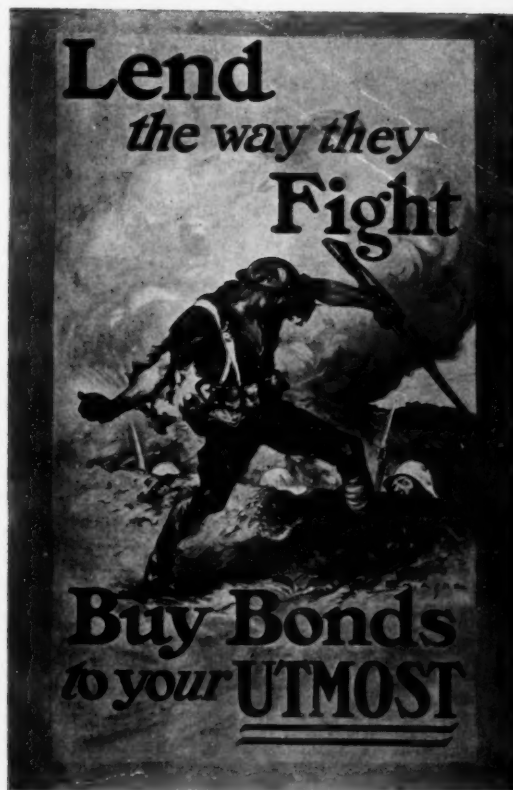


The AMERICAN ARCHITECT



FOURTH LIBERTY LOAN—SEPT. 28 OCT. 19

PUBLISHED WEDNESDAYS IN NEW YORK—FOUNDED 1876

VOLUME CXIV

OCTOBER 2, 1918

NUMBER 2232

Entered as second class matter January 6, 1909, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Publication office, 243 West Thirty-ninth Street, New York, N. Y. Subscription price in the United States and Possessions, \$10

13

The Pledge of Loyalty and Quality

"HANDS UP!"

Not in Surrender
but
In Defiance to the Kaiser



Open Air Meeting of Armco Employees Pledging
to Stay on the Job Until the War is Won

ARMCO IRON FOR WAR WORK

**TRANSPORTATION
SHIPPING**

**BUILDING
FOOD CONTAINERS**



The trade mark ARMCO carries the assurance that iron bearing that mark is manufactured by The American Rolling Mill Company with the skill, intelligence and fidelity associated with its products, and hence can be depended upon to possess in the highest degree the merit claimed for it.

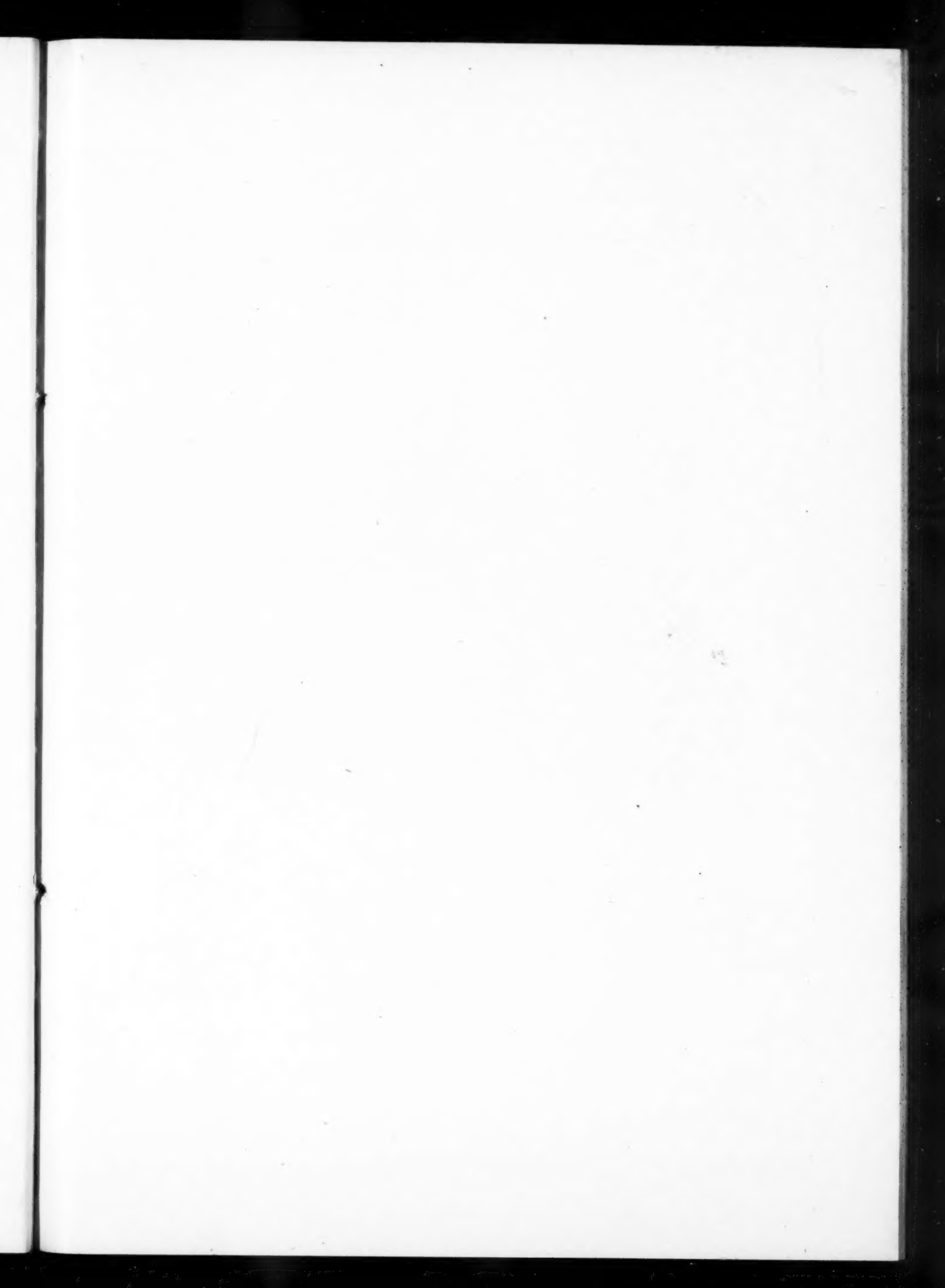
The American Rolling Mill Company
MIDDLETOWN, OHIO

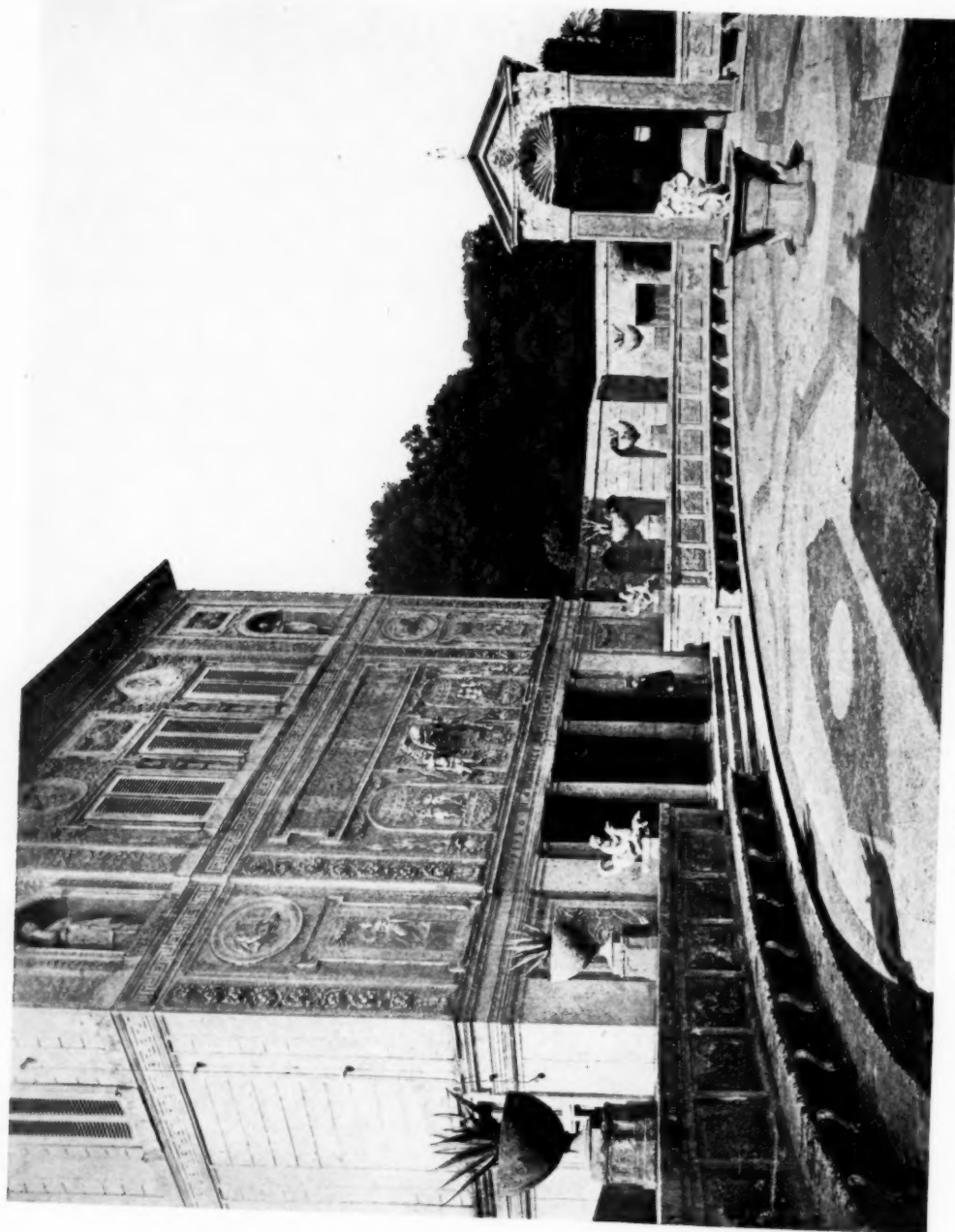
Licensed Manufacturers Under Patents Granted to the International Metal Products Company

Armco Iron Sheets, Roofing, Pipe, Gutter and Metal Lath

Branch Offices at

NEW YORK CHICAGO PITTSBURGH CINCINNATI ATLANTA WASHINGTON
CLEVELAND DETROIT ST. LOUIS SAN FRANCISCO and BUFFALO





THE VATICAN GARDENS, ROME, ITALY

THE AMERICAN ARCHITECT

THE AMERICAN ARCHITECT

VOL. CXIV

WEDNESDAY, OCTOBER 2, 1918

NUMBER 2232



FIG. 1—BIRD'S EYE VIEW OF COMMUNITY CENTER

Workingmen's Colony, East Youngstown

By F. J. HERDING*

THE Youngstown industries have been suffering greatly under terrible housing conditions for the working classes. The Youngstown Sheet & Tube Co., under the spirited leadership of their president, James A. Campbell, saw the effect of it and realized the meaning and high importance of better housing, for the health, happiness and efficiency of the workman; they saw in it the guarantee for still greater industry, greater progress toward a future for the good of the whole nation. Two years ago they took up the problem of housing their employees and began to remedy on a vast scale. The results to-day are four different housing developments under construction. They differ not only in location but in fundamental principles, being for different classes and different kind of workers.

The development introduced here is a colony in East Youngstown, housing about 600 families, of foreign workers with a segregated part for negroes. The company's idea is to work out a colony in countrylike character, mostly one family houses of permanent fireproof construction, with ample sized rooms, bath, basement, and giving each

*Of Conzelman-Herding-Boyd, Architects and Engineers, St. Louis.

tenant a garden for economic use and pleasure. It is expected under such conditions to do much in developing among the alien employees American family ideals and standards of living. To see these

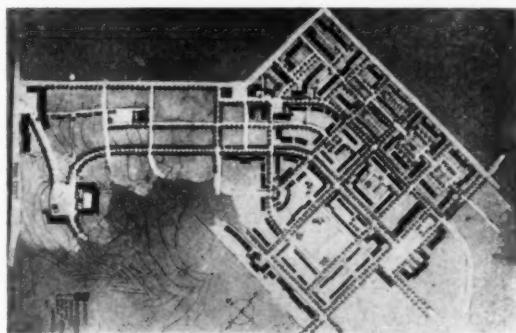


FIG. 2—FIRST STUDY OF LAY-OUT INCLUDING NEIGHBORING PROPERTIES

ideas carried out, The Buckeye Land Company was organized, with Paul Kuegle as manager. For this colony a tract of forty acres was selected and bought. The next step toward realizing the plans

THE AMERICAN ARCHITECT



FIG. 3—PRELIMINARY SKETCH

was to have the proposition studied and to have results submitted. Conzelman-Herding-Boyd, architects, engineers and townplanners, were authorized to do this. In working out the scheme, the planners found some technical difficulties, mainly in draining the property and in getting other and better approaches than they are offered over Robinson and Jackson Road solely. At the same time looking into a more distant future the planners were led to suggest a layout extending over the neighboring tracts in view of acquiring or controlling them. However, efforts to obtain these properties failed on account of the unreasonableness of the owners, and so the first development idea as shown in layout, Fig 1, had to be abandoned and the forty-acre tract treated as an independent, isolated development.

The site is on a sloping hillside along Robinson Road and is approached by Jackson Street. Both of these roads begin less than a half mile down hill on Wilson Avenue, where the main entrance to the mills is located and from where the street cars in fifteen minutes' time run to the center of Youngstown. West and east of the property lines are meadows; south, a deep ravine; north, Robinson Road. Evidently for the time being this road



FIG. 4—PRELIMINARY SKETCH

will be the main approach to the colony in spite of its having rather the minimum width for the service it has to give. Jackson Road, which is fifty feet wide, after improvements, will some day relieve Robinson Road of traffic and become the main access to the colony.

The southwest corner of the property is wooded, as is a smaller area almost centrally located in the tract. Here nature has provided an attractive bit of landscape—big elms, maples, oaks, sycamores—around a beautiful grove with rusty rocks and a clear, ever-running spring.



FIG. 5—PRELIMINARY SKETCH

It appeared next in importance to create right here an attractive park, adjacent to the public square, which has to become, with its surrounding buildings and attractions, etc., the central point of the whole settlement. It will also give focus to the street system. The existing Jackson Street, ending on the west side of the property, after being continued, leads into one corner of the public square, leaving it at the diagonally opposite corner. Robinson Road, on the northwest end of the property, is widened to a plaza, where a group of trees around a fountain is proposed as a decorative feature, as shown in Fig. 8. A main street, mostly fifty feet, in some places forty feet wide, leads from here through the colony. This street as a main artery has as one of its chief purposes the opening for development of the recessed southern parts of the tract which for the present have no outlet. Following pretty closely the prevailing contours it is widened on its turning points into plazas—and leads back to Robinson Road. The public square, Jackson Street, Robinson Road and the property lines command the system for main thoroughfares which divide the tract into larger districts.



FIG. 6—PRELIMINARY SKETCH

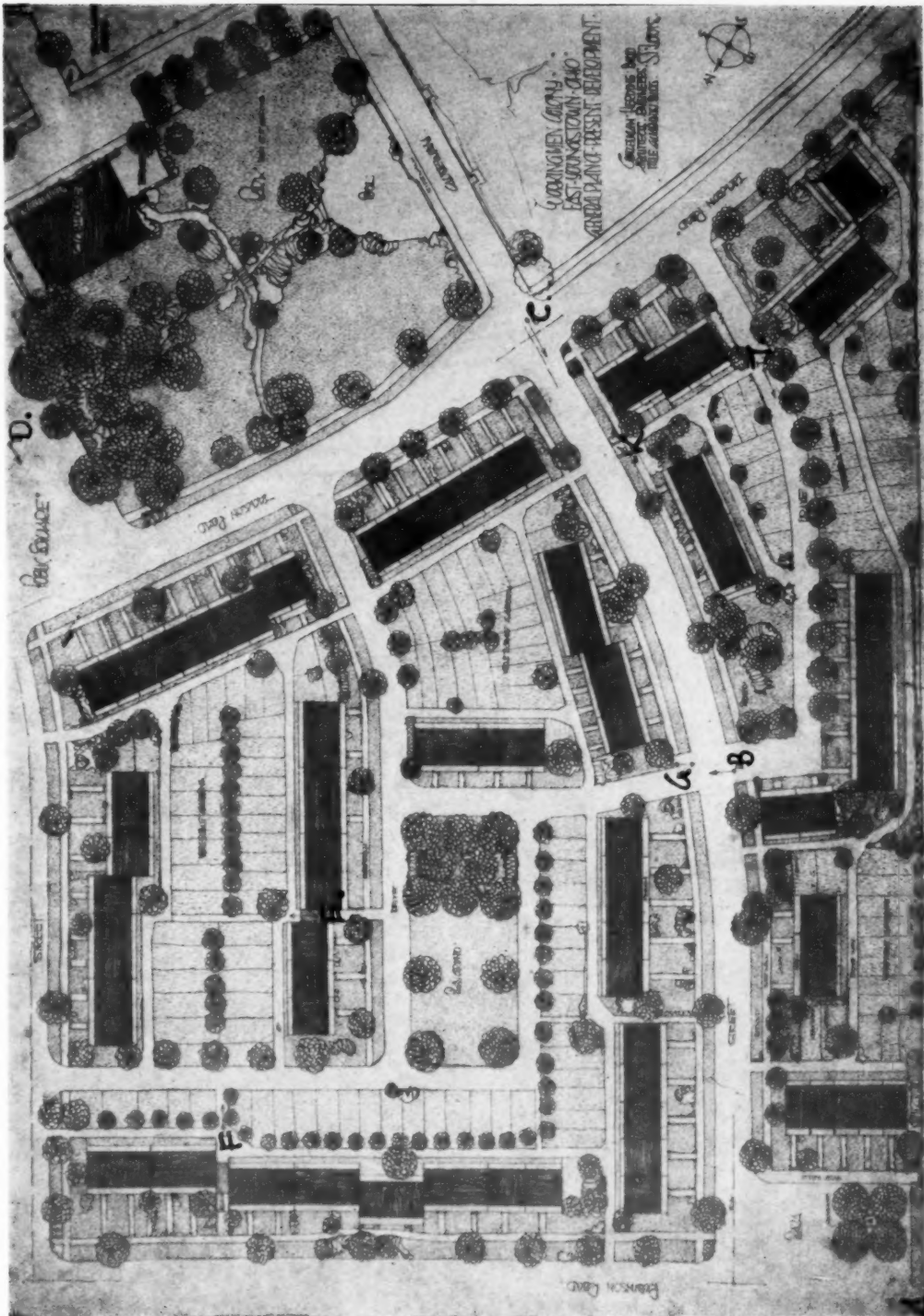


FIG. 7—GENERAL PLAN OF PRESENT DEVELOPMENT
WORKINGMEN'S COLONY, EAST YOUNGSTOWN, OHIO
CONS. BY HERING, BOYD, ARCHT. & ENGRS.

THE AMERICAN ARCHITECT



FIG. 8—ENTRANCE PLAZA ON ROBINSON ROAD

These districts are redivided into minor streets, house-groups, small plazas, walks, short cuts, all of which are always related to each other and naturally lead toward the public square. Fig. 8 best illustrates how this was done.

Before talking about the houses, their grouping, their features, and about the actual operations which have been and are being done on the ground, it may be well to say briefly how it is arranged in the layout to provide for community buildings and needs. The community house in one corner of the park fronts the public square and is the dominating building. It is in the axis of incoming streets, giving an interesting view from many angles of the colony, as is shown, for instance, in Fig. 11. Opposite the community house on the other side of the public square is a row of three-story houses with stores on the first floor and apartments on the second and third floors. A terrace of dormitories for single people gives a closed view to the south side of the square. Fig. 31 shows these three sides.

The schoolhouse and gymnasium are built around a court which opens toward the park. They are off the public square, to the side, in a quiet location forming a group with the community house. Fig. 1. A naturally pretty spot near the east property line is set aside for a hospital or other welfare institution. The plans for these community buildings with their interior arrangements are not yet definitely worked out. However, here everything will be provided for, intellectually, spiritually, socially, and for the material needs of the colony. Various smaller playgrounds are interspersed through the colony, a larger one in the rear of the school group. The indicated wooded section in the southwest corner of the tract will serve only for the present as recreational ground. It is reserved for future building purposes as the trees there promise rather short life.

Now to the houses: Before deciding on their design and construction in this East Youngstown Colony, the Buckeye Land Company went into a

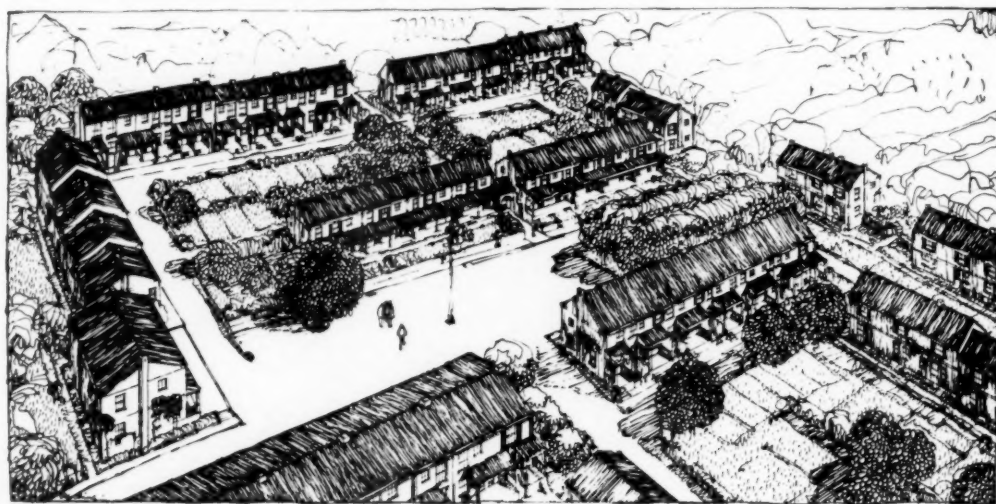


FIG. 9—BIRD'S-EYE VIEW

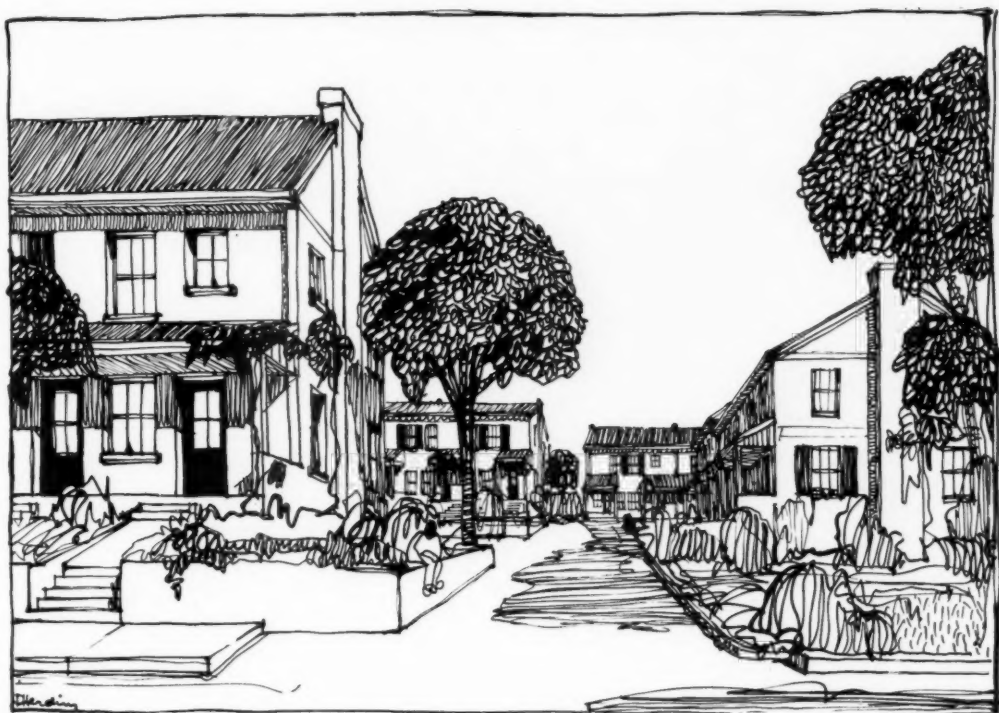


FIG. 10—PERSPECTIVE FROM POINT 4—(SEE FIG. 17)



FIG. 11—THE COMMUNITY HOUSE IN THE STREET PICTURE
WORKINGMEN'S COLONY, EAST YOUNGSTOWN, OHIO
CONZELMAN-HERDING-BOYD, ARCHITECTS AND ENGINEERS

THE AMERICAN ARCHITECT

very careful survey of local conditions and into an extended study of what has already been done elsewhere under similar circumstances. The result was that they adopted three and four-room houses with a lawn in front and a garden and service lane in



FIG. 12

the rear, the construction to be fireproof and permanent, of reinforced concrete, unit method. To effect greater economy from the land, and at the same time to save in roadways and to cut down the cost of the houses, the terrace type was decided upon. The design calls for houses with a depth of only two rooms, permitting draught easily back and

forth, and giving ample light. The dividing wall of the houses is of concrete, eight inches thick.

The individual families are separated from the basement to the roof, each having individual entrance in front and rear, stairways, etc., Figs. 18 to 20 show the three different types of houses used, the sixteen-foot one-family house with four rooms and bath, the twenty-four-foot house for two families, each with three rooms and bath, and the forty-two-foot house for three families, two with four rooms and bath and one with three rooms and bath.

The particular requirements of the unit method of construction reflect themselves throughout the design. Further on a description in detail will explain this type of construction. To be economically applied, it calls for a large duplication of standardized units. This may predict a rather monotonous scheme, but unique ways and adaptations were found to obviate monotony and to present these practically manufactured houses in an interesting, ever changing picture. The grades in this location add a feature which contributes to the attractiveness of the colony. But it was mainly through the grouping of the houses and in intermingling them with landscape that desired effects were obtained (Figs. 12, 14, 15, 16.) Trees and shrubs were not placed as individual plants nor as individual groups, regardless of environment, but in close relationship to it, forming the decorative feature of a house or a house-group or a street view. There are only a few

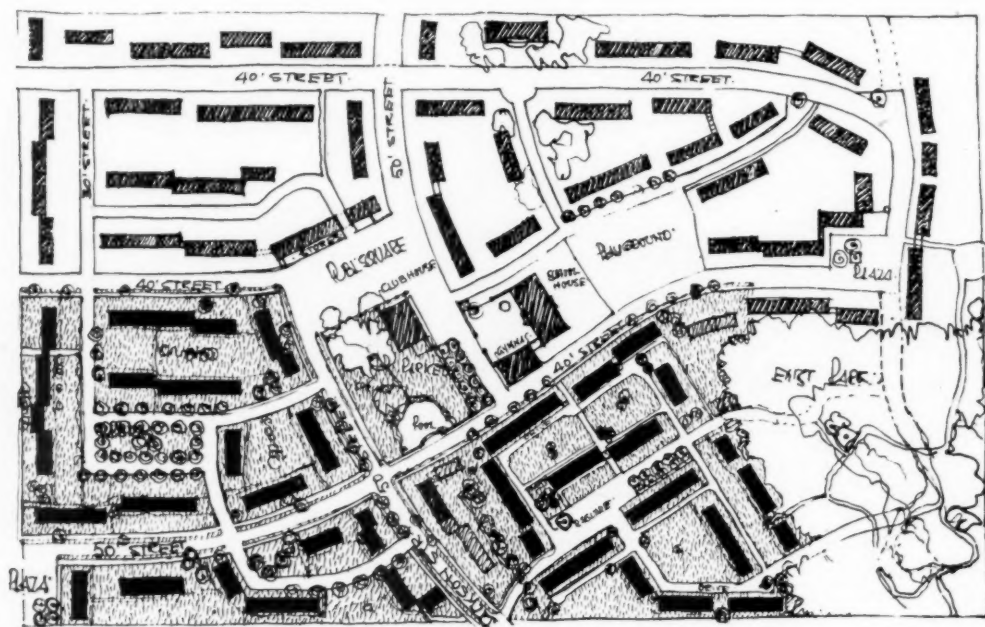


FIG. 13—LAYOUT OF 40-ACRE TRACT. GENERAL PLAN



FIG. 14



FIG. 15



FIG. 16
GROUPING OF HOUSES

WORKINGMEN'S COLONY, EAST YOUNGSTOWN, OHIO
CONZELMAN-HERDING-BOYD, ARCHITECTS AND ENGINEERS

THE AMERICAN ARCHITECT

cases which called for trees to be planted symmetrically in rows. Trees extending from between the different house-groups create distance and perspective. By comparing the early drawings of the architect (Figs. 32-34), with the photographs (Fig. 25 and Fig. 26), showing the same sectional views of houses completed, but with grading and planting not yet done, one will obtain an idea of the importance of trees, shrubs, and vines, in completing a community scheme. The standpoints from which these drawings were taken are indicated in Fig. 7, the general plan of the first section under contract.

The selection of plants was confined to such that can grow in this particular climate and soil, and need little or no care. Still there remained a large variety to select from. Many kinds of fruit trees are found not only in the vegetable gardens, but also have been used in the street pictures to give, with the other trees, color effects ever changing through all seasons. In placing fruit trees, for instance, a thought was given to their varied colored blossoms at different times, and there was also reason for planting in a group the Norway maple with ash and catalpa, especially when thinking of fall—

the maple with its burning red foliage, enhanced by the yellow-green and brown of the others.

These same ideas for color effects were carried out by planting the bushes, shrubs or hedges along the gravel, brick or concrete walks. A variety of vines draws houses and landscape together. They are used liberally, climbing along the gray and cream painted walls of the houses with their white framed windows, green or brown shutters, and red tiled roofs.

All the houses shown in general plan 7 are completed, and most are occupied. They were the first for which a contract by the Sheet & Tube Company was let—an experiment, as it were. It proved very successful and so it was decided to continue the building operations without delay. It was not until this time that it was decided to use one part of the 40-acre tract for a development for colored people. The layout for the entire colony from the beginning was laid down complete, but in such a way that redivision of districts could be made easily without interfering with the community scheme. The new problem suggests working into the existing structure of the proposed colony an individual development, rather segregated. The

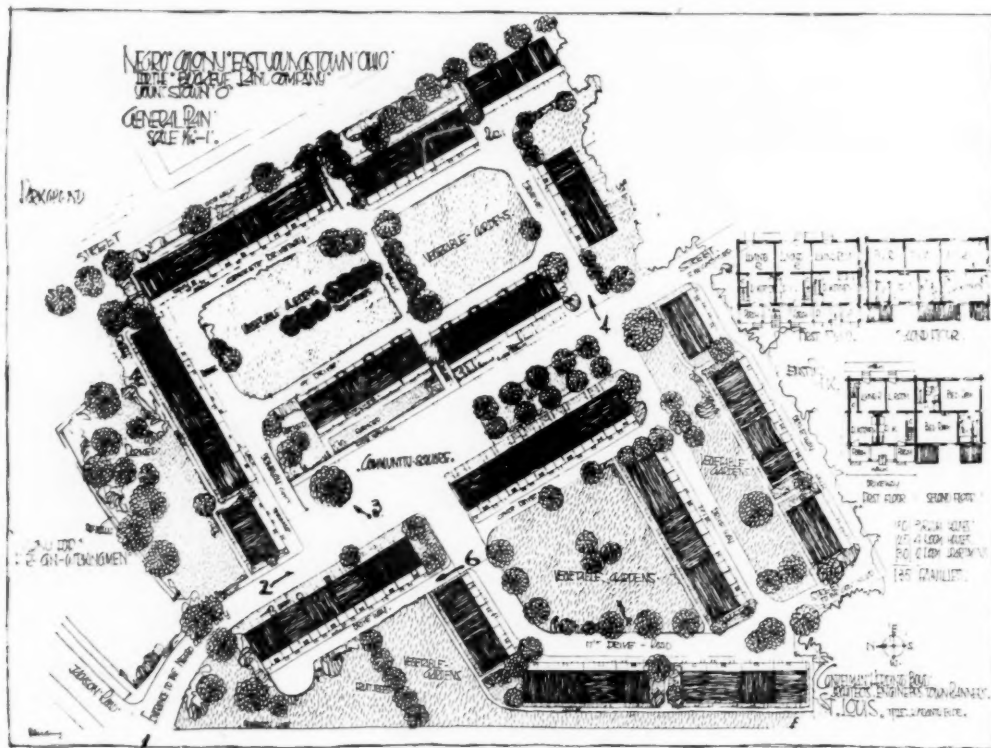


FIG. 17—GENERAL PLAN, NEGRO COLONY

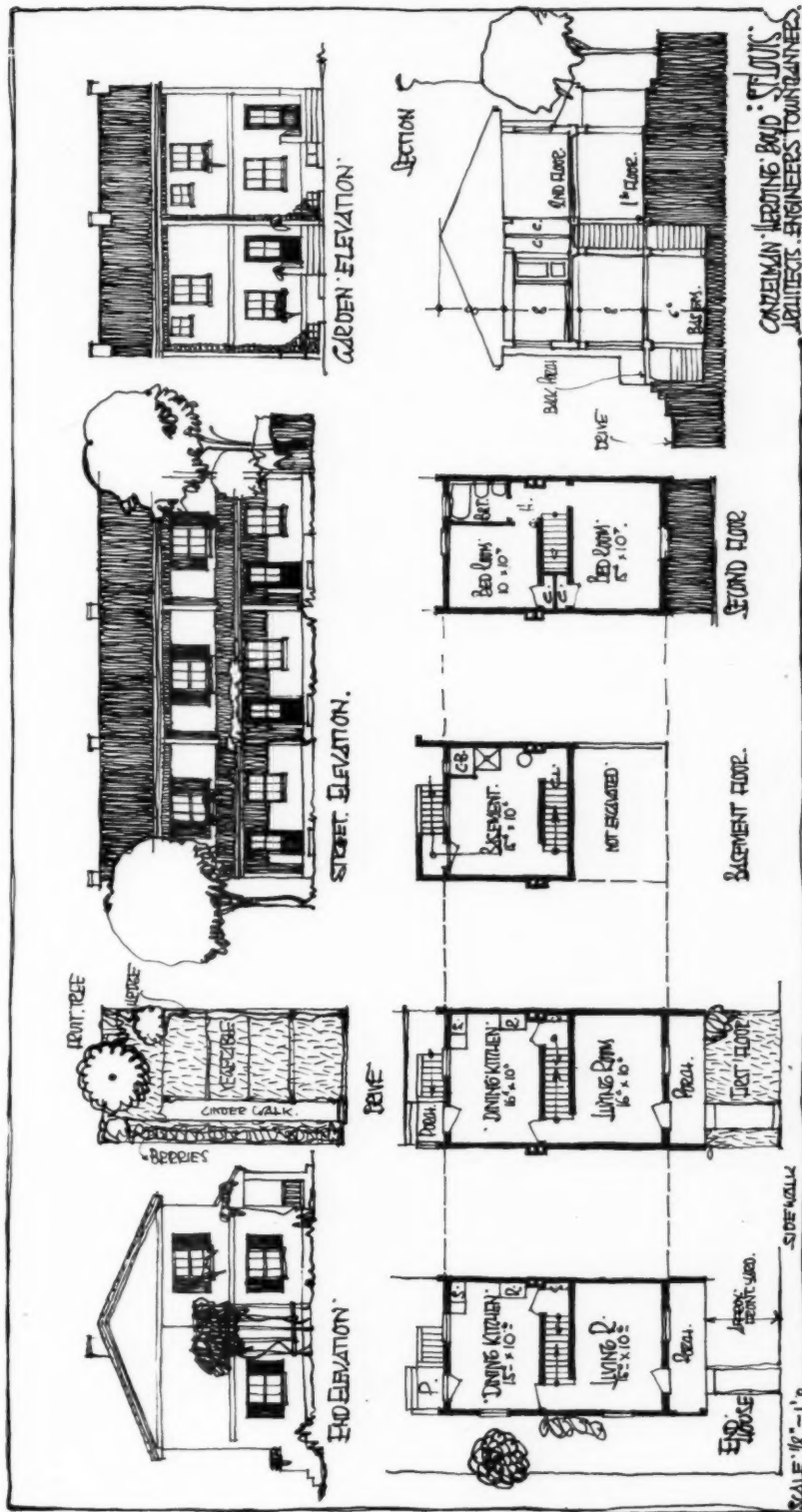


FIG. 18—THE FOUR ROOM HOUSE, 16 x 27 FEET

WORKINGMEN'S COLONY, EAST YOUNGSTOWN, OHIO
CONZELMAN-HERDING-BOYD, ARCHITECTS AND ENGINEERS

THE AMERICAN ARCHITECT

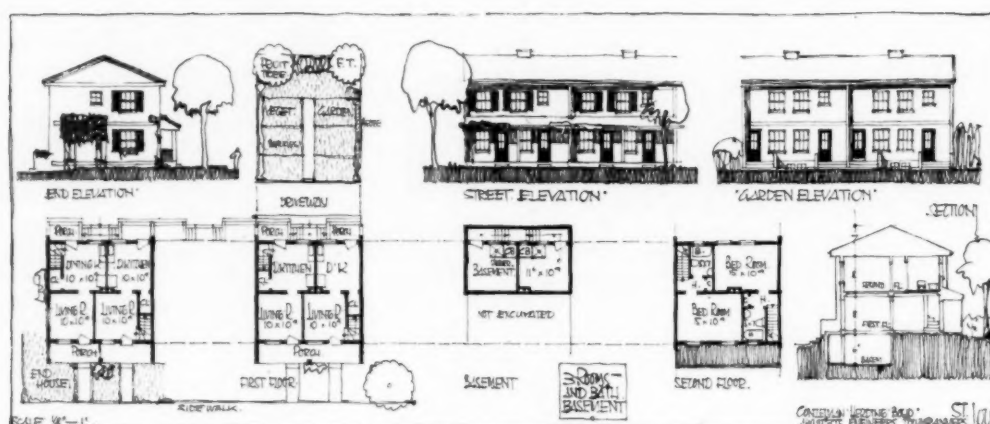


FIG. 19—FOUR-ROOM HOUSE, 16 X 27

solution is seen in Colony Plan, Fig. 13 and General Plan, Fig. 17. The main entrance to this development is at the lower end of Jackson Street and leads to a square, which is the center of this section. Concrete driveways leave and re-enter here after passing the houses with their porches on this side. This arrangement was carried out so as to throw the life of this part of the colony along these driveways and to the square, and so naturally to segregate this section. The only connection with the other community is by a walk toward the schoolhouse and a drive through the wooded district, which ends at the plaza of the south end. The grouping of the houses and the landscape is done here in a similar way as described for the first section. Pictures which show the usefulness and attractiveness of this development are seen in Fig. 9. These houses are of the same stand-

ards as in the first development, except for a few minor changes, such as eliminating the front porch and adding a larger rear porch, with roof, thus practically making here the front where before it was the rear.

This development is under construction and will be completed before winter. On the site at present, all stages and phases of construction are to be seen, from the manufacturing plant to the completed and occupied houses. The unit method of building concrete houses as perfected by this company, consists of casting the walls, floors and top story ceilings in units and then erecting these units by a derrick in much the same manner as steel is erected. The forms for the units are laid in a casting yard adjacent to the building site and there all the concrete for the houses is poured, with the exception of the foundations. The wall units

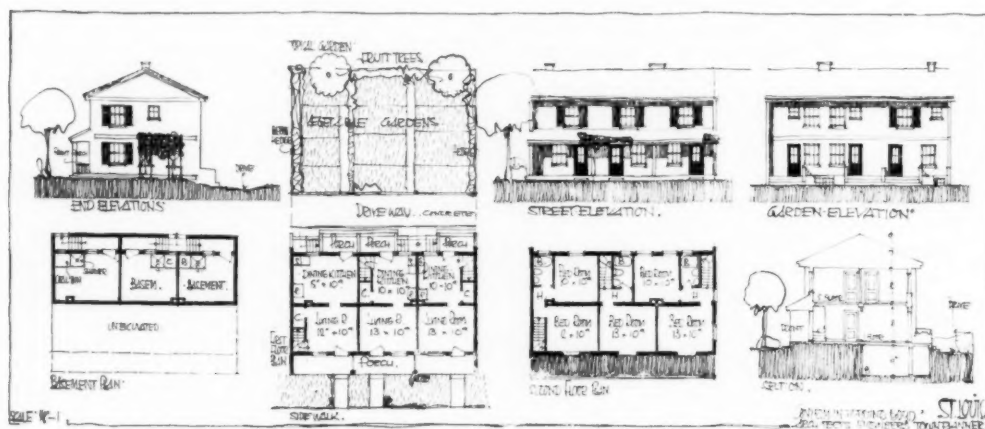


FIG. 20—THREE FAMILY UNIT. TWO FOUR-ROOMS, ONE THREE-ROOMS

THE AMERICAN ARCHITECT



FIG. 21—PERSPECTIVE VIEW FROM POINT 1—(SEE FIG. 17)

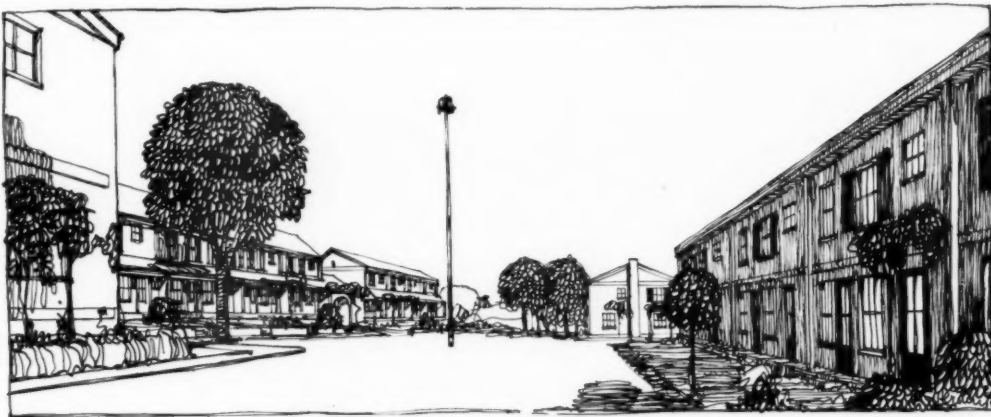


FIG. 22—PERSPECTIVE VIEW FROM POINT 2—(SEE FIG. 17)

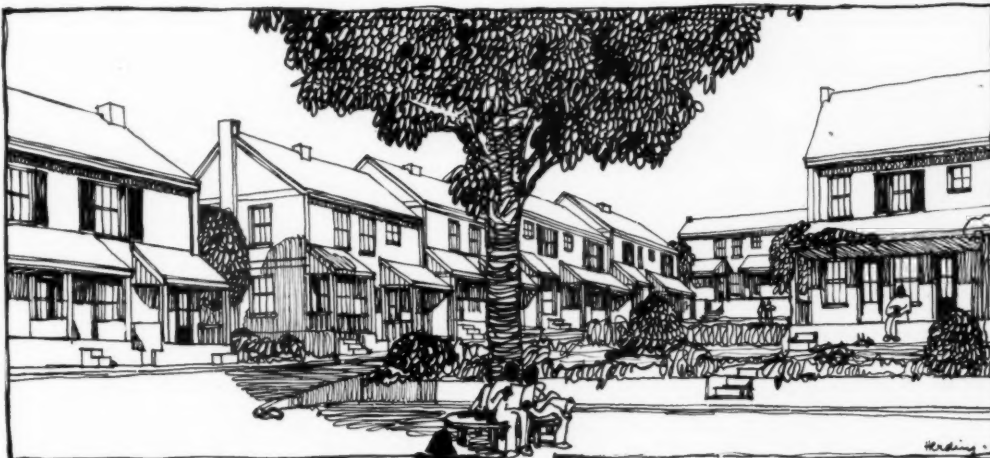


FIG. 23—PERSPECTIVE VIEW FROM POINT 3—(SEE FIG. 17)

WORKINGMEN'S COLONY, EAST YOUNGSTOWN, OHIO
CONZELMAN-HERDING-BOYD, ARCHITECTS AND ENGINEERS

THE AMERICAN ARCHITECT

are made of sufficient size to form the entire side of a room, and the floor units of sufficient size to form the floor of a room and the ceiling of the room below. The exterior walls are cast with ribs on the inside face, to which furring strips are attached to receive the lath and plaster. This provides a wall with an air space which insulates against heat and cold and also prevents any condensation. The advantages of this construction are: The great number of uses possible from one set of forms, especially on a large development; the small number of men required, due to the extensive use of locomotive cranes, motor trucks, derricks, etc.; the remarkable speed of erection attained; the use of local materials for aggregate whether it be stone, gravel or slag; the low cost in comparison to other types of fireproof construction due to the above reasons.

It was possible easily to figure out before starting just what equipment would be necessary to meet the rate of speed desired. The number of houses contemplated is known and therefore the number of unit wall slabs, floor slabs, ceiling slabs, etc. The number of units which can be erected each day by each derrick with its crew is known by experience. With

these things in mind it is a simple matter to figure how many derricks and crews will be required, how many trucks will be required to transport the units from the casting yard to the derricks, how many cranes will be required to pick up the units from

the forms and store them, how many forms will be required in order to pour sufficient concrete each day, and how large a concrete plant will be necessary to pour this yardage.

If the amount of space available for casting yard and storage space is not greatly limited, enough forms can be put down to keep up with as many erecting crews as desired and the speed of erection is limited only by the amount of equipment available. Of course, if the casting yard space is small, then the speed of erection cannot be greater than the number of units it is possible to cast in the space available. One derrick with its crew of five men can erect an average of thirty units a day, and this means the equivalent of one two-story house with four large rooms, bath and basement every working day.

Maximum economy cannot be obtained on a development for less than from 75 to 100 families as economy is attained by the great-

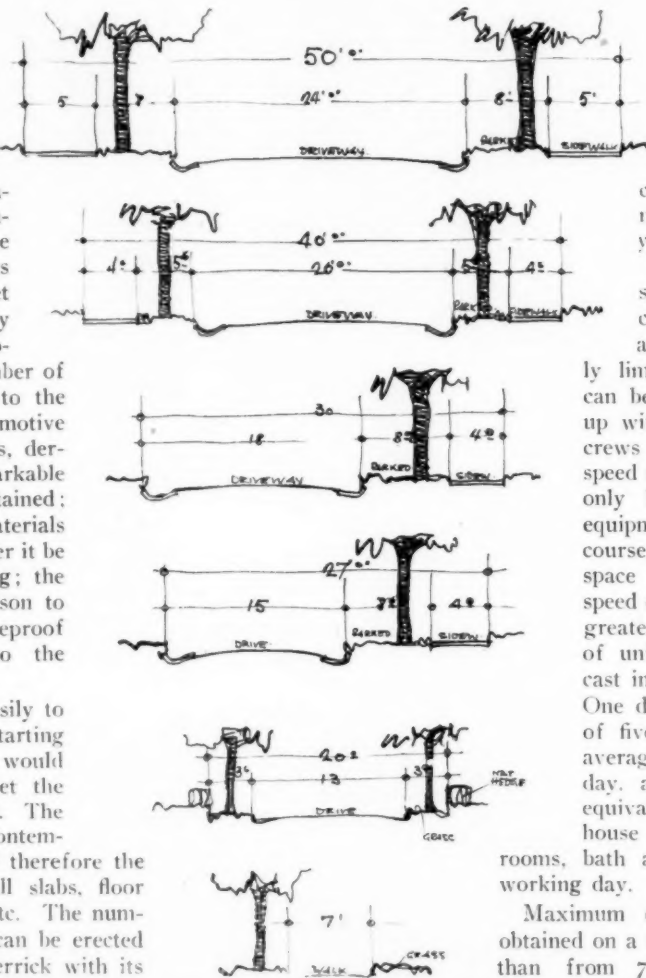


FIG. 24—STREET SECTIONS



FIG. 25



FIG. 26

STREET VIEWS BEFORE PLANTING

THE AMERICAN ARCHITECT



FIG. 27—COMPLETED GROUP, PHOTOGRAPHED BEFORE PLANTING



FIG. 28—A COMPLETED HOUSE

WORKINGMEN'S COLONY, EAST YOUNGSTOWN, OHIO
CONZELMAN-HERDING-BOYD, ARCHITECTS AND ENGINEERS

THE AMERICAN ARCHITECT



FIG. 29—PROGRESS PICTURE

er use of the forms and the familiarity of the erecting crews with the different types of houses. However, under good conditions a very great economy can be shown on developments for as few as fifty families.

This colony presents itself as practically opening a new era in building houses. It is new from the standpoint of engineering, and it may have established a new set of values in site planning and architecture. It is the manufactured, permanent,

standard house, designed for a certain location for certain conditions, wholesale, shown in ever-changing dress, thus giving individuality to every street



FIG. 30—PROGRESS PICTURE

view, to every part of that view, to every house. One does not have to look for the house number to identify his home: it is marked and individualized in its surroundings.



FIG. 31—PUBLIC SQUARE

THE AMERICAN ARCHITECT

WORKINGMEN COLONY EAST-YOUNGSTOWN OHIO PERSPECTIVE VIEW FROM PT. C



FIG. 32



FIG. 33

WORKINGMEN'S COLONY EAST-YOUNGSTOWN OHIO

PERSPECTIVE VIEW FROM POINT F

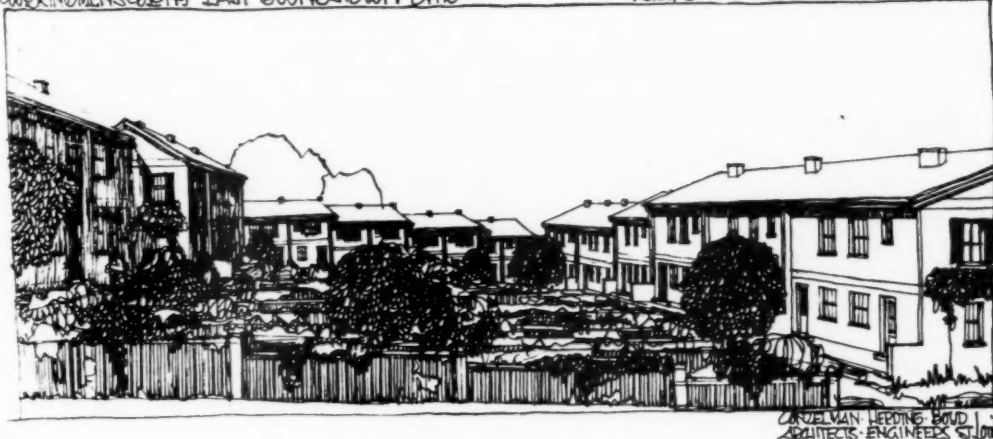


FIG. 34

WORKINGMEN'S COLONY, EAST YOUNGSTOWN, OHIO
CONZELMAN-HERDING-BOYD, ARCHITECTS AND ENGINEERS

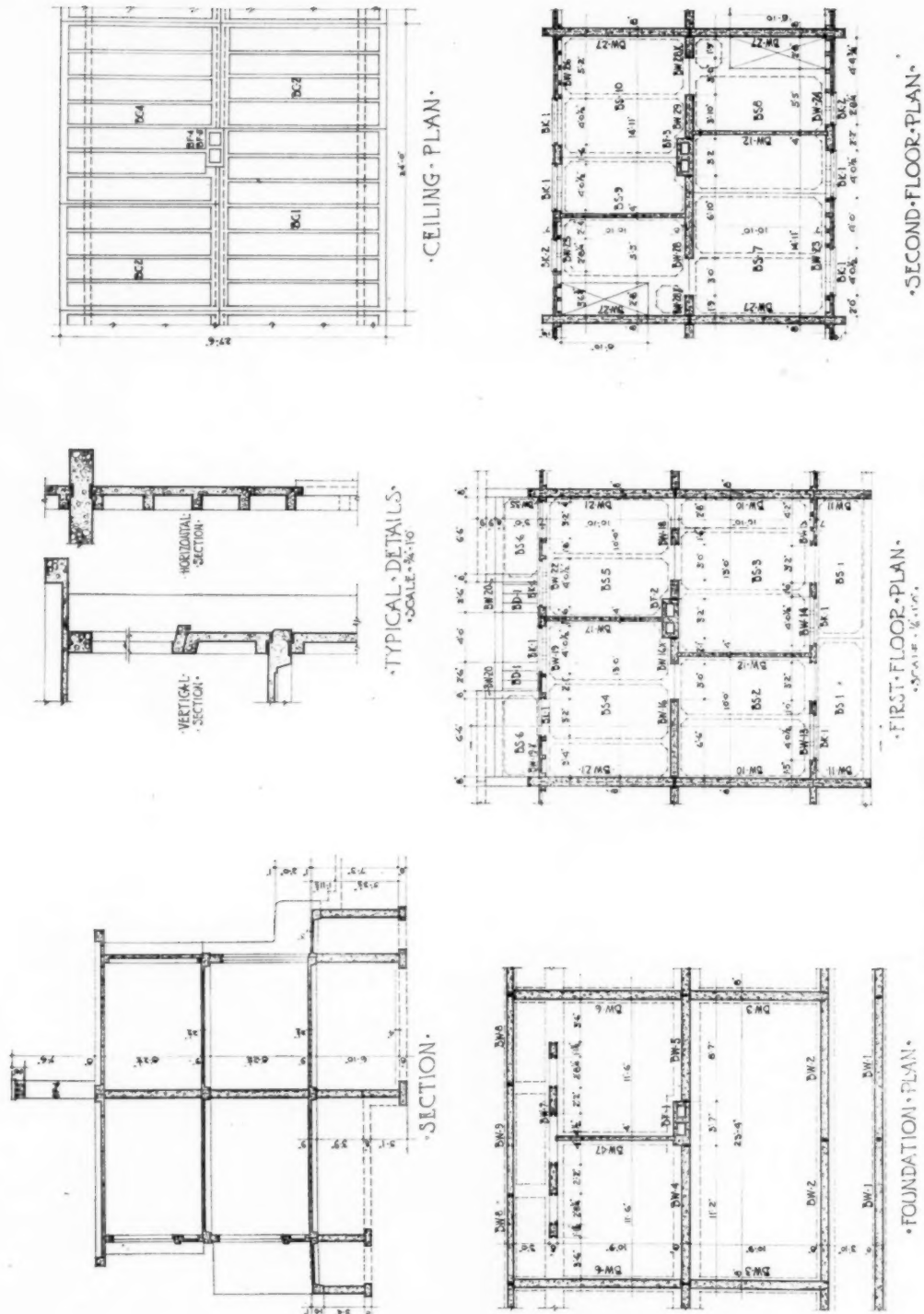


FIG. 35—ENGINEERING DRAWING. TWO FAMILY HOUSE, 3 ROOMS AND BATH

WORKINGMEN'S COLONY, EAST YOUNGSTOWN, OHIO
CONZELMAN-HERDING-BOYD, ARCHITECTS AND ENGINEERS

THE AMERICAN ARCHITECT

Founded 1876

PUBLISHED EVERY WEDNESDAY BY
THE ARCHITECTURAL AND BUILDING
PRESS, INC.

No. 243 West Thirty-ninth Street, New York
E. J. ROSENCRANS, PRESIDENT AND TREASURER
WILLARD C. HOWE, VICE-PRESIDENT

WILLIAM H. CROCKER, Editor
ARTHUR T. NORTH, Engineering Editor

Subscriptions in the United States and Possessions,
Mexico and Cuba, TEN DOLLARS. Other Countries,
TWELVE DOLLARS.
SINGLE COPIES (Regular Issue) 25 CENTS

CHICAGO OFFICE, Mallery Building
PAGE A. ROBINSON, Western Manager
ST. LOUIS OFFICE, Wright Building
CLEVELAND OFFICE, Guardian Building
SAN FRANCISCO OFFICE, 320 Market Street

Owned by United Publishers Corporation—H. M. Swetland, President;
Charles G. Phillips, Vice-President; W. H. Taylor, Treasurer;
A. C. Pearson, Secretary. Entered as second-class matter January
6, 1909, at the Post Office at New York, New York, under the Act of
March 3, 1879.

VOL. CXIV OCTOBER 2, 1918, No. 2232

A Record Performance

EFFICIENCY of organization of architects' offices has been referred to in these columns as proof of the preparedness of the profession to meet every reasonable demand for the rapid and competent preparation of plans in large volume, the superintendence of the work involved in construction, and the quick completion of the building. Among those intimately acquainted with the perfection and thoroughness of detail in these organizations, attributes shared only by the largest and most successful manufacturing enterprises, no proof is necessary.

Unfortunately, however, during the time since we entered into this war, there have been circulated a great many untruthful statements calculated to discredit the architect as the master builder and executive on the work, and claiming that this speed and general efficiency in construction are not the result of organization on the part of architects.

It is therefore gratifying to be able to relate a concrete example where, owing to perfect organization and co-ordination of an architectural office, a record performance was achieved.

A certain firm of architects with offices a thousand miles from Washington was called to that city for a conference with reference to the designing and planning of a large building. The preliminary

sketches were approved on Aug. 30th, and the utmost speed was urged, as the building was needed for occupancy before snowfall.

The office force was instructed by wire to be on hand early the following morning, Sept. 1st, and they were. At midnight of the 14th, all the plans and specifications for this large building were completed and ready to be executed. This we believe establishes a record. To afford an opportunity to judge of what was accomplished in two weeks' time, it may be stated that the main structure, four stories high, of fire-resisting material, with a ground area of more than 100,000 sq. ft., and with thirteen dependent buildings, required forty-five 30 x 50 linen tracings, illustrating all of the usual architectural work, scale drawings and important details, structural and sanitary engineering, heating and lighting, and all are as complete as drawings can be made, and with the absolute accuracy called for in Government work. It is estimated that the cost of producing plans plus overhead will not exceed one-half of one per cent.

We find many references in the daily papers and magazines to the speed of accomplishment of our engineers in France, and detailed accounts of the expression of amazement of the people there at the rapidity with which things are done by our army and navy abroad. All these matters are gratifying to the pride of the American people and serve to give them confidence in those to whom the conduct of the war has been entrusted.

Pride should also be expressed in an accomplishment, which, while not so spectacular in its details, confirms the contention that architects as organizers and executives are second to no other profession called upon to exercise administrative functions.

The Conversion of Large Estates

"IN the past," comments the *Architects' and Builders' Journal* of London, "when Scottish noblemen sold their highland estates, American millionaires bought them." This it writes in recording the fact that this month the Duke of Sutherland, one of the largest landowners of Scotland, will offer at auction nearly 250,000 acres of his estate. This is possibly the first instance of breaking up into small land parcels the large estates everywhere in England, Ireland and Scotland. And in the change of ownership is the probability that it will work a very decided change in the aspect of the land so that where at one time there were broad rolling acres, today will be found small towns developed in the way that has become necessary since Great Britain's entry into the war.

It is the opinion of the *Journal* that the action of the Duke of Sutherland will soon be imitated by

THE AMERICAN ARCHITECT

other large landed proprietors who desire to evade the heavy burdens and great responsibilities that accompany single ownership of large acreage. It is interesting to note that in discussing this epoch-making action on the part of a large landowner, the English press voices the opinion that if Great Britain is to become to the utmost degree independent and self-sustaining, it will not be possible to set aside as in the past, thousands of acres as a playground for the owners and their guests. The *Journal* states:

"In the future to ride straight to hounds and be able to kill with both barrels or to shine at the royal and ancient game will not be regarded as the whole duty of man when he is compelled to work for a living."

Such expressions as this show the very rapid change in public opinion, undoubtedly the effect of England's experience in the war. "Plowing the fields," says the *Journal*, "instead of riding or shooting over them would keep his lordship fit and would free him from the reproach of doing nothing for a living—a reproach that in the strenuous times to come would be unendurable."

England as a small island is strictly limited in its capacity for food production. In view of the necessities which have arisen during the last three years it is a question whether the many miles of land comprising these large estates which have lain idle as parks and shooting and hunting grounds could not be cultivated and made to increase the food production to a very material extent.

The *Journal* sees in the action of the Duke of Sutherland a new movement for the conversion of large estates into small ones, and in view of the coming demand for sites for houses, schools, factories and other necessary buildings, believes that the nation will be in a better condition through the parceling of these large areas to meet a condition after the war which is, in the judgment of competent minds, inevitable.

State Licensing Laws

NOW when the alliance between the professions of architecture and engineering is more intimate than ever before and when it is extremely likely that in the future this alliance may become even closer, the movement in the Illinois State Society of Architects to revise the licensing law in that State offers an unusual opportunity for much lasting benefit.

First, it is realized by members of the profession who have given the subject of state licensing earnest thought that it would be desirable to possess a law the provisions of which would fit the needs of the

profession, and second, to secure the annulment of laws now in force in other states, replacing them by a uniform law in every state of the Union.

It will not be necessary to dwell at length on the many advantages that such a codification would insure. Conditions generally would be more equitable and satisfactory everywhere. The laws now existing in the various states controlling the practice of engineering are in some instances so loosely framed as to conflict with the laws governing the practice of architecture in the same state. These conditions give rise to disputes which are often taken to the courts for action. With the interrelation of the professions of architecture and engineering, it is inevitable that any laws governing the practice of either be amended so as to eradicate all these conflicting elements.

The Illinois State Society will undoubtedly take up these matters and with its usual energy reach a satisfactory conclusion. It is not believed, however, that this would be sufficient. The matter is one of nation-wide interest and the Institute through its various Chapters could with much good result set out along similar lines. A conference on this important question would undoubtedly bring out all the various weak points in the existing laws, and tend to eliminate the conflict with other allied societies. Just now when the practice of architecture is slowed by reason of governmental restrictions on building, there is afforded an opportunity to discuss state license in all of its aspects and accomplish a large measure of good results. There is not unanimity of opinion on this subject, as is shown by a letter from Victor A. Mattison printed in the September issue of the *Bulletin* of the Illinois State Society. Mr. Mattison writes:

As a matter of fact, the present is a mighty poor time to revise the law. Those of us located in Washington, working in connection with the Construction Division of the Army of the United States Housing Corporation, seem to see some handwriting on the wall. It seems as if after the war some changes will come in the method of practicing architecture. Present and past methods are showing up now as entirely unsuited to the demands of the times and there seems to be no question but that the wisdom of adapting our methods to the requirements of the public will soon be seen. Then there will be time enough to change the laws, which it is hoped will be broad enough to cover all who may be entitled to the name "Master Builder."

But procrastination in these matters has brought about present conditions. Shall we be in any better position six months or a year from now to forecast the future than we are to-day? Conceding that in the future there may develop newer phases of professional practice, are not the matters of universal law in all states, and the adjustment of differences between our own laws and those of other societies, just as evident to-day as they will be later?



The American Club at Kohler, Wis.

BRUST & PHILIPP, *Architects*

THE American Club at Kohler, Wis., is a somewhat unusual institution in the modern industrial world. This club was erected by the Kohler Improvement Co. for the use of the men employed by it. It furnishes a home and place for recreation for over a hundred single men and its dining room is open to all employees of the company as well as to the public. In its material aspect and in the spirit in which it is conducted, the group is in vivid contrast to the older industrial clubs.

The American Club is over three hundred feet long and is so built that additions, in perfect harmony with the building, can be made later. The architecture is late Gothic. The roof is of Vermont slate, green and purple in color, and the walls are of rough colored brick, the two color schemes producing an agreeable contrast, further enhanced by the white trimmings and cornices. The building stands in ample grounds, landscaped to set it off and to harmonize with it.

The sanitary arrangements comprise one interesting feature of the club. The equipment of the



BOWLING ALLEYS

kitchen and bakery insures the proper keeping of food, with a minimum of handling by human hands. Bathing and toilet facilities are abundantly provided. On each floor are two toilet and washrooms, one at either end of the building, conveniently accessible to the men rooming in the building. They are large, bright and clean, and have the finest modern sanitary fixtures. In the basement, at each end of the building, is a large bath room. Here are to be found shower baths and tubs and lavatories, the product of the men who will make use of them. Provision has been made in the plans for a swimming pool, which will be added later. The laundry, also in the basement, has revolving tubs, a drying closet, fumigating room, and machinery for ironing and pressing.

A description of the American Club implies some idea of its purpose. Primarily, it was intended as a home for single men of modest means, a class who, particularly if they be of foreign birth, frequently must accept unhygienic and even demoralizing living conditions. The club offers them com-

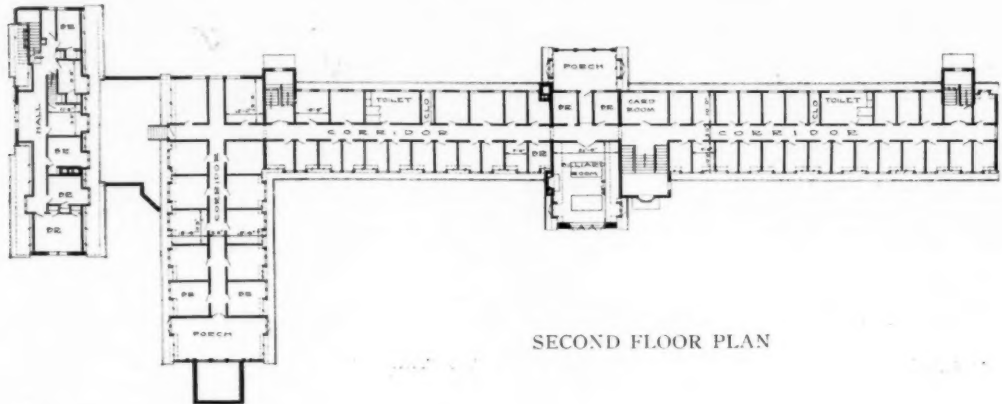


READING ROOM

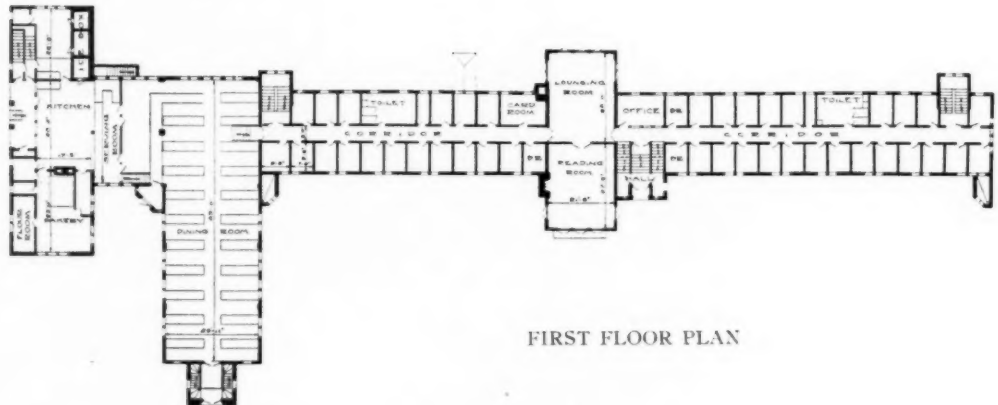
THE AMERICAN ARCHITECT

fort, good surroundings, clean and uplifting life. It gives them these things at a rate a workingman can afford, for it is not run to earn dividends. At the same time, the club is not paternalistic, but American, and is expected to be an influence for citizenship. The name, American Club, was selected

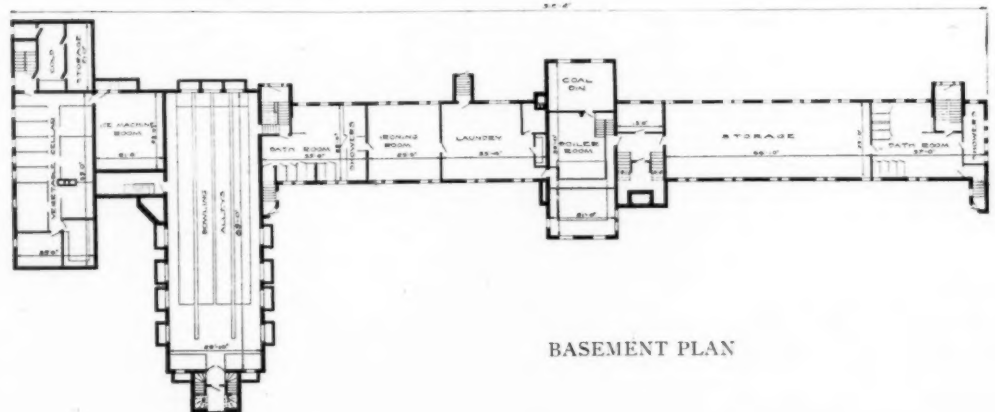
because it was thought that with the high standards of living, and clean, healthful recreation, it would be a factor in inculcating in the men of foreign



SECOND FLOOR PLAN



FIRST FLOOR PLAN



BASEMENT PLAN

same time, the club is not paternalistic, but American, and is expected to be an influence for citizenship. The name, American Club, was selected antecedents a desire for Americanization and in the most attractive way to stimulate in them a love for their adopted country.

THE AMERICAN ARCHITECT

ILLINOIS CHAPTER A. I. A. ELECTS NEW OFFICERS

GEO. W. MAHER SUCCEEDS D. H. BURNHAM
AS PRESIDENT

Energetic and Fruitful Year Foretold by Appointment of Strong Working Committees

(Special from our Chicago correspondent)

A SPECIAL meeting of the Executive Committee of the Illinois Chapter, A. I. A., was held on Sept. 10, at which the resignation of D. H. Burnham, as president, was accepted. George W. Maher was elected president, and his place as first vice-president filled by the advancement of Thomas E. Tallmadge, who was second vice-president. Francis W. Puckey, member of the executive committee, was made second vice-president, and John L. Hamilton and Melville C. Chatten were elected members of the executive committee to succeed Mr. Puckey and Capt. Robert S. DeGolyer, who had resigned on taking up his duties at Washington.

At the regular monthly meeting that evening—the first following the summer months during which no meetings are held—the new president of the Chapter expressed in the address which follows the spirit in which he had accepted the responsibilities of the office.

Mr. Maher's Address

The president of the Chapter, Mr. D. H. Burnham, who was elected for this fiscal year, has resigned to take his place in the ranks of those who are giving their patriotic services to our country.

There have been two presidents of the Illinois Chapter who have resigned before their time of office expired, namely, Mr. Charles H. Hammond and Mr. N. Max Dunning, both of whom are now actively engaged in personal service to the nation in its time of need. Mr. Burnham will, therefore, make the third president who has resigned from the Chapter up to the present time.

It is an honor to become president by act of the executive committee of a society which has been so active and patriotic in actual personal endeavor. Our Chapter membership is also well represented in active war service, and is performing valiant work for the nation in whatever station or position appointed.

Striving for an ideal means sacrifice; this is the real test of a democracy. Our country is giving ample evidence of this spirit, which, as we know, will continue until the world war in which we are

now engaged shall end in victory. When the principles for which we as a nation unitedly stand have been vindicated the world will become more just and human, and civilization will be placed on a higher plane of existence.

It becomes the duty and responsibility of the members of the American Institute of Architects to devote as much of their time as possible to the work of the Chapter and Institute. To be sure, our minds are to a certain extent occupied by the world struggle in which our country is momentarily assuming a greater and a more momentous part. It, however, behooves us to preserve the equilibrium of affairs in our midst, to be ready with suggestions and advice, and also with personal sacrifice to hold together, and by constructive action continue to build up the work and the ideals of our profession. In other words, it becomes our function to "Keep the Home Fires Burning" until the return of those who have left us temporarily for the service.

Let us not be unmindful of the fact that we belong to an organization nation wide in membership, and which is recognized by the Government, with headquarters at the Octagon, Washington, D. C., and that it is our duty to respond quickly and effectively to any call from the president of our organization.

I understand that the Institute has already taken active steps to anticipate the great reconstruction period that will inevitably follow in all phases of human endeavor immediately after the war, when universal peace is definitely achieved. This is a mighty problem to solve, and will worthily tax the combined effort and imagination of the leaders of the Institute. What the future has in store for the individual architect and the profession immediately following the war no one can predict with certainty. That the Institute has settled upon a policy of attempting to arrive at some definite plan of action by visualizing the future at this time is highly commendable.

The work of the Chapter should always be of a consistent and progressive nature, aiming each succeeding year to be broader, more vital and co-operative in its endeavors, more democratic in its way of approach to the various problems presented.

It should be the responsibility of each committee actually to perform the work to which it is assigned. The chairmen of the respective committees should aim regularly to attend the Chapter meetings, or should endeavor to have a representative present to deliver reports pertaining to the work under consideration. Such reports need not be extensive, but they should be of a nature that will inform the members of the Chapter of what is being attempted or accomplished.

THE AMERICAN ARCHITECT

Committee meetings should be held as frequently as possible, and a spirit of fellowship should be engendered in those meetings in order to obtain satisfactory co-operative results.

No society can long endure where its members do not act in a fraternal and sympathetic manner one toward the other, aiming to assist in all worthy effort. The spirit of the American Institute of Architects is founded on this principle of fellowship. It therefore behooves each member strongly to cultivate the Institute ideal, which we hope will forever discourage cliquism or selfish, critical individualism. Hasten the time when membership in the A. I. A., through the various Chapters, will place the seal of distinction and honor on each respective member, so that he will abide both in spirit and deed by the Canon of Ethics indorsed by the Institute. Each member, through his voluntary assent, subscribes to these principles of professional conduct. His practice is evidence of his sincerity, and is the real test of whether he be true or false to the ideal of his organization.

The active work of the Illinois Chapter, A. I. A., is so well organized and defined that it is unnecessary for me to dwell in detail on this phase of Chapter activities. Each committee has its function to perform. To the extent that we assume the responsibility thus undertaken will the success of the year's work be assured. Let us, therefore, be an active body, remembering that as our Chapter and organization increases in influence, as it is certainly destined to increase, we should become correspondingly broader, more sympathetic and democratic in our methods of organization and activity.

We are fully aware that the great ideal of service of the Institute is to make of America a more attractive country in which to abide, where art, beauty and practicability are properly combined and encouraged so that the humblest hamlet, town or city, or the country at large, will feel the influence of the trained and cultured mind working in a way that will result in a greater and more beautiful America. This principle of service is the very essence of democracy.

The A. I. A., being a national society of architects, holds an enviable position in that it is thoroughly organized, and that it has within its ranks the leaders of the profession who have been trained to perform the constructive work that the country needs, not only at the present time, but also in ever greater volume when world peace is assured.

The meeting was devoted to discussion and organization of active work for the balance of the Chapter year, and the following committees were appointed:

Educational.—George C. Nimmons, chairman.

Exhibition.—Frank A. Childs, chairman.

Town Planning.—Edw. H. Bennett, chairman.

Historical.—Thos. E. Tallmadge, chairman.

Program.—John Hamilton, chairman.

Legislative.—Richard E. Schmidt, chairman.

Chapter Relations.—Irving K. Pond, chairman.

Materials and Methods.—Emery Stanford Hall, chairman.

Municipal Art.—Elmer C. Jensen, chairman.

Membership.—Ivar Viehe Naess, chairman.

Publicity.—F. E. Davidson, chairman.

Affiliate Membership.—Henry K. Holsman, chairman.

Joint Committee with Illinois Society on War Relations.—Allen B. Pond, chairman.

Farm House.—The president, secretary and treasurer of the Chapter.

Industrial Housing and Transportation.—D. H. Burnham, chairman.

CHANGES IN OFFICERS OF ILLINOIS SOCIETY OF ARCHITECTS

George W. Maher's Letter of Resignation

At a meeting of the board of directors of the Illinois Society of Architects, Sept. 10, George W. Maher resigned from the presidency, in which, under the constitution, he was automatically succeeded by A. F. Hussander, the first vice-president; James B. Dibelka, second vice-president, becoming first vice-president. Mr. Maher was then elected by the directors as second vice-president, and is thus retained as an officer of the Society. His reasons for withdrawing from the office of president are expressed in his letter of resignation, which follows:

Board of Directors, Illinois Society of Architects, Chicago.

I have approached as many of the board of directors individually as I could reach in the short time at my disposal, to state the reasons why I should resign at this time as president of the Illinois Society of Architects. I very much regret that I cannot continue as your president and carry on the work that has been to a certain extent outlined for this fiscal year.

As you are aware, I am vice-president of the Illinois Chapter, A. I. A., and, due to the fact that Mr. D. H. Burnham, who was president, has resigned in order to assume patriotic services for our

THE AMERICAN ARCHITECT

country, I am to-day placed in the position to accept or reject the presidency of the Illinois Chapter, A. I. A. Three presidents of the Chapter have now resigned and are performing war service. The Chapter membership, which is not so large as that of the Illinois Society of Architects, has been considerably depleted owing to many of the members entering the service.

The principle that dominates me in this whole matter is how I can be of most use, particularly to our country and to the architects, in this time of need.

The Illinois Chapter, A. I. A., is an active unit of the national organization, with headquarters at Washington, D. C. The Institute has received recognition from the Government, and has been called upon by it to perform various services. The Illinois Chapter, A. I. A., for instance, at the present time is preparing a survey of the steel towns south of Chicago, to be presented to the Industrial Housing Corporation at Washington.

As the war progresses, our national organization must increase its responsibility in meeting the demands that will be asked of the architects of the country.

It behooves each of us to do our utmost to uphold the efforts of those who are at the head of our national organization. To be sure, our State organizations must carry on their important work to the best of their ability, but if there is any part in the national organization that members of the State organizations can rightly perform it seems to me they should subserve their personal interests to the great central organization of the architects.

Following this line of reason, it clearly seems to be my duty to assume the presidency of a Chapter that is affiliated with the national body of architects.

These are unprecedented times, and require quick and positive decisions. We are fully aware that there is no more patriotic a body of architects than the Illinois Society, and that they are willing to make any sacrifice for the common cause. The year's work of organization is well under way and is progressing smoothly. The officers in the Illinois Society are all experienced and especially efficient, and I have no thought that any difficulty of any kind will result from my decision. Therefore, with your permission, I am to-day resigning the presidency of the Illinois Society of Architects to assume the new responsibility I have mentioned.

GEORGE W. MAHER.

The Illinois State Building Code

The adoption by the State of Illinois of a State building code seems to be necessarily postponed for another two years or more. This matter was taken up with Governor Lowden by the executive officers of the Illinois Society of Architects shortly after Governor Lowden's inauguration, and in compliance with the request of the Governor no effort was made at the last session of the Legislature to secure an enactment of this most needed legislation. Governor Lowden explained that he was not in entire sympathy with the provisions of the code as then proposed.

Governor Lowden stated that after the civil administrative code had been adopted he would instruct the Department of Public Works and Buildings to prepare a simple, broad, constructive building code for submission to the next session of the Legislature as a departmental recommendation.

The civil administrative code became a law, but shortly after the new department was organized Judge Puterbaugh, director of public works and buildings, died, and our nation entered the War, one result of which has been enormously to increase the cost of all labor and supplies. The various departments of the State government have been seriously handicapped by the great decrease of the purchasing power of the dollar, and unquestionably many departments, in spite of the most rigid economy, will be compelled to ask the next general assembly to make good a deficit in their actual necessary running expenses. It will thus be seen that notwithstanding the importance of the State building law, the Department of Public Works and Buildings did not have the funds necessary to employ experts to frame such a law, and while such a law is an admitted necessity, it can hardly be considered as a matter of such importance as to justify the department in contracting financial obligations which future sessions of the Legislature would be asked to make good.

After the most careful consideration, the Department of Public Works and Buildings has determined that the only course to pursue at the present time with regard to the proposed code would be to submit to the next general assembly a recommendation that it be authorized and instructed to employ the necessary experts to prepare a building code for submission to the Legislature, which will meet in 1921, and to ask that the necessary funds be included in the appropriation for the maintenance of the department for the next two years.

(Special by wire from our San Francisco correspondent)

October 28. Weeks & Day, this city, take first prize in Sacramento Capital Extension competition.

To Conserve the Use of Print Paper

The War Industries Board has called upon the business press to exert its influence to bring about such economy as is possible in the use of paper in all its forms. Sulphur is used in the form of SO_2 or sulphur dioxide in the manufacture of practically all kinds of paper. At this time our Government needs great quantities of sulphur for war munitions, and it is therefore necessary to curtail as far as possible all manufactures that use large quantities of sulphur. The War Industries Board has set down the following seven reasons why paper must not be wasted:

1. The Government's requirements for all kinds of paper are increasing rapidly and must be supplied.
2. Paper making requires a large amount of fuel which is essential for war purposes. A pound of paper wasted represents from one to three pounds of coal wasted.
3. Paper contains valuable chemicals necessary for war purposes. Economy in the use of paper will release a large quantity of these materials for making ammunition or poisonous gas.
4. Paper making requires labor and capital, both of which are needed in war service.
5. Paper making requires transportation space. Economy in the use of paper will release thousands of freight cars for war purposes.
6. Greater care in the purchase and use of paper will save money. Your savings will help finance the war.

May Remove Building Restrictions

The New York Times in an article discussing building conditions in the metropolitan district covering a radius of 100 miles from the city states that there has been shown to be a decline of 37 per cent in building operations during the past year. At the same time the demand for all kinds of buildings—residential, commercial, storage and industrial—has been stimulated to abnormal levels because of Government requisition of buildings here. There appears to be a disposition in Washington to give closer attention to the critical

conditions regarding the building material supply, and there is indication of a disposition to afford more help for necessary construction after the Liberty Loan drive. Continuing, the article states:

It was shown that New York is even now 33 per cent underconstructed, which does not take into account the municipalities comprising, in a broad sense, the metropolitan district of New York.

The committee of building material manufacturers which was recently in Washington reported that they had received assurances that the presentment of facts as to the seriousness of the building situation in and near New York had been borne in upon various high department heads with the result that definite accomplishment toward relieving the pressure on the building situation may be looked for after the close of the Fourth Liberty Loan drive.

This relief may be expected in the matter of providing for housing accommodation for essential or even important commercial houses that have been inconvenienced by Government requirement. In another form the relief will be given in the matter of providing fuel so that building materials may be provided in quantity sufficient to meet the building requirements when the gradual release finally gets into motion.

As an instance of this latter phase: Brick manufacturers up the Hudson have not been able to get coal with which to burn the brick molded this summer. The stock of marketable brick on hand to-day is not more than 10 per cent of normal. The Government has an option on practically all this supply. This means that should Washington give the necessary permission to make loans on building projects it approves of, there would be such a grave shortage of brick in this market as seriously to retard construction. The same situation applies, in a measure, to Portland cement stocks, lime and plaster reserves, glass, sheet metal, and many other commodities.

Practically everything as regards fuel supply here rests upon the capture of the city of Lens in France by the Allies, and their ability to hold it. Once the news comes through that the "Pittsburgh of the French Republic," the center of the biggest coal mining region on the Continent, has been placed in the hands of the Allies, it will not be necessary longer to send such huge supplies of coal abroad with which to bring ships back to America, and domestic industry can be assured of larger supplies.

A new factor developed in the building market here last week, however, that has completely tied up the building market at the week end. The Priorities Commissioner has exacted a pledge from all applying for priorities on building materials wherein the manufacturer must guarantee that none of his materials which he sells shall go into non-essential construction.

It is said to be physically impossible for building material manufacturers to comply with such a requirement, and in consequence not a brick or barrel of cement moved into dealers' yards. Each contractor having an unfinished job must get his priorities from the Commissioner, the manufacturers say, in order to permit them to sell goods to a dealer who supplies the contractor. Some manufacturers said Saturday that the condition imposed upon them borders upon confiscation to an industry that already has been probably the worst sufferer from the war, and yet has been one of the most generous in response to Liberty Loan and other wartime activities.

There was talk of appealing to the Senators from New York and New Jersey in the hope that a modification of the ruling might be obtained, at least to the extent of permitting building projects already under way to proceed to completion.

Developing a Sense of Proportion

Commenting on an article in an English contemporary in which the writer states that architecture is everybody's business, the *Architects' and Builders' Journal* of London adds that it is, therefore, to quote a common saying, "nobody's business"—which is why it is so generally neglected. Continuing and discussing this fact, the *Journal* interestingly remarks:

"Our contemporary sighs for the good old days of a hundred years ago, when some knowledge of architecture was considered indispensable to 'gentle education.' It was then that, having finished his college career, the young man made the 'Grand Tour' and studied the orders in their native lairs. This acquirement of a smattering of architecture had at least one useful effect—it set up a sort of building rivalry among 'men of taste,' who vied with each other in the erection or the embellishment of their dwellings. This made work and promoted quality in it, but tended more to the emolument than to the dignity of the architect, who had to put up with much offensive patronage and to suffer much ignorant criticism from those who knew 'too much and too little'—too much to keep silent, too little to render speech anything more than a hindrance and an embarrassment. Still, there were those whose knowledge was penetrating, and who made good use of it in conference with the architect; and, on the whole, it is better to have a knowledgeable client than an ignorant one. As a rule, the former is likely to be the more reasonable and tractable if his knowledge has its natural concomitants of intelligence and breadth. Apart from the professional view, it is evident that architecture is an excellent instrument of education, which might and should be used not only in places of higher education, but in the common-schools, where its essential principles could be applied with excellent effect to develop, for example, a sense of proportion, which, physically and morally, is one of the most important desiderata of the day."

Artists Form League to Care for Wounded Soldiers

An organization called the Artists' War Service League is being founded in New York for the benefit of artists of all professions who have been wounded or incapacitated during the war.

Mark Twain's home in Redding, Conn., has been offered by his daughter, Madam Clara Clemens Gabrilowitsch, for the use of artist-soldiers as a convalescent home, and President Wilson has given his approval of the plan.

The Health of Our Army

During the Mexican War the annual death rate from disease among our troops was 100 men out of every thousand. During our Civil War the rate was as high as 60 out of every thousand. During our Spanish-American War it was 25 out of every thousand. Now the Surgeon-General's office reports that among our troops at home and abroad the annual death rate from disease fluctuates from less than 2 per thousand to slightly more than 3 per thousand.

This is an incredible record. The best of all previous performances was in the Russian-Japanese War, when the annual death rate from disease among the Japanese troops was 20 per thousand. Our present rate is about one-tenth of that. The annual death rate from disease among American men of military age in civil life is 6.7 per thousand. Our army rate is about one-third of that.

And the miracle has been achieved not by any one medical discovery or precaution, but by a campaign of administrative vigilance that has used every means to protect and promote and assure the health of millions of men.

At the outbreak of the war the most skillful physicians in America were drawn into service. The camps and cantonments were located by sanitary experts. The plans for the buildings were drawn by architects who have earned a world-wide reputation as specialists in hospital buildings. Neither local influence nor political pull was given any consideration in placing the camps or in building them.

Economy a Necessary War Measure

Commenting on a circular letter entitled "Forcing Economy on Us," issued by the war service committee for Illinois, *The American Contractor* states:

"It is interesting to note that good housing is being recognized to-day by government agencies as one of the three necessities of life. In this circular letter the primary essentials of living are those defined as food, shelter and clothing. All else is luxury. During war times many of the so-called necessities of peace require new classification. In the light of new necessities they are found to be unnecessary. But the recognition seems to be general that shelter is one of the three essentials that cannot be relegated to even a temporary category elsewhere." The paragraph in the circular of the Illinois committee that inspires this reference is as follows:

"The time now has come when economy not only is compulsory in some lines, but should become

THE AMERICAN ARCHITECT

universal. War times should and must bring a revision of ideas of what are necessities. Of course, the people must be well and wholesomely fed, comfortably housed and warmly clad if they are to retain their morale and physical stamina. But that is about all that is absolutely necessary, especially when they realize that their sacrifice is to be but temporary and is to help bring victory that will make the world a better place for all mankind."

Destruction of Architectural Monuments in France

A correspondent to the *New York Times* commenting on the destruction of architectural monuments in the fighting zone, and with particular reference to the neighborhood of Soissons, writes:

"Since their defeat by General Mangin the Germans have undertaken the destruction of the architectural masterpieces of Soissons. With the methods previously employed in burning or blowing up every structure in the region out of which they have been driven, they are proceeding with the demolition of churches and other edifices in this town, rich in specimens of the best work of the architects of the thirteenth century.

"The Cathedral of St. Gervais is now the principal target. Enormous breaches have been made in the splendid façade. The upper gallery is three-quarters destroyed, while the lower gallery has been wrecked. The statues fall one by one from the tower.

"The ancient Abbey of St. Jean-des-Mignes, in which Thomas à Becket spent several years, is also gradually crumbling. Both towers have been decapitated, while the façade has been pierced in many places. The vault has fallen in and the rich ornamentation of the left tower has disappeared, with the exception of the statues of two saints that remain facing the enemy."

An Inventory of Steel Stocks

A country-wide inventory of stocks of steel on hand is being made by the War Industries Board in co-operation with the Census Bureau of the Department of Commerce. The ascertainment of the supply of steel is of first importance in view of the deficiency of production of steel for direct and indirect war needs.

The present estimated total production of steel in sight is 17,000,000 tons, and war demands total over 23,000,000 tons, with the demand constantly rising. In a recent interview with the Washington newspaper correspondents, Mr. Baruch, chairman

of the War Industries Board, announced he could not approve requests for an ounce of steel for domestic uses, because of the imperative need of meeting the war demands.

The Americanization of Alien Labor

A phase of the labor problem in this country, which is of considerable importance, and which is now engaging the attention of the Government, is the Americanization of the immigrant.

Conditions arising during the war have served to emphasize the importance of this movement. Comprehensive programs, drafted by the Government, have been adopted in many of our seaboard states, money appropriated and laws enacted that will, it is hoped, accomplish in the speediest manner the Americanization of the alien labor population.

There has already developed a considerable amount of sentiment among those engaged in this work as to the retardence created by the foreign language daily paper, and it is contemplated to urge governmental action to limit, as far as may be done, their publication.

Congested Living Conditions Must Regulate Placing of Government Contracts

Housing and transportation conditions have become so congested in some sixty towns and cities where war supplies are being manufactured that it has become necessary for the General Staff to advise all of the supply bureaus of the War Department to give careful consideration to local conditions before placing contracts.

In each of the sixty towns it has been found necessary for the Bureau of Industrial Housing of the Labor Department to make provision to expend Federal appropriations in order to relieve shortage of housing and transportation. The Bureau of Industrial Housing has a large amount of data indicating great expansion in industries in the cities and towns mentioned.

EXCEEDINGLY HIGH LABOR TURNOVER

At the present time it is found that the extreme congestion of living conditions has created an exceedingly high labor turnover, which has made for increased cost and delay in the completion of work.

It is appreciated that War Department contracts may have to be expanded at these points, in spite of the known congestion, but the bureaus are advised that it should be done only after the most

THE AMERICAN ARCHITECT

careful consideration. The bureaus are warned that the funds at the disposal of the Labor Department for providing housing to meet the increased demands are limited, and it is desired to avoid such expenditures wherever possible.

The General Staff will see to it that the placing of contracts in these towns is reduced to the minimum, and has especially instructed the Quartermaster Corps to avoid these points because of the relative flexibility of their contracts.

Philadelphia to Have Famous Gobelin Tapestry

There is now being made in the famous Gobelin factory a piece of tapestry, 15 x 21 ft., which France purposes to present to Philadelphia when finished. The tapestry will depict the departure of troops from the City of Brotherly Love for overseas to take part in the Great War. The Ministry of Fine Arts approved the sketch of the design in the presence of Robert W. Bliss, secretary of the American Embassy in Paris; Eugene Glaenger, representing Joseph E. Widener of the Art Jury of Philadelphia, and Captain Andre Tardieu, head of the general commission dealing with Franco-American questions. Those who have seen the sketch, according to a dispatch from Paris, describe it as full of movement. Underneath in three panels will be wrought these phrases from President Wilson's messages: "Right is more precious than peace"; "We have no selfish end to serve, and desire no conquest and no domination"; and "We shall fight for democracy."

To Finish Buildings Begun

Assurance that the Government would not interfere with building operations now under way in New York is tending to clear a situation which for a time threatened to paralyze all local construction. William Fellowes Morgan, Regional Adviser for the Resources and Conversion Section of the War Industries Board, has been notified by Charles A. Otis, chief of the section, that permission had been issued for the continuance of buildings now under way until further notice without permit, but that new construction of all kinds must be authorized by the Building Material Section of the War Industries Board after favorable recommendation from the State Council of Defense.

It is logical to assume that this permission will not be confined to New York City.

Roads as Memorials

We have, states the *Minneapolis Tribune*, an example for the road form of memorial in the Lincoln Highway. This highway, constructed for public use, is utilized as a means of honoring the memory of a great man.

If it is appropriate in the case of the martyred president, why is it not appropriate in the case of martyrs of liberty—whose sacred dust will never find a resting place in their native land? And why might not the people of any community select a much used and much needed public highway and utilize the money which might erect an unsightly monument on the public square to build a highway marked by a tablet describing it as a perpetual tribute—as a monument to the memory of the honored dead?

The idea of common use and public possession should pertain, of course, to every such institution, for it would be in keeping with the spirit due to those who will have given their lives to the service of humanity to establish or construct in their memory, memorials of utility.

It is pleasing to reflect that before many years such memorials will be established in very many communities throughout this land.

Industrial Art Department at Metropolitan Museum

The Metropolitan Museum in New York has established a department of American industrial art under the guidance of Richard F. Bach, curator of the School of Architecture at Columbia. The work of the department will be in the direction of giving assistance to designers, craftsmen and manufacturers by bringing the resources of the museum's collections before them and helping them to discover in these the material that will be of the most immediate and direct value to them.

Volunteers Wanted for Industrial Housing Work

The Department of Labor's Bureau of Industrial Housing and Transportation has announced that there is need for managers for the various committees which are being formed all over the country, and asks that men of special qualifications for these positions volunteer their services.

Department of Architectural Engineering

The Swimming Pool

In Two Parts—Part II

THE practical application of ozone for the purification of water in swimming pools was made at the Twenty-third Street Bath, New York. This is one of the older public bath houses in that city, and the large number of persons that it serves



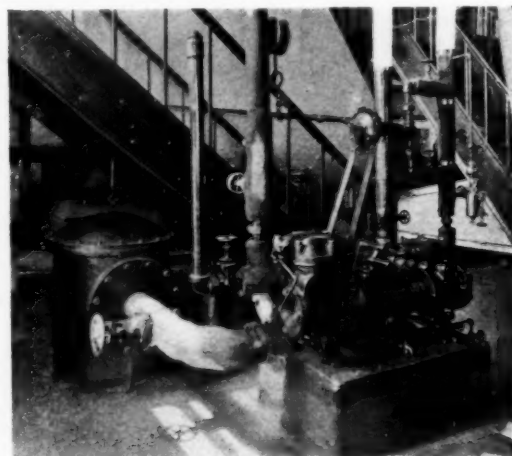
A view of the Twenty-third Street Swimming Pool. The upper part of the mixing tower is seen at the far end of the room.

made it a very excellent place in which to test this method on a large scale. The success of the application of ozone for this purpose is evidenced by the results given in the preceding part of this article in *THE AMERICAN ARCHITECT* of September 18, 1918.

During his preliminary tests on a miniature pool, Dr. Manheimer found that the engineering details connected with the application of ozone on a large scale were of paramount importance. The whole proposition must be predicated on the fact that the important factor in the application of ozone to water is the securing of a thorough mix of ozonized air and water. There is no doubt but that the action of ozone on bacteria and organic matter is exceedingly

rapid. But if the time of exposure of the water to ozonized air is short, three parts of ozone per million of water is required to obtain satisfactory results. This is at least three times the necessary quantity, as was shown in the tests, and entails a useless expense. A mechanical mixer was designed to insure the intimate contact of the gas with water, but this was abandoned. The simpler and more sure method of using a tall tower, as recommended by Vosmaer,* was adopted.

In the Twenty-third Street Bath the top of the swimming pool is on the main floor. About the



The polluted water drawn from the pool passes through the strainer chamber, shown at the left, and through the recirculating pump at the right.

tank and below this floor is a low story about seven to eight feet high in which the steam pipes and ventilating ducts are installed, and which can be termed

*"Ozone" by Vosmaer, D. Van Nostrand Co., 1916.

THE AMERICAN ARCHITECT

the basement story. On this same level are the pump and boiler rooms. The stairs from the pump room level to the pool room level are shown in the illustration.

This plant was originally built with a recirculating apparatus, and the water is withdrawn from the pool by a pump, between which and the pool is a strainer, as shown in the illustration. The purpose of the strainer is to remove solids, such as hair, from the water before it reaches the pump. From this pump the water is passed through two of the filters shown in the illustration. From the filters the water is passed through a closed hot water heater, where the temperature of the water is raised to the desired degree of heat. From this closed heater the water is returned to the pool, either direct or through the ozonating apparatus. This apparatus is by-passed in the usual manner.



View of the filters, two of which are used for filtering the polluted water drawn from the pool. The other two filters are used in case of emergency and to filter the fresh water as it is used.

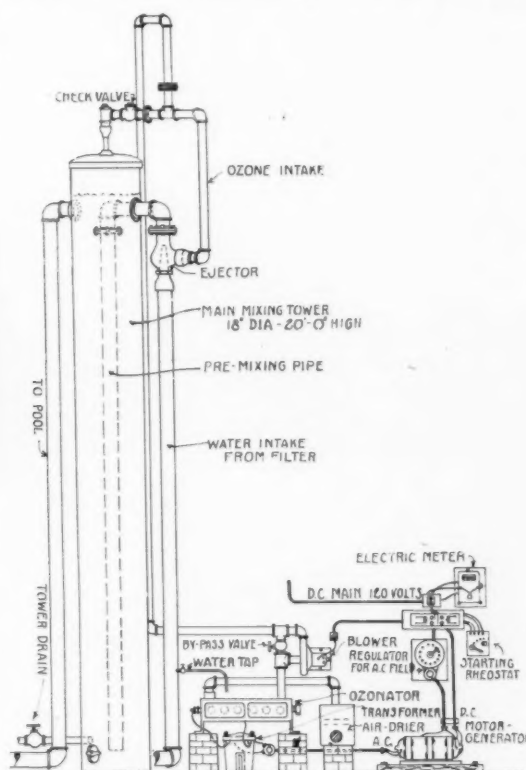
The ozonating apparatus consists of several parts. The main parts are the ozonator and the mixing tower.

The ozonator requires an alternating current at approximately 10,000 volts potential, and that makes necessary a transformer for raising the voltage of the current to the high potential required for operating the ozonator. In addition there is required the electric meter, switch and starting rheostat. In this case a 120-volt direct current is supplied, and a small motor-generator is required to convert this current into an alternating current. The air to be treated must be dry, and to make it so the air is passed through an air dryer containing lump calcium chloride, which abstracts nearly all its moisture.

Ordinarily a blower is used with an ozonator for the purpose of moving a volume of air through the apparatus. As the efficacy of the special aspirator used was not known when this installation was made, a blower was incorporated in the plant. Subsequent developments showed that for this particu-

lar usage a blower is not necessary. In fact it proved to be detrimental, owing to the fact that there was a surplus of air delivered to the ozonator, which diluted the ozone and made more rapid the escape of the gas from the water.

The ozonator is a simple apparatus, consisting of two long cast-iron boxes that are square in section and joined together by a member connecting the ends and bottoms. The faces of the boxes are removable and have glass panels. The two boxes or chambers are connected by brass tubes which



Installation of the ozonating apparatus in the Twenty-third Street Bath, New York. The mixing tower projects above the pool room floor as shown in other illustrations. This is not necessary and is done here for reasons of economy.

can be submerged in water to reduce the temperature of the apparatus. Through these brass tubes is placed a copper-coated glass tube, in which is placed concentrically an aluminum electrode whose exterior diameter is about one-quarter inch less than the interior diameter of the glass tube. The 10,000-volt alternating current is applied to one end of the aluminum electrode, from which a brush discharge radiates to the outer copper-coated glass tube across the intervening air space. The dried air

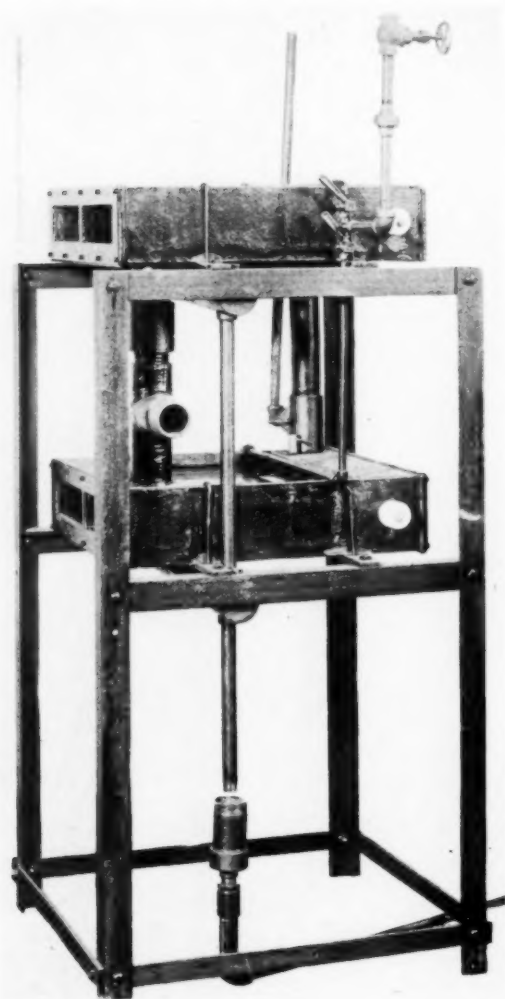
THE AMERICAN ARCHITECT

passing between the electrode and the outer tube through the electrical discharge becomes ozonized. This ozonized air passes to the mixing tower.

The mixing tower in this case is a circular steel tank which is 18 in. in diameter and 20 ft. long,

near the top of the mixing tower, where it joins the ozone intake. At this junction there is placed a special aspirator on the end of the water supply. The restricted opening of the aspirator creates sufficient suction to draw the ozonated air through the ozonator and to carry it with the water into the mixing tower. The water and ozonated air passes through a pipe which enters near the top of the tower and turns down with an open end near the bottom of the tower. Escaping from the lower end of this premixing pipe, the water and ozonated air rises in the tower to a point just above the overflow to the pool. During the passage from the aspirator point to the pool the necessary intimate mixing of the water and ozonated air is accomplished.

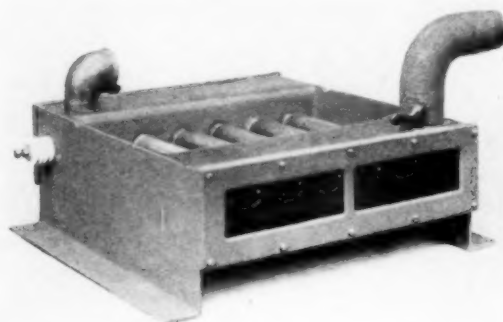
There is a very thorough intermingling of the water and the ozonated air in their downward pas-



An ozonating apparatus of two units which can be increased to any number as needed.

set in a vertical position. In order not to incur costly changes in the pump room, it was decided to place this tower in the corner of the pool room. This arrangement made it necessary to pass the tower through the main floor as shown in the illustrations.

The circulating pump forces the foul water through the filters and the closed heater to a point



A six tube ozonator unit. The dry air enters through the pipe at the left, passes through the horizontal ozonating tubes and out through the pipe at the right. The electrical connection is on the left side as shown. The unit is 30 x 40 inches in size.

sage through the pre-mixing pipe to the bottom of the tower, due to the fact that the water is moving downward at the speed given it by the circulating pump while the ozonated air, owing to its tendency to rise upward against this current, moves downward slower than the water.

In fact, it is the frictional action of the water on the air bubbles that causes the ozonated air to be drawn downward.

The tower being of much greater diameter than the pre-mixing pipe, the upward flow of the water through the tower is very much slower than was its downward movement through the pre-mixing pipe, while the ozonated air, not being restricted now, bubbles upward through the water more rapidly than the water is moving, and there is again a very intimate continuous contact of the water and the

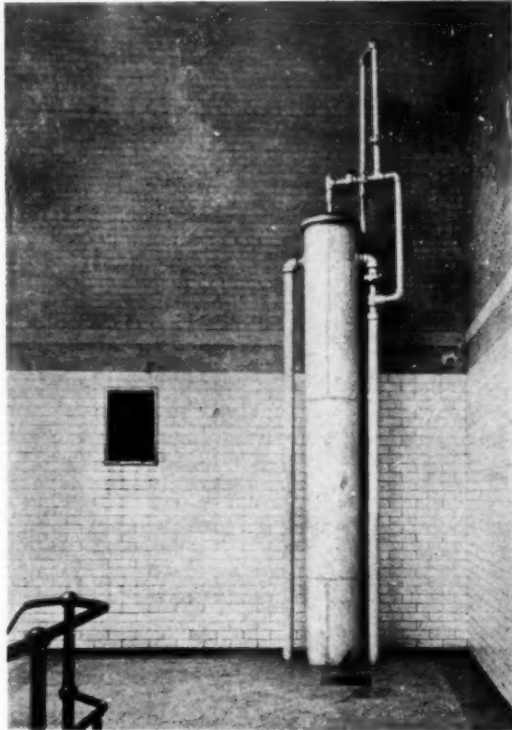
THE AMERICAN ARCHITECT

ozone, and in the discharge from the tower to the pool the downward flow of the water through the discharge pipe sucks with it the ozonated air, repeating the action that took place in the pre-mixing tube. The combined result being such an intermingling of water and ozone that the water is returned to the pool absolutely sterile.

It was found that when the circulating pump was stopped that the air in the pre-mixing pipe rises and carries the water with it so that the water backed

and included no alteration of the general scheme. To accomplish the proper admixture of a fluid and a gas requires many intimate details, as a certain layout of pipes and their sizes, the particular location and adjustment of a valve and a multitude of other essentials that are only determined by experience. In developing an apparatus of this kind certain laws are established that must be followed in order to insure success.*

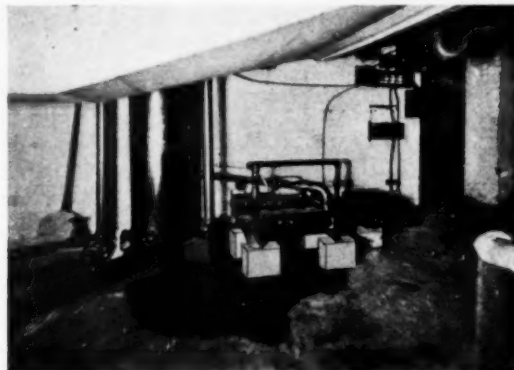
The mixing tower does not necessarily have to be placed in this particular relation to the pool. It could be sunk in a pit, be placed in the regular pump room, and in the case of a pool in an upper story the tower can remain in the basement. The shape of the tower might be changed to suit another condition, the basic requirement being that sufficient



The upper part of the mixing tower, showing the pipe for ozone above the tower and the junction with the water supply pipe to the right of the tower. The ejector is placed at this junction point. At the left is the pipe through which the ozonated water is conveyed to the pool.

down into the ozonator, but by the proper arrangement of pipes and valves, the water and ozone from this pre-mixing pipe is returned to the mixing tower without damage to the ozonator tubes.

To construct a proper working apparatus required numerous changes in the first installation. As in every other first application, unforeseen difficulties developed, and after careful study modifications were made until the whole apparatus functioned properly. These changes were all of a minor nature,



A view of the ozonating apparatus showing the lower portion of the mixing tower and the pipes from and to the pool at the left.

time be provided for the contact of the ozone and the water.

The proposition is a very flexible one, except in some apparently minor details, and can be installed in existing plants without costly changes, and, in any event, it requires but a small volume of space.

The cost of installation and operation is an important element, but secondary to the effectiveness of the method. Perfect purification must be had at any cost. The cost of installation during normal times would probably be at the rate of 3 cents per gallon of the swimming pool. This would vary with the cost of labor and materials. This cost would not include the circulating pump, strainer, filters, hot water heater and recirculating system of pipes. It would include the tower, ozonator and its appurtenances.

Alternating current must be supplied to the ozonator and for a six-tube ozone unit, which is

*The ingenious solution of this problem was accomplished by Willard A. Kitts, Jr., 233 Broadway, New York.

sufficient for 60,000-gallon pool, there is a current consumption of 3 kilowatts per day, which costs from 15 to 20 cents, based on the general price of 5 to 7 cents per kilowatt hour. If a direct current is supplied, a motor-generator must be used to convert it into an alternating current, which would slightly increase the operating cost. Actual current cost of operating the Twenty-third Street Bath is found to be approximately \$7.50 per month, based on a 5-cent rate. This is for a 60,000-gallon tank, recirculated and purified once each twenty-four hours. The cost of heating and recirculating is common to all methods of purification and costs the same for all of them.

The cost of water in New York City is at the rate of \$1 per 1000 cubic feet; thus, to fill the pool costs \$8 for water alone. To heat the water during the cold season from the temperature in the main to that of the pool requires an average expenditure of three tons of coal, costing about \$18. The cost of labor for cleaning the pool is about \$4. This will make a total cost of about \$30. In municipal pools, while there would probably be no reduction of the pay roll on account of other duties to which the attendants could be assigned, nevertheless a labor saving of at least \$4 is effected. Three attendants are occupied for about two and one-half hours in scrubbing out the pool.

These costs of operation and installation are estimated on the basis of one part of ozone per million parts of water, which under the average conditions that obtain in swimming pools allows 100 per cent safety factor in water sterilization.

The ozonizing process removes the necessity of frequently changing the water in the pool as is required when other methods of purification are used. Therefore the actual time in which the use of the pool is possible, is increased by about one-third over those pools which require frequent emptying, cleaning and refilling.

In conclusion, it appears that refiltration combined with disinfection of swimming pool water is standard procedure in the economic sanitary control of swimming pools. The methods of disinfection hitherto employed are objectionable on one score or another. Ultraviolet light in actual practice has proved ineffective; copper sulphate in low dilutions is unreliable and in high concentration is not only costly, but produces a water disagreeable to swim in; chlorine compounds, while effective as disinfectants, require a technical control usually not available in swimming pools, and when used in excess produce objectionable taste and odors in the water. The application of ozone to the purification of swimming pools is automatic in control, reliable in action and inexpensive in application.

The Effect of Lime in Concrete

THE Delaware State Highway Department has made tests on the use of hydrated lime in concrete roads. The results of these tests have been reported by G. W. Hutchinson, testing engineer, to Charles M. Upham, Assoc. M. Am. Soc. C. E., chief engineer of the department.

The test specimens were 6 in. by 12 in. cylinders and were made at the same time the concrete was being placed upon the roadbed. A chute mixer was used and a cylinder form was filled by holding it under the chute and deflecting the flow of concrete from the road into the form. All specimens of one mixture were taken from the same batch in the mixer.

The specimens were not tamped, but were struck off on top and then were covered in order to protect them from the rays of the sun, this being identical with the treatment given the road. After being covered for twenty-four hours they were buried at the side of the finished concrete road, and at the time when moist earth was thrown on the road the specimens were included under this covering. They were left in place until they were six months old and received the same treatment as the road during this period and then taken to be tested.

As the tests were started in November, it will be seen the specimens were subjected to fall, winter and spring periods. The consistency of the mixture was determined by the inspector and the testing engineer in accordance with their ideas of an ideal working consistency. The amount of water was not measured, as it was not practical under the circumstances, but the same consistency was maintained during the mixing by the agreement of opinions of the man running the mixer, the inspector and engineer. The specimens were poured when the consistency was unanimously agreed to by the three parties as being the same as that of the previously made specimens.

At the end of a six months' period the specimens were removed to the laboratories of Henry S. Spackman Engineering Company, Philadelphia, for testing.

COMPRESSIVE STRENGTH

Percentages of hydrated lime based upon the weight of Portland cement in the mixture.

0% lime	2½% lime	5% lime	7½% lime
lbs. per sq. in.	lbs. per sq. in.	lbs. per sq. in.	lbs. per sq. in.
3108	2908	3596	3514
2203	3640	4381	5092
2529	3476	3473	4498

2613 Avg. 3341 Avg. 3816 Avg. 4368 Avg.

In breaking under compression it was noted by the laboratory that failure of the coarse aggregate occurred in every case.

THE AMERICAN ARCHITECT

Of late much attention has been given to the volume of water used in mixing concrete. The result of using too much water and the effect upon top surfaces of concrete upon which a finishing surface is to be applied was discussed in *THE AMERICAN ARCHITECT* of August 7, p. 182.

Recent investigations have shown that the strength of concrete is governed largely by the volume ratio of water to cement. These investigations indicate that a ratio of 0.4 to 1 gives maximum strength, while a ratio of 2 to 1 gives practically no strength. A mixture containing just sufficient water to develop maximum strength is of too dry a consistency to permit of being worked economically. For this reason it is customary for architects and engineers to permit the use of larger quantities of water in order to facilitate expeditious construction. There is a tendency, however, to use too much water in order to make the concrete more easily handled, especially when it is placed by means of a tower and chute.

It has been found that by using hydrated lime in connection with concrete that this makes the mixture more plastic and more easily placed and with a less amount of water than is used in the ordinary mixture. This not only has the advantage of not destroying the strength of the concrete with an excess of water, but apparently from the tests made in Delaware the strength of the concrete is increased. The reasons for this increase in strength have been given as follows:

By the use of hydrated lime the plasticity of the mixture is increased with a less quantity of water than is required when no lime is used. This is easily demonstrated from the fact that it is impossible to lay brick with a thin joint of mortar composed of cement and sand alone. Such a mortar is termed "short," and it is impossible to spread it. The addition of a small percentage of lime will make this mortar very plastic and easily spread. The same thing will occur when lime is used in connection with concrete. Another reason is that the lime, being of a hygroscopic nature, absorbs water at the time of mixing. This water is held by the lime during the time that it is hardening. Cement, on the other hand, has an attraction for water during the period in which it seasons, and it will naturally draw the moisture from the lime and use it in the process of hydration, which will result in increased strength.

These tests are rather unique because of the fact that they were conducted under actual working conditions, the test specimens being taken directly from

the concrete as it was being placed. The results, therefore, give a true indication of the actual strength of the concrete in a finished road. In addition these test cylinders were cured under field conditions and do not have the advantage of being cured under water or in damp sand, as is usual in the laboratory. Under laboratory conditions of mixing and curing, maximum strengths can be obtained which it is impossible to obtain under field conditions. To allow for this depreciation due to field conditions it is necessary to use a factor of safety which is largely a matter of guesswork. For this reason these field tests are of particular interest, as they indicate the results which will be obtained in actual practice. The mixture used was 1:2:4, which is the usual mixture employed in reinforced concrete construction. It is to be hoped that further tests along this line will be made and under the same conditions.

Excess Water Causes Sand Streaks

THE sand streaks which are often seen on the face of concrete walls usually assume a fan shape, being wide at the top and pointed at the bottom. The surface of these streaks is made up of the sand grains which are not surrounded by cement but still are attached at the back to the concrete. These streaks are due to excess water, as noted and reported by D. A. Watt, in *Professional Memoirs* for July-August. Their unusual number in a piece of construction work caused special investigation of their cause to be made. In placing the concrete numerous spring-like bubbleings up of water were noted. These came from down in the mass to the top surface, and the water came up through what may be termed pin holes. The flow would continue for a few moments and when stopped would leave a small mound of cement on the surface. Apparently the weight of the concrete forced out the excess water, which carried with it some of the cement. This apparently explains the fact that no cement is found along the sides or at the bottom of sand streaks which are seen when the forms are struck. These streaks are more noticeable when steel forms are used, their smoother surface evidently offering less resistance to the upward movement of the water than the rougher wooden forms would present. This is another demonstration of the danger of using excess water in concrete construction—a use only justified to make a pouring record at the expense of good work.

Industrial Information

Roofing Paints and Compositions

The Monarch Paint Co., Cleveland, Ohio, has issued a leaflet describing "Hydro-Carbonite", a black paint for use on roofs and iron work. It is stated that but one coat of this paint is necessary to waterproof and protect a roof, even though small cracks or pin holes may have developed, and the makers guarantee it fire-resisting and proof against alkali and acid action. The material is also strongly advocated for use on bridges of iron, steel or wood, and engineers are said to endorse it for that purpose.

The material is ready for immediate use as it comes from the package, and is applied like varnish. It is claimed that one gallon of Hydro-Carbonite will cover about 300 square feet of metal surface, or 150 square feet of felt, paper, cement, brick, wood or canvas. The manufacturers who guarantee full protection by its use for six years, also assert that it possesses permanent gloss.

The same company is also producing "Sealtite", a plastic roofing and waterproofing compound sometimes called "Asbestos Roofing Cement." This comes in plastic form and is said to adjust itself readily to roofing needs, quickly and permanently sealing a leak, or forming a completely new, light-weight yet durable roof. This material is applicable to the same wide variety of materials as "Hydro-Carbonite." It is alleged to remain elastic for years, expanding and contracting with heat and cold, but never getting sticky or "tacky." The makers claim that it outwears both metal and composition roofing. It is advertised to weigh less than ten pounds to the gallon, to be heat resisting to a high degree, and to be impervious to sulphur fumes, acids and alkalies.

Other products supplied by this company are "Metalite", an anti-rust paint in colors, protecting against corrosion and yielding to the widest range of temperature; "Lion Concrete and Brick Coating", used to waterproof, preserve and decorate concrete, brick, stone or stucco walls; and "Gum Elastic Paint", a protective coating made in strong and permanent colors, for use on houses, factories, barns and other outside surfaces of wood, brick or metal.

Planning Exterior Color Schemes

In a recent issue of *The Dutch Boy Painter*, the house organ of the National Lead Company, offices in all principal cities, there are discussed many practical subjects. This journal presents in each issue "dollar coaxing" ideas and other short, timely suggestions for making, saving and otherwise exploiting the "almighty dollar." There are many valuable hints contained in these short articles. Such topics as "Filling Cracks in Terrazzo Floors," "House Painting" and "Planning Exterior Color Schemes" are taken up and treated both from the standpoint of the dealer and that of the builder.

Door Hangers

Full and complete information regarding all kinds of door hangers manufactured by the Coburn Trolley Track Mfg. Co., Holyoke, Mass., is presented in Catalog No. 46 of that company. How to order and how to use door tracks and door hangers for different purposes is told specifically, while all the varied types of door hangers, stays, guide rollers and steel tracks are illustrated, and prices are given for each in all sizes. There are also a number of types of house door hangers.

This company also issues a separate catalog—No. G-3—describing its complete line of garage door hangers. This book is illustrated with sectional line drawings, showing all types of fixtures clearly and readily.

Concrete Buildings on the Farm

Building the rat out of the corner, building municipal piggeries, putting a concrete icehouse on every farm and concrete milk houses are urged by the Portland Cement Association, which has offices in all principal cities. Most of these are good practical suggestions, and most of them have conservation arguments in their favor as well. A very good plan for a cement stave barn is shown in this booklet, accompanied by progress photographs which show what was actually accomplished by this mode of construction.