seemed to be of no avail.



ARCHITECT

Yes—but in Minneapolis



1¢ worth of electricity

will light a 150 watt lamp

for 2 hours.*

(*Based on 3¢ per KWH)

NORTHERN STATES
POWER COMPANY

A New Ceramics Plant...

INTRODUCTION

Red Wing Potteries, Inc., is one of Minnesota's oldest industries, located in one of Minnesota's oldest cities. Red Wing has a population of about 12,000 people and is situated on the Mississippi River about 60 miles southeast of Minneapolis. The surrounding area is intensively farmed, and the town serves as a trading center for the farm families. However, Red Wing does not depend entirely on commerce for its existence, but largely on industry. A large portion of the city's labor supply is absorbed by the Red Wing Potteries, Red Wing Sewer Pipe Company, Northern States Power Company, and many smaller companies.

Red Wing Potteries, Inc., was established in Red Wing in 1875. The concern located here because all the raw material used in the manufacture of "stone crockery" could be found locally. The company made no white ware at that time. Today, however, the corporation manufactures only white ware, and clay for this product must be shipped from some distance. In spite of this fact, a new plant, when and if it is built, will be located in Red Wing because of the skilled labor available here and because of a sort of inertia found in any established business.

In recent years Red Wing tableware, vases and figurines have been sold on a nation-wide market and are becoming increasingly popular.

EXISTING CONDITIONS

The need for a new plant for Red Wing Potteries is obvious to anyone who has seen their present facilities. The need becomes more obvious if one visits the production areas and sees the poor conditions under which the ware is produced.

From the manufacturer's point of view, the present plant is inadequate because of low, allowable floor loadings, narrow column spacings which allow for no flexibility, and inefficient machine organization and flow resulting from a four-floor production area. Although production figures are given a shot in the arm by the use of isolated modern machines and constant study and rearrangement of processes by the engineering department, the overall production picture is still one of

...Designed for Red Wing,
Minnesota by

PAUL A. HESSON

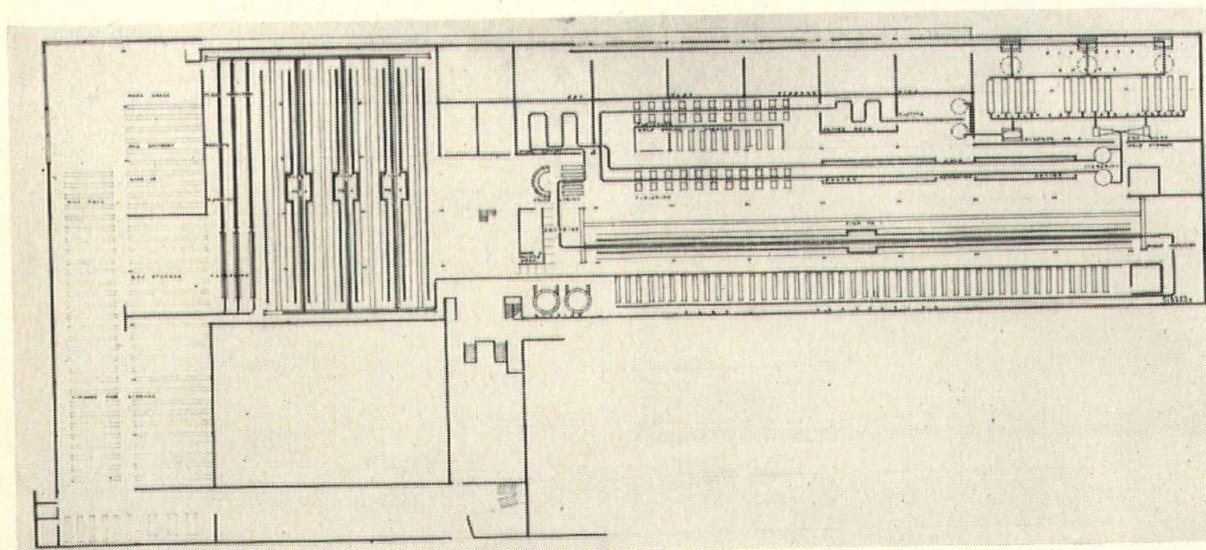
as an

**Undergraduate Thesis,
University of Minnesota, School of
Architecture and Presented Here
Through the Courtesy of the
Author and the School**

inefficient disorder. This picture will remain unchanged as long as the present plant is used.

That it is economically feasible for the corporation to enter into a building program at this time may be illustrated by a few figures. The attached payroll chart shows the estimated cut in employees that could be made while maintaining present production in the new plant, using modern machines and techniques. If the average employe wage is \$1.25 per hour, this payroll cut saves the company about \$6,000 per week. The present production is about 150,000 pieces of ware a week, of which about 95,000 pieces are salable. The rest are lost in rejects, breakage, etc. It is reasonable to assume that in a new plant where modern techniques assure uniform high quality and where modern machines and conveyors insure against breakage, this loss could be cut to one-third the present figure. In dollars and cents, this cuts about \$17,000 per week from the company's overhead. Add to these figures the much lower cost of insurance and maintenance, and the lower taxes on the site property, and it becomes a question of whether the company can afford *not* to build.

From the employees' standpoint, the new plant offers many advantages. Above all, their health and safety would be protected. While the present plant is built



**WORK
FLOW
CHART**

entirely of wood (with the exception of exterior bearing walls of masonry), the new one is of steel and virtually fireproof. Three small unsafe stairways handle the vertical circulation in the old building, whereas in the new one everyone is on one floor, near a direct exit. For the employees today, seeing and breathing are things that begin when the 4:30 whistle blows in the afternoon and end when that whistle blows again at 8:00 the next morning. In the new plant skylights and fluorescent bulbs, natural and artificial ventilation protect the workers' eyes and lungs. There are neither cafeteria nor locker facilities in the old structure. These and adequate toilet facilities have been planned for the new one. All these things add up to better employer-employee relations and less absenteeism.

SPECIFIC REQUIREMENTS

A. Manufacturing area Total—78,000 Sq. ft.

1. Clay storage bins..... 7,000
2. Clay preparation room..... 7,000
 - a. 4 blungers
 - b. 3 sumps
 - c. 12 filter presses
 - d. 2 pug mills
3. Jiggering area..... 4,500
 - a. 2 automatic jiggering machines
 - b. 2 rapid dryers
4. Finishing area (jiggered ware) .. 2,400
 - a. Work tables and sinks
5. Casting area..... 2,400
 - a. 2 storage tanks
 - b. 1 rapid dryer
6. Finishing area (cast ware)..... 2,400
 - a. Work tables and sinks
7. Mold making and storage..... 3,400
8. Final dryer..... 1,000
9. White lining and engobing..... 2,000
 - a. White lining booths
 - b. Engobing booths
10. # 1 kiln..... 4,000
11. Bisque inspection and storage.... 1,000

12. Hand decorating..... 8,000
 - a. 125 tables
13. Glazing 1,200
 - a. 2 auto-glazers
 - b. 5 spray booths
14. Glaze and paint preparation..... 800
15. #2, #3, #4 kilns..... 1,200
16. Glost inspection..... 800
17. Reclaim department 600
18. Packing 7,500
 - a. Box storage and work space

19. Toilets 1,600
20. Boiler room 1,200

B. Warehouse area Total—18,000

1. Packaged ware storage..... 14,000
2. Box storage..... 1,200
3. Work space..... 2,000
4. Shipping office..... 200

C. Retail store..... Total— 7,000

1. Sales area..... 3,600
2. Stock room and display preparation..... 2,400
3. Lobby and toilets..... 1,000

D. Offices Total— 8,400

1. 5 private offices..... 900
2. Conference and display..... 1,000
3. General office..... 800
4. Central filing..... 480
5. Ceramic engineer and laboratory 360
6. Chief engineer and drafting room 500
7. Artist and studio..... 300
8. Plant superintendent..... 200
9. Lounge and toilets..... 200
10. Nurse 140
11. Time keeper..... 140

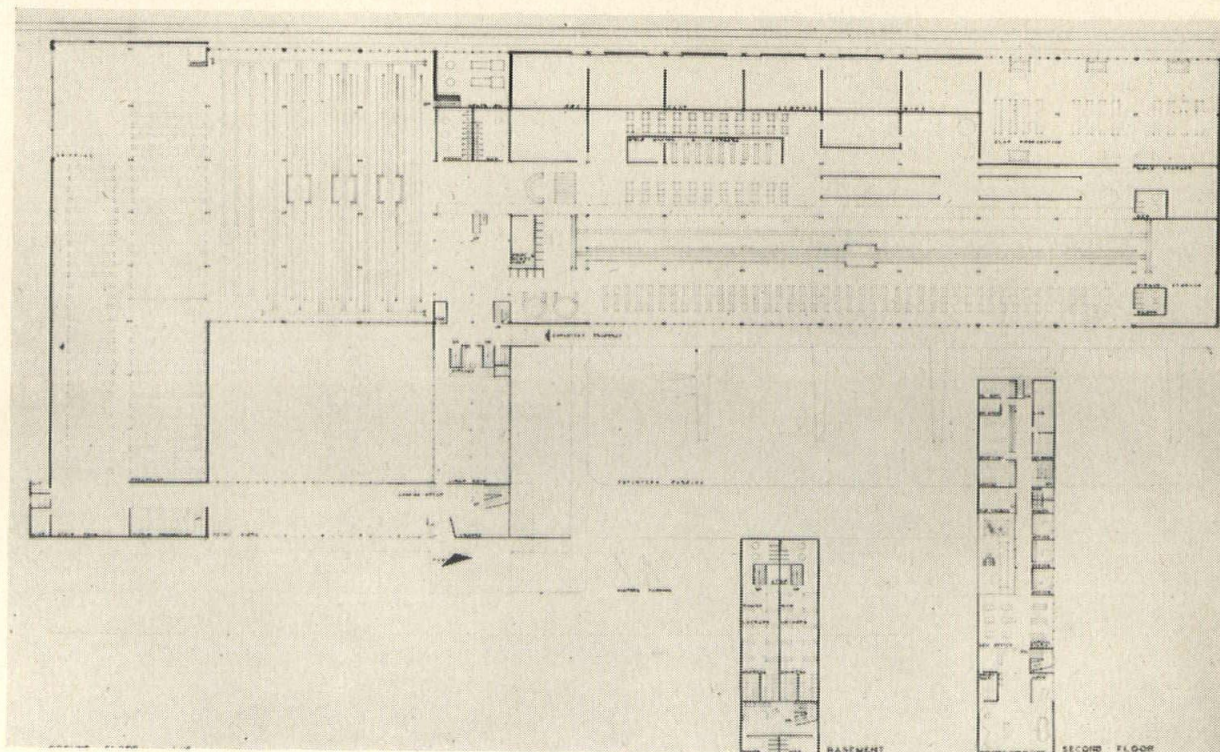
E. Employee services Total—6,000

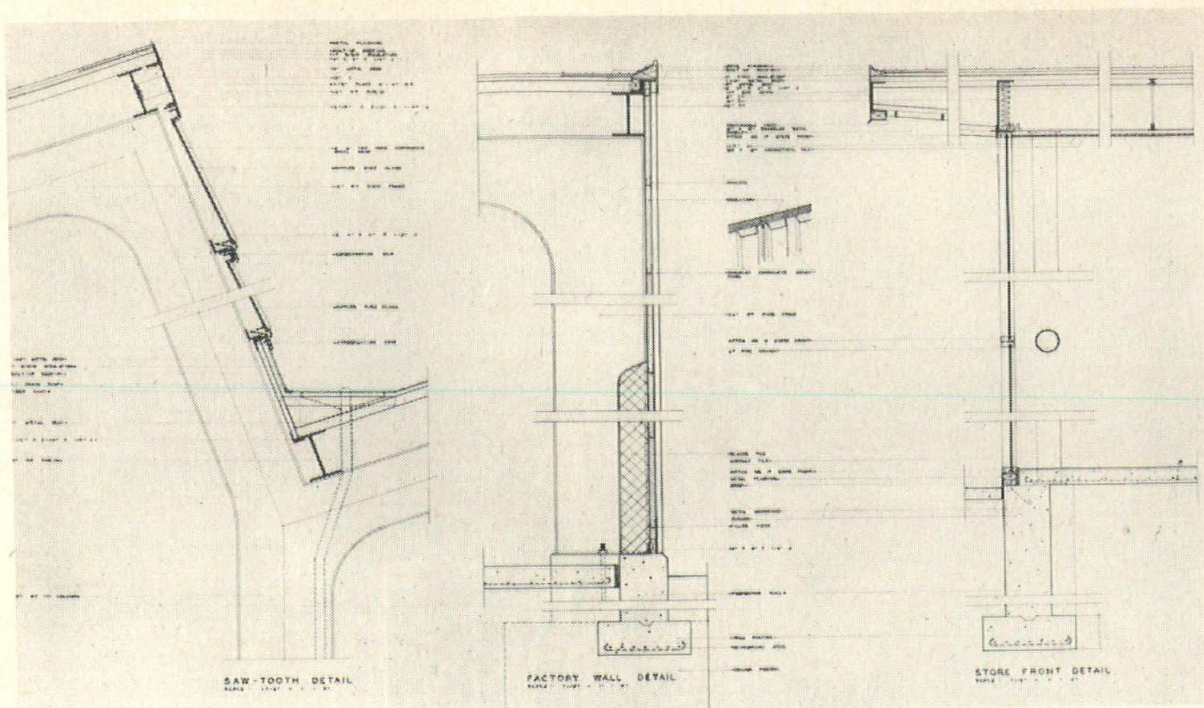
1. Cafeteria and kitchen..... 2,500
2. Lockers, showers, toilets..... 3,500

F. Parking

1. Space for 100 employees' cars
2. Space for 25 customers' cars

PLAN
OF
BUILDING





DETAILS

PROCESS DESCRIPTION

A. Clay Preparation

Clay, in a dry powder form, is shipped by rail into the plant at Red Wing from several sources, all in Minnesota and adjoining states. The cars are parked on the spur opposite the clay storage bins and are unloaded by the use of huge vacuum tubes.

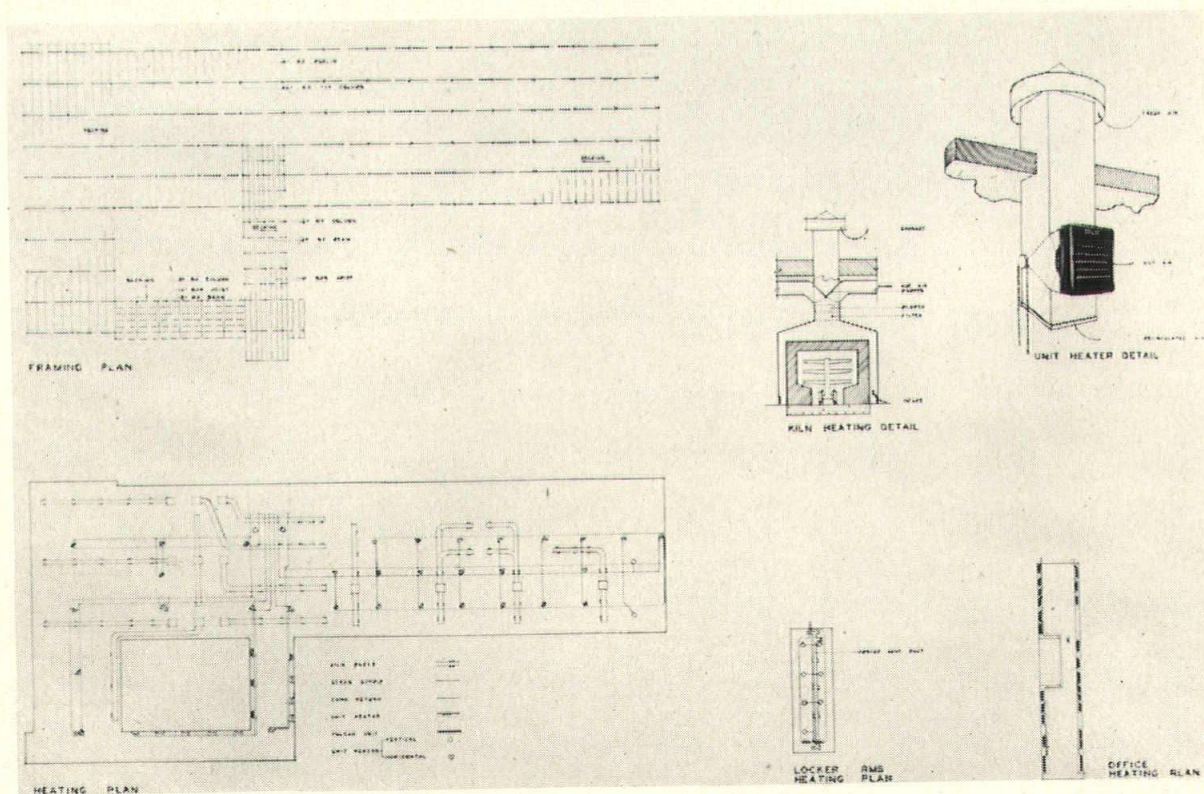
To transfer the clay powder to the clay preparation room, a hopper, equipped with a measuring scale and hung on an overhead rail, is used. In the clay preparation room the hopper is opened and the correct amount of dry clay is dropped into the three blungers. Here hot water is added and the mixture churned to a thin mud. From the blungers it is pumped through a screen filter into a sump where it is stored before being pumped into the filter presses. These presses

consist of banks of hollow discs which are lined with cloth. Pump pressure forces the liquid through the cloth and squeezes most of the water out, leaving the clay in a heavy, plastic state. These clay "pancakes" are removed from the press, placed on small electric trucks and moved to the No. 4 blungers or to the pug mills.

At this point, as is indicated on the flow diagram, the process splits, 70% of the raw clay going through the jiggering process and the remaining 30% through the casting process.

In the pug mills all the air is removed from the clay to prevent the possibility of bubbles forming in the ware when it is fired. Emerging from the pug mill in the shape of cylinders about 24 inches long and 6 inches in diameter, the clay is carried to the two automatic jiggering machines on a belt conveyor.

HEATING CONSIDERATIONS



B. Forming

1. Jigging: In this machine the clay is pressed into thin discs and placed on plaster molds which have the contours of the inside of the bowl or plate. When the clay has been placed on the twelve molds, they begin to spin, and twelve scrapers, cut to form the outside or bottom of the bowl or plate, descend to scrape off the excess clay. This operation completed, the large wheel on which the spinning molds are mounted turns slowly and the operator places the ware, still on the molds, into the dryer. When the ware has moved through this dryer on a chain belt conveyor, it is removed from the molds and put into another dryer while the molds are sent back to the jigging machine. The green ware, as it is now called, is removed from the dryer and placed on a belt conveyor to move through the finishing department. Here girls scrub the ware with brushes and scrape it with knives to remove all rough edges. Leaving the finishing department on the same belt, the ware arrives at the final drying room.

2. Casting: at this point the flow diagram, which had split after the filter presses, joins again.

Back in the clay preparation department again, 30% of the "pancakes" are put into the No. 4 blunger which again adds water and again churns the mixture to a thin mud. From this machine it is pumped to overhead storage tanks. While molds move on link belt conveyors, operators fill them, using gasoline hoses which are connected to the storage tanks. The conveyor carries the molds to the entrance of the dryer. Here the molds are snapped off, the clay being stiff enough to retain its shape. The green molded ware is then placed on another link belt conveyor and carried through the dryer. Emerging from the dryer, it is placed on a belt conveyor to move through finishing. This finishing operation is exactly the same as the one mentioned previously. From the finishing department the conveyor moves the ware to the final drying room where it joins the jigged ware.

All the green ware is now placed on shelves hanging from an overhead conveyor and moved slowly through the final drying room.

After coming out of the drying room the ware may go through white lining, engobing, or directly by to the No. 1 kiln. White lining and engobing are spray processes and are completed in spray booths equipped with exhaust blowers. The white lining process puts a hard white wearing surface on the inside of some ware, while engobing has a decorative function, putting a light shadow of any desired shape on plates.

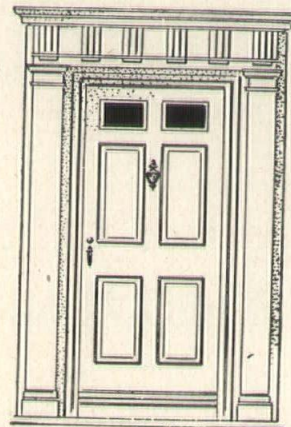
C. Firing: now all the ware is placed on ceramic cars and pushed by means of hydraulic piston, through the 280 foot No. 1 kiln. The entering and leaving temperature in this kiln is 500° F., while the maximum temperature in the center is 2,100° F. The ware emerges from this kiln after 52 hours in a partially baked condition. These bisques, as they are now called, are inspected and stored in the bisque storage room.

D. Decorating: from the bisque storage room to the glazing department, two continuous belt conveyors carry the ware through the decorating room. Bisques from the storage room move down the length of the decorating room, the artists pick them off, paint them and place them on the other conveyor which takes them to the glazing department.

E. Glazing: the glazing department consists of two automatic glazing machines and 5 glazing booths. The large majority of the pieces go through the autoglazers but some of them require hand glazing which is ac-

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complished in the booths. Both machines and booths have forced exhaust systems. The autoglazers look and operate much like the automatic jiggering machines. A large wheel, carrying 20 spinning plates, slowly turns, moving the plates through the multiple sprays.

Removed from the sprayer, the ware is placed on an overhead trolley conveyor and moved to the final burning kilns No. 2, No. 3, No. 4. These kilns are shorter than the No. 1 kiln but temperatures are comparable. The ware is again placed on ceramic cars and pushed through, the trip taking 24 hours this time. At this stage the pieces are known as "glost" ware.

F. Packing: after removal from the carts, the glost ware is inspected while moving on a belt conveyor. Seconds and rejects are sorted out. Some of the normally rejected ware may be reclaimed by chalking with a stick glaze and re-burned. This is done as the belt moves through the reclaim department. From here the belt moves through the packing department. After being packed, the ware is carried on electric trucks into the warehouse area.

THE SOLUTION

The design of this plant began at the back of the lot by the rail spur and worked toward the front of the lot and the main entrance. That is, the manufacturing process diagram determined, directly or indirectly, the placement of all the plan elements.

A. Site: the site selected is one which the corporation considered buying recently. It is located just outside the city limits on Highway 61. The railroad right of way forms the North boundary of the site. The plot is ample to provide for possible expansion and the ground is nearly flat, the North lot line being about four feet lower than the South. The neighborhood of the site is already served by a bus line.

B. Scheme: the sketch shows the scheme that was eventually used. The main influencing factors were, of course, the road and the railway.

In laying out the flow diagram, the effort was made to group all the elements that required close supervision together. Thus, the paint and glaze preparation and the glaze department must necessarily be very near the artist, the ceramic engineer, and the laboratory. The artist should have quite easy access to the mold making and the decorating departments. Supervision was made easy by locating the "plant" offices over this group of functions and connecting them with a dumb waiter for samples and a stair. This stair at the North end of the administration wing also serves as access to a catwalk which runs nearly the length of the production area seven feet off the floor. Ladders to the production floor are located at periodic intervals. The catwalk enables the supervisor, executives, buyers, and other V.I.P.s to tour the plant without actually threading through the machinery.

The store was planned to show an attractive glass front to the highway. The entrance is protected and defined by the overhanging administration wing. The sales area is isolated from the production floor in order to avoid the noise problem and is connected to the warehouse through a stockroom and work space. The lobby provides a pleasant space in which husbands may wait while wives stock up on "Town and Country" ware. In the case of a person who has business in the upstairs offices, the store cashier acts as receptionist and directs him up the stairs where he arrives at the general office.

The large space at the South end of the office wing is flexible and is used for conferences and display area for wholesale buyers. The sales manager and president's offices open to this space. The laboratory, studio,

NORTHWEST

and drafting room are sky-lighted. An office employees' lounge has been provided, and a dumb waiter from the kitchen below enables office workers to eat here.

The employe cafeteria was designed for a capacity of 200 people since the lunch hour is divided into two half-hour periods, the workers eating in shifts in order to keep machines running. The kitchen serves only soup, coffee, milk, sandwiches and ice cream.

C. Structure: continuous, welded, rigid framing is used for the most part. This system is without equal for a factory of this type. It is economical, uncluttered, easy to maintain, handsome. There are no bottom truss cords to interfere with ducts, pipes, conveyors or machinery.

The exterior walls of the factory are of a pre-fabricated sandwich. The exterior of the sandwich is square-corrugated, enameled carbon steel while the insulation is 1½ inches of fiber glass and the inside is flat, enameled carbon steel. The "U" factor for this type of wall is .14, or better than 12 inches of masonry. The lightness of the wall counts as a saving in framing steel and foundations. Glazed tile is used as a wainscoting to a height of seven feet.

D. Mechanical: much of the heat generated in the huge kilns of the present plant now goes to waste. A system was devised in this design to utilize this waste heat. It is expected the kiln-heating system will be used at full capacity with the unit heaters being used as supplemental heating when and where needed. It was, of course, necessary to design the layout of unit heaters so that they may be used exclusively in case the kilns are shut down for rebuilding, etc. "Vulcan" units provide heat for the offices and direct-indirect convectors equipped with blowers are used in store and lobby.

Ventilation is accomplished in the production area by operating sash in the saw-tooth sections, frequent ventilating stacks, and dust control blowers where they are necessary.

E. Cost: the cubage of factory construction is 1,040,000 and that of the administration, cafeteria, locker room, store and lobby is 141,000. On the basis of a cost of \$.65 per cube for factory construction and \$.85 for office and store, the unequipped building would cost about \$896,000.

PRODUCTION EMPLOYEES

| Department | Present | In New Plant |
|-----------------------------|---------|--------------|
| Clay Preparation | 11 | 11 |
| Jiggering and Drying | 46 | 21 |
| Jigger Finishing | 28 | 13 |
| Casting and Drying | 20 | 10 |
| Cast Finishing | 52 | 27 |
| Mold Making and Maintenance | 7 | 3 |
| Green Glazing | 11 | 6 |
| Kiln No. 1 | 14 | 14 |
| Bisque Inspection | 10 | 7 |
| Glaze Preparation | 5 | 5 |
| Decorating | 125 | 125 |
| Spraying | 32 | 22 |
| Dipping | 12 | 2 |
| Kiln No. 2, No. 3, No. 4 | 17 | 17 |
| Glost Inspection | 13 | 10 |
| Storage, Shipping, Packing | 30 | 15 |
| Reclaim | 14 | 14 |
| Maintenance | 10 | 10 |
| Boiler Room | 4 | 4 |
| Plant General | 7 | 7 |
| Sales Room | 4 | 4 |
| Totals | 472 | 347 |

ARCHITECT

GRANITE For Store Fronts

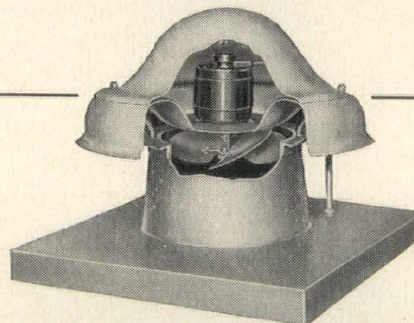
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(For Your Information)

BUILDING BONANZA— RURAL SCHOOLS

The architect has a most serious role to play in the next ten years when rural school districts of the United States will spend some \$7,000,000,000 to construct and remodel their school structures, according to the authors of *Planning Rural Community School Buildings*, recently published by the Bureau of Publications, Teachers College, Columbia University.

Most of the construction will be in the smaller districts of the country, which do not, because of the sporadic planning and building projects carried out, maintain regular architectural consultants. Many of these communities are towns of under 2,500 population.

The new book, first to be published on planning school buildings in rural communities, also, according to the more than 200 consultants and the authors who contributed ideas, is the first to show ways of housing school with other civic activities under a common roof. This multiple function of the small community center is vital in saving original construction funds, heating costs, maintenance expenses, etc. Among the civic activities which can be combined with the school are recreation facilities, health service, library, agricultural extension offices, etc.

The book shows how various activities can be combined, suggesting suitable ones, and then gives plans demonstrating definitely the ways various involved problems can be solved and solutions integrated. It points out that a good rural school building has seven characteristics. It must be functional, adaptable for multiple use, flexible, promote health and safety, be attractive, economical and occupy an adequate site.

Planning and carrying through a project for the school must bring in many of the community's citizens, the authors said. Consultation makes the people take part in the major decisions of their board of education and with a complete budget mapped from the start, there is no need for last minute, high pressure money raising.

As a corollary of the general problem, the book spotlights the need for housing for teachers in rural communities and suggests the answer in "teacherages," giving several floor plans for these teacher housing units.

COLOR IN WOODS VIA PONDEROSA

Keeping step with the modern accent on color in the home is the 32-page booklet on uses of Ponderosa Pine in blending with and counter-pointing home color schemes. The booklet has much to inspire ideas in the architect.

Uses of the pine in all building activities are discussed—in the framing and construction of windows

and frames, closets, panelling, kitchen design, utility room uses, in the garage, for storm sash, moldings, etc. The qualities of the wood in staining, maintenance, re-finishing, insulation, weather tightness and resisting condensation are also pointed out.

"In preparing this booklet," E. W. Ruddick, manager of Ponderosa Pine Woodwork, said, "it was our intention to show that stock designs Ponderosa Pine Woodwork adequately meets every demand of modern living." Agency for the company is The Buchen Company, 400 W. Madison St., Chicago 6, and copies can be obtained through that office.

THERMAL INSULATION BOOK REVISED

A complete revision to incorporate latest data on thermal insulation has brought "Simplified Physics of Thermal Insulation" up to the minute, according to author Alexander Schwartz, president of Infra Insulation, Inc.

Well illustrated, the 44-page booklet covers heat and vapor transfer, conduction and density, convection, radiation and emissivity, rejection, reflection, absorption, permeability, vapor and vapor barriers, humidity, condensation and radiant heating. All types of material, with latest data on the K, C, R and U factors of all insulation and their thicknesses, densities, weights and cubic contents, are considered.

Copies are available without charge through Infra Insulation, Inc., 10 Murray St., New York 7, N. Y.

ARMORED FLOORS WITH IRON-CLAD CONCRETE

Use of metallic particles in final concrete surfaces for heavy duty floors, resulting in a reported extra life of considerable duration for those floors, is thoroughly discussed in a new 36-page booklet produced by The Master Builders of Cleveland.

The booklet discusses the features of the Masterplate Iron-Clad Concrete floor and its ability to stand up under heavy machines and usage, its freedom from static and frictional electricity, its safety factors and many other factors. Later in the booklet complete and well illustrated directions for installing the various types of armored floor are given.

The booklet contains much valuable background information for those architects whose work includes design of factories, stores, warehouses, garages, etc., and copies can be had by writing The Master Builders, 7016 Euclid Ave., Cleveland 3, Ohio. The publication is Form MP-4a, 1949.

COMPREHENSIVE MUSIC STRUCTURE DESIGN

Written by the head of a university music department with expert assistance from other authorities in various allied fields, a new book on "Music Rooms and Equipment" has been published by the Music Educators National Conference which is a valuable source book for architects handling school, municipal and other musical buildings.

Well illustrated and with many reproductions of architects' drawings of buildings being discussed, the

book by Clarence J. Best, head of Texas Christian University's music department, covers with detailed consideration all the many problems facing the designer of a music room or building. The structures outlined range from simple, small outdoor music shells for small towns to auditoriums.

Contents take the architect first through consideration of the general requirements of special musical structures, their location and types, then into a discussion of acoustics, illumination, heating, ventilation, equipment, radio and other audio-visual aids to the specific floor plans, diagrams and drawings. A separate section is devoted to band shells.

Considerable detail is given under each of the many sub-headings in the book so the latest information on each problem is presented. Definitely a book of interest to the architect whose clients include communities, schools and others requiring design of rooms and structures for rehearsal and presentation of musical programs.

Copies can be obtained from the National Education Association of the United States, 64 E. Jackson Blvd.,

Chicago 4. Listed price is \$1.50. The publication is Music Education Research Council Bulletin No. 17.

SMOOTH CEILINGS INSTALLATIONS DESCRIBED

The use of special column heads and other reinforcing materials designed especially to give clean, smooth ceilings, is described in a new four-page folder put out by the Smooth Ceilings System, Minneapolis.

Of a size which will fit the architect's files and book binders, the pamphlet contains much valuable information on the company's system for the use of concrete slabs for ceilings and floors. Design data, tables, drawings and photographs completely describe and illustrate the operations leading to the headless column construction where unbroken lines are desired in buildings.

Also shown is the manner in which the slab is used as a base and the inverted column heads for bases of pillars in one of the nation's newest-type buildings for manufacture of foods.

This pamphlet can be obtained by writing Smooth Ceilings System, 802 Metropolitan Life Bldg., Minneapolis 1, Minn.

FIFTY YEAR LETTER

(Continued from Page 24)

the Army, was graduated B.A. in Business Administration in 1919. Then with New York's National City Bank for a five-year period in their Chicago's office dealing in bankers acceptances. Called home to Rochester by the illness of his father in 1924 and has been there since, operating HOLLANDS FOOD SHOP, which originally was a grocery store, but is now a cafeteria, bakery, counter restaurant and catering operation.

Exposed for the first time at the Chicago Art Institute to the world of art. Took classes there in design and pottery. Since then has been a member of various groups seeking to activate an art interest in Rochester, and to this end published "The Letter That Took 50 Years to Write" on his fiftieth birthday, November 15, 1946. Out of this and a similar interest by other Rochester people grew the ROCHESTER ART CENTER which now is located downtown in a former church building and has been remodeled to give three floors for the Centers program. It has a staff consisting of Wm. Saltzman, formerly Assistant Director of the University of Minnesota Gallery, as instructor, and artist-in-residence; Miss Jean Larson as curator and executive secretary; Miss Nancy Anderson in charge of the office, and Mr. Charles West as Mr. Saltzman's assistant.

He knows from personal experience that the Art Center has given him a "new pair of eyes" to live with. It has stimulated his imagination and added an "extra quality" to his daily life. It is his hope that the ROCHESTER ART CENTER (together with similar movements elsewhere) can be the means of introducing more people to the validity of "Goodness, Beauty and Truth" as a means to richer living.

ADEQUATE FEES SOUGHT FOR PUBLIC HOUSING ARCHITECTS

A new fee schedule for public housing projects, which will assure good design by making it worth designer's time and efforts, has been approved following work done by the A.I.A., Public Housing Administration and National Association of Housing Officials.

The new schedule is on a "fixed fee plus reimbursable contract" basis and follows a fixed fee announcement by PHA last October.

"It is to the credit of all three participating organizations that an agreement was reached which will permit compensation for architects on a basis which will encourage good design," said C. B. Litchfield, New York architect who was chairman of the A.I.A. fees committee. He said it was generally agreed that a fee based on 2.5 times the technical payroll was fair and equitable for housing projects.

"This new basis of compensation, while generally 2.5 times payroll costs, would provide for a contract which establishes a fee to include three component factors—a fixed amount equal to 40 per cent of the maximum fee schedule contained in the above identified PHA schedule, an amount for 'timecard costs' (technical payroll), which would be reimbursed to the architect on the presentation of cost data approved by the local housing authority, and an amount for overhead equal to 50 per cent of 'timecard costs.'"

PHA intends to retain its previously approved schedule of fees known as 216.2, to be used with the new schedule, as Options No. 1 (the 216.2) and No. 2.

HOW'S YOUR BANK ACCOUNT?

If you ever need some blood in a hurry, you can draw from the Red Cross Blood Bank in a hurry and many a life, valuable to loved ones and to society, has been saved by the prompt withdrawal from this human account of a deposit made by a friend. Have you put in your share lately? It's an excellent investment, never know when you'll need some, or a loved one may! If you're prompted to give, visit your local blood bank right now and do the good deed. If you can't, remember the March Red Cross drive and write a reasonable check to help another good cause along.

GO SMALL, YOUNG MAN, GO SMALL

With one of the accents of the atomic age that of decentralization—of population, of industries, of many other activities—the younger architect, especially he who is seeking a foothold in the profession or a new and fresh outlet for his work, can well afford to look over the smaller cities and perhaps find there a golden field in which to find both himself as an artist-architect and financial security.

In the past there has grown up a mental attitude that the place for the artist is where big wealth is centered, where people have enough money to buy expensive designs, in the major centers. But this is changing and if there is any doubt about the purchasing power in smaller communities, read some of the news stories about small town industries that have gone over the top, of rich farmers who have model farms—and make them pay handsomely—of others who have made a good thing in a smaller community, say from 5,000 to 30,000 population.

Trail Already Blazed

Opportunity lies in the small community and some enterprising architects have found their niches there. Where and how depends on the architect's personal preferences, his ability to study and analyze a community and his experience in searching for his particular "home."

The desire for fine design exists in the smaller communities more today than has been the case for many, many years because today modern transportation and communication have enabled small town residents to see what is good and modern in neighboring big cities, even hundreds of miles away, and the newspapers, magazines, radio, telephone and television have kept them informed as to the best that is being done all around the world. These things have created the taste for well designed homes, business places, community centers and the like and the desire is there for the right men to satisfy.

Any architect who has traveled around the Northwest can name any number of communities, like Willmar, Minn., Fargo, N. D., Rapid City, S. D., Madison, Wis., etc., where well designed and excellently constructed buildings are becoming modern community landmarks. There the desire is being satisfied but in many other, even smaller, cities the field has not had a furrow turned as yet.

In considering such a start in the profession or such a move to new acres, one must realize that the community itself is only half the picture. It is merely the hub of a trade territory, stretching miles in all directions, depending on the proximity of other good sized towns and cities. This trade territory of a fair sized town or city will include farms, small villages, unattached factories dependent on the area's major natural resources (especially farming), resort areas, etc. Many ramifications of architectural need can be found and utilized by the alert architect.

... for in the small community lies many an opportunity

Study, however, is necessary to dig out, understand and take advantage of any area's possibilities for the architect. A glance around will not show it as it truly is. By looking over the town to see whether it is building toward the future or just moseying along, whether its residents are active and pushing the community as a shopping center, reaching out into its trade territory, and by talking with people in town and the neighboring territory, a good idea as to its potentialities can be had. The chamber of commerce, storekeepers and others will be able to give valuable data, if they choose. It is fatal to tie in with a dying community. Contributing factors should be considered in the problem, like the nearness of a large city where skilled designers are already established and with whom the small community architect would have to compete.

The field for an alert and aggressive architect in the smaller community is much varied and his abilities should be cultivated accordingly. He can't specialize any more than the village doctor can specialize; he must be the general practitioner of the planning arts—buildings, utilities, landscapes, community centers and so on.

Among the opportunities offered in the smaller town itself are, of course, residences and here the need for efficient, not-too-high-cost homes is pressing as well as the smaller demand for the big, more elaborate home designed for the "brass" of the town. Store buildings offer much for the architect and auto dealers, hardware merchants, food retailers, jewelers and others have made definite strides in many communities with new styling of their places of business. The services of an architect in the community would be valuable to them.

Civic Buildings Needed

In the community field itself there is the wave of construction of small hospitals, schools, buildings for municipal government, park structures, auditoriums and factories. In this work the architect must become an active part of the community and to get the best from the possibilities he should offer himself through service clubs, on planning commissions, through his church and in other ways so he and his talents will be recognized and used. Part of this will of necessity be contributed work but it is groundwork and can pay off in later commissions.

In establishing himself in the smaller community the architect should, if possible, put out a visual demonstration of what he can do. Perhaps he will design and build his home or a small, detached office building. Into this he will put his best and the finished structure will be an example for his future clients. It's good

advertising and the architect should keep a weather eye on publicity in his new field of action. In this connection he should work hand in hand with the local newsman, who can be of considerable assistance in seeing that the architect becomes known and in supplying reliable information about what is going on in the community and who's who and what's what.

The architect in a small community must keep step with its development and, when he can logically do so, be a leader in its progress. Being a member of various town organizations will help put him in a position to do this but he must guard against being just a joiner. He should be a constructively active member of the organizations he joins, even though that requires he limit their number.

A difficulty in the smaller community is that of competent builders. In some there already are good general construction men who can put into tangible shape the plans evolved on the drafting table. In others no such supply of skilled or semi-skilled workers exists and the architect has trouble on his hands. In selecting a community that is another factor to be considered. In some communities the architect will find a good general contractor with whom to work; in others he may have to be his own contractor.

When working out plans for entering the smaller community, some architects, especially those new in the field and without too much experience, will find they can tie in with an established architect and later go out on their own. In other communities, an architect has never found a foothold and the ground must be broken from the rough by the architect establishing himself there. All in all, however, for certain men, this field of the smaller community is a fertile one.

A.I.A. AWARDS TO GO TO THREE MAJOR CLASSES OF DESIGNS

Residential, commercial and religious buildings completed since January 1, 1945, are eligible for awards in the 1950 National Honor Awards Program of the American Institute of Architects, according to Walter A. Taylor, director of education and research.

Entries, from both A.I.A. and other practicing architects in the United States, will be sent to Washington for judgment and exhibition at the 82nd Annual Convention, May 10-13. The First Honor Award will go to the three designs judged best in the three classes with Awards of Merit going to as many additional designs as the judges deem worthy. Each jury will be made up of four architects and a layman, the layman a specialist in the field covered.

"Entries will not be judged in competition with other entries as to size and cost but on the basis of the architect's solution to the problem presented him and its worthiness for an award for excellence," the prize announcement said.

KITCHEN SCORESHEET ADDED TO ILLINOIS SERIES

Latest addition to the Small Homes Council Circular Series issued from the University of Illinois, Urbana, is a kitchen score sheet with commentary on the proper design and fitting out of the modern home kitchen. The new circular fits the pattern and folders of the series.

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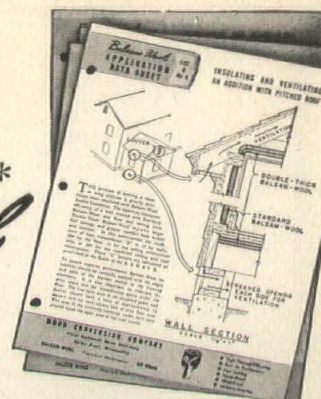
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CONSTRUCTION PAYMENT FORMS

(Continued from Page 21)

It will include work previously done and paid for on preceding estimates. Items upon which no work has been done should not be listed. All items must be numbered as on the detailed breakdown of costs and all columns on the form must be completely filled out.

On the back of the form, under "Contract Recapitulation," the date will be the date of the estimate. The contract amount is the original amount of the contract at the time of signing. Extras and credits include only those extras and credits which have been officially approved in writing up to the date of the estimate. The net contract will include the addition of the extras and the deduction of the credits.

The certificate of the contractor must be completely filled out, including the date of original contract. The total amount earned (a) is identical in total with the amount earned to date in column No. 5 on the front of the form. The retained percentage (b) is the amount that the specification states must be retained until the completion of the job. The contractor's certificates must be signed by an authorized official of the company and his title must be indicated.

The architect will sign the certificate of approval, after receiving and examining the form, and will then forward the estimate to the owner for payment. A third form was also developed to take care of Change Orders and this form is also prepared in sets of five, each sheet being a different color (see Illustration "D"). Five copies of this form are prepared by the architect and he fills in the sequence number of the change order, the name of the owner and contractor,

CHANGE ORDER AND REQUEST FOR ESTIMATE Date May 24, 1949

No. 1

Owner Lake State Power Company

Independence Falls, Minnesota

Contractor Lake City Construction Company

Minneapolis, Minnesota

Long & Thornshov, Inc., Architects

Comm. No. 47-32

Description of proposed change:

Extend footing depths and add additional concrete blocks to wall in order to set foundation on firm undisturbed soil as stated in specifications
Section 43.

Breakdown of cost of proposed change: (by Contractor)

| | |
|-----------------------|----------|
| 1,136 concrete blocks | \$318.08 |
| 5.1 bbl. cement | 21.65 |
| 23 yds. sand | 4.38 |
| Labor | 301.97 |
| | \$665.08 |
| Overhead 10% | 66.51 |
| | \$731.59 |
| Profit 10% | 73.16 |
| | \$804.75 |

Add \$ 781.76 or deduct \$ from total contract price.

Contractor _____

By _____

Date _____

Approval

Long & Thornshov, Inc.

By _____

Date _____

Approval

Owner _____

By _____

Date _____

"D"

NORTHWEST

the commission number and the description of the proposed change. One copy of the change order as first prepared is retained in the architect's file and four copies are transmitted to the contractor. In the paragraph called "Breakdown of Cost of Proposed Change," the contractor gives detailed information regarding labor and material costs and any other pertinent factors affecting the cost. He notes whether this is an additional or deduction to the contract price, signs and dates the change order. He retains one copy of the form as he has completed it and returns three copies to the architect. The breakdown of cost is then carefully checked and if it seems reasonable the architect signs his approval on three copies. These three copies are then sent to the owner with a statement that the cost seems reasonable and that acceptance is recommended. If the owner concurs in accepting the change order he signs all three copies and retains one for his file. The change order now bears the signature of the owner, contractor, and the architect. The owner returns two copies to the architect and the architect retains one copy carrying all signatures and then the other copy is sent to the contractor. Only when the contractor receives the copy with the three signatures does it become effective.

F. J. MORSE APPOINTED TILDEN CONCRETE DRILL AGENT

The F. J. Morse & Co., Inc., St. Paul, has announced its appointment to handle the Tilden Rotary Konkrete Kore Drills in Minnesota and Wisconsin.

The Tilden drill, design of which allows concrete cuttings to be extruded easily from the core, cutting down heating and preserving temper of the cutting teeth, has been used for curb installation of parking meters and traffic signs, setting of telephone line equipment, fastening of signs to walls and many other operations.

Its high speed penetration of difficult materials is demonstrated by the Morse Company's statement that it will cut into concrete at a speed of two to six inches a minute even though the concrete contains flat steel beams.

The Morse Company's address is 509 Minnesota St., St. Paul 2, Minn.

CHIP IN, BROTHER

You can only build a big pot in this magazine if you will chip in, brother. So how about dropping us an occasional—or very frequent—note or postcard telling us of some of the things which are going on architecturally in your neck of the woods, personal notes, changes of personnel and addresses, good personal anecdotes, thoughts worth passing along—all those things which you would like to read and which, we're positive, our readers would relish. Send either directly to us or contact the associate editor in your area.

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Land of the Lemon and

Home of the Nut

(ALSO ORANGES)

YOU MAY RECALL my account of the potato debacle in Maine, and the forecast of what might happen in, say Illinois, sometime in the next fifty years. I admitted that the whole thing seemed rather incredible and that you could hardly be blamed for not going all out in expecting the worst, wherever you may be reading **NORTHWEST ARCHITECT** from Pakistan to North Cape, Norway. We really have a subscriber in both those places!

IN MY ARTICLE "Down to Earth" I was very careful with my facts. I had all of them checked by a widely experienced technological scientist and even my forecasts appraised by well informed friends. But I hardly expected to be handed an overwhelming confirmation of my warnings — and this is not in thirty years, not in ten years, but right here within a few months.

Have you seen this curious advertising campaign in full color in the magazines extolling the virtues of those "grand little California oranges," about the size of golf balls? Remarkable, isn't it! They were always telling you how big they had to be to be good — "so round — so sweet — so juicy juiced" — "more orange, less peel" — etc., etc.

THERE IS a startling story behind the attempt to get you to buy and drink! those little sour oranges, with almost no orange flavor and who knows how little of basic food quality.

MY HOME overlooks the San Gabriel Valley. Stretching East from Pasadena is a hundred thousand acres of orange groves where they are able to produce only little oranges. They have been getting smaller every year. This deterioration problem has been increasingly in evidence for ten years and until the real crisis of the past two years, nothing really effective has been done about it.

As in the case of the lemons, last winter the growers called in the experts. But scientists have been so badly handled the last few years by Congressional Committees, University Trustees, and Business Monopolies that they are getting very cagey about coming right out and saying what they know. If they can effect a temporary "cure," as in the zinc for lemons, their wisdom is accepted. But if their findings mean changing the methods of the big business which production line "farming" has become, then scientists could be accused of political and social irregularity and their jobs be threatened. It happened in Iowa and in Texas, can happen anywhere, any time. Professors don't feel too secure in their jobs at best.

A report on this technical inspection of deteriorating orange groves says, "Some brash member suggested that perhaps the soil was worn out. This thought was plainly unpopular and not considered worthy of a reply."

SINCE the reader may detect a mild cynicism in this report let me admit it and proceed to supply the facts which encourage such feelings.

RIGHT in the heart of this vast Valencia orange empire Dr. Gilbert Parker, D.D.S., has a dozen acres of oranges of which he may well be proud. He is not troubled at all with small oranges. He raises big, sweet fruit with plenty orangeness, for which he gets a premium price. How come?

About fifteen years ago with a fine sense of justice, responsibility and good sense, he decided that it was not equitable to keep accepting God's bounty from the good earth without making some return. Reading Alfred Russell Wallace's study of earthworms he began to realize the astro-nomic contributions which they make to soil fertility. This and other facts about food and teeth and health gave him the resolution to act.

His system was very simple. He stopped plowing his groves, stopped poisoning the soil with chemicals, grew mulch and cover crops, and made compost from all the green wastage he could pick up around the neighborhood. The resulting fertilizer was surface disked into the soil. This procedure soon proved itself so scientifically and ethically sound that in later years when he was unable to pick up enough manure and green wastage he cut down part of his grove and began raising his own compost crops. To the compost he added minerals needed to replace what the oranges had mined from the soil and which the compost was unable to supply.

It is not only as simple as that, but there are perhaps half a dozen small growers in the orange empire operating on the same basis with the same results and in the same valley soil directly adjoining the groves *that are in real trouble*. These normally producing groves on un-pirated soil represent a total of perhaps a couple of hundred acres, less than a thousandth part of the disaster area.

ONE CORRESPONDENT suggests that the freeze last winter may be responsible for the small oranges. A few ripe oranges froze and fell off, but trees and green fruit were unaffected. Otherwise there wouldn't have been even any little ripe oranges. Another writes, "What would you expect the growers to do — just give up? They must sell this enormous crop somehow."

NATURALLY I don't want to see a lot of people facing bankruptcy. Let's help them out. But at the same time let's take the same attitude that Paul Hoffman, Secretary Atkinson and Senator Vandenberg are taking toward the potential United States of Western Europe — "If you want our help, stop stalling around; get together." Let us say to the fruit growers, "Stop putting financial, political and economic pressure on the scientists. Really give them the open bid to supply the complete answer, regardless of time, cost, or whatever. Let corporate growers stop robbing the soil and begin a program based on *agricultural* experience. Science also needs its free enterprise, well sound-proofed against monopoly.

MAN is the most extravagant accelerator of waste the world has ever endured. His withering blight has fallen upon every living thing within his reach, himself not excepted; and his besom of destruction in the uncontrolled hands of a generation has swept, into the sea, soil fertility which only centuries of life could accumulate, and yet this fertility is the substratum of all that is living. —from "Farmers of Forty Centuries"

THE SOIL is not an inert mechanical chemical compound but a living thing, or was before "agriculture as big business" under control of processing and marketing ex-

NORTHWEST

ecutives took over the direction of husbandry and wrecked agronomy.

There is a creative time factor in farming — a rhythm of life cycles which are more subtle than the day, the month, the year, the biennial plants, the twelve-year desert agaves, or the 17-year locusts. From now on it's going to take more individual and national wisdom and less greed, even to stay alive.

Please read "Farmers of Forty Centuries." It's in most libraries. Dr. King shows, so dramatically, how eating is a living link between life *in the earth* and life *on it* — the attached plants and the detached animals. I'm not crabbing at compensation for services by profits taken. But no business — even less the farming business — can succeed on the basis of one year cycles with no look ahead, or behind, or around. These desk "farmers" may have to be saved from their own folly in order to save us from ours, just as we, producers and consumers equally guilty, had to be saved in 1933 from our follies of the previous decade. But even better let's be wise — need no saving!

♦ Food and Health ♦

"... out of the dust of the earth created he him."

"... and watered the whole face of the ground. And the Lord God formed man of the dust of the ground." Genesis II-6, 7.

YOUR INQUIRIES and a few protests to my recent broadside on "Farm and Harm," or "how to commit collective suicide, time being an active factor," will receive the best answers I can find for you. I am still writing letters, telephoning doctors, reading bulletins sent me. We will print as much as there is space to be had in **NORTHWEST ARCHITECT**. The subject is immense — encyclopaedic. Get interested! It will do more for you than a life insurance policy — it is life insurance — long life, good living.

♦ Reward for Incentive ♦

About those twenty-five thousand million profits

WE HEAR A GREAT DEAL to the effect that industrial effort, at both top and bottom levels, is proportional to the rewards in wages or profits. I think it would be difficult to thus isolate the incentive factor as the power impulse driving workers and executives. Too many other plain urges can be seen. True enough, good wages must be the incentive to full production *until men rise above the subsistence level*. Beyond that point, ambition, sport, hobby, pride, love of power, pleasure in the manual arts, family hopes, all begin to change men's lives. Farther along the years acquisition may become a habit and occasionally a disease.

At some point "wages" in a mysterious way has become "salary." Soon "salary" is laid by for words still more exclusive—"commission," "fee," "honorarium," "stipend" but never "pay." At the top levels we have to take account of that peculiar behavior pattern of American adults known as the "infantile complex"—business clubmen, for example, changing the title of their directorates from "Board of Directors" to "Board of Governors" I even see where a flashy firm of Architects somewhere in the sticks now has a "Chairman-of-

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the-Board." All that makes a man really important when he meets his opposite member on the "20th Century Limited."

If you feel that the word "infantile" is an unwarranted aspersion upon our American Aristocracy, you may have missed the piece in *LIFE* August 18, 1947, "THE AMERICAN CHARACTER" by Geoffrey Gorer, pages 94, 95 and following. The resulting discussions, on our porch, concerning the psychological implications of grown (or "adult"!) American men playing with toy railway trains, divided the company about fifty-fifty.

On the "left" side of this picture we must admit that John L. Lewis knows the value of hair cut and eyebrow styling even if spats are no longer the real thing as sartorial equipment for either "right" or "left." While the Portland, Oregon Boiler Makers Union conducts its business and pleasure in the gleam and glitter of a movie makers Hollywood dream, the New York Plasterers Union moves into the most distinguished and expensive banker's dwelling ever built in America.

♦ Good Eating ♦

or Catsup

THERE SEEMS to be a curious idea going around that if you think about what you eat, your meals will be sort of a rugged fueling rather than fun with flavors. A thick steak may be good to eat, but what else did you have? My observation is that in general, people don't enjoy the food — they just automatically react at the sight of food — and down it goes.

Study the sequences of a typical French menu. Then watch such a meal served and eaten by people of experience with good food. The French are shocked at the whole American eating performance — "Mais, mon Dieu, peut-on savourer la bonne cuisine, fumant une cigarette? Impossible!!"

♦ No Retreat from Reason ♦

Alfred E. Cohn

Harcourt Brace And Co.

IT IS, so far as *science* is concerned, absolutely requisite to maintain the primary qualities of objects in a state of *purity*, scrupulously uncontaminated by their secondary or accidental qualities such as "colors, sounds, odors, tastes, heat, hardness": (that is to say) those *impure* qualities which, as every one knows are of *irreplaceable and inalienable value in ART*. Indeed it is those very qualities which make ART even *possible*.

From the Chapter, page 148, "*The Difference between Art and Science*." Read this very stimulating and informative book by a widely experienced physician, and a delightful personality.

♦ Exhibitionist Fade Out ♦

Insincerity has no stamina —

NEW S REPORT — Rome, Nov. 24th: "Salvator Dali informed Pope Pius XII today that in the future he will devote his talent, as a painter, solely to religious subjects." Spending his life perfecting techniques of publicity with nothing substantial to advertise became as empty and inhuman as his furnished pictures.

That was indeed a quick return on my prophecy in the *Fall Art Number of NORTHWEST ARCHITECT*.

NORTHWEST

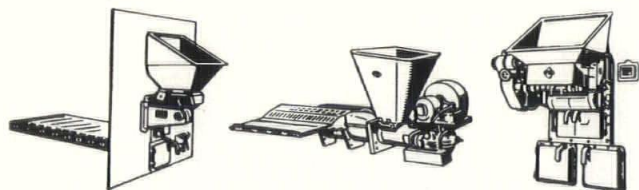
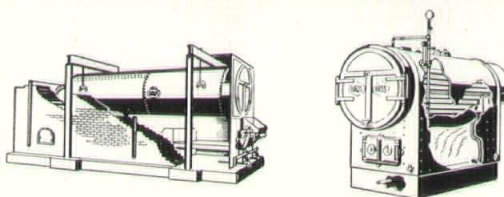
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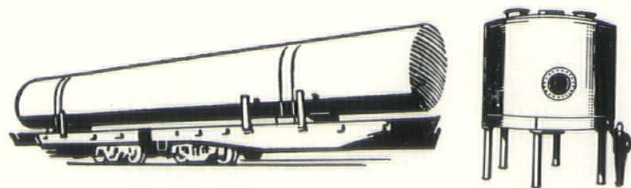


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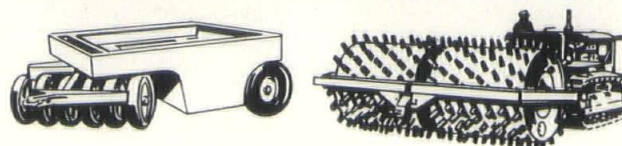


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