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PROJECT for LAKE FRONT DEVELOPMENT of the CITY of CHICAGO

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FOREWORD

WHEN about half a year ago I set foot in Chicago for the first time, I was quite often asked, "How do you like Chicago?" The question was, of course, conventional, and so naturally was the reply, "I certainly like it."

But should I put this question to myself and answer it, I should feel constrained to go deeper into the matter. And the answer would also be more difficult. If, for instance, I take the elevated to the South Side and see along the tracks the numberless rear "facades" with their more or less dilapidated wooden stairways—all begrimed with smoke and soot—I must honestly say, "I do not like Chicago at all." But, if, on the other hand, I make a round trip by automobile through all the beautiful parks on both the South, North and West sides, drive along tree-lined roads and pleasant groves, at times catching a glimpse of beautiful, wide-stretching Lake Michigan, then, indeed, I feel that Chicago is a fair metropolis.

That, however, which impresses one most strongly as he drives around is the possibility Chicago offers of becoming in time one of the world's most beautiful cities.

With its lake front of about twenty miles exclusive of the suburbs, I know no other city that presents such abundant opportunity for monumental as well as picturesque development. Sections, already built up, will in the near future have to be rebuilt because of the city's rapid expansion, and can by sound and unified effort—perhaps also by proper changes in the city plan—be made into beautiful neighborhoods with parks, open spaces, etc., this even in fairly central parts of the city.

But unique it is that almost in the heart and focus of the city there is an enormous untouched expanse, which if improved in a happy manner

could be gradually made into one of the world's most monumental places.

This possibility of making Chicago a city beautiful on a truly grand scale was most strikingly visualized by Mr. Burnham in the city plan he worked out about fifteen years ago. It is a splendid and grandiose project and ought to be adopted in its entirety as a foundation for a rational re-creation of Chicago.

Before I came to Chicago, or even had a thought of ever coming to the United States, I was, as a town builder, professionally familiar with Chicago's official city plan. I had also studied the aforementioned improvement project in all its details. The heart of Mr. Burnham's plan was the laying out of Grant Park and in connection with it a broad monumental park boulevard running West at Congress Street. Upon my arrival in Chicago I expected to see Grant Park ready and the boulevard partly finished, or at least in the process of being built. But Grant Park lay untouched and the monumental boulevard seemed to have been forgotten. The Burnham dream seemed in large part, perhaps altogether, to have met the same fate that overtakes most beautiful dreams in these days. Their realization is delayed until it is too late; or else their magnificence and beauty are so overwhelming that one loses faith in them.

The proposed boulevard is an attractive idea and the city's beauty would have been much enhanced had it materialized. However, it was probably found to be too costly.

I am not sufficiently familiar with early Chicago conditions to form an idea of the possibility of carrying out such a boulevard project through the most central part of the city. It seems, however, that it is now too late and that the project, in so far as it affects the loop at least, at the present

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time, fifteen years later, can no longer be executed.

It is the monumental park boulevard and its joining with Grant Park that forms the basis of the layout of the latter, giving it an East-West center line.

During the time that has passed since the Burnham plan was created, many new and weighty interests have grown up around the Grant Park question, and it must now be considered from the angles which these new interests present.

The town planner looks upon a town as the physician upon his patient. He studies and examines it from all viewpoints and endeavors to ascertain where the fault lies and how to remedy it. So it happened to me. When I saw that the Grant Park question had entered a new phase, and perceived the many new problems that had entered into it, my brain instinctively and subconsciously set to work and new views unfolded themselves.

A perspective sketch of Michigan Avenue, according to the Burnham plan, arises in my memory. I see elegant ladies and gentlemen promenading the Avenue in light, colorful costumes, and as a background for the whole, Grant Park in sunny splendor. Instead of finding this, I see the street overcrowded with stalled automobiles awaiting their turn to proceed—at least for a space. Thus the picture has changed in fifteen years! And I ask myself, "What will it be like after another fifteen years have passed?"

I stayed for a long time at the Blackstone Hotel and consequently had to cross Michigan Avenue several times daily. As time passed, the outlines of a picture of the future began to take form and shape itself in my mind as to the possibilities, practical as well as aesthetic, that lay hidden in the tract between the Avenue and Lake Michigan. This picture was only the activity of my fancy, however, and I had at that time not the slightest idea of developing it into a plan. I felt more or less a stranger who was not concerned in the matter directly. Furthermore, I was fully aware that the working out of such a project would require thorough preparatory study, aside from the "getting at" of the various phases and viewpoints which must necessarily be considered. Nevertheless the idea would have remained undeveloped had I not one day seen published a proposal to regulate the tract owned by the Illinois Central Railroad lying between Grant Park and the Chicago River. The project was perhaps in itself meritorious—that I shall not discuss now—but it took into account only the area mentioned; and what was worse, it spoiled the picture my fancy had created. The possibilities lying dormant in Grant Park and its surroundings would be made sterile by the project I saw published.

After long consideration pro and con, I at last

decided to work out my plan for the development of Chicago's lake front.

I have worked entirely alone without approaching in any manner the interests that own the sections affected by the project or the officials and persons who have the plans for the improvement in hand. I have deliberately done this in order that I might be unhampered in my work and see the things more objectively. I have often been called upon as an expert on city planning in foreign communities, and I have observed that the outsider sees the question differently from the one who has long lived in the place and has formed a fixed opinion. I do not mean to say that the resident has not a truer insight into the question, for he has usually based his opinion on his knowledge of local conditions. But, on the other hand, it is possible that such an opinion is an individual or collective prejudice, and then it is well to have the aid of a more objective view.

The shape my plan has taken is in a large measure influenced by traffic problems, more especially the solution of the automobile traffic problem. Hence I have felt compelled to consider areas that do not directly touch the Grant Park neighborhood, namely, that part of the city lying between the Chicago River and Lincoln Park, and also sections far to the South of Grant Park. The regulations and street extensions proposed, I have planned mainly with traffic, technical and architectural advantages in view. Whether or not they can be practically executed in that way is difficult to foresee. From my own experience I know that the main difficulty in carrying out street extensions is the lack of co-operation of property owners. However, these new streets can be planned in many ways both as to location and to construction, and thereby a spirit of competition can be stirred in the owners. It is to their interest to have their houses situated along better streets.

My plan for changes in the various railroad systems is to be considered merely schematic. I do not lay claim to knowledge of technical railroad questions beyond what is necessary for a city planner, and furthermore, so far as my observations go, the conditions in this field are quite unlike those in Europe.

In certain parts I have worked out my plan in directions contrary to the general tendency. Thus, for instance, I have proposed some buildings devoted to cultural aims for Grant Park although I know that a law prohibits buildings in it beyond a certain height limit, and though I have learned that it is the citizens' wish—how generally I do not know—that Grant Park shall be and remain free of all building. Why I have done so, I shall explain later.

I have also made certain changes in the architectural planning of sections which the South Park Commission has already projected and which

are not a part of Grant Park. This is not to be considered lack of respect, on my part, for the work already done. Such is not the case, and furthermore, I too highly esteem the Burnham project, which is the basis for the shaping of these territories, to desire any alterations in its execution. In working out my plan I have had to start from new premises, and my chief aim has been to achieve a unified style.

Besides, I know that some projects are near

execution in certain parts of the section my plan embraces, and I assume that much more is under consideration which will conflict with my plan. However, I have deliberately steered clear even of these in order to obtain a comprehensive view of the problem in all its ramifications. I have kept within the limits of the existing and the possible.

I have not aimed to present that plan which shall be executed, but one that can be.

INTRODUCTION

SINCE my project concerns only Grant Park and its surroundings, it has not been necessary for me to speculate upon Chicago's city plan as a whole and its guiding ideas. That would have carried me too far. It is only the region near Grant Park, to the North, South and West, that influences the plan, and my studies have not gone beyond that section.

Remarkable, in the large American cities, is the strong concentration of all commercial activities in a small central area. It would be a good thing if such concentration could be prevented in city planning and several centers be provided as in large European cities. Then several difficulties in communication could be more easily remedied. I feel, however, that such an improvement would be too violent an operative attack on American psychology and the soul of its large cities. The attempt would be too artificial and would not lead to happy results.

This tendency to concentration is strongly marked in Chicago, its so-called loop being very restricted relative to the city's large total area. It comprises at present only about forty city blocks, and one is compelled to look for an expansion.

Its extension Westward is circumscribed by various causes, chief among them the numerous railroads situated there. How far the loop may expand to the South depends mainly on the development of the railways here, and in connection therewith, the straightening of the Chicago River South of Roosevelt Road.

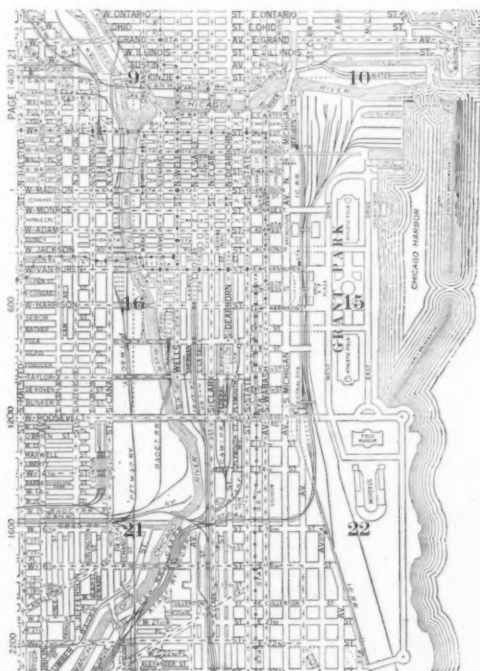
The greatest possibility of development must be anticipated on the North.

Already we note here a decided tendency toward expansion in connection with the new North Michigan Avenue and the Link Bridge across the river. This tendency will be further strengthened by the Illinois Central's decision to release its property East of North Michigan Avenue and North of Randolph Street for the erection of modern business buildings.

It is only a question of time when it will be more generally understood that the Chicago River has lost its character of river and is simply a canal, and that the small water traffic it carries does not necessitate lift bridges. With the introduction of fixed bridges the expansion of the loop enters a new phase.

The section beyond the river, North of and nearest to the Illinois Central's above mentioned property, will gradually become too expensive for manufacturing and harbor purposes, and thus we shall have to anticipate here, too, at least to a certain degree, an invasion of commercial life. So much for the sections to the West and North of Grant Park.

If we turn our attention to the South we find here, in the Burnham project, the lagoon park an already settled question about to be put into execution. Between this park and the city sections to the West lie the Illinois Central's wide railroad yards. Since this road will be electrified in the near future, it is probably only a question of time when the company will be given air rights above its property. The advantage of this is evident. The park gains by coming into direct con-



SKETCH MAP OF A SECTION OF THE CITY OF CHICAGO NORTH FROM TWENTY-THIRD TO ERIE STREETS AND WEST FROM GRANT PARK TO HALSTED STREET

tact with a built-up section, and the section West of the railroad—now mainly adapted to manufacturing—will rise in value and by degrees develop into a business and residential district; that is, we may see grow up here a new and modern part of the city.

I do not know what steps the Illinois Central has taken toward the electrification of its system nor its program for the future. It seems to me, however, that as electrification will take place, and if the company is given air rights above the area in question, it would be reasonable, regardless of the cost of insulation against the ground water, to depress at once the track system so deeply that it could be built over. In my plan I have proposed depression to full depth, so that the street built over the railroad line would not

need to be raised. Alternatively, a middle road might be taken, by depressing to a less depth, and give the streets a correspondingly higher level.

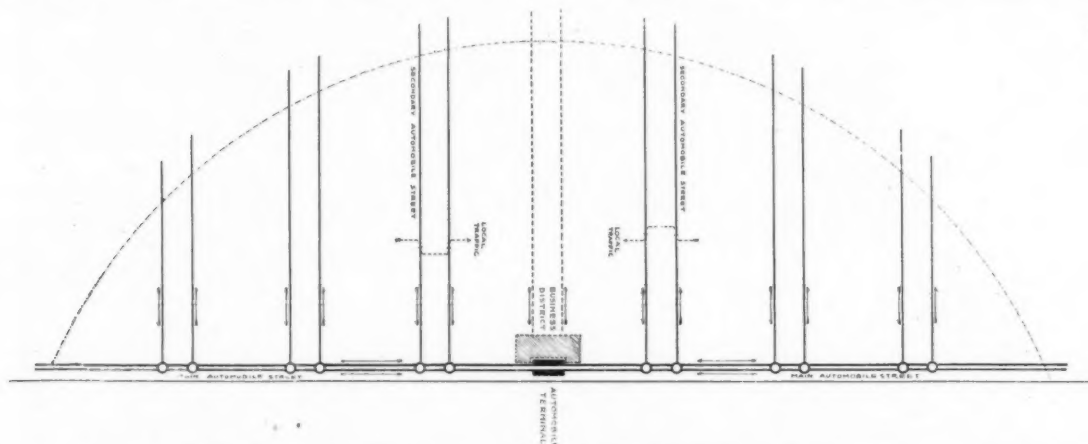
The elevated road projected by the railroad company in order to get an outlet to the West, I have in my plan converted into a tunnel. I have not surveyed the proposed line in its full length in order to determine how it might be located as a tunnel to the best advantage. It may be taken for granted, however, that the sinking of the line does not meet technical impossibilities, especially when the altogether too complex railroad trackage Southwest of the loop will be regulated and re-designed. Besides, an alternative plan, which I shall discuss later, will in my opinion make this Westward communication line unnecessary.

AUTOMOBILE TRAFFIC

WITHIN the last few years the automobile traffic has developed to such an extent in our large cities that one must anticipate numerous changes in city planning before this traffic can be so regulated that it is as effective as possible without hindering other means of

and the lack of broad avenues that would join more important sections with one another.

In Chicago the traffic problem seems very serious, especially in the restricted loop. At present, it is a time-wasting and nerve-irritating experience for a person from the city's peripheral section to



SCHEME FOR MOVEMENT OF AUTOMOBILE TRAFFIC, SHOWING RELATION BETWEEN MAIN AND SECONDARY AUTOMOBILE STREETS

communication. This problem is still comparatively easy to solve in cities that have not yet reached too large a size, but where it is probable that the city will have a rapid growth, it would be prudent to take all necessary steps toward the development of the traffic system in a manner that will keep pace with the city's expansion.

In the large cities the question is more involved. And in this respect the American cities are in a difficult position, principally for two reasons. First, automobile driving is much more common here than in the cities on the other side of the Atlantic; and secondly, the city plans are not conducive to an easy regulation of the traffic. It is the strictly carried out system of square blocks

get to and through the loop. And the situation grows worse year by year.

Michigan Avenue, which is the main thoroughfare to and from the loop, is so encumbered with traffic at present that it cannot carry any more. The recently erected signal towers may possibly ameliorate the situation, especially so that the pedestrian may more easily traverse the street, but as for the automobile traffic it will soon be seen that this system has been only a palliative.

One outlet Michigan Avenue will obtain when South Water Street is double-decked, for a large part of the loop-bound traffic will take this new line. However, this will not relieve North Michigan Avenue. If we look forward to the time when

the sections on both sides of the Avenue have been built up, a considerable cross traffic will have developed and pedestrian traffic become more difficult, and the through traffic will evidently suffer. It seems to me, however, that this Avenue ought to become a business street par preference and that even now through traffic should be diverted from it.

For South Michigan Avenue the widened Roosevelt Road will serve as a traffic outlet; but otherwise the same reservations hold good for this part of the Avenue as for that on the North side.

The proposed outlets Northward and Southward along the shore of the lake I do not believe will be efficient and will only cause increased crossing difficulties at Michigan Avenue.

Another problem hard to solve in connection with the automobile traffic is that of parking the cars in the loop. The parking is now mainly done in garages, some of them fairly high buildings, so that elevators, etc., are necessary in order to place the cars. With the growth of the loop and the rise in ground values, this sort of parking will surely become utterly impossible both to car owners and to traffic.

Parking of cars along the sidewalks is most obstructive of street traffic. It cannot be avoided; such cars are parked only for a short time while the passenger transacts some business nearby. Parking for any length of time is, of course, theoretically prohibited, but in the interest of traffic it should be so also in practice.

Then, we also have parking in Grant Park. This is practicable so long as the park remains in its present state. However, when it becomes a park worthy of its situation—and this ought to happen very soon—no parking space can be counted on there.

The questions of relief from traffic congestion in the streets, and of suitably arranged parking space for present needs and future expansion, have been much discussed by the various commissions that handle traffic problems. I do not know what plans may have been proposed to this end. One project that I have heard mentioned contemplates raising pedestrian traffic one story by the building of elevated sidewalks along the building walls and joining these walks across the street. By this means foot passengers could move more freely as they would be independent of automobile traffic, and the latter would have a wider and unencumbered road; besides, parking could be allowed under the sidewalks. Rationally executed, such a plan would undoubtedly aid traffic in general in the loop. In such parts of the loop and its future extension, that are not as yet closely built up and where new buildings will be erected, the realization of this idea is more easy, if the design and construction of the elevated walks, etc., are taken care of in advance.

More difficult is the change in the crowded dis-

trict, with all the alterations in ground floors this project would demand. Furthermore, it would undoubtedly be very costly to the city, for in such matters one dare not count on much assistance on the part of the property owners.

It is possible, however, that the execution of this plan, even in such districts, will eventually force itself upon the public, and this principally in the interest of foot traffic. The enormous yearly increasing toll of lives and injuries exacted by automobile traffic speaks plainly in favor of such a solution.

Automobile traffic would be benefited by the wider road at its disposal, but the street crossing jams cannot be avoided by this means; and upon closer investigation it will be found that the parking problem is not solved thereby.

If we assume the present loop to contain forty blocks we have 60,000 linear feet of facade. Reserving fifty per cent of this for access from street to shops and building entrances, we can count on parking space in the loop for only three thousand cars, allotting ten feet to each. But all this space should really be allowed only for automobiles that have short errands in the immediate neighborhood.

I have also heard it mentioned that parking space should be provided under Grant Park. This seems a happy thought. But if Michigan Avenue is still to serve as the main thoroughfare and the largest part of the loop parking be done under Grant Park, the traffic on the Avenue will evidently be still more hindered by new traverses.

But if we could locate a new traffic channel which properly arranged would serve to carry the traffic between a sufficiently large parking space under Grant Park and the city's peripheral sections, and then, so arrange it that Michigan Avenue became a street that simply carried the traffic between the new thoroughfare and the parking spaces on one hand, and the loop on the other, we would be on the right road. Then we could make the parking space a sort of automobile terminal, where by far the largest number of automobiles coming into the loop from the outskirts would stop. That would mean a considerable reduction in motor traffic within the loop, and the problem of parking space would be solved.

It is along these lines we must act: Not aim to seek the remedy for the traffic conditions and parking difficulties within the loop itself, but rather take steps to provide for the greatest possible diversion of the traffic from the loop. And this must be done in such a manner that the improvement is not only theoretical, but is effective in practice and for a long time to come.

First, all through traffic should be diverted from the loop and Michigan Avenue, and then the greatest possible part of the traffic pertaining to the loop itself should be so regulated that it would

become more convenient and advantageous to the drivers not to crowd the loop but park their cars outside of it, yet in its immediate neighborhood.

I shall now detail this idea and as a beginning theoretically examine its practicability. At the same time I shall have to specify the conditions which a rationally executed motor traffic regulation must fulfill in order to function as well in the future with its heavily increased traffic.

I have been told that about 25,000 automobiles daily seek the loop. I do not know whether this figure is too high or too low, but it is safe to say that within a short time we shall have to reckon with far larger numbers than at present, and we would have to do it even now but for the fact that a large percentage of car owners dare not enter the loop. Consequently, if the system is improved the traffic to the loop will increase rapidly, and the more rational the improvement has been, the more generally and quickly will car owners make greater use of their cars in traveling to the loop.

This must not deter us, however. The amelioration of traffic conditions carries with it the advantage that the greatest possible number of car owners will be able to use their motor cars when going to the loop, and none of our regulations must be of such a nature as to create any inconvenience. It is the light and rapid automobile traffic I am here referring to. The heavy freight truck should have its own road and this can be taken care of by municipal rules.

As to light motor traffic, we have long been inclined to believe that it is only a development of horse traffic and that streets built for the latter kind would suffice for autos. This was so at first when automobiles were not so common.

Now speed is the automobile's most important feature, however, and when we theoretically design a traffic system for them, speed must first of all be taken into consideration. But this we cannot do without laying out a special system of thoroughfares for speedy cars alone, so, for instance, that where the traffic is heaviest and great speed is desirable main automobile streets are laid out, and where less speed and less traffic are to be met, secondary streets are placed. The main automobile street should be free from other vehicle and pedestrian traffic, and be wide. Besides, crossings should be avoided on it. The secondary streets and their construction depend on the desired speed and on local conditions.

How and where this street system could be located in Chicago's present, and future increased territory, I am not in a position to discuss as I

know too little of the city. I shall only schematically advance some viewpoints on the subject.

As the main artery of the whole system, a main automobile street should be built in a North-South direction, so that it can take in the greatest possible part of both through and loop-bound traffic. This street should be connected by "gyration" points with streets from the West and also at convenient points with Michigan Avenue, and should tangent the above mentioned automobile terminal. It should run as straight and direct as possible.

The long park "girdle" that is projected and partly in existence along the shore of Lake Michigan is the best for the construction of such a main. It should, at least for the greater part of its length, be built at a lower level than the park itself, so that the local traffic in the park would not be disturbed by the speed traffic. This is necessary for the park's sake, for otherwise the principal aim of the park is lost. We see Lincoln Park already losing its character of recreation and promenade ground for the surrounding residential districts through the more and more increasing rapid traffic that seeks it. But still more necessary is this arrangement for the speed traffic itself.

The construction of such a depressed road need not be over costly, since where parks are not yet made both can be built at the same time. The bridges over this road which will accommodate local traffic between the park and shore will be mostly for foot passengers and, therefore, not expensive.

In order further to develop this traffic route, one may select North, as well as South of the loop, suitable West-East streets as secondary automobile streets. These should be one-way streets and should join the main, as above stated, by gyration. In districts farther away from the loop the traffic conditions are not yet so bad that this cannot be accomplished. Similarly, one could select West of the loop some North-South streets to serve as secondaries, and if possible arrange gyration at crossing points with the East-West secondaries. By prohibiting direct crossing of these streets at any but gyration points, it would be possible to permit greater speed on them than now. These secondary automobile streets are the simplest and least costly solution of the problem. Yet, with the growth of the city, the system will be found inadequate.

It would be prudent, therefore, at present to look for areas where in the future could be laid out streets, prohibited to all other traffic, for rapid motor transit and project them so as to connect with the main automobile street.

THE AUTOMOBILE TERMINAL

IN order that the automobile terminal should become, in practice, an effective unloading point for car traffic to the loop, it should be planned on these principles.

1. It should be of sufficient size.
2. The entrances should be so arranged that they can accommodate far more cars than the maximum traffic the main automobile street can

carry; this, in order to avoid blocking at the entrances.

3. The placing of cars within the garages should proceed faster and in greater quantities than the entrances can admit cars.

4. No crossings, quick turns, or backing should be permitted.

5. The automobiles should be at once easily, without crossing and backing, placed in starting position for leaving.

6. Exits should be separate from entrances and so arranged that cars can pass them at high speed and join the stream of traffic on the main automobile street.

7. A signal system should be provided enabling a driver on the main automobile street to see at once in which part of the garage parking space is to be had; indicating immediately upon parking of a car that the space had been occupied, and giving the time of leaving, etc.

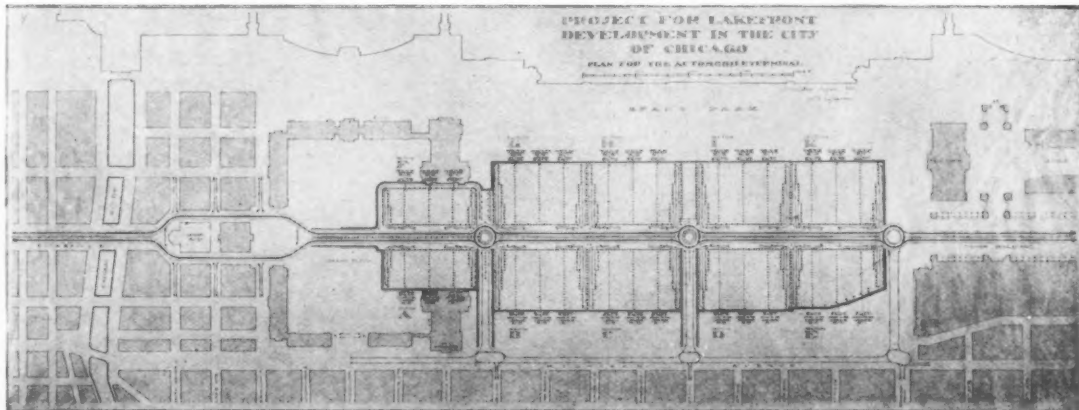
daily work. He will prefer to park his car at the terminal and thus will contribute to ease loop traffic.

I would not deny, however, that other garages might serve other autoists, particularly from the West side, and all those who have their work in parts of the loop far distant from Grant Park. But these garages, too, should have the character of terminals, and be arranged on such a plan that no traffic obstruction can occur outside of them.

PROGRAM FOR IMPROVEMENT OF GRANT PARK AND NEIGHBORING AREAS

As I have presented in principle the viewpoints which are to be considered in order to bring about traffic improvement in the loop and systematizing of motor traffic, I have now to present other points that are to be taken into account in the planning of Grant Park and nearby districts.

I shall consider them as follows:



PLAN FOR THE AUTOMOBILE TERMINAL

The important consideration in planning this terminal is that it should be possible for the car owner to do everything without assistance from the personnel

8. Owners and drivers should be able to reach Michigan Avenue on foot, easily and under shelter, from each parking space.

9. A simple marking system should be devised so that each parking space can be easily designated and found.

The important consideration in planning this terminal is that it should be possible for the car owner to do everything without assistance from the personnel. For if we can arrange it so that the motorist, arrived in his parking space at good speed, can leave for his office at once and as easily and without any waiting depart, it becomes to him an appreciable saving in time and therefore an advantage, compared with the slow traffic under the present system, the interrupted passage through the loop and the time-wasting system at garages. The saving of time is of especial value to every one who has to reach the loop for his

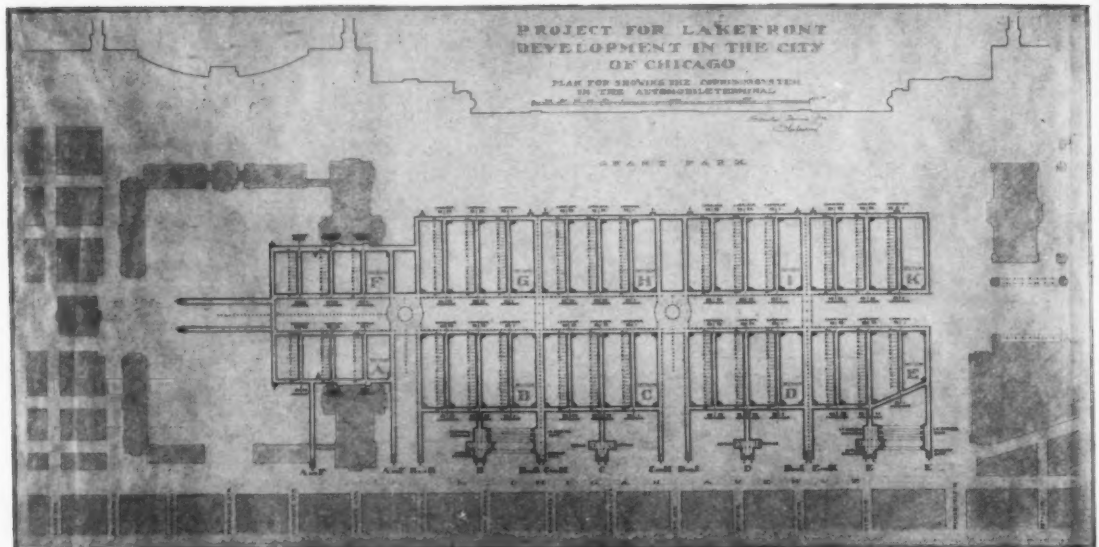
1. The project of the above mentioned automobile street and the car terminal.

2. The planning of the park proper so that no car traffic will be on the park level, except that along the shore close to the lake. The park should be reserved as a recreation and promenade ground for citizens.

3. The park and its surroundings should be so planned that they form an architectural whole and possess a monumentality befitting one of the world's largest cities.

4. The project should be such that a working plan can be made for its successive realization.

5. The project should be so worked out that a profitable financial plan for its prosecution can be made up, that is, so that the whole project will finance itself. In this respect the principle of all good business should be observed, namely, that all interested parties should draw advantage from it.



PLAN SHOWING CORRIDOR SYSTEM IN THE AUTOMOBILE TERMINAL

DESCRIPTION OF THE PROJECT

THE MAIN AUTOMOBILE STREET

THIS street runs from the North through Lincoln Park and that park extension I have imagined created by filling in along the shore opposite Lake Shore Drive and the Drake Hotel, and goes through the blocks South of the park in the Fairbanks Street line. The latter I have widened so that, on either side of the automobile drive, local traffic streets can be arranged and connected with each other by bridges over the low-level main automobile street. The wide street thus obtained I have given the name of Fairbanks Boulevard.

In its Southern part this boulevard rises to the same level as the local streets, forms into a bridge at the Chicago River and South of it expands into Central Plaza. At this Plaza contact is made with local traffic on both sides of it. The main automobile street divides here into two branches, one on either side of the tall hotel building I have proposed between Central Plaza and Grant Plaza South of it. Foot traffic is here provided for by elevated sidewalks.

South of the hotel the two branches join, the street (Grant Boulevard) again is depressed to a lower level and runs parallel to Grant Park's center line through the automobile terminal which lies on both sides of it. In this stretch we have by means of gyration contact with Michigan Avenue at three points: Art Institute Boulevard just South of this institution, Fountain Boulevard on a line with Seventh Street and at Roosevelt Road.

At the last mentioned point of gyration the street again rises to ground level and runs on in the same direction between the Field Museum and

the Illinois Central Station, now under the name of Tower Boulevard.

At the crossing with Sixteenth Street another gyration point is arranged and the street turns Eastward immediately South of the Stadium and runs through Lagoon Park parallel to the Illinois Central tracks at low level. Foot traffic across the automobile street is by means of elevated sidewalks.

At the gyration point at Sixteenth Street one branch of the automobile street goes straight South, still under the name of Tower Boulevard, and expands at Twenty-second Street into South Plaza, at the South side of which I have proposed Chicago Tower as a background for the long thoroughfare formed by Grant Boulevard and Tower Boulevard.

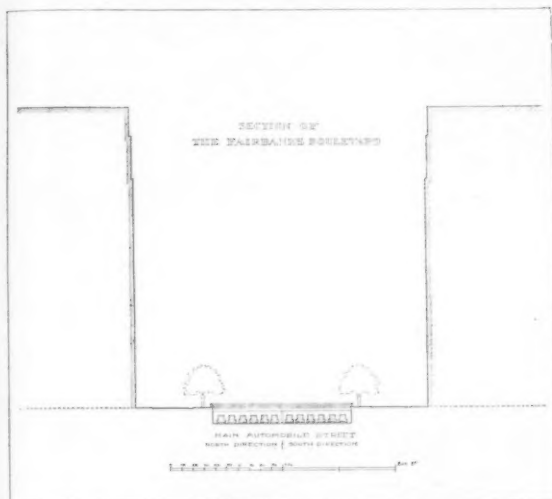
East of South Plaza the traffic branch running through Tower Boulevard continues along the line of South Park Boulevard, which is to be widened, and its continuation, Grant Boulevard.

The main automobile street is projected as a twin drive, one half for South-bound, and the other for North-bound traffic. Its total width is 120 feet, calculated to accommodate twelve cars, six in each direction. The speed permitted on the street self-evidently depends on the momentary density of the traffic, but may with lighter traffic be set as high as forty miles an hour. The theoretical maximum capacity of the street should be calculated at the gyration points where the speed is reduced. If the speed at these points is taken as ten miles we arrive at a theoretical capacity of 20,000 automobiles per hour, or if we assume fifteen traffic hours in twenty-four, 300,000 cars for one day and night. The traffic capacity of this street should therefore, with respect to speed and

density, be sufficient, even though it has to carry all through traffic from the city's North and Northwest sections on the one hand, and the South and Southeast sections on the other, and over and above it all the traffic from these parts that is bound for the loop and the automobile terminal.

THE AUTOMOBILE TERMINAL

The terminal is planned in ten sections (A, B, C, D, E, F, G, H, I, and K), the first five situated



SECTION OF FAIRBANKS BOULEVARD

This main automobile street, running through Lincoln Park, is created by filling in along the shore, and goes through the blocks South of the Park in the Fairbanks Street line. The wide street thus obtained I have given the name of Fairbanks Boulevard

on the West side of the main automobile street, and the remainder on the East side.

Each of these sections is in three stories (levels A, B, and C). The entrance to each story in each section is by a twenty-three foot wide ramp, calculated to accommodate two cars, one beside the other. The ramps to level A are horizontal, those to level B have a rise of 1 in 27 and to level C, 1 in 17. The ramps are designed with only a slight curve and run conveniently in relation to the traffic direction on the main automobile street so that it is possible to run a car onto the ramp from the street without appreciably reducing the speed.

Thus we have for each section three ramps, each wide enough for two cars, and the whole of the traffic on the street can therefore run into the same section without blocking either in the street or on the ramps.

At the end of each ramp are three 23-foot wide entrances (excepting in sections A and F, which are smaller and have only two entrances). Each of these leads to seven parking streets; thus

Entrance A—G, to streets A, B, C, D, E, F and G;

Entrance H—N, to streets H, I, J, K, L, M and N; and

Entrance O—W, to streets O, P, R, S, T, U and W.

Thus, one runs at comparatively high speed from the ramp through one of the entrances, and thence again on a curve of a 30-foot radius, onto one of the parking streets, and the car is here placed slantingly on the right side of the street. As the exit street lies ahead of the car, the automobile is in a starting position for the departure. The exit from the sections is done in the same fashion as the entrance. One passes out at the other end of the parking street on a 30-foot curve, through a 23-foot wide exit onto ramps of the same width and gradient as the entrance ramps. The departure can therefore be made at the same speed as the arrival and the traffic on the street is joined without delay.

From the parking place one has to pass only a few cars (as a rule a maximum of twelve) to reach a stairway that leads to a system of corridors above the garages. These corridors lead to Michigan Avenue, where another stairway lands one on the East sidewalk. They are connected at various points with the park above, so that in Summer or when the weather is fair, one can walk through the park to Michigan Avenue.

The corridor system has two classes. First, those which connect the garage sections with one another and with Michigan Avenue, and which at two points form connections to the Illinois Central Suburban Station and to the proposed underground city railway; and secondly, the stair corridors which connect with the stairways from the parking streets.

Each section has three stair corridors:

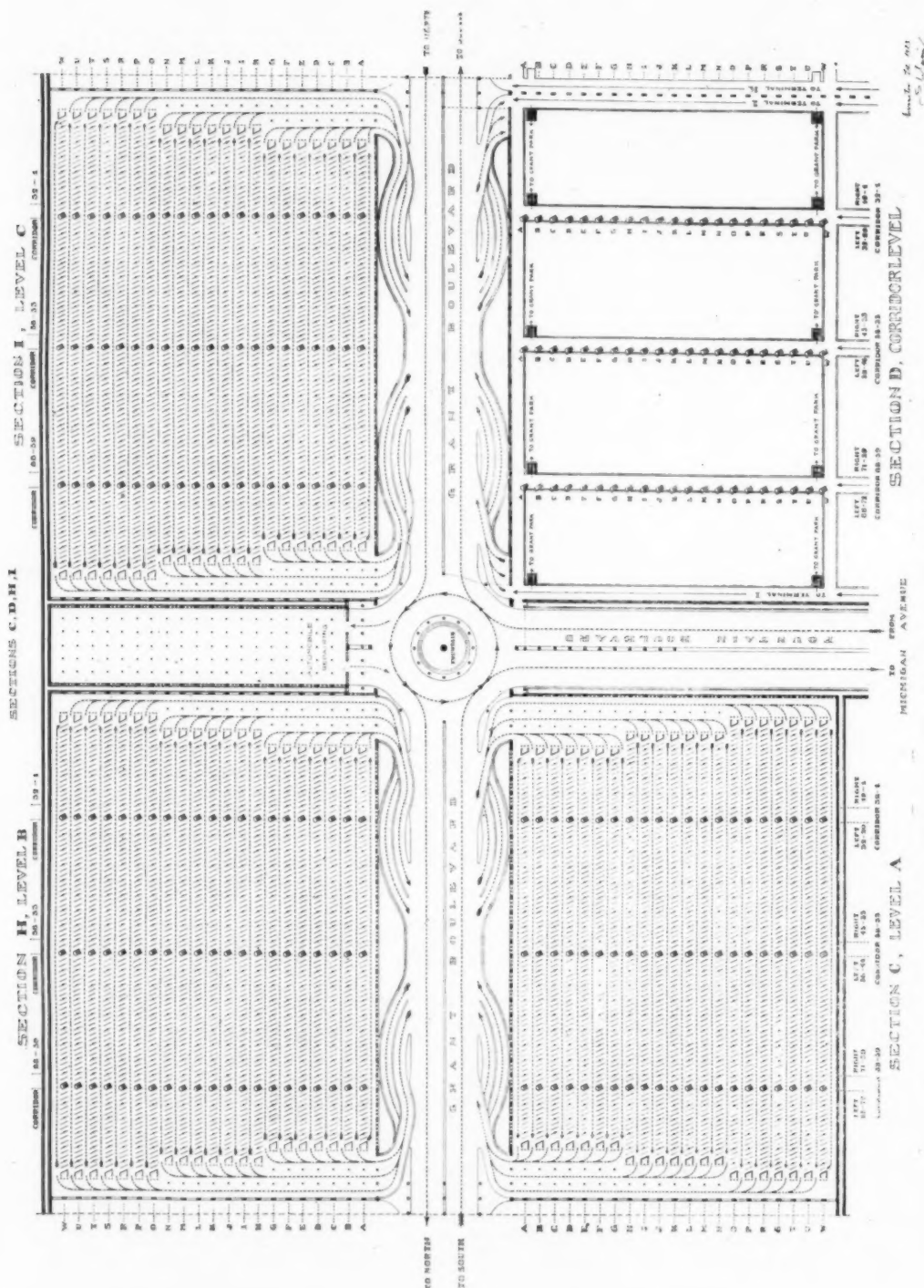
Corridor 1-32, leading to and from parking space 1-32, of which 1 to 19 are on the right side, and 20 to 32 on the left side as seen from Michigan Avenue;

Corridor 33-58, leading to and from parking spaces 33-58, of which 33 to 45 are on the right and 46 to 58 on the left side; and

Corridor 59-88, leading to and from parking spaces 59-88, of which 59 to 71 are on the right side and 72 to 88 on the left side.

By such a system it is possible to designate each parking space in the whole terminal with three letters and one numeral, for instance: CAF27 means section C, level A, parking street F, 27 being the number of the parking space. Thus it is easy to find the place where an automobile is parked. You walk from Michigan Avenue by the corridor that leads to section C, thence to the stair corridor 1-32 and continue by stairway F to level A, and there you find the place after having passed seven parked cars.

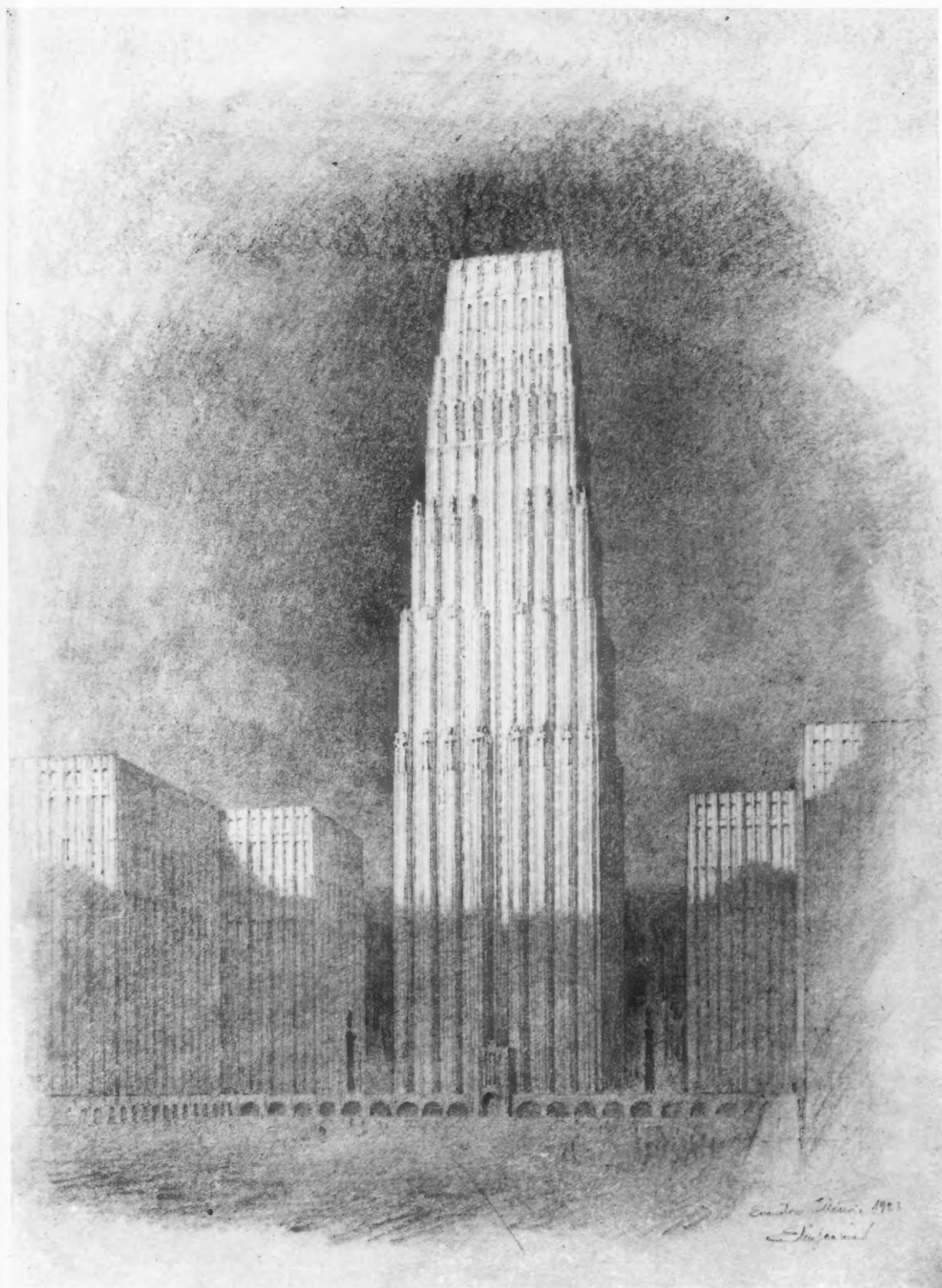
At the beginning of each entrance ramp a signal system is arranged, with different colored lights, so



PLAN FOR THE AUTOMOBILE TERMINAL—SECTIONS C, D, H AND I
PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO

ELIEL SAARINEN, ARCHITECT

This terminal is planned in ten sections, the first five located on West side of main auto mobile street, the second five on East side

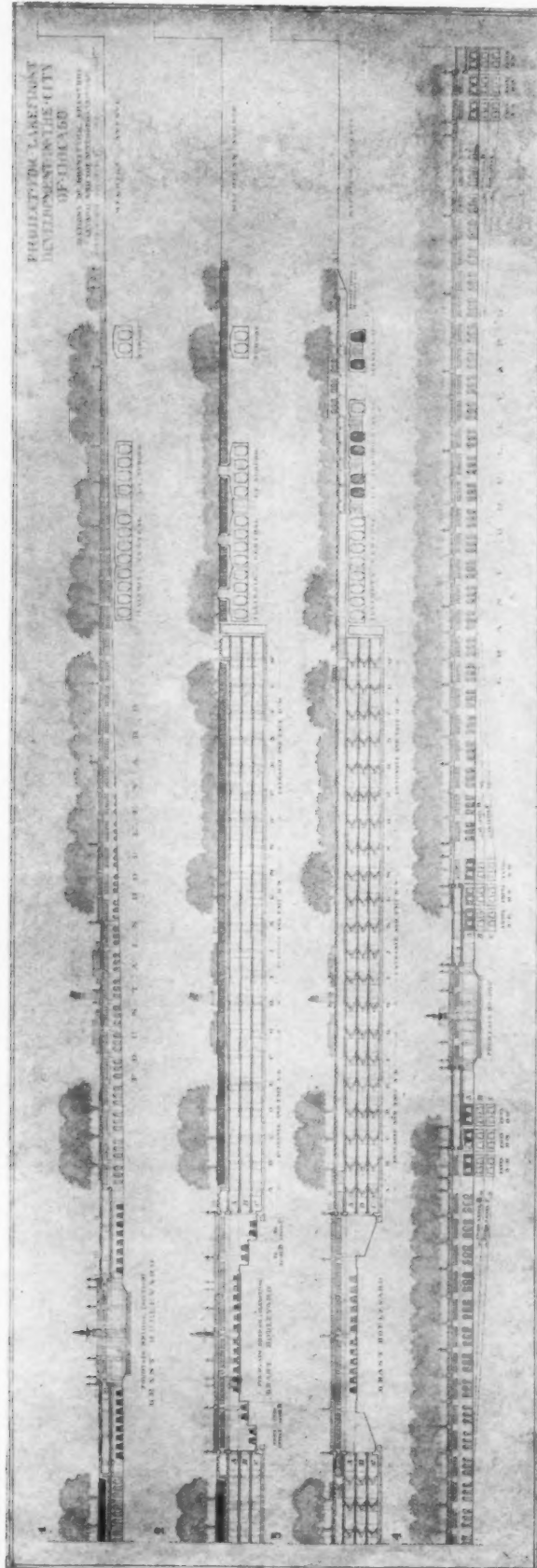


PERSPECTIVE OF CHICAGO TOWER

PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO

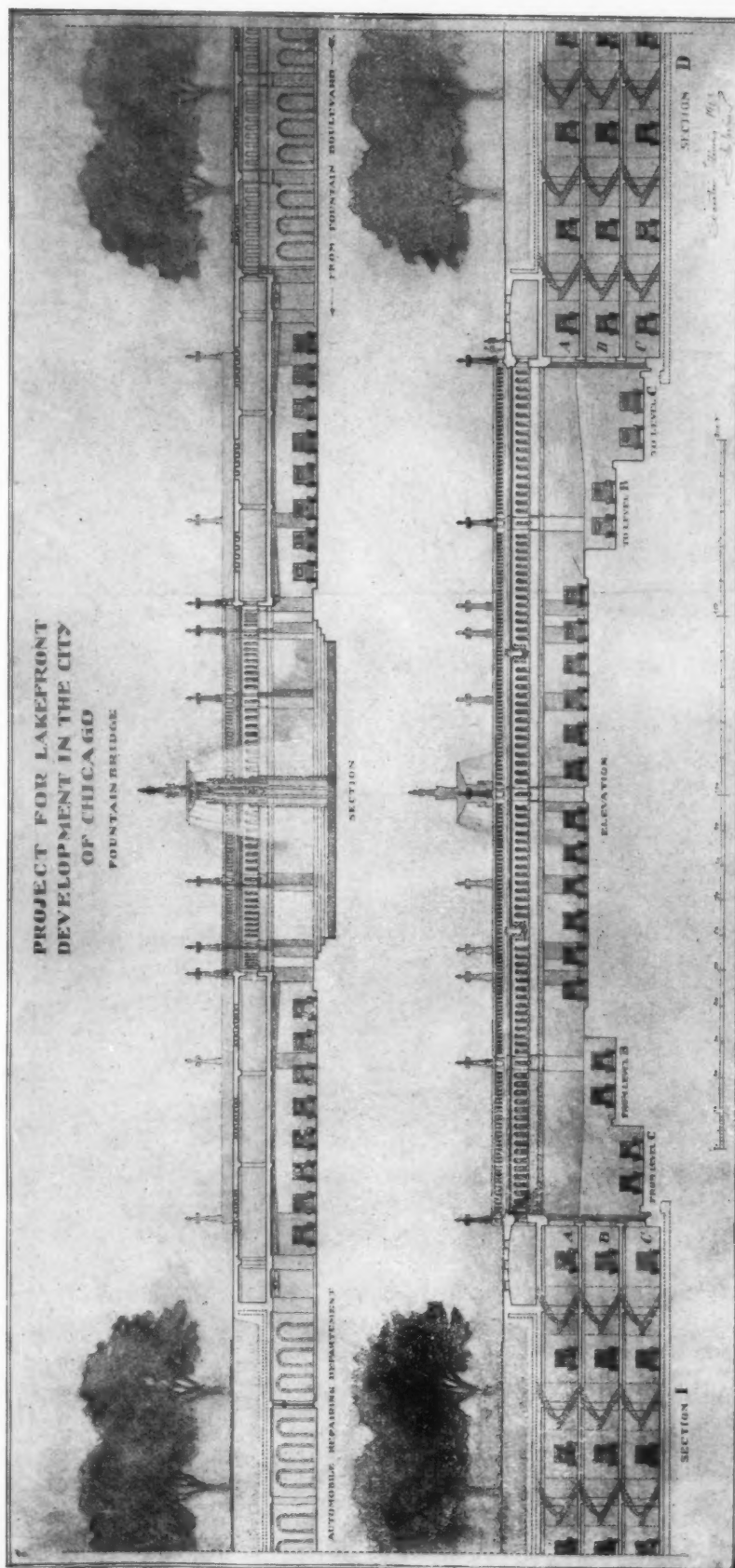
ELIEL SAARINEN, ARCHITECT

This tower is located on the South side of South Plaza and serves as a background for the long thoroughfare formed by Grant Boulevard and Tower Boulevard



SECTIONS OF GRANT PARK, GRANT BOULEVARD AND THE AUTOMOBILE TERMINAL
PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO

ELIEL SAARINEN, ARCHITECT



FOUNTAIN BRIDGE
PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO
ELIEL SAARINEN, ARCHITECT

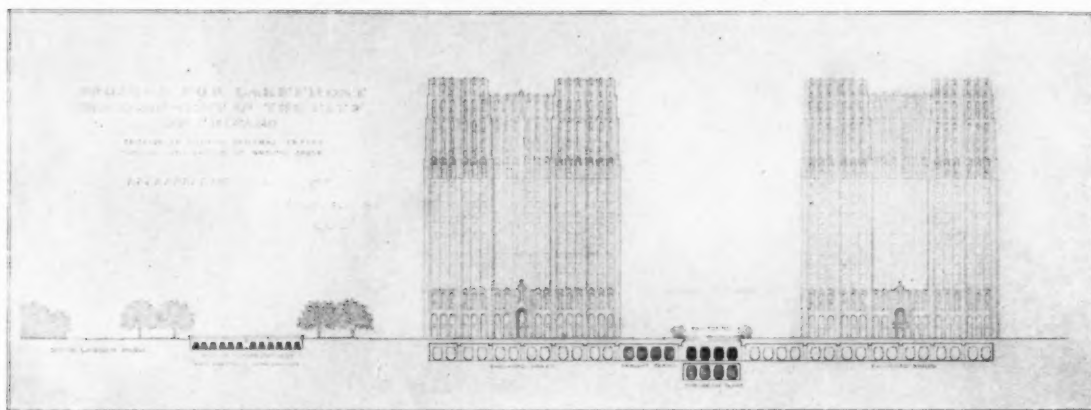
that the automobilist may know at once whether parking space is available in the section. If, for example, white light indicates space available and red light, occupied, the automobilist can, by following a white light first at the ramp, then at the entrance and finally at the beginning of a parking street, easily find an unoccupied parking space.

By a suitable signaling system each parking space can communicate with the signal station of the section, indicating upon arrival that a certain space is occupied, and its availability when one leaves. The hour of departure can be signaled so that payment for parking will not delay the car at the exit; one can indicate that the car should be cleaned, repaired, or the like (a separate repair section is included in the terminal).

age of eighty parking spaces. The whole terminal is thus planned for about 47,000 automobiles, and so that one can find each parking space and arrive at or leave it with equal ease.

Assuming that it will take one-half minute to reach a parking street and place one's automobile, and at the same time to get out, we are, theoretically, able to fill and empty the whole terminal in 40 minutes.

This is neither possible in practice nor will it be required, because the main automobile street cannot carry such a number. The calculation is only made to show that the entrances and the system are so arranged that no blocking at the former need be feared, and consequently no traffic obstruction on the main automobile street can occur.



SECTION OF ILLINOIS CENTRAL RAIL ROAD TRACKS, SHOWING UTILIZATION OF GROUND ABOVE

It is of importance that the traffic in the terminal be so organized that the automobilist need no assistance from the personnel. Similarly the signal and payment systems must be so arranged that a minimum number of assistants is required. The main personnel should consist of those at each section's signal and pay stations. Thereby the yearly overhead is reduced.

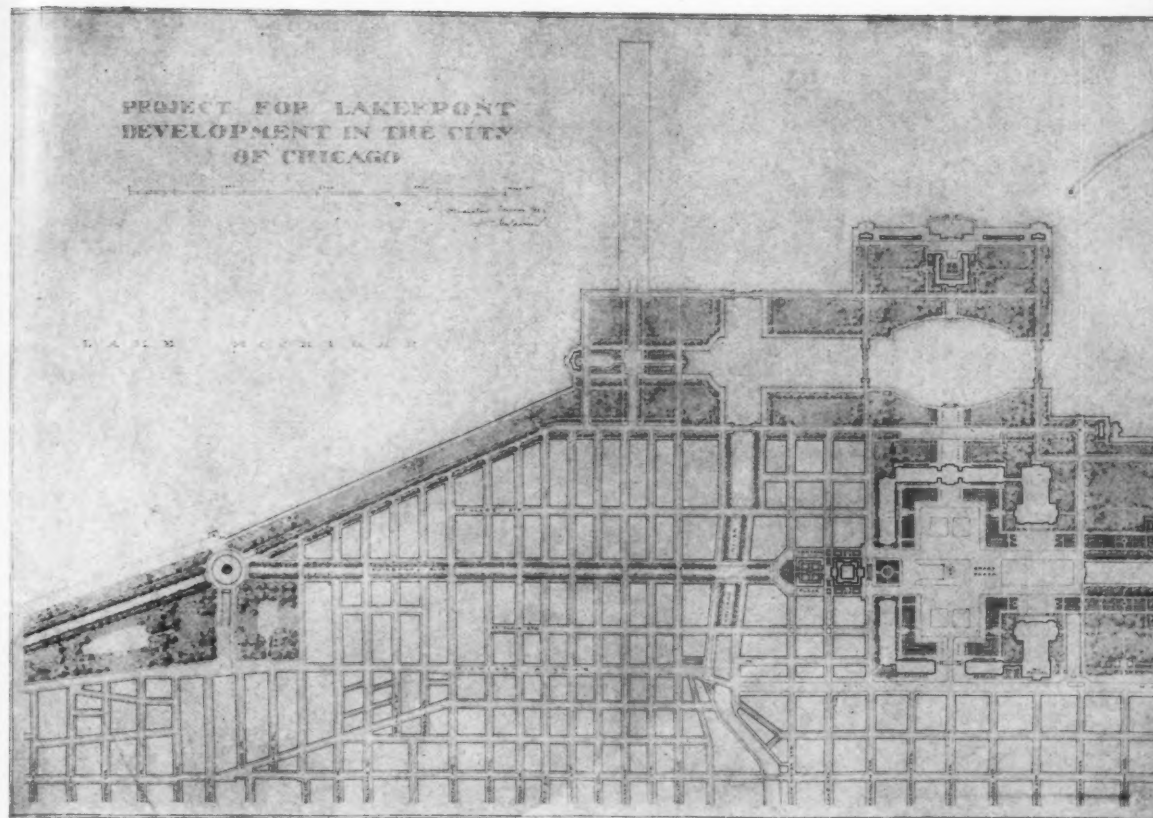
The salaries of those who have to do with the cleaning and repairing of cars, need not burden the cost accountant, since this item takes care of itself, cleaning and repairing being paid for as extras.

As mentioned before, the terminal consists of ten sections and each section has three in-drive ramps. Thus we have thirty ramps. Each ramp leads to three entrances. Remembering the smaller sections A and F, we have in all eighty-four entrances. Each entrance leads to seven parking streets. On account of certain exceptions in sections A and F, where the entrances vary between six and seven, we have, all told, in the whole terminal 579 entrances to the parking streets. At each of these streets there is an aver-

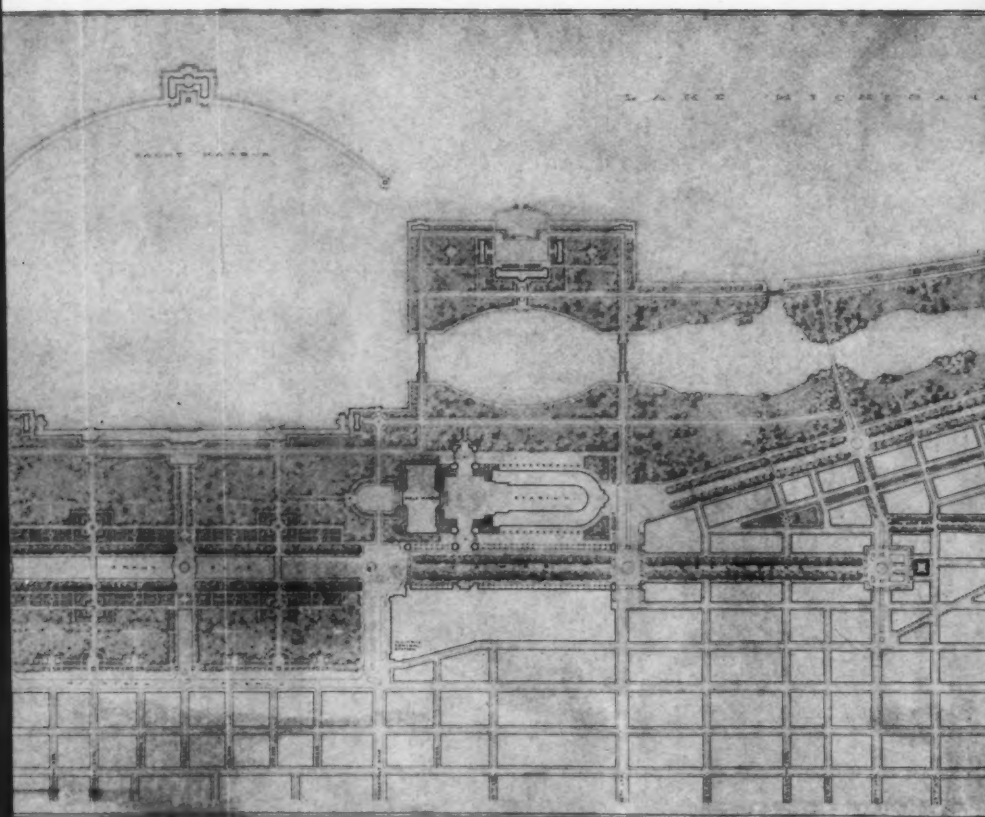
I stated above that a repair shop was to be provided in the terminal. In connection with this, one might arrange rest and recreation rooms and dining rooms for the personnel and for chauffeurs.

The ventilation of the terminal is a rather complex problem, and I have neither the desire nor the time to discuss it in detail. It depends in a large measure on the extent to which mechanical ventilation is desired. The system is, however, so planned that natural ventilation will suffice and that the air volume available is ample for the requirement of the engines.

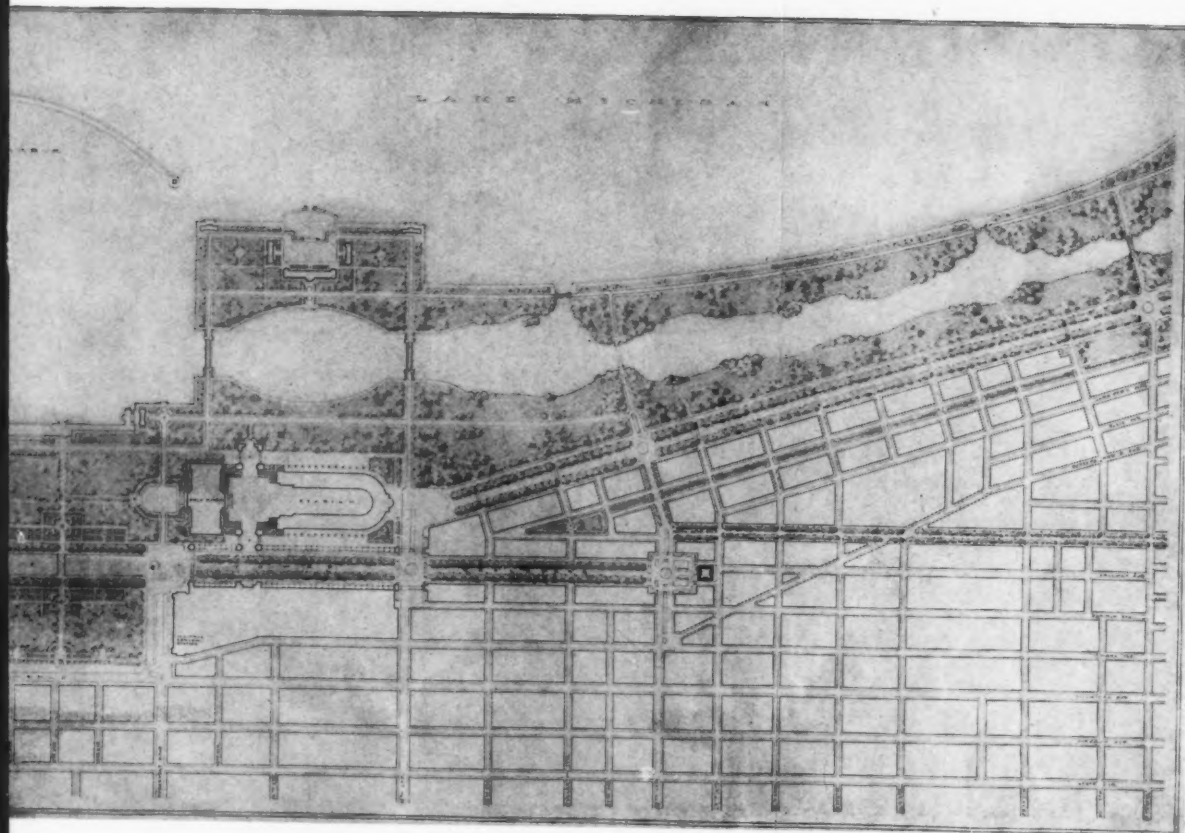
The poisonous gases developed by gasoline, which are heavier than air, could be most conveniently disposed of by a vacuum system. This is easily effected by a network of suction pipes under each floor, the openings being located under each column or alternatively under each car. In this way an even suction downward will be caused over the whole floor surface, and at each stairway could be arranged a barrier with a tight-closing half door that would prevent any excessive escape of gases to the floor below.



PROJECT FOR LAKE FRONT
ELIEL

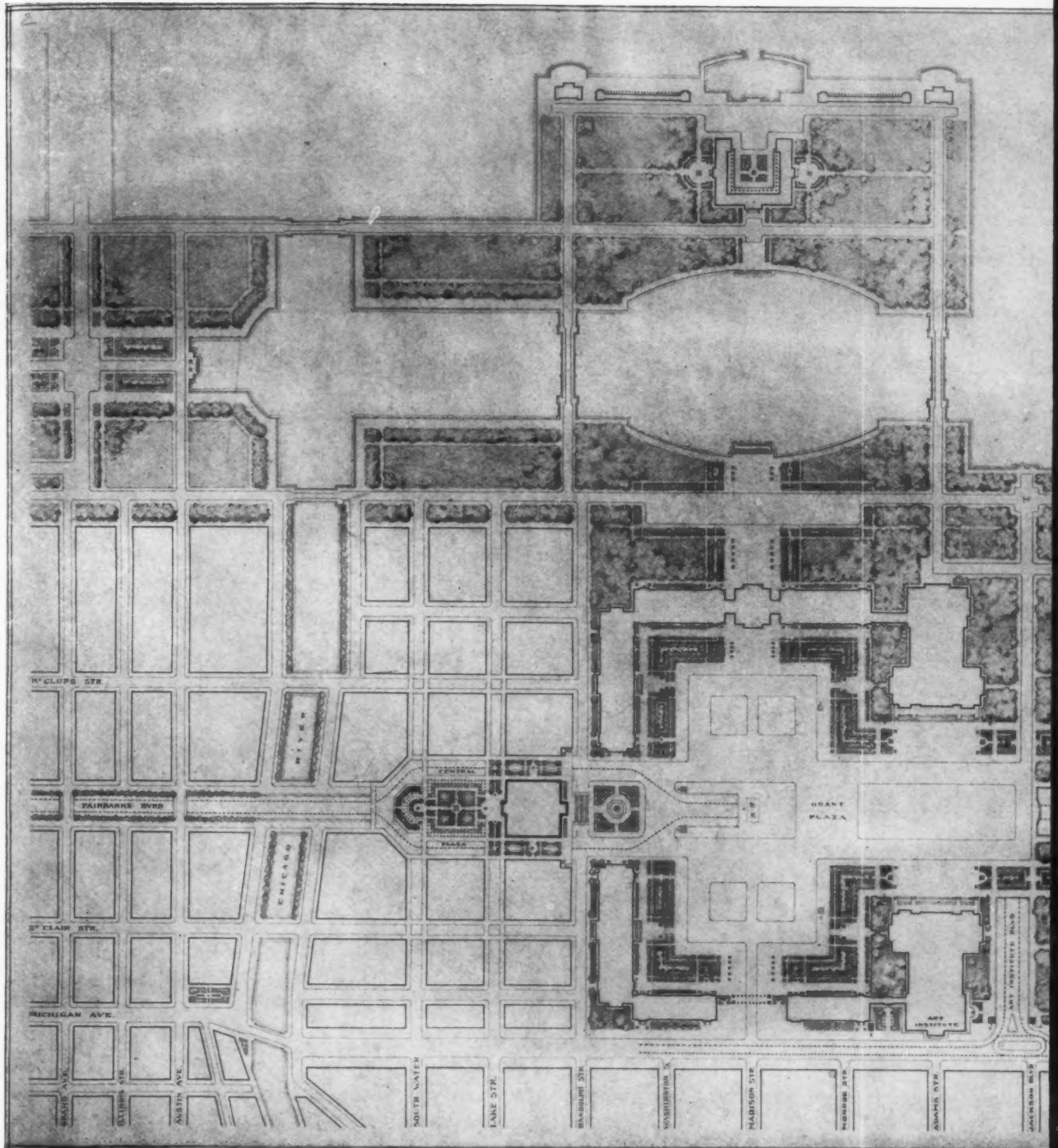


GENERAL PLAN
FRONT DEVELOPMENT OF THE CITY OF CHICAGO
ELIEL SAARINEN, ARCHITECT

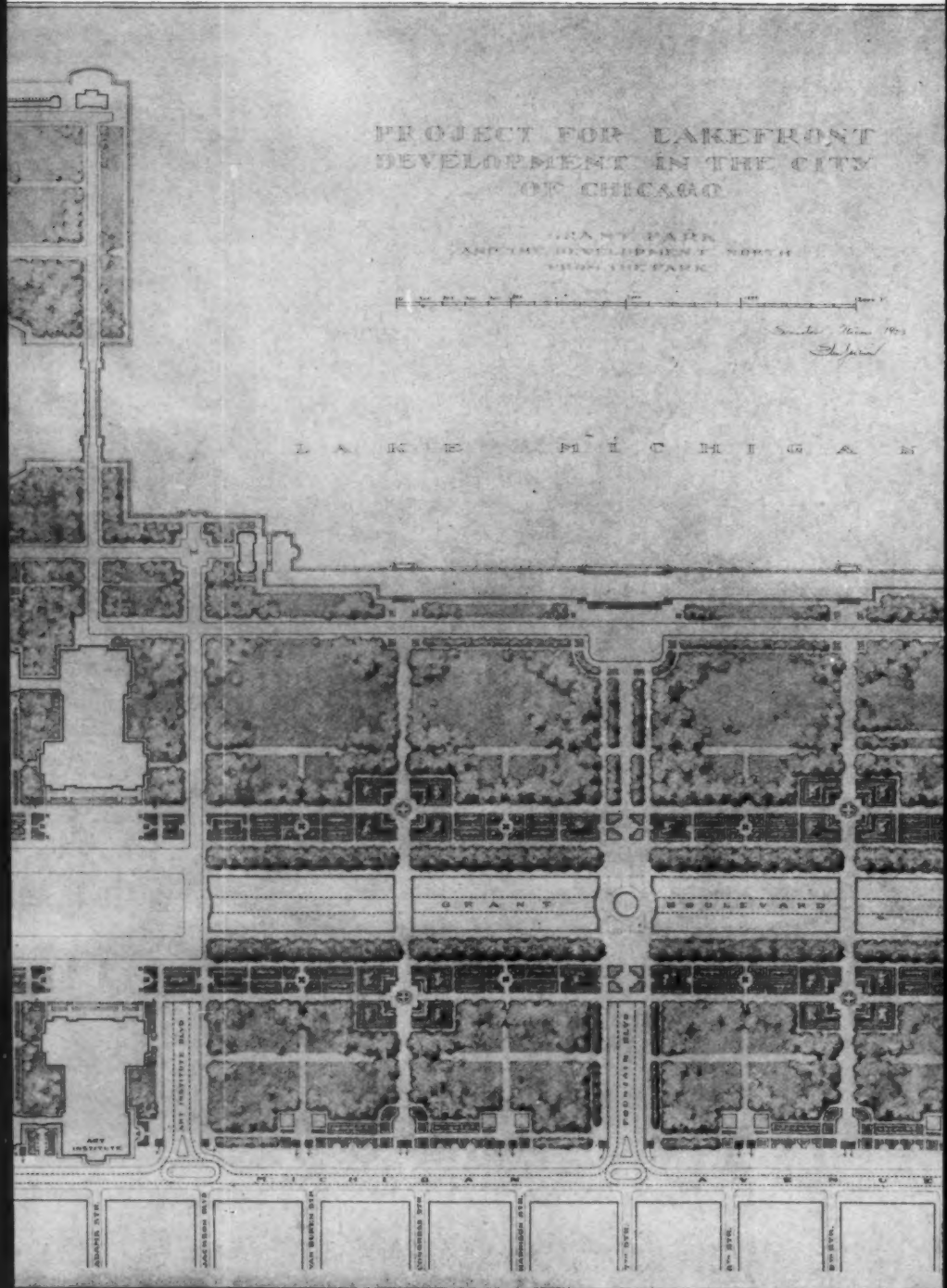


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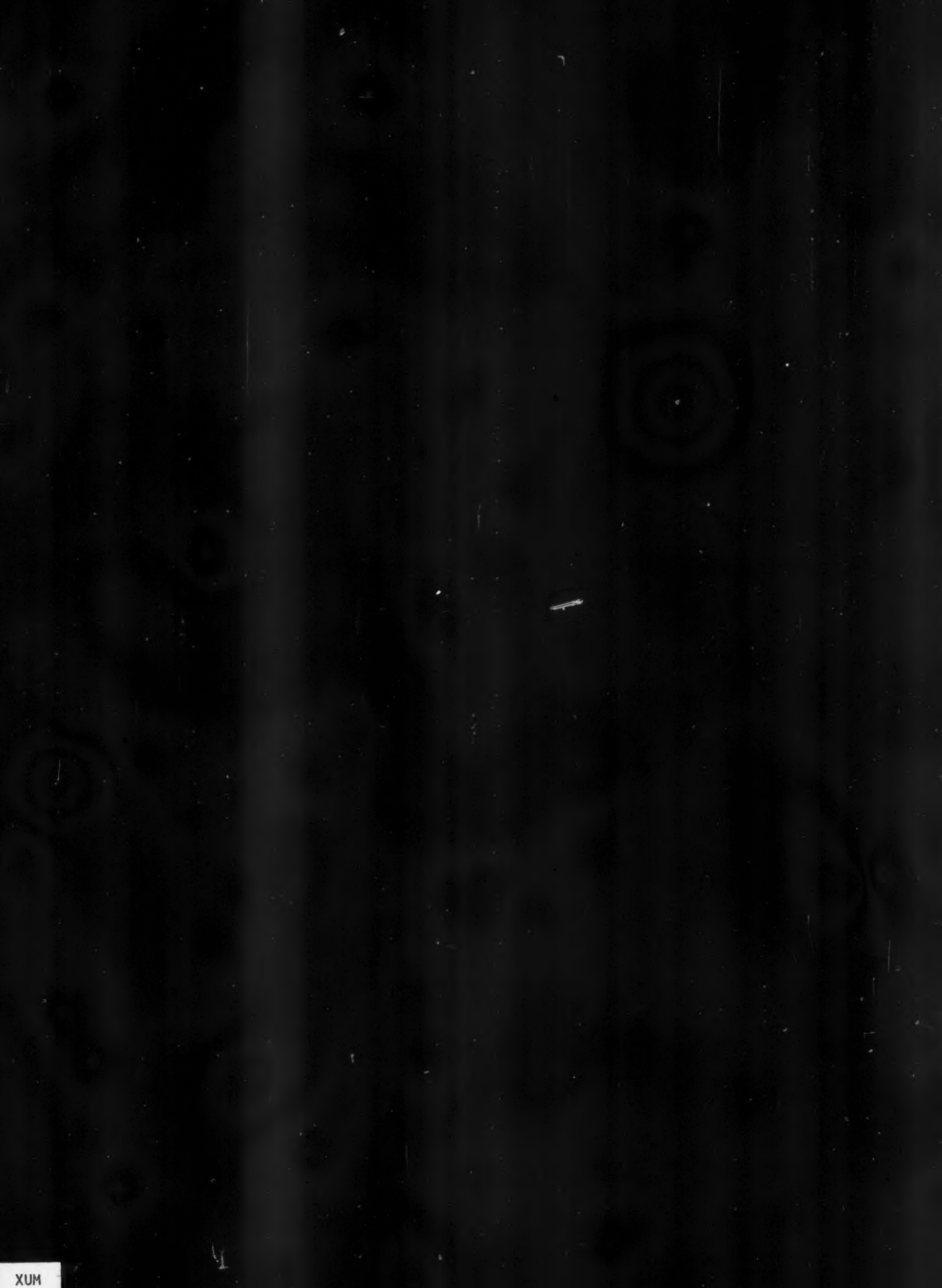


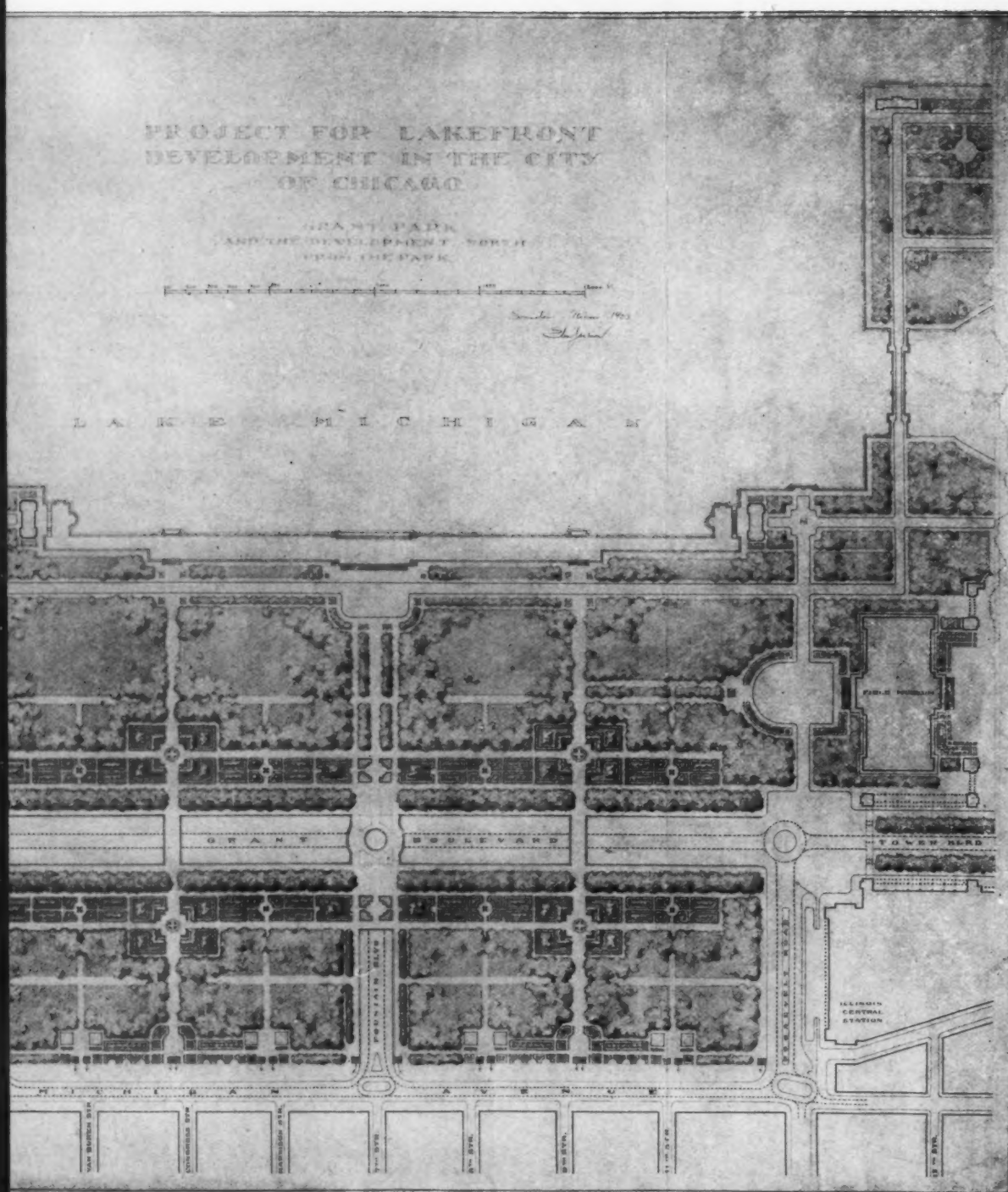


GRANT PARK AND THE DEVELOPMENT
PROJECT FOR LAKE FRONT DEVELOPMENT
ELIEL SAARINEN,



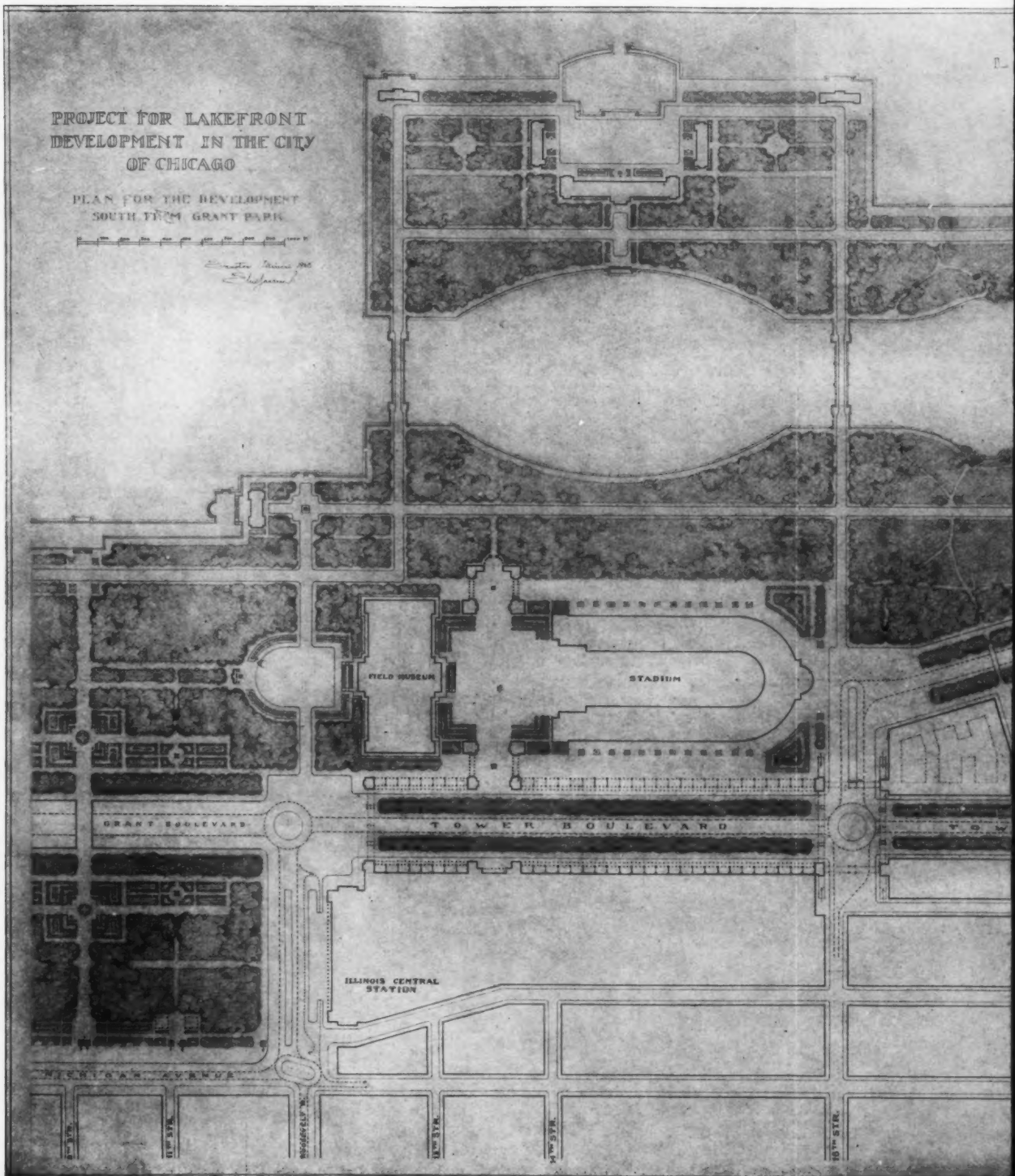
GRANT PARK AND THE DEVELOPMENT NORTH FROM THE PARK
LAKEFRONT DEVELOPMENT OF THE CITY OF CHICAGO
ELIEL SAARINEN, ARCHITECT



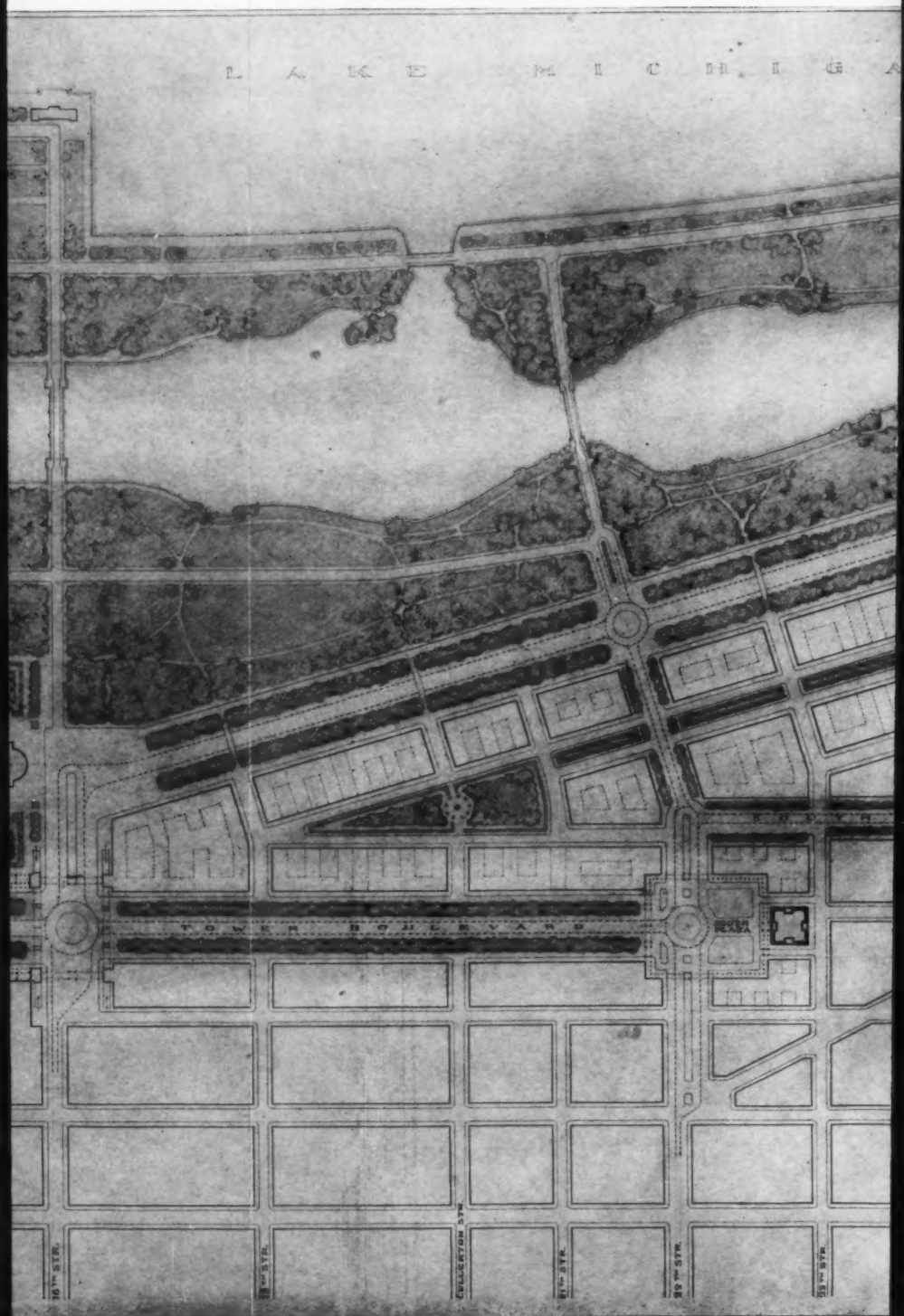


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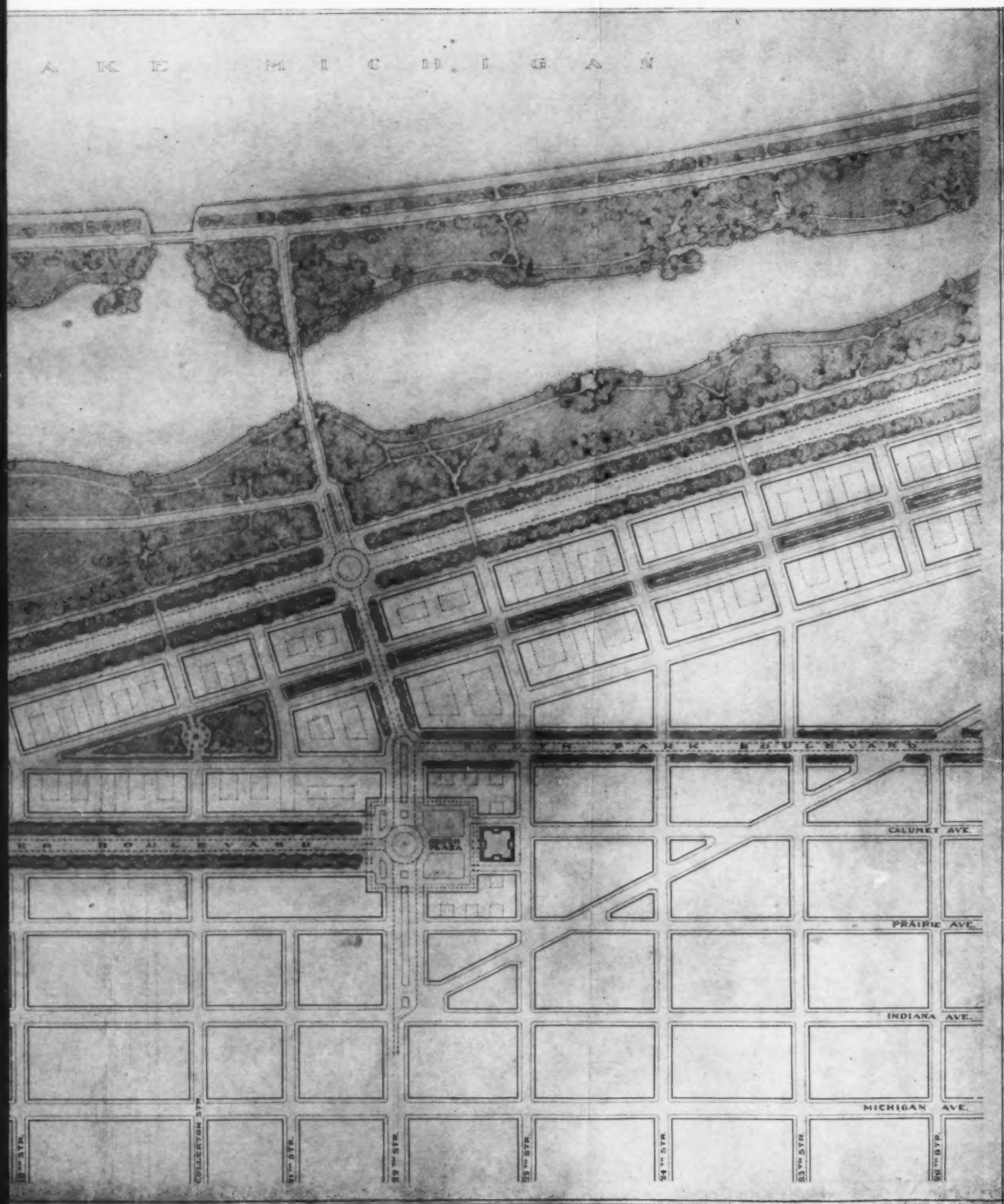


PLAN FOR THE DEVELOPMENT
PROJECT FOR LAKE FRONT DEVELOPMENT
ELIEL SAARINE



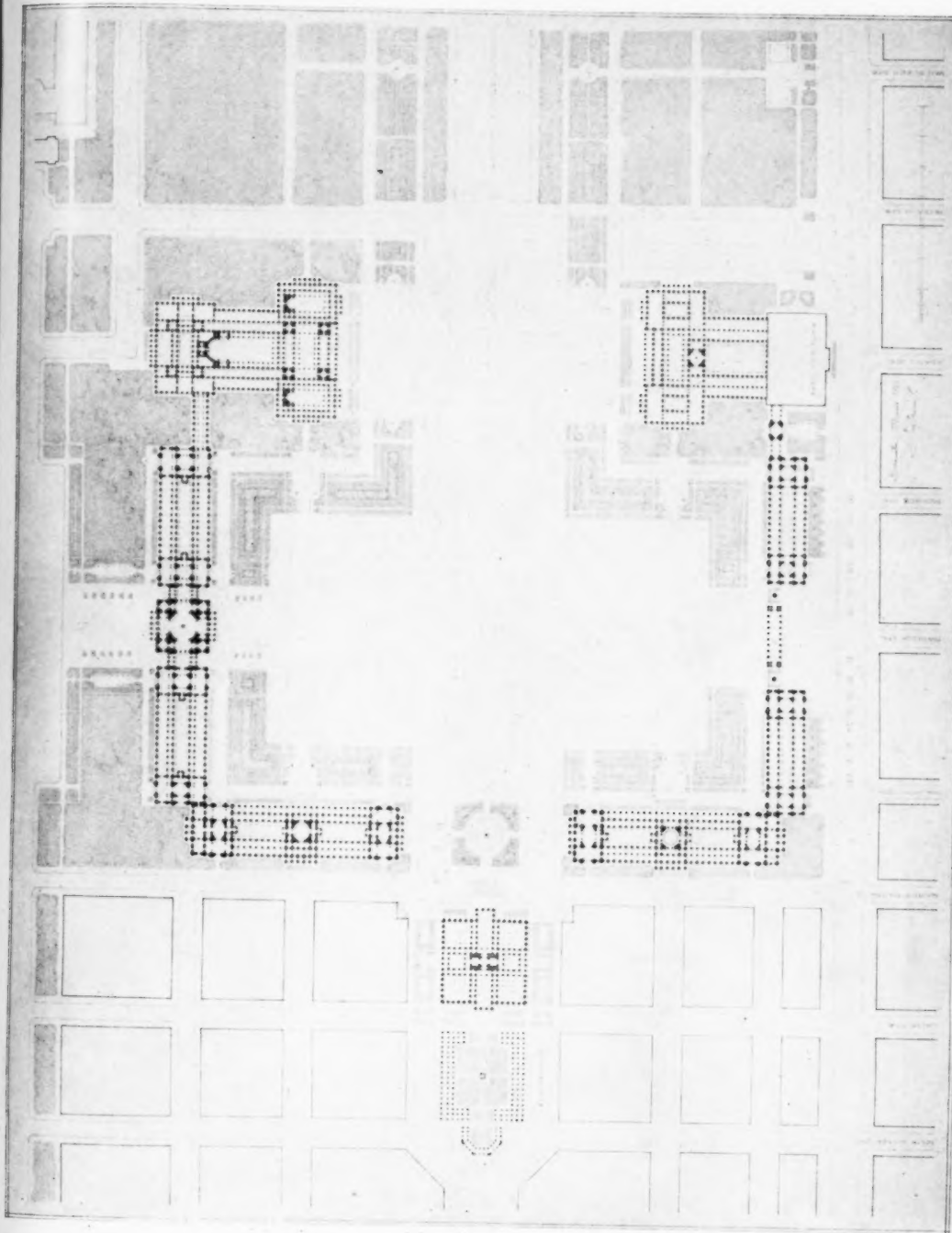
PLAN FOR THE DEVELOPMENT SOUTH FROM GRANT PARK
FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO
ELIEL SAARINEN, ARCHITECT



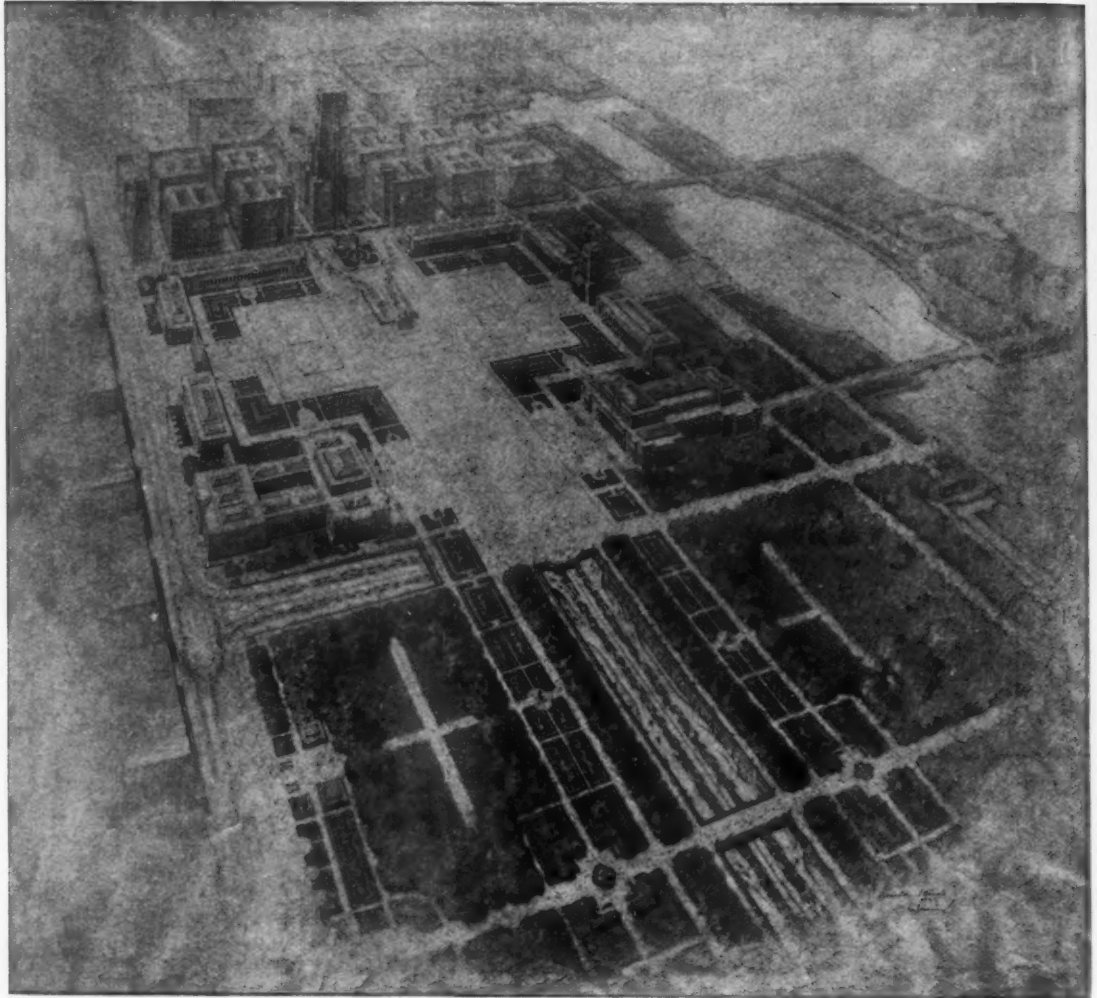


PLAN SOUTH FROM GRANT PARK
DEPARTMENT OF THE CITY OF CHICAGO
J. H. WELLS, ARCHITECT





GRANT PLAZA
PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO
ELIEL SAARINEN, ARCHITECT



BIRD'S-EYE VIEW OF GRANT PARK AND GRANT PLAZA

GRANT PARK AND GRANT PLAZA

The park itself I have planned so that it is symmetrically arranged around its central axis, Grant Boulevard, and have grouped trees and flower beds so that they as far as possible accentuate the North-South direction of this center line.

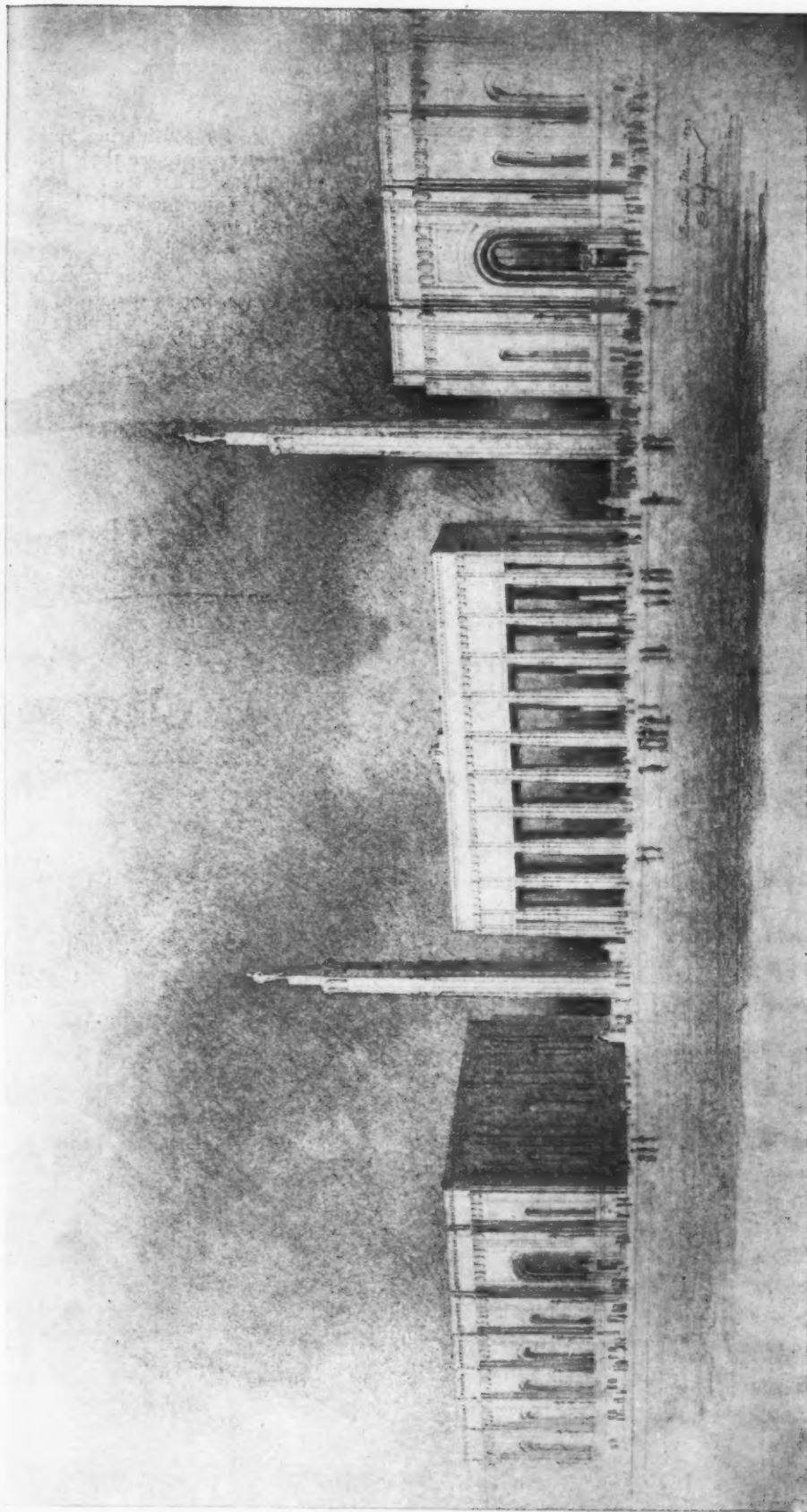
At its Northern end the park expands into a monumental open place—Grant Plaza—surrounded by flower beds and outside of them lower public buildings. At the left front of the plaza, in line with Madison Street and in the wide opening between two public buildings, I have proposed a monumental colonnade, and at either end of this a tall memorial pillar. This, in order to provide an architecturally effective view of Grant Plaza through the colonnades.

As a counterbalance to the enlarged Art Insti-

tute I have imagined, on the other side of Grant Boulevard, a concert palace—a building that very soon will become a necessity to Chicago. This palace will be in communication with the automobile terminal so that the public which arrives in cars can reach the concert palace directly by the stairways.

In the background of Grant Plaza's North side and in line with Grant Boulevard, the previously mentioned hotel will rise, higher than the buildings on either side of it. Thus we attain a good rhythm and crescendo in the height relations. The hotel is much higher than Chicago's building code permits. But in the interest of the city's beauty and an impressive view of it, it is happily so that exceptions are made in a case like this.

Another tall building, Chicago Tower, I have, as already mentioned, planned at the Southern end of



PERSPECTIVE OF MONUMENTAL COLONNADE AT ENTRANCE TO GRANT PLAZA—VIEW FROM MICHIGAN AVENUE AT MADISON STREET

PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO

ELIEL SAARINEN, ARCHITECT

At the left front of the plaza in line with Madison Street there is proposed this monumental colonnade. By this there is obtained a good rhythm and crescendo in height relations

the more than two mile long boulevard. This is also to heighten the monumental effect of Grant Park.

On either side of Tower Boulevard, which runs between the Illinois Central Station to the East, and the Field Museum and the Stadium to the West, I have proposed low arcades, one story in height. These arcades, that may be used for show windows or small shops, will enhance the effect of the place as a whole and aid in giving a beautiful and fashionable character to the space around the Museum and Stadium where now the Illinois Central's open and slantingly arranged yards are an eyesore.

the park. This project fell through, however, although it was beautifully thought out and planned.

I shall nevertheless admit that, personally, I would not have a lonely monumental building in Grant Park. This opinion may be subjective and is based on my dislike for considering buildings in a city as units, preferring to see them together form plazas, and the like. They are the material with which the town builder models his city and by their rhythmic grouping gives it beauty, variety and character.

This feeling has led me to plan the public buildings around Grant Plaza, not as structures in the park but as a frame for a part of it without making



PERSPECTIVE OF GRANT BOULEVARD, LOOKING SOUTH TO CHICAGO TOWER

I said that I had planned low buildings in the Northern part of Grant Park as a frame for Grant Plaza. I have done that although I know that there is a law prohibiting building in the park. While these buildings are not absolutely essential to my plan, and my project does not fall by their elimination, the architectural and monumental shaping of Grant Park is largely based on a Grant Plaza in the form I have given it with surrounding buildings.

It seems to me the spirit of that law is to prevent the encroachment of the business district upon the Grant Park area, although a later interpretation reads it literally as forbidding any and every kind of building, if it exceeds a very scanty height limit.

Attempts have been made to embellish the park with public buildings. Among others, the Burnham project presupposes a museum building in

the framed-in place a separate and independent unit but rather one that clearly joins the remainder of the park and with it forms an architectonic whole.

The structures I have proposed in order to give Grant Plaza a monumental and unified frame, are perhaps not now needed but belong in the future. I believe Chicago—a growing city in the very heart of the United States—undoubtedly will need monumentally conceived public buildings for various cultural purposes; and in the search for a location for them the strict interpretation of that oftmentioned law will undoubtedly lose its force and its spirit win the day. Why, then, hesitate to create in the heart of Chicago a place consecrated to the arts and to cultural interests, and at the same time strive to make it a monumental whole *that with its surroundings will in the future become to Chicago*

and America what the Louvre with Place de la Concorde and Champs Elysées is to Paris and Europe?

GRADUAL EXECUTION OF THE PROJECT

Self-evidently a project such as this with its wide ramifications cannot be realized in a short time, but is rather to be looked upon as a program of successive developments.

A working plan, to the purpose and in accordance with existing circumstances, is therefore a necessity.

I have planned the automobile terminal so that it can be built successively—although I have the feeling that, with rapidly increasing traffic now apparent and to come in the future, if the improvements I have proposed are carried out the intervals between the periods of construction will not be long. The extension of the corridor system from the terminal to Michigan Avenue cannot, of course, take place until after the Illinois Central Railroad has done much of its work. For the same reason the construction of the North part of Tower Boulevard must be postponed to a convenient future date. The terminal-bound traffic from the South can be carried provisionally by the roads now under construction East of the railroad tracks.

The combined extension and widening of Fairbanks Boulevard and the building of a fixed bridge over Chicago River is also an undertaking, the realization of which is dependent on manifold and different conditions, and cannot be thought of in the near future. In this case, however, it would be well to take, at present, all necessary preliminary steps to assure its execution at the proper future date.

While all this is in abeyance, however, we can avail ourselves of the traffic road proposed farther East along the shore of the lake.

FINANCIAL BASIS OF THE PROJECT

As stated earlier, my project presupposes that the Illinois Central Station and yards should be depressed and the company accorded the right to over-build the area with high structures. Aside from the filling material (about 6,000,000 cu. yd.) that hereby becomes available for the construction of the park girdle, the company obtains about 2,700,000 sq. ft. of building ground, representing about 35,000 front feet down to Thirty-first Street. This area situated on the South park girdle and the Park Boulevard and possessing an open view of Lake Michigan will become, after the realization of the project, one of the city's most exclusive sections and consequently represents a large capital value.

Similarly, by laying the continuation of Grant Boulevard South of the river through the Illinois Central property and by the location here of Central Plaza with its tall hotel building, a displace-

ment of the center hitherward will occur, and the area as a whole become more valuable. This means a capital increase that will measurably turn the balance in favor of the project.

The same holds good as to the section North of the river.

In order to investigate more closely the financial possibility of constructing the main automobile street and the terminal in Grant Park, it would be necessary to make a detailed cost plan, and even then one would only arrive at a probable estimate, for it is impossible to determine at what time or times the construction will be undertaken and the price levels that will prevail on those occasions. Such a calculation is, however, of aid in obtaining a clear view of the balance between income and outlay. Experience teaches us that if the outlay rises on account of higher prices, the income will also increase.

It is difficult to calculate closely the cost on the basis of the plans for the automobile terminal at the present price level. As stated, there is no program for ventilation. Draining and insulation of ground water are also uncertain items.

In order to throw some light on the financial possibilities of the project, I shall nevertheless present a schematic estimate, based upon the assumption that the whole Grant Park system is executed and that the use of the terminal corresponds to its capacity (and this ought to be the case, for if the terminal is completed, that is in itself proof its full capacity is needed).

In calculating the cost of the terminal, it should be borne in mind that the excavation will yield a considerable quantity of material (over 200,000,000 cu. ft.) useful for filling in when the park is extended. Furthermore, the plans for the terminal are so designed that standardized parts can to a great extent be used in its construction. By approximate calculations I have arrived at a total cost of \$60,000,000. If the community can do the work with money borrowed at five per cent, we have a yearly interest charge of \$3,000,000. With employees' salaries, upkeep, lighting, etc.,—another \$3,000,000—the total annual expense amounts to \$6,000,000.

There are in the terminal about 47,000 parking spaces, or in a year's time about 17,000,000. The pay for parking will partly take the form of monthly rentals and partly per-diem payments. I assume also that space can be taken for a few hours and that, consequently, the same space may be occupied several times during the day. It would be logical to exact higher pay in the sections West of Grant Boulevard, since they are closer to Michigan Avenue, than in those East of it.

The present rate of garage rent in the loop, I am told, is \$1 a day. Parking in Grant Park, on the other hand, costs only twenty-five cents, but it has its drawbacks in Winter time and in foul weather, and, furthermore, the space will not be

available when Grant Park has been laid out.

If, in this case, we figure with a per-diem rental per space of sixty cents in the sections West of and forty cents in those East of Grant Boulevard, we arrive at an annual income of \$8,500,000. Deducting the running expenses and rental charges, and capitalizing the remainder at five per cent, we have available for further improvements \$50,000,000. If we count on eighty and sixty cents rentals, respectively, we arrive at a capital of \$120,000,000 for continuing the project.

We see the curious phenomenon that, the more rational and commodious our provisions for automobile traffic are, the greater becomes the use of the terminal, and the more profitable the enterprise. In other words, the more monumentally our city plan is arranged, the better becomes the financial result, for the practical and the aesthetic here go hand in hand.

These calculations are made only to show that an economical balance between outlay and income can be obtained, and that the income can be fixed so that it will cover the cost of the whole project.

It is to the benefit of automobilists that the project be realized, and they have to contribute by their parking rentals to its realization. Thus far the undertaking is on a sound financial basis.

The tax on the automobile owner is less than at present, and the probability is that, if the parking problem is not solved mainly as now outlined, but the great majority of cars continue to be parked in loop garages, the parking price will rise considerably.

Taking the project as a whole and working out for it a practical construction and financial program, we shall find that, if we take care of the economical profits it produces, it will finance itself, and that the city consequently will be able to solve its difficult traffic problem in an economical manner, and at the same time look forward to the fulfillment of its aspiration to a monumental beauty that few cities can boast of.

CENTRAL STATION

In my project, as hitherto considered, I have assumed that the Chicago Central Station will be located, as so far determined, South of Grant Park. But among the possibilities I have found in the district my project touches upon, I see another and more suitable solution of the Central Station problem which I desire also to discuss.

I shall treat the question as an alternative, although I consider it an important part of my project and closely connected with it.

A map of Chicago shows us, especially South and West of the loop, a maze of railroad tracks. Clearly, a thorough house cleaning is due here sooner or later, and I have learned that powerful efforts in that direction have been and are being

made to the end that a unification of the various railroad systems may be effected. It seems to me, however, that no matter how wide in scope this unification may be, the easiest and most advantageous solution would be to divide the railroad systems into two groups—the Western and the Eastern, as relating to the location of this trackage in Chicago.

In the Eastern group I place the Illinois Central and, in part, the Northwestern systems. The Illinois Central controls the traffic Southeast, South and Southwest; the Northwestern that North, Northwest and West. If these two groups are combined into one, we shall be able to direct traffic from one central point toward all the points of the compass, limited only by Chicago's situation on the lake; and what is better, the focus of this



SCHEME FOR CONNECTION OF ILLINOIS CENTRAL AND NORTHWESTERN RAILROADS, THROUGH CENTRAL STATION

group will be in the center of the city with good communication lines for all kinds of traffic.

This focus is the spot I have called Central Plaza in my project.

To realize a combination of these two railroad systems and to move the Central Station to the plaza naturally requires that also the Northwestern Railway be converted to electrical operation. We must consider that such a change takes time, and though the Northwestern as yet has not put electrification on its program, we shall undoubtedly in a short time see the decision made. In the

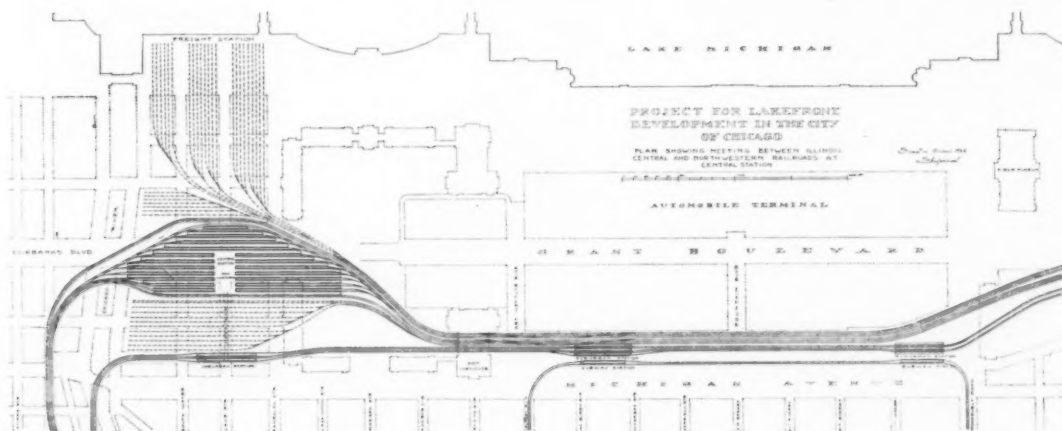
circumstances it would, in my opinion, be an irreparable blunder if one did not at once investigate the possibility of changing the location for the Central Station and take the necessary steps toward its future accomplishment.

In order to make clear the advantages of such removal I have drawn some diagrammatic sketches of the station. In these sketches the levels are only approximated because I have no precise information on various points, such as the average water level in the river, its depth, the relations of the streets to the river, and so forth. For the same reason the absolute height of Central Plaza is not fixed.

promenade park surrounded by arcades. This is the Central Plaza proper.

It will be seen then, that the station is mostly subterranean, and boasts no tall monumental facades, as usually is the case. I believe this to be the coming type of railroad stations for our large cities.

If we study the development of station architecture in large cities, the tendency is clear. We first aimed at outward monumentality by erecting above the track system high glass halls with imposing gable walls. As the glass halls proved themselves unsatisfactory because of the smoke and soot that accumulated there, one strove to gain architectonic



PLAN SHOWING MEETING OF ILLINOIS CENTRAL AND NORTHWESTERN RAILROADS AT CENTRAL STATION

The connection of the two railroad systems is through tunnels under the river, and the joint station and yard is located at Central Plaza, or more correctly, under it. There are fourteen tracks for North-bound traffic, as many Southward, and ten through tracks or thirty-eight in all.

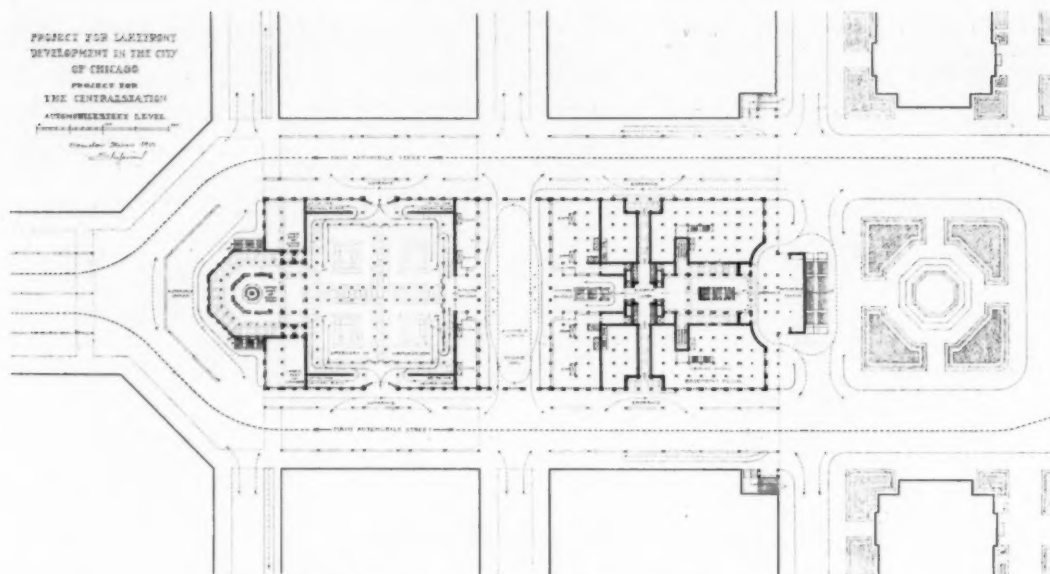
The tracks are accessible from above by means of stairways and elevators. Above this level I have planned a low story for baggage transport.

The station proper is above the baggage platforms, the floor being one story below the street level. Waiting rooms, dining salons, kitchen, ticket booths, etc., are on this level. From the large concourse ramps lead to the street level where entrances and exits for passengers who use automobiles are arranged. Here one is in direct contact with the two branches of the main automobile street and thus has good opportunities for rapid approach to or departure from the station. The hall for checking and delivery of baggage is on the street level, and also has easy access to the automobile street. For foot traffic—one story higher than the street—there are also ramps from the main waiting room. Above the large waiting room on a level with the foot traffic is planned a

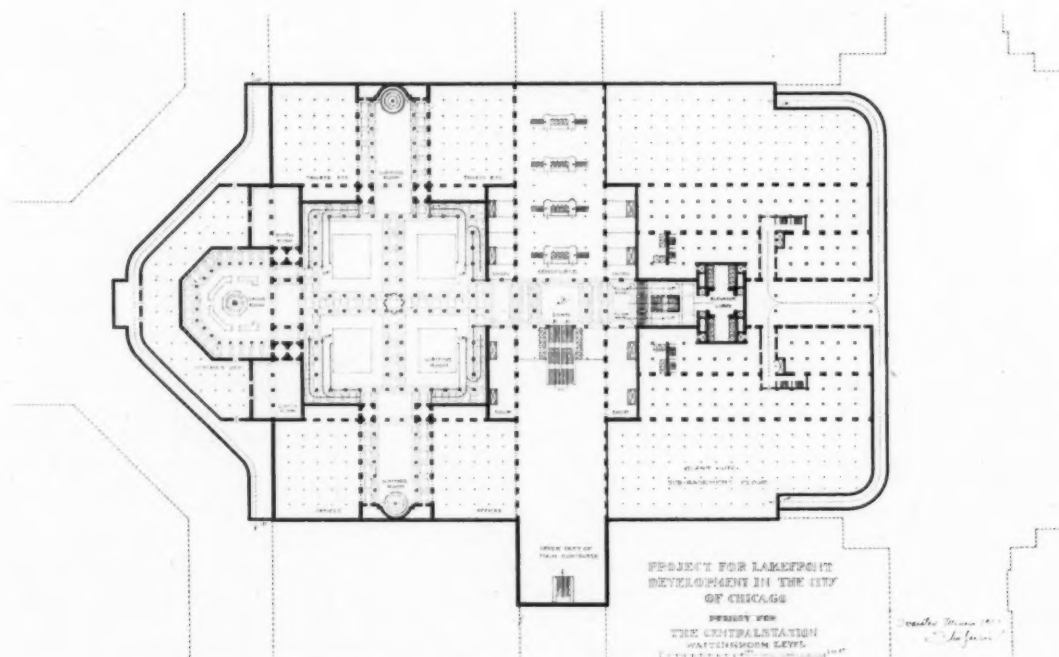
mass effect by means of lofty entrance and waiting halls. This is all very well so long as the track system is on the ground level or elevated. With the advance of electrical power the track systems in our large system show a growing tendency to go below the ground and the station follows suit. It is logical, then, to seek a type of station meeting the needs of this tendency. Modern ventilation systems also permit a reduction of height in the halls.

By combining the Illinois Central and Northwestern systems, the contemplated line Westward from the Illinois Central's present station would, so far as I can see, become unnecessary. By the removal of the station to a more Northern location a large area is released for other purposes and if the company is given air rights above it so that tall buildings could be erected there, the financial side of the removal would become still more attractive.

The present freight station of the Illinois Central Railroad is to the East of the Central Plaza Station and its track system is on a higher level than the central tracks. Here is a possibility to obtain, by means of tunnels for freight transport, a good connection between the freight station and



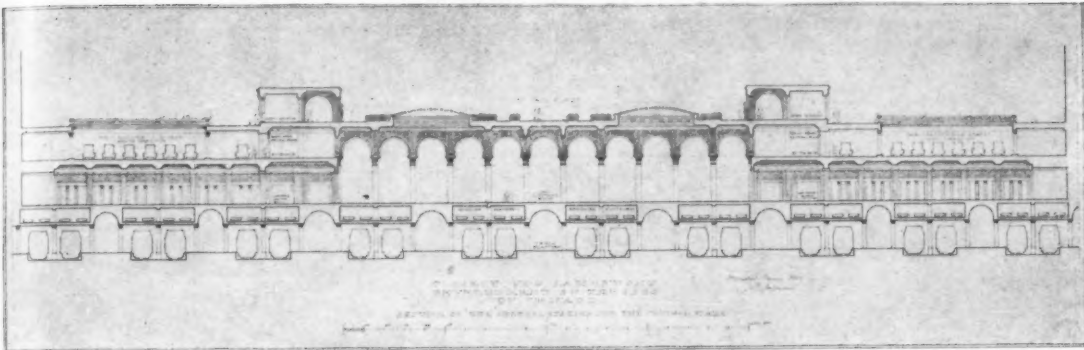
PROJECT FOR CENTRAL STATION AUTOMOBILE STREET LEVEL



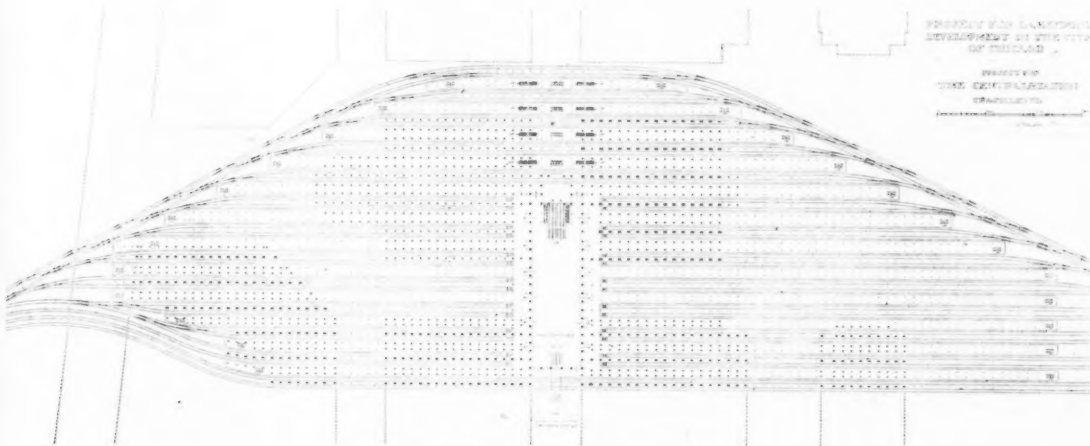
PROJECT FOR CENTRAL STATION WAITING ROOM LEVEL

PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO

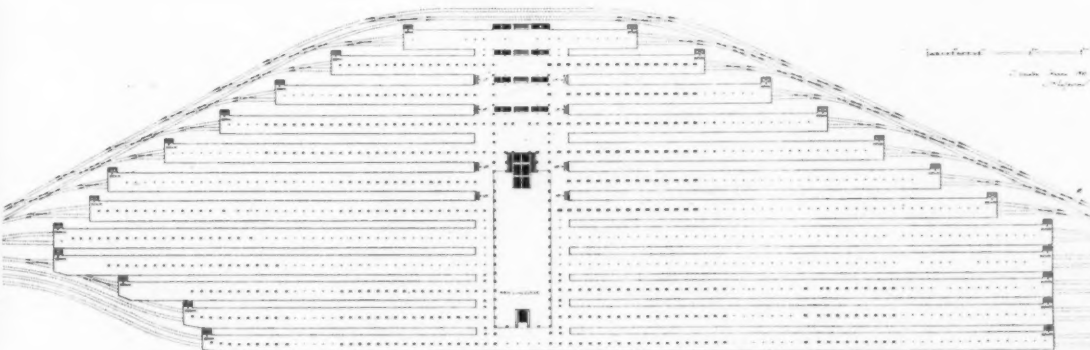
ELIEL SAARINEN, ARCHITECT



SECTION OF CENTRAL STATION AND CENTRAL PLAZA



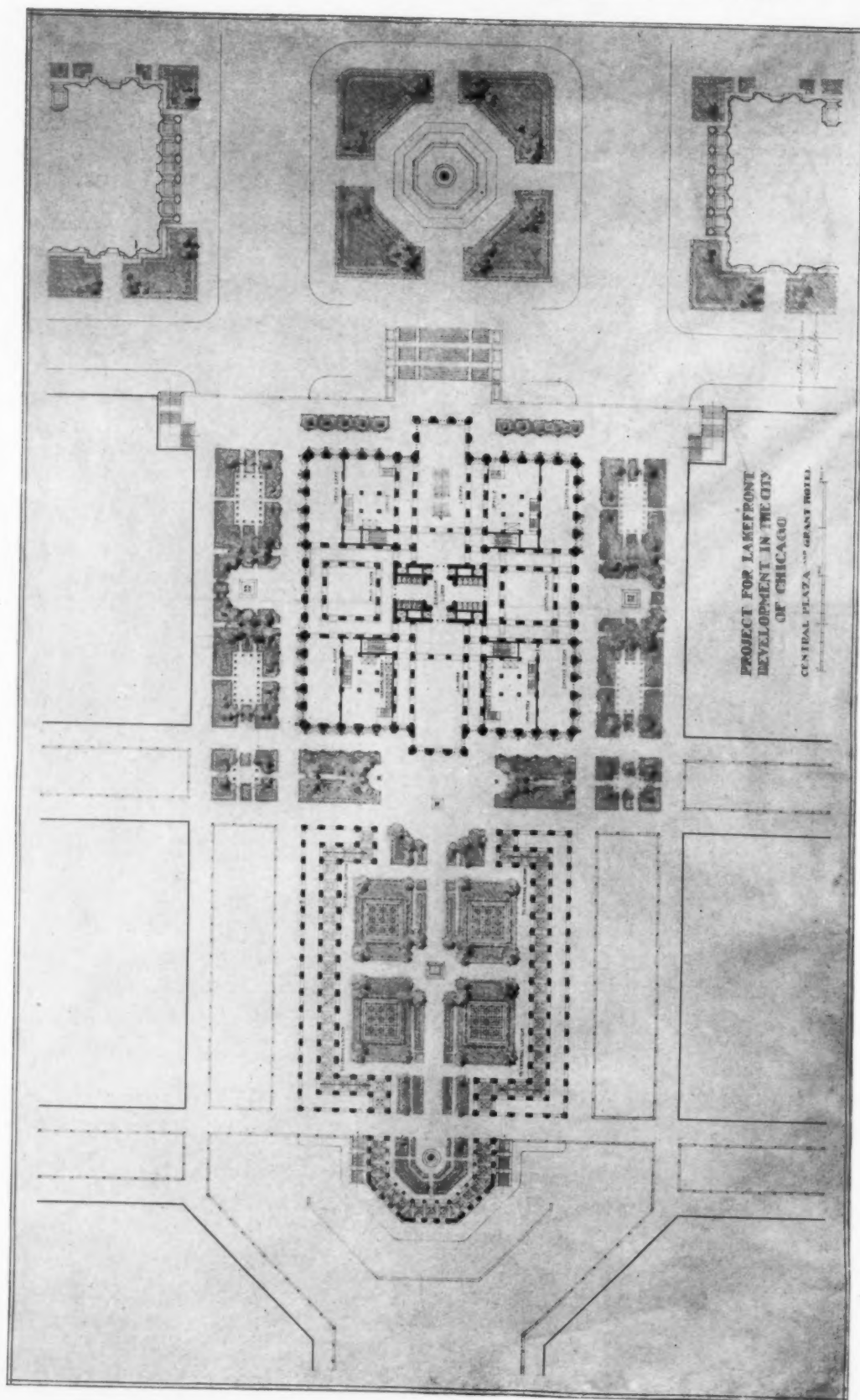
PROJECT FOR CENTRAL STATION TRACK LEVEL



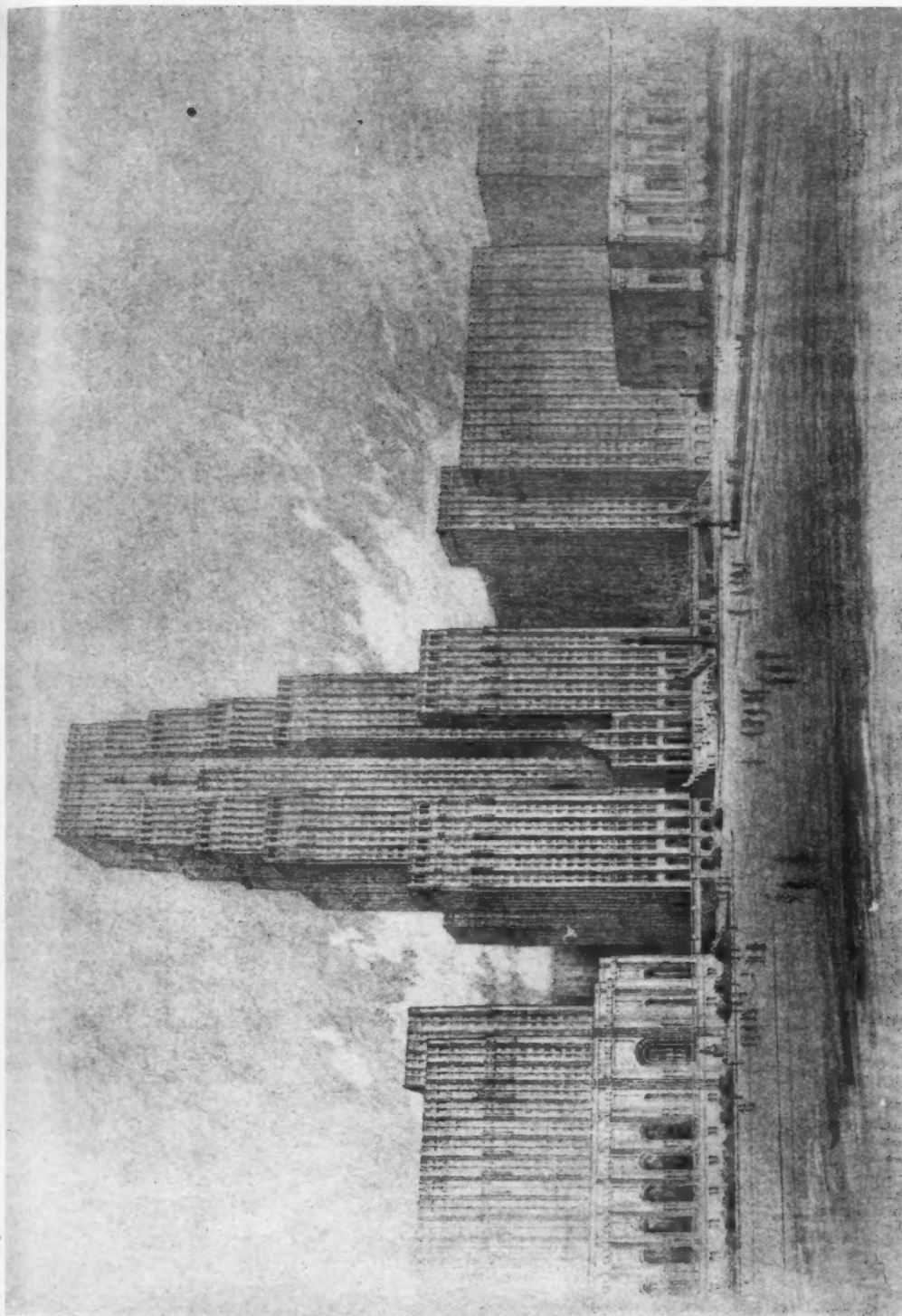
PROJECT FOR CENTRAL STATION BAGGAGE LEVEL—SCHEME FOR BAGGAGE PLATFORMS

PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO

ELIEL SAARINEN, ARCHITECT



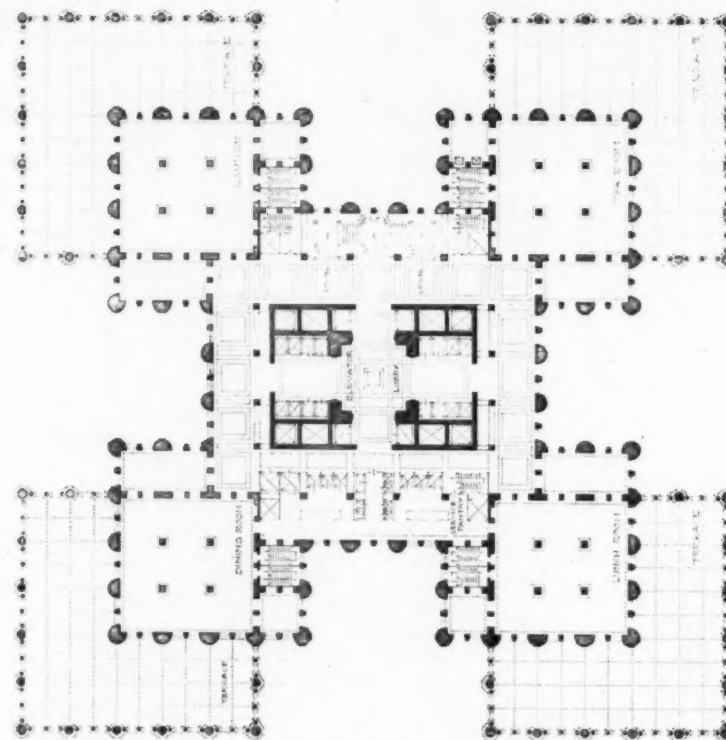
CENTRAL PLAZA AND GRANT HOTEL
PROJECT FOR LAKEFRONT DEVELOPMENT OF THE CITY OF CHICAGO
ELIEL SAARINEN, ARCHITECT



PERSPECTIVE OF GRANT HOTEL
PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO

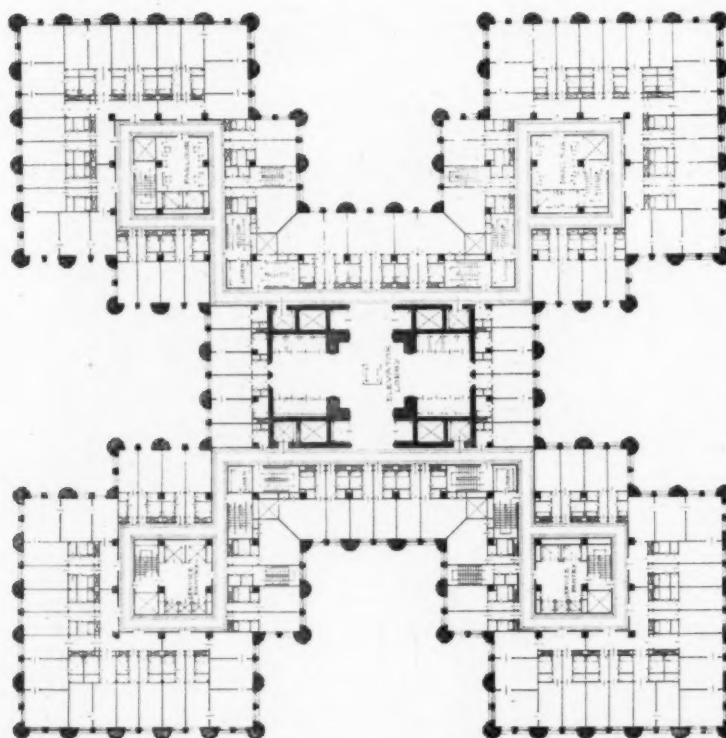
ELIEL SAARINEN, ARCHITECT

This hotel forms the architectonic finishing point of Grant and Fairbanks Boulevards. It is located at the Southern facade of Central Plaza, and in close proximity to the Central Station



Sanctus, March 1913
Elie Saarin

PROJECT FOR THE GRANT HOTEL
MAIN FLOOR PLAN OF THE UPPER PORTION.



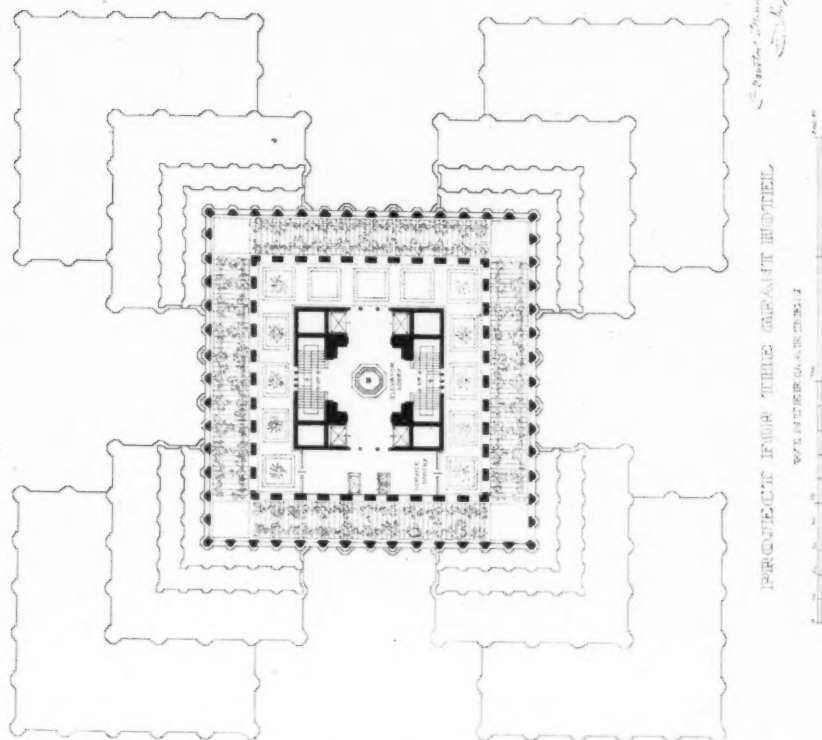
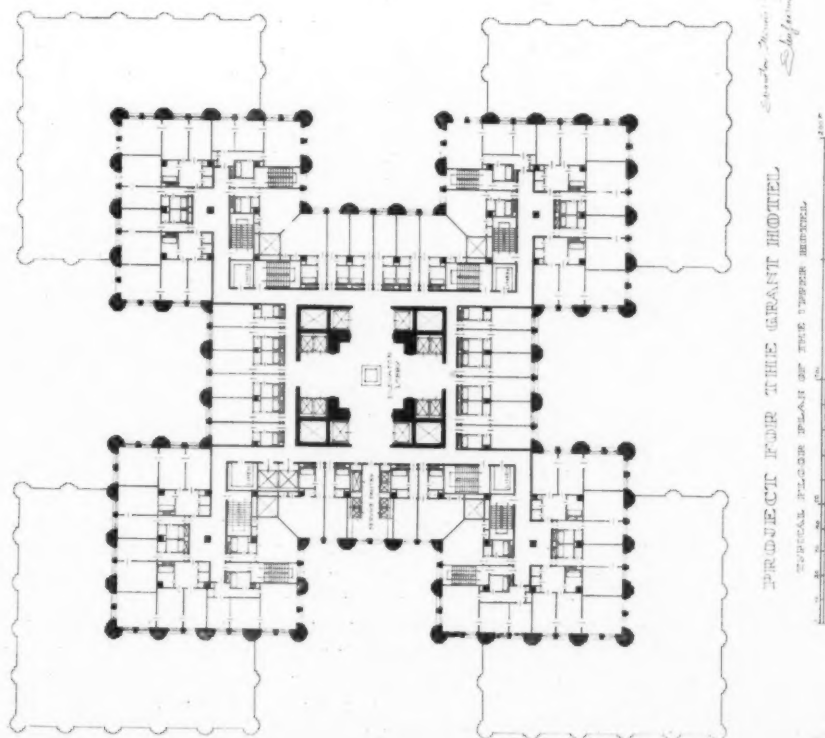
Sanctus, March 1913
Elie Saarin

PROJECT FOR THE GRANT HOTEL
TYPICAL INTERIOR FLOOR PLAN

PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO

ELIEL SAARINEN, ARCHITECT

This hotel is planned in two divisions, so that the lower, more massive part of the building forms a separate hotel, centrally located and easily accessible



PROJECT FOR LAKE FRONT DEVELOPMENT OF THE CITY OF CHICAGO
ELIEL SAARINEN, ARCHITECT

the present loop, as well as its future extension North of the river.

In planning the Central Station I have at the same time connected the suburban lines of the two railroads with one another, and also with the

projected underground city railway, so that two of its East-West branches at two points have stations in common with the suburban lines. Also the Central Station communicates through a corridor with the suburban system.

GRANT HOTEL

AS I have already stated, the modern type of railroad station for million-cities loses more and more its monumental character. But simultaneously the development goes in the direction of combining with the station another type of building which by its tendency to height and mass effect is destined to be the monumental ingredient in the station complex. This is the modern hotel.

I have incorporated it in the project now under discussion. The beforementioned tall hotel—Grant Hotel—which forms the architectonic finishing point of Grant Boulevard Northward and of Fairbanks Boulevard Southward is situated at the Southern facade of Central Plaza, and thus in close proximity to the Central Station.

The hotel has been projected in intimate and comfortable contact with the station so that the passenger can reach the large elevator hall and the baggage elevators of the hotel directly from the waiting rooms, track platforms and baggage divisions of the station.

I have planned the hotel in two divisions so that the lower more massive part of the building forms a separate hotel, centrally located and easily accessible from all sections of the city by way of the various traffic systems which meet here. The upper part of the building is also planned as a separate unit; it, too, central and easily accessible, yet apart from the smoke and noise of the large city, in peaceful surroundings and with beautiful and wide views.

In the two lower floors of the hotel complex are found boiler rooms, storage rooms, laundry, etc. In the upper of the two also toilet rooms, barber shop, etc., and entrances for automobile passengers.

The main story of the hotel is on a level with the elevated sidewalks for pedestrians, and the garden terrace above the station together with the flower beds East and West of the hotel form a convenient promenade for the guests. On this floor are rooms for the porters, rest rooms, dining and serving rooms. The floor above also belongs to this group since many of the halls and dining rooms are two stories in height.

The whole of the third floor is reserved for the kitchen department. The next two stories are planned as banquet halls and ballrooms.

The remaining part of the hotel consists of guest rooms, which occupy sixteen stories.

A large number of the elevators run directly to the upper hotel and its vestibule floor. From the latter the guests can reach their respective rooms by transferring to another elevator. This splitting of the elevator traffic is advantageous from both a technical and an economical point of view.

The next floor contains dining rooms, tea rooms

and rest rooms, and four open garden terraces surrounded by arcades.

The guest rooms of the upper hotel occupy the remaining thirty-four stories. This division forms the apex of the whole hotel complex and tapers upwardly by steps which form open arcade-surrounded terraces at various levels.

The whole complex, which is seven hundred feet high and has fifty-seven stories, contains besides the rooms for common use about 4,000 guest rooms, 2,000 in each part, all being outside rooms.

CONCLUSION

This description of my project for the improvement of the Grant Park district is further illustrated by the drawings I have made to clarify its technical and architectural aspects. As I have said before, I have not undertaken the work this project has demanded in order to propose a plan that shall be accepted and executed, but one which is possible of realization, and which could be used as a basis for the development of the city in the "sign of beauty" with its practical considerations as starting point and guide line.

I shall now look farther into the future.

I wish to see Chicago advance along the lines I have emphasized in my project. I do not mean thereby the architectonic style in which I have clothed the plan, for it is individual, but the architectonic grouping of the masses as a framing for the whole in order to form an harmonic rhythm of city views around Grant Park.

And I see a stranger arrive in Chicago. From the Central Station he makes his easy way by elevator to the hotel above. From its garden terraces a beautiful panorama greets his eye. To the West and North he sees the growing metropolis and above it farther to the North the green park girdle along the length of the shore. Below him Grant Plaza expands Southward in majestic repose, surrounded by flower beds and public buildings in harmonic monumentality; farther away verdant Grant Park and in the distant South, Chicago Tower's monumental pinnacle flashing in the sun high above the city's smoke and dust. To the Eastward, Lake Michigan spreads its wide expanse in green and violet, fading toward the horizon.

And he finds Chicago—in the heart of America—a beautiful city.

He looks down and sees the dark endless chain of automobiles rush on to the North and South. He can follow it as far as the eye reaches.

He finds labor and diligence.

And he feels that they are the forces that have created this pearl on Michigan's shore.

EDITORIAL COMMENT

TWO AND ONE-HALF CENTURIES have passed since Père Marquette and Joliet explored the West shore of Lake Michigan and camped at the mouth of the Chicago River. They found a low-lying sandy plain extending as far as the eye could see, covered with a scant growth of scrub oaks and pines, characteristic of that shore. There was nothing attractive in that locality, but its location with reference to the surrounding territory was such that it was an important meeting place for the Indians. Later the place was visited by those hardy explorers, LaSalle and Hennepin who also recognized the natural advantages of the location for pioneer trading because of the short and easy portages from the Chicago to the Des Plaines River giving access to the Illinois River, the Mississippi River and the vast territory contributing thereto. Naturally a trading post was established and later a fort garrisoned successively by French, English and American soldiers.

Less than a century ago a map was made to guide the growth of the village of a few hundred inhabitants. An unprecedented growth has characterized Chicago until it is the second city of this country and the world's greatest railroad center. When the subject of city planning was discussed in this country less than two decades ago the basic thought was to beautify the city and centralize certain governmental and civic institutions with suitable surroundings. Since that time the matter of street traffic and the storage of automobiles have become the essential factors of city planning. A correct combination of all of these elements must now be included in such undertakings. They are problems that confront every city, town or village that expects to have future growth.

The city planning project illustrated in this issue of *THE AMERICAN ARCHITECT* is one which incorporates all of these elements. In this project Mr. Saarinen has combined them in such a manner that no interference occurs. The park, with all of the landscape features preserved, also serves as a great through traffic thoroughfare and a parking place for automobiles. The outstanding feature of this project is that traffic and storage are so cleverly disposed of that they do not in any way detract from a most beautiful development and use of a park site. This marks it as the greatest advance yet made in city planning.

This project, while local to Chicago insofar as the limitations of site and its surroundings are concerned, possesses those elements which make its adaptation in modified forms possible for other cities. In this it will be of universal interest. The

conception of the project, evolved after such a short contact with it, stamps Mr. Saarinen as one possessing a keen insight into conditions and their improvement. His architectural designing introduces a note in complete harmony with the surroundings and appropriate for buildings of their kind.

* * *

A PRONOUNCED AND TIMELY movement toward a better ecclesiastical architecture appears to be in the making. It is being carefully organized and happily it promises a permanence of effort that should result in changing the deplorable architecture that characterizes such buildings in this country. Perhaps there is a reason for this condition. A certain lack of architectural co-operation has long been characteristic of inter-denominational relations. There is now an apparent growth of a closer relationship between the denominations which is probably based on a realization of a common desirable end of their efforts and the folly of giving undue weight to individual group opinions.

With a discarding of these man-made differences, attention has been given to those things which affect the denominations as a whole. Undoubtedly the arguments made by the Rev. Van Odgen Vogt in his book "Art and Religion" have had an influence on those who are in control. In this he clearly showed the necessity for, and reasonableness of, incorporating a better art and architecture in ecclesiastical buildings. A beauty of building, its decorations and accessories undoubtedly have a pronounced effect on the personnel of a congregation and an elimination of crudeness and ugliness will attract those who have been repelled by their presence. An appreciation of better things is a strong characteristic of these times and architecture must assume its rightful place in the general movement.

For some years the Methodist Episcopal organization has maintained two architectural bureaus that act in an advisory capacity to those congregations that erect new church buildings. Its sole purpose is to improve the architectural quality of the buildings and to secure plans suitable for the many activities that are now a part of its service to its members. Other denominations are moving toward the same thing. Among them, the Synods of the Lutheran Church have taken positive steps and perfected the organization of an architectural bureau. When a powerful and wealthy organization like this officially expresses a determination

to construct better churches a most desirable result is assured.

The relationship between art and religion is clearly discernible to thinking persons and the latter cannot fulfill its true purpose without the aid of the former.

* * *

THE MONTHLY BULLETIN of the Illinois Society of Architects contains a quotation from *The Economist* (Chicago) of August 11, 1923. A statement of this kind made by a man who is able to own buildings costing \$3,000,000 and \$4,000,000 is well worth the consideration of architects and owners. It makes apparent the importance of the articles which have appeared in recent issues of *THE AMERICAN ARCHITECT* written by F. S. Marlow, Architect, of S. W. Straus & Co. and the article by C. H. Blackall, F. A. I. A., in *THE AMERICAN ARCHITECT* of September 12.

"You cannot be too careful in the selection of an architect these days," said an owner a few days ago. "It is surprising that anyone should say anything of this kind when we have so many talented architects offering their services to us, each feeling that he is much more competent than any other who might offer his services. Another thing that makes it surprising is that we are supposed to be living in an age when one would think too that the ability of architects who profess to do a particular class of work is about equal.

"An architect today must not only be a good designer and a good planner but he must be able to design and construct a building that will work out along the lines of its occupancy as well as from a financial viewpoint, in fact, must be as complete as we agreed upon when the structure was in contemplation.

"Along with this, and most important, is that an architect must be a business man. He must be able to know a survey and approximate the cost of the

work as a whole from the start or at any point in the construction of the building.

"I have built two buildings very similar in many respects; practically alike insofar as cubic contents are concerned. One cost me \$3,000,000 and the other \$4,000,000. I had two different architects and they were different. One knew his profession and his business and the other did not. A million dollars is a big lot of money to lose, isn't it? But that is what I am compelled to do solely because I retained an architect who did not know his business. The same rule applies whether it is a big building or a small building. It doesn't make any difference."

It is possible that these buildings would vary in cost, although having the same cubic contents and designed by the same architect, if there was a noticeable variation in the shape of the building. Of two buildings having equal cubic contents and built for the same use, in approximately the same market, it is unlikely that one would cost 33 1/3% more than the other. It would appear then that this discrepancy in cost is correctly attributed by the owner to the difference in the qualifications of the architects.

This quotation is very positive proof that owners of large buildings are becoming awake to the necessity of securing competent architectural service. Although it is common for many architects to deprecate the alliance of commercialism with architecture, it does exist. Unless architects adapt themselves to this condition, it is evident that they will not long continue to secure commissions from intelligent clients. There is no doubt but that these requirements can be fulfilled and at the same time a high standard of architectural excellence be maintained. This will require departures from many accepted practices of today and its successful accomplishment will undoubtedly be for the betterment of architectural design in this country.

ARCHITECTURAL ENGINEERING

The LIGHTING of PICTURE GALLERIES and MUSEUMS

PART III

BY S. HURST SEAGER, F. R. I. B. A.

IT will be noted in Fig. 21 that when the camera is focused on the reflections of the pictures on the opposite walls, or the reflections of objects in the center of the room—as the statue of Carlyle—the reflections are sharp, and the figures in the picture blurred. If focused on the picture the reflections are blurred; but in both cases there is a constant struggle for mastery creating an acute eye strain and consequent “museum headache.” This is particularly pronounced in all cases where the picture and the reflections are of the same intensity or when the pictures on both sides of the room are equally lighted and are of the same tone. This result is always seen in very high top-lighted rooms; for if the room is so high that the space above the pictures is better lighted than the pictures themselves, there would be general diffusion of light at the floor level causing equal illumination of spectators and pictures, and consequently reflections of equal intensity with the picture.

It is astonishing how a very little difference in illumination on the walls makes a very decided difference in the reflections. Oftentimes the illumination of the two walls is apparently equal, but the reflections on one side are much more pronounced than the reflections on the other, and it is seen at once by examination that the side which has the most intense reflections is a few degrees darker than the opposite wall.

It will be said that it is useless to offer the “counsel of perfection” to the hundreds of Directors who are already in charge of art galleries and museums constructed on totally wrong principles. It will be seen that very great improvements indeed might be effected in all galleries if only earnest consideration were given to the question. Under the present conditions it is impossible that all, or even the greater number, of the priceless pictures in our galleries can be perfectly seen, but such improvements might be made that at least the greater number could be well seen from at least one point of view. It is in the endeavor to help Directors to realize how such improvements can be made that I submit a few illustrations and notes for their consideration. In many cases the improvements would cost nothing, and the most radical changes suggested would certainly cost but a very small

fraction of the value of the pictures they would improve. It is not surprising to learn that millions of postcards and photographs have been sold at our National Galleries, for it is at present only by photographs taken with the aid of large black cloths to shut off the reflections that the beauty of the pictures can be realized. In a very large number of brilliantly top-lighted galleries the Top-Side-Lighted method might be utilized by constructing within them the partitions and ceilings as shown in sections, Fig. 1* and Fig. 3*. Care would have to be taken that the light from the skylights falls direct on the pictures. This cannot be done in some of the lofty galleries, and in this case the system, to be successful, would have to be carried out on a raised floor. In many cases the floor could be raised sufficiently high above the present one to give a very useful storage space or even electrically lighted rooms.

The Edinburgh Art Gallery (Fig. 21) is formed of a series of octagonal rooms. They are top-lighted with ceiling lights. The divisions prevent these being seen, and consequently a very pleasing vista is created—furnished with white statues and busts which, while enhancing the general effect of the gallery, give the most powerful and irritating reflections in all the pictures. The statue of Carlyle in the foreground is seen strongly reflected in (2) and (3).

It is very difficult to see how a gallery of this type can be improved. It is a good instance of a pleasing effect as a whole being obtained at the expense of the lighting of the pictures themselves. A great deal, of course, could be done by judicious inclining of the pictures. Certainly a very great improvement in respect to the pictures might be made by removing all the white marble statues and busts to form a separate collection apart from the pictures.

The Tate Gallery (Fig. 22) provides some interesting examples of lighting. All the rooms are far too high, making all pictures of moderate size look woefully insignificant on their walls, and the flood of light which falls on the spectator makes reflections in all pictures overpowering. The pro-

*November 7, 1923, issue of THE AMERICAN ARCHITECT.

portion of the rooms makes them suitable only for the largest pictures, and yet these reflect not only all the spectators and objects in the room, but even the skylight itself in a large part of the picture. This is seen in Watt's fine picture, "The Court of Death." The picture itself it is impossible to see from any point of view. As pointed out in my original paper, the defect could be wholly cured by hanging a curtain across the room at a suitable distance from the picture to a little below the top of the picture. I have referred to the possibility of utilizing the Top-Side-Lighted method within top-lighted galleries. This might well be carried out in Room No. 1.



"RENT DAY IN THE HIGHLANDS"
THE PICTURE WITHOUT REFLECTIONS

In the Turner Room the lights are far too high for this to be successful; In this case the expedient of forming a central corridor-gallery at the required height for viewing the pictures might be adopted.

The Fitzwilliam Museum (Fig. 22) shows an imposing interior lantern-lighted with all the most valuable light high above the space available for pictures. It is 53 feet high. For this design the advice of Sir Charles Eastlake was obtained, yet, as can be seen in (4) the reflections are overpowering, and it is impossible for the Director to display his exhibits so that they can be properly seen. In this case the only remedy is the erection of a central corridor-gallery as above recommended for the Tate Gallery and other lofty rooms.

Dulwich Gallery (Fig. 22) is certainly one of the most pleasing and satisfying galleries in Europe. It is not so large as to be overwhelming, and it is so artistically arranged that pleasing vistas are formed in various directions. The vista down the central gallery (5), with the varying tones of light on the arch divisions, is a beautiful one, and it shows how effectively the pictures can be arranged on partition walls to form a series which can be easily seen as one passes along the

gallery. The only defect in this vista is the mass of brilliant light from the lantern. Originally all the sloping part was formed solid by Soane, but the Directors, thinking that there was not sufficient light in the gallery, instead of raising the floor so that the pictures might be hung nearer to the source of light, decided to glaze the whole upper part. They certainly produced a much more brilliantly lighted room, but not one in the least degree better adapted for the exhibition of glazed pictures. Six (6) gives us a very effective view across the central gallery, showing the great advantage of being able to see the pictures without at the time being dazzled by the source of light. These two illustrations form a striking object lesson in this respect. The variety in brilliancy of the lighting in the rooms in (6) results from the manipulation of the blinds. That the central end picture is placed far too high in relation to the source of light can be seen by the glitter in the upper part of it, which would increase as the picture is approached.

The pictures hanging on the light colored walls of the Wallace Collection (and of all other galleries) (See Figs. 14* and 15*) show not only that this form of roof is quite unsuited for the exhibition of glazed pictures, but they also give extremely interesting illustrations of the fatal error of coloring the walls in a tone much lighter than the tone of the pictures. This room runs North and South, and in the morning the reflections in the pictures on the East side, and in the afternoon in those on the West side, are quite overpowering. It needs the reproduction of a photograph (Fig. 15*) to enable us to see what the picture is like. That this picture would be infinitely better seen even in the afternoon if the walls absorbed instead of reflected the rays of light can at once be realized by noting that those parts of the picture (Fig. 14*) which are within the reflections of the dark pictures on the opposite wall can be fairly well seen, while all those parts which reflect the light colored wall can either not be seen at all, or are with difficulty discernible, as are objects seen through a white fog or through a white muslin curtain.

The room has more than enough light, and all the pictures could be very well seen if dark blinds were used shutting off the light from one side or the other.

If the walls are of a bright color the effect is—not to obliterate the picture—but to spread over them the hue of the wall whenever there is a bright light. This was pointed out by Professor Silvanus Thompson in a discussion held under the auspices of the Illuminating Engineering Society in March, 1914, and published in their Journal of that date. He said "A very remark-

*November 21, 1923, issue of THE AMERICAN ARCHITECT.



(1) GENERAL VIEW. A PLEASING VISTA OF OCTAGONAL BAYS, SHOWING STATUE OF CARLYLE



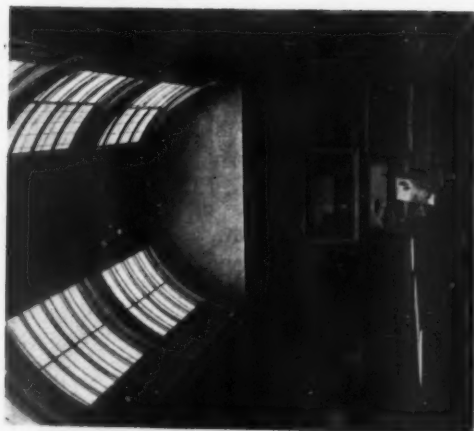
(2) FOCUSED ON REFLECTIONS



(3) FOCUSED ON PICTURE

"RENT DAY IN THE HIGHLANDS"

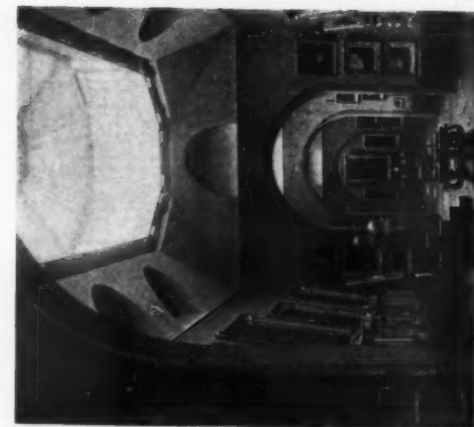
FIG. 21. EDINBURGH ART GALLERY



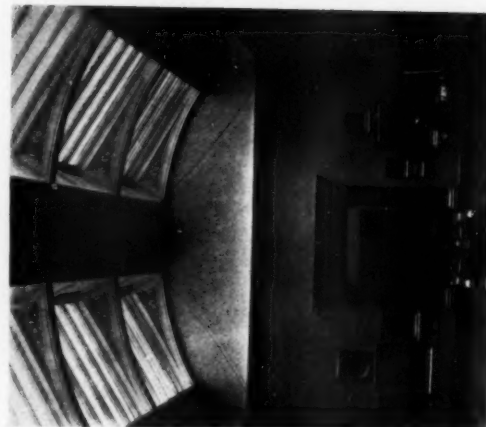
(1) THE TURNER ROOM IN WHICH A CENTRAL CORRIDOR-GALLERY MIGHT BE FORMED



(3) SHOWING ELABORATE LANTERN LIGHT. ARCHITECTURAL MAGNIFICENCE PRECEDING SCIENTIFIC CORRECTNESS



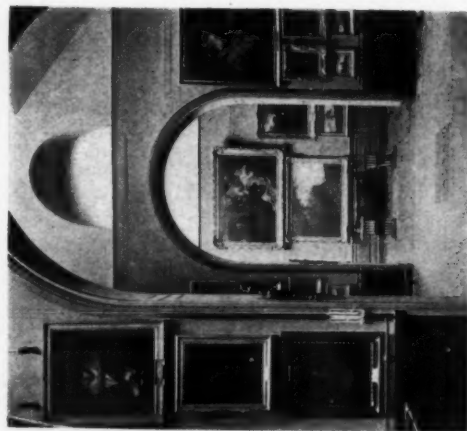
(5) VIEW IN CENTRAL HALL, SHOWING SOANE'S LANTERN LIGHT, ALTERED AT TOP



(2) ROOM NO. 1, SUITABLE FOR ADAPTING TO THE TOP-SIDE-LIGHTED METHOD



(4) THE DIFFUSED LIGHT OWING TO LOFTY ROOM, GIVES STRONG REFLECTIONS



(6) VIEW ACROSS GALLERY—IMPROVED EFFECT WHEN LIGHT IS HIDDEN

FIG. 22. TATE GALLERY (1-2). FITZWILLIAM MUSEUM (3-4). DULWICH GALLERY (5-6)

able example of misjudged treatment of wall space was afforded by one of the largest rooms, the Turner Room, in the Tate Gallery, where space above the pictures up to the skylight was a strong crimson tone, with the result that when the light was coming in through the skylights, and struck on that crimson wall, all the pictures opposite were illuminated in a red light, and not by a true daylight, and they were ruined in some respects. On a bright day, with fleecy white clouds, and occasional alterations of bright sunshine and shadow, so that the red wall was lighted up brilliantly and then plunged into comparative darkness, the pictures absolutely changed color."

It is the publication of the opinions of those who cannot have given a moment's consideration to the subject, nor have entered any gallery with a "seeing eye" that has befogged the issue and prevented any progress being made. It is a fundamental rule that there must be no reflected light interfering with the direct lighting of the picture, and it is a scientific truth often expressed that dark colors absorb light, while pale colors and polished surfaces reflect it. The "direct" light from the source of it may, of course, be as diffused, as subdued or as bright as we wish—whatever its character, it must fall on the picture *from one source only*.

The exact amount of light reflected has been lately shown by the valuable researches of Dr.

Rayner and Messrs. Buckley and Walsh, who tell us that (with artificial illumination) white ceilings reflect 80 per cent, white walls 70 per cent, buff walls 60 per cent, while the dark toned bluish-gray reflects only 25 per cent, or conversely, absorbs 75 per cent. The necessity for dark-toned neutral color for the walls of galleries where glazed pictures are exhibited is at once apparent.

The kind of glass used is of the utmost importance. Mr. D. Macleod, B.Sc., of Canterbury College, N.Z., found that the glass which gave the greatest diffusion combined with the maximum light was the kaleidoscopic glass—one formed of small pyramids. The test can easily be made by placing the glass in the rays of light from a lantern, and it will in the same way be found that rolled plate glass is the worst.

At present the result of my experiments has led me to the conclusion that the best form of skylight is one double-glazed, with clear glass on the outside, and at a distance of about four inches from it an inner sheet of the kaleidoscopic glass forming an airtight and, of course, dustproof space in which the blinds could work. It is most important that all blinds for both skylights and windows should be *rolled up at the bottom* so that the low light which is the cause of the greatest number of reflections may be shut off.

(The End)

TESTS OF "COMPOSITION" FLOORS AND STUCCOS

COMPARATIVELY very few people, who walk on oxy-chloride cement floors, or who live in houses having exterior walls of oxy-chloride cement stucco, are familiar with these materials. In fact, very often the architect or builder knows oxy-chloride cement products only in connection with trade names. The rapidly increasing demand for these materials is significant of certain desirable peculiarities, and has made it necessary to replace haphazard or "rule of thumb" methods, in the manufacture and use of this cement, with more scientific methods based on the study of numerous tests.

The U. S. Bureau of Standards of the Department of Commerce is assisting in obtaining information which is vital to the development of the industry and of benefit to the public through the improved quality of this attractive structural material. The results of a part of the bureau's work on this cement are treated in this paper.

Caustic magnesia, the chief constituent of oxy-

chloride cement, was made in the experimental cement plant by calcining magnesite ore. The temperature and other conditions were varied in order to study the effects on the properties of the product. An ore imported from Greece, one shipped from the State of Washington, and two from different mines in California were used, as these were representative of the chief sources of supply for this country. Cement mixtures, typical of those used by the trade, were then made and tested by laboratory methods, and in actual service. The service tests were conducted on panels of flooring and stucco exposed to actual service conditions. The results of this work add to the information necessary in producing the most satisfactory oxy-chloride cement products.

The results of these tests are published in Technologic Paper No. 239 of the Bureau of Standards entitled, "Tests of Caustic Magnesia Made From Magnesite from Several Sources." It can be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. The price is 10 cents in currency.

STRENGTH OF CONCRETE

MANY views have been put forth of late concerning the factors which govern the strength of concrete. These have resulted in some confusion in the minds of architects and engineers as to what are the factors that influence the strength. In order to investigate the subject under a program including all of the factors and under a uniform method, such an undertaking has been concluded at the Engineering Experiment Station of the University of Illinois, Urbana, Ill. This data contained in Bulletin No. 137 can be obtained free of charge on application.

A study of this bulletin, with its conclusions, will obviate the necessity for reducing the results obtained by scattered investigators to a common basis. The program was prepared and executed under the direction of Arthur N. Talbot and Frank E. Rickart in accordance with the well known practice of the Engineering Experiment Station.

TOKYO ORGANIZES HUGE BUILDING COMPANY

WE learn, through the Department of Commerce, Washington, that a building construction company is being organized in Tokyo for the purpose of undertaking the construction of commercial and industrial buildings on the unit basis. This company plans to specialize in four story reinforced concrete buildings designed to withstand earthquake shocks. Such material as cannot be obtained locally or which cannot be supplied in standard specifications will be obtained abroad, it is announced.

Funds for the promotion of this new company will, according to present plans, be obtained in large part from the Government at a low interest rate. At present the company is marking time, awaiting the announcement of the plans of the Capital Restoration Board as to the areas set aside for industrial and business purposes.

The announcement of the general plans for reconstruction, as worked out by the Reconstruction Board, are expected any day. Meanwhile, temporary construction is in progress in a big way in Tokyo and Yokohama but permanent building is, of course, being delayed until after promulgation of regulations designating industrial and commercial zones, height of buildings, and materials to be used.

It appears at present that in addition to securing abroad a large part of the iron and steel and lumber that goes into the permanent reconstruction, considerable quantities of cement will have to be imported as well. Ordinarily Japan exports considerable cement but the enormous demand that is bound to come with the commencement of permanent building activities, coupled with the destruction of about 8 per cent of Japan's cement

production, will be greater than the industry can meet.

Conservative bankers in Tokyo are advocating a program of reconstruction spread over a period of 20 years and financed in most part through the flotation of domestic loans. In order to keep the yen on an even keel, however, they favor the flotation of foreign loans sufficient to cover all purchases made abroad.

REQUEST FOR INFORMATION

HERETOFORE the planning of buildings for the United States Veterans Bureau has been done by different organizations and individual architects. The Bureau has recently established a Construction Division which will prepare all plans and specifications for and supervise the construction of its building. This arrangement should result in better planning and more economical construction than has been possible in the past. Gen. Hines, in instituting this Construction Division, has selected as consulting advisers Lewis F. Pilcher, A. I. A., Consulting Architect, and Col. P. M. Anderson, Consulting Engineer.

The Construction Division issues the following request:

The United States Veterans Bureau has recently organized a Construction Division in the Arlington Building, Washington, D. C., and would appreciate recent data and catalogs from manufacturers of building materials and specialties, which would enter into hospital construction and utilities.

WHITEWASH AND COLD WATER PAINT

A STUDY and series of experiments have been made by the National Lime Association on the possibilities of whitewash and cold water paints. The results, with specifications for preparing and applying them have been incorporated in a booklet for free distribution. The formulas given are simple, easy to prepare and use, and have all been subjected to practical tests. They are for weatherproof, non-rubbing coverings. This data is valuable for architects and specification writers. Copies can be obtained from the National Lime Association, 918 G Street, N. W., Washington, D. C.

SOCIETY OF ENGINEERS OF BOLIVIA

A GROUP of engineers and architects residing in Bolivia has organized the Society of Engineers with headquarters at La Paz, Juan Munoz Reyes, President, and Formerio Gonzalez, Secretary. This society is desirous of entering into reciprocal relations with architectural and engineering societies in this and other countries.



HOUSE AT GREAT NECK, LONG ISLAND, N. Y.
WM. ALBERT SWASEY, ARCHITECT



HOUSE AT GREAT NECK, LONG ISLAND, N. Y.

WM. ALBERT SWASEY, ARCHITECT

The LAW as to ARCHITECTURE

BY CLINTON H. BLAKE, Jr., of the New York Bar

WE have discussed, in prior issues, in its various phases the situation which arises where the owner asks for an estimate of cost, and the architect submits such an estimate to him. In this connection, we have seen the danger to the architect of submitting any such estimate, without making it quite clear that he is merely giving his best guess and that the estimate furnished is not to be taken in any way as a warranty or a guaranty that the work can be done for the figure given.

A very similar situation with respect to the cost feature of the work is that which arises in those cases where the owner specifies, in employing the architect, that the building must not exceed a certain stated cost. If the owner states definitely that the cost of the work must not exceed a certain figure, and the architect, without securing any qualification of this statement, undertakes and proceeds with the work, he is running a grave risk of loss, in the event that the cost of the work exceeds the figure quoted or in the event that the bids received are all in excess of it. In such a case, the owner may well urge that the architect, by proceeding with his work with fair warning and a full knowledge of the owner's stipulation that the cost must not exceed a specified amount, impliedly recognizes and consents to the condition as to cost which the owner has imposed. In the event that the estimates exceed this cost and the owner does not proceed with the work, the architect may lose entirely his compensation for the services performed. In case the work is done, but the final cost exceeds the stipulated amount, the question will arise whether the owner, by proceeding with the work, has not waived the condition. Whether he has done so or not will depend on the facts in each case and upon bringing home to him a knowledge as he proceeds with the work that the cost is to exceed the amount which he has stipulated. It is quite possible also, under certain conditions, that he may be able, and quite likely that he may attempt, to hold the architect liable for damages by reason of his failure to design a building of the cost impliedly agreed upon.

To obviate all of these dangers, it is important that the architect should protect himself by making it clear to the owner that he cannot accept the work under any implied or express condition that the ultimate cost should be within any specified amount. If he wishes to take a chance on building and labor costs and on his ability to make and secure the consent of the owner to such changes in the plans as may be necessary to reduce the

cost from any excessive figure to the limit agreed on, he may, of course, proceed with his work on the understanding, implied or otherwise, that the cost shall not exceed the sum mentioned by the owner. In taking this course, however, he should clearly recognize its dangers and the possible and very probable "come-backs" which it may bring about. The only safe course is for him to tell the owner that he will do his best to bring the cost within the figure quoted, but that he has not the control of the material and labor markets and must be paid for his work, accordingly, whether or not the cost exceeds the given amount.

If the owner merely expresses a hope that the cost will not exceed a stipulated amount and does not attempt to make it a definite condition of the architect's employment that this shall prove to be the case, the danger to the architect of proceeding is not, of course, as great. If the architect does proceed, however, in such a case, without qualifying the position of the owner, he nevertheless takes a chance which, while somewhat less than that which he would take by proceeding in a case where the owner definitely stipulated that the cost should not exceed the sum given, is nevertheless a very real one.

While the expression of a mere hope or expectation is not the same as a specific condition or stipulation, it may, nevertheless, have the same effect, under certain circumstances, if it is improperly disregarded. If the owner tells the architect that it is his expectation that the cost shall not exceed a certain amount, the architect is put on notice of the position of the owner, and if, with this knowledge, he deliberately proceeds with plans which will carry a much heavier expense than that which the owner has given, it may be possible for the owner to defeat his right to compensation. This, again, would be on an implied understanding rather than an express agreement.

The point is, in general, that whether the owner definitely stipulates that the cost shall be within a certain figure or simply puts the architect on notice that the cost which the owner contemplates is that figure, the architect, to be on the safe side, must follow the matter at that point a step further and clear up any possible misapprehension in the mind of the owner. He must make perfectly clear the fact that he cannot accept the work subject to any such condition; that he will do his best to meet the amount referred to, but that his compensation is not in any way to be predicated upon his success in doing this. It is just as important, and possibly more important, that the architect

should follow this course as it is that he should, in submitting estimates of cost, guard himself by following the course recommended in former articles and specify definitely that in submitting estimates he does not in any way represent or guarantee that the work can be done for the estimated amount.

LEGAL DECISION

A MUNICIPAL contractor completed the foundation of a building and erected the metal forms necessary for the purpose of pouring concrete for the walls. An electrical contractor, coming on the job at this point, tore down the forms and so necessitated their rebuilding. It appeared that the City had authorized the electrical contractor's work to be done. The contract provided that the City should not be liable for extras, except where contracted for by certain specified officers. It also appeared that the City contracted with a plumber to install certain pipes in such places and in such a manner, that they would interfere with the building of partitions by the plaintiff contractor, and that the contractor incurred additional expense, as a result. The contractor completed the building walls, leaving window openings of a size specified in the contracts. The architects then gave to a sub-contractor of the contractor detailed plans for larger windows than those specified. Windows of a larger size were manufactured and brought to the job, and the contractor was thus compelled to enlarge his window openings at additional cost. The contractor's agreement provided, among other things, for the laying of a cement floor on a hillside. It was provided that the basement floor should be a certain height above sea level. The contractor asked the City architect what grade he needed for the building, and the architect gave him a grade, which was 15 inches higher than that required by the contract. The contract provided that the windows be surmounted with relieving arches. The contractor put in furring between the top of the windows and the lower sides of the arches. He also dug test pits to determine the depth at which the foundation of the building should be placed.

The contractor, on the foregoing facts, claimed that he was entitled to recover damages for the extra work of re-erecting the concrete forms, for the extra expense involved in extra work made necessary by defective plans furnished by the City, for the damage caused by the work of the

plumber interfering with the building of partitions, for the extra expense occasioned him by the change in the window openings, for the extra fill on the cement floor, due to the error in the grade given him by the architect, for the furring above the windows and for the digging of the test pits.

The court held that, in every express contract for the erection of a building for the performance of construction work, there is implied an agreement that the person or corporation for whom or for which the work is to be done will not delay the contractor, but will facilitate the performance of the work; that the City, having obstructed the execution of the contract, was liable for damages in the amount of the extra expense incurred, and the fact that the contract provided that the contractor should not be paid for extras, unless approved by the officials, would not alter this result; that the contractor was entitled to recover his damages for the expense incident to rebuilding the concrete forms for the work necessitated by the defective plans, for the damages occasioned him by interference of the plumber with the building partitions and for the damage occasioned him by the architect's having had windows larger than those specified provided.

With respect to the other items, the court held that, having agreed to lay the cement floor on a hillside, the contractor apparently agreed to make the necessary fill to support the floor; that the architect, having had no authority in this case to contract for extras or to modify the contract in any material respects, the contractor could not recover for the additional fill, because of the error of the architect in giving the grade; that, inasmuch as the contract provided that the windows be surmounted with relieving arches, it was necessarily implied that there should be no openings above the windows, and the contractor could not recover therefor extra compensation for the furring which he placed between the top of the windows and the lower sides of the arches; that the contractor finally could not claim extra compensation for digging test pits to determine the depth at which the foundation of the building should be placed, inasmuch as his obligation and agreement were to construct the building in accordance with the plans furnished by the architects; that it was no part of the contractor's duty to make these tests, and that, if he made them at the request of the architects, no claim could be based upon such request, inasmuch as the architects were without power to contract with the plaintiff.

Ryder Building Co. v. City of Albany, 176 N. Y. Supp. 456.

INTERIOR ARCHITECTURE

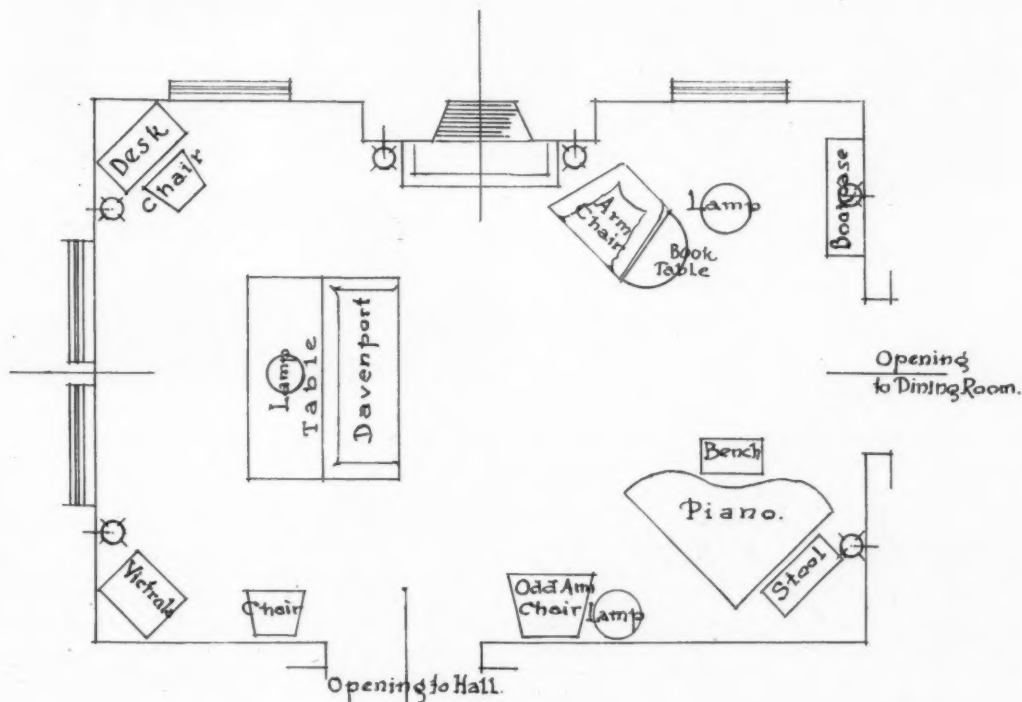
The Living Room and Its Furnishings

IF the sizes of the various rooms which constitute the plan of the average small house should be determined by their relative value of usage, the greater part of the first floor would logically be taken up by the living room. That room in the average home serves the purpose of several rooms in the larger and more pretentious ones, being in a sense a combined parlor, library and music room for the entire family. By reason of this manifold use, it is evident that its wall design, furniture and color scheme should be selected so as to serve these varied purposes and, from that fact alone, the problem becomes man-sized.

There are several facts which must be given careful consideration in the planning of this room, each bearing certain weight on the entire scheme and its many details. First, its twenty-four hours' use by all members of the family requires a scheme of decoration pleasing to all, comfortable and informal. Second, as a reception room for friends, the scheme must be rather more conservative than radical, especially in color, to sympathize with their varied tastes and ideas, for they should be

satisfied too when they are there. Furthermore, a certain touch of formality should be evidenced to make it appropriate for formal entertaining.

Consider, then, how best to obtain these results. The first proposition is the floor plan, or size and shape of the room. Its dimensions, determined actually in relation to its importance, would create an unbalanced plan, which fact presents a problem to be solved by good proportion, the result depending on its interpretation by the architect. Several square feet could easily be taken away from the dining room, where the space may not be necessary, and could be used to better advantage in the living room, without interfering with good proportion. The general size and shape thus determined, the next step in the development of the room plan is the placing of the fireplace. Nothing is more necessary to the real, solid comfort of a living room than a properly constructed and well placed fireplace. Its position bears a most important part in all that follows. Consideration should next be given to the openings. Windows are apt to be fairly well settled by the general plan,



A WELL PLANNED ROOM WITH WELL PLACED FURNITURE

Note the view obtained when entering the room from the hall. Also note the grouping of the furniture, each group quite distinctly alone and yet all forming a perfect ensemble. For instance, the big armchair is a part of the main lounging group and yet, with the bookcase, completes the reading group. The small book table ties the chair with the bookcase

but in locating the doors, the fireplace enters into the study. Locate the main opening from the entrance hall so that the fireplace catches your attention. After placing the furniture, it will be found that at first glance from the hall, the fireplace and its surrounding furniture will present an alluring invitation to enter. Place some of the furniture around the fireplace to give that effect. Call this group of furniture the "Lounging Group." It should consist, principally, of a davenport or sofa, at least one armchair and some kind of table. That is all that is needed in a floor plan study, for, aside from their general position, their proportion to the plan as a whole is the only consideration at this stage. Give next thought to the general style of the mantel design, for the

ering or raising of the ceiling level, the widening or narrowing of door or window openings, or other changes which might affect the structural conditions. Do it now, for it should not be necessary to rearrange the columns and beams too often, and positively not after the plans have been put through. All this determines the scale of the room, and advances the problem that much farther, limiting designs of woodwork, ornament, furniture and materials to that scale.

Consider now the other more important pieces of furniture and their relation to the floor plan and to each other. Continuing along the group idea, of next importance to the lounge group is the "Reading Group." This must be apart from the fireplace group, consisting of a bookcase, at least



HOUSE OF FREDERICK A. GUEST, ROSLYN, L. I.
CARRERE AND HASTINGS, ARCHITECTS
CHARLES OF LONDON, DECORATORS

A real living room of the Elizabethan period. There is evident on all sides co-operation between architect and decorator for in its every dimension is the detail of the period considered

style of decorations of the entire room must be determined by something and surely the mantel is the feature of the decorative scheme. This decision is simplified if the client has indicated a preference for a particular style or period of room. The problem then becomes much easier, as the architect can design the mantel, proportion it by the selected style to the rest of the room, and then design the wall treatment, window trim, and door surrounds to correspond. By this time the room begins to take definite form and design, and it is necessary to revise or check up on the window and door openings to permit of correct wall surfaces for carrying out the characteristic designs of the chosen period or style. This may require the low-

one comfortable chair and a lamp or wall light. Another group is the "Music Group" of piano, stool, one chair and lamp or wall light. These three groups must not appear in any way distinct, and must be arranged so that with little shifting, they would all appear as one big group, centering on the fireplace, and could be used as such on certain occasions. This would sometimes call for several odd pieces placed here and there to tie the several groups together and complete the furniture for the room. In laying these different groups out on the floor plan the best and necessary location for wall lights, ceiling outlets and receptacles is readily determined. As the wall treatment has been blocked out, these outlets can be placed so that



This sofa or davenport, while comfortable in the extreme, is upholstered so as to appear very light, and thus in correct scale with the details of a small room. It suggests Adam, and the Italian chair, on account of its contrasting details, goes well with it

they are in unison with that treatment and even the design of the brackets can carry out certain details of the ornament, to appear as a real part of the wall design, if that would be in keeping with the period or style.

Certain styles and periods are always more popular for different rooms than others according to prevailing modes and fancies, and it is often on account of this that some interior designers will unfortunately concede to their clients' wishes to be "up-to-date" and design rooms carrying out the ornament and certain details of that style where the proportion of the room is not at all suitable. The early English, covering the Stuart and Tudor periods, with wood panelled walls, simple lines and bold ornament, is very livable and wears well. The simple adaptation of the Georgian period, of forming wall panels with a wood moulding applied to the plaster walls, is generally pleasing, but as often carried out without the enrichments of the original English homes, rather severe. The various Colonial styles which dominate our early American architecture with their low wood wainscots and trim in light color, setting off the delicate

grays of the figured wall paper, are still hard to improve on for the simple living room, while the rough plaster treatment suggested by the Italian with appropriate furnishings, is decidedly homelike and domestic in its relations at all times.

It is in the selection of furniture that so many mistakes are made. The details of styles and periods of furniture design and their influence on one another are important subjects and are too often passed by. In strictly period rooms, most of the furniture should, of course, be of the same period as the wall treatment, or, at least, of a contemporary style. Occasional pieces of a contrasting period as shown in a preceding article can be brought in, but not too many. For instance, in an Italian room a certain type of Queen Anne chair would not be at all out of place. Many accurate Louis XVI salons have several Adam pieces interspersed. In the rather nondescript rooms which abound now as always, as in apartment houses, it is best to keep the principal pieces, not meaning necessarily the large

An armchair, designed along the general lines of the davenport is always in good taste. This Italian table could be appropriately used to complete the principal group with the davenport and chair, while the Italian chair above would be treated as an odd piece, although tied to the scheme by the sympathetic note in the table



pieces only, in the same style but not always in the same design. Properly selected period furniture can be used well in this nondescript type of room, and the contrasting motif could be brought in through some of the less important pieces.

Be very careful in selecting the color scheme. Avoid as a rule primary colors for the dominating color. Everyone has a favorite color, and also one that irritates. This is especially true of the primary colors. Therefore, choose for the dominating color one of the secondary colors, composed of two primary colors combined. Fewer people really dislike a secondary color for this very reason. There is then the chance of pleasing two instead of one of every three people. Undoubtedly there are many rooms in which the scheme was carried out entirely around one primary color,

as a dominating color and yellow-orange as the subordinate color with blue-green as the contrasting color is a good combination of three secondary colors, generally pleasing and suitable for a living room. The Georgian green, sometimes called apple green, so often used for entire walls and woodwork of rooms of that period is very restful and satisfying, makes a good background for furnishings because of its grayish tint, and harmonizes well with many colors.

Consider the complete color scheme of an average living room, with mulberry as the dominating color, and orange as the subordinate. In this type of room, walls, ceiling and floor serve best as a sort of background for the furniture and hangings, and, for this reason, shades of gray, tinted slightly toward the dominating color, are best. Flat paint,



A decorative scheme for a living room, illustrating contrast in color, tone, texture and design. The wall surface is in stipple effect paper or paint of a gray tint; taupe chenille carpet on the floor; draperies of figured damask in mulberry and gold; large and important furniture covered in narrow striped two-tone mohair, mulberry shade, and valance over curtains in same material; odd piece of furniture in small pattern tapestry with tan background and design in blue and green

with, perhaps, satisfying results. There is the rather conventional blue room with buff walls, and woodwork, blue rug with gold or tan border, blue and gold hangings and blue furniture covering. Harmonious throughout and even pleasing for a little while, but soon this becomes tiresome and monotonous and desperately cries for contrast. A typical Chinese rug of gold ground, with Chinese characters spotted in various colors, would give instant relief and prove the desirability of a contrasting color, or element.

Therefore, build the scheme around two secondary colors and add touches of a primary color, as best suited, for the contrasting note. In this way, the general pleasing qualities of the less subdued secondary colors will satisfy and often interest the majority, while the primary will give all the necessary "punch" to break any effect of monotony in tone or color. Mulberry, a shade of red-purple,

stippled effect, wall paper or rough plaster treatment are all good when selected according to the style of room and results to be obtained. The ceiling tinted in a much lighter shade than the walls, nearly white, and a plain rug, as a chenille, of a much deeper shade, as a "taupe," tend to keep the ceiling "over your head" and the carpet "on the floor." The furniture should be covered to suit the background. The largest mass of material is the covering of the davenport and an armchair to match. Being also important pieces of furniture, the dominating color is used, but, to avoid seeming monotony a two-tone mulberry stripe is selected. Next of importance in the room, from point of material used, are the window drapes. These call for a prevalence of the dominating color in the design of the fabric on account of their important part in the furnishings with sufficient of the subordinate color to establish them as a feature apart

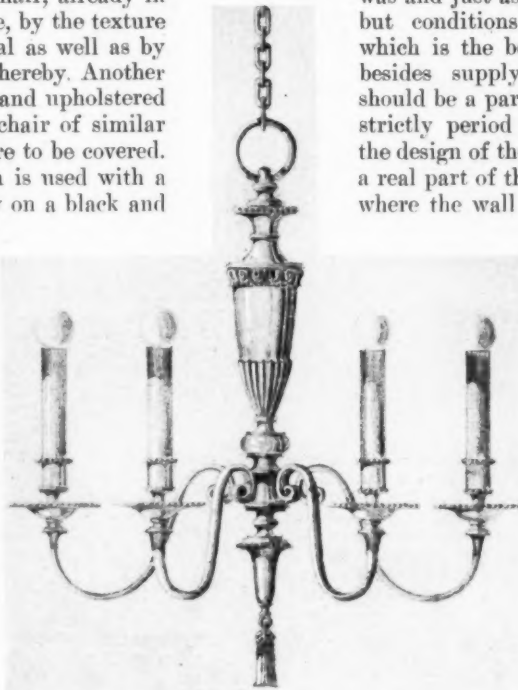
from the davenport and chair. A figured damask of mulberry and gold in about equal proportion is found to serve this purpose best. In order to meet the necessity of the desired prevalence of mulberry, a flat shaped valance is placed above the curtains of the same mohair as the furniture covering already used. There is an odd upholstered wing chair, of contrasting period, to be covered, and here is found the opportunity to bring in the first note of contrasting color, much needed even now. A tapestry with a small conventional pattern, combining several colors, emphasizing greens and blues, contrasting colors, is selected, which further distinguishes the chair, already in contrast in design and style, by the texture and pattern of the material as well as by the new colors brought in thereby. Another armchair with wood arms and upholstered seat and back and a side chair of similar style complete the furniture to be covered. For these, a damask again is used with a figured design in mulberry on a black and gold ground. Being insignificant pieces, the use of colors and texture already a part of the scheme serves to place them in correct relation to the more important pieces, while accurately making them an integral part of the whole scheme. Certain colors can be repeated as desired in the several accessories as lamp shades, drapery trimmings, sofa pillows and table covers, according to their importance. Use tones of yellow for lamp shades everywhere, and other colors for trimming only.

The best method of lighting a living room is a question that has recently come in for considerable discussion. Someone suddenly came out with the announcement that ceiling chandeliers were passé and all lighting should now be done by wall brackets. It is quite remarkable how much attention has been given to this statement. Throughout all the stages of the development of interior architecture, wall brackets had proved their usefulness, both from the decorative and practical standpoints. The chandelier had also proven to be worthy of consideration in any lighting scheme. These statements stand true today. Under certain conditions, one is better; under others, another, or perhaps both are

best. During the last twenty-five years there have been many other methods of lighting brought forward. This is probably due to the fact that the public was so easily swayed by the announcement that ceiling lights were to go, that someone thought up another scheme and announced that indirect lighting was to replace both. Consequently, the choice today is not only between wall brackets and chandeliers, but also the indirect method and entirely concealed lights.

It all comes back to the old contention, everything in its proper place. There is just as much use today for the wall bracket as there ever was and just as much for the ceiling light, but conditions of the room determine which is the better suited. Wall brackets besides supplying light for the room, should be a part of the wall decoration. In strictly period rooms, this is evident, as the design of the bracket can often be made a real part of the wall treatment. In rooms where the wall design is somewhat vague

as to period, as in the different Colonial styles, the choice of the bracket will determine the style of the wall treatment. In the low ceilinged room, wall brackets are, as a rule, more practical than ceiling lights. But this alone does not govern their selection. Placing of furniture, color scheme, in fact all the many details which influence the general planning and designing of any room or interior have an important bearing on the selection of the lighting system. The popular use of both table and floor lamps has had its



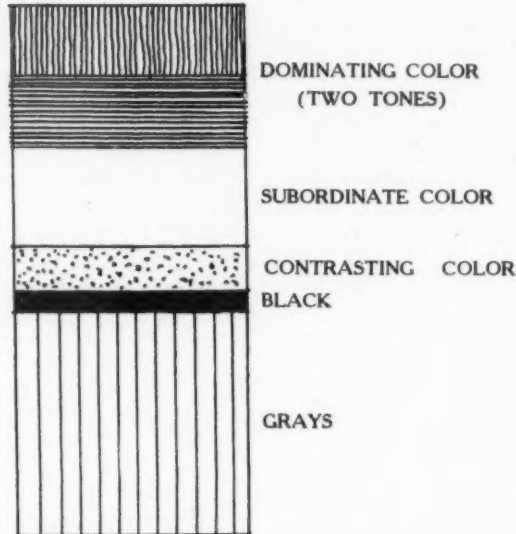
In spite of all that is said to the contrary, the ceiling chandelier is still very much in vogue. The pleasing note of ornamental detail which a well designed chandelier adds to an otherwise rather bare section of a room, is an argument in favor of the center light, aside from its practical lighting qualities

effect on the actual necessity of the wall bracket and chandelier, but for general lighting qualities, these types of lamps are neither appropriate nor desirable. For general distribution of illumination the ceiling light is most adaptable and, therefore, in many cases, desired, even when lamps and wall brackets may take care of those places of special intensity. Indirect lighting diffuses the general distribution of light, but also requires other facilities for reading purposes, etc. The value of concealed lighting in public halls, hotel lobbies, and theatres, can be readily seen, where lighting fixtures must be carefully designed to retain the scale of the decorations and furnishings, and even

in the average home it has its advantages, although not so generally used.

Architects are invited to correspond with the editor of this department in regard to any problems of interior design or the availability of materials.

Acknowledgment is made to the following firms for their courtesy in supplying illustrative material: Berkey & Gay Furniture Co., Cassidy

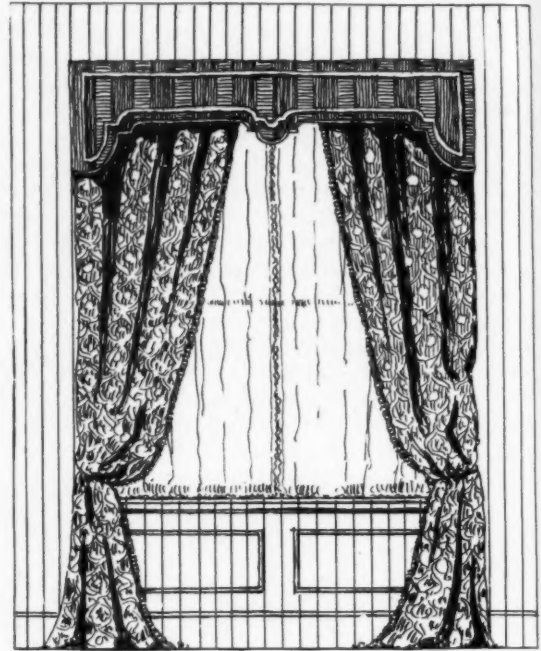


Color scheme chart in black and white, illustrating relation of colors, values, textures and designs. The idea applies to the furnishing of most any room. The davenport and chair represent the principal pieces; the wing chair, odd pieces of different style and design; the side and armchair, the remaining insignificant furniture in the room. Generally, all furniture would come under one of these headings. Details of design, woods, etc., are not considered here, although in reality they all have a decided influence on the choice of fabrics

Co., W. H. S. Lloyd Co., W. A. McHorney Co., Inc., F. Schumacher & Co., Somma Shops.

SMALL PICTURES FOR SMALL ROOMS

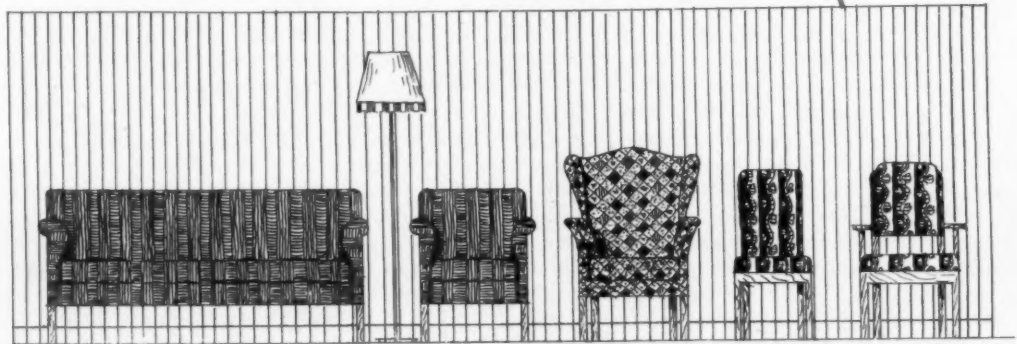
THE limited wall space in the average small apartment prevents the hanging of large pictures. This fact has led to a demand on the part



WALLS AND WOODWORK, GRAY; CURTAINS, MATERIAL COMBINING DOMINATING AND SUBORDINATE COLORS; VALANCE OF TWO TONES OF DOMINATING COLOR, TRIMMED WITH GALLOON OF SUBORDINATE COLOR

of the picture loving and picture buying public for the small, or as they are known among artists, "thumb-box" sizes. These vary from 5 x 7 up to about 12 x 16 inches. In the current exhibition of the National Academy of Design, now open at the Fine Arts Building, in New York, the hanging committee has very successfully solved the problem of the small picture in exhibitions.

A series of grouped panels each afford a space, equivalent to the average wall space available in the living room of small apartments. On these panels are hung a series of about seventy small pictures, supplemented by some excellent examples of small sculptured figures.



Davenport covered in two-tone material of dominating color; armchair to match in same material; odd wing chair, covered in material combining dominating, subordinate and contrasting colors, contrasting color in greatest proportion; side and armchairs of different design covered in fabric combining dominating and subordinate colors with black

BEAUX-ARTS INSTITUTE of DESIGN

ACTING DIRECTOR OF THE INSTITUTE—WHITNEY WARREN

ARCHITECTURE—RAYMOND M. HOOD, DIRECTOR

SCULPTURE—EDWARD FIELD SANFORD, JR., DIRECTOR

INTERIOR DECORATION—FRANCIS LENYON, DIRECTOR

MURAL PAINTING—ERNEST C. PEIXOTTO, DIRECTOR

OFFICIAL NOTIFICATION OF AWARDS

JUDGMENT OF NOVEMBER 13, 1923

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NUMBER OF DRAWINGS SUBMITTED:—115.

AWARDS:—

FIRST MEDAL:—H. B. Tross, Carnegie Inst. of Tech., Pitts.; H. A. Dumper, Columbia University, N. Y. C.; W. R. Amon, Atelier Licht, N. Y. C.

SECOND MEDAL:—J. Franklin and T. R. Hinckley, Carnegie Inst. of Tech., Pitts.; V. L. Annis, B. Riaboff and J. F. Booton, Univ. of Pennsylvania, Phila.

FIRST MENTION:—S. M. Shaw, C. Leonardi, E. Albright, G. F. Trapp, M. P. Dyke, M. A. H. Chapman, E. C. Morris, M. C. Hills, N. B. Hanes, and S. R. Moore, Columbia Univ., N. Y. C.; W. Z. Bane, E. M. Gearhart, P. Hohorst, A. Thormin and H. A. Page, Carnegie Inst. of Tech., Pitts.; A. R. Hauser, Dept. of Archt. of Armour Inst. of Tech., Chicago; L. K. Levy and J. S. Thomas, Jr., Georgia Sch. of Technology, Atlanta; J. Gambaro, A. F. Euston, D. K. Frohwerk and M. Gauthier, Atelier Hirons, N. Y. C.; A. T. G. Durnford and W. W. Wurster, Atelier Licht, N. Y. C.; F. W. Raudebush, Princeton Univ., Princeton; E. A. Beihl, "T" Square Club, Phila.; R. Bloomgarten and G. M. Beal, Univ. of Kansas, Lawrence; L. I. Kahn, A. H. Spencer, T. E. Cooper, J. W. Everhard, H. H. Weiss, W. P. Wagner, C. P. Zimmers, J. L. Evans, E. F. Anderson, A. M. Butts, T. P. Yang, A. D. Reid, E. R. Duckering and A. G. Lindblad, Univ. of Pennsylvania, Phila.; W. E. Armantrout, R. A. Mattson, E. I. Harrison, E. Mittelbush and A. B. Gallion, Univ. of Illinois, Urbana; H. B. Marsh, A. F. Harrer and E. L. Babitsky, Atelier Wynkoop-Seymour, N. Y. C.; H. P. Staats and C. F. Ferrari, Yale Univ., New Haven.

SECOND MENTION:—A. Ehrenrich, E. Kaeyer, G. R. Tyler, W. E. Page, C. H. Dornbusch, H. R. Robinson and O. Betts, Columbia Univ., N. Y. C.; P. F. McLean, Carnegie Inst. of Tech., Pitts.; B. K. Jones, Clemson Agricultural College, Clemson College, S. C.; O. F. Cerny, E. A. Lynch, E. Fuhrer, R. V. Fard, A. E. Nicolai, R. Brandt, N. L. Flint, and H. F. Reynolds, Dept. of Archt. of Armour Inst. of Tech., Chicago; W. Harris, George Washington Univ., Wash., D. C.; E. R. MacDonald, San Francisco Archtl. Club, San Francisco; H. S. Shaw, "T" Square Club, Phila.; D. Kosvich, F. W. Lang, O. Stepan, P. S. Hall, Univ. of Illinois, Urbana; H. S. Gannaway, Univ. of Texas, Austin; H. O. Williams and I. Horton-3rd, Yale Univ., New Haven.

H. C.:—Elsa M. Griesser and H. C. Douden, Carnegie Inst. of Tech., Pitts.; J. B. Walther and S. G. Winston, Columbia Univ., N. Y. C.; J. R. Koberling, W. F. Yerkes and H. E. Anderson, Dept. of Archt. of Armour Inst. of Tech., Chicago; J. J. Whitfield, Jr., Georgia Sch. of Tech., Atlanta; J. D. Tuttle, Los Angeles Archtl. Club, Los Angeles; G. P. Turner, "T" Square Club, Phila.; W. Faulkner, Yale Univ., New Haven.

CLASS "A"—I ESQUISSE-ESQUISSE

"A CARVED WOOD CEILING"

There are a great variety of good examples of carved wood ceilings in France, Italy, England and Spain. Some

expressing the actual beams, some very flat of a panelled nature; or coffered, rich in ornament. Color is used or natural wood.

It is assumed that a central hallway of an art museum is rectangular in plan with an entrance at one side and stairway opposite, and with an important room on each of the transverse axes. The walls are of stone and the ceiling 25' from the floor. This Hall is 60'-0" long 40'-0" wide.

The problem is to design a flat wood ceiling for the hall. The ceiling treatment may be carried down on the wall forming a rich frieze, if desired. The general effect is to be that of richness of the ceiling with a relatively simple wall stone treatment which would give as much space as possible for the hanging of tapestries or works of art to be exhibited.

JURY OF AWARDS:—R. M. Hood, H. O. Milliken, J. H. Freedlander, W. E. Shepherd, Jr., J. T. Haneman, C. H. Aldrich, G. A. Lansburgh, E. S. Hewitt, C. Grapin, F. C. Hirons and E. S. Campbell, Jr.

NUMBER OF DRAWINGS SUBMITTED:—61.

AWARDS:—

FIRST MENTION:—M. Gauthier, Atelier Hirons, N. Y. C.; T. P. Yang, Univ. of Pennsylvania, Phila.

SECOND MENTION:—H. C. Douden, Carnegie Inst. of Tech., Pitts.; A. F. Euston and D. K. Frohwerk, Atelier Hirons, N. Y. C.; R. Nickel, "T" Square Club, Phila.; C. F. Ferrari, Yale Univ., New Haven.

CLASS "B"—I ESQUISSE-ESQUISSE

"A ROADSIDE RESTAURANT"

A highway, used by motorists, winds through a picturesquely wooded valley and crosses a willow bordered stream over an old stone arched bridge. At a point about a hundred feet from this bridge, is an old ruined mill with its wheel and mill-pond.

This mill and two acres of land have been bought by a man who proposes to transform it into a roadside restaurant. It will be necessary to accommodate about thirty persons at small tables in the main room. A pantry, kitchen, store room and wash rooms should be provided in the building, while outside, there should be a small parking space or covered shed for motor cars. Facilities for lunching or dining out of doors by the mill-pond should be considered. The building itself should not exceed 50'-0" in length.

JURY OF AWARDS:—R. M. Hood, H. O. Milliken, W. Warren, J. H. Freedlander, W. E. Shepherd, Jr., J. T. Haneman, C. H. Aldrich, G. A. Lansburgh, E. S. Hewitt, C. Grapin and E. S. Campbell, Jr.

NUMBER OF DRAWINGS SUBMITTED:—87.

AWARDS:—

FIRST MENTION:—G. A. Hacker, Atelier Sibley, Palisade, N. J.; W. Ferrari, Yale Univ. of New Haven.

SECOND MENTION:—J. J. Landon, Los Angeles Archtl. Club, Los Angeles; H. W. Johnson, Dept. of Archt. of Pa. State College, State College; D. Douglas and W. H. Schilling, Yale Univ., New Haven.

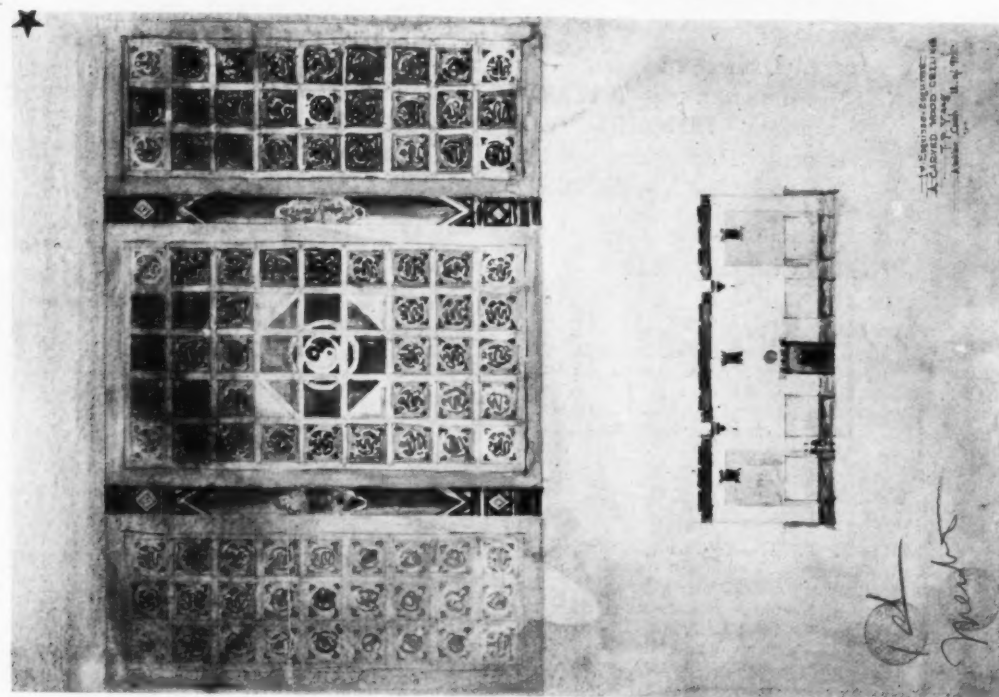
CLASS "A" AND "B" ARCHEOLOGY—I MEASURED DRAWING

JURY OF AWARDS:—The same as for Class "B"—I Esquisse-Esquisse.

NUMBER OF DRAWINGS SUBMITTED:—1.

SUBJECT:—Lorenzo Ghiberti.

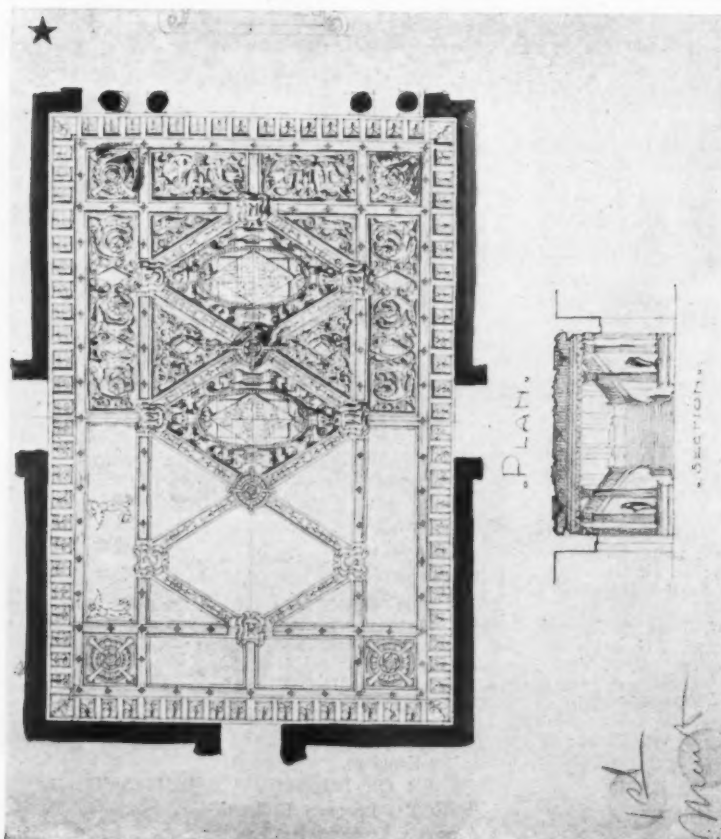
AWARD:—MENTION:—P. Simonsen, Atelier Hirons, N. Y. C.



UNIV. OF PA.

FIRST MENTION

T. P. YANG



ATELIER HIRONS

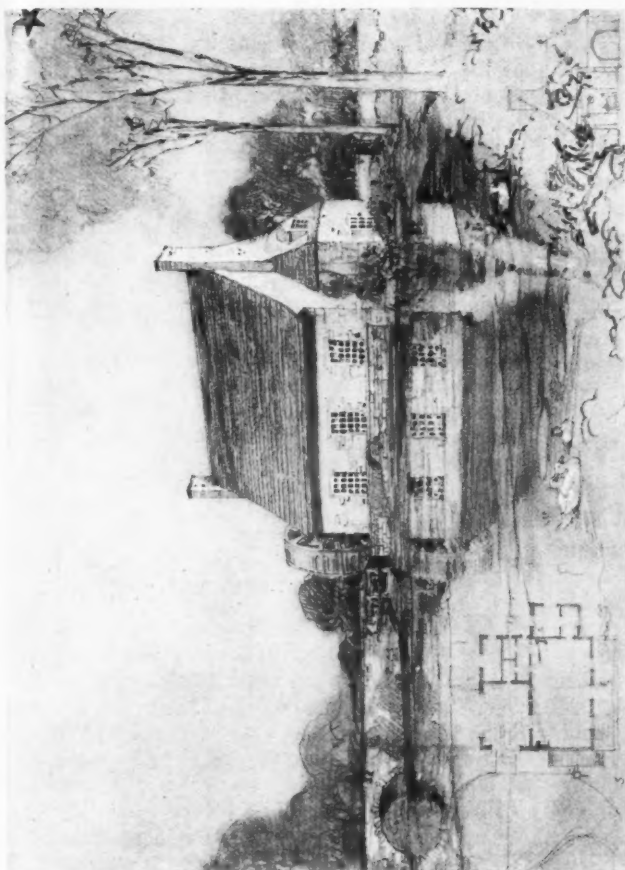
FIRST MENTION

CLASS "A"-I ESQUISSE-ESQUISSE

A CARVED WOOD CEILING

M. GAUTHIER

STUDENT WORK, BEAUX-ARTS INSTITUTE OF DESIGN



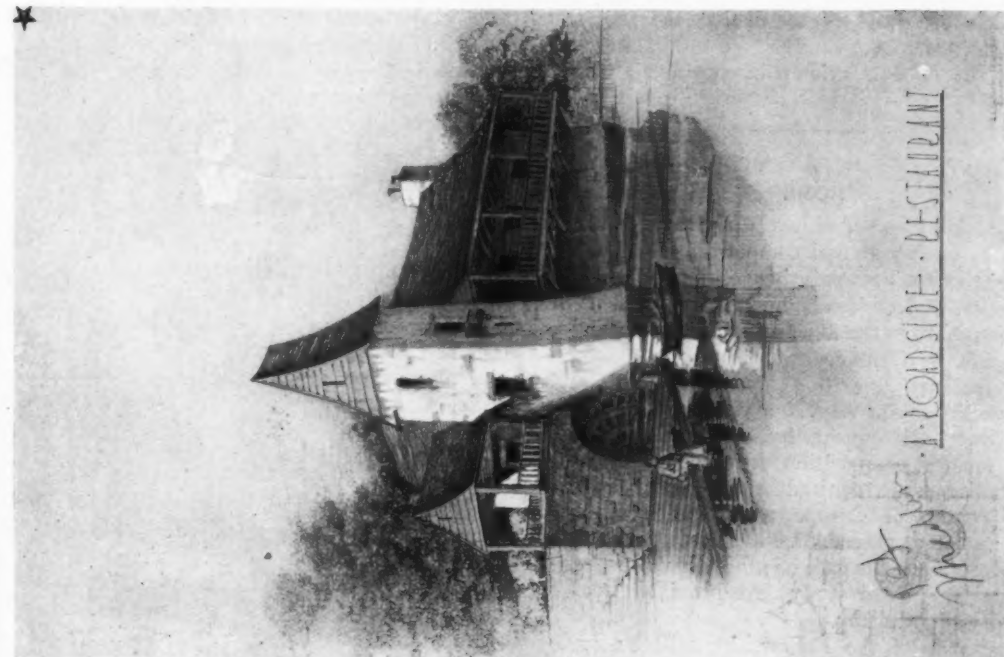
YALE UNIVERSITY

FIRST MENTION

CLASS "B"-I ESQUISSE-ESQUISSE

A ROADSIDE RESTAURANT

W. FERRARI



ATELIER SIBLEY

FIRST MENTION

G. A. HACKER

PARIS PRIZE—1924

THE First Preliminary Competition for the Paris Prize of the Society of Beaux-Arts Architects will be held on January 5, 1924.

This competition is open to all citizens of the United States under 27 years of age on July 1, 1924, whether or not they have followed the courses of the Beaux-Arts Institute of Design, and provides \$3,000 for two and one-half years' study in Paris where the winner is given special privileges at the Ecole des Beaux-Arts.

If sufficient notice is given to the Chairman, at the headquarters of the Society, 126 East Seventy-fifth Street, New York City, the first preliminary competition can be taken in any part of the United States.

PRELIMINARY NOTICE, LE BRUN TRAVELLING SCHOLARSHIP COMPETITION, YEAR—1924

THE Executive Committee of the New York Chapter of The American Institute of Architects as Trustees of the Travelling Scholarship, founded by Pierre L. Le Brun, announces a competition for the selection of a beneficiary. The program will be issued about January 2, 1924, calling for drawings to be delivered about March 1, 1924.

All those wishing to enter the competition should arrange at once for nomination by a member of The American Institute of Architects. Nomination blanks can be had of the Secretary of any Chapter, A. I. A., or of the Le Brun Scholarship Committee, 215 West Fifty-seventh Street, New York. Nominations should be sent, so as to be received before January 1, 1924, to the Le Brun Scholarship Committee, 215 West Fifty-seventh Street, New York, Julian Clarence Levi, Chairman.

FELLOWSHIPS OF THE AMERICAN ACADEMY IN ROME

THE American Academy in Rome has announced its annual competition for Fellowships in architecture, painting, sculpture, musical composition and classical studies. The stipend of each Fellowship in the fine arts is \$1,000 a year for three years. In classical studies there is a Fellowship for one year with a stipend of \$1,000, and a Fellowship paying \$1,000 a year for two years. All Fellows have opportunity for travel, and Fellows in musical composition, from whom an extra amount of travel is required in visiting the leading musical centers of Europe, receive an additional allowance not to exceed \$1,000 a year for traveling expenses. In the case of all Fellowships, residence and studio (or study) are provided free of charge at the Academy.

The awards of the Fellowships will be made after competitions, which, in the case of the fine

arts, are open to unmarried men who are citizens of the United States; in classical studies, to unmarried citizens, men or women. It should be particularly noted, however, that in painting and sculpture there is to be no formal competition involving the execution of work on prescribed subjects, as formerly, but these Fellowships will be awarded by direct selection after a thorough investigation of the artistic ability and personal qualifications of the candidates. Candidates are requested to submit examples of their work and such other evidence as will assist the jury in making the selection.

Entries will be received until March first. Circulars of information and application blanks may be obtained from Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York City.

FINE ARTS BUILDING IN JACKSON PARK, CHICAGO, TO BE RESTORED

WITH but one dissenting vote, the South Park Commissioners of Chicago have appropriated \$500,000 to be used toward restoring the World's Fair Fine Arts Building in Jackson Park. It is proposed to begin the preliminary work of restoration early next Spring.

The success of this restoration is assured as it will be carried forward under the supervision of a committee from the Chicago Chapter of The American Institute of Architects. George W. Maher, architect, and Lorado Taft, sculptor, it is stated, will be members of this committee. These two men have been actively identified with the movement to retain this building, and their appointment is a well deserved acknowledgment of their consistent and well directed efforts.

A GARDEN COMPETITION

AT the recent Exhibition of Garden Paintings and Sculpture presented under the auspices of The Garden Club of America at the Ferargil Galleries, 607 Fifth Avenue, New York City, a prize of a bronze statue entitled "Narcissus" by Daniel Chester French was offered by Messrs. Price and Russell, the managers of the Galleries, for the best installation of a piece of garden statuary by an American sculptor, in the garden of a member of The Garden Club of America. Announcement has just been made that this prize has been awarded to Mrs. Harold Irving Pratt for a Sun Dial by Edward McCartan placed in her garden at "Welwyn," Glen Cove, Long Island. The judges were Charles A. Platt, architect; Royal Cortissoz, critic, and James B. Carrington, editor.

SPECIFICATIONS

IN our last disoussion of specifications, the article ended with suggestions covering mortar for all uses properly coming under brick masonry work.

The next subject that should be given attention in specifications is the matter of sample panels, which refers to the construction of samples of specified or suggested ways of laying up the face brick in conjunction with stone or terra cotta that is to be used in the building. Such a sample panel should be specified for any work of importance wherein an artistic effect is to be gained by the lay-up of the brick. It is well enough that the specifications be explicit as to the kind of mortar, the size of mortar joints, and the general bond, but oftentimes the exact texture that is desired cannot be determined until a sample of the work is erected on the job with the material and by the workmen that are to be available throughout the work. These panels should be not less than six feet square and of the full thickness of the wall. If terra cotta or stone belt courses or other ornamental work is to be so placed in the final building that it will have some effect on the general pattern contemplated, pieces of this material as made for use in the building should be obtained and set in place in the manner required. For more important work the size of the panel should be increased either in length or in height in order that judgment may be rendered on work comparable to areas which may appear in the finished structure. The specifications should require that these panels be altered, entirely torn down and rebuilt, extended in size, or worked on in any other way as may be directed by the architect until his approval is given. Photographs of the panels should be taken after approval has been given and the specifications must require that the panel be maintained in its original approved condition until the architect orders its removal. It is not to be understood that use of sample panels should be restricted to buildings costing large sums, say of fifty thousand dollars or more, as it is often desirable to study the proposed texture of the brick walls for small residences, field houses, garden walls, or other structures where an effectual beauty is expected.

One important item to specify in brick masonry work is the leaving of temporary openings in exterior walls and oftentimes in interior walls for the receipt of machinery or other large items of equipment that must be taken into the building. Oftentimes the openings designed will not receive these items without a great deal of expense for shoring up and dropping down as would occur where large windows are placed with sills five or six feet above the floor and ground

level. It is not expensive to leave temporary openings in these windows or in other locations that give easy access and will facilitate the direct placing of the work from the truck to the final location. These temporary openings should, of course, be located by the superintendent but the specifications can indicate whether curtain walls below or above openings are to be omitted or whether such opening is to be placed in some part of a blank wall. There is a certain expense involved in handling material more than once and in putting workmen back at this point after surrounding work is completed, and the checking up of necessity for specifying temporary openings oftentimes will facilitate the early delivery of material so that such openings need not be provided.

Wood centers for arched openings ordinarily are built by a carpentry contractor, but there are often cases where the brick masonry contractor will provide a few centers, especially where they do not require intricate fabrication. The centers should be substantial in construction and if made by a contractor other than the brick masonry contractor, the mason should satisfy himself that they are sufficiently substantial to insure stability of his work, as he should be held responsible for the masonry work placed upon them and he should not be allowed to excuse faults in his work on the argument that he accepted the centers as given him without question as to their substantiality. The centers must be substantially braced and must be allowed to remain in place until their removal is ordered by the architect, or at least for not less than two to three weeks after the placing of construction work which they support. The brick masonry contractor should be required to strike these centers.

In most all brick masonry construction there is a necessity for the building in of wood brick and wood nailing strips. As in the case of arch centers, such items should be fabricated by the carpentry contractor, whose specifications should require that the material be cut to correct sizes and then given a creosote bath of not less than eight hours' duration before being placed in the construction work. Creosote is spoken of here more as a liquid preservative than as any particular material. If the brick masonry contractor is to supply the wood brick and nailing strips, similar specifications as to preservative means should be included. Where walls may be subject to a great deal of dampness it is advisable to omit these wood items unless they have been thoroughly impregnated with a preservative fluid applied under pressure in accordance with specifications for such material that may be issued by the American Wood Preservers' Associa-

tion. Since it is rarely possible to obtain material so impregnated, especially for smaller structures, some other means of attaching future work should be provided. Where wood brick and nailing strips are supplied by the carpentry contractor the specifications should require the brick masonry contractor to install all of these items as directed by the contractor furnishing them, or in accordance with instructions included in the specifications. It should be possible to specify the placing of these items somewhat as follows:

Provide wood brick in the jambs of all window and door openings set flush with the jamb and inner wall surface, placing one brick at the bottom of the opening and additional brick at every seventh course in height. Provide 2" x 4" wood nailing strips in the heads of all windows, set two courses above the lintel.

The specification writer should make some sort of schedule to facilitate the determination of the proper location of this material. In this connection, the specification writer is reminded that he must look far afield and anticipate all fixtures, fittings or other equipment that may be applied in the fixing of window shades, decorations, heavy pictures, or other interior decorative or furniture items that must be provided for eventually.

The laying of common brick should be specified rather explicitly, especially where a real good job is desired. As mentioned before in these discussions on brick masonry specifications, it is probable that no better source of information for the building up of good specifications could be found than the many paged pamphlet entitled "Brick" published by the Common Brick Manufacturers' Association of Cleveland, Ohio.

The first paragraph in the section devoted to laying up of common brick should specify the walls that are to be built of this material. This specification may be brief if the drawings are sufficiently explicit with respect to the indication by notes or hatching, but oftentimes it is advisable to go into a little more detail including generally all exterior walls, certain partition walls, backing for terra cotta or stone, fireproof covering for exterior steel columns, flues, hearth arches, basement walls, cisterns, or any other of the numerous items that might possibly be built out of material other than brick.

The specifications next should be devoted to the choice of mortar. This clause should say that certain brickwork is to be laid in cement mortar, other brickwork laid in gauged cement mortar, and so on, covering all possible mortar usages for particular locations, and stressing the use of certain mortars where it is essential in accordance with architectural or structural design that these mortars be used. In general, the specifier should remember

that the progress of brick laying is facilitated if only one mortar is used on the scaffold at a time, and unless absolutely necessary to mix up the two mortars for common brickwork, the specifications should consider this phase of field practice.

All brick should be drenched in extremely warm weather and should be sprinkled sufficiently in any weather other than freezing weather to prevent too rapid absorption of the water in the mortar. This seems to be especially required where a fine sand is used. It has been noted that fine sand mortars, particularly in hot weather, will dry out to leave a very large number of fine air cracks which do not seem to impair the strength of the joint, but which might possibly provide moisture passages and which would most certainly cause a question to come to the mind of a discriminating owner as to the good construction put in his work.

The specifications next should cover the matter of joints and bonding. The bond in most cases will control the laying up of the brick which in common brickwork, ordinarily is in running bond, with header courses for the through bond in every fifth, sixth or seventh course. Building codes most always provide for these courses and the specifications of course will follow those stipulations. The best class of brick masonry work will call for joints about three-eighths of an inch thick. To obtain these joints the brick must be rubbed in place and the very careful work required to produce such thin joints will itself furnish a guarantee for the substantial construction of the wall. For all classes of common brickwork the specifications should set the maximum thickness of joints at five-eighths of an inch, and if one wishes to compromise, the thickness should be specified definitely at one-half inch. It will, of course, be necessary in the actual work to vary the thickness of the joints in order to adapt the wall to fixed sizes, such as for window frames, door frames, fresh air intake or exhaust, grilles, etc. The brick should have all vertical joints well filled with mortar and wherever the brick abuts other material such as concrete column fireproofing, frames, cast iron columns, or similar work, care should be exercised in making close, tight joints to insure tight work.

The specifications should require backing for stone and terra cotta where this material is to be used, and where terra cotta is to be backed up, the backing should be specified to extend to the full thickness of the wall.

The walls should be carried up to an even height around the perimeter of the building to insure equal settlement of the foundations. The specifications should require that no wall be carried more than eight feet higher than an adjoining wall and that where such extensions are made they should be laid with racked or toothed jointing to receive the future work.

All common brick walls should be covered at

the completion of the day's work, using boards or planks or in extreme cases, where very heavy rains are anticipated, canvas tarpaulins especially provided for this use should be required. Whatever covering material is specified should be held in place to insure covering until the succeeding day's work is commenced. This, of course, applies not only to walls built entirely of common brick, but also to walls having face brick, stone or terra cotta facing, or other similar materials built into them.

MISCELLANEOUS SPECIFICATION DATA

In a recent issue of *The Decorator*, published in London, the following query and answer appear. The answer contains some interesting information and is as follows:

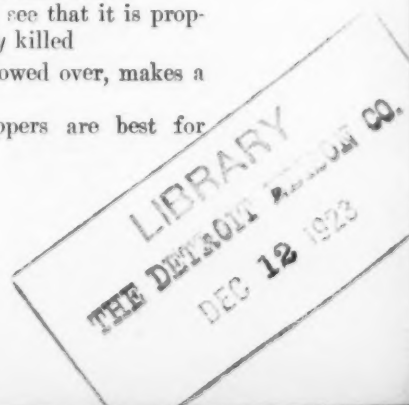
Enquirer (Hants) writes: "Kindly advise me how to treat a wall finished in Keene's. It has never been painted, and I want to guarantee whichever process I take, that it will stand either distemper, paper or paint.

(ANSWER) You have given us rather a wide choice between distemper, paper or paint, and we will try and show where you should look to avoid any trouble with either of them. We do not like the word "Guarantee" in connection with Keene's or any other cement. It has a habit of playing tricks at times that are very hard to explain. In the first place you say that the Keene's cement has never been painted. That is the first mistake, and one that may cause trouble, for Keene's should always be given a thin coat of sharp lead paint as soon as the plasterer has troweled it off. The reason for doing this is to allow the paint to get in and obtain an anchorage before the face of the Keene's has set to a hard, impervious surface. In addition to this question of key between the paint and the Keene's, it affords a splendid indication as to the state of the surface for further treatment. If this preliminary thin coat keeps sound and hard for a week or ten days without any flaking or disintegration, it may safely be assumed that the work of finishing off may be proceeded with. Any efflorescence that exudes during that period may be washed off with vinegar and it seldom recurs. Seeing that your Keene's was not painted, you will probably have some difficulty in getting paint to adhere properly, and under these circumstances we are inclined to think that the safest finish would be distemper, providing you choose a suitable color. The wall should first be "claircolled" i. e., size with sufficient whiting added to make it look like milk. When this is thoroughly dry, apply the distemper. Some colors are quickly affected by new Keene's and other cements and only those which are lime resisting should be used. A good water paint would be better than ordinary distemper, especially if when ordering you specify that it is for new walls. If you decided upon wallpaper, you should claircolle the wall's first and choose a paper that is free of delicate or easily affected colors. Perhaps the makers could help you in this, but they will probably not guarantee any on new walls. There are ways of making sure that wallpaper will not be affected, such as lining the walls first with pitch paper, but it is an expensive method. Then if you decide upon paint, you must start off with a very thin coat of white lead, gold size and turpentine, and finish off with a zinc oxide paint for white, and only those colors which are fast to lime for tinting. A short list of available colors is the following: Raw sienna for creams, with umbers for stone colors, with burnt sienna or Venetian red for buffs and terra cottas; chromium oxide for greens and ultramarine blue for the blue tints, or blue greens and with carbon black for grays.

The following rules for application of copper flashings are quite usable in the preparation of specifications. These notes are taken from a re-

cent bulletin of the Copper and Brass Research Association.

1. Use 16-ounce soft rolled (roofing temper) copper only
 - (a) Do not use hard-rolled (cornice temper) copper except for cornice work
 - (b) Do not use lighter than 16-ounce copper
2. Prepare the laying surface carefully and see that it is smooth and even
 - (a) All flashings, gutter linings, etc., used on masonry should be laid on resin-sized sheathing paper
 - (b) Sheathing boards should be ship-lap
3. Avoid sharp bends in copper sheets
 - (a) Box gutters should have triangular blocks set in the corners to form easement curves
4. Allow for the movement of copper at every intersection of roof planes by means of large free-locked joints
 - (a) Never carry a copper sheet over a concave angle more than 3 or 4 inches
 - (b) Break the sheet and lock it to the adjoining one by means of a double lock joint. This allows room for expansion and contraction
5. Never nail sheet copper. Use cleats
 - (a) By sheet is meant any piece over 12 inches wide
 - (b) Use large two-nail cleats and place them not more than 12 inches apart
6. Use copper (or brass) nails only—never iron or steel—for fastening strips and cleats
 - (a) Barbed wire nails are the best
 - (b) If cut nails are used the strips should be punched for them
 - (c) Strip copper can be safely nailed along one edge
 - (d) Nails should be spaced 4 inches maximum
7. Make full size joints and seams
 - (a) Standing seam at least 1½ inches
 - (b) Flat seam (locked) at least ½ inch
 - (c) Lapped seams at least 1 inch
8. Tin carefully and thoroughly
 - (a) Use heavy tinning coppers
 - (b) Use enough tin to cover all the surface
9. Use resin as a flux rather than acid
 - (a) If acid is used, see that it is properly and thoroughly killed
10. Plenty of solder, well-flowed over, makes a strong seam
 - (a) Heavy hot coppers are best for this.



ANNUAL BANQUET, NEW YORK SOCIETY OF ARCHITECTS

THE New York Society of Architects held its annual banquet at the Hotel Astor on the evening of 20th November.

James Reily Gordon, R. A., President of the Society presented the medals, and as toastmaster introduced the following speakers and representatives of the different art societies of New York.

J. L. C. Clarke, editor, poet and publicist and dean of the newspaper fraternity in New York, spoke of the achievement of the Society and elaborated upon the life and work of the late Charles Cary Rumsey.

Edward Robinson, Director of the Metropolitan Museum of Art, described briefly the advances made in American architecture, painting and sculpture during the past twenty-five years.

Charles C. Curran of the National Academy of Design addressed the members and the guests upon the subject of modern painting and fully explained the motives of that body in its endeavor to advance the arts among the people of the United States and its endeavors to encourage education among the arts students.

H. Van Buren Magonigle, architect, and member of the National Sculpture Society spoke of the possibilities of the future, and outlined the policy of modern education in the vast number of colleges, universities and schools of our country.

James Monroe Hewlett of the National Society of Mural Painters spoke not alone as a mural painter, but as a painter of all subjects of landscape and figures, a modeler in clay—a craftsman.

George Gray Barnard spoke in eulogy of Rumsey as a sculptor and as a man, an American and an officer of the American Expeditionary Forces.

William de Leftowitch Dodge briefly told of the history of American mural painting, and sketched what in his opinion leads us in our national painting of art.

Dan Everett Waid, Treasurer of The American Institute of Architects, and President of the New Chapter, ably supplemented the previous speakers and commented upon the growth of the New

York Society of Architects and its field for future effort in lines not covered by the other organizations.

William H. Gompert, President of the Brooklyn Chapter of The American Institute of Architects, and the architect of the public school system of New York expressed appreciation of the fact that sculpture and mural painting are vitally a part of our general system of public education.

Walter Dabney Blair of The Architectural League of New York spoke in behalf of that organization upon the relation and co-ordination of the several societies of the city and the endeavor to obtain closer relationship between the fine arts.

President Gordon in behalf of the Society, presented the medals and honors to those artists to whom the awards had been made by the Society's juries of award for the most meritorious sculpture and mural painting, for the year nineteen hundred and twenty-two.

The gold, silver and bronze medals for sculpture were presented to:

Ernest Wise Keyser, for his group "Mother and Child" which crowns the cascade at the Rice Playfield in Pelham Bay Park.

Gertrude Vanderbilt Whitney for her "Soldiers Memorial" at the intersection of Broadway and 168th Streets, Washington Heights.

Lewis St. Lanne, for his "American Boy," The Herculean Statue crowning the Stadium at the Rice Playfield, and

The late Charles Cary Rumsey, a special gold medal of Honor for his "Victory" the Soldiers and Sailors Memorial of the 71st Division, Brooklyn.

The gold, silver and bronze medals for mural painting were awarded to:

Ezra Winter for his mural decoration in the Cunard Building.

Willy Pogany for his decoration in the Heckscher Foundation Theatre.

Charles Basing for his mural decoration in Public School No. 38 and

William Clark Rice a special honorable mention for his mural decoration in Public School No. 43.



Mantel and equipments by Todhunter, New York

SINCE early colonial days it has been recognized that the use of wallpaper plays no mean part in the proper treatment of the fireplace. Leading designers always have employed wallpaper in rooms which contain fireplaces in order to create the atmosphere of true comfort and hospitality.

Whether the architect or interior decorator is working in one of the eighteenth century periods or in any other of the great artistic periods there

are almost countless designs and colorings of unimpeachable authenticity. Of course, there are many modern wallpapers from which a selection may be made to meet the requirements of any room.

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The purpose, simply stated, is to afford an organization which, it is believed, will become a most important element in architectural practice and building operations, a medium through which it may, without expense to itself, reach a class of readers that are most intimately identified with the field of the activities of The American Specification Institute.

Publishers, THE AMERICAN ARCHITECT AND THE ARCHITECTURAL REVIEW.

OUTLINE OF TENTATIVE SPECIFICATIONS FOR PRESSURE WATER SOFTENING PLANT

(The form of this bulletin conforms to the arrangements of Elements of a Specification as given in Bulletin No. 5, ANALYSIS OF A SPECIFICATION, Revised January 20, 1923.)

I. CONTRACT AND LEGAL

1. Parties:
2. Drawings:
3. Agreement:
4. Terms of Payment:
5. General Conditions:
6. Regulations and Codes:
7. Standards:
8. Patents:

II. ECONOMICS

SCOPE OF CONTRACT:

9. Work Included:
10. Schedule of Work Included:
11. Schedule of Work not Included:

METHODS OF ANALYSIS AND COMPARISON OF BIDS:

12. Methods:
13. Basis:
14. Detailed Information:
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III. GENERAL DESCRIPTIVE

- 16: Characteristics and Service Conditions:
- 17: Location:
18. Railroad Siding:
19. Visiting Site:
20. Working Facilities:

IV. PRELIMINARY PREPARATION

21. Field Measurements:
22. Shop Drawings:
23. Samples:
24. Models:

V. MATERIALS

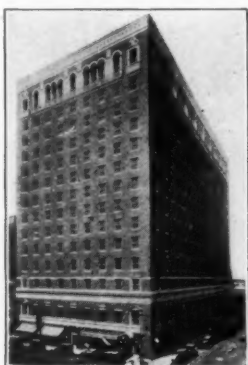
25. Properties, Chemical and Physical:
26. Sizes, Weights, Gauges:
27. Quantities:

VI. DESIGN AND CONSTRUCTION

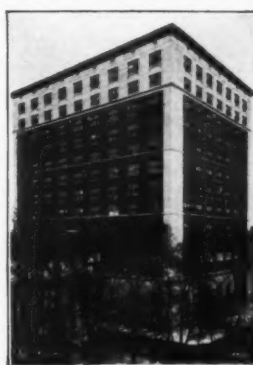
28. Water Softener Units, Capacity, etc.:
29. Softener Tanks:
30. Salt Tanks:
31. Softener and Salt Tank Supports:
32. Softener and Salt Solution Tank Pipings:
33. Control Valves:
34. Strainer System:
35. Strainer Valves for Softener:
36. Rectifying Material:
37. Water Meters:



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definite preference. Nowhere is this confidence in the ware with "the name in the enamel" more generously expressed than in the hotels of America. Among them are many notable Kohler installations—of which a few typical instances are illustrated here.

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38. Alarm System:
39. Sight Glass of Softener:
40. Test Cock on Softener:
41. Pressure Gauges:
42. Air Relief:
43. Indicating Tags:

FIELD WORK:

44. Foundations:
45. Erection:
46. Finish:
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VII. SCHEDULES

48. Shop Production:
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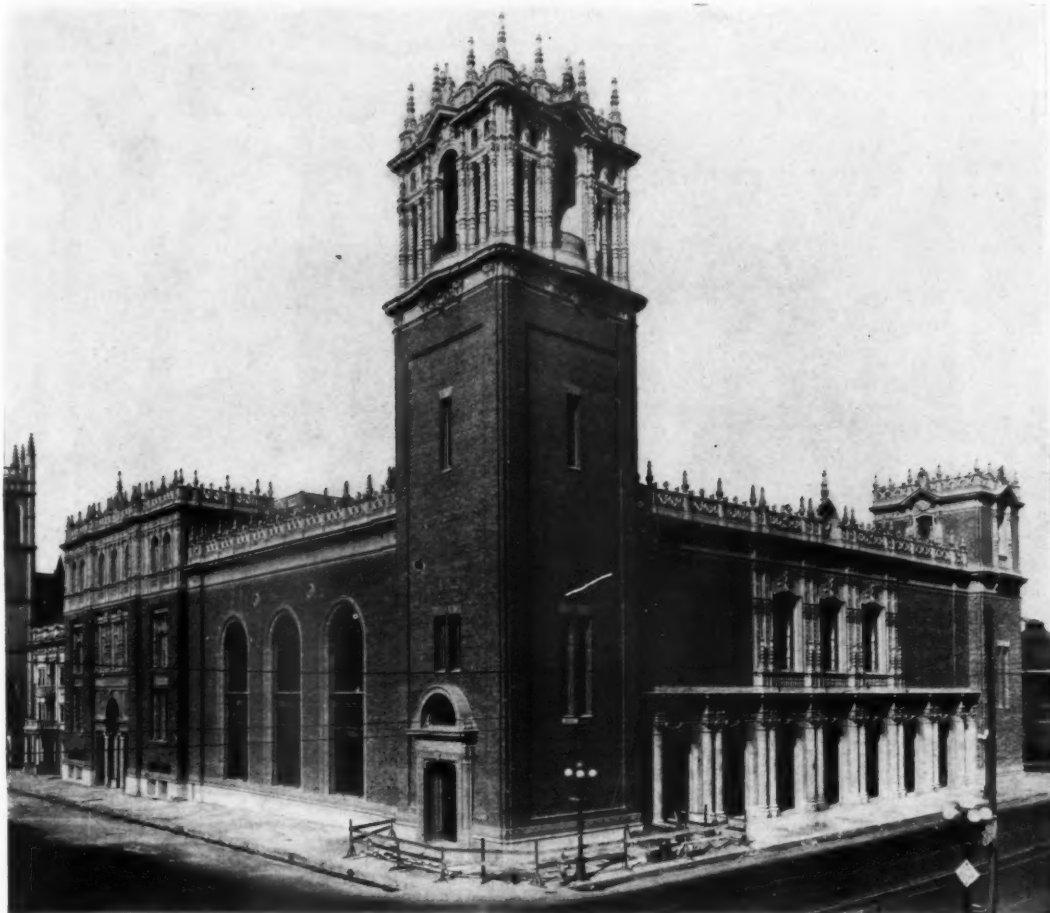
VIII. RESULTS

51. Inspection and Performance:
52. Instructions for Operation:
53. Guarantees:
54. Tests:
55. Rejection:

SEASIDE ARCHITECTURE

WHY is it that year by year our popular seaside resorts, especially those that are developing rapidly, seem to become more and more depressing, asks *The Architects' Journal*, London, in one of its recent issues. Because, we imagine (as in the case of inland towns), there is a complete lack of competent control over the architectural character of building developments. The influence of the big town is as potent today as it was just over a century ago, when so many of our seaside towns, then little more than fishing villages, began to expand and grow prosperous as a result of the new fashion of the seaside holiday, which his Majesty King George III, of gracious memory, did so much to popularize. (The town council of Weymouth, it may be noted, were so grateful to the monarch for his patronage that they went so far as to erect a monument to him on the sea front.) The influence of the big town upon these coast resorts was very considerable, as may still be seen by a casual glance at such places as Ramsgate, Margate, Hastings, Brighton, Weymouth, and so forth. And the influence was all to the good, if we still have any appreciation of the delights of bow windows and gracefully proportioned verandas and balconies. What a pity that this seaside tradition should have been so completely lost. To-day almost any big seaside town is merely a repetition of ugly suburbia. Thus does history repeat itself! And the pity of it is intensified a thousand-fold when the place happens to be one of great natural charm—such, for example, as that wonderful stretch of Hampshire coastline between Christchurch and Poole. We merely mention this particular spot because it happens to be fairly typical

of what has happened elsewhere; in its general development it is no better and no worse than a score of other seaside places. Thomas Hardy's description of "Sandbourne," in "Tess," written when the place was newly sprung from the pines, already has a curiously old-fashioned flavor; he calls it "a fairy place suddenly created by the stroke of a wand, and allowed to get a little dusty . . . By the midnight lamps he (Clare) went up and down the winding ways of this new world in an old one, and could discern between the trees and against the stars, the lofty roofs, chimneys, gazebos, and towers of the numerous fanciful residences of which the place was composed. It was a city of detached mansions; a Mediterranean lounging place on the English Channel." The "fanciful residences" are still there, looking more dusty than ever and not a little out of date, just as, in a few years' time, those very new suburban-looking villas which stretch for miles through the pine-clad slopes East and West of Bournemouth will begin to look as if they had seen a better day. Everywhere, if we mistake not, is the trail of the speculative builder. Popular places like Bournemouth must develop (more's the pity!). They will continue to develop until they become so congested that people will be only too glad to get away from them for the sake of a little privacy and fresh air. Then, perhaps, these variegated villas will become overgrown with verdure and stand tenantless amid the stillness of the pines. We can imagine for them no better fate. The moral of it all is that seaside development, like city development, must be a regulated, not a fortuitous, growth; and the sooner our architects and town planners have a voice in the matter the better.



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BUILDING INDUSTRY BOUNDARIES

EACH element of the building industry has a definite boundary. These boundaries are fixed by contractual relations and it is naturally expected that they will be fulfilled. The Associated General Contractors of America is the only national organization of its kind in this country. When this great organization speaks, it is entitled to respectful attention. In its *Members' News-Letter* of October 22, 1923, it discusses certain elemental boundaries in the building industry, from which is quoted:

From time to time cases are brought to the attention of the Associated General Contractors where contractors are required by specifications to shoulder responsibilities which they should not be asked to assume, and which should find a resting place elsewhere. The contractors then are at a loss to know what should be added to their bids to cover contingencies which might be invited by such responsibilities.

An instance which may be taken as indicative of this situation recently was brought to light in specifications from which the following quotation is made:

"All the work must be executed in accordance with the requirements in force of the local building, plumbing, health and fire departments and any other municipal and state departments, or of any other officials having jurisdiction. Similarly all the work must be completed so as to comply with the latest rules and regulations of the fire insurance exchange or board of fire underwriters having jurisdiction for the minimum insurance ratings.

"Wherever the minimum requirements of the said exchange or board are referred to, it shall be taken to mean the requirements of the said exchange or board for its minimum insurance ratings.

"If subsequent rulings should require additional work, the contractor must submit the matter to the architect for adjustment as provided for in the paragraph of this section entitled 'Modifications and extra work.'

"Each contractor must therefore verify the validity of any work called for in the contract documents and details before ordering any material or completing any of his work.

"Any confliction between the rulings or regulations of the departments and officials hereinbefore mentioned and the contract documents must be reported to the architect immediately, and the contractor will be held responsible and accountable for any errors or violations arising from his failure to comply with the regulations embodied in this paragraph."

The usual contract between an owner and an architect stipulates that the latter shall prepare and furnish *complete* plans and specifications with such supervision as may be agreed upon. In the instance above mentioned, the architectural service was not complete although in all probability paid for in the first instance by the owner. Any competent architectural organization can and should prepare plans and specifications that *do* conform to any and all legal requirements of municipal and other bodies having jurisdiction. It is the failure of some of them to do so that makes it necessary for general contractors to employ qualified architects and engineers whose work supplements the work for which the owner has already paid. This increased contractor's overhead and the sum added to the contract price for unknown and estimated contingencies is one element of

the high building costs which confront us today.

Contractors usually meet the situation in one of two ways. They either add a sum estimated to be sufficient for the unspecified items or they deliberately estimate on exactly what is clearly defined with the intention of settling the account by litigation. In a large Western city a contractor entered into a contract approximating \$1,500,000 with this latter method in view. On completion of the work a sum of about \$450,000 was demanded for work and materials furnished in excess of that definitely shown and specified in the contract documents. The court entered a judgment, which was paid by the owner, for about 90 per cent of the amount claimed. That architectural organization, nationally known, has suffered a very decided slump in its business from which it has not yet recovered. A certain regard must be given by architects to the influence of reputable contractors as well as to clients, both satisfied and disgruntled.

Complete plans and specifications mean only one thing—a definite instruction to the contractor, leaving him no option of interpretation nor requiring him to assume any part of the work of the architect. Fortunately the number of offices from which complete and definite plans and specifications can be secured is steadily increasing. It is one of the hopeful signs of the times.

CARPETS AND RUGS

A CLOTH bound book, of more than 150 pages, copiously illustrated, has been issued by the Hoover Company of North Canton, Ohio, for private distribution. This firm are makers of vacuum cleaners, and their object in preparing this well written and finely illustrated book, is to broadcast information they have gathered during many years' business experience, as to rugs and carpets, their value and significance and their proper care and preservation.

The book has been admirably prepared. It first presents an historical chapter which illustrates and describes the earlier methods employed in the making of rugs and carpets. Various types, methods of manufacture and suggestions for a proper selection are treated in succeeding chapters. A final chapter on the proper care and cleaning of carpets completes the work.

There is entire absence of effort specifically to advertise their vacuum cleaners. Withal, the book is one that might have been prepared by a specialist in carpets, who desired to place in the possession of the buying public a work that would give explicit instructions on the selection and care of a most important, but often sadly neglected, accessory of furnishings.



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By day the bedroom with *AiR-Way* equipped windows is flooded with healthful sunshine. At night it instantly becomes a private sleeping porch.

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BOOK NOTES

PENCIL DRAWING

THIS small book aims to give the essentials of the subject in a concise and comprehensive manner. It contains five chapters covering pencils and paper, masses and planes, line, values and rendering, composition, indication and sketch. Intended primarily for the student, it will be of value to all those interested in this kind of drawing. It is written by a well known artist and instructor. The scope of the book is limited to architectural work. The book is illustrated with ten drawings by the author.

Pencil Drawing, by Wm. P. Spratling, Instructor in Architecture, Tulane University of Louisiana. 40 pp. 5 3/4 x 7 3/4 inches. The Penguin Book Shop, New Orleans. Price \$1.00 Postpaid.

TOWNS AND TOWN PLANNING

THE town plan is indicative of the existing state of society at the time of its building. This is evident from a study of maps which show the development of towns. The Roman towns in France and England were apparently as intelligently planned for their purpose as were many of the older towns in America. The later town developments, built on these beginnings, reflect the changing conditions of society. Primarily the town was a place of refuge and defense against other communities. Considering the then existing means of offense and defense, they indicate engineering skill of a high order.

With the changes in the habits of society, the plan of the towns changed. The development of medical science with the natural corollary of sanitary engineering, the change in army equipment, commerce with modern means of transportation and industrialism—all these impose entirely new requirements on a town.

Many of these social changes have developed so suddenly and others, now unsuspected, are reasonably expected, that town planning is now a most serious and important thing. To rehabilitate old towns requires the highest degree of architectural and engineering skill. To plan new ones is a much more simple matter. To do this successfully the architect and engineer who undertake the work must have a broad knowledge of what has gone before.

This book supplies that need in its historical outline of town development, illustrated with numerous maps. The essential elements of modern

towns are described. With this knowledge the architect and engineer must construct a plan adapted to the topography of the site, the means of transportation, probable character of the known and future industries. These, with many other things, determine the plan. A restricted residential town is a simple matter to plan compared to one that embraces all of the modern social activities.

The book is written in such a clear and readable manner that it will appeal to the layman who should be interested in the subject through property ownership or as an element of general culture. It will also be of value to town officials whose duties confront them with planning problems. The architect and engineer will find it a valuable addition to their libraries.

The book is printed in large type on good paper and is profusely illustrated.

Towns and Town Planning, Ancient and Modern, by T. Harold Hughes, Fellow of the Surveyor's Institution, A. R. I. B. A., and E. A. G. Lamborn, Hon. M. A. Oxon. 156 pages, 7 1/2 x 10. Oxford University Press, American Branch, 29 West Thirty-second Street, New York City. Price \$5.00.

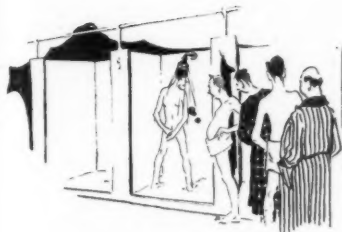
HISTORIC CAMBRIDGE

THERE is a certain distinction as to Cambridge that does not apply to any other English University nor, as far as we can recall, to any in this country. Cambridge University is a body distinct from the colleges though it includes all members of the colleges. It is not even confined to the limits of the town, for all graduates fulfilling certain formalities and who pay the necessary fees remain members of the University after they have passed to the outer world.

This book deals with Cambridge as visible to the passing stranger. This assemblage of buildings, housing colleges which date in some instances from the thirteenth century, composes a group of great architectural and historical interest. While all these buildings are more or less familiar, it is interesting to have them grouped into one volume and presented by such well executed pencil sketches. An interesting historical introduction prefaces the sketches.

Withal, the book is worth while and a good artistic record of a leading English university.

Historic Cambridge. Pencil sketches by J. M. Delbos, with a foreword by L. F. Salzman. Full cloth, 120 pp. 6 x 9 inches. Price \$2.00. New York, D. Appleton & Company.

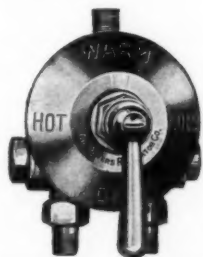


**They Stood in line
at the Union League Club**

The showers of this prominent Chicago club were formerly equipped with ordinary mixers. The management decided to test the Powers Mixer on one of the showers. Members say that the men quickly found out that it did all we claim for it and actually stood in line to use it.

Some Recent Installations

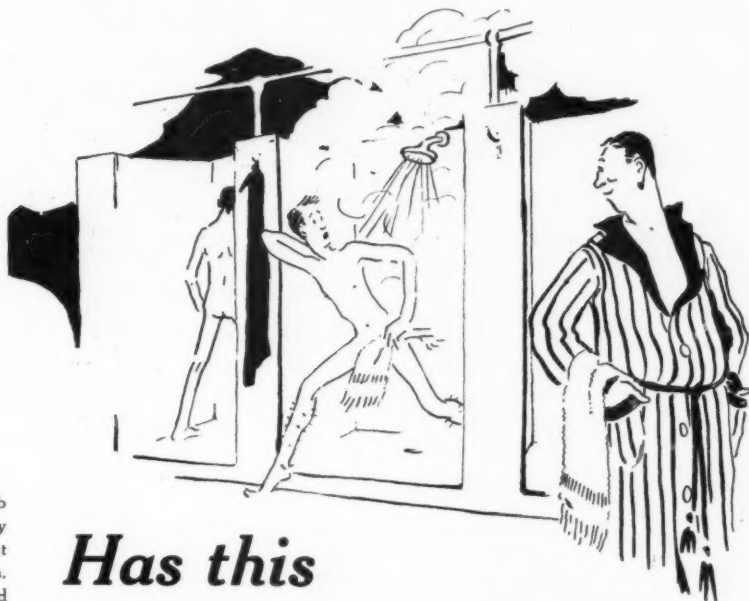
Illinois Athletic Club, Chicago, Calumet Country Club, Homewood, Ill., Big Oaks Golf Club, Chicago, Post's Health Club, Chicago, Frank Carsey Health Club, Cubs Ball Park, Chicago, Lake View Golf and Country Club, Port Credit, Canada, Cleveland Athletic Club, Evanston Golf Club.



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Bul. 154 gives full information and roughing-in dimensions. May we send it?

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DISTINGUISHED AMERICAN ARTISTS

THE series of monographs on distinguished American painters, published by Frederick A. Stokes Company, of New York, has now been supplemented by two, one each on Winslow Homer and Abbott H. Thayer. These interesting little books have a fine artistic and educational purpose. They present well written biographical sketches of the artists and excellently reproduced examples of their more important work.

The Thayer monograph is particularly timely, appearing with the opening of the Freer Art Gallery in Washington, where the largest and most important collection of Thayer's work is on permanent exhibition. Probably no painter of modern time has more beautifully painted the mysticism of womanhood and childhood. His canvases present this in the most convincing way. And this fine truthfulness, combined with the highest perception of form and color, places Thayer in the group of our greatest American artists.

As Thayer excelled in the psychic attitude toward women, so did Winslow Homer in the setting forth of the sturdy, rugged type. It is a contrast in mental attitude to have these two books before one at the same moment. While Homer lacked most of the sense of color that Thayer so keenly possessed, his pictures, by reason of their beautiful pattern, their dramatic presentation of the subject, are as satisfying to the cultured artistic perception.

There is a record of sturdy manhood and womanhood to be found in Homer's paintings and their dramatic force is rarely or ever approached by painters today.

Distinguished American Artists, edited by Nathaniel Pousette-Dart. Paper boards; size 5 x 7 inches; with introduction and approximately sixty illustrations. Price \$1.00 each.

THE LITTLE THINGS THAT MATTER

IT is often the little things about a building that cause the trouble. Through inadvertence some minor details may be overlooked or their importance is not correctly valued. The writer of this book of ten chapters has included those minor details which are clearly illustrated by well executed line drawings. Many of the details are old, many are new, all valuable. The author of the book believes that architects who have encountered or avoided "snags" ought to give the data to their fellows.

This book will be of value to young as well as older architects, for instruction or renewal of forgotten information. While it is based on English practice, which in many ways varies from ours, it follows that a good thing in England can be adapted to American usage.

Little Things that Matter, by Edwin Gunn, A. R. I. B. A. 82 pages, profusely illustrated, 5 1/2 x 8 1/2 inches. The Architectural Press, 27 Tothill Street, Westminster, S. W. 1, London. Price 5 shillings net.

PERSONALS

JOHN BEVERLY ROBINSON DIES

JOHN BEVERLY ROBINSON, formerly head of Washington University, St. Louis, School of Architecture, died at his home in St. Louis on November 12 last. He was 70 years old.

Professor Robinson was born in New York, and after his graduation from Columbia University was in successful practice in this city. He was deputy superintendent of school buildings in New York for three years, retiring from that office in 1919.

Three children and his wife survive him.

C. B. J. SNYDER, F. A. I. A.

AFTER thirty years of continuous service as architect for the Board of Education, New York City, Mr. Snyder resigned from that position the first of this year. During the term of his service, he always led in the great development which has characterized school building planning and construction in this country. The conditions, peculiar to New York, were solved in such a logical and rational manner that it evidences architectural ability of the finest kind and firmly establishes his reputation.

Mr. Snyder has established offices at 505 Fifth Avenue, New York City, for practice as consulting

architect, specializing in educational buildings. His experience and knowledge pertaining to these things are now available to architects and Boards of Education.

Spain & Strasser have opened an office for the practice of architecture at 406 Milsap Building, Jackson, Miss., where they will be glad to receive manufacturers' catalogs and samples.

Announcement is made that Francesco Mauro, engineer and architect, has terminated his connections with Martin J. Lide, and has opened an office for the practice of structural engineering and architecture at Room 437, First National Bank Building, Birmingham, Ala. Manufacturers' catalogs and samples are requested.

W. D. Trehwhitt and H. W. Shields of the architectural firm of Trehwhitt-Shields Co. of Fresno, Cal., announce that they have taken into their firm H. Rafael Lake and R. Raymond Fisher. The firm also announces the opening of a Los Angeles office in the Western Mutual Life Building, with Mr. Fisher in charge. The main offices of the company will continue to be located in the Rowell Building, Fresno.



THE HISTORIC ALAMO, SAN ANTONIO, TEXAS

THE AMERICAN ARCHITECT