COMMON CLAY

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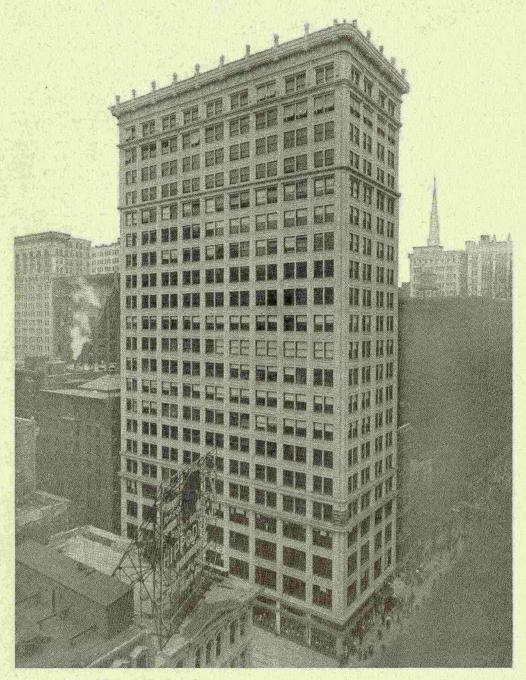


WAND LABOR IN OUR TIME SO THAT WHAT CAME TO US AS SEED MAY GO TO THE NEXT GENERATION AS BLOSSOM; AND THAT WHAT CAME TO US AS BLOSSOM MAY GO TO THEM AS FRUIT. THIS IS WHAT WE MEAN BY PROGRESS.

HENRY WARD BEECHER



→ DISTINCTIVE BUILDINGS »



CONSUMERS' BUILDING, CHICAGO JENNEY, MUNDIE & JENSEN, ARCHITECTS

VOL. 1 COMMON CLAY ...

NO. 6

Published by

THE AMERICAN TERRA COTTA & CERAMIC CO.

1808 Prairie Ave., Chicago, Ill.

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627 Plymouth Bldg., Minneapolis, Minn.

Terra Cotta, Ill.

Indianapolis, Ind.

EDITORIAL

DUE undoubtedly to the admitted durability of Terra Cotta many of our clients have fallen into the grave error of neglecting it after erection. There is no building material, natural or manufactured, that will not suffer from neglect; and Terra Cotta, although capable of tremendous resistance to the natural foes of building materials, nevertheless is entitled to periodical inspection and necessary attention.

Everybody recognizes that the most dangerous enemy of building material is water. Water is most to be feared when the variations of temperature permit its alternate freezing and thawing. We have seen huge granite blocks crumble to dust before the mighty power of silent, oft repeated, contraction and expansion. Terra Cotta properly made and set, and given the proper periodical attention, successfully defies water and weather.

The surface of Terra Cotta is impervious to moisture, the body practically so. The percentage of absorption is very small in a body which is well-mixed and burned to the correct degree of temperature. The great problem is in the voids. It is not, in the opinion of the large majority of experts, practicable to fill these voids sufficiently to prevent the danger from seepage moisture finding a lodging place. Obviously, the thing to do is to keep the water out. Terra Cotta will do its share, for the surface presented to the weather can be thoroughly relied upon. The danger is in the jointing. It is absolutely necessary that the joints be well pointed and kept so. When the Terra Cotta is set, see to it that the joints are properly pointed. Make a careful inspection at least once a year to assure yourself that the mortar is performing its functions. If the matter is given prompt attention you have nothing to fear, and the expense will be trifling. If you neglect this evident duty to your building and yourself trouble will inevitably result, and the building material, while guiltless, usually gets the blame. It is equally important that you examine the flashing around the parapet walls and exercise every care to prevent the seepage of water through the walls to the eventual detriment of your Terra Cotta cornice. There is no one thing which has brought more grief to the owner and the manufacturer than the gross neglect of a building from this point of view. The water must be kept out of your walls until human ingenuity can devise a material strong enough to resist the tremendous power resulting from the expansion of freezing water. While we can give you a Terra Cotta body that will be sufficiently impervious to obviate all danger, we cannot guarantee the life of the mortar joints, neither can we eliminate the voids. Your duty begins where ours ends, and unless you do your part as well as we do ours, trouble will result.

In asking you to inspect your building periodically, we do so for your protection, primarily. But you will readily see that we are vitally interested, because every failure of our material, whether we are responsible or not, reacts unfavorably on our life's work. We are spending thousands of dollars to insure the best ware for our common protection, and we ask you to spend a little time every once in a while to see to it that these efforts are not wasted.

STANDARD ANCHORS, HANGERS AND CONNECTIONS. & hole - Not - Iron Cub See Fig. 5 -Iron Clib Bent Bar Web of Bea -Continuous Continuous L Fig. 2. Fig. 3. g'dowel. Wall Anchor size and length as required HE anchors, hangers and connec-I hanger, any length EXTXF plate. tions shown on this page are standard for Terra Cotta construction. The ½" hangers and ¾" dowels are proper for all ordinary work, though for very light sections where space is limited, ¾" hangers and ½" dowels Fig. 1. Fig. 4. may be used. Excepting very short pieces, there should be two hangers for each running length; and for wide soffit courses there Iron Clib, U Connection for Hange See Figs. 1 and 4 should be two rows of hangers to each Fig. 6. course. For each piece less than 1'-8" long use one dowel ½" shorter than the piece. For each piece 1'-8" or longer use two 10" dowels for Fig. 5. CI Block each running length. The iron clip shown in Fig. 5 * Anchor Bolt gives the maximum liberty of spacing of supporting members #x# square Bar, Wall Tie in and makes an effective clamp to Shelf Angle Brick-work counteract any twisting of angles or bars & dowel-Figs. 9 and 10 show the superiority Fig. 7. of bar separators placed between shelf angles and steel or concrete beams. Figure 3 shows method to be used when it is impossible to get behind the web of beam to adjust as shown in Fig. 8. Figure 2. Gas Pipe Separator Bar Separator - 1'Anchor Bolt. ± Anchor Bolt Pipe separators do not give sufficient bearing; Shelf angle may drop out of line. Bar separators give full bearing, and hold shelf angle true to line. Fig. 9. WRONG CONSTRUCTION. Fig. 10. RIGHT CONSTRUCTION.

TERRA COTTA TRIM

N the issues for October and November, we illustrated the use of Terra Cotta trim in Factory buildings, re-

cently erected, following a style developed in modern factory construction, In this number we present illustrations showing Terra Cotta trim used from an entirely different viewpoint. In factory design, our material was designed to brighten the building, to accentuate the entrances, to give the factory a cleanly appearance, and to relieve the large brick surfaces of the deadly monotony, which if unrelieved, would be oppressive. The Terra Cotta was openly and obviously used as "Trim' pure and simple.

The examples of the use of Terra Cotta which we show on pages five and six of this issue show that our material was used, not for the purposes outlined above, but for the expression of architectural design. In conceiving and developing the design the architects in both cases thought in terms of clay.

Where the proper evolution of the design demanded it, brick was used; where the design demanded it, Terra Cotta was used. A study of the illustrations will convince anyone that this natural course was the one followed by the architects. It must be clear, even to an un-

trained observer, that neither architect questioned himself as to where he should use Terra Cotta, and where he should

INTERNISSE CONTRACTOR DE C

use brick. Each material found its rightful place without debate, and no other material could even be considered as an alternate. The design offered no excuse for the builder to ask us how much we would deduct if Terra Cotta were omitted in one place, or how much more would be added to thequotationif Terra Cotta were to be used in place of brick. The law of the use of appropriate materials forbade.

Thebuilding shown on Page five was designed by Architect Harry W. Iones of Minneapolis and was erected in that City for The Cream of Wheat Company in 1903, seventeen years ago. It is a great testimony to the durability of our material, that in showing our wares we are willing to produce, as an excellent example, a building seventeen years old, still functioning, still attrac-

tive, still an advertisement. Mr. Jones has frequently permitted us to be of service to him in the interpretation of his designs, and in a later issue we plan to show you more of his excellent work.

The illustration on page six shows the entrance feature of The Home for The



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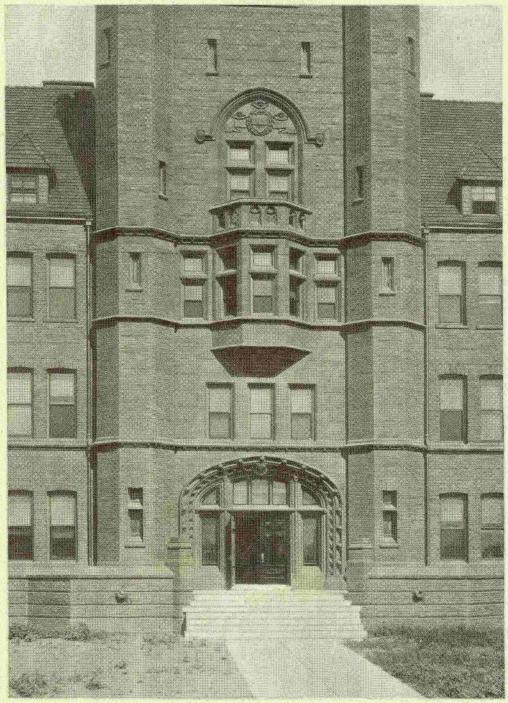
CREAM OF WHEAT BUILDING
MINNEAPOLIS, MINN.
HARRY W. JONES, ARCHITECT

Friendless erected in Chicago more than twenty years ago for Mr. Chas. S. Frost, of Chicago. Again the fitness, durability, and friend-making ability of our material is demonstrated, for since this building was erected we have signed twenty-six contracts with Mr. Frost, to perpetuate his designs in clay, and we have in our shop today, the material for the new Union Station in St. Paul.

To those who would insinuate that Terra Cotta is a new and untried material, a substitute for better material of no standing of its own, with no message to carry, in confutation we point to these buildings, and thousands of others. Terra Cotta used right, will use you

right. If the design demands a full Terra Cotta front, use it. If you have visualized a clay building using brick and Terra Cotta trim, use it with a full realization that the material will carry the burden you would have it carry. We have never argued that our material should be used everywhere by everyone. We have preached the use of appropriate materials, and would be the first to discourage using Terra Cotta where it could not properly function.

We owe a debt of gratitude to the architects who have seen as we see, and who have permitted us to work with them. In return, we are endeavoring to give them service and a better ware.



DETAIL—HOME OF THE FRIENDLESS, CHICAGO CHAS. S. FROST, ARCHITECT

I, WE, US, & COMPANY

E were sitting around the editorial table, all of us: "I, We, Us, & Company," discussing with the frankness common to men who have no secrets, the editorial policy of this little magazine. One of us thought that there were too many "We's" in it. Hence the quotation in center.

We are all profound believers in the

influence of personality in business, and naturally recognize the pulling power of personality in journalism. If the main function of this periodical were to impress you with the fact that noone but the American Terra Cotta Company is competent to interpret your designs in clay, there would be no occasion for the discussion, nor this article. The only problem before the editor would be to endeavor to prove to you that we are not as other men are, being careful not to

overdo it, stopping just before nauseation would invoke the law of diminishing returns. But "Common Clay" is not issued for that purpose. Its chief function is to promote the use of the most consistent, most obedient, most satisfactory building material at your service; to show you what has been done with it, what might be done with it, and to instill in you the desire to do something with it. Coincident with this aim 'Common Clay" must bear its share in the development of Architecture. To accomplish this it is not necessary for us to abandon our views of personality; for among the many virtues of Terra Cotta, there is something so closely akin to personality, that it requires no stretch of the imagination, nor need it call forth protests from the purists, to call that vague appeal, "personality."

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In preaching the personality of Terra Cotta, the only means at hand is the work we have done, and the work we are doing in the field. That is where "I, We, Us, & Co." must necessarily appear. It is imperative that personal pronouns be scattered through the pages.

Moreover, while Terra Cotta has a personality, clay has not. All that is good, all that charms, in the material, is the personality that has been put into it in its transformation from clay and grit into Terra Cotta. That is why we show you pictures of our men. They are not merely men, they are our men; for in addition to their inherent and acquired skill, unquestionably their work reflects the work and skill of "I, We, Us, & Company.

The purpose of this page is not to apolo-

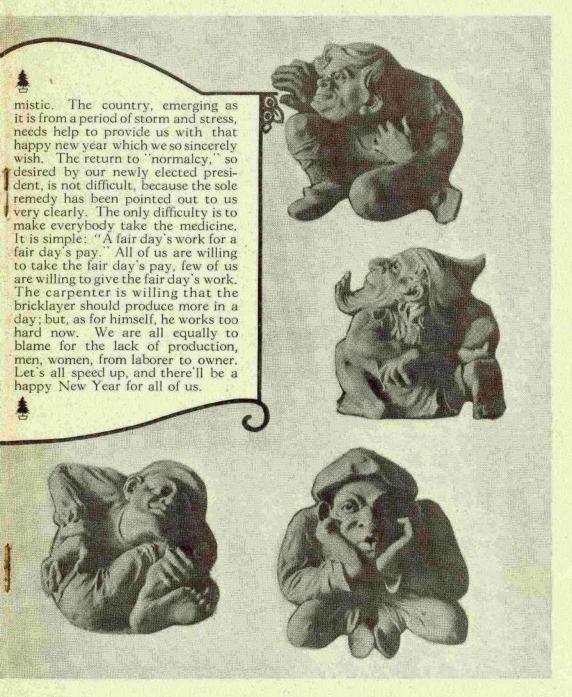
gize, but to explain to you that our devotion to Terra Cotta is such, that should "I, We, Us, & Company" through some great calamity be divorced from the business, that our hearts would still be with it; that the future of Terra Cotta is greater than our future, and that the business is greater than we are. Our faith in ourselves and in our institution is sufficient to assure us that as the Terra Cotta business grows, we shall grow in the proportion which we deserve.

So we are going to continue to talk about ourselves, and the "frank, but graceful use of" "I, We, Us, & Company" must of necessity continue to be in conspicuous evidence in these pages. In expressing personality, the personal pronouns must function.

"A MERRY CHRISTMAS"



and "A HAPPY NEW YEAR"



MANUFACTURING NOTES

When the been asked by a number of our readers, who confess to absolute ignorance of the process of Terra Cotta manufacture, to start at the beginning and tell them all about

it in a series of articles. This we are glad to do, and think it wiser to start with the actual manufacturing process, leaving the more technical subject of the selection and prep-

Mold Face Pron Hoop

Soffit Knife Mark in Model.

FIG. 1

aration of the clays used to a later series.

The architect of the building provides us with what are known as the general drawings, showing the elevations, plans, concrete construction, steel construction, etc., which should be, but seldom are, complete in every detail, to enable us to follow out his design in a workman-

like manner. From these drawings, our draughtsmen make working drawings, showing every detail of construction and jointing to a scale sufficiently large to enable the factory to follow them intelligently. These working drawings, together with full size details of all mouldings,

are sent to the architect for his approval. When finally approved, the drawings

are sent to the factory.

The first step in the process of actual manufacture is the plaster of paris work. For every different shape in the building it is necessary first to make a model, usually of plaster, as shown in the stippled portion of Fig. 1. The model is made to a shrinkage scale because when moist clay is dried and burned it shrinks considerably. The mixture used by us shrinks in such proportions that our shrinkage rule is twelve and three-quar-

ter inches equals twelve inches in the finished material. If the piece is to be checked out for structural steel the model is scored as shown in the diagram. Around this model is built a mold, al-

ways of plaster, reinforced with iron bars to add to its strength. The reason why the mold must be of plaster is that when the moist clay is pressed into the mold, the

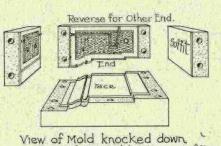
plaster will absorb enough of this moisture to stiffen the clay sufficiently so that it will retain its shape when the mold is removed.

The mold is made in sections, as shown in Fig. 2, so that it may be easily removed after the finished piece is sufficiently dry. After the mold is assembled.

held together firmly by an iron hoop as shown in the diagram Fig. 1, the presser, by hand, forces the damp clay a little more than an inch thick all round the mold; carefully thumbing and pounding the material into place and kneading the clay to form a homogeneous com-

pact wall, as shown in the shaded portion of Fig. 3. The partitions are then placed about six inches on centers to give strength to the finished piece. The material is allowed to stand in the mold for a sufficient length of time to dry it enough so that it is able to stand without changing its shape; the mold is then removed, and the process repeated.

At this point we wish to call your attention to a very important factor in the price of Terra Cotta, that which we call "repeat." If there is but one piece to be made, the cost of the model and mold



View of Mold knocked down.
One End Removed to give view of Face
FIG. 2

must be figured against that one piece, whereas, if there were, for example, forty pieces alike, the cost of the model and mold is distributed over the forty pieces. There is no more important factor in the price of the job than this one thing. We recently figured the contract for a hotel in which there were many different win-

dow sizes. When the attention of the architect was called to this, without very much Rebate difficulty the window sizes were made alike and a very large saving accrued to the owner. While we cannot advocate design-

ing a building to fit a plaster mold, yet a little care in the design will accomplish

wonders in the price.

Note the rebate as shown in Fig. 4. This rebate is designed so that the piece can easily be rubbed to the proper size in the fitting room. And also to make a proper mortar joint when set.

taken from the mold, it is carefully placed on a platen where it remains until dry enough to be moved without danger to the next department, which is the drying room. In the old days, and, in fact, in many plants today, this drying department was merely a hot room. But the proper drying of the

fresh ware presents so many difficulties which the old "hot room" could never solve, that it is gradually giving way to the more scientific "Humidity dryer." The most obvious difficulty was that the ware would dry on the outside rapidly, causing cracking of the ware, and the ultimate weakening, or in some cases, the spoiling of the piece. In addition to that danger the old system of drying took too long. The time which elapses from the start to the completion of a piece of Terra Cotta is so great that anything which can be done to shorten it is of great advantage economically. In the humidity dryer, the hot air, laden with just the proper degree of moisture, circulates around the piece in such a way that it dries evenly throughout in about

one third of the time necessary under the

old system.

When the piece is properly dried, it is taken to the slipping and glazing department where the finish is applied. The enamel finishes are usu-

ally applied in a liquid form with a modified form of the air-brush; although special finishes demand special treatment. The piece is now ready for the burn, and it is handed over to the kiln department. Terra Cotta is usually burn-

ed in a circular muffled kiln: that is to say, in a kiln in which the flame is not permitted to touch the ware. The ware is stacked in tiers, each tier being formed by a platform of fire-clay slabs, so that, during the burn, each piece supports only its own weight. Then the door

is sealed with masonry and the fire started. Some firms burn with coal, others with gas, and some with oil. In the old days, when the kiln door was

sealed and the fire started, the material was consigned into the hands of fate, and the Terra Cotta man could do little but hope for the best. Today, science has given us the needed control. Pyrometers measure the heat automatically and accurately; tests have been devised as a further guide and check; and curves have been plotted showing the proper application of heat required for different bodies and glazes.

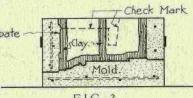
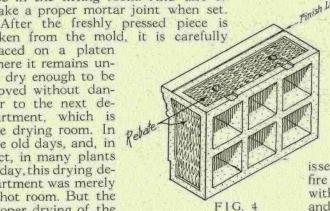


FIG. 3



BUTTON HOLE TALKS

W. D. GATES, PRESIDENT

ONLY A BUBBLE

TOOKING down the vista of a city street, where one sky scraper after another stretched away into the distance in diminishing perspective and into the haze of the city's smoke, my friend discoursed—

All that picture before you is made up of lines, vertical and horizontal. Every brick and block in that whole picture is gauged and set by a little bubble of air in a little glass tube, nearly but not quite, filled with alcohol. Each block is tested and placed to conform with the action of this little bubble of air, and, while the test is applied by many different individuals and many different instruments, the instruments are all standardized and the men all trained. Both these being perfect, all vertical lines will be perfect, and all horizontal lines horizontal and all will stretch away into accurate perspective. If all the workmen were skilled in their part and all the bubbles properly standardized, the result would be perfect and each brick and block being perfect, the whole would be perfect. But either one may mar. An imperfect instrument or a careless workman, of only one of the many workmen, will leave an imperfection. It may be so slight as to be unnoticed by the common crowd but it will be there and to the practiced man, the artist in construction, it will mar the whole. Of course absolute perfection is humanly unattainable and there will be differences in the work in every building, all the way down the street and these differences will probably be caused not by differences in the instrument but by the differences of the individual workers. You can absolutely standardize the instruments but not the men, their individuality can not be wiped out.

Perfection is always a joy. It is what we all seek to attain and when attained, or even nearly attained, it is a joy to the producer and to all others as well. Progression also must be reckoned with.

The Cave Dweller did not care for, nor try particularly to produce horizontal or vertical lines; he did not need to. Just fairly vertical lines meant safety to him, not necessarily absolutely vertical, just nearly enough so that climbing was difficult for an enemy and so that a well directed rock would dispose of an assailant

But it is absolutely essential that the bubble, the spirit level, that little bit of air enclosed in glass, shall be standardized and perfect. If such is not the case, no matter how skillful the artisan may be, the result will be imperfect, the vertical lines will not be vertical nor the horizontal lines be horizontal and the vista of the street will be a mixed and drunken vista.

Quality demands quality. Perfect work must be founded on quality. The glass tube must be good glass and well made and the filling must be alcohol so it will not freeze, the tube must be hermetically sealed so the alcohol will not evaporate and must be properly mounted and handy for the man's use and the alcohol must be in the tube and not in the man. The man must be trained to use the instrument properly, must be an artisan, skilled and trained in his profession. Then, when you have these two properly combined, a real artisan and a perfect tool, you will come pretty near having perfection in your work and the vista of the street will be pleasing and captivating. Further than this, that vista of the street is built up of sections of the individuality and life of many men. It is a composite into which they have each put their individual contribution. and it will show plainly to the onlooker the manner of their giving, whether it was given grudgingly or joyfully. When it is done it cannot be changed but will remain as wrought, to bring foy or pain to future generations, according to the joy or grief wrought into it in its inception.

"W. D." AT HOME



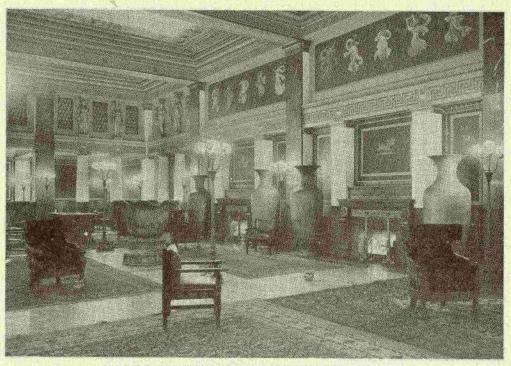
T has been necessary to keep this page a secret. For some time we have wanted to publish this picture, but the Boss vetoed the suggestion. He couldn't see why we should wish to feature his picture in any issue. In fact, by his direct orders we were forced to omit the cut we first used on the "Button-Hole Talk" page. We know, however, that when a man like W. D. Gates spends the better part of thirty five years in association with architects and builders, inevitably, the result must be a host of friends. He cannot call upon you so frequently now as he did in the past, so we shall continue to over-ride his modesty and devote a page to him every once in a while.

The founder of a business house of the caliber of this one is necessarily of inter-

est to the clients of the house. Where Macgregor sits, there is the head of the table; as Macgregor thinks, so the house thinks; as Macgregor wills, so runs the house. This is the law and the prophets and we are content.

It is our great delight when we linger about the lunch table to force him into a reminiscent mood, putting a judicious question here and there, drawing out the tale of the early struggles in the business, the griefs and the joys, the tribulations and the rewards, and we rise from the table inspired with the resolution to carry the work along; realizing that the woes of the present are as nothing to those of the past. So works the law of the immortality of influence to our great benefit, and we rejoice and are glad in it.

TECO



VASES IN CONGRESS HOTEL, CHICAGO

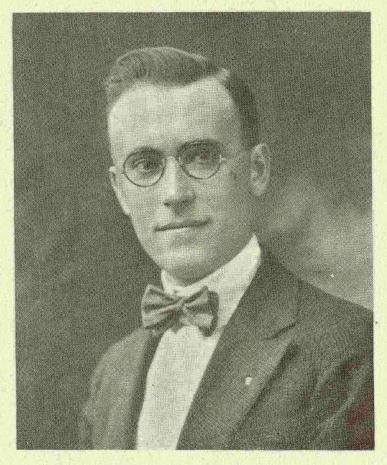
7E show here a picture of the well-known Pompeian Room. Congress Hotel, Chicago. Our reason for showing it is not for its beauty alone, although that would be sufficient reason, but to show you the Teco vases which we made many years ago. These are interesting not only for their beauty of texture and line, but also because of their size. In height they measure a little more than seven feet and, in the widest swell, they are about three feet in diameter. It is evident that the greatest skill of the potter was called into service in the production of these wonders, and we confess that we would approach the duplication of the feat with fear and trembling. Please don't send us an order for any of them. There are a few still left around the factory grounds, but we would hate to part with them. In fact, we nearly had a young

пинистроний в принципиний в пр

riot on our hands when we stole one of them for the Chicago office. Men who love beautiful things dislike parting with them, and our people at the factory are no exception to the rule. We printed a picture of one of them in our July issue. Several worthy patrons asked "How Much?" but we smilingly shook our heads and the vase still stands where for years it has graced the lawn.

Did it ever occur to you that clay renders a service to humanity, more wide and varied in its scope than almost any other material. It is used to build the walls of your homes; it is indispensable in your kitchen and dining room; it gives you comfort in your bathrooms; it can give you the floor to walk upon, and the roof over your head. In your living room it gives you beauty in shape and color, It serves us constantly, silently, and well.

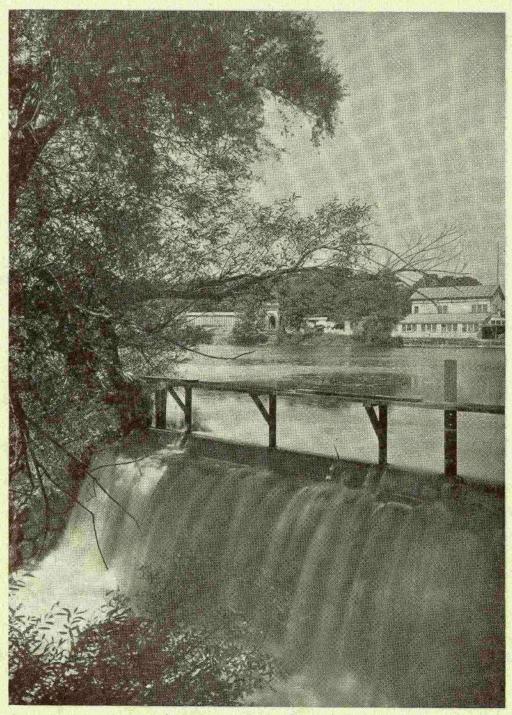
WHO'S WHO IN THE AMERICAN TERRA COTTA CO.



JOHN R. E. BJORKLUND

We take pleasure in introducing our Chief Draughtsman, Mr. John Bjorklund. "Jack" started his career in Providence, Rhode Island, where he studied at the School of Design, and was later employed in the office of a prominent architect. After some years of training in architectural work he was called to the draughting department of an Eastern Terra Cotta firm, and since that time his experience has been wide and varied. His training

and experience have been of that character which enables him to appreciate the viewpoint of the architect, the draughtsman, and the shop man, the trinity of terra cotta construction. If you have any terra cotta construction problems, put your burdens on his broad shoulders, and your troubles will no longer be. We preach and practice the doctrine of service, and if you wish to put Mr. Bjorklund's splendid equipment to the test, it is yours to command.



THE OLD MILL POND AT THE FACTORY

PAGE XVI ...

THE WALLACE PRESS CHICAGO

lessed he the Builders:

Blessed be the Builders; the men who have conquered the wilderness, and put the mountains under their feet, and set their watch towers in the midst of the sea. A Blessed be the Builders; for they are the salt of the earth. They have tamed the wild beasts: and taken tribute for man from the rocks of the earth. They have broken the lightning to harness; and made fire and water lie down together that man might be served. They have made gardens in the desert; and habitations for men in the sandy wastes. They have cleared the forest, and drained the swamps, and gathered food from the land that brought forth pestilence. They have pierced the mountains for their highways; and taught the rivers to walk in unaccustomed paths. ¶ They have bound the continents with bands of steel: and the oceans with webs of copper. They have given us temples instead of creeds; homes instead of thrones; cities in place of deserts. They have builded up faster than kings and warriors could tear down; and the gain is civilization. They have said to the bigot: "Thou shalt not!" and to the sluggard: "Thou shalt!" ♦ ♦ They have made houses of justice that kings might cease from troubling; and they have tied the warrior's hand with golden thread, \ Whatever their cost, they have earned it a thousand fold. Blessed, thrice blessed, be the Builders. GEORGE L. KNAPP



Originally written for and published in Lippincot's Magazine Reprinted from: The Permanent Builder The sacred chorus first was sung
Upon the first of Christmas Days;
The shepherds heard it overhead,
The joyful angels raised it then:
Glory to Heaven on high it said,
And peace on earth to gentle men.

My song save this is little worth,

I lay the weary pen aside,
And wish you health, and love, and mirth,
As fits the solemn Christmas tide,
As fits the holy Christmas birth.
Be this, good friends, our carol still,
Be peace on earth, be peace on earth,
To men of gentle will.

THACKERAY

